



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

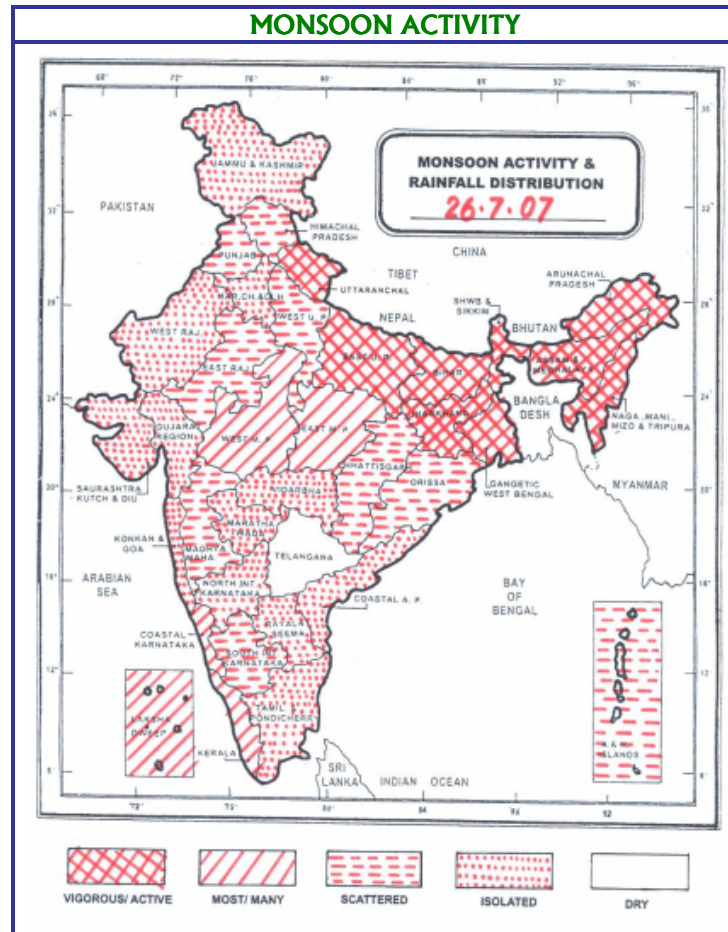
Issued by

Agricultural Meteorology Division, India Meteorological  
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**Thursday, 26<sup>th</sup> July, 2007**

(For the period 26<sup>th</sup> to 30<sup>th</sup> July, 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 25<sup>th</sup> July and weak on 23<sup>rd</sup> & 24<sup>th</sup> July. Rain occurred at most places on 25<sup>th</sup> July and at many places on 23<sup>rd</sup> July and at a few places on 24<sup>th</sup> July.
- Rain / thundershowers are likely at many places in all the districts of the State.

**Warning:** Isolated heavy to very heavy rainfall is likely to occur over the State during next 48 hours.

#### Advisories

- Rain/thundershowers are likely to occur at many places over the state for the next three days. Under the circumstance, postpone irrigation to plantation crops viz., coconut, arecanut, rubber and banana.

- Postpone intercultural operations, application of fertilizers and pesticides in plantation crops.
- Arrange for extensive drainage facilities to prevent water logging due to isolated heavy rainfall likely during next 48 hours.
- Monitor *virippu* rice for stem borer, leaf folder, brown plant hopper and gall midge and for blast & bacterial diseases. Spray Qunalphos 25 EC @ 750 ml/ha to control the pests and apply *Pseudomonas* @ 2.5 kg along with 50 kg cowdung to control the diseases. Spraying of chemicals may be undertaken after current spells of rain.
- Attack of Rhinoceros beetle, red palm weevil, bud rot, stem bleeding 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. Spray 1% Bordeaux mixture to control bud rot. Chisel out the completely affected tissues and paint the wound with coal tar or Bordeaux paste to control stem bleeding disease. Spray 2% neem oil and garlic emulsion in the crown and bunches to control Eriophyid mite. Spraying of chemicals may be undertaken after spells of rain.
- Monitor arecanut for mahali disease and spray 1% Bordeaux mixture after current spells of rain to control the disease.
- Attack of bunchy top disease is reported in banana. Apply 25 g phorate 10G or 20 gm carbofuran 3G per pit 20 days after planting around the rhizome.

### **Tamilnadu**

- Rainfall occurred at a few places over the State on 25<sup>th</sup> July and at one or two places on 23<sup>rd</sup> and 24<sup>th</sup> July.
- Rain / thundershowers are likely at a few places over the State.

### **Advisories**

- Undertake sowing of *samba* rice in the nursery. Do seed treatment with *Pseudomonas fluorescense* @ 10 g/kg before sowing.
- As there was no significant rainfall in the state except in Dharmapuri, Krishnagiri, Salem, Thiruvannamalai, Vellore and Villupuram districts and rain / thundershowers are likely only at a few places over the State for the next three days, apply irrigation to sugarcane and cotton. Apply irrigation depending upon soil profile stored moisture in the above mentioned districts.
- Undertake sowing of maize (*Adippattam* – July-Aug crop). Use 6 kgs of seeds / acre. Treat the seeds with *Azospirillum* and *Phosphobacteria* one packet each for one acre seeds.
- Monitor sugarcane for stem borer and if the pest population crosses ETL, release *Trichogramma* egg parasite @ 5cc / acre on a non rainy day to control the pest.
- Continue picking of 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.
- Start planting of special season sugarcane. Undertake sett treatment with *Azotobacter* before planting.

### **Karnataka**

- On 23<sup>rd</sup> July monsoon was weak over Coastal Karnataka and South Interior Karnataka. Rainfall occurred at most places over Coastal Karnataka and at isolated places over Interior Karnataka. On 24<sup>th</sup> July monsoon was weak over the State. Rainfall occurred at most places over Coastal Karnataka and at isolated places over Interior Karnataka. On 25<sup>th</sup> July monsoon was active over North Interior Karnataka and weak over Coastal Karnataka. Rainfall occurred at most places over Coastal Karnataka and at a few places over South Interior Karnataka.

- Rain/thundershowers likely at many places over Coastal Karnataka and at a few places over South Interior Karnataka and North Interior Karnataka.

**Heavy rainfall warning:** Isolated heavy to very heavy rainfall is likely over Coastal Karnataka during next 48 hours.

#### **Advisories**

- Continue intercultural operations, application of fertilizers and pesticides to *kharif* jowar, maize, cotton, groundnut and sunflower after current spells of rain in Coastal Karnataka and on a non rainy day in Interior Karnataka.
- Postpone irrigation to summer sugarcane, *Kharif* jowar, maize, cotton, groundnut and sunflower as rain / thunder showers is likely to occur at many places over Coastal Karnataka for the next three days. Apply irrigation depending upon soil profile stored moisture in Bangalore, Chamrajnagar, Kolar and Tumkur districts in South Interior Karnataka as there was excess rainfall during last week. Apply irrigation in the remaining districts as there was no significant rainfall during last week.
- Provide drainage facilities in coastal Karnataka to avoid water logging due to isolated heavy rainfall likely during next 48 hours.
- Monitor groundnut for red hairy caterpillar and if the pest population crosses ETL, undertake plant protection measures after spells for rain in Coastal Karnataka and on a non rainy day in Interior Karnataka to control the pest.

#### **Andhra Pradesh**

- Rain occurred at many places over Telangana on 23<sup>rd</sup> July and at a few places over Coastal Andhra Pradesh on 20<sup>th</sup>, 21<sup>st</sup>, 23<sup>rd</sup> to 25<sup>th</sup> July, over Telangana on 21<sup>st</sup> & 22<sup>nd</sup> July and over Rayalaseema on 19<sup>th</sup> to 21<sup>st</sup> & 25<sup>th</sup> July. Isolated rain occurred elsewhere over the State during the period.
- Rain/thundershowers are likely at a few places over the State.

#### **Advisories**

- Continue nursery sowing, main field preparation and transplanting of *kharif* rice by utilizing the monsoon rainfall. Transplant rice seedlings at proper age. Apply pre-emergence herbicide Butachlor @ 1 litre/ha on 3<sup>rd</sup> day after planting.
- There was no significant rainfall in the state during last week except in Srikakulam district in Coastal Andhra Pradesh and in Chittoor district in Rayalaseema and rain/thundershowers is likely to occur only at a few places for the next three days. Under the circumstances, apply irrigation to *kharif* crops viz., groundnut, cotton, maize, green gram and black gram to bring the soil moisture to field capacity. Apply irrigation depending upon soil profile stored moisture in the above mentioned districts.
- Incidences of stem borer have been reported in maize. Spray Endosulphan @ 2 ml/litre of water on a non rainy day 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 on a non rainy day to control the pest.
- Undertake earthing up in early sown *kharif* crops on a non rainy day to keep the field weed free.

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

#### **Assam**

- Light to moderate rain occurred at most places on 23<sup>rd</sup> July and at many places on 24<sup>th</sup> & 25<sup>th</sup> July with rather heavy to heavy falls on 23<sup>rd</sup> & 24<sup>th</sup> July and isolated rather heavy falls on 25<sup>th</sup> July over the State.
- Rain/ thundershowers are likely at many places over the State.

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

## **Advisories**

- **Sali rice is badly damaged in Dhemaji and Lakhimpur district due to flood.**
- As rain/ thundershowers are likely at many places over the State for next three days, postpone irrigation, intercultural operation and application of fertilizer to the crops.
- As isolated heavy to very heavy rainfall also likely over the State during next 48 hours, arrange for draining out of excess water from the field.
- Also postpone transplanting of *Sali* rice and arrange for draining out of excess water from the already sown / transplanted fields.

## **Arunachal Pradesh**

- Sky remained mainly cloudy over the State during the period. Light to Moderate rain / thundershowers occurred at most places on 23<sup>rd</sup>, 24<sup>th</sup> and 25<sup>th</sup> July.
- Rain/thundershowers are likely to occur at many places over the State.

**Warning:** Isolated heavy to very heavy rainfall is likely over the State during next 48 hrs.

## **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, maize, *jhum* paddy and ginger crops.
- Arrange extensive drainage facilities to avoid water logging due to heavy rainfall. As ginger and maize crops are highly sensitive to water logging, excess water should be drained immediately.
- Postpone weeding, spraying and intercultural operations due to heavy rainfall.

## **Bihar**

- Moderate to heavy rain occurred at many places. Very heavy rainfall occurred at one or two places.
- Rain/thundershowers are likely at many places over the State.

**Warning:** Isolated heavy to very heavy rainfall is likely over the State during next 48 hours.

## **Advisories**

- Transplanting of rice may be continued with the realized rainfall. Provide drainage in nursery bed and already transplanted field.
- As rain/thundershowers are likely at many places with isolated heavy to very heavy rainfall over the State, postpone irrigation to maize, arhar and sugarcane.
- Monitor the mango for mealy bug or hopper & if exceeds economic threshold level, then spray with Carboryl @ 2g/litre of water after current spells of rain.

## **Jharkhand**

- South West Monsoon was active over the State. Rain or thundershowers occurred at many places.
- Rain/thundershowers are likely at a few places over the State.

## **Advisories**

- Continue transplanting of *Kharif* rice and sowing of upland crops viz. maize, arhar, groundnut, soybean, urad, and rice utilising the monsoon rain.
- 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 carry out earthing up.

## Sikkim

- Sky remained overcast during the period. Moderate to nearly heavy rain occurred on 22<sup>nd</sup> July and light to moderate rainfall on rest days of the period at many places over East Sikkim. The rainfall was normal during the period.
- Rain/thundershowers are likely at many places over the State.

**Warning:** Isolated heavy to very heavy rainfall is likely over the State during next 48 hrs.

### **Advisories**

- As rain / thundershowers are likely at many places over the State for next three days, postpone irrigation and intercultural operation to large cardamom, orange, vegetables, maize and ginger.
- Arrange for drainage facilities to prevent water stagnation in the field as heavy to very heavy rainfall is likely to occur at isolated places in the next 48 hours.
- Maintain 4-5 cm water level in the rice field.
- Monitor large cardamom for chirkey and forkey disease and rouge out the affected plants to prevent further damage. Also collect and destroy leaf eating caterpillars.
- 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. Plug trunk borer holes with cotton soaked with kerosene and later with mud after spells of rain to prevent trunk borer.

## West Bengal

- SW-Monsoon has been active over the State on 23<sup>rd</sup> to 25<sup>th</sup> July. During the said period rainfall occurred at most places on 23<sup>rd</sup> to 25<sup>th</sup> July with heavy rainfall at isolated places on 24<sup>th</sup> July over Sub Himalyan West Bengal. But rainfall occurred at most places on 23<sup>rd</sup> July and at many places on 24<sup>th</sup> & 25<sup>th</sup> July with heavy to very heavy rain at isolated places on 25<sup>th</sup> July over Gangetic West Bengal.
- Rain / thundershowers are likely at many places over the State.

**Heavy Rainfall Warning:** Isolated heavy to very heavy rainfall is likely over West Bengal during next 48 hrs.

### **Advisories**

- As rain / thundershowers are likely at many places over the State for next three days along with heavy to very heavy rainfall at isolated places during next 48 hrs, undertake sowing of groundnut and arhar and sowing / transplanting of *aman* rice after current spells of rain. Also arrange for draining out excess water from the fields of already sown / transplanted crops.
- Select varieties from improved varieties like JL-24, JL-11, A-K-12-24 for sowing of groundnut. Seedrate is 110-125 kg / ha. Apply 20-25 carts compost, 15 kg N, 30 kg P<sub>2</sub>O<sub>5</sub> and 45 kg K<sub>2</sub>O at the time of land preparation. Line to line distance is 12 inches and seed to seed distance is 6 inches.
- Arhar can be grown in high land where there is no water logging. Select varieties from high yielding varieties like B-7, UPS-A-120 etc. Seedrate is 20-25 kg / ha. Apply 20-25 carts compost, 20 kg N and 40 kg P<sub>2</sub>O<sub>5</sub> at the time of land preparation. Maintain line to line distance of 30 inches for sowing.
- Transplant 25 – 30 days old seedlings of *aman* rice in the main field. Apply 15 kg N, 30 kg P<sub>2</sub>O<sub>5</sub> and 30 kg K<sub>2</sub>O / ha to short duration varieties and 20 kg N, 40 kg P<sub>2</sub>O<sub>5</sub> and 40 kg K<sub>2</sub>O / 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.
- Maintain 3 – 5 cm water in the field of *aus* rice.

- As rain / thundershowers are likely at many places over the State for next three days, postpone irrigation to sugarcane and jute. Also postpone intercultural operation and fertilizer application to these crops and also to *aus* rice. Also arrange for draining out excess water from the field under prevailing weather condition.

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

### **Gujarat**

- Rainfall occurred at isolated places over Gujarat region, Saurashtra on 23<sup>rd</sup> July. Rainfall occurred at isolated places over South Gujarat region, Saurashtra on 24<sup>th</sup> July. Rainfall occurred at isolated places over Gujarat region, Saurashtra, Diu, Daman, Dadra Nagar Haveli on 25<sup>th</sup> July.
- Isolated rain / thundershowers are likely over the State.

### **Advisories**

- Prepare the main field by paddling method and transplant 25 – 30 days old rice seedlings in the field.
- As there was no significant rain during last week and rain / thundershowers are likely only at isolated places over the State for next three days, apply irrigation to sugarcane and pre-monsoon cotton and also to *kharif* groundnut, *kharif* cotton, *kharif* bajra and *kharif* maize wherever the crops are at vegetative stage.
- Maintain 2 – 3 cm water after 3 – 4 days after transplanting of *kharif* rice. Maintain 3 – 5 cm water at tillering stage.

### **Chhattisgarh**

- Rainfall occurred at many places on 24<sup>th</sup> July and at a few places on 23<sup>rd</sup> and 25<sup>th</sup> July in the State.
- Rain / thundershowers are likely at many places over north Chhattisgarh and isolated over rest of the State.

### **Advisories**

- Prepare land and continue sowing of black gram, groundnut and soybean.
- Select varieties from Soya – 9, J.S. – 335, J.S. – 80 – 21, J.S. – 75 – 46 and P.K. – 472 for sowing of soybean.
- Prepare land and transplant 25 – 30 days old seedlings of *kharif* rice in the main field. Transplant 2 – 3 seedlings per hill. Half part of Nitrogen and full dose of Phosphorus and Potash may be applied at the time of land preparation. Germinated sowing may be done in the field with excess water. The suitable varieties are Mahamaya, MTUS – 1010, IR-64, Bamleshwari, Chandrahasani etc.
- As there was no significant rain in most of the districts of the State during last week and rain / thundershowers are likely to occur at isolated places over south Chhattisgarh for next three days, apply irrigation to sugarcane and maize and also to black gram, groundnut and soybean wherever crops are at vegetative stage in the districts of south Chhattisgarh. As rain / thundershowers are likely at many places over north Chhattisgarh, postpone irrigation to the crops in the districts of this region.
- Also postpone intercultural operation and fertilizer application in north Chhattisgarh under prevailing weather condition.
- 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 South Konkan, at many places in Marathwada, at a few places in North Konkan, South Madhya Maharashtra, Vidarbha and at isolated places in North Madhya Maharashtra.

- Rain/thundershowers are likely to occur at a few places over Konkan during next 24 hours & increase thereafter. Rain/thundershowers are also likely to occur at isolated places over Madhya Maharashtra, Vidarbha and Marathwada.

### **Advisories**

- As there was no significant rain in the State during last week and rain/thundershowers are also likely to occur at isolated places over Madhya Maharashtra, Vidarbha and Marathwada 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.
- A dose of 60 kg Nitrogen / ha may be applied after 30 days from sowing to *kharif* jowar.
- Apply 44 kg Urea / ha for non-irrigated *bajra* & 88 kg Urea / ha for irrigated *bajra* after 25 to 30 days from sowing to the crop.
- Apply 125 kg Gypsum per hectare after 25 to 30 days from sowing of *kharif* groundnut.
- A dose of 30 kg Nitrogen / ha may be applied after 30 days from sowing of *kharif* sunflower.
- Mild incidence of white woolly aphids in Kolhapur division in sugarcane (pre-seasonal), Sap sucking insects in Aurangabad division and aphids & jassids in Amravati division in irrigated cotton, stem borer in Kolhapur division in jowar, Leaf eating caterpillar in Amravati division in green gram and Leaf eating caterpillar in Amravati and Kolhapur divisions in soybean is reported.
- Monitor sugarcane (pre-seasonal) for White Woolly Aphids in & 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 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. Perform the same on a non rainy day in Madhya Maharashtra.
- Monitor *kharif* Jowar for Stem borer & if exceeds economic threshold level, spray 5 % Neem seed extract or 35 % Endosulphon 14 ml or 30 % Dimethoate 10 ml plus 10 ml Sticker in 10 liter water.
- Monitor green gram and soybean for Leaf eating caterpillar & if exceeds economic threshold level, spray 25 EC Quinolphos or 36 EC Monocrotophos @ 700 ml / ha in 500 liters water.

### **Madhya Pradesh**

- Rainfall occurred at many places in East M.P. on 24<sup>th</sup> July, at a few places over the State on 25<sup>th</sup> July and at isolated places over the rest of the State for remaining period.
- Rain / thundershowers are likely to occur at many places over north Madhya Pradesh and isolated over rest of the State.

### **Advisories**

- There was no significant rainfall in most of the districts in the state for the past two weeks. In order to save the crops from moisture stress, apply supplementary irrigation to sugarcane and other *kharif* crops viz., soybean, maize, urd and jowar.
- Continue land preparation and transplanting of *kharif* rice.
- Undertake intercultural operation in sugarcane and *kharif* crops to keep the field weed free. Intercultural operations may be continued after spells of rain in north Madhya Pradesh.

## **Orissa**

- Rain fall occurred at a few places over Orissa on 23<sup>rd</sup> & 24<sup>th</sup> July and at isolated places over Orissa on 25<sup>th</sup> July. Heavy rain occurred at isolated places over- South Orissa on 23<sup>rd</sup> & 25<sup>th</sup> July.
- Rain / thundershowers are likely to occur at a few places over the State.

**Warning:** Heavy rain likely to occur at isolated places over the districts of the State during next 48 hours.

## **Advisories**

- As there was sufficient rainfall in most of the districts over the State and rain/thundershowers are likely at a few places over the State, postpone irrigation to sugarcane, arhar and jute. Make arrangements for excess water drainage to avoid water logging where excess rainfall was there during last week.
- Continue sowing / transplanting of rice and 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 to control the pest.
- Monitor jute for leaf eating caterpillar and spray Endosuphan @ 2.5 ml / liter of water if the damage crosses ETL on a non rainy day to control the pest.

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

### **Punjab**

- Rainfall occurred at a few places on 25<sup>th</sup> July at isolated places rest days.
- Scattered rain/thundershowers are likely over the State.

### **Advisories**

- Avoid further transplanting of paddy in view of expected dry weather conditions. Area which is uncovered may be diverted for *Kharif* Pulses. All available water resources may be utilized to save already transplanted paddy.
- As there was no significant rainfall in most of the districts during last two weeks and rain/thundershowers are likely at a few places over the State during next three days, apply irrigation to sugarcane, cotton, pulses, groundnut(early sown crop) and Horticultural crops.
- Attack of mealy bug has been observed in Malwa region. Farmers are advised to take adequate plant protection measures to control further spread. They are also advised to spray recommended pesticides. They have also been advised to destroy them manually. Adequate arrangement be made to drain out standing water.

### **Haryana**

- Rainfall occurred at few places on 24<sup>th</sup> July and at isolated places on rest days.
- Scattered rain/thundershowers are likely over the State.

### **Advisories**

- As there was no significant rainfall over most of the districts during last few weeks 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.
- Avoid further transplanting of paddy in view of expected dry weather conditions. Area which is uncovered may be diverted for Kharif Pulses. All available water resources may be utilized to save already transplanted paddy.
- 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 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 in a non rainy day.



## **Rajasthan**

- Light to moderate rain / thundershowers occurred at few places in Jaipur, Ajmer, Bikaner, Kota and Udaipur divisions, at isolated places in Jodhpur division.
- Rain / thundershower are likely at isolated places in the State.

### **Advisories**

- There was no significant rainfall in most of the districts in the state during past two weeks and rain/ thundershowers are likely at isolated places only over the State for the next three days. In order to prevent the crops from moisture stress, apply supplementary irrigation to early sown *kharif* crops viz., bajra, groundnut, maize, guar, moong, moth bean and urd.
- Undertake intercultural operations in early sown *kharif* crops to keep the field weed free.
- Monitor *desi* and *American* cotton for sucking pests. If the pests population crosses ETL, spray Endosulphan @ 1.25 liters/ha to control the pests.

## **Uttar Pradesh**

- Rain occurred at many places in Gorakhpur divisions and at isolated places in remaining divisions of the State on 23<sup>rd</sup> July. Moderate to rather heavy rain occurred at most places in Faizabad, Gorakhpur, Bareilly divisions and at many places in Varanasi division. Light to moderate rain occurred at isolated at isolated places Allhabad ,Lucknow ,Kanpur Moradabad and weather was mainly dry in remaining divisions of the State on 24<sup>th</sup> July. Moderate rain occurred at most places in Meerut, Kanpur, Bareilly Moradabad, Lucknow Gorakhpur, , Faizabad division. Heavy rain occurred at isolated places in Kanpur division. Light to moderate rain occurred at many places in Allhabad, Varanasi, Jhansi division and at isolated places in Agra division on 25<sup>th</sup> July.
- Rain/thundershowers are likely at many places over the State.

**Warning:** Isolated heavy to very heavy rainfall is likely over East Uttar Pradesh during next 48 hours.

### **Advisories**

- Continue transplanting of *Kharif* rice. Aswani, Saket-U, Govind, Narendra-118, Narendra-97 varieties may be selected.
- Continue sowing of til and soybean after current spells of rain in East U.P.
- As rain/thundershowers are likely to occur at many places over the State with isolated heavy to very heavy rainfall in East U.P .for the next 48 hours, postpone irrigation to the standing crops.
- Proper drainage arrangements for avoiding waterlogging in Turmeric grown in East UP may be done.
- Monitor the top borer in sugarcane, if exceeds economic threshold level, apply Furadon 3G granules @ 33kg/ha near the drains of sugarcane field after current spells of rain.

## **Himachal Pradesh**

- Precipitation occurred at many places in the State
- Rain / thundershowers are likely at many places over the State

### **Advisories**

- Continue land preparation and transplanting of rice. The seedbed should be irrigated a day before uprooting of the seedlings. The seedlings should be pulled gently so that the roots are not injured. Repair all bunds. Incorporate all the organic matter about two weeks ahead of transplanting by ploughing the field to enable decomposition. Begin puddling about 2-3 days before transplanting. Prepare the field into a soft puddle. This will help minimize losses due to percolation of water. Uniformly level the fields before application of fertilizers. Where transplanting has not been started, it should be done immediately.
- Harvest early varieties of apple like Tydeman, early worcestor or Redjuna etc in low / mid hills. Premature leaf fall and red might attack have been reported from various parts of the apple growing regions of the state. Farmers are advised to spray Combi-Product @ 500 g

(Carbendazim 100 g+ Mancozeb 500 g or Dithianon 100 g or Myclobutanil 800 g) after current spells of rain.

- As rain / thundershowers are likely at many places over the State for next three days, postpone irrigation, intercultural operation and fertilizer application to vegetables, potato and maize.
- There is mild chance of attack of leaf spot disease in cabbage and cauliflower. If attack crosses economic threshold level, spray dithane M - 45 after current spells of rain 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 after current spells of rain to control the disease.
- Premature leaf fall and red might attack have been reported from various parts of the apple growing regions of the state. Farmers are advised to spray Combi-Product @ 500 g (Carbendazim 100 g+ Mancozeb 500 g or Dithianon 100 g or Myclobutanil 800 g) after current spells of rain.

### **Uttarakhand**

- Light to heavy rainfall was recorded at most places on 22<sup>nd</sup> & 24<sup>th</sup> July, light to moderate rain was recorded at 23<sup>rd</sup> & 25<sup>th</sup> July, Moderate rain was recorded at isolated places on 19<sup>th</sup> July, while very light rain was recorded at many places on 21<sup>st</sup> July. Sky remained partly to mainly cloudy during the period.
- Rain/thundershowers are likely at many places over the State.

**Warning:** Isolated heavy to very heavy rainfall is likely over the state during next 48 hrs.

### **Advisories**

- As rain/thundershowers are likely at many places with isolated heavy to very heavy rainfall for the next 48 hours over the State, postpone irrigation to sugarcane, potato, ginger and other orchard trees.
- Continue transplanting of rice. Apply pre-emergence herbicide Butachlor @ 1 litre/ha on 3<sup>rd</sup> day after planting to control weeds. Apply herbicide after current spells of rain due to heavy rain.
- Undertake intercultural operations after current spells of rain to keep the field weed free in sugarcane, rice and in orchards.
- Monitor apple for thrips and mites, if the pest population crosses ETL and undertake plant protection measures after current spells of rain.

### **Jammu & Kashmir**

- Light to moderate rain/thundershowers occurred at isolated places on 23<sup>rd</sup> and 24<sup>th</sup> July. Moderate to rather heavy rain/thundershowers occurred at isolated places on 25<sup>th</sup> July over J&K divisions.
- Scattered rain/thundershowers are likely to occur over the State.

### **Advisories**

- Continue land preparation and transplanting of rice in the main field in Jammu division. Transplant healthy seedlings @ 3 seedlings/ hill in 15x15 to 20x15 cm row to row and plant to plant spacing.
- There was no significant rainfall in the State during last week and rain/ thundershowers is likely at a few places over the state for the next three days. Under the circumstances, 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.
- Monitor cucurbits for powdery mildew in Jammu division. Spray Kerathane @ 0.05% or Wettable sulphur @ 0.3% on a non rainy day to prevent the disease.
- Continue sowing of cabbage, cauliflower, kale and knoll-khol in nurseries and sowing of carrot for seed purpose in Kashmir division.

- Continue field preparation and sowing pulses like moong and beans in Jammu division.
- White wash bottom portion of trees on a non rainy day to prevent termite attack. Undertake planting citrus, litchi, loquat, guava and papaya in orchards in Jammu division.

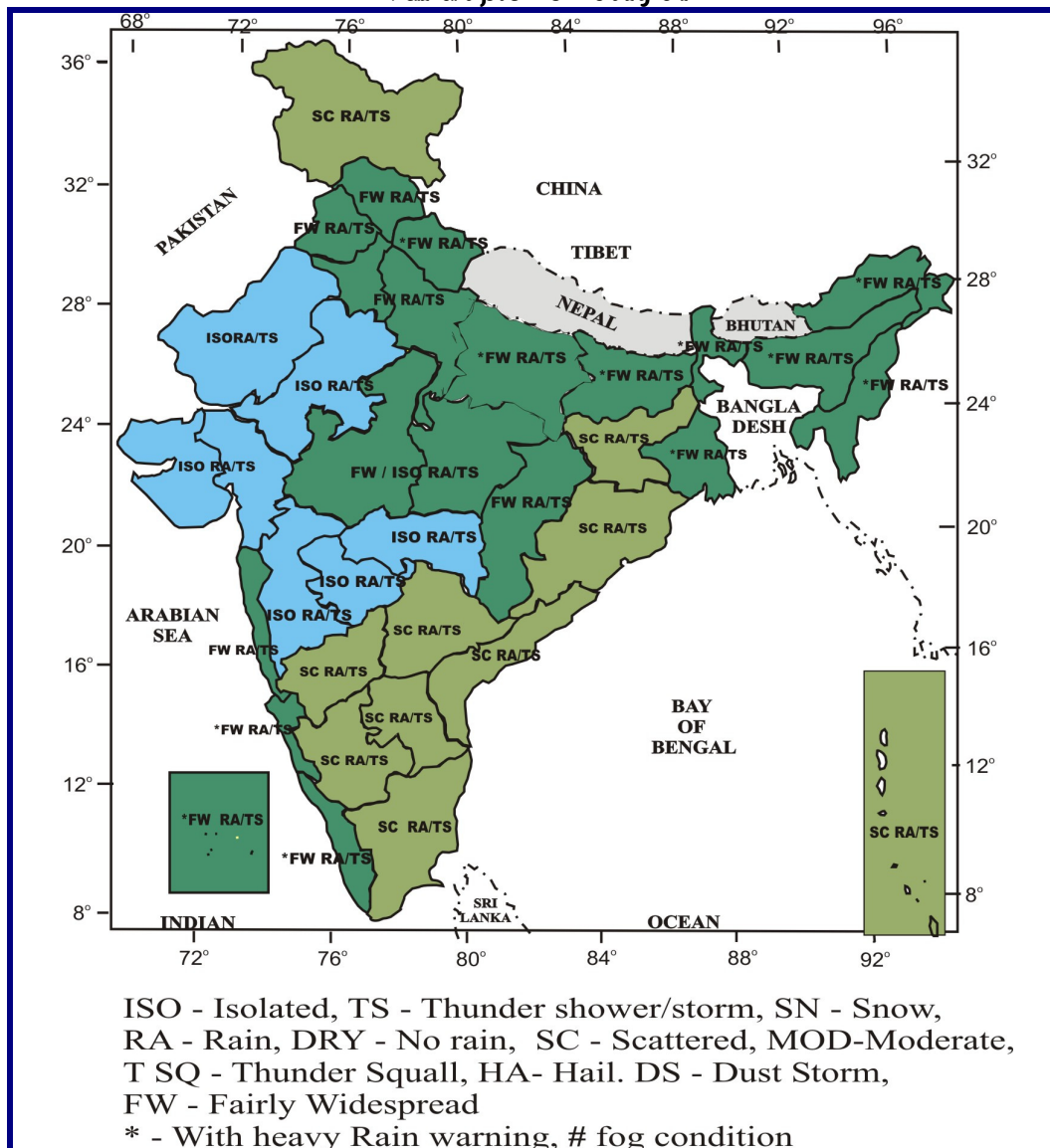
### **Delhi**

- Moderate rain occurred on 24<sup>th</sup> and 25<sup>th</sup> July at many places. Weather remained mainly dry on 23<sup>rd</sup> July.
- Scattered rain / thundershowers are likely over the State.

### **Advisories**

- As there was no significant rain during last week and rain is likely to occur at a few places over the State during next three days, apply irrigation to vegetables and also to arhar, maize and bajra.
- Maintain 3 – 5 cm water in the rice field at tillering stage. Apply urea @ 100 kg / ha at 3 – 4 weeks after transplanting.
- Prepare land and perform sowing of fodder crops like jowar, bajra and mixed maize and lobia and transplanting of cauliflower, cabbage, tomato, brinjal, chilly and onion and nursery sowing of mid period cabbage and cauliflower.
- Perform transplanting of 5 – 6 weeks old early cauliflower and cabbage plants and ready varieties of plants like Pusa Early Dwarf of tomato, Pusa Kranti of Brinjal and Pusa Jwala of chilly and 6 – 8 weeks old seedlings of onion in the main field.

**Forecast Map**  
Valid upto 29<sup>th</sup> July 07



### *Salient weather features for the week ending 25/07/07*

#### **METEOROLOGICAL ANALYSIS**

- The axis of the monsoon trough at sea level ran close to the foothills of the Himalayas during many days of the week.
- Last week's low pressure area over East Uttar Pradesh and adjoining Bihar became less marked on 19<sup>th</sup> July. However, the associated upper air cyclonic circulation lay over Bihar & neighbourhood extending upto 3.1 km a.s.l. on 19<sup>th</sup> and became less marked on 20<sup>th</sup>. A north-south trough in lower tropospheric levels extended from Bihar to north coastal Andhra Pradesh on 20<sup>th</sup> and became less marked on 21<sup>st</sup>.
- An upper air cyclonic circulation in the lower tropospheric levels lay over Bangladesh & neighbourhood on 21<sup>st</sup> & 22<sup>nd</sup> and over Assam & neighbourhood on 23<sup>rd</sup> July. It moved away eastwards thereafter. Another upper air cyclonic circulation at lower tropospheric levels lay over Sub-Himalayn West Bengal & neighbourhood on 24<sup>th</sup> and east Assam & adjoining Arunachal Pradesh on 25<sup>th</sup> July.
- A cyclonic circulation lay over westcentral Bay of Bengal off south Coastal Andhra Pradesh extending upto 3.1 km a.s.l. on 23<sup>rd</sup>; over southwest Bay of Bengal off north Tamil Nadu coast on 24<sup>th</sup> and over Tamil Nadu & neighbourhood on 25<sup>th</sup> July.

- Last week's upper air cyclonic circulation over Jammu & Kashmir and neighbourhood moved away eastwards on 19<sup>th</sup>.
- A trough in westerlies extending upto mid-tropospheric level ran from north Pakistan to north Arabian Sea during 19-21<sup>st</sup> and from Jammu & Kashmir to north Arabian Sea across Pakistan during 22-25<sup>th</sup> July. An embedded cyclonic circulation lay over north Pakistan at lower tropospheric levels during 19-21<sup>st</sup> and over Jammu & Kashmir and neighbourhood during 22-25<sup>th</sup>.
- An off-shore trough extended from south Maharashtra coast to Kerala coast throughout the week.

## **RAINFALL**

Under the influence of the above systems:

- Rainfall activity was subdued over central, west & adjoining northwest & peninsular India with isolated to scattered rainfall during many days of the week.
- Widespread/fairly widespread rainfall occurred over northeastern states, West Bengal & Sikkim and Bihar throughout the week. Southwest monsoon was active/vigorous over the above regions during many day of the week. Widespread/fairly widespread rainfall also occurred over Jharkhand and East Uttar Pradesh during many days of the week.
- Fairly widespread rainfall occurred over western Himalayan Region during 2<sup>nd</sup> half of the week.
- Widespread/ fairly widespread rainfall occurred along the west coast and Lakshadweep during many days of the week.

## **RAINFALL DURING THE WEEK (FOR THE WEEK ENDING ON 25<sup>TH</sup> JULY, 2007)**

Rainfall was excess/normal in 11, deficient/scanty in 25 out of 36 meteorological sub-divisions (Actual: 47.7 mm, Normal: 67.8 mm and Departure: -30%).

## **CUMULATIVE SEASONAL RAINFALL (1<sup>ST</sup> JUNE TO 25<sup>TH</sup> JUNE, 2007)**

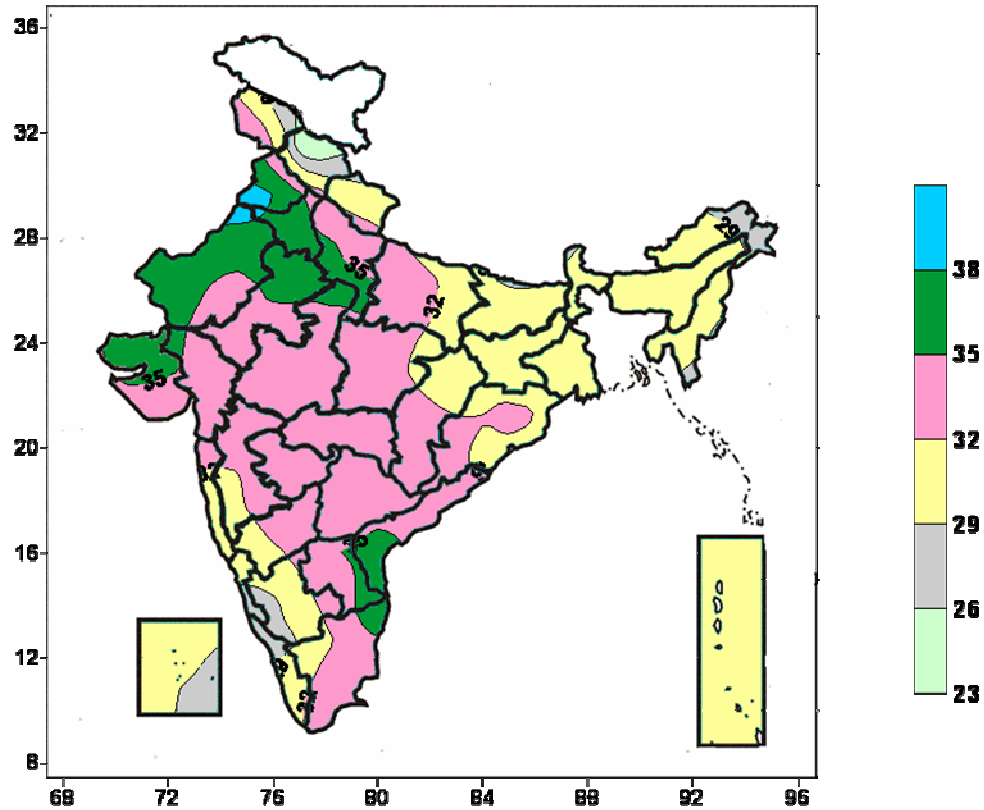
Rainfall was excess/normal in 29 and deficient in 7 out of 36 meteorological sub-divisions. (Actual: 413.4 mm, Normal: 398.0 mm and Departure: +4%).

## **OUTLOOK FOR THE WEEK ENDING ON 1<sup>ST</sup> AUGUST, 2007.**

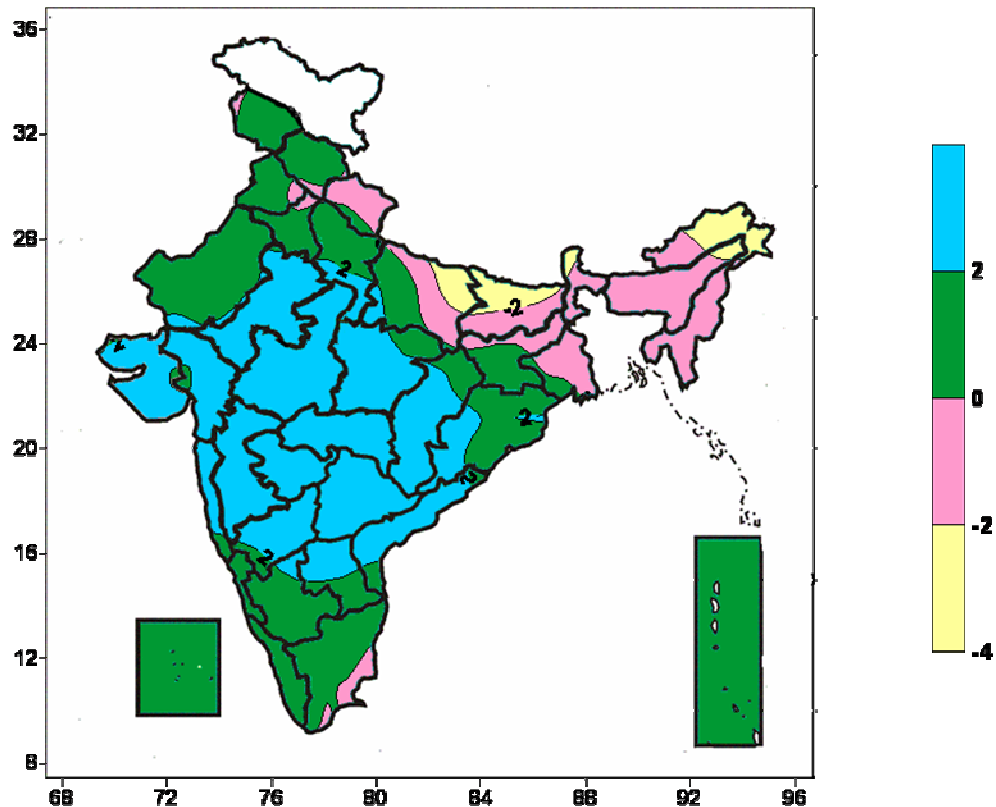
- Numerical Weather Prediction models suggest that southwest monsoon is likely to remain in a weak phase during the week. Hence, rainfall activity over central and adjoining peninsular & northwest India will remain subdued during the same period.
- Enhanced rainfall activity with isolated heavy to very heavy fall is likely to continue over northeastern states, Sub-Himalayan West Bengal & Sikkim and Bihar during the week.
- Increase in rainfall activity along the west coast towards 2<sup>nd</sup> half of the week.

## Contour maps for the week ending 25<sup>th</sup> July, 2007

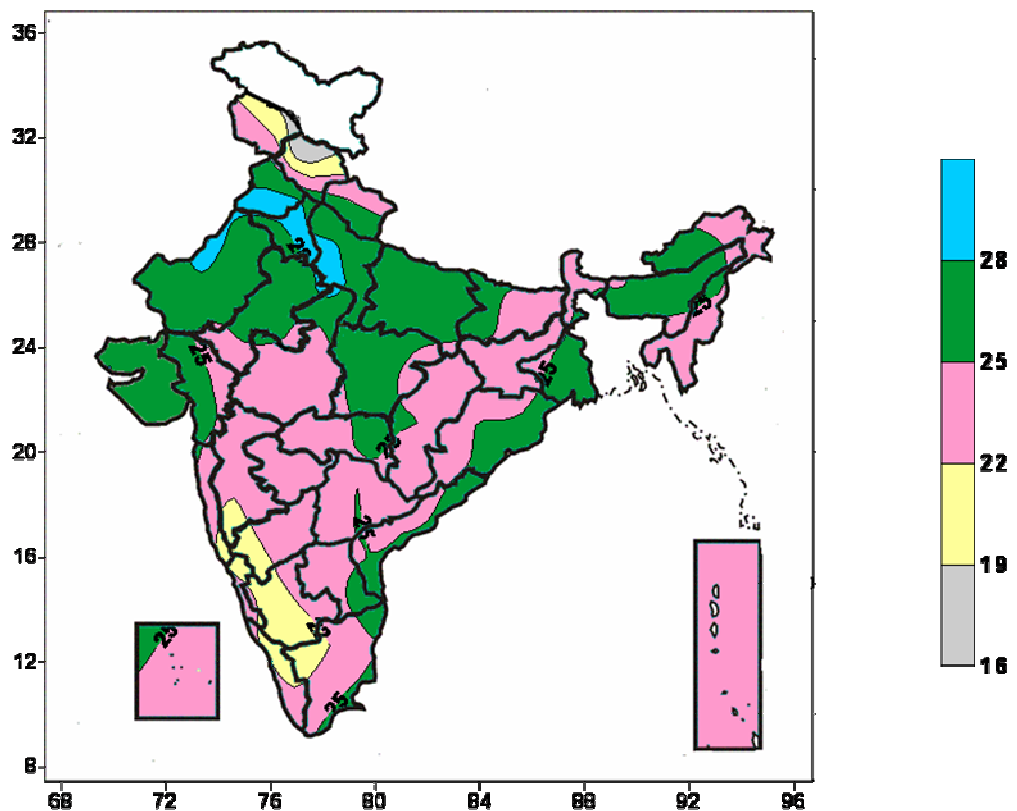
Actual Mean Maximum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 25.07.07



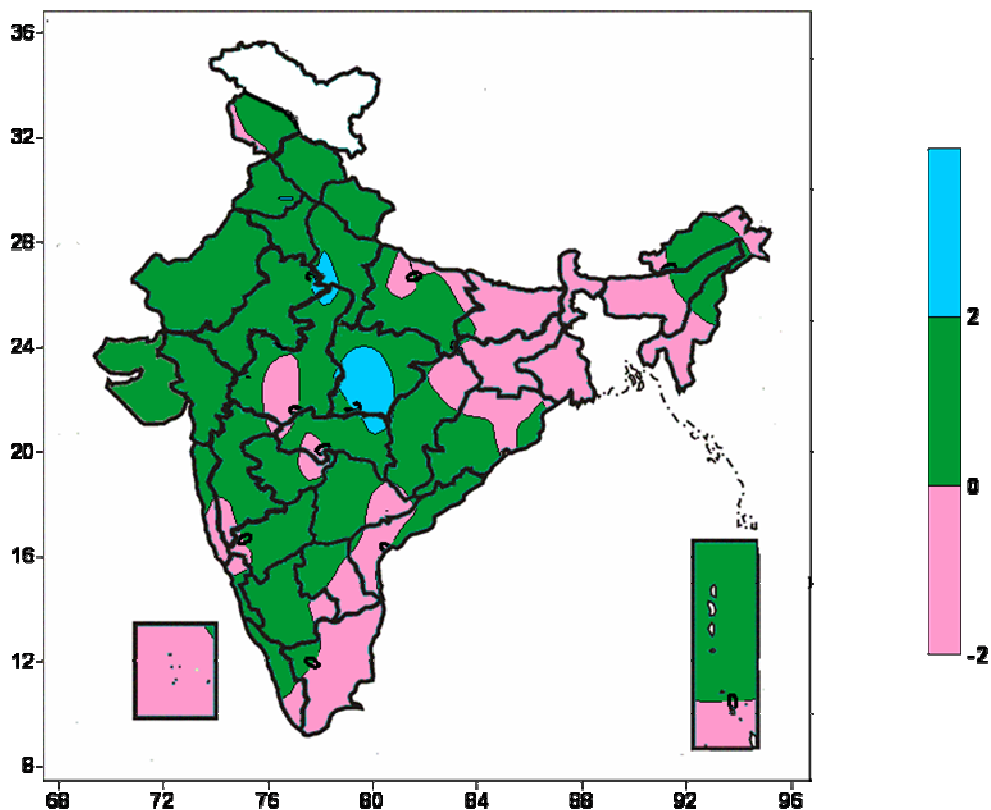
Maximum Temperature ( $^{\circ}\text{C}$ ) Anomaly In India for the week ending 25.07.07



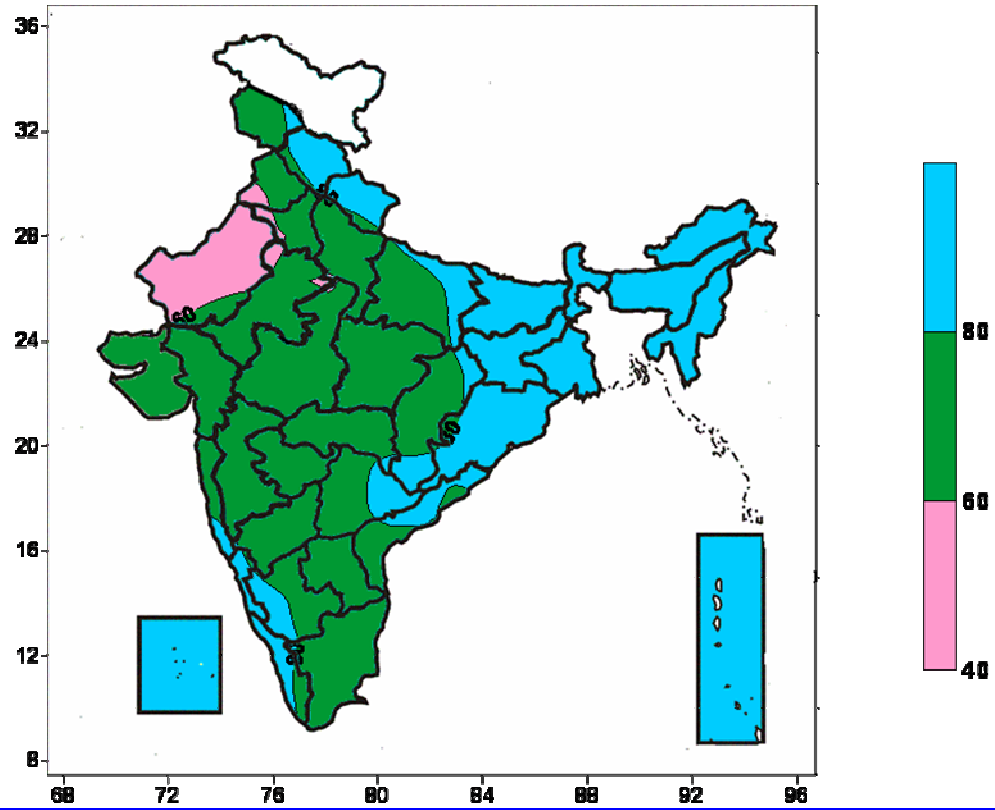
**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 25.07.07**



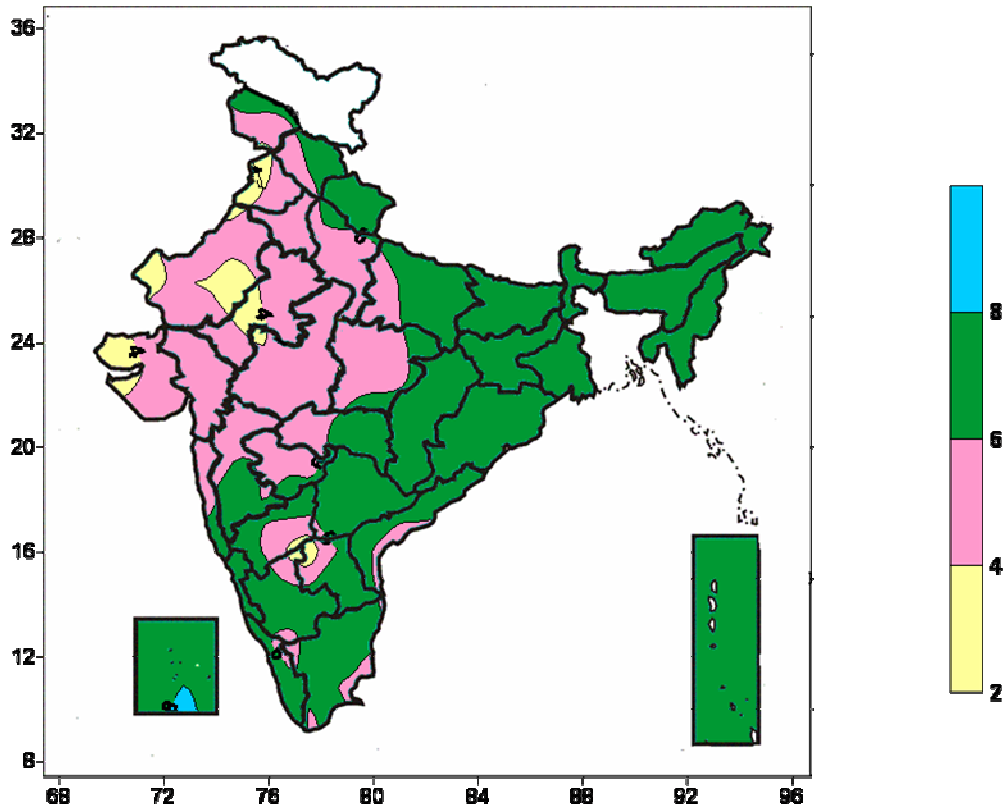
**Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 25.07.07**



Relative Humidity (%) over India for the week ending 25.07.07

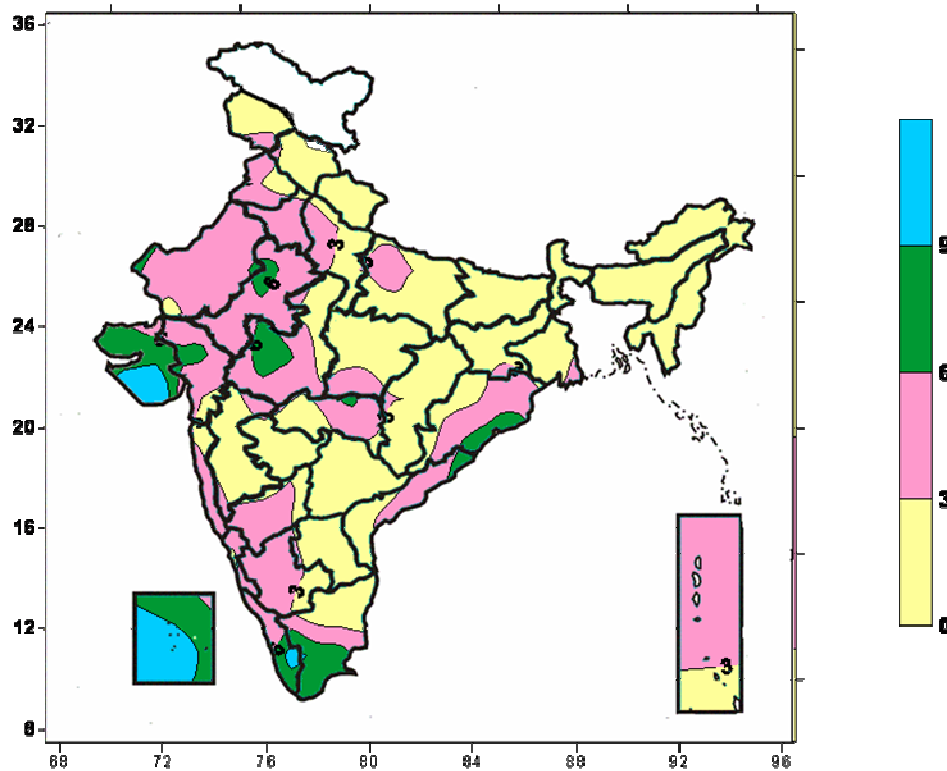


Cloud amount (okta) over India for the week ending 25.07.07





## Wind speed (knots) over India for the week ending 25.07.07



## Desert Locust Forecasting



Rainfall (mm)							
Station Name	19.07.07	20.07.07	21.07.07	22.07.07	23.07.07	24.07.07	25.07.07
Amritsar	-	-	-	10.4	5.3	-	12.8
Barmer	-	-	-	-	-	-	-
Sriganganagar	-	-	-	-	-	-	2.4
Jaisalmer	-	-	-	-	-	-	-
Kota	-	-	-	-	-	-	-
Deesa	-	-	-	-	-	-	-
Churu	-	-	-	-	0.9	4.7	-

Temperature (degree Celcius)							
Station Name	19.07.07	20.07.07	21.07.07	22.07.07	23.07.07	24.07.07	25.07.07
Amritsar	33.5	31.5	-	29.0	30.0	31.0	28.5
Barmer	-	32.5	32.5	31.5	32.5	32.5	34.0
Sriganganagar	-	34.5	34.0	34.0	33.5	34.0	31.5
Jaisalmer	-	32.0	31.5	30.0	-	33.5	35.5
Kota	-	31.0	30.5	31.0	31.0	32.0	32.0
Deesa	30.5	30.0	29.5	30.0	31.0	31.0	32.5
Churu	-	-	-	-	-	-	-

Station Name	Wind													
	19.07.07		20.07.07		21.07.07		22.07.07		23.07.07		24.07.07		25.07.07	
	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.
Amritsar	09	ESE	-	-	-	-	-	-	-	-	-	-	-	-
Barmer	17	SSW	26	SW	-	-	-	-	08	SSW	06	E	13	SSW
Srigangana gar	21	WSW	16	WSW	-	-	-	-	10	WSW	-	-	12	W
Jaisalmer	18	SW	12	SW	-	-	-	-	11	SW	12	S	14	SW
Kota	12	WNW	15	W	-	-	-	-	10	WNW	-	-	10	WNW
Deesa	-	-	20	SW	-	-	-	-	-	-	13	S	11	S
Churu	20	W	18	WSW	-	-	-	-	13	W	03	NW	09	W

Under the prevailing weather conditions, there is chance of pest incidence. 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 summer vegetable crops	Rice	Arhar	Maize
Nursery sowing/Transplanting	Early Vegetative / vegetative	Vegetative/Tillering	Early Vegetative / vegetative	Early Vegetative / vegetative
<b>Fodder</b>	<b>Bajra</b>			
Land preparation/Sowing	Germination / Early vegetative			

### Haryana

Sugarcane	Oilseeds	Horticultural crop	Cotton	Paddy
Vegetative	Harvesting	Vegetative	Vegetative	Transplanting
<b>Kharif Groundnut</b>	<b>Early sown Kharif Groundnut</b>	<b>Kharif Pulses</b>		
Sowing	Early vegetative	Vegetative/Flowering		

### Himachal Pradesh

Vegetables (Ladies finger)	Potato	Apple	Rice	Maize
Vegetative/Flowering/Fruiting—Ladies finger	Tuber formation	Early varieties- Maturing/Harvesting Normal varieties- Fruit development/Early maturity	Transplanting-	Germination/Knee high

### Jammu & Kashmir

Vegetable crops	Rice	Maize	Pulses	Fodder Bajra
Fruiting/harvesting—in Kashmir Div.	Transplanting – Jammu Div. Panicle initiation - Kashmir Div.	vegetative- Jammu Div. Tasseling- Kashmir div.	Sowing	Sowing

### Punjab

Sugarcane	Sunflower	Horticultural crop	Cotton	Paddy
Vegetative	Harvesting	Vegetative	Vegetative	Transplanting
<b>Kharif Groundnut</b>	<b>Early sown Kharif Groundnut</b>	<b>Kharif pulses</b>	<b>Arhar</b>	
Field preparation/ Sowing	Early vegetative	Vegetative /Flowering	Sowing	

### Rajasthan

<b>Kharif crops(Bajra, Groundnut, Maize, Guar, Moong, Moth bean, Urd)</b>	<b>Zaide Fodder</b>	<b>Cotton</b>		
Sowing	Vegetative	Vegetative		

### Uttar Pradesh

Sugarcane	<b>Kharif Vegetables</b>	<b>Mango</b>	<b>Kharif Rice</b>	<b>Kharif oilseeds</b>
Early vegetative	Sowing/Transplanting	Harvesting	Nursery preparation/Sowing	Sowing / Early vegetative

**Uttarakhand**

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

**Assam**

<b>Vegetables</b> Flowering / Fruiting / Harvesting	<b>Jute</b> Vegetative/Maturity	<b>Maize</b> Cob formation/Maturity	<b>Sugarcane</b> Vegetative	<b>Regular Ahu Rice</b> Flowering/Grain formation
<b>Arhar</b> Vegetative	<b>Sali rice</b> Transplanting/Early tillering			

**Arunachal Pradesh**

<b>Summer vegetables</b> Late Harvesting	<b>Ginger</b> Rhizome formation	<b>Millet</b> Flowering	<b>Jhum Paddy</b> Vegetative	<b>Maize</b> Cob formation / Maturity
<b>WRC Rice</b> Vegetative				

**Bihar**

<b>Summer Vegetables</b> Maturity	<b>Mango &amp; Litchi</b> Fruit Development	<b>Maize</b> Flowering/Cob formation	<b>Arhar</b> Seedling / early vegetative	<b>Sugarcane</b> Vegetative
<b>Kharif rice</b> Transplanting				

**Jharkhand**

<b>Khrif rice</b> Transplanting	<b>Ragi</b> Transplanting	<b>Vegetables (Tomato, Brinjal, Bhendi)</b> Vegetative/Maturity	<b>Upland crops (Maize, arhar, groundnut, soybean, urad, rice and ragi)</b> Early vegetative
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**Sikkim**

<b>Maize</b> Harvesting	<b>Orange</b> Fruiting New planting in some places	<b>Vegetables</b> Flowering	<b>Large Cardamom</b> Capsule formation	<b>Ginger</b> Flowering
<b>Rice</b> tillering				

**West Bengal**

<b>Sugarcane</b> Vegetative	<b>Jute</b> Vegetative	<b>Aus rice</b> Tillering/Panicle initiation/flowering	<b>Kharif Groundnut</b> land preparation / sowing	<b>Early sown Kharif Groundnut</b> Germination/Early vegetative
<b>Arhar</b> Land preparation / sowing	<b>Early sown Arhar</b> Germination/Early vegetative	<b>Aman rice</b> Land preparation / nursery sowing/Transplanting		

**Chattisgarh**

<b>Sugarcane</b> Vegetative	<b>Black gram, Groundnut</b> Land preparation / sowing	<b>Soybean</b> Land preparation / sowing	<b>Kharif Rice</b> Sowing/ Transplanting	<b>Maize</b> Vegetative
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**Gujarat**

<b>Sugarcane</b> Vegetative	<b>Kharif Rice</b> Transplanting	<b>Early transplanted Rice</b> Early tillering	<b>Kharif Groundnut</b> Germination/Early vegetative	<b>Kharif Cotton</b> Germination/Early vegetative
<b>Kharif Maize</b> Germination/Early vegetative	<b>Kharif Bajra</b> Germination/Early 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>
Early vegetative / active growth	Early vegetative/active growth	Early vegetative/vegetative	Seedling /Transplanting – North Konkan Early tillering– South Konkan	Seedling /Transplanting Kolhapur – Early tillering
<b>Kharif Jowar (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif Bajra (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif Groundnut (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif Sunflower (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif Green Gram (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>
Germination/Early vegetative	Germination/Early vegetative	Germination/Early vegetative	Germination/Early vegetative	Germination/Early vegetative
<b>Kharif Cotton (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif Tur (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif Soyabean (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>		
Germination/Early vegetative	Germination/Early vegetative	Germination/Early vegetative		

**Madhya Pradesh**

<b>Sugarcane</b>	<b>Kharif crops (Soybean, maize, urd and jowar)</b>	<b>Kharif rice</b>		
Vegetative	Germination/Early vegetative	Transplanting		

**Orissa**

<b>Summer Vegetables</b>	<b>Kharif vegetables</b>	<b>Kharif rice</b>	<b>Sugarcane</b>	<b>Jute</b>
Fruiting / maturity	Raising nursery	Sowing	Vegetative	Vegetative
<b>Arhar</b>				
Sowing / Seedling / early vegetative				

**Andhra Pradesh**

<b>Kharif Rice</b>	<b>Kharif Maize</b>	<b>Kharif Cotton</b>	<b>Kharif Groundnut</b>	<b>Kharif Black gram, Green gram</b>
Nursery sowing /Transplanting	Vegetative	Vegetative	Vegetative	Vegetative

**Karnataka**

<b>Sugarcane (Ratoon crop)</b>	<b>Kharif Jowar/Maize/Groundnut/Sunflower</b>			
Grand growth	Early vegetative/Vegetative			

**Kerala**

	<b>Rubber</b>	<b>Virippu rice</b>		
	Tapping	Panicle initiation		

**Tamil Nadu**

<b>Rice (Kuruvai/Samba)</b>	<b>Cotton</b>	<b>Sugarcane (Early, Mid and Late season)</b>	<b>Maize</b>	<b>Groundnut/Black gram/Green gram/Red gram</b>
Samba- Nursery sowing Kuruvai - Tillering	Picking	Grand growth	Sowing	Sowing

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