



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

Issued by

Agricultural Meteorology Division, India Meteorological  
Department, Pune, India

Thursday, 17<sup>th</sup> July, 2008

(For the period 17<sup>th</sup> July to 21<sup>st</sup> July, 2008)

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

## *Agromet Advisory*

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

### **Punjab**

- Rain/thundershowers are likely at a few places over the State during next three days.

### **Advisories**

- Farmers are advised to complete transplanting of rice by utilising the realized rainfall.
- Farmers are advised to continue land preparation and sowing of cotton, maize and radish varieties like Pusa chetki and Punjab Ageti.
- Postpone irrigation in Amristar, Patiala, Nawaransahar, Jallandar, Kapurthala and Gurdaspur districts as sufficient rainfall occurred in these districts and also arrange for adequate drainage facilities in the fields of early sown maize and cotton fields as these crops are susceptible to water logging.
- As there was no significant rain in remaining districts of the State during last week and rain/thundershowers are likely only at a few places over the State during next three days, farmers are advised to apply irrigation to the standing crops like sugarcane, vegetables and early sown cotton, groundnut and maize.
- Monitor the attack of thrips and pyrilla in sugarcane in central and western plain zone and if required spray, 350 ml Endosulfan 50 EC in 600 liter of water/acre to control the pest.
- Monitor cotton crop for the attack of mealy bug and tobacco caterpillar, spray the crop with 1 litre endosulphan or 800 ml quinalphos or 2 litre chloropyriphos or 800 g acephate or 250 g thiodicarb per acre on a non rainy day. Rogue out and destroy the leaf curl infected plants.

### **Haryana**

- Rain/thundershowers are likely at a few places over Haryana

### **Advisories**

- Farmers are advised to complete transplanting of rice.
- Farmers in western zone are advised to sow bajra, guar and pulse crops in rainfed areas with certified seeds for bajra (HHB 60, HHB 67, HHB 67 improved, HHB 117, HHB 146, HC 10 & HC 20); guar (HG 75, HG 365 & HG 563); groundnut (MH 2, MH 4, M 45, M13), maize(HM1, HM2, HM4, HM5 & QPM1) and moong (Asha & Muskan).
- Undertake direct sowing of radish varieties i.e. Pusa Chetki and Punjab Ageti.
- As there was no significant rainfall in most of the districts except Faridabad, Hissar, Jhajjar, Karnal, Panipat, Rewari, Sonapat and Yamunanagar districts during last week and rain / thundershowers are likely only at a few places over the State during next three days, apply irrigation to sugarcane, early sown cotton, maize, guar and bajra crops. Postpone irrigation in the above mentioned districts and also provide adequate drainage facilities to avoid water logging in early sown cotton and maize fields.
- Monitor the sugarcane crop for shoot borer in western zone & if exceeds economic threshold level, apply 13 kg furodon 3G or 8 kg phorate per acre with remaining dose of urea along the furrows on a non rainy day.

## **Rajasthan**

- Rain / thundershowers are likely at a few places over East Rajasthan. Isolated rain / thundershowers are likely over rest of the state.

### **Advisories**

- Undertake intercultural operations in already sown *kharif* crops on a non rainy day in and around Karauli and Dholpur.
- Weather conditions are favourable for mild incidences of white grub in groundnut. Monitor the crop for the pest. To control the pest, spray Endosulfan @ 2.5 litres / ha on a non rainy day in Dausa and Jaipur.
- Undertake intercultural operations and application of fertilizers in already sown bajra (fodder), cowpea and red gram in Barmer, Churu, Jalore, Jodhpur and Pali districts. Intercultural operations may be undertaken on a non rainy day in bajra, sorghum (grain and fodder), til and cluster beans in Sawai Madhepur, Karauli, Dholpur and Bharathpur districts.
- Undertake thinning in groundnut, red gram and cotton to maintain optimum population in Sawai Madhopur, Karauli, Dholpur and Bharathpur districts.
- Due to rainy conditions, vaccinate the cattle to save from infections/diseases like Black Quarter and FMD etc in Alwar, Sawai Madhopur, Karauli, Dholpur and Bharathpur districts.

## **Uttar Pradesh**

- Rain/thundershowers are likely at many places over the State.

### **Advisories**

- Farmers are advised to drain out excess water from rice field and nursery beds as excess or heavy rainfall occurred in Bahraich, Ballia, Balrampur, Basti, Faizabad, Gonda, Gorakpur, Kheri, Shravasti, Siddharthnagar and Sitapur in East U.P during last week. Sowing / transplanting may be continued after current spells of rain in north U.P. as heavy rain is expected.
- As rain/thundershowers are likely at many places over the State for the next three days along with isolated heavy to very heavy rainfall in North Uttar Pradesh, postpone irrigation to the crops. Provide adequate drainage facilities to avoid water logging in the fields.
- Weeding, hoeing, intercultural operations and application of fertilizers / pesticides in early sown *kharif* pulses, maize, sugarcane and other crops may be done after current spells of rain.
- Continue field preparation and sowing of urd, moong, maize and til in West U.P. and after current spells of rain in East U.P.
- To control internal rotten disease in mango, spray the solution of 5-6 gm Borax / litre of water after current spells of rain.

## **Himachal Pradesh**

- Rain/thundershowers are likely at a few places over the state.

### **Advisories**

- Prepare land and undertake sowing / transplanting of rice.
- Continue preparation of land for sowing of maize by ploughing and mixing biological manures properly. Undertake sowing in lower valley with the help of recent rain.
- There is chance of attack of red beetle and fruit fly in cucurbits in Sub-mountain & Low hills Sub tropical zone. If infestation crosses economic threshold level, spray malathion 1 ml / litre +50 gram gur or sugar to control these insects.

- The weather is congenial for spread of fruit rot in tomato, chilli and Shimla mirch in Sub-mountain & Low hills Sub tropical zone. For control apply Dithane M-45 @ 2-3 g per litre of water in 10-15 days interval.
- Attack of cut worm is reported in bhindi in Sub-mountain & Low hills Sub tropical zone. Drench the fields with chlorpyrifos @ 1ml per litre of water.
- There is chance of attack of fruit borer and blight and leaf spot diseases in tomato in High Hill Temperate Wet Zone. To control the fruit borer in Tomato, spray 300 ml endosulphan @ 200 liters of water. To control the blight and leaf spot diseases in tomato, remove the yellowish leaves from the plant and spray 600 g Mancozeb or copper axicloride in 200 liters of water in the evening.
- There is chance of attack of San Joje Scale in apple. To control the San Joje Scale in apple spray 400 ml Chlorpyrifos per 200 liters of water only on the affected plants.
- Plucking of tea leaves can be continued at 8-10 days interval.
- Mealy bug is appearing in the tea plantation. For control spray Deltamethrin (Decis 2.8 EC) @ 1340 ml in 750 litres of water for one hectare. Spray immediately after plucking.
- It is optimum time for transplanting of summer annuals viz. Gladiolus, glardia, gomphrina, rudevekia, celosia, balsam cleome, kochia and zenia. Transplanting may be done in the evening.
- Weather is conducive for appearance of aphids in rose in Mild Hills Sub Humid Zone. For control, spray rogor @ 1 ml per litre of water. For the control of green beetle in roses, spray metasytox @ 1 ml per litre of water.
- Aphids are also appearing in gladiolus in High Hills Temperate wet zone. For control, spray metasytox @ 0.05%. For control of blue beetle in godetia spray metacid @0.1%.
- It is optimum time for plantation of evergreen plants like Mango, litchi, guava, citrus, loquat and amla in Sub-mountain & Low hills Sub tropical zone. Plant the saplings in 3x3x3 cubic feet pit. Add 40-50 kg FYM + 300g SSP + chlorpyrifos @ 10ml / 10 litres of water per pit before planting.
- The ensuing weather is conducive for the attack of leaf miner in new growth of citrus in Sub-mountain & Low hills Sub tropical zone. For its control, spray 10 ml Matasytox or Malathion @ 10 ml in 10 litres of water. The new growth appearing below bud union may be cut.
- There is chance of attack of flower and fruit borer in Pomegranate in Mild Hills Sub Humid zone and High Hills Temperate wet zone. For the control of flower and fruit borer in Pomegranate, spray 200 ml Ripcard (sypermathrine 10 EC) or 80 ml Challenger (sypermathrine 25 E.C) or 200 ml Monocrotophos @ 200 liters of water at the interval of 20 days.
- Apply plant protection measures on a non-rainy day.

## **Uttarakhand**

- Rain / thundershowers are likely at many places over the state.

### **Advisories**

- Farmers are advised to continue sowing of *kharif* rice, groundnut, maize, amaranthus and vegetables in Tehri, Haridwar, Dehradun and Pauri districts after current spells of rain. Continue transplanting of rice.
- Farmers are advised to undertake sowing of moong varieties like Pant Moong-2, Pant Moong-4, Narendra Moong-1 and complete sowing of soybean after current spells of rain.
- As rain/thundershowers are likely at many places over the State along with isolated heavy to very heavy rainfall for the next three days, postpone irrigation to sugarcane, vegetable crops and orchard trees. Also provide adequate drainage facilities to avoid water logging.
- Undertake intercultural operations in orchards and sugarcane after current spells of rain to keep the field weed free.

## **Jammu & Kashmir**

- Rain/thundershowers are likely at a few places over the state.

### **Advisories**

- As rain / thundershower is likely only at a few places over Jammu & Kashmir during next three days, apply irrigation to the standing crops.
- Undertake intercultural operations, application of fertilizers and pesticides to the standing crops on a non rainy day.
- Undertake sowing of kale, knol khol, cabbage and cauliflower and harvesting of cole crops like radish, carrot and also onion and garlic in Kashmir division.
- Complete planting of fodder maize and MP Chari slips in Kashmir division.
- Undertake sowing of *kharif* crops like maize, bajra, groundnut and til and complete transplanting of rice in Jammu division.

## **Delhi**

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

### **Advisories**

- As there was sufficient rain during last week over the State, postpone irrigation to the standing crops.
- The farmers who could not transplant early cauliflower seedlings till date, carry out transplanting as early as possible. Undertake transplanting of chilli in the main field during evening and also planting of seedlings of cucurbitaceous crops.
- Also carry out transplanting of kharif onion in the main field at a spacing of 15 cm X 15cm.
- The farmers who could not prepare nursery of cauliflower till date, carry out nursery preparation and apply formaldehyde 36% @ 1 ml / 19 litres of water to the nursery and cover the same with a black polythene for 1 week. After removing the cover don't transplant the seedlings at least for two days.
- There is chance of attack of fruit and shoot borer in brinjal due to favourable weather condition. Farmers are advised to collect the infested shoots from 15 days old plants and destroy them. Apply rogor or endosulphon @ 2 ml / litre of water to control the insect.
- There is chance of attack of fruit fly in vegetables due to favourable weather condition. Farmers are advised to collect the infested fruits and destroy them. Apply malathion @ 2 ml / litre of water to control fruit fly.
- Undertake application of fertilizer and plant protection measures on a non-rainy day.
- Continue land preparation and undertake transplanting of rice. Prepare the main field by puddling and transplant 25 – 30 days old rice seedlings in the field. Transplant 2 – 3 seedlings / hill at a spacing of 20 cm x 15 cm.
- Prepare land and sow maize, arhar, fodder sorghum and bajra utilizing monsoon rain. Select varieties from Ganga-5, Ganga White, Vikram and Kissan for maize, Upas - 120 and Manak for arhar and Pusa Chari 1 and 3 for fodder sorghum for sowing.
- Select varieties from high yielding varieties Pusa Safed, ICMB 221, Pusa 226 and hybrid varieties IHRBH 8294, GHB 183, Pusa 23 etc. for sowing of bajra. Adopt seed rate of 4 – 5 kg / ha. Maintain line to line distance of 45 cm at the time of sowing.
- Undertake intercultural operation and earthing up in sugarcane to prevent the crop from lodging.

## ***Southern Region (AP, Tamilnadu, Karnataka and Kerala)***

### **Kerala**

- Rain/thundershowers are likely at many places the state.

## Advisories

- Though the State received insufficient rainfall during last week, rain / thundershowers are likely to occur at many places for the next three days. Farmers are advised to postpone irrigation to the crops.
- Application of fertilizers and pesticides and intercultural operations may be undertaken after current spells of rain.
- Weather conditions are conducive for mild incidences of stem borer and case worm pests and leaf spot and sheath blight diseases in rice in and around Thrissur. Monitor the crop and use *Trichogramma* cards @ 2 nos / acre to control the pest. Spray *Pseudomonas* to control sheath blight. Control measures may be undertaken after current spells of rain.
- Monitor pepper for *Phytophthora* wilt in Thrissur and for foot rot in Kannur, Kasragod, Kozhikode and Malappuram. Spray 1% Bordeaux mixture or *Trichoderma viridae* after spells of rain to control the disease.
- Attack of mahali disease is reported in arecanut in Thrissur. Apply 1% Bordeaux mixture after spells of rain to control the disease.
- Monitor ginger for soft rot due to stagnation of water in and around Thrissur. Collect and destroy the affected plants.
- Weather conditions are conducive for mild incidences of Sigatoka leaf spot in banana in and around Kannur, Kasragod, Kozhikode and Malappuram. Monitor the crop for the pests and spray Indofil M 45 @ 3 g / litre of water after current spells of rain to control the disease.

## Tamilnadu

- Rain/thundershowers are likely at a few places over the state.

## Advisories

- Apply irrigation to groundnut, sugarcane and pulse crops as there was no significant rainfall during last week except in Kanyakumari and Krishnagiri and rain/ thundershowers likely at a few places over the State. Postpone irrigation in the above districts as there was excess rainfall during last week.
- Continue transplanting 24 days old seedlings of *kuruvai* rice in the main field.
- Undertake land preparation and sowing of groundnut, pulses and maize in Northwestern zone (in and around Namakkal). Select short duration varieties for groundnut like VRI-6, 7, TMV-13, CO-7 and Vamban-5.
- Due to *E. coli*, death of poultry birds is reported in Northwestern zone. Poultry growers may monitor water quality and keep sanitation to prevent further spread of infection.
- The *Trypanosoma* infection may flare-up in cattle during this period in Chennai, Cuddalore, Kanchipuram, Thiruvavur, Thiruvannamalai, Vellore and Villupuram districts. As the disease is transmitted by vectors (flies) it is advisable to avoid stagnation of water near the cattle shed and maintain sanitation.
- Monitor sorghum for stem borer in Thirunelveli, Tuticorin and Virudhunagar districts. Spray Carbaryl 4% granules on a non rainy day to control the pests.

## Karnataka

- Rain / thundershowers are likely at many places over Coastal Karnataka. Rain/thundershowers are likely at a few places over rest region of the State.

## Advisories

- In Bidar region, due to prolonged dry spell, farmers who could not undertake sowing of pulses like green gram and soyabean may undertake sowing of red gram till the end of July and niger or sunflower upto second week of August as late *kharif* crops.
- Similarly, farmers in upland region of Coastal Karnataka who could not undertake transplanting of rice may undertake sowing of sunflower and red gram as alternate crops.

- Postpone irrigation to sugarcane in coastal Karnataka as rain/thundershowers are likely at many places over Coastal Karnataka and apply irrigation over South Interior Karnataka and North Interior Karnataka as rain/thundershowers are likely only at a few places for the next three days.
- Monitor citrus for canker in Bijapur and spray Streptocyclin Sulphate @ 0.5 g + Copper oxy chloride @ 2.5 g/litre of water.
- Weather conditions are congenial for the attack of leaf spot and downy mildew in vegetable crops in Mysore and Mandya. Monitor the crops for the diseases and undertake plant protection measures.
- Monitor chillies for thrips and mites in and around Dharwad. To control the pests, spray 1.7 ml Rogar + 2.5 ml Dicofol dissolved in one liter of water.

### **Andhra Pradesh**

- Southwest monsoon was active over Coastal Andhra Pradesh on 10<sup>th</sup> July. Rain occurred at a few places over Coastal Andhra Pradesh on 11<sup>th</sup>, over Telangana on 10<sup>th</sup> and 11<sup>th</sup> and over Rayalaseema on 10<sup>th</sup>. Isolated rain occurred over Coastal Andhra Pradesh from 12<sup>th</sup> to 14<sup>th</sup> over Telangana on 14<sup>th</sup> and over Rayalaseema from 11<sup>th</sup> to 14<sup>th</sup>. Mainly dry weather prevailed over Telangana on 12<sup>th</sup>.
- Rain/thundershowers are likely at a few places over rest region outside Telangana and north Coastal Andhra Pradesh where it will be isolated.

### **Advisories**

- As there was no significant rainfall during last week and rain / thundershowers are likely at a few / isolated places over Andhra Pradesh for the next three days, apply irrigation to sugarcane.
- Monitor vegetable for damping off and mealy bugs in and around Hyderabad. To prevent damping off in vegetable nurseries drench Copper-Oxy-Chloride @ 3g per litre of water. To prevent mealy bug attack, remove and destroy the alternate hosts.
- Monitor citrus for leaf miner in and around Hyderabad. To prevent leaf miner, spray systemic insecticides like Monocrotophos @ 1.6 ml per litre of water or Dimethoate @ 2 ml per litre of water at 10 days interval.
- Weather conditions are congenial for mild attack of jassids and fruit borer in bhindi in and around Hyderabad. Monitor the crop for the pests and spray Dimethoate @ 2 ml and Quinalphos @ 2 ml/litre of water, respectively to control the pests.
- Farmers in Ananthapur region are advised to undertake groundnut sowing as there was good amount of rainfall during last two days.
- Continue land preparation and sowing of cotton in East and West Godhavari.

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

### **Assam**

- Moderate to rather heavy rain occurred at most places on 14.07.08, 15.07.2008 and at many places on 16.07.08 with isolated heavy to very heavy falls on 14th and 15th over the state.
- Rain/thundershowers are likely at many places over the state.

### **Advisories**

- As rain / thundershowers are likely at many places with isolated heavy to very heavy rainfall during next 48 hours over the State, postpone irrigation and intercultural operation to the crops. Provide adequate drainage facilities to avoid water logging.
- Maintain 3 – 5 cm of water in regular ahu rice field.
- Provide mechanical support to the sugarcane crops to prevent lodging.
- Infestation of hispa and stem borer and diseases like sheath blight and blast is reported in regular ahu rice from a few localities. For control of pests like Hispa, stem borer etc.,

Monocrotophos or Phophomidion @ 5ml per litre of water may be sprayed and for sheath blast & blast diseases use Bavistan @ 1gm/litre of water to control the disease.

- There is mild chance of attack of hairy caterpillars, semi-looper and stem weevil in jute. To control these pests, Fenitrothion 50 EC @ 1ml per litre of water or Endosulfan 35 EC @ 2ml per litre of water should be sprayed.
- There is more chance of attack of fruit fly, fruit borer and powdery mildew in vegetables as the weather condition is favourable. For control of fruit fly and fruit borer in summer vegetables, Malathion 50 EC @ 2.5 ml per litre of water should be applied. Also for control of disease such as powdery mildew apply bavistan @ 2.5 ml / litre of water or Diathine Z-78 or Captaf @ 2 g / litre of water.
- Undertake sowing and application of pesticides after current spells of rain.
- Prepare land and undertake transplanting of Sali rice. Recommended paddy varieties are Ranjit, Mahsuri, Bahadur, Kushal etc. Before uprooting the seedlings from the nursery, apply Carbofuran @ 3.0 g/m<sup>2</sup> area in the seedbed to protect the seedlings from stem borer, gall midge, leaf folder etc in the main field.
- Prepare land and sow cauliflower, tomato, cucumber, capsicum etc. as early season crop after current spells of rain. The early varieties of cauliflower like Pusa Keteki, Pusa Deepali, Early Kuwary, Early Chinese Prince, Jowahar Moti etc. can be sown within 15th July to 15th August.
- Prepare the well-drained sandy loam soils for sowing of sesamum. Select recommended varieties of sesamum for this zone like Madhabi, Gauri, Binayak, Punjab Til No-1 etc.

### **Arunachal Pradesh**

- Rain/thundershowers are likely at many places over the state.

### **Advisories**

- As rain / thundershowers are likely at many places with isolated heavy to very heavy rainfall during next 48 hours over the State, postpone irrigation to the millet and maize crops. Provide adequate drainage facilities to avoid waterlogging.
- Undertake intercultural operations, application of fertilizers and pesticides in ginger, wet seeded rice, *jhum* rice and millets after current spells of rain.

### **Bihar**

- Rain occurred at many places
- Rain/thundershowers are likely at many places over the state.

### **Advisories**

- Drain out excess water in already sown *kharif* rice nursery beds and continue transplanting.
- Sowing of *kharif* vegetables like brinjal, onion and chilies may be sown in nursery bed after current spells of rain.
- As rain/thundershowers are likely at many places over the State with isolated heavy to very heavy rainfall, postpone irrigation to early sown maize, sugarcane and vegetables. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.
- There is mild chance of attack of red spider mite in vegetables. If attack crosses economic threshold level, for controlling the red spider mite spray the crop with sulfex @ 3kg/ha or share @ 3 kg/ha in 700 litre of water after current spells of rain.
- There is mild chance of attack of mealy bug and anthracnose in fruits. If attack crosses economic threshold level, spray the crop with Endosulfan @ 1.5 ml + Chlorthalonil @ 2g + Planofix @ 1 ml per litre of water after current spells of rain.
- Monitor the sugarcane crop for shoot borer incidence. If attack crosses economic threshold level, apply pesticides after current spells of rain.

- Undertake intercultural operations, spraying, application of fertilisers after current spells of rain.

### **Jharkhand**

- Rain/thundershowers are likely at many places over the state.

### **Advisories**

- Farmers are advised to prepare main field and undertake transplanting of *kharif* rice.
- Continue land preparation and sowing of *kharif* maize and arhar.
- Transplanting of tomato may be done with upland varieties like Pusa rubi, Pusa early, selection-12 etc.
- As rain/thundershowers are likely at many places over the State during next 3 days, postpone irrigation to vegetables.
- Undertake intercultural operations, spraying and application of fertilisers after current spells of rain.

### **Sikkim**

- Rain/thundershowers are likely at many places over the State.

### **Advisories**

- As rain/thundershower are likely at many places over the State for next three days, postpone irrigation to orange, large cardamom, ginger and vegetable crops. Arrange for drainage facilities to avoid water stagnation due to excess water.
- Monitor orange for trunk borer and undertake plant protection measures after spells of rain to control the pest. Also undertake deshooting and debugging.
- Gap filling / replanting may be continued in newly planted large cardamom in mid and low hills up to August. Planting materials may be selected from high yielding sucker nurseries free from pest / disease infestation or diseases free high yielding elite garden. Chirke and foorkey infected plants may be destroyed by uprooting / burial at regular intervals in the pits. Regular inspections may be carried out to observe caterpillar/ shoot borer/shoot fly incidence if any and may be hand picked and destroyed mechanically. 1% Bordeaux mixture or copper oxychlorid @ 3gm/ltr of water may be sprayed to the cardamom plants after spells of rain to protect from fungal diseases.
- Continue transplanting of rice in Medium and High hills by utilizing the monsoon showers.
- Undertake earthing up and application of compost in seed potato after spells of rain.
- Monitor ginger for bacterial wilt in Medium and High hills and collect and destroy the affected plants completely to prevent further spread of the disease.

### **West Bengal**

- SW-Monsoon was active over GWB from 14<sup>th</sup> to 16<sup>th</sup> July and over SHWB on 16<sup>th</sup>. Rainfall occurred at most places on 14<sup>th</sup> and 15<sup>th</sup> and at most places, heavy at isolated places on 16<sup>th</sup> over SHWB. Rainfall occurred at most places on 14<sup>th</sup>, heavy at an isolated places, at most places on 15<sup>th</sup> and at many places, heavy at an isolated places on 16<sup>th</sup> over GWB.
- Rain / thundershowers are likely at many places over The State.

### **Advisories**

- As rain / thundershowers are likely at many places over the state for next three days with the possibility of isolated heavy to very heavy rainfall over Sub-Himalayan West Bengal during next 48 hours, postpone irrigation and intercultural operation to the crops. Arrange for draining out excess water from the fields in Sub-Himalayan West Bengal.
- Maintain 3 – 5 cm water in the aus rice field.



- Undertake application of fertilizer, plant protection measures and sowing of crops after current spells of rain.
- For late sown jute, apply second dose of top dressing (at the stage of 5 to 6 weeks after sowing) at the rate of 6 to 7 Kg per bigha.
- In late sown direct seeded aus rice, apply last dose of top dressing (@ 3 to 4 kg Urea per Bigha).
- In the present weather situation, there is a chance of infestation of bacterial leaf blight in aus rice in New alluvial zone and stem borer in Red Lateritic zone. To prevent bacterial leaf blight, apply Streptocycline (@1 gm per 10 litres of water). Repeat the spraying after 10 days. For controlling stem borer, survey the field and if 5% or more dead hearts are seen apply 3% Carbofuran (Furadon) granules @ 1.5 – 2 kg per bigha or Phorate (Thimet) 10G @ 1 kg per bigha.
- Due to cloudy weather and high humidity, attack of fruit rot due to fungus may be prevalent in pointed gourd. Remove the infected fruits from the land. Spray blitox (4 gm per lt) or blue-copper oxide.
- Land preparation and sowing of broadcasted aman rice may be undertaken. Select H.Y.V like Tilak, Kachhary, Patnai-23, Raghusal etc. Recommended varieties for those lands where water logging cannot take more than 6-8” are Pankaj, C.N-540, C.R- 1009, C.R-1010, C.R-1011, Sarnodhan. Complete nursery bed preparation for transplanted aman rice as early as possible. One kattah land is required for transplanting one bigha.
- Wherever rice nurseries are ready, start land preparation and transplanting of aman rice. Transplant 2 – 3 seedlings of 20 – 25 days in line at a distance of 20 cm from line to lind and 15 cm from plant to plant.
- Undertake sowing of groundnut, pigeon pea and soybean after current spells of rain. Select varieties from B-7, UPS-A-120 etc. for pigeon pea and J.S.-2; Soyamax etc.for soybean.
- Prepare nurseries for early cauliflower. Treat the seeds before sowing. Cover the bed with polythene and ensure proper drainage. Select improved varieties of cauliflower like Kanwari, Jowhar, Moti, Early Patna etc.
- Start cultivation of tomato. Select improved varieties of tomato like Pusa Rubi, Pusa Early, S-2, Roma Super etc.

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

### **Gujarat**

- Rain/thundershowers are likely at many places over south Gujarat region and at a few places over north Gujarat.
- Isolated rain/thundershowers are likely over the rest region.

### **Advisories**

- As rain / thundershowers are likely at many places over South Gujarat Region, postpone irrigation and intercultural operation to the crops in this region. As Saurashtra and Kutch region received no significant rain during last week and rain / thundershowers are likely at isolated places over this region, apply irrigation to sugarcane.
- Continue preparation of land and sowing of kharif crops in the districts of South Gujrat after current spells of rain and also in Saurashtra utilizing monsoon rain. Arrange for draining out of excess water from the fields of already sown crops in South Gujarat.
- As there was rain during last week and there is chance of occurrence of rain over most of the districts of North Gujarat also for next three days, farmers of this region are advised to undertake land preparation and sowing of kharif crops.
- Seeds should be treated with thirum or captan or mancozeb @ 4 gm/kg seeds before sowing of groundnut to control stem rot and seedling blight. Treat the seeds with Rhizobium culture

@ 250 g / 40 kg seeds. Farmers are advised to raise kharif groundnut varieties GG-2 (erect) and GG-20 (semi spread).

- Dusting of methyle parathion 2% @ 25 kg / ha should be made on ridge / furrow before sowing of kharif cotton crop. Hybrid varieties for cotton crop like HC-4, 6, 8 and 10 and Deshi cotton varieties as per area should be selected for kharif season.
- Prepare land and undertake transplanting of kharif rice in South Gujrat region and Saurashtra. Select the desired rice variety from early matured cultivars like Sukhvel-20, GR-3, 4, 6, 7 and late matured cultivars like GR-101, 102, 103, 104, Narmada and Masuri.
- Prepare land and sow early pigeon pea varieties like Guj PP-1, 100, 101 at spacing of 120 X 45 cm by dibbling method and treat seeds with Rhizobium @ 25g / kg seeds.
- Undertake sowing operation of rainfed maize, bajra and other pulses. For kharif bajra certified varieties like GHB- 315, 316, 577, 558 and MH-169 and MH-179 (seed rate 3.75 to 4.75 kg / ha) should be selected for sowing.
- Carry out light earthing up in sugarcane. Apply 75 kg Nitrogen / ha as top dressing.
- Undertake plan protection measures and fertilizer application in South Gujarat region after current spells of rain and North region on a non-rainy day.
- In early sown cotton crop, there is mild chance of attack of mealy bug infestation. If infestation crosses economic threshold level, apply monocrotophos or metasystox @ 20 ml / 10 liter of water.

### **Chhattisgarh**

- Isolated rain / thundershowers are likely over Chhattisgarh during next 24 hours and increase there after.

### **Advisories**

- Provide mechanical support to sugarcane to avoid lodging.
- Farmers are advised to plough and prepare the fields weed free and undertake sowing / transplanting of rice. Under the present weather conditions undertake transplanting of 20 – 25 days old seedlings of rice. The spacing between plant and row should be 20 x 15 cm. For medium duration varieties two plants per hill and for hybrids one plant per hill should be transplanted.
- There is mild chance of attack of blast disease in rice nurseries. For protection of nursery from blast disease, spray Hinosan @ 0.2% or Civic @ 0.6% on a non-rainy day.
- Prepare nursery for chilli, tomato and brinjal and also early varieties of cabbage and cauliflower.
- Undertake sowing of okra as soon as possible. To save the crop from Yellow vein mosaic resistant varieties such as Pusa Vaibhav, Akra Anamika and Pusa Savani should be chosen. Also undertake sowing of cowpea and beans.
- Farmers are advised to prepare the fields and complete the sowing of soybean. Recommended varieties for this region are JS-335, Indira Soya 9, JS 80-21, JS 93-05.
- Prepare land and undertake sowing of groundnut and black gram in transmahanadi belt of Chhattisgarh. Farmers are advised for sowing of maize, pigeon pea, green gram, urad and groundnut in the up land areas.
- Farmers are advised to undertake intercropping of pigeon pea with soybean. For better results, after every four rows of soybean, 2 rows of pigeon pea should be sown by maintaining 30 cm row to row distance.
- Incidence of hairy caterpillar and stem borer is reported in maize in Baster Plateau Zone. As there is more chance of attack of these insects, apply carbofuran 3G @ 5-6 kg / acre on a non-rainy day if infestation crosses economic threshold level.

## **Maharashtra**

- Rain / thundershowers are likely at many places over Konkan & Goa and at isolated places over rest of the State.

### **Advisories**

- As the districts of Madhya Maharashtra, Marathwada and west Vidarbha received no significant rain during last week and rain is likely to occur only at isolated places for next three days, apply irrigation to sugarcane (pre-seasonal), sugarcane (suru) and irrigated cotton in these regions.
- There is mild chance of attack of aphids, jassids & thrips in irrigated cotton. For the control of aphids, jassids & thrips, spray 85% Phosphamidon @ 100 ml or 30 % Dimethoate @ 400 ml / ha in 500 litres of water day after 2 weeks from germination.
- There is more chance of attack of mealy bug in cotton in Western Maharashtra Plain Zone and Central Vidarbha Zone. For the control of mealy bug, apply 25% WSC Methyl Demeton @ 4 ml or Dichlorovos 76% @ 0.7 ml or Trizophos @ 1 ml / litre of water.
- There is mild chance of attack of army worm in rice in South Konkan. Spraying of Cypermethrin 10% @ 5 ml or Cypermethrin 20% @ 3 ml / 10 lit or Cabaryl 2 gm / litres of water may be done. Use 0.5 to 1.0 ml sticker at the time of spraying.
- Undertake application of fertilizer and plant protection measures in Konkan after current spells of rain.
- Continue land preparation of main rice field and transplanting in Konkan and South Madhya Maharashtra
- .Continue sowing operation in Nashik, Nandurbar and Pune districts of Madhya Maharashtra and most parts of Vidarbha. Farmers of Marathwada and Akola, Amravati, Wardha and Yeotmal districts of Vidarbha and Ahmednagar, Dhule, Jalgaon, sangli and Solapur districts of Madhya Maharashtra are advised to complete preparatory tillage with the help of limited monsoon showers & land may be kept ready for sowing of kharif crops.
- Land may be prepared for the sowing of kharif Cotton. Select the variety from PA 402, American PH 348, Phule 492 or 388, JLH 168, JLA 794, Ganga, Parbhani Sona for sowing.
- For sowing select the varieties like Phule Pragati (JL-24), SB-11, TAG-2, Phule Unap (JL-2(1) & Phule Vyas for Kharif groundnut, ICPL-87, Vipula, BSMR-853 or 836 for Western Maharashtra Scarcity Zone and BDN-1, BDN-2 and ICPL-87119 for Western Maharashtra Plain Zone for tur, EC-68414, SS-56 & Bhanu for sunflower, JS-335, Phule-kalyani (DS-228) for Western Maharashtra Scarcity Zone, DS-228, MACS-124, JS-335 for Western Maharashtra Plain Zone and TAMS-38, JS-335 & PK-472 for Eastern Vidarbha Zone for soybean, CSH-9, CSH-14, SPV-462, SPV-475 and SPV-946 for kharif sorghum, Shradha, Saburi, MH-179, WCC-75, ICTP-8203 and ICMV-211 for bajra, S-8, M-2 and BM-4 for green gram and T-9 and TPU-4 for black gram.
- As the districts of Madhya Maharashtra and west Vidarbha received no significant rain during last week and rain is likely to occur only at isolated places for next three days, apply irrigation to save the already sown crops

## **Madhya Pradesh**

- Rain/thundershowers are likely at a few places over North Madhya Pradesh.
- Isolated rain/thundershowers are likely over the rest region of the State.

### **Advisories**

- As there was no significant rainfall during last week and rain/thundershowers are at a few / isolated places over Madhya Pradesh for the next three days, apply irrigation to sugarcane.
- Undertake intercultural operations, application of fertilizers and pesticides on a non rainy day in North Madhya Pradesh.

- Complete land preparation and sowing of jowar, maize, moong, urd and soyabean in and around Jabalpur. Early varieties like JM-8, 12, Surya, Kiran, Pusa composite-2 for maize, JJ-741, JJ-938, JJ-1022, JJ-1041 and CSV-15 for jowar and JS-97-52, JS-93-05, JS-90-41, JS-80-21, JS-335, NRC-37 for soyabean may be selected for sowing.
- Farmers in Ujjain, Ratlam, Shajapur, Rajgarh, Neemuch, Mandsaur, Indore and Dewas are advised to continue land preparation and sowing of maize, soyabean, jowar and transplanting of vegetables like brinjal, tomato, cauliflower, chillies and onion and sowing of bottle gourd and bitter melon in the main field by utilizing the monsoon showers. In early sown crops, undertake intercultural operations in south Madhya Pradesh and on a non rainy day in North Madhya Pradesh.
- Monitor cucurbitaceous crops for red pumpkin beetle and spray Methyl Parathion @ 2 ml/litre of water to control the pest. Spray the chemical on a non rainy day in North Madhya Pradesh.
- Due to rainy conditions, vaccinate the cattle to save from infections/diseases like Anthrax, Galgotu, Black Quarter and FMD etc. As high humidity prevails, keep the sheds aerated and dry in Ujjain, Ratlam, Shajapur, Rajgarh, Neemuch, Mandsaur, Indore, Jabalpur and Dewas.

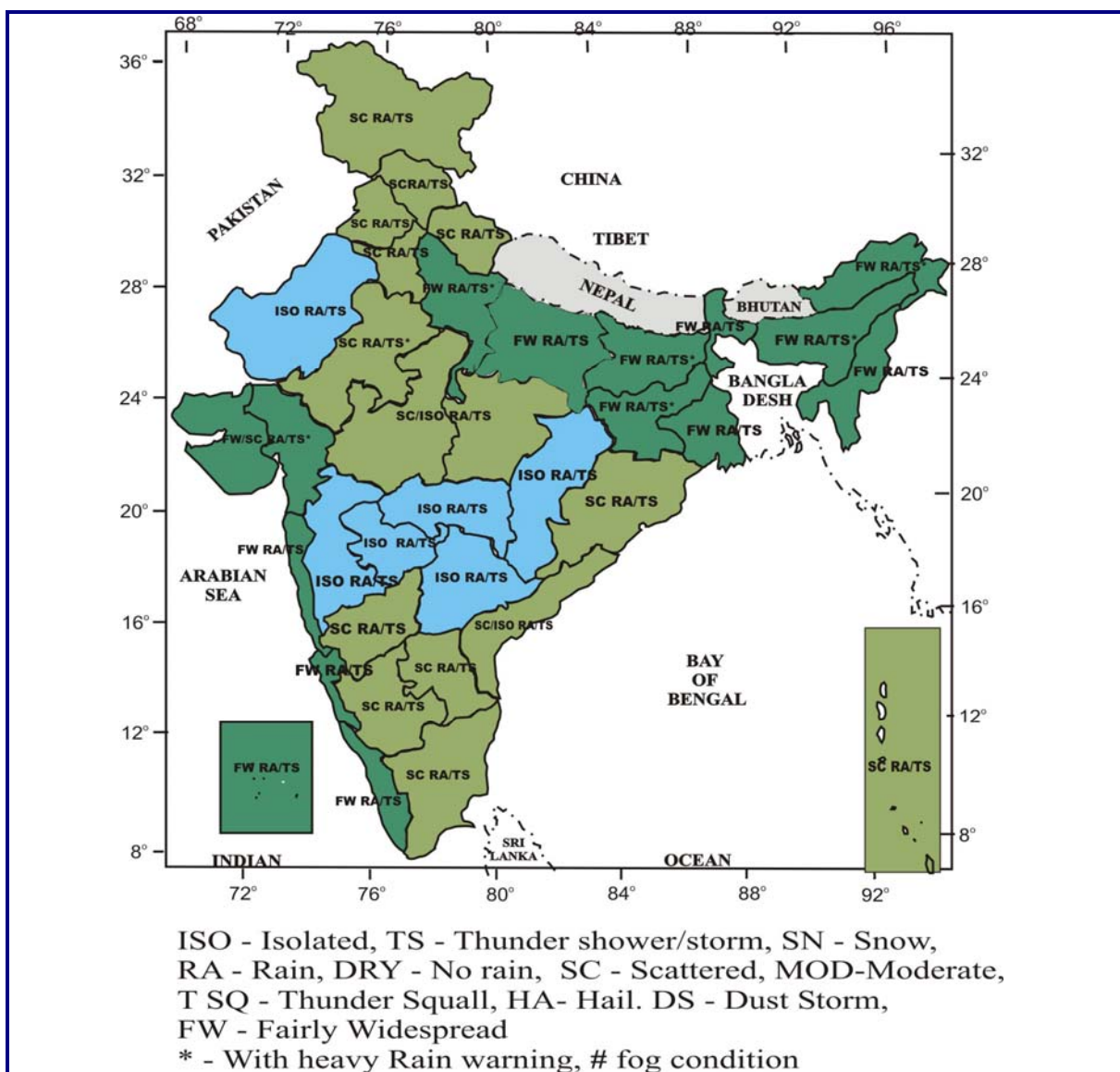
### **Orissa**

- Rain/thundershowers are likely at a few places over the state during next 24 hours and increase thereafter.

### **Advisories**

- Farmers are advised to undertake transplanting of rice and also complete sowing of groundnut, cotton, sesame, maize and greengram and blackgram in uplands of East and South-Eastern coastal plain zone.
- Farmers are advised to undertake sowing of rice in the uplands of western Orissa, with extra early varieties like Kalinga-3 and Heera. If not available go for early duration varieties like Khandagiri, Pathara and Parijat.
- As there was no significant rainfall in Bhadrak, Cuttack, Dhenkanal, Gajapati, Ganjam, Jajpur, Khurda and Nawapara districts during last week and rain/thundershowers are likely at a few places over the state during next 24 hours and increase thereafter, farmers are advised to apply irrigation to the standing crops. Postpone irrigation in the remaining districts as there was sufficient rainfall during last week.
- There is mild chance of occurrence of aphids in vegetables. If the pest population crosses economic threshold level, spray Dimethoate or Methyl demeton @ 2 ml per litre of water on a non rainy day. Also monitor the crop for leaf blight and spray Mancozeb @ 4-5 gm/litre of water on a non rainy day to control leaf blight.
- Monitor sugarcane for early shoot borer and undertake need based plant protection measures on a non rainy day.

## Forecast Valid upto 17<sup>th</sup> July, 2008



### *Salient weather features for the week ending 16/07/08*

#### MAIN EVENTS OF THE WEEK

- Southwest monsoon further advanced into remaining parts of Rajasthan and thus covered the entire country on 10<sup>th</sup> July 2008, about 5 days earlier than normal date.
- Subdued rainfall activity continued over south and adjoining west & central India during the week.

#### METEOROLOGICAL ANALYSIS

- Last week's low pressure area over Jharkhand and neighbourhood lay over central parts of north Madhya Pradesh and adjoining Uttar Pradesh on 10<sup>th</sup>, northwest Madhya Pradesh and neighbourhood on 11<sup>th</sup>, northeast Rajasthan and neighbourhood on 12<sup>th</sup>, West Uttar Pradesh and neighbourhood on 13<sup>th</sup> and became less marked on 14<sup>th</sup>. However, the associated upper air cyclonic circulation lay over West Uttar Pradesh and adjoining Uttarakhand extending upto 1.5 Km above mean sea level (amsl) on 14<sup>th</sup> and became less marked on 15<sup>th</sup>. The

system moved northeastwards after 12<sup>th</sup> due to the interaction of mid-latitude westerly trough at mid-tropospheric level.

- A trough in mid-latitude westerlies ran at mid-tropospheric levels from north Pakistan and adjoining Punjab and Jammu & Kashmir to northeast Arabian Sea off Gujarat coast on 12<sup>th</sup>. It ran from Jammu & Kashmir to south Gujarat coast on 13<sup>th</sup>, Jammu & Kashmir to West Rajasthan on 14<sup>th</sup> and became less marked on 14<sup>th</sup>.
- An upper air cyclonic circulation extending upto 1.5 km amsl lay over Gangetic West Bengal & adjoining Bangladesh on 12<sup>th</sup>. It lay over the same region and extended upto 3.1 km amsl on 13<sup>th</sup>, upto mid-tropospheric level on 14<sup>th</sup>, upto 1.5 km amsl with a trough aloft on 15<sup>th</sup>. It was seen as a trough extending from Sub-Himalayan West Bengal & Sikkim to north Bay of Bengal extending upto 4.5 km amsl on 16<sup>th</sup>.
- Last week's cyclonic circulation over West Uttar Pradesh and neighbourhood extending upto 1.5 km amsl lay over northeast Rajasthan and neighbourhood on 10<sup>th</sup>, central Rajasthan and neighbourhood on 11<sup>th</sup> and became less marked on 12<sup>th</sup>.
- The axis of the monsoon trough at mean sea level gradually shifted towards the north during the week and lay close to foothills of the Himalayas from 14<sup>th</sup> onwards.
- An off-shore trough at mean sea level ran from Karnataka coast to Kerala coast during the week. However, the pressure gradient along the west coast continued to be weak.
- A trough in lower tropospheric levels ran from central Pakistan to northeast Arabian Sea with embedded cyclonic circulations over central & southeast Pakistan during 13-16<sup>th</sup>.

### **RAINFALL**

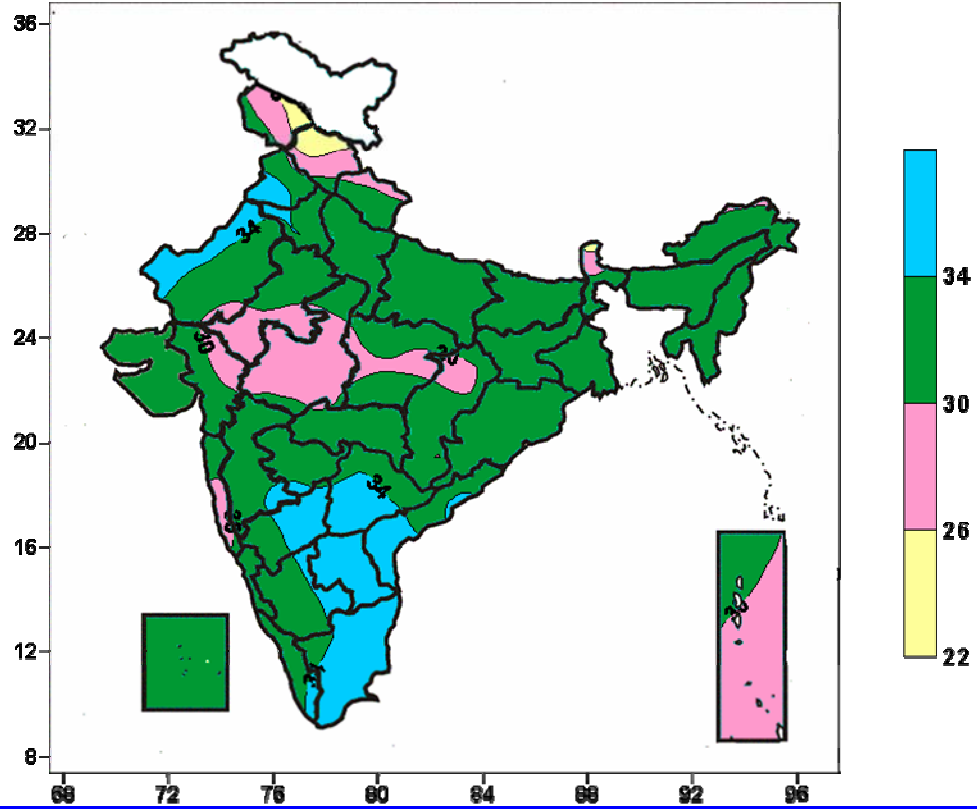
- Active/vigorous monsoon conditions prevailed over Madhya Pradesh and Rajasthan during first half of the week and decreased thereafter.
- Scattered to fairly widespread rainfall occurred along the west coast, Andaman & Nicobar Islands and Lakshadweep Islands during many days of the week.
- Widespread/ fairly widespread rain/thundershower occurred over northeastern states, West Bengal & Sikkim, Jharkhand and Bihar with increase in intensity towards the second half of the week. The active/vigorous monsoon condition prevailed over these regions during a few days.
- Widespread/ fairly widespread rain/thundershower occurred over Uttar Pradesh and Uttarakhand during second half of the week.
- The rainfall was subdued over remaining parts of the country with isolated/ scattered rainfall activity during many days of the week. The details of the rainfall distribution/activity during the week are given in *Table-1*.

### **Outlook For The Week Ending On 23<sup>rd</sup> July 2008**

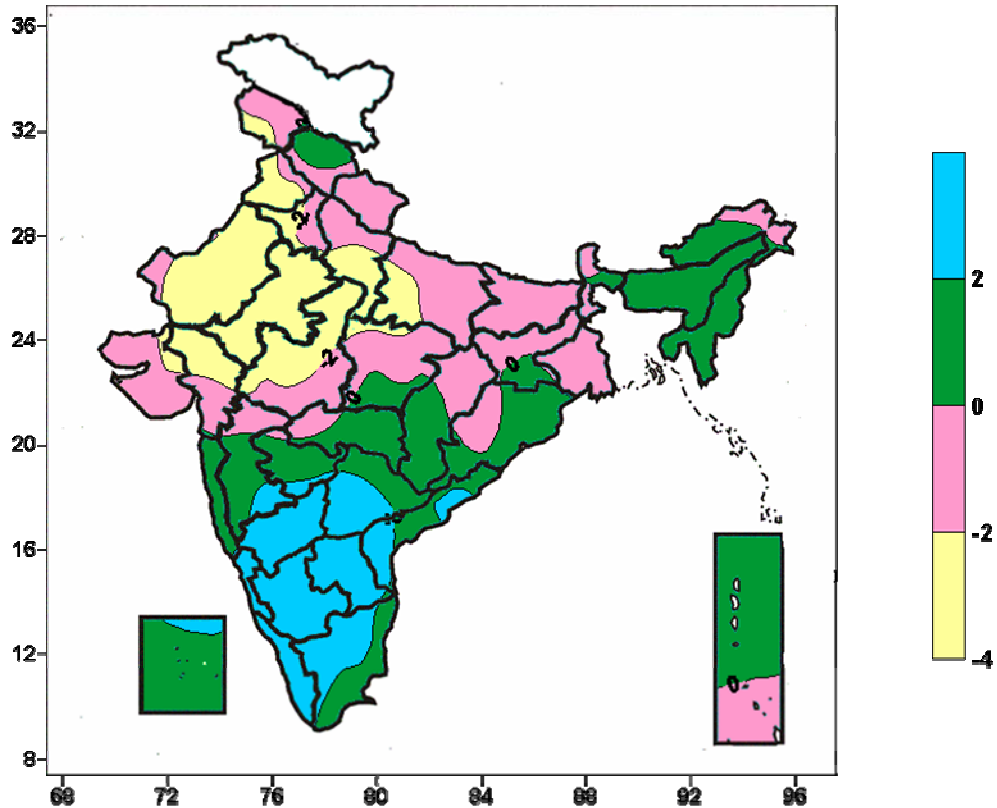
- Fairly widespread rainfall activity with isolated heavy to very heavy falls along the foothills of the Himalayas, adjoining Gangetic Plains and northeastern states.
- Scattered to fairly widespread rainfall activity over remaining parts of East India.
- Fairly widespread rainfall activity over Coastal Karnataka and Kerala
- Subdued rainfall activity over interior Peninsula, west and adjoining central India.

## Contour maps for the week ending 16<sup>th</sup> July, 2008

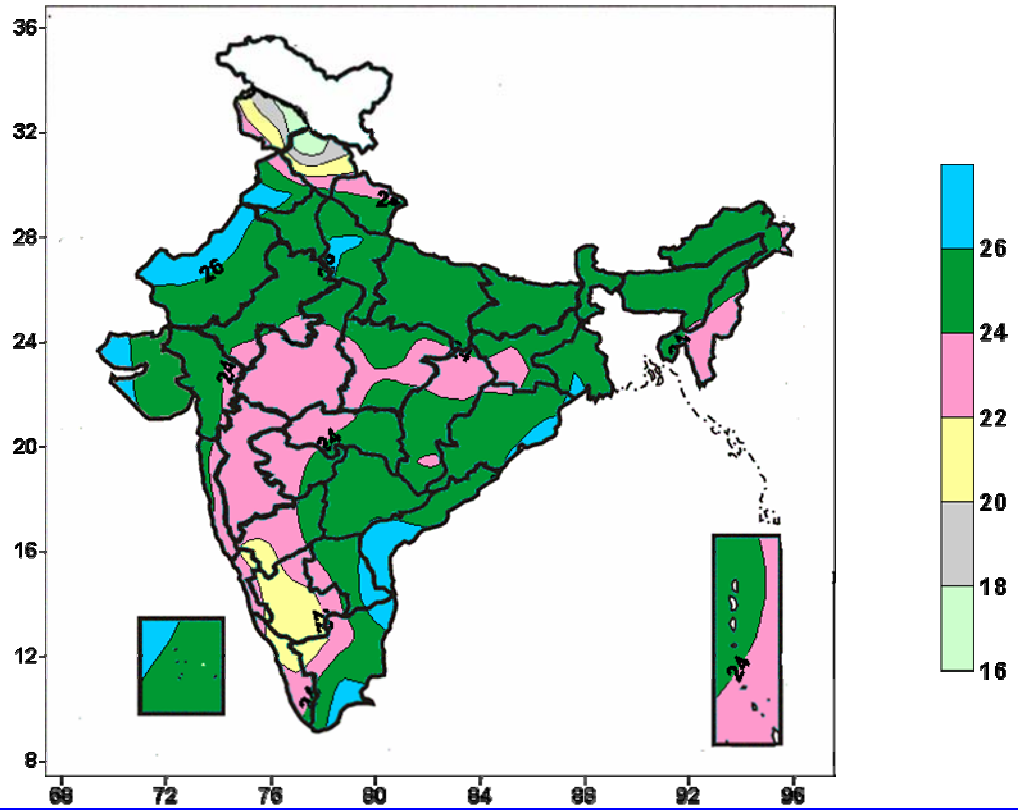
**Actual Mean Maximum Temperature (°C) In India for the week ending 16.7.08**



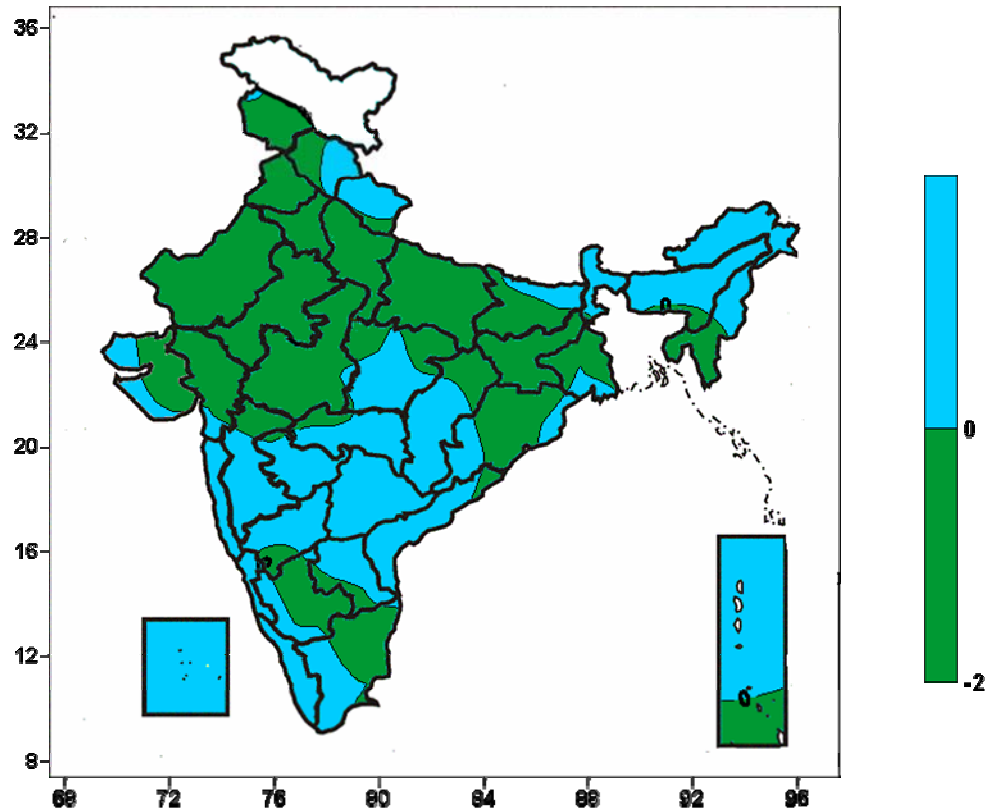
**Maximum Temperature (°C) Anomaly In India for the week ending 16.7.08**



**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 16.7.08**

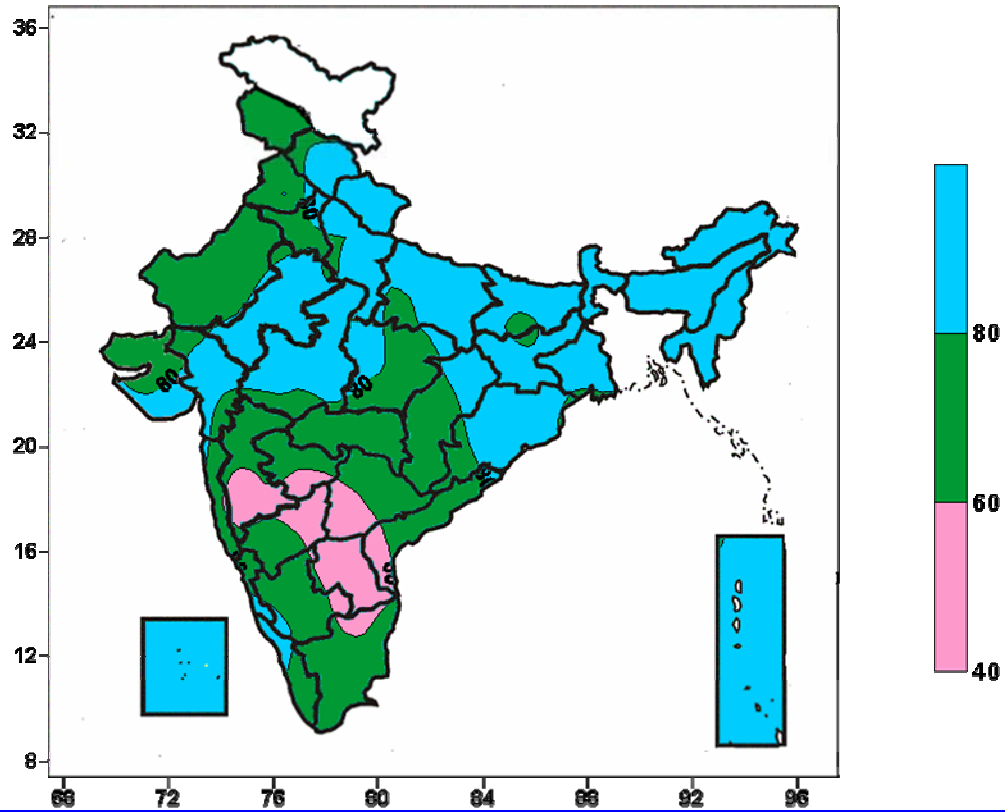


**Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 16.7.08**

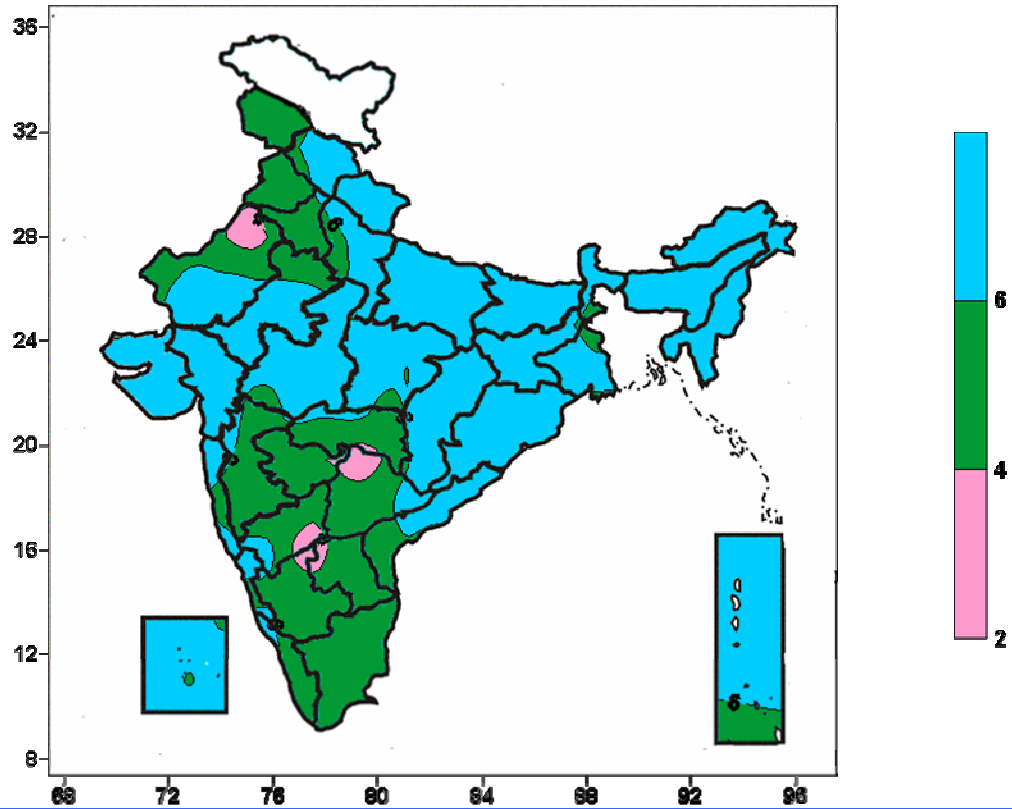




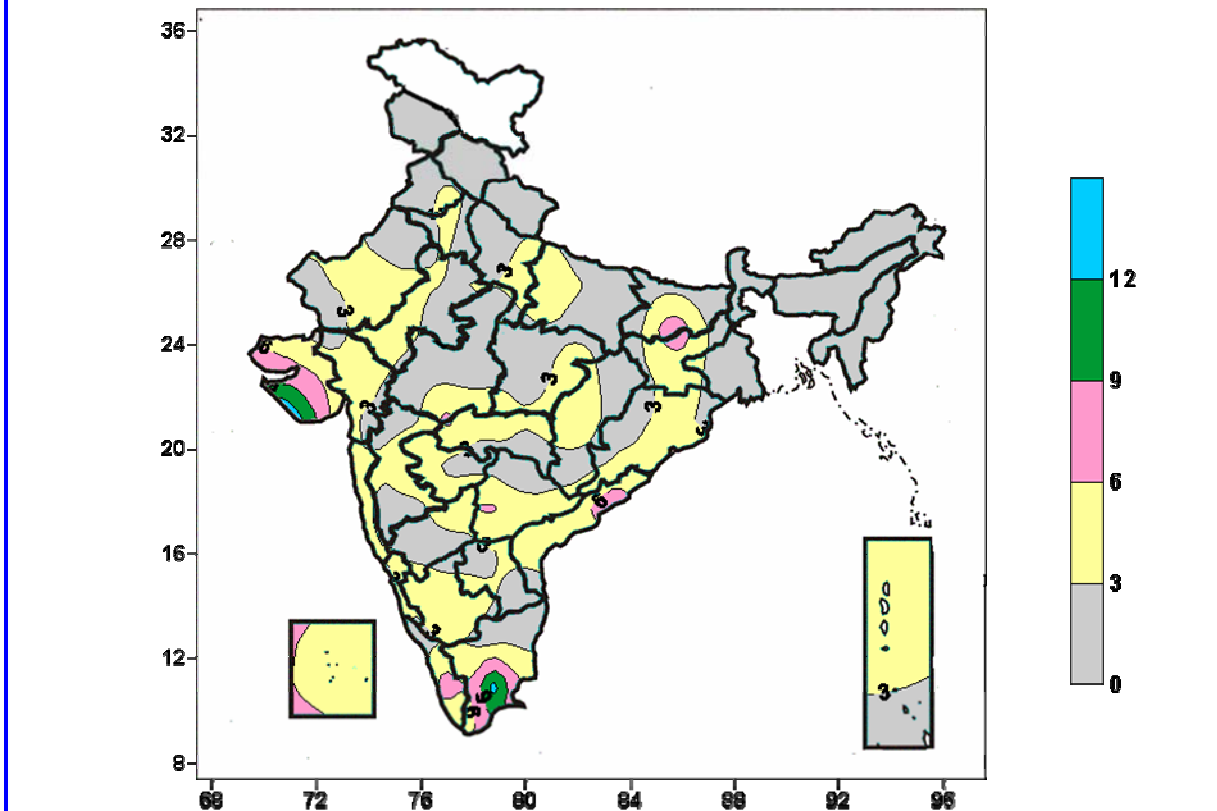
**Relative Humidity (%) over India for the week ending 16.7.08**



**Cloud amount (okta) over India for the week ending 16.7.08**



### Wind speed (knots) over India for the week ending 16.7.08



### Desert Locust Forecasting



Rainfall (mm)							
Station Name	10/07/08	11/07/08	12/07/08	13/07/08	14/07/08	15/07/08	16/07/08
Amritsar	00.0	00.0	42.0	89.6	00.0	00.0	00.0
Barmer	12.7	26.1	01.0	00.0	00.0	00.0	00.0
Sriganganagar	76.9	00.0	00.0	02.8	00.0	00.0	00.0
Jaisalmer	01.8	00.0	22.9	00.0	00.0	00.0	00.0
Kota	73.4	36.7	09.8	06.1	02.7	00.0	00.0
Deesa	00.0	04.0	16.2	16.0	00.2	00.0	00.0
Churu	34.7	05.5	08.9	06.2	00.0	00.0	00.0

### Temperature (°C)

Station Name	10/07/08	11/07/08	12/07/08	13/07/08	14/07/08	15/07/08	16/07/08
Amritsar	-	29.5	26.0	27.5	28.0	30.0	30.0
Barmer	30.0	27.0	29.5	31.0	31.5	32.0	32.0
Sriganganagar	-	32.0	31.5	30.0	32.5	33.5	34.5
Jaisalmer	31.5	32.0	30.5	31.5	32.0	31.5	31.0
Kota	28.0	27.5	28.0	26.5	30.0	30.0	30.5
Deesa	30.0	26.0	25.5	27.0	29.0	28.5	29.0
Churu	29.0	31.5	29.5	29.5	32.0	33.0	33.0

Wind															
Station Name	10/07/08		11/07/08		12/07/08		13/07/08		14/07/08		15/07/08		16/07/08		
	Dir.	Speed	Dir.	speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	
Amritsar	NE	05	ESE	03	-	-	ESE	03	ESE	03	ENE	02	-	-	
Barmer	-	-	-	-	-	-	-	-	-	-	WSW	18	WSW	18	
Ganganagar	-	-	SE	11	-	-	-	-	-	-	W	20	WSW	23	
Jaisalmer	WNW	09	NW	10	-	-	-	-	SW	28	SW	22	-	-	
Kota	-	-	NNE	10	WNW	13	-	-	W	23	WSW	22	WSW	23	
Deesa	WNW	05	W	16	-	-	SSW	13	SW	13	SW	16	SW	14	
Churu	ESE	10	ESE	09	WNW	08	-	-	WSW	23	WSW	20	WSW	21	

Under the prevailing weather conditions there are chances of small-scale breeding along the **Indo-Pakistan** border.

As part of the early warning system, regular surveys are recommended.

### CROP – STATE – STAGE

#### New Delhi

Vegetables	Arhar	Rice	Maize	Fodder Sorghum/Bajra
Vegetative / flowering / fruiting/ harvesting	Land preparation/ sowing	Land preparation and transplanting	Land preparation and sowing	Land preparation and sowing
Haryana				
Autumn sugarcane	Horticultural crops	Sunflower	Summer Pulses	Cotton
Vegetative	Vegetative	Vegetative/flowering	Vegetative	Land preparation /Sowing
Rice	Maize/Bajra			
Transplanting	Land preparation /Sowing			

#### Himachal Pradesh

Vegetables (Ladies finger/ Cabbage, Cauliflower)	Potato	Rice	Apple	Maize
Vegetative / flowering / fruiting / harvesting	Vegetative	Sowing/transplanting	Fruit development	Land preparation for sowing
Tea				
Plucking				

#### Jammu & Kashmir

Vegetable crops	Rice	Pulses		
Vegetative	Vegetative	Vegetative		

#### Punjab

Autumn sugarcane	Horticultural crops	Summer pulses	Sunflower	Paddy
Vegetative	Vegetative	Vegetative	Vegetative/flowering	Transplanting
Cotton/Maize				
Sowing				

#### Rajasthan

Cotton	Summer Vegetable crops	Groundnut		
Seedling/early vegetative	Vegetative	Seedling/early vegetative		

#### Uttar Pradesh

Summer Sugarcane	Vegetables	Summer pulses	Sunflower	Mango
Vegetative	Fruiting / harvesting	Vegetative	Vegetative	Fruit setting
Oilseeds	Kharif rice	Kharif pulses/Maize		
Vegetative	Land preparation and	Land preparation and		

	transplanting	sowing	
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**Uttarakhand**

<b>Mango/Litchi</b>	<b>Sugarcane</b>	<b>Kharif crops(Rice, maize, groundnut and vegetables)</b>	<b>Apple</b>
Fruiting/picking	Vegetative	Land preparation and sowing	Vegetative

**Assam**

<b>Regular Ahu rice</b> (B/T)panicle initiation/flowering/grain formation	<b>Maize</b> Cob maturity/harvesting	<b>Horticultural plants</b> Planting	<b>Sugarcane</b> Vegetative	<b>Summer vegetables</b> Vegetative / flowering /fruiting/harvesting
<b>Early Ahu rice</b> Grain formation/grain maturity	<b>Jute</b> Olorious –Vegetative Capsularis-Maturity/harvesting	<b>Arhar</b> Vegetative	<b>Sali Rice</b> Land preparation/transplanting	

**Arunachal Pradesh**

<b>Wet seeded rice</b> Early vegetative	<b>Early sown Wet seeded rice</b> Land preparation /transplanting	<b>Jhum Rice</b> Vegetative	<b>Ginger</b> Rhizome formation	<b>Millet</b> Vegetative
<b>Summer Vegetables</b> Harvesting	<b>Maize</b> Cob formation			

**Bihar**

<b>Vegetables &amp; fruit crops</b> Vegetative/flowering/fruiting	<b>Potato</b> Tuber formation	<b>Kharif rice</b> Land preparation and transplanting	<b>Sugarcane</b> Vegetative/flowering/maturity	<b>Maize</b> Early vegetative
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**Jharkhand**

<b>Kharif Paddy</b> Transplanting	<b>Litchi / Mango</b> Planting	<b>Vegetables (Tomato, Brinjal, Bhendi)</b> Harvesting		
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**Sikkim**

<b>Orange</b> Fruiting/Harvesting	<b>Vegetables</b> Seedling/early vegetative	<b>Large Cardamom</b> Capsule Development / maturity	<b>Ginger</b> Vegetative	
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**West Bengal**

<b>Sugarcane</b> Vegetative	<b>Jute</b> Vegetative	<b>Sesamum</b> Pod formation/seed formation/early maturity	<b>Groundnut</b> Seed formation/early maturity	<b>Coconut</b> Planting
<b>Vegetables</b> Land preparation and sowing/nursery	<b>Aus Rice</b> Tillering /panicle initiation / flowering	<b>Aman rice</b> Land preparation and sowing/nursery sowing/transplanting	<b>Groundnut, Pigeonpea and Soybean</b> Land preparation/ Sowing	<b>Early sown Groundnut, Pigeonpea and Soybean</b> Germination/early vegetative

**Chhatisgarh**

<b>Sugarcane</b> Autumn sugarcane – Vegetative	<b>Sesame</b> Pod formation / seed formation/ early maturity	<b>Kharif Rice</b> Sowing/transplanting	<b>Vegetables</b> Flowering / fruiting / harvesting	<b>Soybean</b> Land preparation and sowing
<b>Already sown Soybean</b> Germination/early vegetative	<b>Other Kharif crops</b> Land preparation for sowing	<b>Already sown Kharif crops</b> Germination/early vegetative		

**Gujarat**

<b>Sugarcane</b> Vegetative	<b>Other Kharif crops</b> Land preparation / sowing	<b>Already sown Other Kharif crops</b> Germination/early vegetative	<b>Kharif groundnut</b> Land preparation / sowing	<b>Already sown Kharif groundnut</b> Germination/early vegetative
<b>Kharif cotton</b>	<b>Already sown Kharif</b>	<b>Kharif rice</b>		

	<b>cotton</b>			
Land preparation / sowing	Germination/early vegetative	Land preparation /transplanting		
<b>Maharashtra</b>				
<b>Sugarcane Preseasonal (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Sugarcane (Suru) (Madhya Maharashtra, Marathwada and Vidarbha)</b>	<b>Fruit crops</b>	<b>Kharif Cotton</b>	<b>Potato (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>
Elongation / cane development	Active growth / elongation	Planting	Land preparation/sowing/germination	Vegetative
<b>Irrigated cotton</b>	<b>Kharif Rice</b>	<b>Kharif Groundnut</b>	<b>Other Kharif crops</b>	
Early vegetative/vegetative	Germination/seedling- E.Vidarbha Seedling/transplanting- Other zones	Sowing Already sown- Germination	Sowing/germination	
<b>Madhya Pradesh</b>				
<b>Sugarcane</b>	<b>Summer Sugarcane</b>			
Grand growth	Vegetative/grand growth			
<b>Orissa</b>				
<b>Vegetable crops</b>	<b>Kharif Rice</b>	<b>Sugarcane</b>	<b>Moong</b>	<b>Maize</b>
Flowering / fruiting / harvesting	Sowing/transplanting	Vegetative	Vegetative	Sowing
<b>Jute</b>	<b>Pulses</b>	<b>Cotton</b>		
Field preparation/sowing	Vegetative	Vegetative		
<b>Andhra Pradesh</b>				
<b>Chillies</b>	<b>Sugarcane</b>			
Vegetative	Vegetative			
<b>Karnataka</b>				
<b>Annual sugarcane</b>	<b>Early kharif Crops</b>			
Tillering	Vegetative			
<b>Kerala</b>				
<b>Virippu- rice</b>	<b>Rubber</b>	<b>Coconut</b>	<b>Banana</b>	<b>Pepper</b>
Tillering	Planting	Land preparation for new planting	Planting	Land preparation for new planting
<b>Tamil Nadu</b>				
<b>Rice (Kuruvai)</b>	<b>Sugarcane (Early, Mid season)</b>	<b>Early sown Sorghum</b>	<b>Cotton</b>	<b>Special season sugarcane</b>
Nursery sowing	Cane development / maturity	Vegetative	Boll maturity/picking	Grand growth

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