



Summary of Agromet Advisory Services for different States of the country

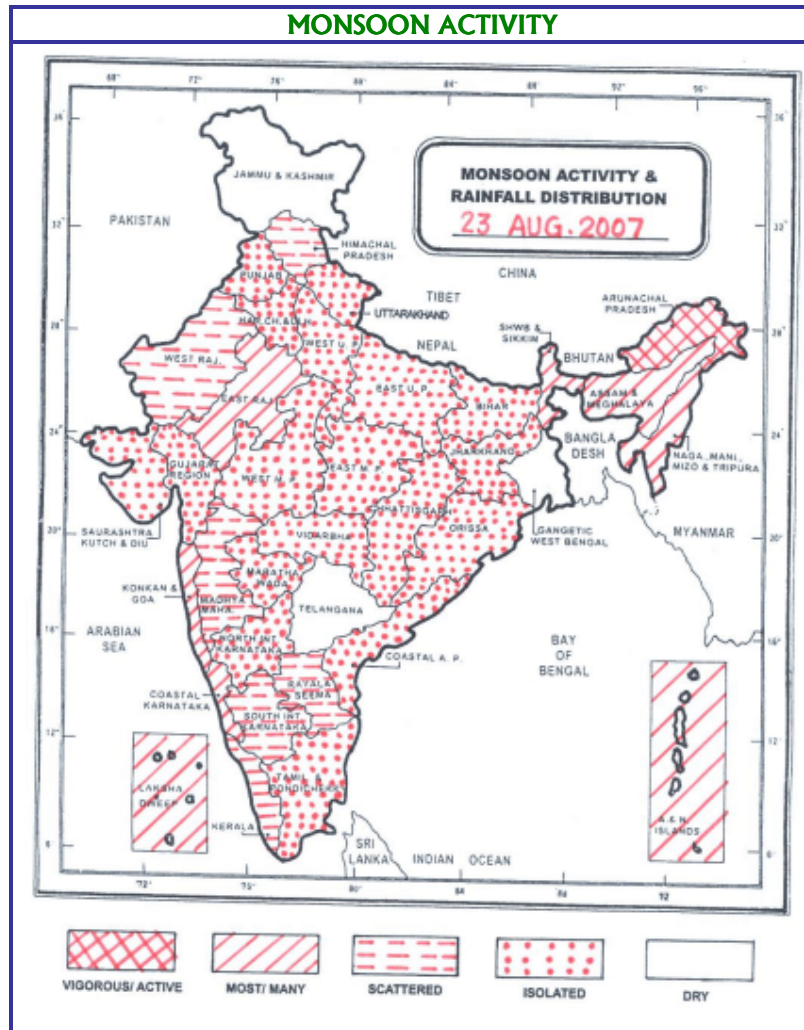
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(For the period 23rd to 27th August, 2007)

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



Agromet Advisory

Southern Region (AP, Tamilnadu, Karnataka and Kerala)

Kerala

- Southwest monsoon was active over the State on 22nd August and weak on 20th & 21st August. Rain occurred at most places on 22nd August, at many places on 21st August and at isolated places on 20th August.
- Rain / thundershowers are likely at many places over the State.

Warning: Isolated heavy rainfall is likely over the State.

Advisories

- As rain/thundershowers is likely to occur at many places over the State with isolated heavy rainfall in next 24 hours, postpone irrigation to plantation crops viz., coconut, arecanut, rubber and banana. Provide drainage facilities to avoid waterlogging.

- Continue intercultural operations, application of fertilizers and pesticides in plantation crops after current spells of rain.
- Monitor *virippu* rice for rice bug and for blast & bacterial blight diseases. Spray Malathion 50 EC @ 2 ml/litre of water to control the pest and apply *Pseudomonas* @ 2.5 kg along with 50 kg cow dung to control the diseases after current spells of rain for the crops in flowering/grain formation stage. Harvesting of early sown crops may be continued in bright sunny days.
- Attack of bunchy top is reported in banana. Apply Phorate 10 G @ 25gm or Cabofuran 3 G @ 20gm per pit around the rhizome after current spells of rain.
- Attack of *Phytophthora* foot rot, quick wilt and pollu beetle is reported in pepper. Drench the vines over a radius of 45-50 cm with 0.2% copper oxy chloride. A foliar spray with 1% Bordeaux mixture also may be given to control the diseases. Spray Quinalphos @ 0.05% to control pollu beetle after current spells of rain.
- Pink disease is reported in rubber. Apply 1% Bordeaux paste after cleaning the affected parts after current spells of rain.
- Attack of root grub and foot rot disease is reported in Arecanut. Apply Phorate @10 g/plant to control root grub. Spray 1% Bordeaux mixture to control the disease after current spells of rain.
- Attack of Rhinoceros beetle, red palm weevil, bud rot and mite is reported in coconut. Fill leaf axil with 25 gm Sevidol 8G and fine sand 200 g to control rhinoceros beetle and red palm weevil. Prophylactic spraying with 1% Bordeaux mixture on spindle leaves and crown of palms may be continued control bud rot after current spells of rain.

Tamilnadu

- Rainfall occurred at a few places over the State on 21st, 22nd and at one or two places on 20th August.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- Undertake transplanting of *samba* rice in the main field. Apply pre-emergence herbicide Butachlor @ 1 litre/ha in a non rainy day on 3rd day after planting.
- As there was excess rainfall in Kanchipuram, Madurai, Perambalur, Pondicherry, Thiruvallur, Thiruvannamalai, Vellore, and Villupuram districts and rain/thundershowers are likely at a few places over the State for the next three days, postpone irrigation to sugarcane and early sown maize. Apply irrigation in the remaining districts of the State.
- Undertake sowing of maize (*Adippattam* – July-Aug. crop). Use 6 kgs of seeds/acre. Treat the seeds with *Azospirillum* and Phosphobacteria one pocket each for one acre seeds.
- Monitor sugarcane for stem borer and if the pests population crosses ETL, release *Trichogramma* egg parasite @ 5cc/acre to control the pest.
- Continue picking matured cotton bolls on bright sunny days. Picking may be done at early morning hours to maintain quality of kapas.
- 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 planting of special season sugarcane. Undertake sett treatment with *Azotobacter* before planting. Start harvesting late sugarcane.
- Continue sowing rainfed millet crops like jowar, bajra and samai. Undertake seed treatment with *Azospirillum* before sowing.

Karnataka

- On 20th August, monsoon was weak over South Interior Karnataka. Rainfall occurred at most places over Coastal Karnataka and at isolated places over Interior Karnataka. On 21st August, rainfall occurred at most places over Coastal Karnataka and at a few places over Interior Karnataka. On 22nd August, monsoon was active over Coastal Karnataka and South Interior

Karnataka. However it was weak over North Interior Karnataka. Rainfall occurred at isolated places over North Interior Karnataka.

- Rain/thundershowers are likely at many places over Coastal Karnataka and at a few places over interior Karnataka.

Rainfall warning: Isolated heavy rainfall is likely over Coastal Karnataka.

Advisories

- As rain/thundershowers are likely at many places over Coastal Karnataka with isolated heavy rainfall during next 24 hours, postpone irrigation to the crops. Provide adequate drainage facilities to avoid waterlogging.
- As there was no significant rainfall during last week in interior Karnataka except Kogadu district and rain/thundershowers are likely to occur at a few places for the next three days, apply irrigation to summer sugarcane, *Kharif* jowar, maize, cotton, groundnut and sunflower. Postpone irrigation in Kodagu district.
- Continue intercultural operations, application of fertilizers and pesticides to *kharif* jowar, maize, cotton, groundnut and sunflower on a non rainy day in Interior Karnataka and after current spells of rain in Coastal Karnataka.
- Monitor sugarcane for white woolly aphids in Mysore, Mandya and Hassan districts and release predators *viz.*, *Dipha* sp. to control the pest.

Andhra Pradesh

- Rain occurred at few places over Coastal Andhra Pradesh on 18th, 19th and 22nd August, over Telangana from 18th to 20th and 22nd August and over Rayalaseema on 21st & 22nd August. Isolated rain occurred elsewhere over the State during the week.
- Rain/thundershowers are likely at many places over Coastal Andhra Pradesh and at a few places over Telangana during next 24 hours and increase thereafter. Rain/thundershowers are likely at a few places in Rayalaseema.

Advisories

- Maintain standing water in rice field.
- Postpone irrigation in coastal Andhra Pradesh as rain/thundershowers are likely at many places over Coastal Andhra Pradesh for the next three days. As there was no significant rainfall in Telangana and Rayalaseema during last week and rain/thundershowers are likely at a few places over Rayalaseema & Telangana for the next three days, apply irrigation to *kharif* crops *viz.*, groundnut, cotton, maize, green gram and black gram to bring the soil moisture to field capacity.
- Incidences of stem borer have been reported in maize. Spray Endosulphan @ 2 ml/litre of water to control the pest if the damage crosses ETL. Monitor cotton for sucking pests and if the damage crosses ETL spray Imidachloprid @ 0.5 ml/litre of water to control the pest. Spray pesticides on a non rainy day in Telangana and Rayalaseema and after current spells of rain in coastal Andhra Pradesh.
- Undertake earthing up in early sown *kharif* crops on a non rainy day in Telangana and Rayalaseema and after current spells of rain in coastal Andhra Pradesh.

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

Assam

- Light to moderate rain occurred at a few places on 20th and 22nd August and isolated light rain on 21st August with isolated heavy falls on 22nd August and isolated rather heavy falls on 20th August over the State.
- Rain/ thundershowers are likely at many places over the State.

Warning: Isolated heavy to very heavy falls is likely over the State.

Advisories

- *Sali* rice is damaged in few localities due to flood. After receding of flood water if the land cannot be transplanted due to shortage of *sali* rice seedling, sprouted seeds of variety –Luit, Kopili, Culture-1 or local short duration variety seed may be directly sown after current spells of rain.
- Prepare land for after current spells of rain and continue transplanting of *Sali* rice. Apply urea @ 6 kg, SSP @ 17 kg, Mop @ 4 kg per bigha. The uprooted seedlings are to be washed and then the root portion is dipped in 0.2% solution of Chloropyriphos (1 ml per litre of water) along with 1% of urea for three hrs as protective measure against stem borer, gall midge and hopper.
- As rain/ thundershowers are likely at many places over the State for the next three days, with isolated heavy to very heavy falls during next 48 hours, postpone irrigation to sugarcane and arhar. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.
- Harvest already matured crop of jute and maize.
- Jute crop is to be harvested at small pod stage to get optimum yield and good quality fibre.
- Harvesting of maize should be done on bright sunny days as soon as husk cover turns brown in colour and the silks are completely dry. Birds may damage maize crop at maturity stage. The matured cobs can be protected from attack of birds by tying the cobs with leaves of same plant. Shining coloured strips may also be used to scare the birds.
- Old and dry leaves should be removed and sugarcane should be provided with mechanical support to prevent lodging.
- Incidence of hispa and stem borer was noticed in *Sali* rice in few localities. Monitor the infestation of hispa and stem borer. If one adult is noticed per hill, insecticides like Chloropyriphos 20 E.C. @ 2 ml per litre of water or Monocrotophos 40 EC @ 1.5 ml per litre of water is to be applied after current spells of rain. For management of yellow stem borer *Trichogramma japonicum* @ 50,000 per hectare in six releases are to be used.
- Seeds of black gram varieties T-9, Pantu-19, Saonimah SB-12 and green gram varieties T-44, Pratap and AAU-39 should be sown in the field after current spell of rain where *Sali* rice could not be cultivated due to shortage of seedling damaged by flood water and also in uphill land till 15th September. Seeds should be inoculated with 150 gm of *Rhizobium* culture for 3 kg of seeds. Fertilizer @ 3 kg Urea, 30 kg SSP per bigha should be applied after current spells of rain for more yields.

Arunachal Pradesh

- Sky remained partly cloudy over the State during the period. Light to moderate rain /thundershowers occurred at a few places on 21st and 22nd August, and weather remained mainly dry on 20th August.
- Rain/ thundershowers are likely at many places over the State.

Warning: Isolated heavy to very heavy rainfall is likely over the State.

Advisories

- As rain/ thundershowers are likely at many places over the State for the next three days, with isolated heavy to very heavy falls during next 48 hours, postpone irrigation to millet, *jhum* paddy and ginger crops. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.
- Continue weeding, spraying and inter-cultural operations after current spells of rain.
- Complete harvest the matured maize crop bright sunny days.

Bihar

- Moderate to heavy rain occurred at most places on 16th, 17th & 18th August and light to moderate rain occurred during remaining period.
- Rain/thundershowers are likely at many places over the State.

Warning: Isolated heavy to very heavy rainfall is likely over the State.

Advisories

- Transplanting of photosensitive rice varieties and direct sowing of short duration rice (less than 115 days) can be undertaken in flood water receding areas after current spells of rain.
- As rain/thundershowers are likely at many places over the State for the next three days with isolated heavy to very heavy rainfall during next 48 hours, postpone irrigation to arhar and sugarcane. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.

Jharkhand

- SW monsoon subdued over the State.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- Complete transplanting of *Kharif* rice.
- As there was sufficient rainfall in most of the districts during last week and rain/thundershowers are likely at a few places over the State for the next three days, postpone irrigation to vegetables, maize, arhar, groundnut, soybean and urad.
- To prevent from powdery mildew of small fruits in Mango and Litchi, spray sulfex@ 2gm/litre of water on a non rainy day.
- Monitor the crop for stem borer infestation and if exceeds economic threshold level, about 10 granules of carbofuron should be applied in earhead. After weeding, top dressing of urea @ 75 kg urea per hectare may be applied on a non rainy day and do earthing in a non rainy day.
- Topdressing of urea @ 30 kg per hectare for early sown rice and @ 75 kg/ha for maize may be done on a non rainy day.

Sikkim

- Sky remained cloudy during the period. Moderate to nearly heavy rain occurred from 17th to 19th August, very light rain on 16th, 20th and 21st August and no rain fall on 22nd August. The rainfall was normal during the period over the State.
- Rain/thundershowers are likely at many places over the State.

Warning: Isolated heavy to very heavy falls is likely over the State.

Advisories

- As rain / thundershowers are likely at many places over the State for the next three days with isolated heavy to very heavy falls is likely over the State, postpone irrigation to orange, vegetables, and ginger. Provide adequate drainage facilities as heavy rainfall is expected.
- Maintain 4-5 cm water level in the rice field.
- Continue harvesting matured vegetable crops in bright sunny days as per market demand.
- Continue harvesting maize and large cardamom on bright sunny days.
- Monitor ginger for rhizome rot and bacterial wilt and rouge out the affected plants and destroy completely to prevent further damage.
- Monitor orange for leaf miner and trunk borer. Spray neem based pesticides to control leaf miner. Plug trunk borer holes with cotton soaked with kerosene and later with mud to prevent trunk borer.

West Bengal

- Rainfall occurred at a few places on 20th and at isolated places on 21st and 22nd over Sub-Himalayan West Bengal. During the period rainfall occurred at most places with heavy rain at isolated places on 21st and at isolated places on 22nd over Gangetic West Bengal.
- Rain/thundershowers are likely at many places over Sub-Himalayan West Bengal and at a few places over the rest region of the State.

Warning: Isolated heavy to very heavy rainfall is likely over the State.

Advisories

- As rain/thundershowers are likely at many places over the State for the next three days with isolated heavy to very heavy falls is likely over Sub-Himalayan West Bengal during next 48 hours, postpone irrigation to sugarcane, jute, groundnut and arhar. Provide adequate drainage facilities in Sub-Himalayan West Bengal due as heavy rainfall is expected.
- Maintain 3 – 5 cm water in the field of *aus* rice in grain formation stage. Harvest the matured crops in bright sunny days.
- Transplant 25 – 30 days old seedlings of *aman* rice in the main field. Apply 15 kg N, 30 kg P₂O₅ and 30 kg K₂O / ha to short duration varieties and 20 kg N, 40 kg P₂O₅ and 40 kg K₂O / ha to medium and long duration varieties. Select varieties from Hira, Aditya, Prasanya etc. for broadcasting and Rassi, Tulsi, Annada, Biraj, IR – 64, IR – 36, Ratna, Swarna, Nalini, Amulya etc. for transplanting. Apply fertilizers after current spells of rain in Sub-Himalayan West Bengal and on a non rainy day in Gangetic West Bengal.
- Maintain 2 – 3 cm of water in *aman* rice field 2 – 3 days after transplanting. Maintain 3 – 5 cm water on the field wherever crops are at tillering stage.
- Undertake intercultural operation on a non-rainy day in Gangetic West Bengal and after current spells of rain on Sub-Himalayan West Bengal to keep the field weed free.

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

Gujarat

- Rainfall occurred at isolated places over Gujarat State, Diu, Daman, Dadra Nagar Haveli on 20th August. Rainfall occurred at a few places over North Gujarat region, at isolated places over South Gujarat region, Saurashtra, Daman, Dadra nagar Haveli on 21st August. Monsoon was active over Gujarat State, Diu, Daman, Dadra Nagar Haveli on 22nd August.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- Prepare the main field by puddling method and transplant 25 – 30 days old rice seedlings in the field wherever seedlings available.
- Prepare land by two ploughing after current spells of rain for sowing of castor. Apply 10 mt. FYM or 1 Mt. castor cake. Apply 40 kg N and 25 kg phosphorus / ha in furrows as basal dose. Select varieties from hybrid castor GAUCH-1, GCH-2, 4, 5, 6 for sowing.
- As there was no significant rainfall in most of the districts of the State rain / thundershowers are likely at a few places over the State for the next three days, apply irrigation to sugarcane, *kharif* groundnut, *kharif* cotton, *kharif* bajra and *kharif* maize. Postpone irrigation in Gandhinagar, Panchmagal, and Sabarkantha districts as there was excess rainfall during last week.
- Maintain 2 – 3 cm water after 3 – 4 days after transplanting of *kharif* rice. Maintain 3 – 5 cm water at tillering stage.
- If *kharif* groundnut appears yellowish, spray 100 grams hirkasi (Ferolus sulphate) + 10 grams lemon aeck dissolved in 10 liter of water / ha by making a solution in 500 liters of water to the crop on a non rainy day.
- For monitoring and management of boll worm in *kharif* cotton, hang 5 pheromone traps in one ha of land. Change the lures at an interval of 15 days. Destroy trapped moths every day.
- Weeding, intercultural operation and top dressing of Nitrogen may be done in *kharif* maize, cotton, bajra and groundnut crops on a non rainy day.

Chhattisgarh

- Monsoon was active on 21st August. Rainfall occurred at many places on 20th August and at a few places on 22nd August in the State.
- Rain/thundershowers are likely to occur at a few places over State.

Advisories

- Maintain 2 – 3 cm water after 3 – 4 days after transplanting of *kharif* rice. Maintain 3 – 5 cm water at tillering stage. Undertake top dressing on a non rainy day.
- As there was sufficient rainfall in Bilaspur, Durg, Janjgir, Korba, Raigarh, and Raipur districts of the State and rain/thundershowers are likely to occur at a few places over the State, postpone irrigation to sugarcane and maize and also to black gram, green gram, groundnut and soybean. Apply irrigation in the remaining districts as there was no significant rainfall in these districts during last week.
- When the sugarcane crop attains a height of 5 – 6 feet, 4 – 5 plants may be tied together to prevent lodging from gusty wind.

Maharashtra

- Rain occurred at most places in Konkan, at a few places in Madhya Maharashtra and Marathwada and at isolated places in Vidarbha.
- Rain/thundershowers are likely at many places over Konkan & Goa and Madhya Maharashtra and at a few places over Marathwada and Vidarbha.

Advisories

- As rain/thundershowers are likely at many places over Konkan & Goa and Madhya Maharashtra, postpone irrigation to the crops.
- As there was no significant rain in Marathwada and Vidarbha during last week and rain/thundershowers are likely to occur at a few places during next three days, apply irrigation to the standing crops.
- Maintain 3 – 5 cm water in the rice field wherever crops are at tillering stage.
- Mild incidence of white woolly aphids in Kolhapur division of Maharashtra in sugarcane (pre-seasonal) & (suru), sap sucking insects in Aurangabad and Latur, aphids & jassids in Amravati & Nagpur and aphids, jassids, thrips in Nashik division in irrigated cotton, blast and stem borer in Konkan in *kharif* rice and hairy caterpillar in Aurangabad division in *kharif* sunflower, leaf caterpillar in Nashik, Aurangabad, Amravati division, Ahmednagar district & leaf roller in Aurangabad, Nagpur division in Kharif soyabean is reported.
- Monitor sugarcane (pre-seasonal) 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 Sap sucking insects and aphids, jassids & thrips in irrigated cotton, spray 5 % Neem extract or release 10,000 to 15000 larvae of *Crysoperla carnea* and if infestation exceeds economic threshold level, spray 30 % WSC Diamethoate 1000 ml or 25 % WSC Methyl dimeton 320 ml / ha in 500 liters water.
- Monitor *kharif* rice for Blast & if exceeds economic threshold level, spray Bavistin 500 gm / ha in 500 liters water.
- Monitor *kharif* rice for Stem borer & if exceeds economic threshold level, apply 10G Foret (Granular) or 5 G Quinolphos powder @ 15 kg / ha or spray 50 % fenitrothion @ 800 ml / ha in 500 liters water.
- Water may be drained out from *kharif* rice field before the application of plant protection measures & may be applied again after 24 hours of application of plant protection measures.
- Monitor *kharif* sunflower for hairy caterpillar & if exceeds economic threshold level, spray 5 % Neem extract or Quinolphos 25 EC @ 1000 ml or Endosulphan 36 EC @ 1000 ml / ha in 500 liters water.
- Monitor soybean for Leaf eating caterpillar & if exceeds economic threshold level, spray 25 EC, Quinolphos 1000 ml or 36 EC, Monocrotophos 700 ml / ha in 500 liters water.

- Monitor soybean for Leaf roller & if exceeds economic threshold level, spray 5 % Neem extract or if infestation exceeds economic threshold level, spray Dimethoate 10 ml or 50 % Carbaril water soluble powder 40 gm or Monocrotophos 15 ml /ha in 500 liters water.
- Undertake intercultural operation and apply fertilizer and plant protection measures after current spells of rain in Konkan and Madhya Maharashtra and on a non rainy day in Marathwada & Vidarbha.

Madhya Pradesh

- South West Monsoon been active in South East M.P. on 20th August, East and North West M.P. on 21st August and North M.P. on 22nd August. Rainfall occurred at many places in North East M.P. on 20th August and South East M.P. on 22nd August and at a few places over the rest of the State for remaining period.
- Rain/thundershowers are likely at a few places over East Madhya Pradesh. Isolated rain/thundershowers are likely over West Madhya Pradesh.

Advisories

- As there was no significant rainfall in most of the districts in the State during last week and rain / thundershowers likely to occur at isolated places in West M.P and at a few places in East M.P for the next three days, apply irrigation to sugarcane and other *kharif* crops viz., soybean, maize, urd and jowar. Postpone irrigation in Balaghat, Damoh, Dindori, Jabalpur, Katni, Mandla, Sagar, Seoni, Umaria, Dhar, Guna, Mandraur, and Neemuch districts as there was excess rainfall in these districts.
- Undertake intercultural operation in sugarcane and *kharif* crops to keep the field weed free. Application of fertilizers may be undertaken on a non rainy day in East M.P.

Orissa

- South West monsoon was active over the State on 20th August and normal 21st August. Rainfall occurred at most places over the State on 20th, 21st August and at isolated places on 22nd August. Heavy falls followed extremely heavy falls occurred at isolated places over the State on 20th August.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- As there was sufficient rainfall in most of the districts during last week and rain/thundershowers are likely at a few places over the State during next three days, postpone irrigation to the crops and also make arrangement to drain out excess water from the field.
- Continue sowing / transplanting of vegetable crops.
- Monitor sugarcane for top shoot borer and if the damage exceeds ETL, undertake spraying of Monocrotophos or Triazophos or Prefonophos @ 400 ml/acre on a non rainy day.
- Monitor jute for leaf eating caterpillar and spray Endosuphan @ 2.5 ml/liter of water on a non rainy day, if the damage crosses ETL.

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

Punjab

- Rainfall occurred at a few places on 20th August, at isolated places on 21st August. Weather remained mainly dry on 22nd August.
- Rain / thundershowers are likely at a few places over the State.

Advisories

- As there was no significant rainfall in most of the districts and rain / thundershowers are likely at a few places over the State for the next three days, apply irrigation to sugarcane, cotton, pulses, groundnut(early sown crop) and Horticultural crops. Postpone irrigation in Gurdaspur, Jalandhar and Ropar districts as there was excess rainfall during last week.

- Undertake transplanting of basmathi rice. Maintain standing water in rice field.
- Attack of jassid, white fly, spotted bollworm, american bollworm in cotton and leaf roller in rice has been observed. Farmers are advised to monitor the pests, if exceeds economic threshold level, take adequate plant protection measures, on a non rainy day.

Haryana

- Rainfall occurred at a few places on 20th August and at isolated places on 21st August. Weather remained mainly dry on 22nd August.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- As there was no significant rainfall in most of the districts and rain/thundershowers are likely at a few places over the State for the next three days, apply irrigation to sugarcane, cotton, pulses, groundnut (early sown crop) and Horticultural crops.
- Undertake transplanting of basmati rice.
- Incidence of thrips on cotton, white fly on moong, and shoot borer in sugarcane reported below ETL. Monitor the crop & if exceeds economic threshold level, for effective control of cotton thrips, spray 250ml Rogor 30EC per hectare, Metasystox 25EC 1ml/l of water on a non rainy day to control white fly in moong, and sprinkle Endosulfan 5 percent granules in the leaf whorls and axils for effective control of shoot borer in sugarcane.

Rajasthan

- Light to moderate rain / thundershower occurred at many places with heavy to very heavy rainfall at a few places in Jaipur, Ajmer, Kota and Udaipur divisions and at isolated places in Bikaner and Jodhpur divisions of the State.
- Rain/thundershowers are likely at many places over West Rajasthan during next 24 hrs. and decrease thereafter. Rain/thundershowers are likely at a few places over East Rajasthan.

Advisories

- As rain/thundershowers are likely at many places over West Rajasthan during next 24 hrs. and decrease thereafter, postpone irrigation to the crops.
- As there was no significant rainfall in most of the districts during last week in East Rajasthan and rain/thundershowers are likely at a few places over East Rajasthan for the next three days, apply irrigation to early sown *kharif* crops viz., bajra, jowar, maize, guar, moong, moth bean and urd. Postpone irrigation in Banswara, Baran, Chittorgarh, Dungarpur and Sawai Madhopur districts as there was excess rainfall in these districts during last week.
- Undertake intercultural operations in early sown *kharif* crops to keep the field weed free. Intercultural operations may be continued on a non rainy day in East Rajasthan and after current spells of rain in West Rajasthan.
- Monitor *desi* and *American* cotton for sucking pests. If the pests population crosses ETL, spray Endosulphan @ 1.25 liters/ha on a non rainy day in East Rajasthan and after current spells of rain in West Rajasthan to control the pests.

Uttar Pradesh

- Light to moderate rain occurred at most places in Jhansi, Meerut Agra, Gorakhpur divisions and at many places in Kanpur division and at a few places in Bareilly, Allhabad, Varanasi, Faizabad, Lucknow division and weather was mainly dry in remaining divisions of State on 20th August. Light to moderate rain occurred at most places in Allhabad, Jhansi division and at a few places in Varanasi, Kanpur division and at isolated places in Faizabad, Lucknow, Agra division and weather was mainly dry in remaining divisions of the State on 21st August. Light to moderate rain occurred at most places in Jhansi division and at few places Allhabad, Kanpur division and at isolated places in Varanasi, Lucknow division and weather was mainly dry in remaining divisions on 22nd August.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- Start sowing of toria.
- Postpone irrigation to the crops as rainfall is expected in next 4-5 days. Provide adequate drainage facilities.
- Proper drainage arrangements for avoiding waterlogging in turmeric may be done.
- Monitor the top borer in sugarcane, if exceeds economic threshold level, dip the small branches of neem and peepal around the field to catch white grub and collect insects and to destroy, spray the solution of 0.5% Monocrotophos on a non rainy day.
- Maintain 2.5- 3.0 cm water level in transplanted paddy and undertake top dressing of urea on a non rainy day.

Himachal Pradesh

- Precipitation occurred at a few places in the State.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- Harvest already matured fruits of apple.
- As there was no sufficient rain during last week in most of the districts of the State and rain/thundershowers are likely at a few places for next three days, apply irrigation to vegetables, potato and maize.
- Maintain 3 – 5 cm water in rice field wherever crops are at tillering stage.
- Zinc deficiency symptoms may appear on the 3rd or 4th basal leaf after 3-4 weeks of transplanting of rice. The mid ribs become yellowish particularly at the base of the leaf but the leaf tip remains normal green. If the deficiency symptoms appear in the leaves, 0.5 per cent Zinc Sulphate solution (5 kg Zinc Sulphate mixed with 2.5 kg Calcium Hydroxide per ha) could be sprayed in a non rainy day.
- There is mild chance of attack of leaf spot disease in cabbage and cauliflower. If attack crosses economic threshold level, spray dithane M – 45 on a non rainy day to control the disease.
- There is mild chance of attack of late blight disease in potato. If attack crosses economic threshold level, spray blitox – 50 / copper oxychloride @ 300 g in 100 litres of water on a non rainy day to control the disease.

Uttarakhand

- Light to moderate rainfall was recorded at many places on 19th August, moderate rain was recorded at a few places on 20th August and at isolated places on 16th, 18th and 22nd while light rain was recorded at isolated places on 17th and 21st August. Sky remained partly cloudy to generally cloudy during the week.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- As there was no significant rainfall in most of the districts during last week and rain/thundershowers are likely at few places over the State, postpone irrigation to sugarcane, potato, and ginger. Postpone irrigation in Garhwal Pauri, Hardwar, Udham Singh Nagar, and Uttarakasi districts as there was excess rainfall in these districts during last week.
- Undertake intercultural operations in a non rainy day and keep the field weed free in potato, sugarcane, rice and in orchards.
- Monitor apple for thrips and mites, if the pest population crosses ETL and undertake plant protection measures on a non rainy day.

Jammu & Kashmir

- Light rain occurred at isolated places on 20th, 21st and 22nd August with heavy falls at Kathua on 20th August over J&K divisions.
- Rain/thundershowers are likely at isolated places over the State.

Advisories

- As there was no significant rainfall in most of the districts during last week and isolated rain/thundershowers are likely over the State for the next three days, apply irrigation to maize, vegetable and fruit crops in Kashmir division and to maize in Jammu division.
- Maintain 5 cm standing water in rice field in Kashmir division.
- Weather conditions are favourable for the attack of brown plant hopper and *Hispa* in rice in Jammu division. Spray Endosulfan @ 1.5 litre/ha to prevent the pests.
- Monitor pulse crops for mosaic and rogue out the affected plants to prevent further damage.
- Weather condition is favourable for outbreak of blister beetle in the maize crop, in such situation farmers are advised to destroy beetle sitting from trap of crop plants or spray the crop with carbaryl @ 0.1% or Endosulphon @0.07%.
- Continue sowing of cabbage, cauliflower, kale and knol-khol in nurseries and sowing of carrot for seed purpose.
- Undertake planting citrus, litchi, loquat, guava and papaya in orchards in Jammu division.

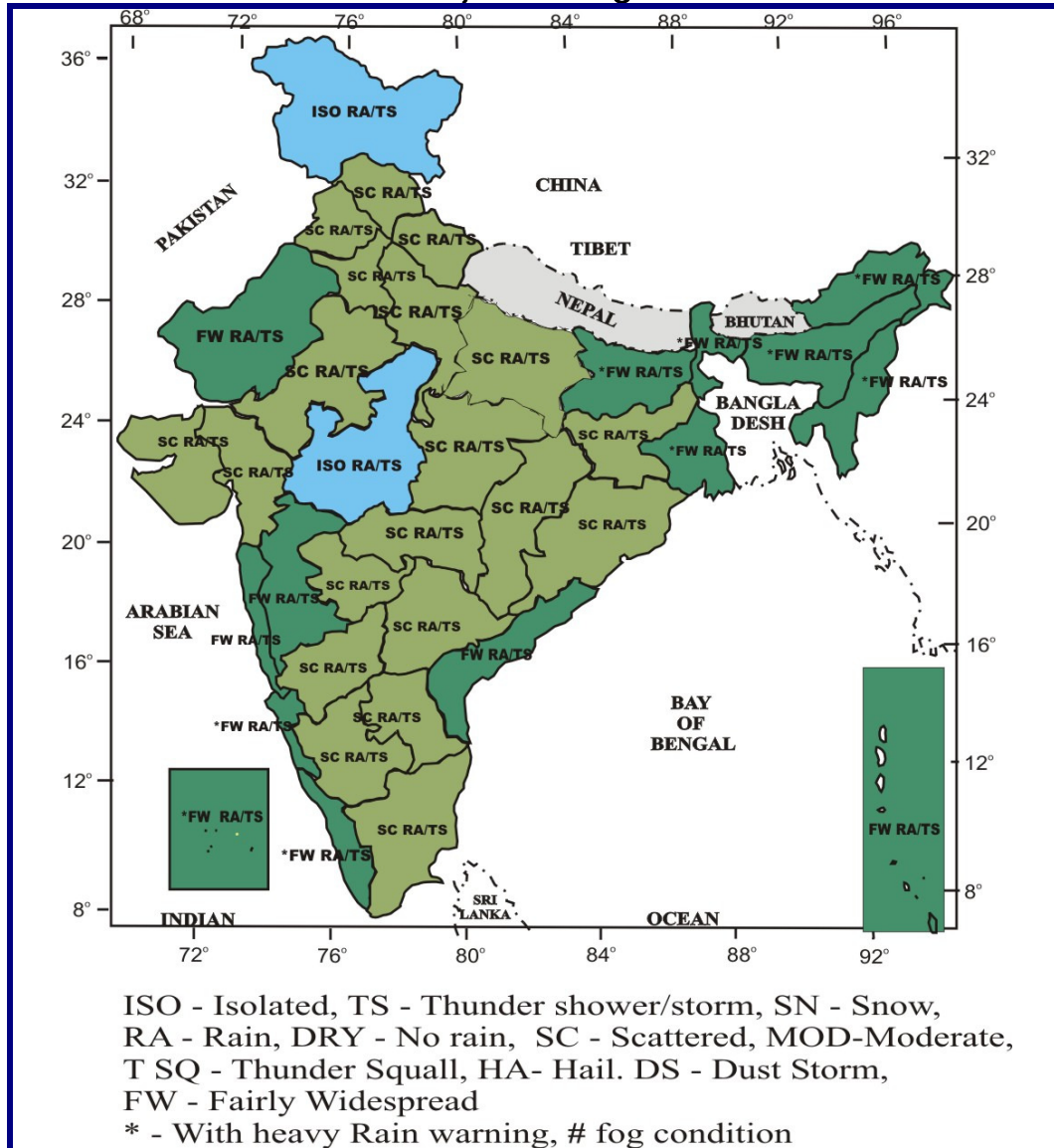
Delhi

- Very light to light rain occurred on 20th August at most places .Weather remained mainly dry on rest of the days.
- Rain/thundershowers are likely at a few places over the State.

Advisories

- As there was no significant rainfall over the State during last week and rain/thundershowers are likely at a few places over the State for the next three days, apply irrigation to vegetables, arhar, maize and bajra.
- Maintain 3 – 5 cm water in the rice field at tillering stage. Top dressing urea may be undertaken on a non rainy day.
- Prepare land and perform transplanting of 5 – 6 weeks old early cauliflower and cabbage and nursery sowing of mid period cabbage and cauliflower.
- Undertake intercultural operation to keep the field weed free and application of fertilizer and plant protection measures to the crops on a non rainy day.

Forecast Map
Valid upto 26th August 07



Salient weather features for the week ending 22/08/07

METEOROLOGICAL ANALYSIS

- A cyclonic circulation lay over Gangetic West Bengal and adjoining Bangladesh extending upto mid-tropospheric level on 17th. Under its influence, a low pressure area formed over north Bay of Bengal and adjoining West Bengal and Bangladesh on 18th morning. It became well marked over the same area on 18th evening. The well marked low pressure area lay over Gangetic West Bengal and neighbourhood on 19th. It lay as a low pressure area over Jharkhand and adjoining areas of north Orissa and Gangetic West Bengal on 20th and over East Madhya Pradesh and neighbourhood on 21st. It became less marked on 22nd. However, the associated upper air cyclonic circulation lay over northwest Madhya Pradesh and adjoining East Rajasthan extending upto 4.5 km above sea level.
- The axis of the monsoon trough at mean sea level gradually shifted southwards from its last week's position along the foothills of the Himalayas. It lay to the south of its normal position towards the end of the week.
- Last week's off shore trough from Gujarat coast to Karnataka coast ran from Gujarat coast to Konkan coast during 16-19th, from Gujarat coast to Karnataka coast on 20th and from Gujarat coast to Kerala coast on 21st and 22nd.
- Last week's upper air trough running from Bihar to north Bay of Bengal with embedded cyclonic circulation at lower levels over Bihar persisted on 16th and became less marked on 17th.

- A trough in westerlies at times embedded with cyclonic circulation extending upto lower/mid tropospheric levels affected western Himalayan region and adjoining plains during 16-20th.

RAINFALL

Under the influence of the above systems:

- Widespread/fairly widespread rainfall with scattered/ isolated heavy to very heavy falls occurred over Sub-Himalayan West Bengal & Sikkim during 16th-19th, Gangetic west Bengal and Jharkhand during 16-20th, Orissa during 19th-21st, Chhattisgarh and East Madhya Pradesh during 20-21st, West Madhya Pradesh on 21st, East Rajasthan on 21st-22nd and Gujarat Region on 22nd. Extremely heavy rainfall (>25 cm) was recorded over Bihar, Gangetic West Bengal and Orissa on 16th, 18th and 20th August respectively.
- Widespread/fairly widespread rainfall occurred over northeastern States during first two days of the week and decreased thereafter.
- Widespread/fairly widespread rainfall occurred over Himachal Pradesh, Uttar Pradesh, and Uttarakhand during 19-20th.
- Widespread/fairly widespread rainfall occurred over Konkan & Goa, Coastal Karnataka and Andaman & Nicobar islands during many days of the week.
- The rainfall was subdued over remaining parts of the country where isolated/scattered rain occurred during many days of the week.

RAINFALL DURING THE WEEK (FOR THE WEEK ENDING ON 22ND AUGUST, 2007)

Rainfall was excess/normal in 9, deficient/scanty in 27 out of 36 meteorological sub-divisions (Actual: 38.6 mm, Normal: 59.3 mm and Departure: -35%).

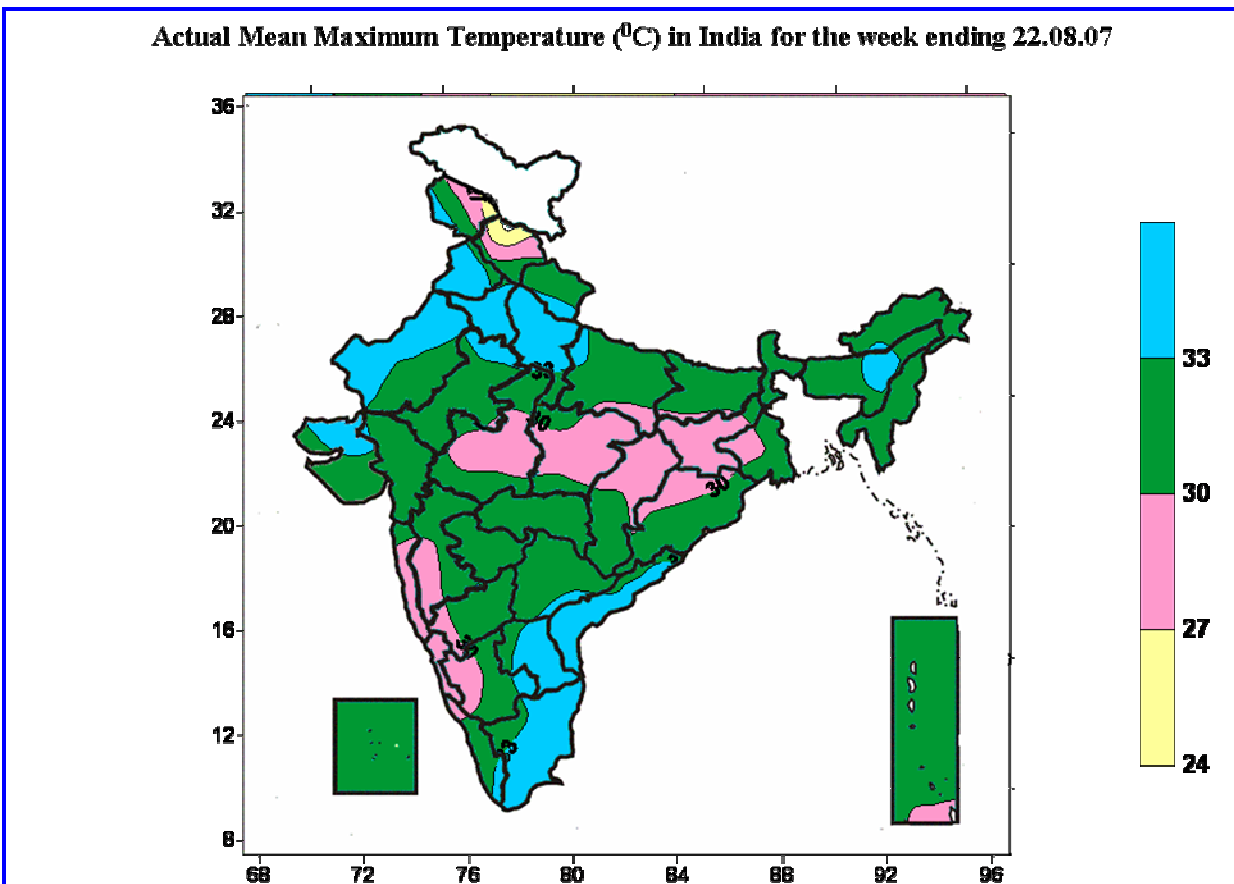
CUMULATIVE SEASONAL RAINFALL (1ST JUNE TO 22ND AUGUST, 2007)

Rainfall was excess/normal in 29 and deficient in 7 out of 36 meteorological sub-divisions. (Actual: 669.6 mm, Normal: 652.1 and Departure: +3%).

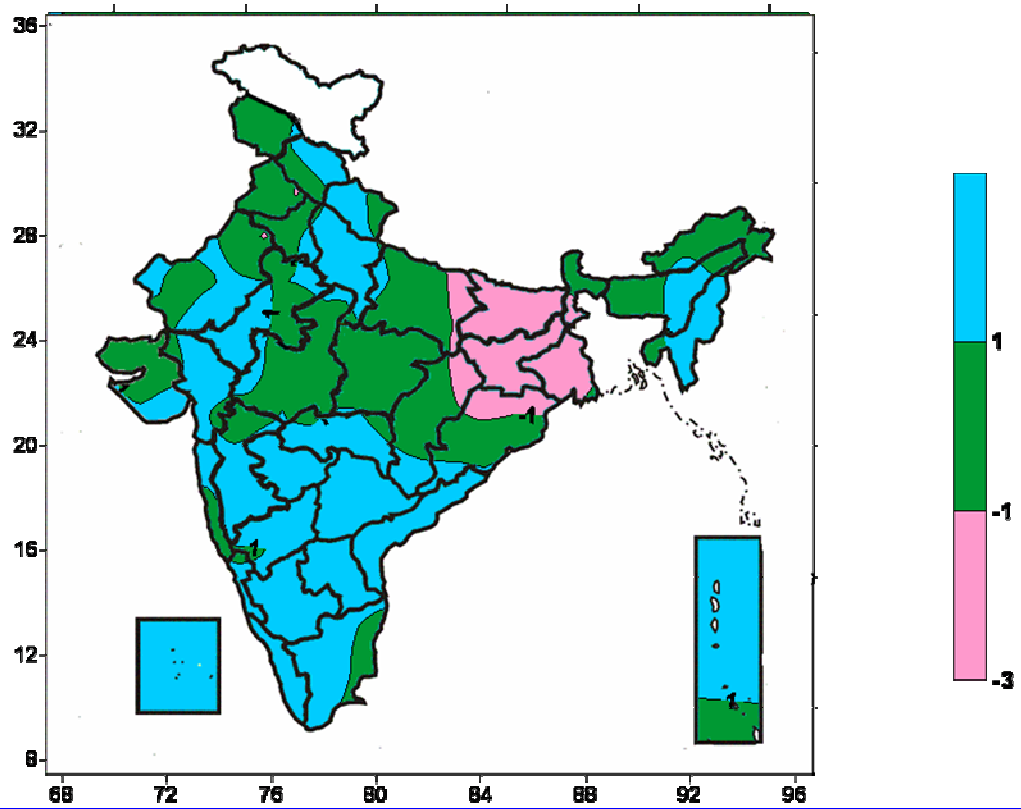
OUTLOOK FOR THE WEEK ENDING ON 29TH AUGUST, 2007.

- Numerical Weather Prediction Models suggest gradual shifting of monsoon trough towards foothills of the Himalayas during next 2-3 days. Under this scenario, enhanced rainfall activity with fairly widespread rainfall with isolated heavy to very heavy falls is likely over northeastern states, Sub-Himalayan West Bengal & Sikkim, Bihar and Uttar Pradesh.
- Scattered rainfall activity is likely over peninsula India.
- Subdued rainfall activity is likely over remaining parts of the country.

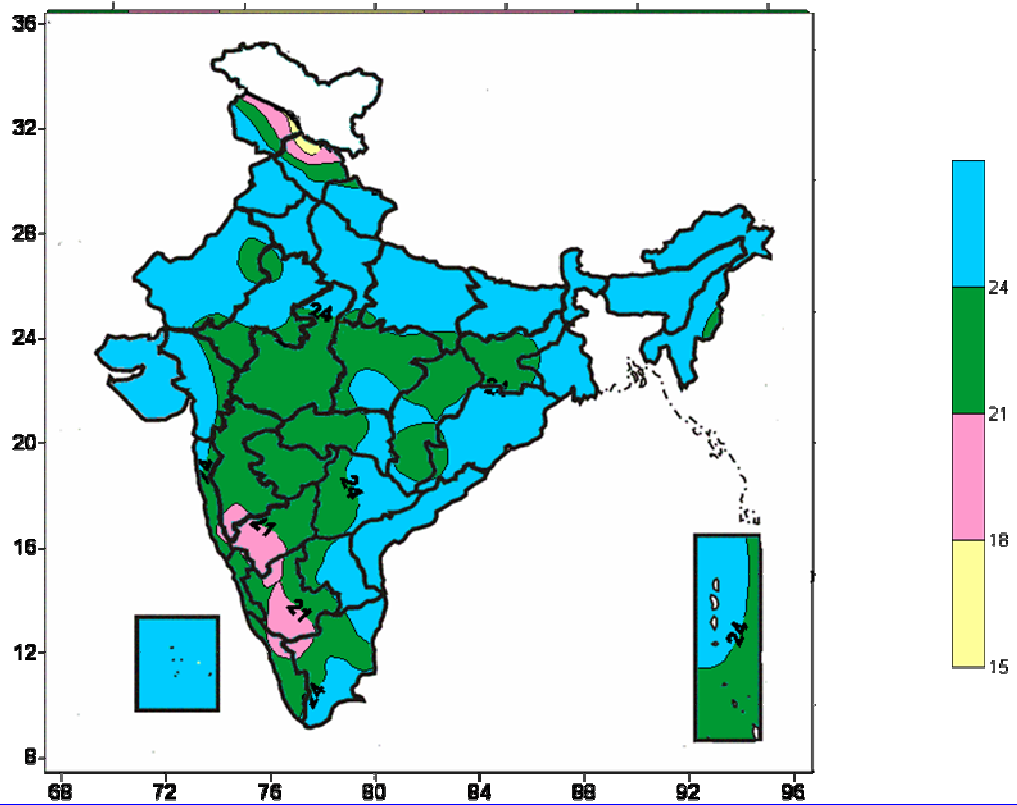
Contour maps for the week ending 22nd August, 2007



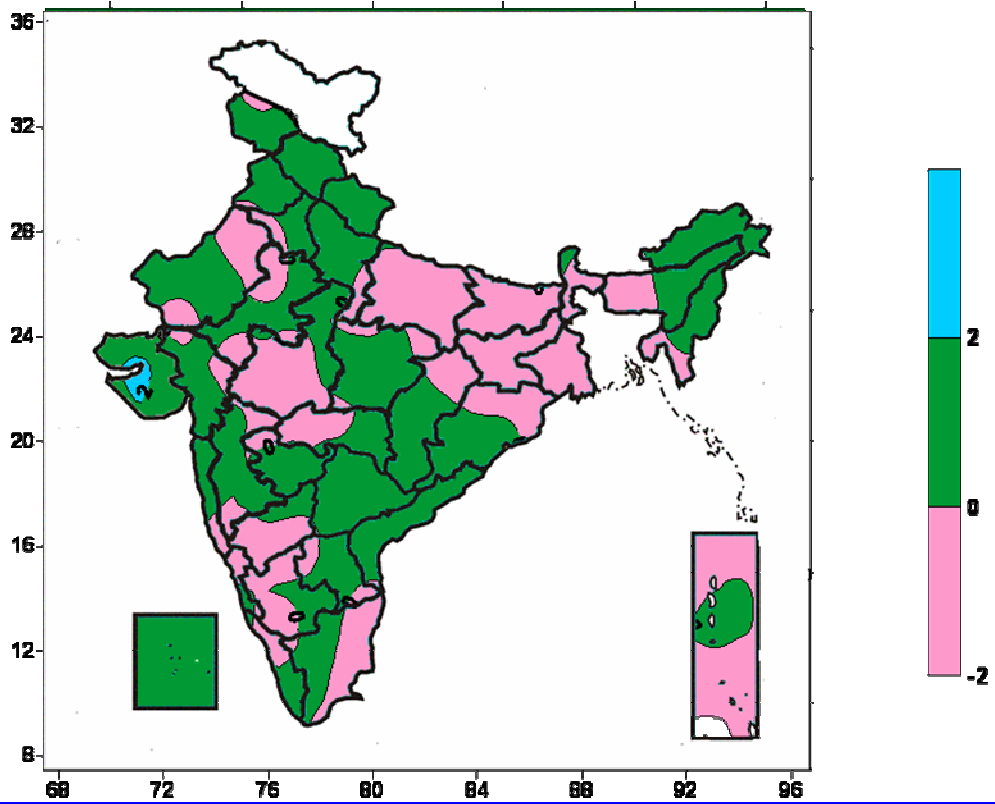
Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 22.08.07



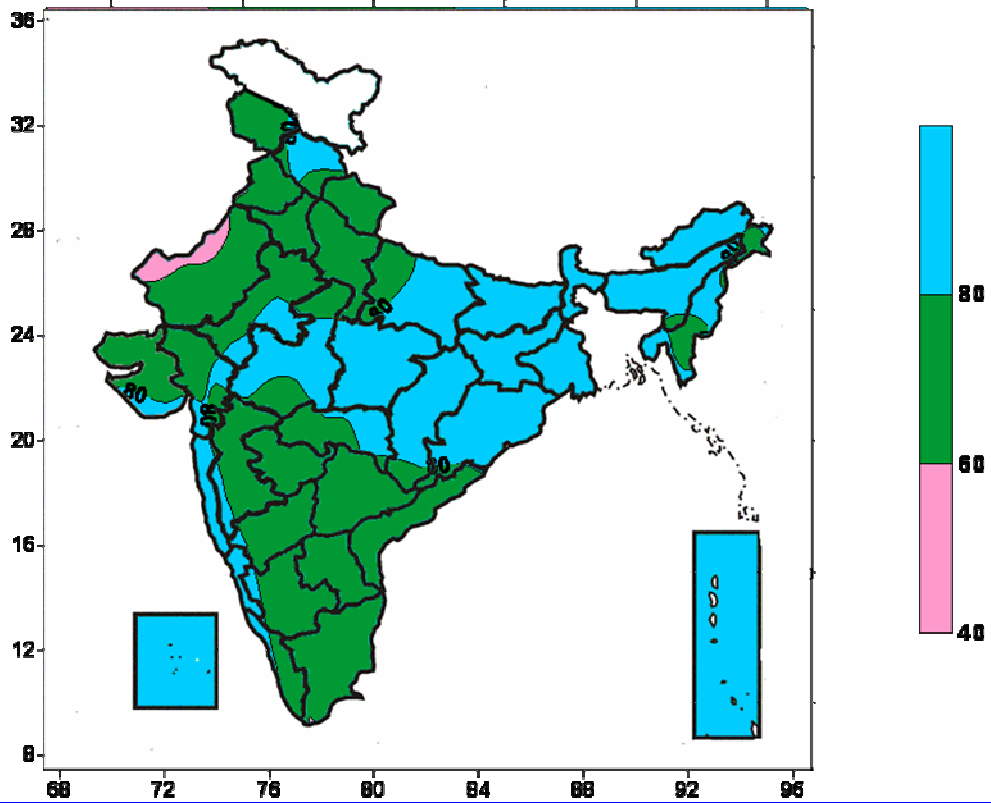
Actual Mean Minimum Temperature ($^{\circ}\text{C}$) In India for the week ending 22.08.07



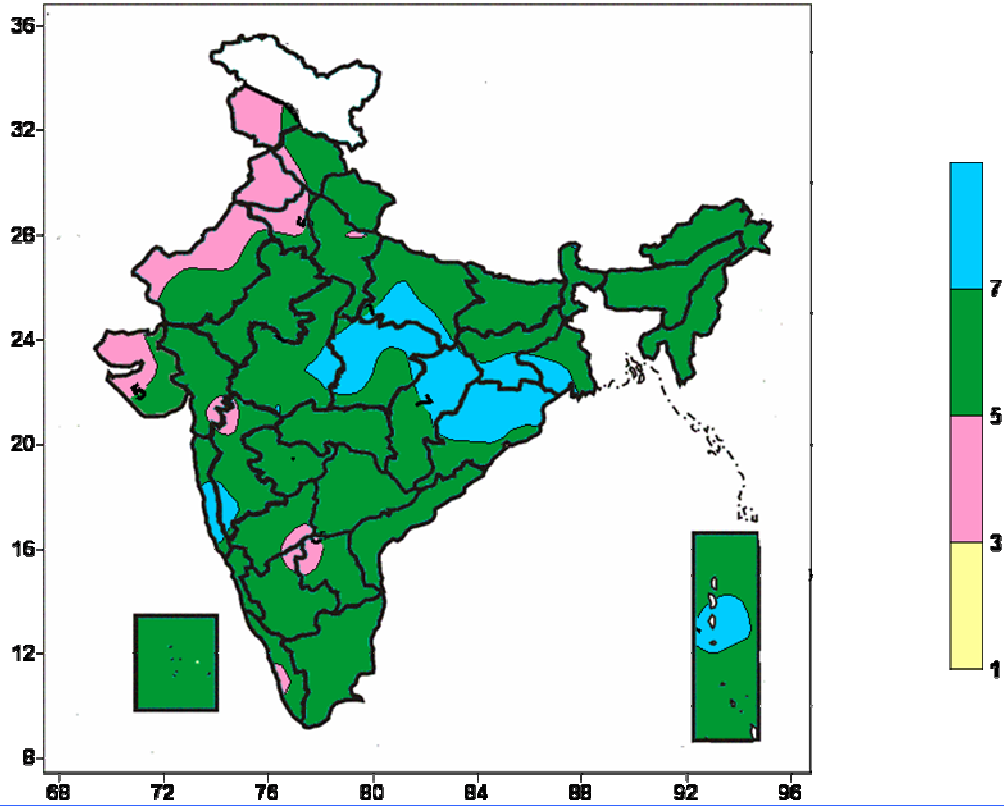
Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 22.08.07



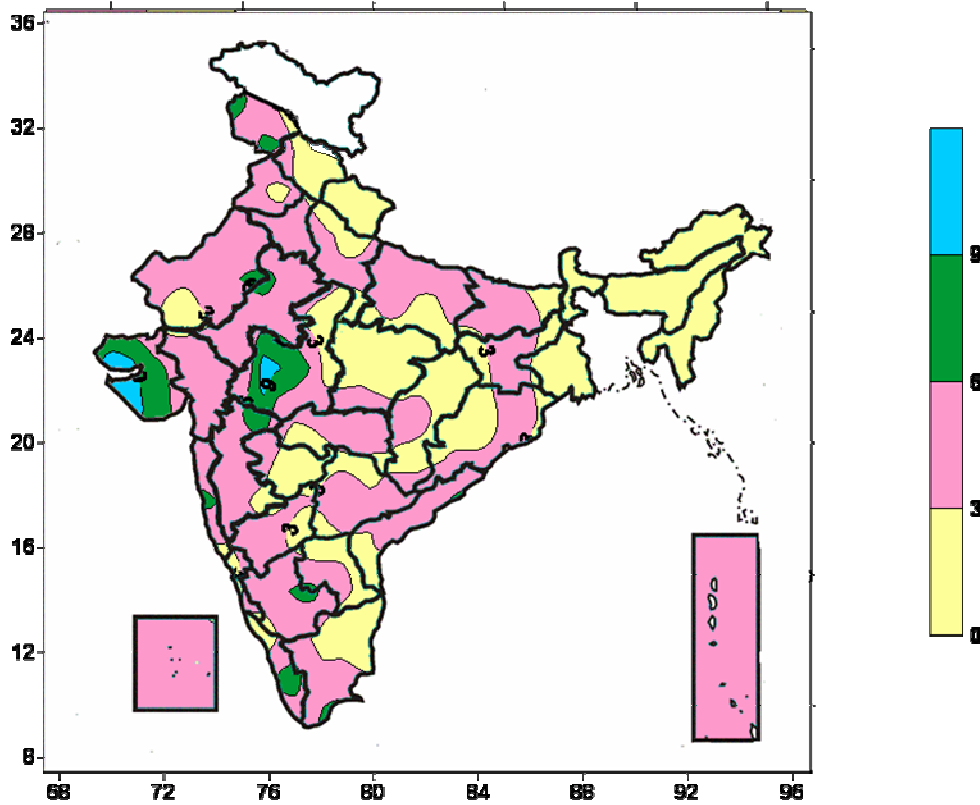
Relative Humidity (%) over India for the week ending 22.08.07



Cloud amount (okta) over India for the week ending 22.08.07



Wind speed (knots) over India for the week ending 22.08.07



Desert Locust Forecasting



Rainfall (mm)							
Station Name	16.08.07	17.08.07	18.08.07	19.08.07	20.08.07	21.08.07	22.08.07
Amritsar	0	0	0	0	0	0	0
Barmer	0	0	0	0	0	0	0
Sriganganagar	0	0	0	0	0	0	0
Jaisalmer	0	0	0	0	0	0	2.7
Kota	0	0	0	0	0	2.9	57.4
Deesa	1.0	3.0	0	0	0	0	10.2
Churu	0	0	0	0	0	0	0

Temperature (degree Celcius)							
Station Name	16.08.07	17.08.07	18.08.07	19.08.07	20.08.07	21.08.07	22.08.07
Amritsar	-	-	-	31.5	30.5	31.0	30.5
Barmer	30.5	30.5	30.0	30.0	-	31.5	25.5
Sriganganagar	-	-	34.0	34.5	33.5	32.0	34.0
Jaisalmer	30.0	30.5	30.5	30.5	31.0	32.5	21.0
Kota	30.0	30.0	29.5	-	30.5	27.0	-
Deesa	-	-	-	-	-	-	-
Churu	-	-	-	-	-	-	-

Wind														
Station Name	16.08.07		17.08.07		18.08.07		19.08.07		20.08.07		21.08.07		22.08.07	
	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.
Amritsar	07	WSW	-	-	-	-	-	-	06	ESE	-	-	--	-
Barmer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sriganganagar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jaisalmer	05	NW	-	-	-	-	--	-	07	E	-	-	10	ESE
Kota	13	WNW	-	-	-	-	-	-	-	-	-	-	-	-
Deesa	-	-	-	-	-	-	-	-	12	SW	-	-	-	-
Churu	06	NNW	-	-	-	-	-	-	21	NW	-	-	25	ENE

Small-scale breeding is in progress in desert areas of the **Indo-Pakistan** border. Under the prevailing weather conditions, there is chance of slight increase in the locust number. All efforts should be made to monitor the situation closely and carefully and take appropriate plant protection measures.

CROP – STATE – STAGE

Delhi

Vegetables	Early sown vegetables	Rice	Arhar	Maize
Nursery sowing/Transplanting	Early Vegetative / vegetative	Tillering	Flowering / Pod formation	Vegetative / flowering
Bajra				
Vegetative / flowering				
Haryana				
Sugarcane	Horticultural crops	Cotton	Paddy	
Vegetative	Vegetative	Vegetative	Early vegetative	
Kharif Groundnut	Kharif Pulses			
Vegetative	Flowering			

Himachal Pradesh

Vegetables (Ladies finger/ Cabbage, Cauliflower)	Potato	Apple	Rice	Maize
Vegetative Ladies finger -- Flowering/Fruiting Cabbage, Cauliflower-- Nursery sowing	Tuber formation	Maturing/Harvesting	Early vegetative/ tillering	Vegetative

Jammu & Kashmir

Vegetable crops	Rice	Maize	Pulses	
Fruiting/harvesting--in Kashmir Div.	Vegetative – Jammu Div. Flowering stage - Kashmir Div.	Flowering- Jammu Div. Cob formation- Kashmir div.	Vegetative	

Punjab

Sugarcane	Sunflower	Horticultural crop	Cotton	Paddy
Vegetative	Harvesting	Vegetative	Vegetative	Early vegetative
Kharif Groundnut	Kharif pulses			
Vegetative	Flowering			

Rajasthan

Kharif crops(Bajra, Maize, Guar, Moong, Moth bean, Urd)	Zaide Fodder	Cotton		
Vegetative	Vegetative	Vegetative		

Uttar Pradesh

Sugarcane	Kharif Vegetables	Mango	Rice	
Early vegetative	Early vegetative	Harvesting	Early vegetative	
Kharif oilseeds	Early sown Kharif oilseeds			
Sowing	Early vegetative			

Uttarakhand

Apple	Ginger	Sugarcane	Potato	Kharif Rice
Pre-Maturity/maturity	Rhizome formation	Tiller formation	Tuber growth	Seedling /vegetative
FingerMillet/ Amranthus	Mango/Litchi			
Vegetative	Seedling			

Assam

Vegetables	Jute	Maize	Sugarcane	
Harvesting	Harvesting	Harvesting	Vegetative	
Arhar	Sali rice	Black Gram & Green Gram		
Vegetative	Transplanting/Early tillering	Land preparation and Sowing		

Arunachal Pradesh

WRC Rice	Ginger	Millet	Jhum Paddy	Maize
Vegetative	Rhizome formation	Flowering	Vegetative	Late harvesting

Bihar

Vegetables & fruit crops	Maize	Arhar	Sugarcane	Kharif rice
Sowing	Maturity	Vegetative	Vegetative	Early vegetative

Jharkhand

Kharif rice	Ragi	Vegetables (Tomato, Brinjal, Bhendi)	Upland crops (Maize, arhar, groundnut, soybean, urad, rice and ragi)
Early vegetative	Transplanting	Sowing Early sown – Early vegetative	Early vegetative

Sikkim

Maize	Orange	Vegetables	Large Cardamom	Ginger
Harvesting	Fruiting New planting in some places	Maturity/Harvesting	Capsule maturity/Early harvesting	Flowering
Rice				
Tillering				

West Bengal

Sugarcane	Jute	Aus rice	Groundnut	Arhar
Vegetative	Vegetative	Grain formation / maturity	Early vegetative/vegetative	Early vegetative/vegetative
Aman rice	Early transplanted Aman rice			
Land preparation sowing/Transplanting	Early vegetative/early tillering			

Chattisgarh

Sugarcane	Black gram, Green Gram & Groundnut	Soybean	Kharif Rice	Maize
Vegetative	Early vegetative/Vegetative	Early vegetative/Vegetative	Early vegetative/Early tillering	Vegetative

Gujarat

Sugarcane	Kharif Rice	Early transplanted Rice	Kharif Groundnut	Kharif Cotton
Vegetative / cane formation	Transplanting	Early tillering/Tillering	Vegetative	Vegetative
Kharif Maize	Kharif Bajra	Castor		
Vegetative	Vegetative/Tillering	Land preparation and Sowing		

Maharashtra

Sugarcane Preseasonal (Madhya Maharashtra, Marathwada & Vidarbha)	Sugarcane (Suru) (Madhya Maharashtra, Marathwada and Vidarbha)	Irrigated cotton (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Rice (Konkan)	Kharif Rice (Madhya Maharashtra, Marathwada & Vidarbha)
Active growth / elongation	Early vegetative/active growth	Vegetative growth/Flowering	Early vegetative/Tillering	Early tillering Kolhapur –Tillering
Kharif Jowar (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Bajra (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Groundnut (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Sunflower (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Green Gram (Madhya Maharashtra, Marathwada & Vidarbha)
Vegetative	Vegetative growth/Flag leaf initiation	Vegetative / flowering	Vegetative growth	Vegetative/Flowering
Kharif Cotton (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Tur (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Soyabean (Madhya Maharashtra, Marathwada & Vidarbha)		
Vegetative	Early vegetative	Vegetative / Flowering		

Madhya Pradesh

Sugarcane	Kharif crops (maize, urd and jowar)	Kharif rice	Soyabean	
Vegetative	Vegetative	Active tillering	Flowering	

Orissa

Kharif vegetables	Kharif rice	Sugarcane	Jute	Arhar
Transplanting	Early vegetative	Vegetative	Vegetative	Vegetative

Andhra Pradesh

Kharif Rice	Kharif Maize	Kharif Cotton	Kharif Groundnut	Kharif Black gram, Green gram
Tillering	Vegetative / flowering	Vegetative / flowering	Vegetative / flowering	Vegetative / flowering

Karnataka

Sugarcane (Ratoon crop)	Kharif Cotton/Maize / Sunflower	Groundnut	Jowar	
Grand growth	Late Vegetative / Flowering	Peg formation	Milking	

Kerala

Rubber	<i>Virippu</i> rice	Early sown Virippu Rice		
Tapping	Flowering/Ear head formation	Maturity / harvesting		

Tamil Nadu

Rice (<i>Kuruvai/Samba</i>)	Cotton	Sugarcane (Early, Mid and Late season)	Maize	Groundnut/Black gram/Green gram/Red gram
Samba- Transplanting Kuruvai - Tillering	Picking	Grand growth Late Sugarcane- Harvesting	Sowing	Sowing
Jowar/Bajra/Samai Sowing				
