



Summary of Agromet Advisory Services for different States of the country

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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.
- 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 sugarcane and Horticultural crops.
- Continue sowing 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 liter 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.
- Mainly dry weather is likely over 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 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.
- Continue 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 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 by utilizing residual moisture.
- This is proper time for land preparation and planting of potato in and around Bharatpur. Select varieties from 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 varieties from 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 P₂O₅ per ha.

Uttar Pradesh

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

Advisories

- As there was no rainfall in the State during last week and mainly dry weather is likely over U.P for the next three days, apply irrigation to the vegetable and toria.
- Prepare the field and undertake sowing of potato, garlic and pea.
- Complete field preparation and sowing of rai, mustard, gram, pea, masoor and other pulse crop.
- Spray the solution of Dimethoate 1.5 ml / litre of water to control stemborer 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 125 kg / hectare after seed treatment with 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 in all divisions of the State.
- Mainly dry weather is likely over the State.

Advisories

- As there was no significant rainfall over the State during last week and mainly dry weather 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. For securing optimum yield, sowing time for timely sown crops of wheat for the State is last week of October to mid November in low hills and mid hills. 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.

Uttarakhand

- Mainly dry weather prevailed during the period. Sky remained mainly clear during the period.
- Mainly dry weather is likely over 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 light 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 using certified seeds.

Jammu & Kashmir

- Mainly dry weather is likely over the State.

Advisories

- Apply irrigation to vegetable and fruit crops in Kashmir division and to vegetables, toria and fruit crops in Jammu division as dry weather is likely to prevail over the State for the next three days.
- Stop irrigation 10-15 days before harvesting of rice in Jammu division. Continue harvesting of the matured crop.
- 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 %.
- 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, 60 kg P₂O₅ and 40 kg K₂O as basal dose.
- 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 in Jammu division and pea, lentil, chickpea etc. in Kashmir division.

Delhi

- Whether 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 and mustard.
- Prepare land and undertake transplanting of 5 – 6 weeks old seedlings of cauliflower, tomato and brinjal in the main field.

- Continue sowing varieties like Janani 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.
- Undertake sowing of barseem varieties like Pusa Joint Tetraploid or maskavi. Treat the seeds with Rhizobium culture before sowing. Barley and Mustard seeds may be mixed with Barseem for good first cutting.
- Prepare field and undertake sowing of wheat. Use varieties like HD 2338, HD 2329, HD 2687, HD 2428, Raj 3077, CPAN-2004, PBW-502 etc. for sowing.
- Prepare field and undertake sowing of gram. Use varieties like Pusa 362, pusa 372 and Pusa 1003 (Kabuli Chana) etc. for sowing under irrigated condition.
- Prepare field and undertake sowing of barley. It is recommended to sow varieties like Jyoti, BG-25, DL-70 and Ratna etc. Adopt seed rate of 75 – 100 kg / ha.

Southern Region (AP, Tamilnadu, Karnataka and Kerala)

Kerala

- Northeast monsoon was weak over Kerala on 20th November. Rain occurred at a few places on 21st and at isolated places on 20th November. Dry weather prevailed on 19th November.
- Rain / thundershowers are likely at isolated places over the State.

Advisories

- As there was no significant rainfall in all the districts over the State during last week and rain / thundershower is likely to occur only at isolated places for the next three days, apply irrigation to plantation crops viz., coconut, arecanut, rubber and banana.
- 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 g mixed with 200 g fine sand to control rhinoceros beetle. As a prophylactic measure spray crowns and leaves with 1% Bordeaux mixture or 0.5% copper oxychloride formulation or 0.4% Mancozeb. 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 feed with Tridemorph 5% to prevent further spread of lesions. Undertake prophylactic spraying with 2% neem oil + garlic emulsion in the crown and bunches, 2nd – 7th 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 oxychloride @ 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. Apply *Pseudomonas* culture @ 25 kg / ha mixed with 50 kg of cow dung to control blast & bacterial blight disease.

Tamilnadu

- Northeast monsoon was active over Coastal Tamilnadu on 20th and over Tamilnadu on 21st November. Rainfall occurred at most places over Coastal Tamilnadu, at a few places over Interior Tamilnadu on 20th at many places over Tamilnadu on 21st and at one or two places on 19th November.

- Rain/thundershowers are likely at a few places over South Tamilnadu and at isolated places over North Tamilnadu State.

Advisories

- As there was no significant rainfall during last week and rain/thunder showers are likely to occur only at isolated/a few places over Tamil Nadu 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 Zn SO₄ @ 10kg / acre by mixing with 20 kg of sand. If needed ZnSO₄ can also be given as foliar spray by mixing 1 kg of ZnSO₄ 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 @ 100 g or Ediphenphos @ 200 ml or Tricyclozole @ 200 g by mixing with 200 litres of water using the hand sprayer.
- Monitor maize for stem borer and aphids and if the pest population crosses ETL, spray Carbaryl 50% WP @ 400 g / acre to control the pest.
- 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 of 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. For rainfed crop, seed rate @ 10 kg/acre 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

- Rainfall occurred at a few places on 20th and at isolated places on 19th and 21st November over South Interior Karnataka. Dry weather prevailed over Coastal Karnataka and North Interior Karnataka.
- 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.
- Complete harvesting of matured *kharif* crops of maize and jowar and picking of cotton on bright sunny days.
- Undertake intercultural operations and application of fertilizers 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

- Northeast monsoon was active over Rayalaseema on 20th November. Isolated rain occurred over Coastal Andhra Pradesh on 19th to 21st and over Rayalaseema on 19th & 21st November. Weather was generally dry elsewhere over the state during the week.

- Rain/thundershowers are likely at isolated places over Rayalseema and South Coastal Andhra Pradesh. Mainly dry weather is likely over rest region of the State.

Advisories

- As rain/thundershowers are likely at isolated places over Rayalseema and South Coastal Andhra Pradesh and dry weather is likely to prevail over rest region for the next three days, apply irrigation to red gram and chillies.
- Complete harvesting of groundnut and continue harvesting of rice on bright sunny days.
- Continue picking of cotton on bright sunny days.
- 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.
- 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 ZnSo₄ @ 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 dry weather is likely over the State.

Advisories

- As there was no significant rain in Barpeta, Bongaigaon and Dhubri districts of 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 in these districts. As there was sufficient rain during last week in remaining districts, postpone irrigation to the 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 rod 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 start sowing of wheat. Wheat may be sown from 1st week of November to 1st 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

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

Bihar

- Weather was 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 arhar, fodder, maize and sugarcane.
- Continue sowing of raddish, carrot, spinach, chillies, fodder maize, 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 seeds of rai variety Kranti, Varuna, Pusa bold 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 week 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, K 8962 for rainfed conditions.

Sikkim

- Very light rain occurred at isolated places on 17th November. Weather was mainly dry over East Sikkim on rest of the days during the week. Rainfall was scanty over East Sikkim during the period.
- Mainly dry weather is likely over the State.

Advisories

- As there was no significant rainfall during last week and mainly dry weather is likely over the State, apply irrigation to *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root crops.
- Withhold irrigation 10-15 days before harvesting of rice. Arrange for harvesting of matured crop on bright sunny days.
- Complete harvesting of large cardamom and 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 19th to 21st November.
- Mainly dry weather is likely to prevail over the State.

Advisories

- As there was no significant rainfall in Hooghly, Howrah, Midnapore, Purulia, Coochbehar, Darjeeling, Jalpaiguri and Dinajpur (S) districts of the State during last week and mainly dry weather is likely to prevail for next three days, apply irrigation to sugarcane and arhar and already sown *rabi* crops like mustard, rapeseed, gram, lentil, *rabi* arhar, potato and sunflower in these districts. As there was sufficient rain during last week in remaining districts, postpone irrigation to the crops.
- Drain out water from the field 10 – 15 days before harvesting of *aman* rice. Continue harvesting of already matured crops on bright sunny days.
- Prepare land and continue sowing of mustard, rapeseed, 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 P₂O₅ and 35 kg K₂O as a basal dose in irrigated areas. In non-irrigated areas the dose will be 20 kg N, 60 kg P₂O₅ and 35 K₂O. 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, *kharif* cotton and castor and early sown mustard and wheat.

- 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.
- Complete sowing of mustard variety G-Mustard 1-2-3 & Varuna with basal fertilizer doze of 25kg. Nitrogen & 50 kg Phosphorous per hectare. Wherever deficiency of sulphur in soil apply 40 kg sulphur as a basal doze.
- 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 P₂O₅ 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 mainly 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.
- 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 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 *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.

Maharashtra

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

Advisories

- As there was no significant rain in most of the districts of the State during last few weeks & 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. Cold wave condition prevailed in parts of West M.P. on 21st November.
- Mainly dry weather is likely over the State.

Advisories

- As dry weather prevailed during last week in most of the districts 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 / harvesting of cotton and rice on bright sunny days.
- Undertake sowing of *rabi* crops like wheat, linseed, lentil, gram and mustard by utilizing residual moisture. Undertake seed treatment with Thiram @ 1.5 g / kg seeds followed by biofertilizers before sowing.
- Undertake nursery sowing and transplanting of cabbage, cauliflower and onion.
- Undertake sowing of coriander, spinach and methi in the main field.
- Start land preparation and sowing of pea (Arkel). Undertake seed treatment with bavistin @ 2.0 g per kg of seeds before sowing.
- Start land preparation and planting of Berseem for green fodder.

Orissa

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

Advisories

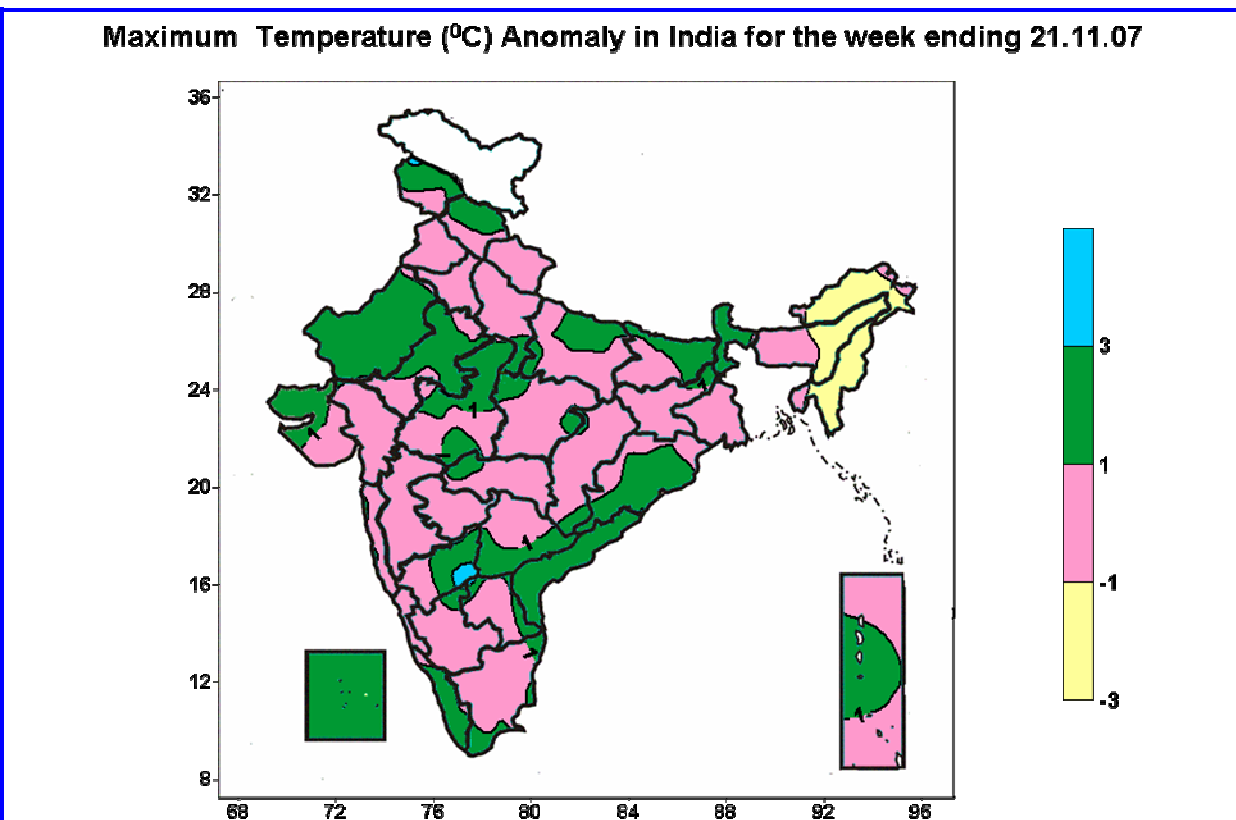
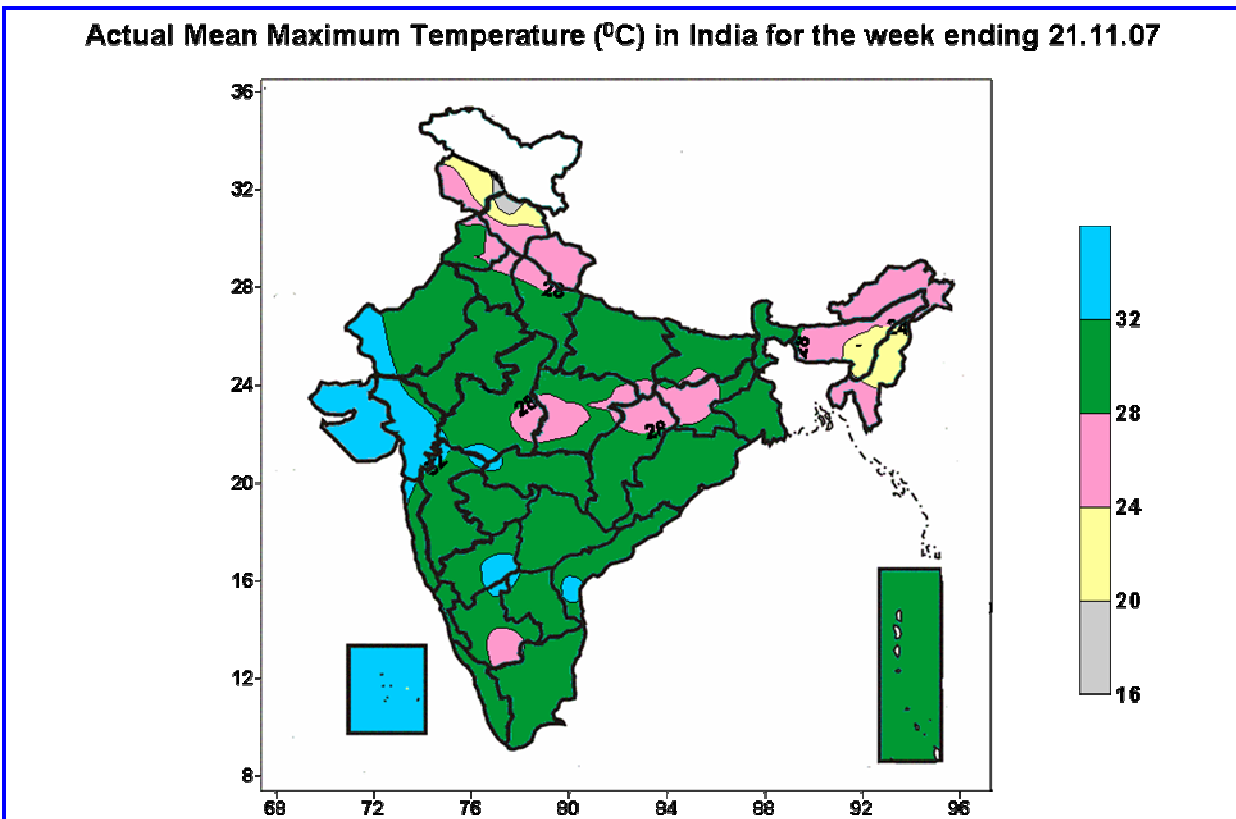
- As there was no significant rainfall over the State during last week and mainly dry weather is likely to prevail over the State for the next three days, apply irrigation to vegetables, sugarcane and pulse crops.
- Harvest the matured crops of rice.
- Continue field preparation and sowing of mustard. 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 g / kg of seed or 3g Thiram @ 3g / kg of seeds. Apply 12 kg N, 12 kg P₂O₅, and 12 kg K₂O per acre as basal fertilizer dose. 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 4 kg seeds for variety and 2 kg seeds for hybrid varieties per acre. Apply 8 kg N, 16 kg P and 12 kg K per acre and for hybrid varieties twice the quantity per acre.

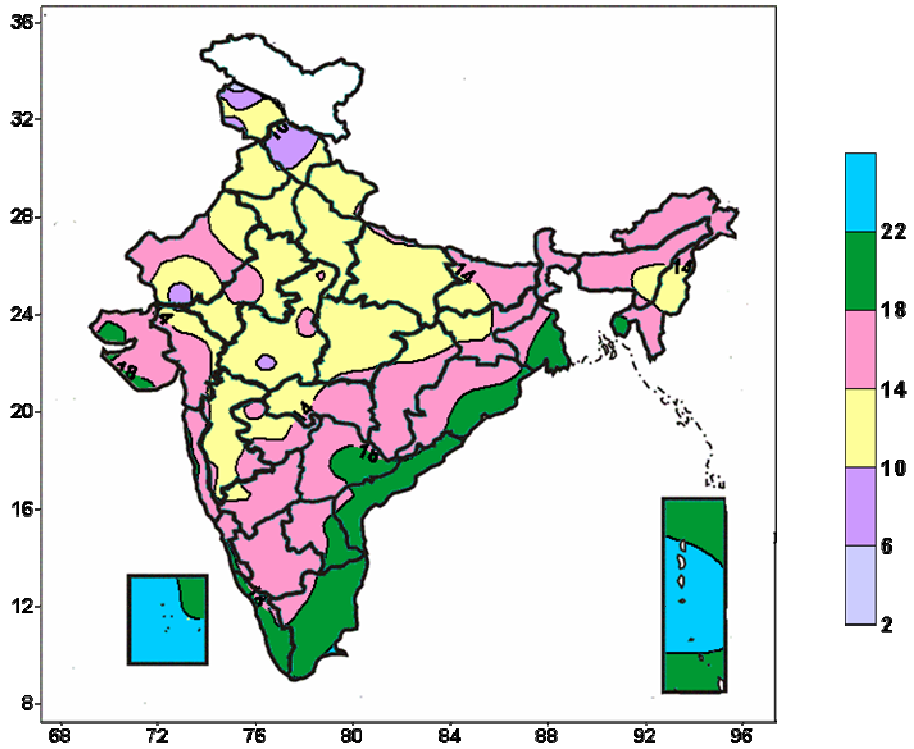
Forecast Valid upto 25th November 07

Forecast valid upto 0830 hrs IST of 25th November, 2007	
NORTH-WEST INDIA (J & K, H. P., Uttarakhand, Punjab, Delhi, Haryana, West U.P.)	<ul style="list-style-type: none"> • Mainly dry weather is likely over the region
EAST INDIA (East U.P., Bihar, Jharkhand, West Bengal & Sikkim, Orissa)	<ul style="list-style-type: none"> • Mainly dry weather is likely over the region
NORTH-EAST INDIA (Arunachal Pradesh, Assam, Meghalaya, NMM & T)	<ul style="list-style-type: none"> • Isolated rain/thundershowers are likely over Nagaland, Manipur Mizoram & Tripura. • Mainly dry weather is likely over the rest region.
SOUTH INDIA (Tamil Nadu, Andhra Pradesh, Kerala, Karnataka, Andaman & Nicobar Islands, Lakshadweep)	<ul style="list-style-type: none"> • Rain/thundershowers are likely at a few places over Andaman & Nicobar Islands, south Tamil Nadu and Lakshadweep. • Rain/thundershowers are likely at Isolated places over north Tamil Nadu, Rayalaseema, south Coastal Andhra Pradesh and Kerala. • Mainly dry weather is likely over the rest region.
WEST INDIA (Maharashtra (Other Than Vidarbha), Goa, Gujarat, Rajasthan)	<ul style="list-style-type: none"> • Mainly dry weather is likely over the region.
CENTRAL INDIA (M.P., Chattisgarh, Vidarbha)	<ul style="list-style-type: none"> • Mainly dry weather is likely over the region.
Outlook for subsequent two days from 0830 hours IST of 25th November, 2007 (Based on numerical weather products):	
➤ Isolated rain/thundershowers are likely over extreme south peninsula and northeastern States.	

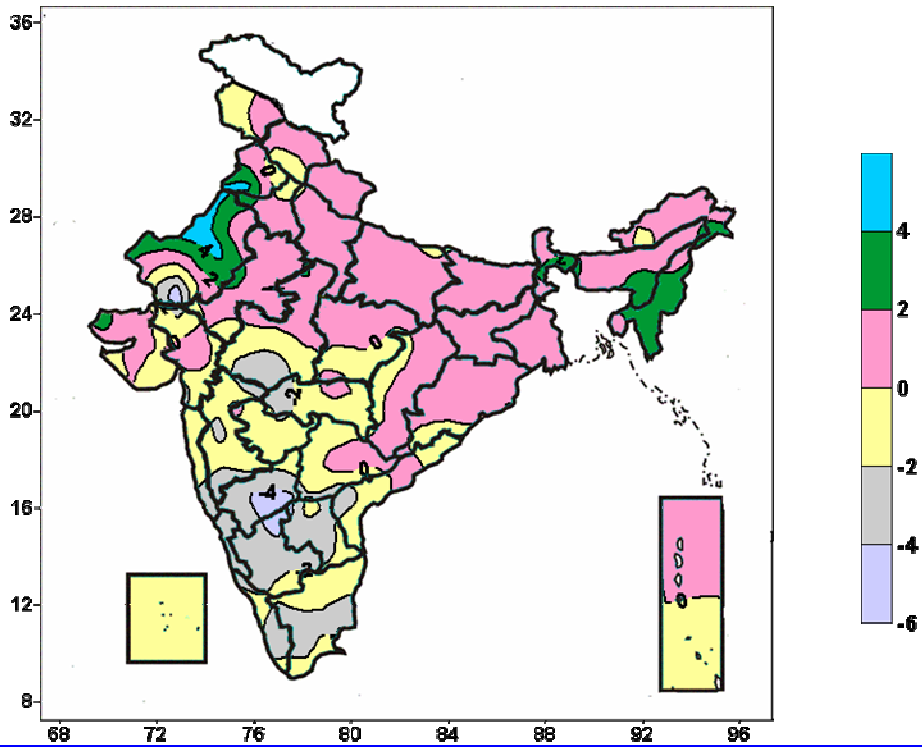
Contour maps for the week ending 21st November, 2007



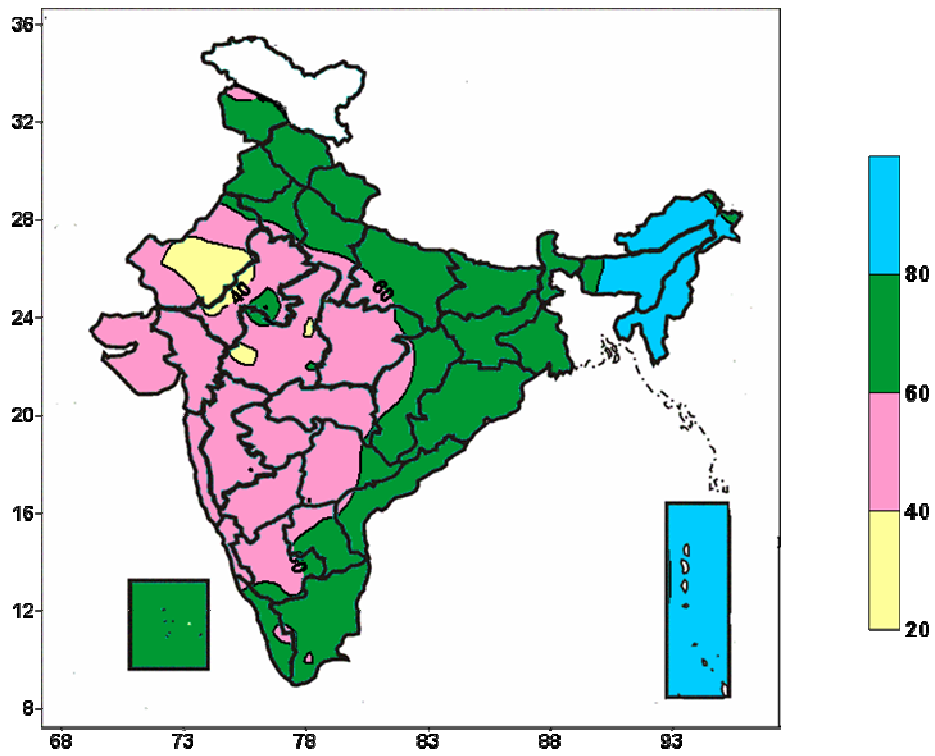
Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 21.11.07



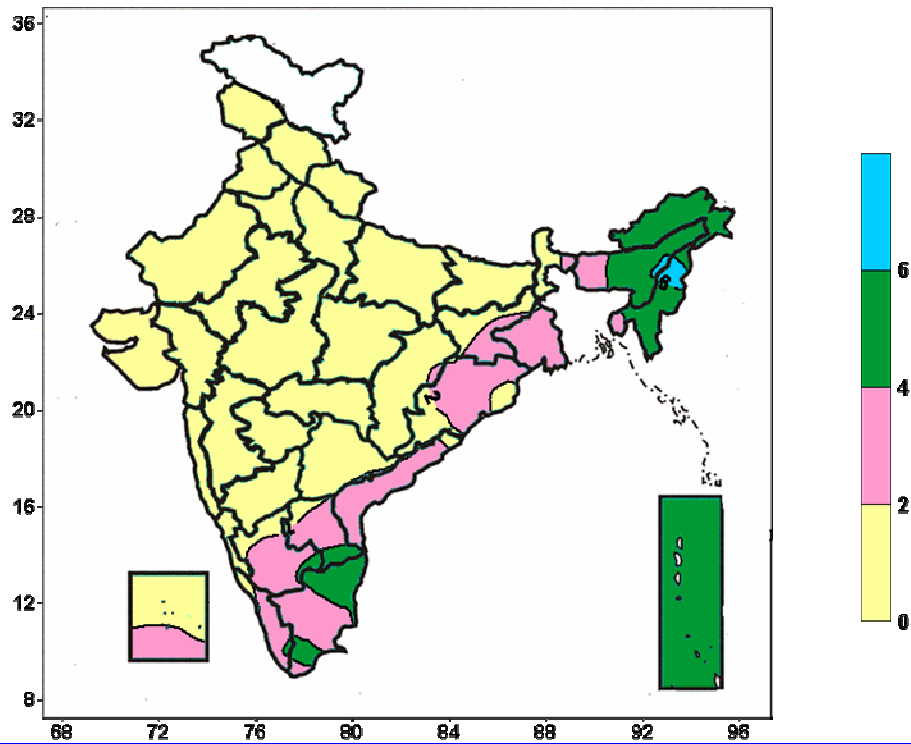
Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 21.11.07



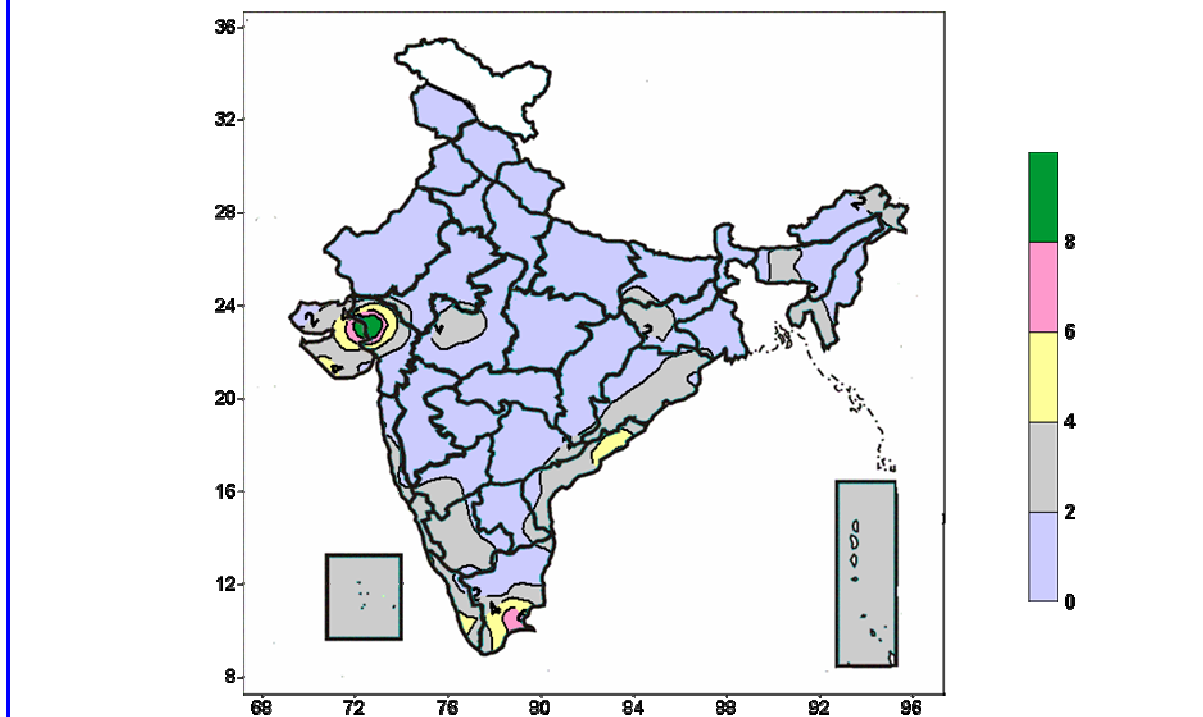
Relative Humidity (%) over India for the week ending 21.11.07



Cloud amount (okta) over India for the week ending 21.11.07



Wind speed (knots) over India for the week ending 21.11.07



Desert Locust Forecasting



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

CROP - STATE - STAGE

Delhi

Vegetables	Early sown vegetables	Mustard	Berseem	Wheat, Gram, Barley
Sowing/Transplanting	Vegetative	Vegetative	Sowing	Sowing
Haryana				
Sugarcane	Horticultural crops	Cotton	Rabi oilseeds	Kharif Groundnut
Vegetative	Vegetative	Picking	early vegetative / vegetative	Pod maturity / harvesting
Rabi Pulses	Wheat			
Sowing	Sowing			

Himachal Pradesh

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

Jammu & Kashmir

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

Punjab

Sugarcane	Horticultural crop	Rabi pulses	Cotton	Cabbage / garlic / pea / potato
Vegetative	Vegetative	Sowing	Picking	Sowing
Kharif Groundnut	Wheat	Autumn sugarcane	Rabi oilseeds	
Pod maturity / harvesting	Sowing	Early vegetative	early vegetative / vegetative	

Rajasthan

Wheat	Cotton	Rabi crops(Mustard, taramira, gram)	Potato	Early sown rabi crops
Sowing	Picking	Sowing	Planting	Germination

Uttar Pradesh

Sugarcane	Kharif Vegetables	Rice	Toria	Rai, mustard
Cane maturity	Flowering / fruiting / maturity	Harvesting	Early vegetative	Seedling
Winter vegetables	Rabi pulses	Wheat	Early sown Wheat	
Vegetative / flowering	Seedling	Field preparation & sowing	Seedling	

Uttarakhand

Pea	Toria	Sugarcane	Potato	Wheat
Vegetative / flowering	Flowering / seed formation	Maturity	Vegetative / tuber formation	Seedling / crown root initiation
Kharif Rice				
Harvesting				

Assam

Winter vegetables	Sugarcane	Arhar	Sali rice	Black Gram & Green Gram
Land preparation & sowing Early sown – early vegetative	Harvesting	Flowering / pod formation	Grain maturity / harvesting	Pod maturity / harvesting
Rabi crops	Wheat	Horticultural plants		
Land preparation & sowing Early sown – early vegetative	Land preparation & sowing	Planting		

Arunachal Pradesh

WRC Rice	Ginger	Millet	Jhum Paddy	Potato
Grain maturity / harvestig	Rhizome maturity / harvesting	Harvesting	Harvesting	Seedling / early vegetative
Rabi Vegetables	Wheat / Mustard	Pea / rabi maize		
early vegetative	Early vegetative	Seedling / early vegetative		

Bihar

Vegetables & fruit crops	Maize fodder	Arhar	Sugarcane	Kharif rice
Sowing	Early vegetative	Vegetative	Vegetative	Maturity
Rabi oilseeds, wheat	Wheat			
Sowing	Sowing			

Jharkhand

Kharif rice	Potato	Vegetables (Tomato, Brinjal, Bhendi)	Pea, gram
Harvesting	Planting	Sowing Early sown – Early vegetative	Sowing
Wheat			
Sowing			

Sikkim				
Orange	Vegetables	Large Cardamom	Ginger	Rice
Harvesting	vegetative	Harvesting	Harvesting	Grain maturity / early harvesting
West Bengal				
Sugarcane	Arhar	Aman rice	Mustard / Rapeseed / sunflower	Early sown Mustard / Rapeseed / sunflower
Cane development	Pod formation	Grain maturity / harvesting	Land preparation / sowing	Germination / early vegetative
Rabi arhar	Potato			
Sowing	Planting			
Chattisgarh				
Sugarcane	Rapeseed, Toria, Niger	Kharif Rice	Tomato, Brinjal, Chilli	
Vegetative	Land preparation & sowing Toria - vegetative	Grain maturity / harvesting	Vegetative / flowering	
Gujarat				
Sugarcane	Mustard / wheat	Castor	Kharif Cotton	Early sown mustard / wheat
Cane development / early maturity	Land preparation & Sowing	Spike formation	Boll formation/ boll maturity / picking	Germination / early vegetative
Maharashtra				
Sugarcane Preseasonal (Madhya Maharashtra, Marathwada & Vidarbha)	Sugarcane (Suru) (Madhya Maharashtra, Marathwada and Vidarbha)	Irrigated cotton (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Rice (Vidarbha)	Kharif Cotton (Madhya Maharashtra, Marathwada & Vidarbha)
Active growth / elongation	Active growth / elongation	Boll maturity / picking	Grain maturity / harvesting	Boll maturity / picking
Kharif Tur (Madhya Maharashtra, Marathwada & Vidarbha)	Rabi Jowar	Rabi safflower	Potato	Rabi onion
Pod formation	Sowing	germination / early vegetative	Planting Early planted - sprouting	Planting
Gram	Wheat	Early sown jowar		
Planting Early sown - germination	Sowing Early sown - germination	Germination / early vegetative		
Madhya Pradesh				
Sugarcane	Kharif rice	Rabi crops (wheat, linseed, lentil, gram, mustard)	Rabi vegetables (cabbage, cauliflower, onion)	Cotton
Grand growth	Harvesting	Sowing	Nursery sowing	Picking
Orissa				
Kharif vegetables	Kharif rice	Sugarcane	Arhar	Mung and urd
Vegetative / fruiting	Grain Maturity / harvesting	Vegetative	Vegetative / Flowering	Early vegetative
Rabi oilseeds				
Sowing				
Andhra Pradesh				
Kharif Rice	Kharif Cotton	Kharif Groundnut	Rabi red gram / chillies	
Harvesting	Picking	Harvesting	Vegetative	
Karnataka				
Sugarcane (Ratoon crop)	Kharif Sunflower	Groundnut	Kharif maize & Jowar	Cotton
Grand growth	Maturity / harvesting	Pod development / maturity	Maturity / harvesting	Maturity / picking
Rabi Jowar/Maize/Cotton/Sunflower				
vegetative				

Kerala

Rubber	Mundakkan Rice			
Tapping	Flowering / grain formation			

Tamil Nadu

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