



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

Issued by

Agricultural Meteorology Division, India Meteorological  
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(For the period 29<sup>th</sup> November to 3<sup>rd</sup> December, 2007)

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

## *Agromet Advisory*

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

### **Punjab**

- Weather remained dry during the period.
- Isolated rain / thundershowers are likely over the State on 1<sup>st</sup> December.

### **Advisories**

- As there was no rainfall in the State during last few weeks and isolated rain / thundershowers are likely over the State on 1<sup>st</sup> December, apply irrigation to sugarcane and Horticultural crops.
- Complete sowing of gram and lentil using improved varieties.
- Continue picking of cotton.
- Monitor the sugarcane crop for shoot borer infestation & if exceeds economic threshold level, for effective control spray Endosulfan 50 EC @ 600 ml in 600 liters of water/acre.
- Preparation of field and sowing of wheat, cabbage, pea, garlic and flower crops can be done.

### **Haryana**

- Weather remained dry during the period.
- Isolated rain / thundershowers are likely over the State on 1<sup>st</sup> December.

### **Advisories**

- As there was no rainfall in the State during last two weeks and isolated rain / thundershowers are likely over the State on 1<sup>st</sup> December, apply irrigation to sugarcane and Horticultural crops.
- Continue picking of cotton.
- Monitor the sugarcane crop for borer infestation & if exceeds economic threshold level, for effective control, spray 600 ml Endosulfan 50 EC in 600 liter of water/acre.
- Preparation of field and sowing of wheat, carrot, raddish and brinjal can be done.
- Complete sowing of gram and lentil using improved varieties.

### **Rajasthan**

- Weather remained dry in all the divisions of the State.
- Mainly dry weather is likely over the State.

### **Advisories**

- Continue picking of cotton and harvesting of guar. Picking of fully open bowl of cotton may be undertaken in the early morning hours to maintain the quality of kapas.

- Undertake ploughing of fields and sowing of *rabi* crops viz, mustard, barley, taramira and gram.
- This is proper time for land preparation and planting of potato in and around Bharatpur. Select among Kufri Jyoti, Kufri Badshah, Kufri Sutlej and Kufri Anand. Maintain spacing of 45-60 cm between rows and 15-20 cm between plants for optimum plant population.
- Undertake land preparation and sowing of wheat. Select among Raj 3077, HD 2329, HD 2236, WH147 and PBW 343. Adopt seed rate of 100 kg / ha. At the time of last ploughing, apply 50-60 kg N and 50 kg P<sub>2</sub>O<sub>5</sub> per ha.

### **Uttar Pradesh**

- Weather was mainly dry in all divisions of the State.
- Weather will be mainly dry in the State.

### **Advisories**

- As there was no rainfall in the State during last week and mainly dry weather is likely over the State for the next three days, apply irrigation to the vegetable, pulses, rai, mustard and toria.
- Prepare the field and continue sowing of potato, garlic and pea.
- Complete field preparation and sowing of rai, mustard, gram, masoor and other pulse crop.
- Spray the solution of Dimethoate 1.5 ml / litre of water to control stem borer in turmeric.
- Complete harvesting of rice.
- Sowing of improved varieties of wheat like PBW-343, UP-2338, AD-85 and late varieties Malviya-234, Narendra-236, TWT-373 may be done and use seed rate of 125 kg/hectare after seed treatment by Carbendazim and Thiram.
- Sowing of wheat varieties KRL-203, Raj-3077 and Lokwan in barren land may be done by using seeds 25% more than normal. Application of fertilizers may be done on the basis of recommendation of fertilizer after testing the soil.

### **Himachal Pradesh**

- Weather was mainly dry.
- Isolated rain / snow is likely over the State.

### **Advisories**

- As there was no significant rainfall over the State during last week and isolated rain is likely over the state for the next three days, apply irrigation to vegetables and toria and early sown wheat, barley and gram crops.
- Also continue harvesting of potato. Continue harvesting of seed potato. Seed potato must be certified by the certification agency.
- 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.
- Prepare land for sowing of wheat. 90-100 kg seed / ha is required for timely sown crops.
- Prepare land for sowing of barley. The crop should be sown by kera in lines 22 cm apart. 100 kg seeds per hectare are optimum for sowing. Additional 20 to 25 kg seed should be used under rainfed conditions.
- Prepare land for sowing of gram. Gram should be sown by kera in lines 30 cm apart. Seed should be placed at a depth of 10 to 12.5 cm because the shallow sown crop is more liable to be damaged by wilt. 40 to 45 kg seeds per hectare are required for pure crop of C-235 but in case of HPG-17 the seed rate of 80 kg / ha is recommended.
- Prepare land and complete sowing of rapeseed and mustard crops within this month.
- Start sowing of Autumn varieties of potato.

## **Uttarakhand**

- Mainly dry weather prevailed during the period. Sky remained mainly clear to partly cloudy during the period.
- Isolated rain / snow likely over the State.

### **Advisories**

- As there was no rainfall in the State during last week and isolated rain / snow likely over the State for the next three days, apply irrigation to toria, pea and potato.
- Undertake intercultural operations in potato and in orchards to keep the field weed free.
- Undertake weeding to conserve soil moisture in toria / pea.
- Undertake harvesting of matured crops of sugarcane.
- Continue field preparation and sowing of wheat areas using certified seeds.

## **Jammu & Kashmir**

- Scattered rain/snow are likely over Jammu & Kashmir.

### **Advisories**

- Apply irrigation to vegetable and fruit crops in Kashmir division and to vegetables, toria and fruit crops in Jammu division as there was no rainfall in the State during last week and only scattered rain is likely for the next three days.
- Drain out water 10-15 days before harvesting of rice in Jammu division. Continue harvesting of the matured crop on bright sunny days.
- Prevailing weather conditions may be favourable for the mild infestation of aphids in toria crop in Jammu division. If the pest population crosses ETL, spray the crop with Chloropyrifos 20EC @ 0.05% or Monocrotophos 36 EC @ 0.04 % on a non rainy day.
- Continue transplanting of cauliflower and knoll-khol with seed rate of 500g and 250 g respectively in Jammu division and sowing of onion in Kashmir division.
- Continue land preparation and sowing of wheat in Kashmir division. Adopt 100 kg/ha seeds for sowing. Apply 40kg N, 60kg P<sub>2</sub>O<sub>5</sub> and 40kg K<sub>2</sub>O as basal on a non rainy day.
- Sowing of normal sown wheat varieties (HD-2329, CPAN-3004, Raj-3077, PBW-343, RSP-303, WH-542 -& PBW-154) under irrigated condition and PBW396, RSP81, IWP-72 & PBW-175 under rainfed condition with seed rate 100 kg/ha can be done during this period in Jammu division.
- Prepare land for sowing of gobi sarson crop (varieties: GSL-I, DGS-I) and gram (var: C-235, K-468, Gourav and PBG-I) crop in Jammu division in irrigated as well as rainfed areas.
- Continue harvesting of matured fruit crops and maize on bright sunny days in Jammu division and pea, lentil, chickpea etc. in Kashmir division.

## **Delhi**

- Weather remained mainly dry.
- Mainly dry weather is 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 irrigation to vegetables, mustard, gram and barley.
- Prepare land and undertake transplanting of 5 – 6 weeks old seedlings of cauliflower, tomato and brinjal in the main field.
- Continue sowing varieties like Japani White and Rashmi for raddish, Pusa keshar and Pusa Desi for carrot and Pusa Kanchan, PTWG and Golden Ball for turnip. Treat the seeds with captan or thiram or dithane M-45 @ 2 g / kg of seeds.

- Sow potato with seed weight ranging from 25-30 gm. Select varieties from Kufri Badshah, Kufri Bahar and Kufri Chander Mukhi for sowing.
- Prepare land and plant onion varieties N-53 or Pusa Red.
- Prepare field and undertake sowing of wheat. It is recommended to sow late varieties like UP 2338, HD 2285, HD 2687, HD 2428, Raj 3077, Raj 3765, PBW-226, PBW-373 etc. Adopt seed rate of 125 – 150 kg / ha. Sow seeds in line keeping distance between lines of 15 – 20 cm. Treat the seeds with 2-3 g bavistin 50 WP / kg to avoid the spread of kadwa disease.

## ***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.

### **Advisories**

- As there was no significant rainfall in most of the districts except Alappuzha during last week and mainly dry weather is likely over the State for the next three days, apply irrigation to plantation crops *viz.*, coconut, arecanut, rubber and banana. Postpone irrigation in Alappuzha district as there was excess rainfall during last week.
- Continue intercultural operations, application of fertilizers and pesticides in plantation crops.
- Attack of rhinoceros beetle, leaf rot, stem bleeding and Eriophid mite 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. To control stem bleeding, chisel out completely the affected tissues and paint the wound with Tridemorph @ 5%. Apply coal tar after 1-2 days. Root fed with Tridemorph 5% to prevent further spread of lesions. Undertake prophylactic spraying with 2% neem oil + garlic emulsion in the crown and bunches, 2<sup>nd</sup> – 7<sup>th</sup> bunches from top avoiding unpollinated inflorescence to minimize Eriophid mite incidence.
- Attack of *Phytophthora* foot rot is reported in pepper. Spray and drench with Copper oxy chloride @ 0.2%.
- Attack of pink disease is reported in rubber. Clean the affected portion and apply Bordeaux paste @ 1%.
- In *mundakan* rice, attack of rice bug, blast and bacterial leaf blight diseases is reported. Spray Malathion @ 2 ml/litre of water to control rice bug. If the infestation is found severe, spray 2 ml of Malathion 50 EC per lit of water either before 9 a.m or after 3 p.m. starting from the boundary towards inner part of the field.

### **Tamilnadu**

- Rainfall occurred at one or two places over the State on 27<sup>th</sup>, 28<sup>th</sup> November and mainly dry weather prevailed on 26<sup>th</sup> November.
- Isolated rain / thundershowers are likely over Coastal Tamilnadu and mainly dry weather likely over remaining region of the State.

### **Advisories**

- As there was no significant rainfall during last week and rain / thunder showers are likely to occur at isolated places over coastal Tamil Nadu and mainly dry weather is likely in the rest of Tamilnadu for the next three days, apply irrigation to sugarcane and early sown maize, groundnut, black gram, green gram and pulses.
- Continuous rain and flood may result in yellowing of leaves with rusty brown patches in rice in Aduthurai region. Rice plants will be stunted with reduced tillering. The above symptoms are due to the deficiency of Zinc. Apply ZnSO<sub>4</sub> @ 10 kg / acre by mixing with 20 kg of sand.

If needed ZnSO<sub>4</sub> can also be given as foliar spray by mixing 1 kg of ZnSO<sub>4</sub> and 2 kg of Urea in 200 liters of water.

- The present cloudy weather is congenial for diseases like 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 pests population crosses ETL, spray Carbaryl 50% WP @ 400 g/acre to control the pest.
- Continue sowing of rainfed groundnut, black gram, green gram and red gram. Use 112 kg pods/ha for groundnut and 20 kg/ha for pulse crops.
- Continue sowing rainfed millet crops like jowar, bajra and samai. Undertake seed treatment with *Azospirillum* before sowing.
- Continue picking matured cotton bolls on bright sunny days. Picking may be done at early morning hours to maintain quality of kapas.
- Undertake land preparation and sowing of coriander in the main field in southern region. Adopt 5 kg seeds / ac in the spacing of 20 x 15 cm under irrigated condition. If rainfed crop, seed rate @ 10 kg/ac has to be broadcasted evenly. Apply Urea @ 9 kg/ac / super @ 100 kg/ac and potash @ 13 kg/ac as basal for both rainfed and irrigated condition.

### **Karnataka**

- Mainly dry weather prevailed over South Interior Karnataka and dry weather prevailed over Coastal Karnataka and North Interior Karnataka on 27<sup>th</sup> November. Dry weather prevailed over the State on rest of the days.
- Mainly dry weather is likely over the State.

### **Advisories**

- As there was no significant rainfall during last week and dry weather is likely to prevail over the State for the next three days, apply irrigation to summer sugarcane, *rabi* jowar, maize, cotton and sunflower.
- Undertake propping of sugarcane to prevent the crop from lodging.
- Undertake intercultural operation in *rabi* crops like maize, jowar, sunflower and cotton.
- Monitor *rabi* sunflower for powdery mildew and undertake spraying of Wettable Sulphur @ 3 g/litre of water.

### **Andhra Pradesh**

- Isolated rain occurred over coastal Andhra Pradesh on 27<sup>th</sup> November and over Rayalaseema on 27<sup>th</sup> & 28<sup>th</sup> November. Weather has been mainly dry to dry over the State during the period.
- Mainly dry weather is likely over the State.

### **Advisories**

- As mainly dry weather is likely to prevail over the State for the next three days, apply irrigation to red gram and chillies.
- Complete harvesting groundnut and continue harvesting rice.
- Continue picking cotton.
- Monitor red gram for *Helicoverpa* and if the pest population crosses ETL, spray NSKE @ 5% to control egg and early instar larvae. To control adults, install bird perches @ 10-15 nos/acre. Arrange pheromone traps @ 4 per acre.
- The incidence of thrips, dieback, leaf spot, blight and powdery mildew is noticed in chillies. To control thrips, spray Fipronil @ 2.0 ml per litre of water. To control dieback, spray Captan @ 1.5 g per litre of water. To control leaf spot, spray Mancozeb @ 2.5 g or Carbendazim @ 1

g per litre of water. To control blight, spray Plantamycin or Poustamycin @ 0.2g or Streptomycin @ 0.1g + Copper oxychloride @ 3g per litre of water 2-3 times at 15 days interval. To control powdery mildew, spray Wettable Sulphur @ 3.0 g per litre of water.

- The deficiency of Zinc and Boron is noticed in chillies. The prevailing low temperature further hastens the deficiency. To correct zinc deficiency, spray ZnSo<sub>4</sub> @ 2g per litre of water. To correct boron deficiency, spray Borax @ 1.5 g per 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 significant 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 and other *rabi* crops.
- Drain out water from the field 10-15 days before harvesting of *Sali* rice. Harvest already matured crops on bright sunny days.
- 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 early varieties of winter vegetables such as spinach, reddish & coriander 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.
- Prepare land and continue sowing of different *rabi* crops such as mustard, rapeseeds, pea, lentil, wheat etc. For mustard and rape seed apply Urea @ 20 kg and SSP @ 30 kg per bigha at the time of land preparation and use seeds @ 1.5 kg per bigha for sowing. For pea apply Urea @ 6 kg, SSP @ 4 kg per bigha at the time of land preparation and use seeds @ 7 kg per bigha for sowing.
- For cultivation potato apply Urea @ 19 kg, SSP @ 45 kg and MOP @ 12kg per bigha at the time of land preparation and use tuber (2.5 cm in diameter, 25 gm by weight) @ 3 quintal per bigha for planting at distance of 15 cm.
- Prepare land and continue sowing of wheat. Wheat may be sown up to 1<sup>st</sup> week of December. Select varieties from Sonalika, PBW, UP-262etc. Adopt seed rate of 16 kg / bigha.
- 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.

### **Arunachal Pradesh**

- Sky remained mainly clear over the State during the period. Dry weather prevailed over the State during the period.
- Mainly dry weather is likely over the State.

### **Advisories**

- As there was no significant rainfall in the State and mainly dry weather is likely for the next three days, apply irrigation to wheat and mustard.

- Harvest the matured crops of ginger, millet, wet seeded rice and *Jhum* rice.
- Apply first top dressing (33 kg Urea/ha) in early sown potato.
- Prepare field undertake sowing of pea and *rabi* maize.

### **Bihar**

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

### **Advisories**

- As there was no rainfall in the State during last two weeks and mainly dry weather is likely over the State for the next three days, apply irrigation to the arhar, fodder maize and sugarcane.
- Continue sowing of raddish, carrot, spinach, chillies, pea, gram, lentil and & tomato.
- Continue land preparation and planting of potato. Select among Kufri Ashoka or Kufri Chandramukhi or Rajendra, Aloo-3.
- Continue harvesting of the matured crops of rice.
- Continue field preparation and sowing of rai and linseed. Use certified seed of rai variety Rajendra Pichheti, Rajendra Annkul & Suphlam and linseed variety 397, Shubhra, Garima and Sweta.
- Continue field preparation and sowing of timely sown wheat in irrigated areas. Select varieties like HD 2733, HP 1761, K9107, HUW 468, PBW 443, PBW 343, RW 346, RW 234, RW 3413 and UP 262. Use seed rate @ 125 Kg/ha.

### **Jharkhand**

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

### **Advisories**

- Apply irrigation to vegetables as there was no significant rainfall during last few weeks and mainly dry weather is likely over the State for the next three days.
- Complete harvesting of rice. After harvest, undertake sowing of *rabi* crops like gram, sarson, rai, and pea.
- Continue land preparation and sowing of potato. Select among Altimous, Kufri Chandramukhi, Kufri Ashok, Kufri Badshah.
- Continue field preparation and sowing of wheat. Sow varieties like HD-2733, HD – 2402, HUW – 468, PBW – 343, NW- 1012, K8804, K9107 etc. in irrigated conditions and C 306, K 8027, HDR 77, K8962 for rainfed conditions.

### **Sikkim**

- Sky remained partly cloudy during the period. Weather was mainly dry over East Sikkim during the period.
- Isolated rain / thundershowers are likely over the State.

### **Advisories**

- As there was no significant rainfall during last week and isolated rain / thundershowers are likely over the State, for the next three days, apply irrigation to *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root crops.
- Withhold irrigation 10-15 days before harvesting rice. Arrange for harvesting the matured crop on bright sunny days.
- Continue harvesting of ginger and orange.

- Monitor orange for fruit flies. Prepare baits made of Sevin and keep once in every 10-15 days till harvesting.
- Undertake intercultural operations and application of fertilizers in *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root to keep the field weed free.
- Continue land preparation and sowing of mustard and wheat in the field using residual moisture. Use certified seeds for sowing.

### **West Bengal**

- Weather was mainly dry during the period from 26<sup>th</sup> November to 28<sup>th</sup> November over Gangetic West Bengal and Sub Himalayan West Bengal.
- Isolated rain / thundershowers are likely to occur over Sub Himalayan West Bengal and mainly dry weather is likely to prevail over the Gangetic West Bengal.

### **Advisories**

- As there was no significant rainfall in the State during last week and no significant rain is expected for next three days, apply irrigation to sugarcane and arhar and already sown *rabi* crops like mustard, rapeseed, wheat, gram, lentil, *rabi* arhar, potato and sunflower.
- Drain out water from the field 10 – 15 days before harvesting of *aman* rice. Continue harvesting of already matured crops on bright sunny days.
- Keep vigil against late blight disease of potato. Uproot and burn the affected plants. Apply dimethoate 30% @ 2 ml / litre of water in the remaining healthy plants.
- Prepare land and continue sowing of mustard, rapeseed, wheat, gram, lentil and *rabi* arhar and planting of potato.
- Continue preparation of land and sowing of sunflower. Apply 8 – 10 tonnes of organic matter along with 30 kg N, 80 kg P<sub>2</sub>O<sub>5</sub> and 35 kg K<sub>2</sub>O as a basal dose in irrigated areas. In non-irrigated areas the dose will be 20 kg N, 60 kg P<sub>2</sub>O<sub>5</sub> and 35 K<sub>2</sub>O. Select hybrid varieties from Surya-51, Pack-36 and M.S.F.H-17 from sowing. Adopt seed rate of 3.5 to 4 kg / ha. Treat the seeds with Thyrum @ 3g / kg of seeds.

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

### **Gujarat**

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

### **Advisories**

- As there was no significant 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 sugarcane, *khariif* cotton and castor and early sown 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.
- In some places cotton crop is infested with mealy bug. Monitor the crop for mealy bug and if damage exceeds ETL, to control the pest spray Methyl dimeton 25 EC @ 10 ml or Phosphamidon 85 EC @ 5 ml or Dimethoate 30 EC @ 10 ml in 10 liters of water.
- Prepare land for sowing of wheat by one harrowing and ploughing with application of FYM @ 10 – 15 MT before ploughing. Apply 60 kg N and 60 kg P<sub>2</sub>O<sub>5</sub> as basal dose at the time of sowing for irrigated crops and 20 kg N / ha for rainfed crops. Select varieties from Lok-1, GW-190, GW-496, 503, 273, 322, Raj 1555 for timely sown irrigated crops, Lok-1 and GW-173 for late sown irrigated crops and GW-1 and A-206 for rainfed crops.



## Chhattisgarh

- Weather was dry in all divisions of the State.
- Mainly dry weather is likely to prevail over the State.

### Advisories

- As there was no rainfall during last week in the State and mainly dry weather to occur over the State for next three days, apply irrigation to sugarcane, toria and vegetables and early sown rapeseed, mustard and niger.
- Drain out water from *kharif* rice field 10 – 15 days before harvesting. Harvest the already matured crops on bright sunny days. Sowing of gram, safflower, green gram, linseed and lathyrus may be undertaken before harvesting of rice in wet field as utera crop.
- Prepare land for sowing of rapeseed, mustard and niger. Sow the seeds in lines keeping 30 cm row-to-row spacing. Apply 40:30:20 kg of Nitrogen, Phosphate and Potash per hectare in the field.
- Transplanting of seedlings of tomato, brinjal, chilli, cauliflower etc. in the main fields may be continued in the afternoon to avoid the mortality of seedlings.
- Prepare land for sowing of wheat and *rabi* crops. Treat the seeds with thirum @ 3 g or bavistin @ 2 g / kg of seeds. Seeds of pulse crops may be treated with rizobium 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.

## 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 & mainly dry weather is likely over the State during next three days, apply irrigation to sugarcane (Pre-seasonal), sugarcane (*suru*), *kharif* tur, *rabi* jowar, safflower, gram, wheat and maize.
- Water may be drained out 8 to 10 days before the harvesting of matured crop of rice. Continue harvesting of matured crops on bright sunny days.
- 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.
- Apply 35 kg Nitrogen/ha after 30 days from sowing of *rabi* safflower at the time of first irrigation.
- Mild incidence of white woolly aphids in Kolhapur division in Sugarcane (pre-seasonal) & sugarcane (*Suru*), boll worm in Nagpur division in *kharif* cotton and irrigated cotton and pod borer in Nashik, Pune, Aurangabad, Latur and Amravati division in *kharif* tur 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.
- For the control of boll worm in cotton adopt integrated pests management method. Monitor the crop for same & if exceeds economic threshold level, spray 36 % WSC Monocrotophos @ 850 ml or 25 % WSC Quinolphos @ 1000 ml / ha in 500 liters water wherever crop is at boll formation stage.

- Monitor the crop for pod borer in tur & if exceeds economic threshold level, first spray 250 diseased larvae of Nuclear poly hydrosis virus followed by 35 EC Endosulphan 1000 ml/ha in 500 liters water 3 times by 15 days interval.
- This is the proper time for sowing of *rabi* Jowar, wheat and maize and planting of potato and onion. Select varieties from Selection-3 for low fertile soil, Maldandi, Mauli, Phule chitra, SPV-86 for Madhya Maharashtra, SPV-669, AKSV-13-R for Vidarbha & PKV-809, SPV-1411 for Marathwada for medium & black soil for *rabi* jowar. For planting of potato select a variety from Kufri Sinduri, Kufri Lavkar & Kufri Jyoti. Select varieties from HD-2189, HD-2278, DWR162, MACS-2489, Trimbak, Godavari, Tapovan & Vimal for wheat. Select varieties for maize from Ganga 11, Deccan 105, DMH-107, Pusa sankar 1 & 2 as hybrid varieties and Dhaval, African tall, Manjri, Karvir, Panchganga as mixed varieties.

### **Madhya Pradesh**

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

### **Advisories**

- As dry weather prevailed during last week in the State and likely to prevail for the next three days, apply irrigation to sugarcane.
- Undertake intercultural operation in sugarcane to keep the field weed free.
- Continue picking of cotton and harvesting of rice on bright sunny days.
- Prepare land and undertake sowing of *rabi* crops like wheat, linseed, lentil, gram and mustard. Undertake seed treatment with Thiram @ 1.5 g / kg seeds followed by biofertilizers before sowing. Select varieties from Navin Chandosi (H.I.1418), Vidisha (D.L.-788/2), G.W.-173, Aabha (H.I.-1454) for irrigated wheat.
- Undertake nursery sowing of cabbage, cauliflower and onion. If seedlings are at proper age, transplanting in the main field may be started.
- Undertake sowing of coriander, spinach and methi in the main field.
- Start land preparation and sowing of pea (Arkel). Undertake seed treatment with Vebistene @ 2.0 g per kg of seed before sowing.
- Start land preparation and planting of Berseem for green fodder.

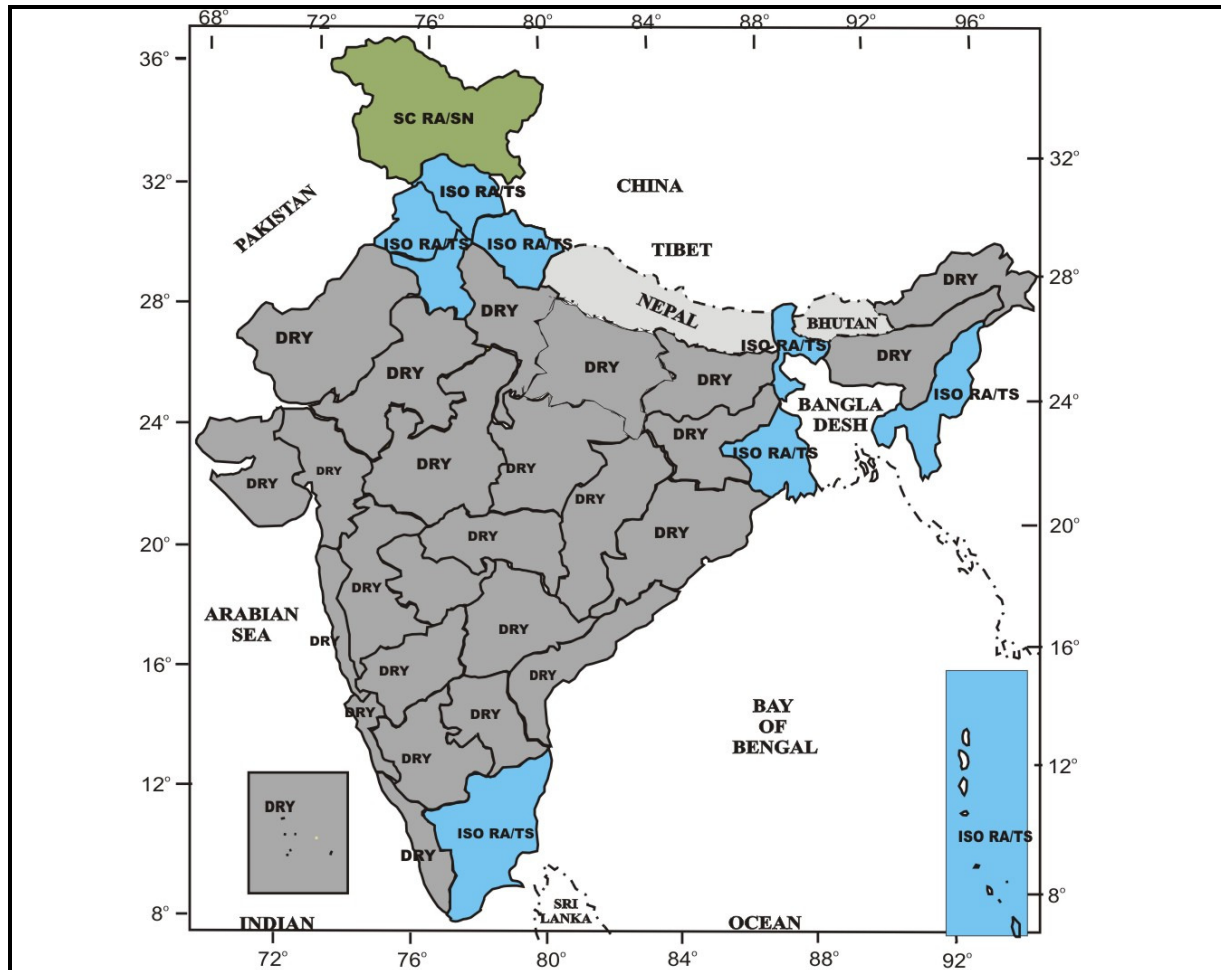
### **Orissa**

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

### **Advisories**

- As there was no significant 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 and pulse crops.
- Harvest the matured crops of rice.
- Continue field preparation and sowing of mustard. Sow irrigated mustard variety Parvati, Anuradha, P.T.303, Pusa agrani etc. using 3 to 4 kg of seed per acre. Treat the seed with Carbendazim @ 1.5 gm/kg of seed or 3gm Thiram @ 3gm/kg of seed. Apply 12kg N, 12 kg P, and 12 kg K per acre as basal fertilizer. Maintain a spacing of 30x10 cm.
- Complete field preparation and sowing of groundnut and sunflower. Select groundnut variety like A.K.1224 or Smruti and maintain a spacing of 30x10 cm. Select sunflower variety Morden or Sunrise or hybrid like KBSH 1 or KBSH 3. Use 4kg seed for variety and 2 kg seed for hybrid per acre. Apply 8kg N, 16kg P and 12kg K for variety per acre and for hybrid twice the quantity per acre.

## Forecast Valid upto 1<sup>st</sup> December 07



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

# *Salient weather features for the week ending 28/11/07*

## **METEOROLOGICAL ANALYSIS**

- Weak easterly waves sometimes embedded with cyclonic circulations at lower tropospheric levels passed through Andaman & Nicobar Islands, Southwest Bay of Bengal, extreme south peninsula and southeast Arabian Sea during the week.
- Last week's upper air cyclonic circulation over southwest Bay of Bengal and adjoining Comorin area and neighbourhood persisted on 22<sup>nd</sup> November in the lower tropospheric levels and moved away westwards thereafter.
- An upper air trough extended from Nagaland & Manipur to Sub-Himalayan West Bengal & Sikkim between 0.9 and 1.5 Km above mean sea level during 25<sup>th</sup> to 28<sup>th</sup> November.

## **RAINFALL**

Under the influence of the above systems:

- Isolated to scattered rain/thundershowers occurred over Andaman & Nicobar Islands during many days of the week.
- Isolated rain/thundershowers occurred over coastal Tamil Nadu and south Kerala on a few days of the week.
- Isolated rain/thundershowers occurred over Sub-Himalayan West Bengal & Sikkim on 27<sup>th</sup> & 28<sup>th</sup> November.
- Mainly dry weather prevailed over remaining parts of the country during the week.

## **MINIMUM TEMPERATURE**

- The minimum temperatures were below normal by 2-4°C over Jammu & Kashmir, Punjab and adjoining Haryana and by about 2°C over Jharkhand and Orissa during the week.
- They were above normal by 3-8°C over West Rajasthan and by 2-4°C over northeastern states and remaining parts of northwest & east India during the week.
- They were below normal by 2-7 °C over Maharashtra, South Madhya Pradesh, South Chhattisgarh and South India, outside Tamil Nadu and Kerala during many days of the week. They were also below normal by 2-5°C over Tamil Nadu and Kerala during a few days and normal during remaining 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 28<sup>TH</sup> NOVEMBER, 2007)**

Rainfall was excess/normal in 0, deficient/scanty in 9 and no rain in 27 out of 36 meteorological sub-divisions (Actual: 0.3 mm, Normal: 5.7 mm and Departure: -94 %).

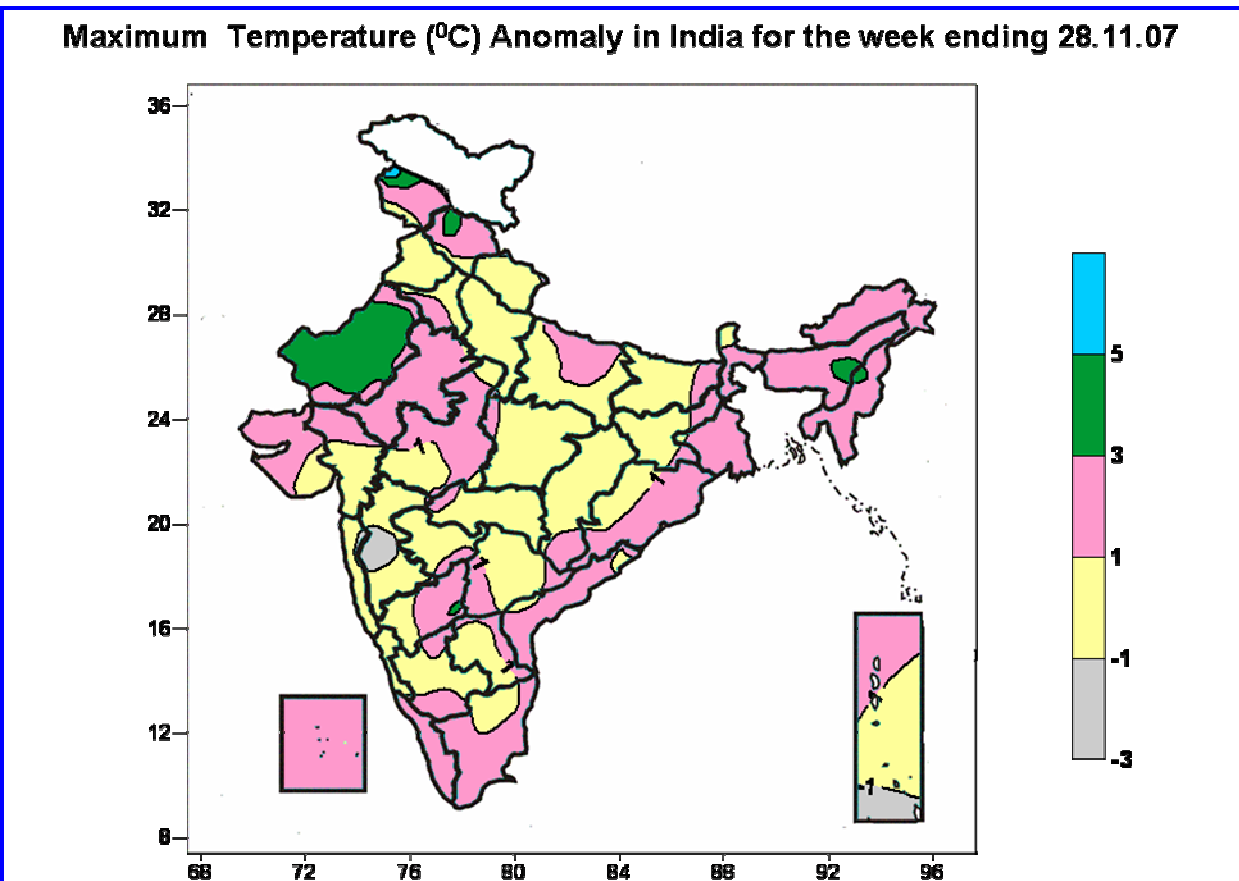
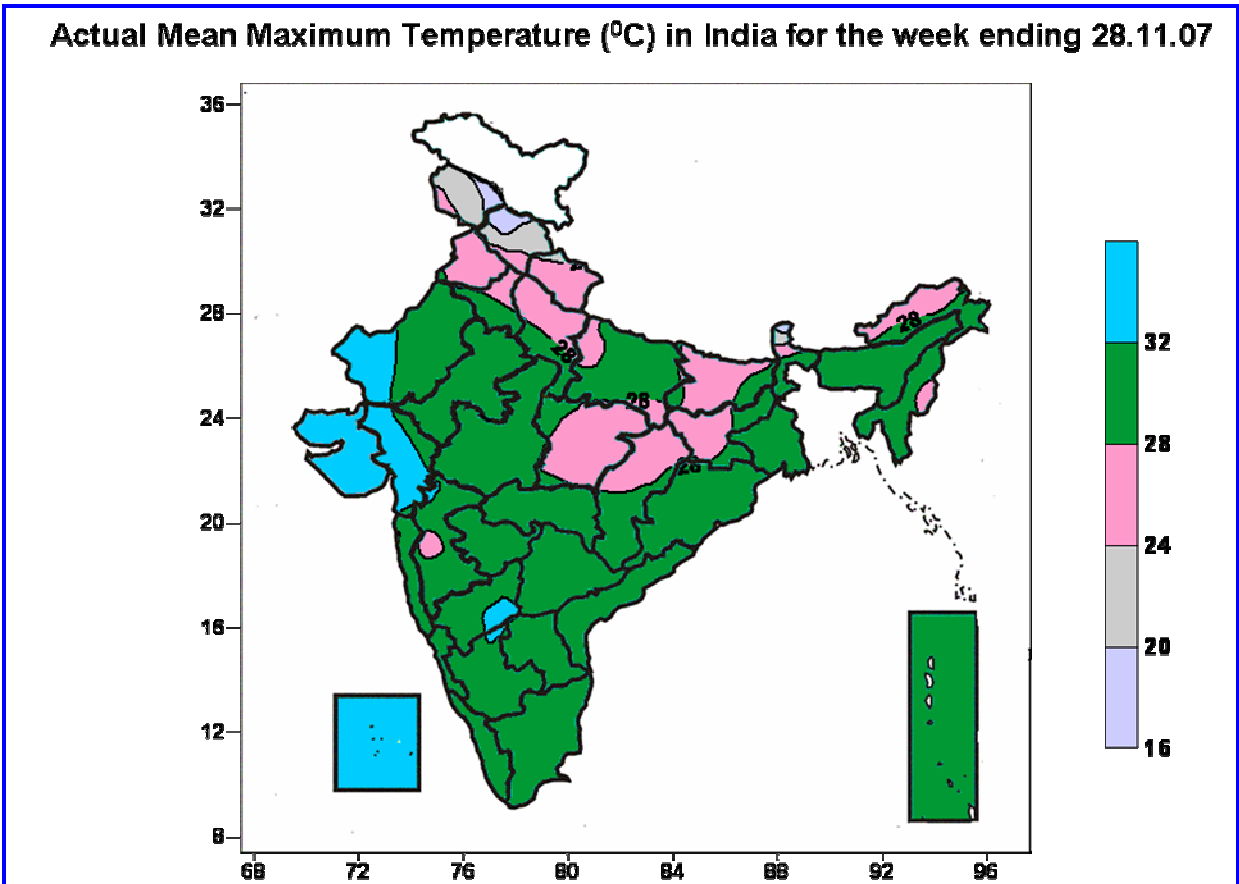
## **CUMULATIVE SEASONAL RAINFALL (1<sup>ST</sup> OCTOBER TO 28<sup>TH</sup> NOVEMBER, 2007)**

Rainfall was excess/normal in 11 and deficient/scanty in 23 and no rain in 2 out of 36 meteorological sub-divisions. (Actual: 69.3 mm, Normal: 106.8 mm and Departure: -35%).

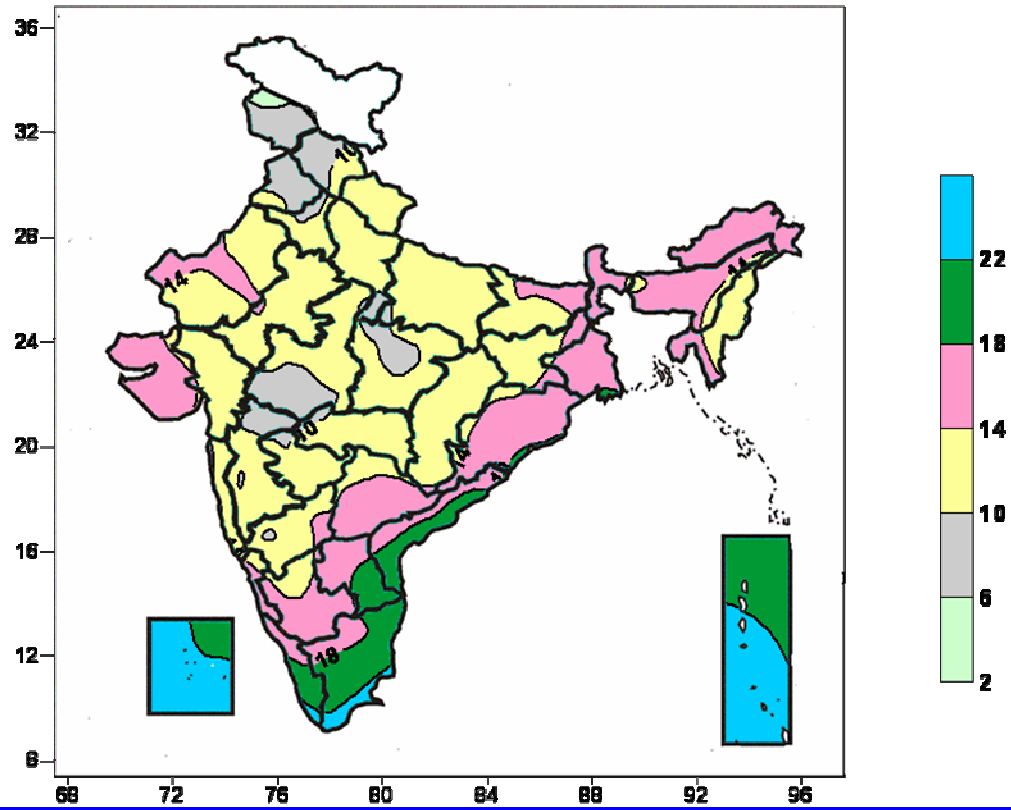
## **OUTLOOK FOR THE WEEK ENDING ON 5<sup>TH</sup> DECEMBER, 2007.**

- Under the influence of western disturbance, isolated to scattered precipitation is likely over western Himalayan Region and adjoining northern plains during the first half of the week.
- Increase in rainfall activity over extreme south peninsula.
- Fog condition is likely over plains of northwest India during second half of the week.

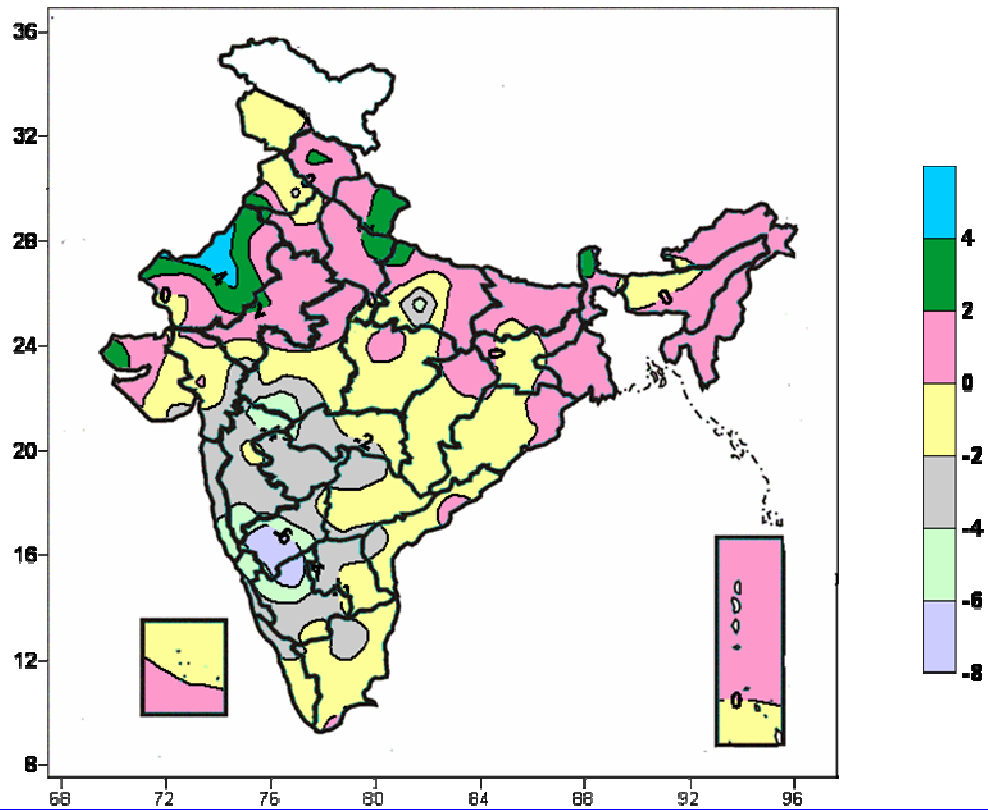
## Contour maps for the week ending 28<sup>th</sup> November, 2007



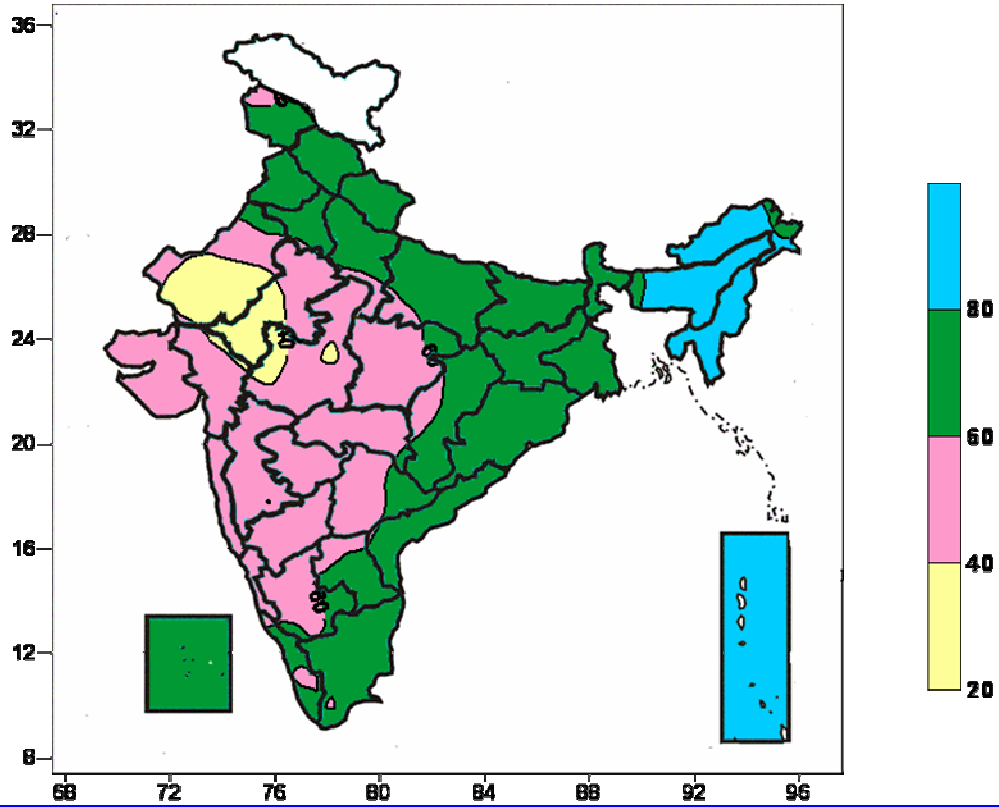
**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 28.11.07**



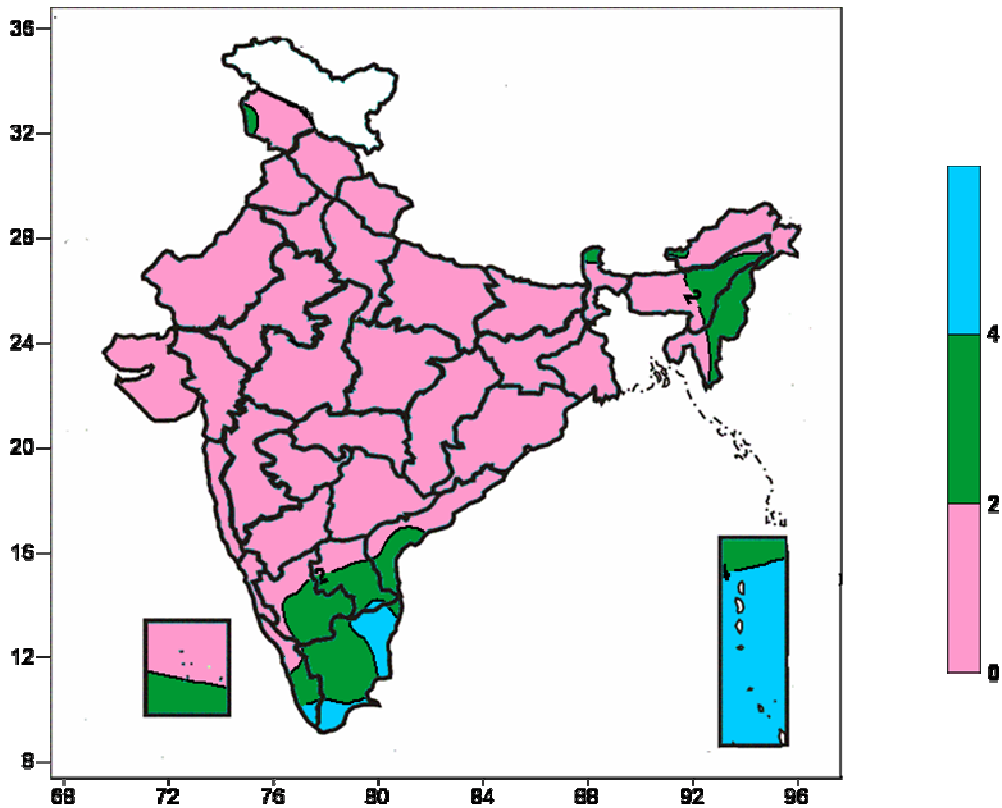
**Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 28.11.07**

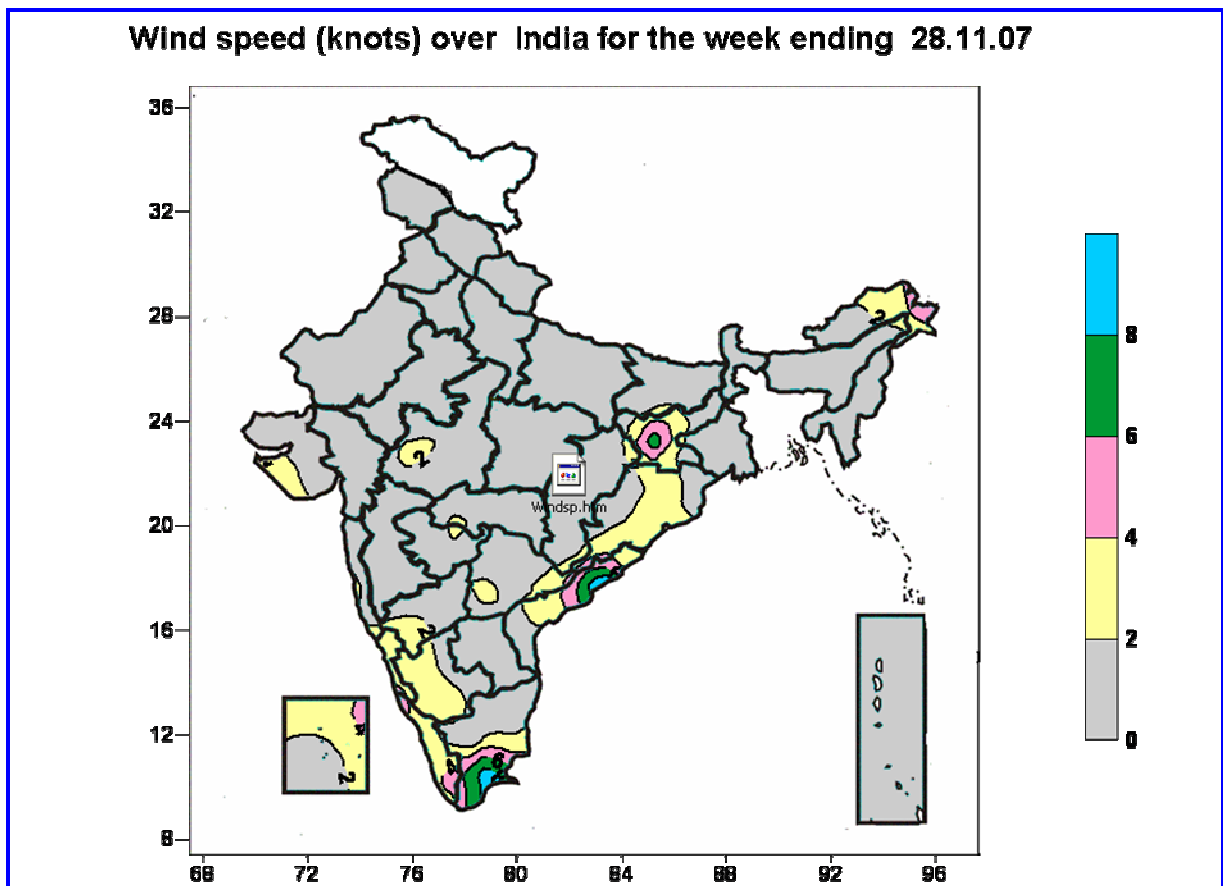


**Relative Humidity (%) over India for the week ending 28.11.07**



**Cloud amount (okta) over India for the week ending 28.11.07**





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                               |                              |                    |                  |                         |
|-------------------------------------|------------------------------|--------------------|------------------|-------------------------|
| <b>Vegetables</b>                   | <b>Early sown vegetables</b> | <b>Mustard</b>     | <b>Berseem</b>   | <b>Wheat</b>            |
| Sowing/Transplanting                | Vegetative                   | Vegetative         | Sowing           | Sowing                  |
| <b>Gram</b>                         | <b>Barley</b>                |                    |                  |                         |
| Vegetative                          | Vegetative                   |                    |                  |                         |
| Haryana                             |                              |                    |                  |                         |
| <b>Sugarcane / Autumn sugarcane</b> | <b>Horticultural crops</b>   | <b>Cotton</b>      | <b>Paddy</b>     | <b>Kharif Groundnut</b> |
| Vegetative / early vegetative       | Vegetative                   | Picking            | Grain harvesting | Harvesting              |
| <b>Rabi oilseeds</b>                | <b>Wheat</b>                 | <b>Rabi Pulses</b> |                  |                         |
| Early vegetative / vegetative       | Sowing                       | Sowing             |                  |                         |



### Himachal Pradesh

| Vegetables (Ladies finger/ Cabbage, Cauliflower)                     | Potato                | Apple        | Toria      | Wheat / Barley / Gram / Oil seeds  |
|--|-----------------------|--------------|------------|--|
| Vegetative/ head formation<br>Ladies finger --<br>Flowering/Fruiting | Maturity / harvesting | New planting | Vegetative | Land preparation & sowing<br>Early sown crops – germination / early vegetative |

### Jammu & Kashmir

| Vegetable crops        | Rice                   | Pulses / wheat / brown sarsun               | Mustard, gobe sarson                      | Barley, Oat               |
|------------------------|------------------------|---|---|---------------------------|
| Sowing / transplanting | Harvesting- Jammu div. | Land preparation for sowing in Kashmir div. | Land preparation for sowing in Jammu div. | Land preparation / sowing |

### Punjab

| Sugarcane               | Horticultural crop | Rabi pulses             | Cotton                        | Cabbage / garlic / pea / potato |
|-------------------------|--------------------|-------------------------|-------------------------------|---------------------------------|
| Vegetative              | Vegetative         | Sowing                  | Picking                       | Sowing                          |
| <b>Kharif Groundnut</b> | <b>Wheat</b>       | <b>Autumn sugarcane</b> | <b>Rabi Oilseeds</b>          | <b>Irrigated toria</b>          |
| Harvesting              | Sowing             | Early vegetative        | Early vegetative / vegetative | Flowering / fruiting            |

### Rajasthan

| Wheat                    | Early sown wheat     | Rabi crops(Mustard, Barley, taramira, gram) | Early sown rabi crops | Potato   |
|--------------------------|----------------------|---|-----------------------|----------|
| Sowing                   | Germination          | Sowing                                      | Germination           | Planting |
| <b>Early sown potato</b> | <b>Guar / Cotton</b> |   |                       |          |
| Sprouting                | Harvesting / Picking |   |                       |          |

### Uttar Pradesh

| Sugarcane                  | Kharif Vegetables               | Winter vegetables           | Rice                        | Toria        |
|----------------------------|---------------------------------|-----------------------------|-----------------------------|--------------|
| Cane maturity              | Flowering / fruiting / maturity | Vegetative / flowering      | Harvesting                  | Vegetative   |
| <b>Wheat</b>               | <b>Early sown wheat</b>         | <b>Rabi pulses</b>          | <b>Rai , mustard</b>        | <b>Mango</b> |
| Field preparation & sowing | Seedling                        | Seedling / early vegetative | Seedling / early vegetative | Vegetative   |

### Uttarakhand

| Pea                            | Toria               | Sugarcane                        | Potato       | Kharif Rice |
|--------------------------------|---------------------|----------------------------------|--------------|-------------|
| Flowering                      | Pod formation       | Maturity                         | Tuber growth | Harvesting  |
| <b>FingerMillet/ Amranthus</b> | <b>Mango/Litchi</b> | <b>Wheat</b>                     |              |             |
| Maturity                       | Vegetative          | Seedling / crown root initiation |              |             |

### Assam

| Winter vegetables   | Sugarcane                 | Arhar                       | Sali rice             | Black Gram & Green Gram   |
|---|---------------------------|-----------------------------|-----------------------|---------------------------|
| Land preparation & sowing / transplanting<br>Early sown – early vegetative / vegetative | Harvesting                | Flowering / pod formation   | Maturity / harvesting | Pod maturity / harvesting |
| <b>Rabi crops</b>   | <b>Wheat</b>              | <b>Horticultural plants</b> |                       |                           |
| Land preparation & sowing<br>Early sown – early vegetative / vegetative                 | Land preparation & sowing | Planting                    |                       |                           |

### Arunachal Pradesh

| WRC Rice               | Ginger                 | Millet                  | Jhum Paddy | Potato           |
|------------------------|------------------------|-------------------------|------------|------------------|
| Harvesting             | Harvesting             | Harvesting              | Harvesting | Early vegetative |
| <b>Rabi Vegetables</b> | <b>Wheat / Mustard</b> | <b>Pea / rabi maize</b> |            |                  |
| Vegetative             | Early vegetative       | Early vegetative        |            |                  |

**Bihar**

|                                     |                     |              |                  |                    |
|-------------------------------------|---------------------|--------------|------------------|--------------------|
| <b>Vegetables &amp; fruit crops</b> | <b>Maize fodder</b> | <b>Arhar</b> | <b>Sugarcane</b> | <b>Kharif rice</b> |
| Sowing                              | Early vegetative    | Vegetative   | Vegetative       | Maturity           |
| <b>Rabi oilseeds, wheat</b>         |                     |              |                  |                    |
| Sowing                              |                     |              |                  |                    |

**Jharkhand**

|                    |               |   |   |
|--------------------|---------------|---|---|
| <b>Kharif rice</b> | <b>Potato</b> | <b>Vegetables (Tomato, Brinjal, Bhendi)</b> | <b>Upland crops (Maize, arhar, groundnut, soybean, urad, rice and ragi)</b> |
| Grain maturity     | Planting      | Early vegetative                            | Harvesting  |
| <b>Pea, gram</b>   | <b>Potato</b> | <b>Wheat</b>                                |   |
| Sowing             | Planting      | Sowing                                      |   |

**Sikkim**

|                            |   |                       |               |                                    |
|----------------------------|---|-----------------------|---------------|------------------------------------|
| <b>Orange</b>              | <b>Vegetables (Cauliflower, Cabbage, Carot, Beat, tomato)</b> | <b>Large Cardamom</b> | <b>Ginger</b> | <b>Rice</b>                        |
| Harvesting                 | Early vegetative / vegetative                                 | Nursery sowing        | Harvesting    | Harvesting (in low and high hills) |
| <b>Mustard &amp; wheat</b> | <b>Early sown wheat &amp; mustard</b>                         |                       |               |                                    |
| Sowing                     | Early vegetative  |                       |               |                                    |

**West Bengal**

|  |                   |               |                             |   |
|--|-------------------|---------------|-----------------------------|---|
| <b>Sugarcane</b>   | <b>Groundnut</b>  | <b>Arhar</b>  | <b>Aman rice</b>            | <b>Mustard / Rapeseed / Wheat / gram / lentil</b> |
| Cane development   | Pod maturity      | Pod formation | Grain maturity / harvesting | Land preparation / sowing                         |
| <b>Early sown Mustard / Rapeseed / Wheat / gram / lentil</b> | <b>Rabi arhar</b> | <b>Potato</b> | <b>Sunflower</b>            | <b>Early sown Sunflower</b>                       |
| Germination / early vegetative                               | Sowing            | Planting      | Land preparation / sowing   | Germination / early vegetative                    |

**Chattisgarh**

|                   |   |  |                             |                               |
|-------------------|---|--|-----------------------------|-------------------------------|
| <b>Sugarcane</b>  | <b>Rapeseed, Toria, Niger</b>                   | <b>Early sown mustard, Toria and niger</b> | <b>Kharif Rice</b>          | <b>Tomato, Brinjal, Chili</b> |
| Vegetative        | Land preparation & sowing<br>Toria - vegetative | Germination / early vegetative             | Grain maturity / harvesting | Vegetative / flowering        |
| <b>Rabi crops</b> | <b>Potato</b>                                   | <b>Wheat</b>                               |                             |                               |
| Land preparation  | Land preparation / planting                     | Land preparation / sowing                  |                             |                               |

**Gujarat**

|                                |   |                 |                            |   |
|--------------------------------|---|-----------------|----------------------------|---|
| <b>Sugarcane</b>               | <b>Mustard / wheat</b>                    | <b>Castor</b>   | <b>Kharif Rice</b>         | <b>Kharif Cotton</b>                    |
| Early cane maturity/harvesting | Land preparation & Sowing                 | Spike formation | Milking / dough / maturity | Boll formation/ boll maturity / picking |
| <b>Early sown wheat</b>        | <b>Early sown mustard</b>                 |                 |                            |   |
| Germination / early vegetative | Germination / early vegetative/vegetative |                 |                            |   |

**Maharashtra**

|  |   |   |   |  |
|--|---|---|---|--|
| <b>Sugarcane Preseasonal (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> | <b>Sugarcane (Suru) (Madhya Maharashtra, Marathwada and Vidarbha)</b>   | <b>Irrigated cotton (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> | <b>Kharif Rice (Konkan)</b>                                       | <b>Kharif Rice (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> |
| Active growth / elongation   | Active growth / elongation  | Boll maturity / picking   | Grain maturity / harvesting                                       | Grain formation / grain maturity                                   |
| <b>Kharif Jowar (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>          | <b>Kharif Groundnut (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> | <b>Kharif Cotton (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>    | <b>Kharif Tur (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> | <b>Rabi Jowar</b>  |

|  |  |   |  |                                |
|--|--|---|--|--------------------------------|
| Grain maturity / harvesting                            | Pod maturity / harvesting                                    | Boll formation / maturity                                   | Pod formation  | Sowing                         |
| <b>Rabi potato</b>                                     | <b>Rabi onion</b>  | <b>Gram (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> | <b>Wheat (Konkan, Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> | <b>Early sown jowar</b>        |
| Planting<br>Early planted - sprouting                  | Planting   | Seedling/early vegetative                                   | Sowing   | Germination / early vegetative |
| <b>Rabi safflower</b>                                  | <b>Maize (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b> |   |  |                                |
| Sowing.<br>Early sown – germination / early vegetative | Sowing<br>Early sown – Germination/early vegetative          |   |  |                                |

#### Madhya Pradesh

|                  |                    |   |   |               |
|------------------|--------------------|---|---|---------------|
| <b>Sugarcane</b> | <b>Kharif rice</b> | <b>Rabi crops (wheat, linseed, lentil, gram, mustard)</b> | <b>Rabi vegetables (cabbage, cauliflower, onion)</b>          | <b>Cotton</b> |
| Grand growth     | Harvesting         | Sowing /<br>Early sown crops are at germination stage     | Nursery sowing /<br>Early sown crops are at germination stage | Harvesting    |
| <b>Pea</b>       | <b>Barseem</b>     |   |   |               |
| Sowing           | Sowing             |   |   |               |

#### Orissa

|                          |                    |                  |                           |                       |
|--------------------------|--------------------|------------------|---------------------------|-----------------------|
| <b>Kharif vegetables</b> | <b>Kharif rice</b> | <b>Sugarcane</b> | <b>Arhar</b>              | <b>Mung &amp; urd</b> |
| Vegetative / fruiting    | Maturity           | Vegetative       | Flowering / pod formation | Vegetative            |
| <b>Rabi oilseeds</b>     |                    |                  |                           |                       |
| Sowing                   |                    |                  |                           |                       |

#### Andhra Pradesh

|                    |                      |                         |                                 |  |
|--------------------|----------------------|-------------------------|---------------------------------|--|
| <b>Kharif Rice</b> | <b>Kharif Cotton</b> | <b>Kharif Groundnut</b> | <b>Rabi red gram / chillies</b> |  |
| Harvesting         | Picking              | End Harvesting          | Vegetative                      |  |

#### Karnataka

|                                |  |  |  |  |
|--------------------------------|--|--|--|--|
| <b>Sugarcane (Ratoon crop)</b> | <b>Rabi Jowar/Maize/Cotton/Sunflower</b> |  |  |  |
| Grand growth                   | Vegetative                               |  |  |  |

#### Kerala

|               |                             |  |  |  |
|---------------|-----------------------------|--|--|--|
| <b>Rubber</b> | <b>Mundakkan Rice</b>       |  |  |  |
| Tapping       | Flowering / grain formation |  |  |  |

#### Tamil Nadu

|                          |                                      |   |  |                  |
|--------------------------|--------------------------------------|---|--|------------------|
| <b>Rice (Samba)</b>      | <b>Sugarcane (Early, Mid season)</b> | <b>Maize</b>                            | <b>Groundnut/Black gram/Green gram/Red gram</b>            | <b>Cotton</b>    |
| Vegetative               | Cane development / maturity          | Grain formation                         | Sowing   | Picking          |
| <b>Jowar/Bajra/Samai</b> | <b>Special season sugarcane</b>      | <b>Early sown jowar / bajra / samai</b> | <b>Early sown Groundnut/Black gram/Green gram/Red gram</b> | <b>Coriander</b> |
| Sowing                   | Grand growth                         | Early vegetative / vegetative           | Early vegetative / vegetative                              | Sowing           |

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