



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

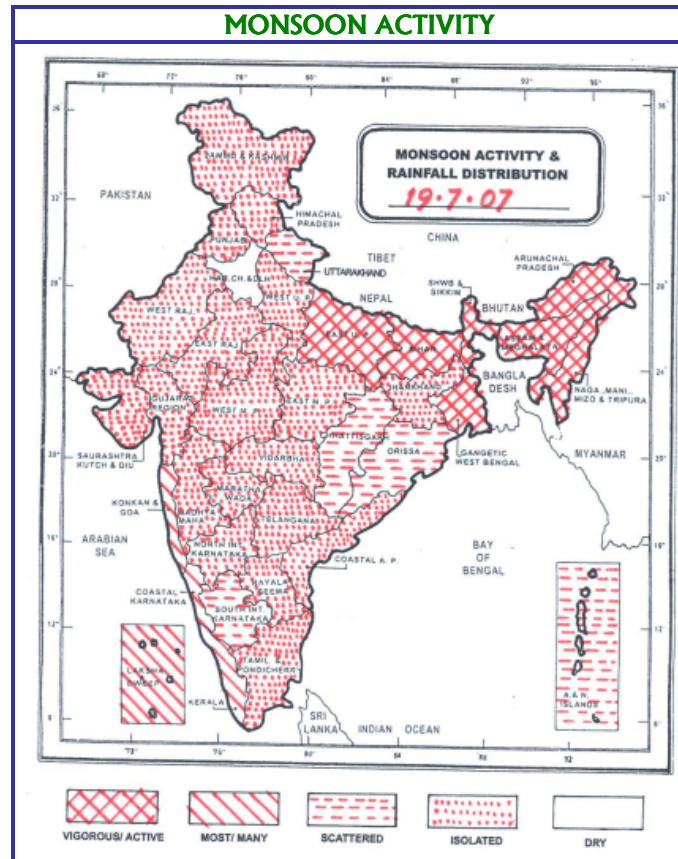
Issued by

Agricultural Meteorology Division, India Meteorological  
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**Thursday, 19<sup>th</sup> July, 2007**

(For the period 19<sup>th</sup> to 23<sup>rd</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 vigorous over the State on 17<sup>th</sup> and active on 16<sup>th</sup> & 18<sup>th</sup> July. Rain occurred at most places during 16<sup>th</sup> to 18<sup>th</sup> July.
- Rain/thundershowers are likely at many places in all the districts of Kerala.

#### Advisories

- Rain/thundershowers is 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.
- In areas where crop loss is reported in *virippu* rice, direct sowing may be undertaken.

- 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 cow dung 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.
- Attack of foot rot and quick wilt is reported in pepper. Spray 1% Bordeaux mixture after current spells of rain to control the diseases.

### **Tamilnadu**

- Rainfall occurred at one or two places over the State on 16<sup>th</sup>, 17<sup>th</sup> and 18<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 *Psoudomonas flurescence* @ 10 g/kg seed before sowing.
- As there was no significant rainfall in the state and rain/ thundershowers are likely at isolated places over the State for the next three days, apply irrigation to sugarcane and cotton.
- Undertake sowing of maize (*Adippattam* – July-Aug crop). Use 6 kgs of seeds/acre. Treat the seeds with *Azospirillum* and Phssphobacteria 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 on a non rainy day to control the pest.
- Start picking matured cotton bolls on bright sunny days. Picking may be done at early morning hours to maintain quality of kapas.
- Start 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.

### **Karnataka**

- On 16<sup>th</sup> & 18<sup>th</sup> rainfall occurred at most places over Coastal Karnataka and at a few places over Interior Karnataka. On 17<sup>th</sup>, monsoon was active over South Interior Karnataka. Rainfall occurred at most places over Coastal Karnataka and at a few places over North Interior Karnataka.
- Rain/Thundershowers likely to occur at many places over Coastal Karnataka, at a few places over South Interior Karnataka and at isolated places over North Interior Karnataka.

### **Advisories**

- Continue intercultural operations, application of fertilizers and pesticides to *kharif* jowar, maize, cotton, groundnut and sunflower after spells of rain in Coastal Karnataka and on a non rainy day in South 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 Postpone irrigation in Chikmagalur, Kodagu and Shimoga 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 pests population crosses ETL, undertake plant protection measures after spells for rain in Coastal Karnataka and on a non rainy day in South Interior Karnataka to control the pest.

### **Andhra Pradesh**

- Southwest Monsoon was active over Coastal Andhra Pradesh on 13<sup>th</sup> & 16<sup>th</sup> and over Telangana on 15<sup>th</sup> & 16<sup>th</sup> July. Rain occurred at a few places over Coastal Andhra Pradesh on 12<sup>th</sup>, 15<sup>th</sup> & 17<sup>th</sup> over Telangana from 12<sup>th</sup> to 14<sup>th</sup> & 18<sup>th</sup> and over Rayalaseema on 17<sup>th</sup> July. Isolated rain occurred elsewhere over the State during the period.
- Rain/thundershowers are likely to occur at isolated 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 East Godavari, Guntur, Krishna, West Godavari districts in Coastal Andhra Pradesh and in Adilabad, Karimnagar, Khammam, Medak, Nizamabad and Warrangal districts in Telangan and rain/thundershowers is likely to occur at isolated places only 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 to control the pest if the damage crosses ETL.
- Undertake eathing up in early sown *kharif* crops 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 16<sup>th</sup> and at many places on 17<sup>th</sup> & 18<sup>th</sup> with isolated heavy falls on 16<sup>th</sup> and 18<sup>th</sup> and isolated rather heavy falls on 17<sup>th</sup> July over the State.
- Rain/ thundershowers are likely at most places over the State during next 48 hours and decrease thereafter.

### **Advisories**

- As rain/ thundershowers are likely at most places over the State during next 48 hours, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the crops.
- Also postpone sowing / transplanting of *Sali* rice and arrange for draining out of excess water from the already sown / transplanted fields.

### **Arunachal Pradesh**

- Light to Moderate rain / thundershowers occurred at most places on 17<sup>th</sup> and 18<sup>th</sup> July and at many places on 16<sup>th</sup> July.
- Rain/thundershowers are likely to occur at most places over the state.

**Warning:** Heavy rain is likely to occur at isolated places over the state during next 48 hrs.

### **Advisories**

- As rain/thundershowers are likely at most places over the state for the next three days with 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 rain occurred at many places. Heavy rainfall occurred at few places on 17<sup>th</sup> July.
- Rain/thundershowers are likely at most places over the State.

### **Advisories**

- As rain/thundershowers are likely at most places over the State and heavy to very heavy rainfall is likely at a few places over Bihar, postpone sowing of *kharif* rice for next 2-3 days. Start sowing utilizing the available water after the current spell of rain.
- Select short duration varieties i.e. Pusa 2-21, Saket-4, Prabhat, IR 64 or scented paddy, Pusa basmati.
- As rain/thundershowers are likely at most places over the State and heavy to very heavy rainfall is likely at a few places, 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**

- Rain or thundershower occurred at many places.
- Rain/thundershowers are likely to occur at a few places over the State during next 48 hrs.

### **Advisories**

- Continue transplanting of *Kharif* rice and sowing of upland crops viz. maize, arhar, groundnut, soybean, urad, and rice utilizing the monsoon rain.
- As excess rainfall received in Dhanbad, Singhbhum and Hazaribagh during last week and rain/thundershowers are likely to occur at a few places over the State during next 48 hrs, postpone irrigation to vegetables in the above mentioned districts..
- To prevent from powdery mildew of small fruits in Mango and Litchi, spray sulfex@ 2gm/litre of water in a non rainy day.
- If stem borer appears in maizeput about 10 granules of Feurodon carbofuron should be applied after weeding spray 30 kg urea per acre and do earthing up.

### **Sikkim**

- Sky remained generally cloudy during the period.
- Rain/thundershowers are likely at most places over the State.

**Warning:** Heavy to very heavy rainfall is likely at a few places over the state during next 48 hrs.

### **Advisories**

- As rain / thundershowers are likely at most 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 a few 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 vigorous over Gangetic West Bengal on 16<sup>th</sup> and active over Sub Himalayan West Bengal on 17<sup>th</sup> July during this period.
- During the said period rainfall occurred at most places with heavy rainfall at a few places and very heavy rain at isolated places on 16<sup>th</sup>, with heavy to very heavy at a few places on 17<sup>th</sup> and with heavy rain at isolated places on 18<sup>th</sup> July over Sub Himalayan West Bengal.
- But rainfall occurred at most places with heavy rain at a few places and very heavy at isolated places on 16<sup>th</sup>, at many places on 17<sup>th</sup> and 18<sup>th</sup> July over Gangetic West Bengal.
- Rain/thundershowers are likely at most places over Sub Himalayan West Bengal and at many places over Gangetic West Bengal.

**Heavy Rainfall Warning:** Heavy to very heavy rainfall is likely at a few places over Sub-Himalayan west Bengal during next 48 hrs.

### **Advisories**

- Prepare land with the advantage of recent monsoon rain and continue sowing of groundnut. Select varieties from improved varieties like JL-24, JL-11, A-K-12-24. 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. Prepare land with the advantage of recent monsoon rain and continue sowing. 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.
- As rain / thundershowers are likely at many places for next three days over Gangetic West Bengal along with isolated heavy falls during next 48 hours, postpone sowing of groundnut and Arhar and sowing / transplanting of *aman* rice in Gangetic West Bengal. Also arrange for draining out excess water from the fields of already sown crops.
- Maintain 3 – 5 cm water in the field of *aus* rice.
- As rain / thundershowers are likely at most/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. Arrange for draining out excess water from the field in Gangetic West Bengal.

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

### **Gujarat**

- Monsoon was active over Gujarat region, Daman, Dadra Nagar Haveli. Rainfall occurred at isolated places over Saurashtra, Kutch, Diu on 9<sup>th</sup> & 11<sup>th</sup> July Monsoon was vigorous over North Gujarat region. Rainfall occurred at many places over South Gujarat region, Daman, Dadra Nagar Haveli, at isolated places over Saurashtra, Kutch on 10<sup>th</sup> July.
- Rain / thunder showers are likely at isolated places over the State.

### **Advisories**

- Prepare the main field by paddling method and transplant 25 – 30 days old rice seedlings in the field.
- Prepare land and continue sowing of *kharif* groundnut. Prefer high yielding varieties like GAU-10, GG-20, GG-11, 12, 13 with basal fertilizer dose 12.5 kg N, 25 kg P<sub>2</sub>O<sub>5</sub> / ha at time of sowing in furrows. Treat the seeds with thiram or Dithane M-45 @ 3 to 4 g / kg seeds to prevent seed borne diseases and pests like white grub and termite.

- This is the time for land preparation and sowing of *kharif* cotton. Start sowing of different high yielding varieties like H-4, 6, 8, 10 and local varieties for south Gujarat like Guj-cotton - 16, Guj-cot-23, Guj-cot 17 & Digvijay. For north Gujarat V-797, Guj-cot 13, 21 and entire state cotton local hybrid -7 & 9 may be used. Use delinted seeds and seed treated with any mercurized compound @ 2 to 3 g / kg seeds.
- Prepare land and continue sowing of *kharif* bajra. Prefer resistant varieties against downey mildew & high yielding varieties of bajra like GHB-15, 235, 316, MH-169, GHB-27 with basal fertilizer dose 40 kg N, 40 kg / ha P<sub>2</sub>O<sub>5</sub> at the time of sowing in furrows.
- Prepare land and continue sowing of *kharif* maize. Prefer high yielding varieties like Maize-1, 4, 6 and Ganga safed-2, Gujart maize-2, Ganga-11 and Pusa hybrid-1 for sowing.
- As there was sufficient rain during earlier part of the month in all the districts of the State, sufficient moisture may be available in the soil and irrigation may not be required for sugarcane and pre monsoon cotton.

### **Chhattisgarh**

- Monsoon was active on 16<sup>th</sup> & 17<sup>th</sup> July and rainfall at one or two places on 18<sup>th</sup> July.
- Isolated rain/thundershowers are likely over the State.

### **Advisories**

- As there was no significant rain in Dhamtari, Jashpurnagar, Kanker, Kowardna, Koriya, Raigarh and Rajandgaon districts of the State during last week and rain / thundershowers are likely to occur at isolated places over the State for next three days, apply irrigation to sugarcane and maize in these districts. As remaining districts received sufficient rain during last week, postpone irrigation to the crops.
- When the sugarcane crop attains a height of 5 – 6 feet, 4 – 5 plants may be tied together to prevent lodging from gusty wind.
- 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. 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.

### **Maharashtra**

Monsoon was active in Vidarbha. Rain occurred at most places in South Konkan & East Vidarbha, at many places in North Konkan, North Madhya Maharashtra & West Vidarbha, at a few places in South Madhya Maharashtra & Marathwada.

Rain/ thundershowers are likely to occur at a few places over Konkan & Madhya Maharashtra, at isolated places over Vidarbha & Marathwada.

### **Advisories**

- Continue land preparation and sowing of *Kharif* Jowar, *Kharif* Bajra, *Kharif* Groundnut, *Kharif* Sunflower, *Kharif* Green gram, *Kharif* Cotton, *Kharif* Tur and *Kharif* Soyabean and transplanting of *kharif* rice.
- Select the variety from EC 68414, Morden, SS 56, Phule bhanu, KBSH 11, APSH-11 for Madhya Maharashtra, Surya, PKV SF 9 or 27 for Vidarbha & hybrid SCH 35 for Marathwada for *kharif* sunflower, from PA 402, American PH 348, Phule 492 or 388, JLH 168, JLA 794, Ganga, Parbhani Sona for *kharif* cotton and from BDN-1 & 2, ICPL-87119, & 87, BSMR-853, & 876, AKT-8811 and Vipula for Madhya Maharashtra, T – Vishakha 1, TAT 10, Akola sankar 1 for Vidarbha and Vaishali & Amol for Marathwada for *kharif* tur.

- As there was no significant rain in most of the districts of Madhya Maharashtra, Marathwada & Akola, Amravati & Wardha districts of Vidarbha during last week, apply irrigation to sugarcane (pre-seasonal), sugarcane (suru) and irrigated cotton in these districts. As sufficient rain occurred in remaining districts of the state during last week, postpone irrigation to the crops.
- A dose of 60 kg Nitrogen / ha may be applied after 30 days from sowing to the early sown kharif jowar on a non rainy day.
- 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 early sown crop on a non rainy day.
- Mild incidence of Sap sucking insects in Aurangabad division in irrigated cotton is reported.
- For the control of Sap sucking insects 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.

### **Madhya Pradesh**

- Rainfall occurred at many places in East M.P. on 16<sup>th</sup> and 17<sup>th</sup>, at a few places in North West M.P. on 16<sup>th</sup>, South West M.P. on 17<sup>th</sup>, East and South West M.P. on 18<sup>th</sup> and at isolated places over the rest of the state on remaining period.
- Rain / thundershowers likely to occur at isolated places in over the State.

### **Advisories**

- Prepare land and continue sowing of *kharif* crops like soybean, maize, urd and jowar and nursery sowing of rice taking the advantage of monsoon rain.
- Undertake seed treatment with Rhizobium before sowing soyabean and urad and with Azospirillum before sowing maize and jowar.
- Apply irrigation to early sown *kharif* crops as there was no significant rainfall in the state during last week
- Undertake intercultural operation in sugarcane and early sown *kharif* crops to keep the field weed free.

### **Orissa**

- South West Monsoon was active over the State on 16<sup>th</sup> July, 07.
- Rain fall occurred at most places on 16<sup>th</sup> and at a few places on 17<sup>th</sup> & 18<sup>th</sup> July, 07.
- Heavy rain occurred at isolated places on 16<sup>th</sup> July, 07; over Interior Orissa on 17<sup>th</sup> July, 07.
- Rain or thunder shower likely to occur at a few places over the State.

### **Advisories**

- As there was excess rainfall in most of the districts 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 isolated places during the whole period.
- Isolated 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 week and rain/thundershowers are likely at isolated 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 cotton crop 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 many places on 16<sup>th</sup> and at isolated places on 17<sup>th</sup> and 18<sup>th</sup> July.
- Isolated rain/thundershowers are likely over the State.

### **Advisories**

- As there was no significant rainfall over the State during last week and rain/thundershowers are likely at isolated 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 isolated places in Bikaner, Jaipur, Kota, and Udaipur divisions and weather remained mainly dry in Ajmer, Jodhpur divisions in the State.
- Day maximum temperatures were nearly normal in all the divisions of the State.
- Rain / thundershower are likely at isolated places in the State.

### **Advisories**

- Farmers are advised to continue field preparation and sowing of *khraif* crops, viz., bajra, groundnut and maize, Guar, moong, moth bean, urd.
- Undertake seed treatment with *Rhizobium* for sowing moong, urad and groundnut and with *Azospirillum* for maize and bajra. Use certified seeds for ensuring good germination.
- As there was no significant rainfall in the state during last week and rain/thundershowers are likely at isolated places over the State for the next three days, apply irrigation to cotton crop.
- Monitor *desi* and *American* cotton for leaf eating caterpillar. If the pest population crosses ETL, undertake plant protection measures to control the pests.



## **Uttar Pradesh**

- Moderate to rather heavy rain occurred in most places in Allahabad, Gorakhpur, Varanasi, Kanpur & Faizabad divisions and very heavy rain occurred at many places in Varanasi, Gorakhpur & Faizabad division and at isolated places in Faizabad, Lucknow divisions. Moderate to rather heavy rain occurred at many places in Lucknow divisions and weather was mainly dry in remaining divisions of U.P on 18<sup>th</sup>.
- Isolated rain/thundershowers are likely over the West U.P. Rain/thundershowers are likely to occur at a few places over East U.P during next 48 hours.

**Warning:** Heavy rain likely at isolated places in NW U.P. and E. U.P. during next 48 hours.

### **Advisories**

- Continue nursery sowing and transplanting of *Kharif* rice. Aswani, Saket-U, Govind, Narendra-118, Narendra-97 varieties may be selected.
- Continue sowing of til and soybean with sufficient moisture in the fields.
- As there was no significant rainfall in most of the districts of West UP during last week and rain/thundershowers are likely at isolated places, apply irrigation on the standing crops. Whereas most of the districts in East UP received significant rainfall during last week and rain/thundershowers are likely to occur at a few places over this region, postpone irrigation, to the crop.
- Proper drainage arrangements for escaping rain water in Turmeric grown in East UP may be done along with topdressing of 1/3 amount of Nitrogen.
- To control top borer insect in sugarcane, apply Furadon 3G granules @ 33kg/ha near the drains of sugarcane field in a non rainy day.

## **Himachal Pradesh**

- Precipitation occurred at a few places in the State.
- Isolated rain / thundershowers are likely at many places over the State during next 48 hrs and scattered thereafter.

### **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.
- As there was no significant rain during last week and rain / thundershowers are likely at isolated places over the State for next two days, apply irrigation 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 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 to control the disease.

## **Uttarakhand**

- Moderate rain was recorded at a few places on 13<sup>th</sup> and at isolated places on 12<sup>th</sup> July, light rain was recorded at isolated places on 14<sup>th</sup> and 15<sup>th</sup> July and very light rain occurred at a few places on 16<sup>th</sup> July. Sky remained partly to mainly cloudy during the week. Relative humidity varied from 78% (New Tehri) to 84% (Dehra Dun) in the morning and from 64% (New Tehri) to 85% (Mukteshwar) in the evening.

- Isolated rain/thundershowers are likely over the State during next 48 hrs. and scattered thereafter.

#### **Advisories**

- There was no significant rainfall over the State during last week and rain/thundershowers are likely at isolated places over the state. Under the circumstances, apply 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.
- Undertake intercultural operations to keep the field weed free in sugarcane, rice and in orchards.
- Monitor apple for thrips and mites and undertake plant protection measures if the pest population crosses ETL.

#### **Jammu & Kashmir**

- Light rain occurred at isolated places on 16<sup>th</sup> July whereas weather remained mainly dry on 17<sup>th</sup> and 18<sup>th</sup> July over J & K division.
- Isolated rain/thundershowers are likely over the State during next 48 hrs. and scattered thereafter.

#### **Advisories**

- Continue land preparation and transplanting of rice in the main field in Jammu. 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 isolated places over the state for the next three days. Under the circumstances, apply irrigation to maize, vegetable and fruit crops in Kashmir division.
- Maintain 5 cm standing water in rice field in Kashmir division.
- Monitor chillies for wilt and bhindi for yellow vein mosaic in Jammu division and rogue out the affected crops to prevent further damage. Drench the soil with Bavistin @ 0.1% to prevent wilt in chillies.
- Continue sowing of cabbage, cauliflower, kale and knoll-khol in nurseries and sowing of carrot for seed purpose in Kashmir division.
- White wash bottom portion of trees to prevent termite attack. Undertake new planting in orchards.
- Continue field preparation and sowing pulses like moong and beans in Jammu division.

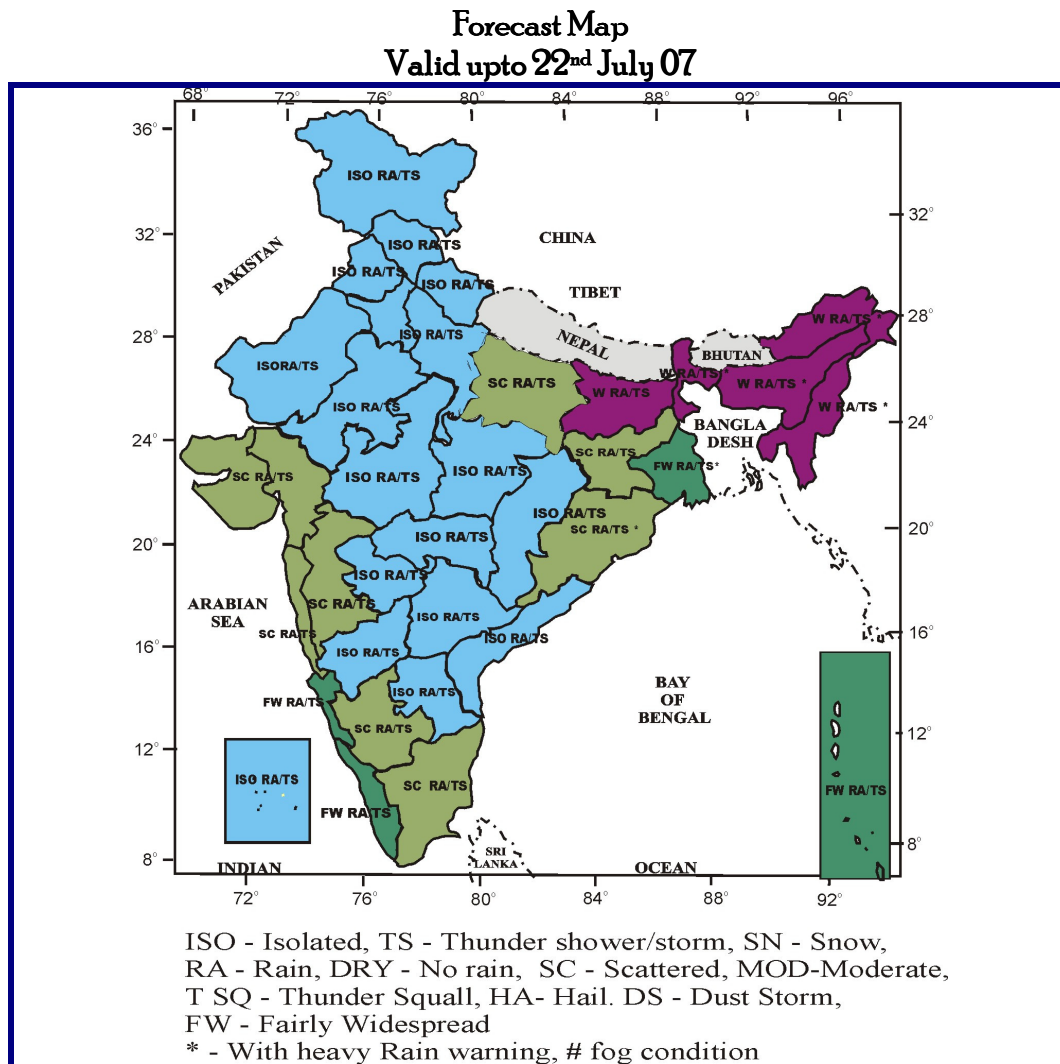
#### **Delhi**

- Light to moderate rain occurred on 16<sup>th</sup> July at most places. Very light rain occurred on 17<sup>th</sup> July at isolated places. Weather remained mainly dry on 18<sup>th</sup> July.
- Isolated rain / thundershowers are likely over the State.

#### **Advisories**

- As sufficient rain occurred during last week over the State, postpone irrigation to vegetables and also to arhar and maize.
- Prepare land and perform sowing of bajra, fodder crops like jowar, bajra and mixed maize and lobia and transplanting of cauliflower, cabbage, tomato, brinjal, chilly, onion and rice.
- 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.

- Prepare the main field by paddling method and transplant 25 – 30 days old rice seedlings in the field.



### *Salient weather features for the week ending 18/07/07*

#### **METEOROLOGICAL ANALYSIS**

- An upper air cyclonic circulation extending upto mid-tropospheric level lay over north Bay of Bengal on 12<sup>th</sup>. Under its influence, a low pressure area formed over northwest Bay of Bengal off north Orissa and West Bengal coasts on 13<sup>th</sup>. It became well marked over the same area on 14<sup>th</sup>. It lay over northwest Bay of Bengal and coastal areas of north Orissa and West Bengal on 15<sup>th</sup>, over Jharkhand & neighbourhood on 16<sup>th</sup> and over East Uttar Pradesh and adjoining Bihar on 17<sup>th</sup>. It lay as a low pressure area over East Uttar Pradesh and adjoining Bihar on 18<sup>th</sup>.
- The axis of the monsoon trough passed through normal position during beginning of the week. However, the western end of the monsoon trough gradually shifted northwards and lay close to the foothills of the Himalayas on 18<sup>th</sup>. The eastern end of the monsoon trough ran from centre of low pressure area, Patna, Asansol and thence southeastwards to northeast Bay of Bengal.
- An off-shore trough ran from Konkan coast to Kerala coast during the week.
- An upper air cyclonic Circulation lay over north Pakistan and adjoining Jammu & Kashmir extending between 1.5 to 5.8 km a.s.l. on 13<sup>th</sup>. It lay over Punjab & neighbourhood in the lower tropospheric levels during 14<sup>th</sup> to 17<sup>th</sup>. It lay over Jammu & Kashmir and neighbourhood on 18<sup>th</sup>.
- Last week's upper air cyclonic circulation over central Rajasthan & neighbourhood extending upto mid-tropospheric level lay over central Pakistan and adjoining Rajasthan on 12<sup>th</sup> extending upto 1.5 km a.s.l. It persisted over the same area and extended upto 0.9 km a.s.l. on 13<sup>th</sup> and became less marked on 14<sup>th</sup>.

## **RAINFALL**

Under the influence of the above systems:

- Southwest monsoon was active/vigorous over Gangetic West Bengal & Orissa on 16<sup>th</sup>; Jharkhand on 15<sup>th</sup> & 16<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim & Bihar on 17<sup>th</sup>; East Uttar Pradesh on 14<sup>th</sup>, 17<sup>th</sup> & 18<sup>th</sup> and Chhattisgarh on 14<sup>th</sup>, 16<sup>th</sup> & 17<sup>th</sup>. Widespread/fairly widespread rainfall occurred over Gangetic West Bengal on 15<sup>th</sup>, 17<sup>th</sup> & 18<sup>th</sup>; Jharkhand on 17<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim on 15<sup>th</sup> & 18<sup>th</sup>; Bihar on 18<sup>th</sup>; East Madhya Pradesh on 17<sup>th</sup> & 18<sup>th</sup>; Chhattisgarh & East Uttar Pradesh on 13<sup>th</sup>.
- Southwest monsoon was active/vigorous over Assam & Meghalaya on 16<sup>th</sup> & 18<sup>th</sup> and Nagaland, Manipur, Mizoram & Tripura on 17<sup>th</sup> & 18<sup>th</sup>. Fairly widespread rainfall occurred over Arunachal Pradesh on 14<sup>th</sup> & 16<sup>th</sup>-18<sup>th</sup>; Assam & Meghalaya on 14<sup>th</sup> & 17<sup>th</sup> and Nagaland, Manipur, Mizoram & Tripura on 16<sup>th</sup>.
- Southwest monsoon was active over Kerala during last two days of the week. Widespread/ fairly widespread rainfall occurred over Kerala during remaining days of the week. Widespread/fairly widespread rainfall occurred over Konkan & Goa and Coastal Karnataka throughout the week.
- Southwest monsoon was also active over Coastal Andhra Pradesh, Telangana, North & South Interior Karnataka, Chhattisgarh, Vidarbha, Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, West Uttar Pradesh, East Rajasthan for one or two days during the week. Isolated to scattered rainfall occurred over these sub-divisions during many days of the remaining period of the week.
- Isolated to scattered rainfall occurred over remaining parts of the week.

### **RAINFALL DURING THE WEEK (FOR THE WEEK ENDING ON 18<sup>TH</sup> JULY, 2007)**

Rainfall was excess/normal in 14, deficient/scanty in 22 out of 36 meteorological sub-divisions (Actual: 50.4 mm, Normal: 67.6 mm and Departure: -25%).

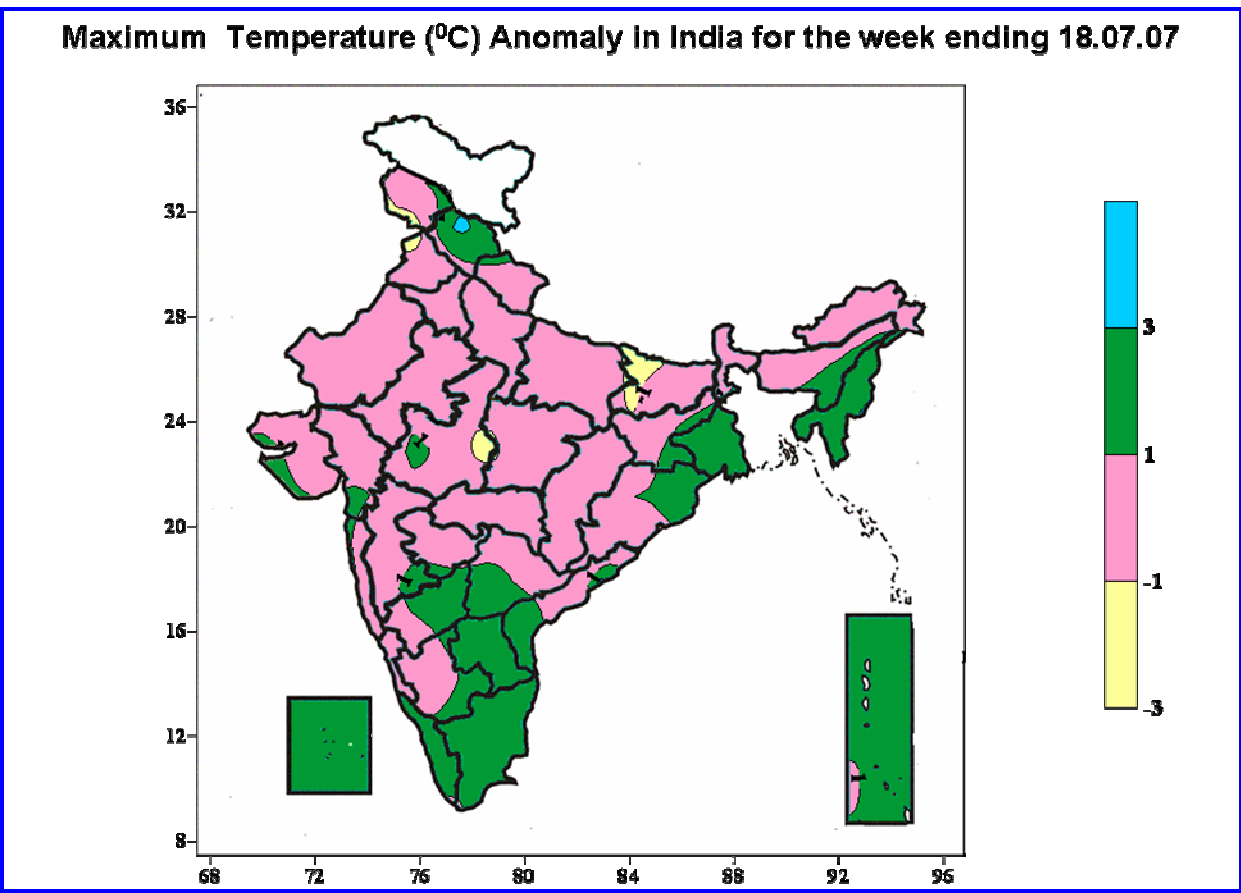
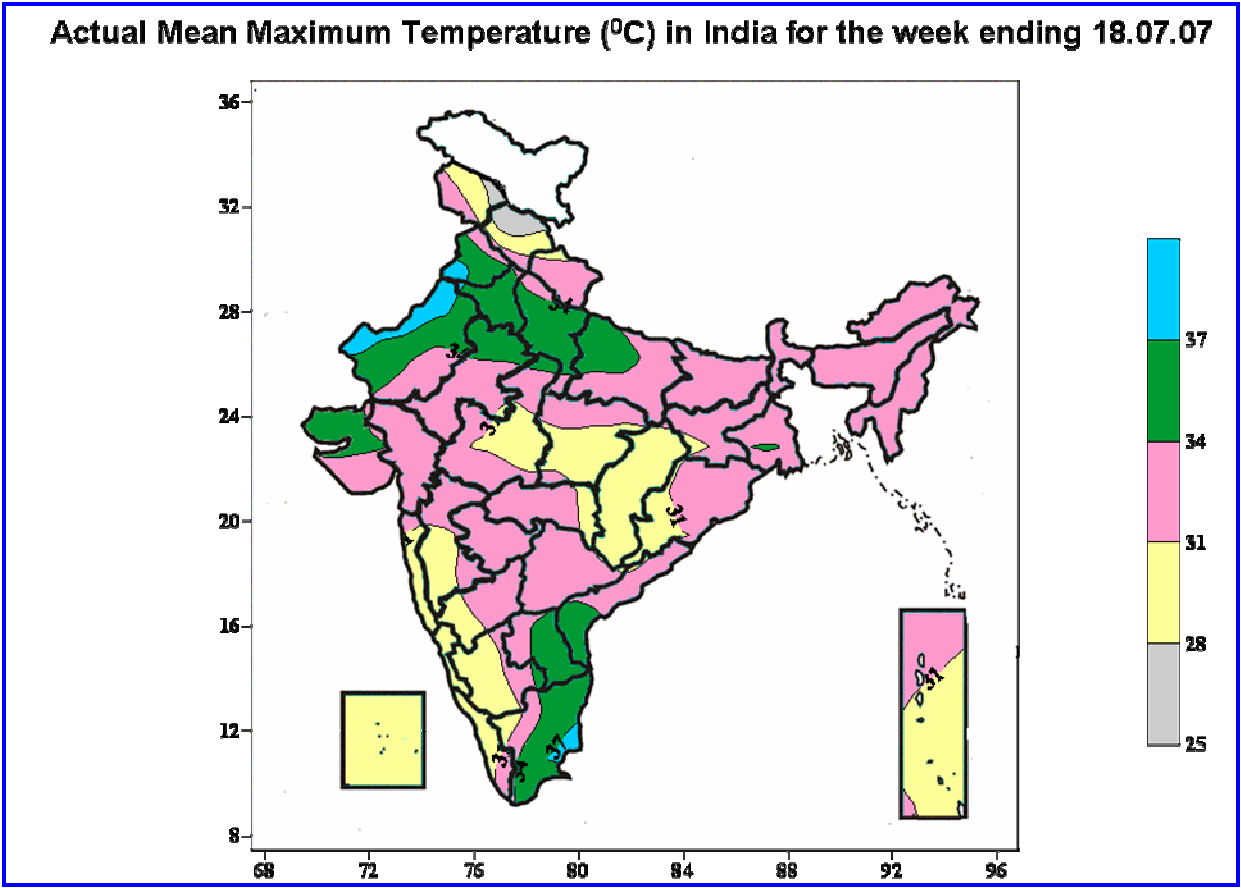
### **CUMULATIVE SEASONAL RAINFALL (1<sup>ST</sup> JUNE TO 18<sup>TH</sup> JUNE, 2007)**

Rainfall was excess/normal in 29 and deficient in 7 out of 36 meteorological sub-divisions. (Actual: 365.9 mm, Normal: 330.2 mm and Departure: +11%).

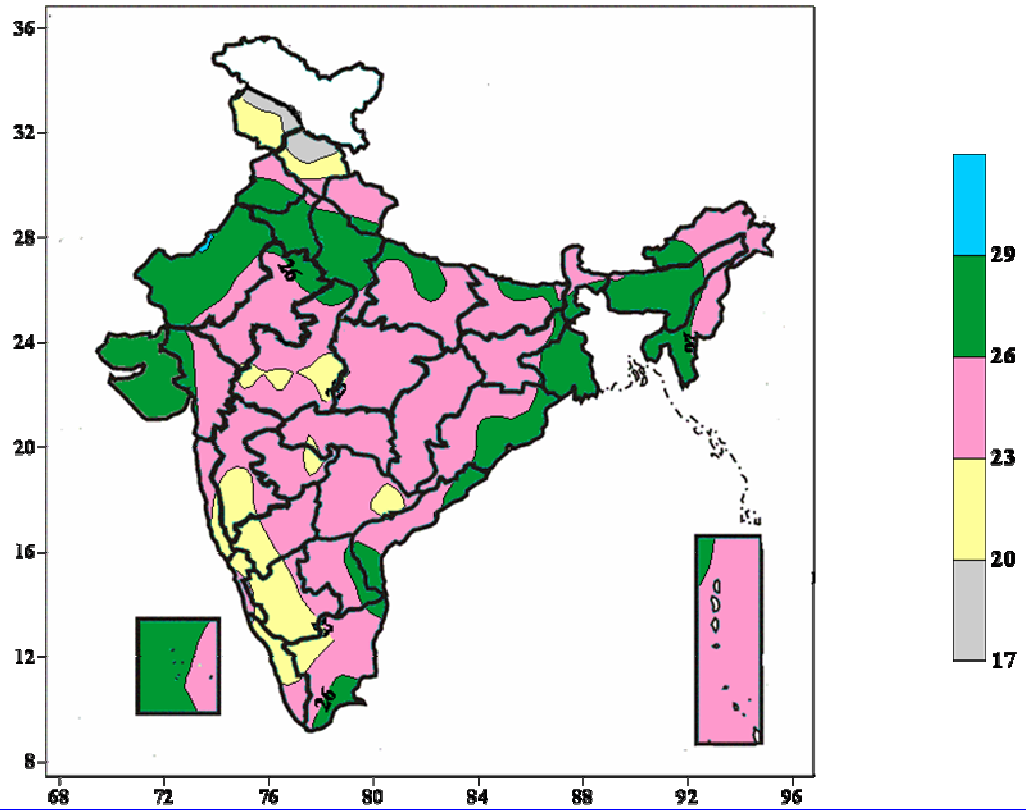
### **OUTLOOK FOR THE WEEK ENDING ON 25<sup>TH</sup> JULY, 2007.**

- Enhanced rainfall activity with scattered heavy to very heavy falls are likely over northeastern states, Sub-Himalayan West Bengal & Sikkim and Bihar during next week. Isolated extremely heavy falls (>25 cm) are also likely over Assam & Meghalaya on a few days.
- Increase in rainfall activity over southeast peninsula.
- Subdued rainfall activity likely over remaining parts of the country.

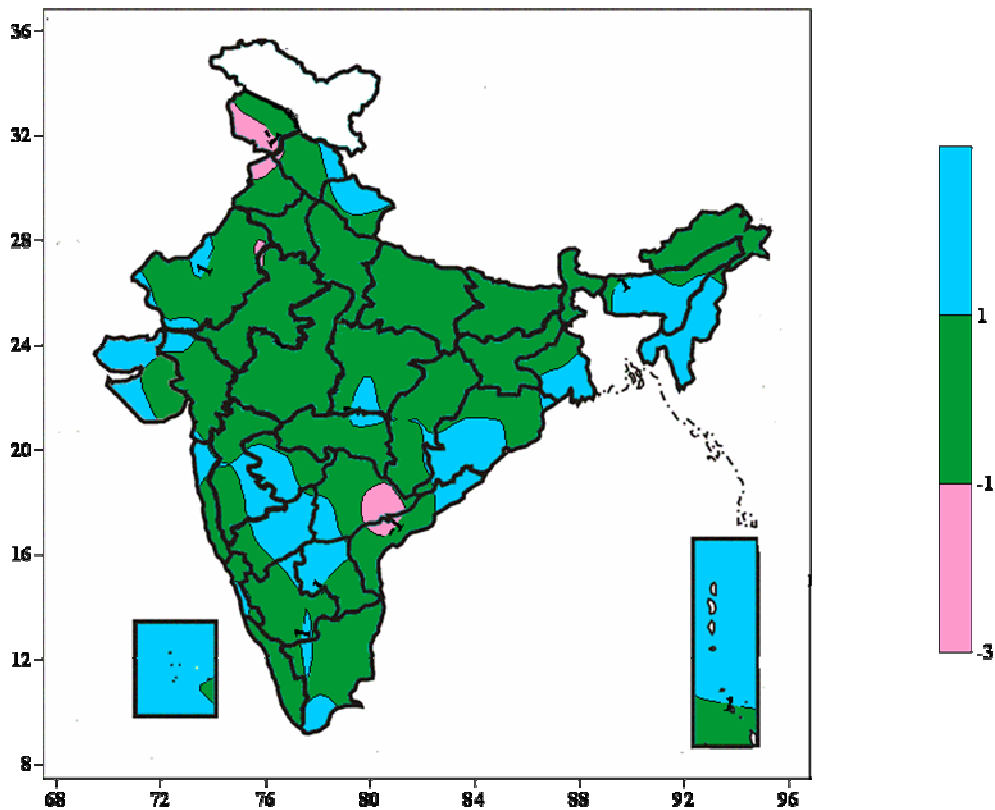
## Contour maps for the week ending 18<sup>th</sup> July, 2007



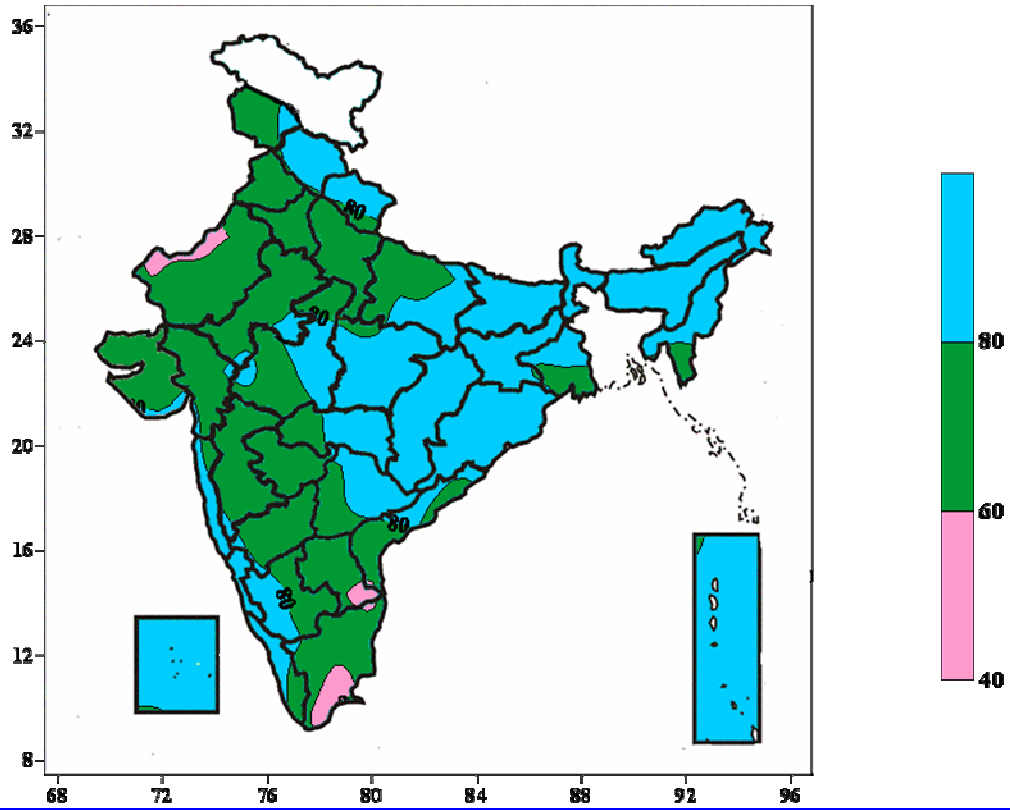
**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 18.07.07**



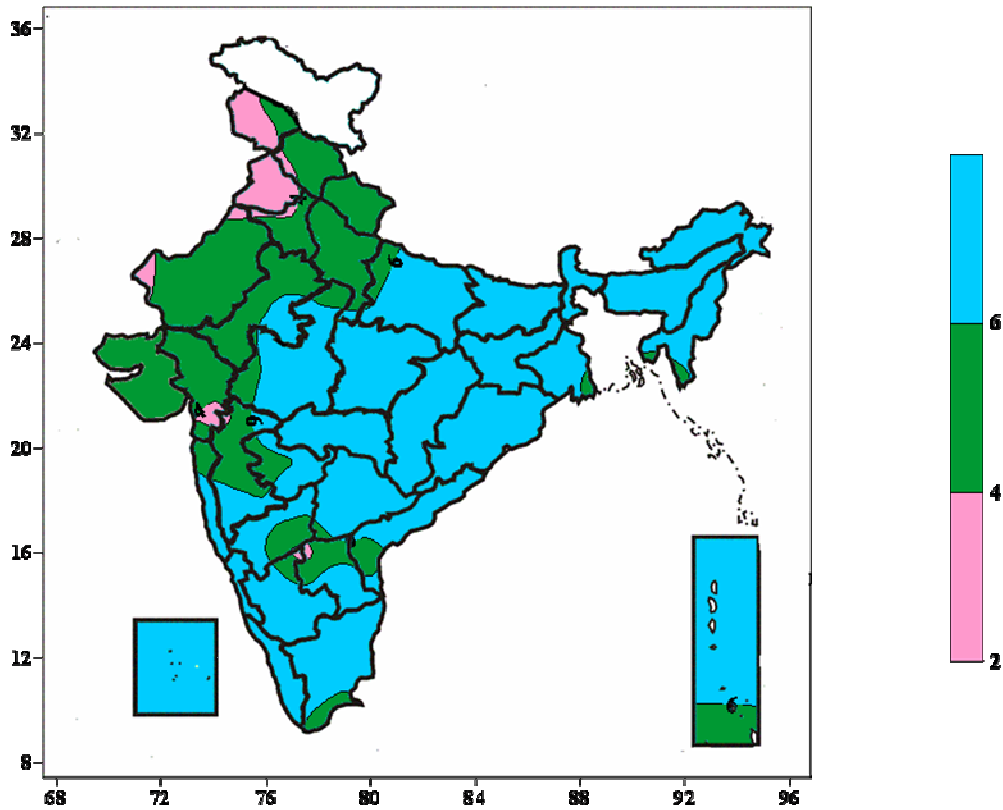
**Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 18.07.07**



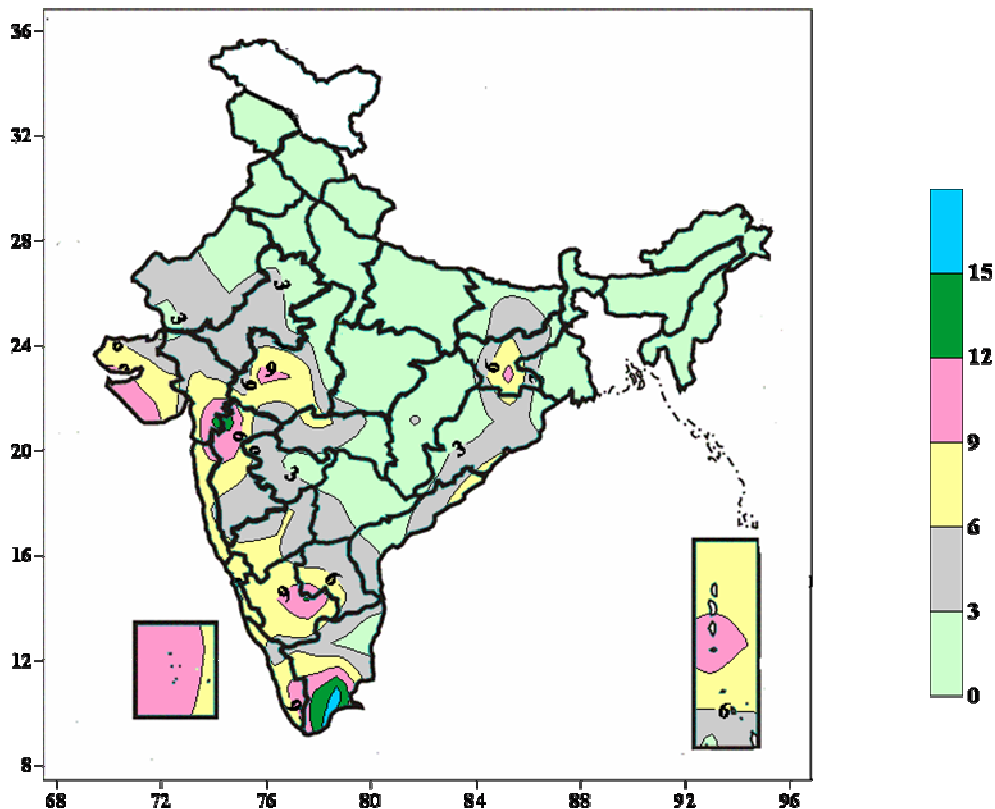
Relative Humidity (%) over India for the week ending 18.07.07



Cloud amount (okta) over India for the week ending 18.07.07



### Wind speed (knots) over India for the week ending 18.07.07



## Desert Locust Forecasting



#### Rainfall (mm)

Station Name	12.07.07	13.07.07	14.07.07	15.07.07	16.07.07	17.07.07	18.07.07
Amritsar	-	18.4	3.6	0.5	0.3	-	-
Barmer	3.1	-	-	-	-	-	-
Sriganganagar	-	-	-	5.0	5.2	-	-
Jaisalmer	2.0	-	-	-	-	-	-
Kota	1.1	47.2	-	-	-	-	47.0
Deesa	7.0	-	-	1.4	-	-	0.1
Churu	-	-	5.0	-	-	0.8	9.0

#### Temperature (degree Celcius)

Station Name	12.07.07	13.07.07	14.07.07	15.07.07	16.07.07	17.07.07	18.07.07
Amritsar	-	30.5	26.5	28.0	29.5	31.5	30.5
Barmer	30.5	32.0	31.5	32.0	22.5	-	33.0
Sriganganagar	35.0	36.5	33.0	31.5	29.5	32.0	34.0
Jaisalmer	31.5	32.0	32.0	31.5	33.0	33.5	33.0
Kota	28.5	28.0	30.5	31.5	31.5	30.0	30.0
Deesa	27.0	30.0	30.0	29.5	-	30.5	30.0
Churu	-	-	-	-	-	-	-



Wind														
Station Name	12.07.07		13.07.07		14.07.07		15.07.07		16.07.07		17.07.07		18.07.07	
	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.
Amritsar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barmer	-	-	-	-	-	-	-	-	02	SW	-	-	13	SW
Sriganga nagar	05	WNW	15	WNW	-	-	-	-	-	-	-	-	09	WSW
Jaisalmer	03	ESE	17	SSW	-	-	-	-	04	SE	-	-	14	SSW
Kota	-	-	19	WNW	-	-	-	-	08	NW	-	-	13	NW
Deesa	-	-	-	-	-	-	-	-	03	S	08	S	-	-
Churu	03	SW	14	NW	-	-	-	-	15	WNW	-	-	17	WNW

Under the prevailing weather conditions, there is chance of the more pest incidences.

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	Early sown Rice	Arhar
Transplanting	Early Vegetative / vegetative	Transplanting	Vegetative/Tillering	Early Vegetative / vegetative
Maize	Fodder	Bajra		
Early Vegetative / vegetative	Land preparation/Sowing	Land preparation / Sowing		

### Haryana

Sugarcane	Oilseeds	Horticultural crop	Cotton	Paddy
Vegetative	Seed maturity/Harvesting	Vegetative	Early vegetative	Main field preparation / Transplanting
Kharif Groundnut	Early sown Kharif Groundnut	Kharif Pulses		
Field preparation and Sowing	Early vegetative	Early vegetative		

### Himachal Pradesh

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

### Jammu & Kashmir

Vegetable crops	Rice	Early sown Rice	Maize	Pulses
Fruiting/harvesting–in Kashmir Div.	Transplanting – Jammu Div. Tillering- Kashmir Div.	Early vegetative	knee high- Jammu Div. Tasseling- Kashmir div.	Sowing
Fodder Bajra				
Sowing				

### Punjab

Sugarcane	Sunflower	Horticultural crop	Cotton	Paddy
Vegetative	Maturity/Harvesting	Vegetative	Vegetative	Main field preparation / transplanting
Kharif Groundnut	Early sown Kharif Groundnut	Kharif pulses	Arhar	
Field preparation/ Sowing	Early vegetative	Early vegetative	Sowing	

### Rajasthan

Kharif crops	Zaide Fodder	Cotton		
Sowing	Vegetative	Vegetative		

**Uttar Pradesh**

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

**Uttarakhand**

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

**Assam**

<b>Vegetables</b>	<b>Jute</b>	<b>Maize</b>	<b>Sugarcane</b>	<b>Regular Ahu Rice</b>
Vegetative/ Flowering / Fruiting / Harvesting	Vegetative/Maturity	Cob formation/Maturity	Vegetative	Tillering/flowering
<b>Arhar</b>	<b>Sali rice</b>			
Vegetative	Sowing/Transplanting			

**Arunachal Pradesh**

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

**Bihar**

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

**Jharkhand**

<b>Kharif rice</b>	<b>Ragi</b>	<b>Vegetables (Tomato, Brinjal, Bhendi)</b>	<b>Upland crops (Maize, arhar, groundnut, soybean, urad, rice and ragi)</b>
Transplanting	Transplanting	Vegetative/Maturity	Field preparation/Sowing

**Sikkim**

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

**West Bengal**

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

**Chattisgarh**

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

**Gujarat**

<b>Sugarcane</b>	<b>Kharif Rice</b>	<b>Kharif Groundnut</b>	<b>Kharif Cotton</b>	<b>Pre monsoon Cotton</b>
Vegetative	Transplanting	Land preparation & sowing	Land preparation & sowing	Vegetative
<b>Kharif Maize</b>	<b>Kharif Bajra</b>			

Land preparation and Sowing	Land preparation and Sowing			
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**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	Germination – North Konkan Seedling /Transplanting – South Konkan	Germination/ Seedling /Transplanting
<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>
Land preparation & sowing Early sown- Germination/Early vegetative	Land preparation & sowing Early sown- Germination/Early vegetative	Land preparation & sowing Early sown- Germination/Early vegetative	Land preparation & sowing Early sown- Germination/Early vegetative	Land preparation & sowing Early sown- 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>		
Preparation of land & sowing Early sown- Germination/Early vegetative	Preparation of land & sowing Early sown- Germination/Early vegetative	Land preparation & sowing Early sown - Germination/Early vegetative		

**Madhya Pradesh**

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

**Orissa**

<b>Summer Vegetables</b>	<b>Kharif vegetables</b>	<b>Kharif rice</b>	<b>Sugarcane</b>	<b>Jute</b>
Fruiting	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	Germination / early vegetative			

**Kerala**

	<b>Rubber</b>	<b>Virippu rice</b>		
	Tapping	Tillering		

**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 - Seedling/Early tillering	Boll development	Grand growth	Sowing	Sowing