

Summary of Agromet Advisory Services for different States of the country Issued bu

Agricultural Meteorology Division, India Meteorological Department, Pune, India

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(For the period 31st August to 4th September, 2006) The extended version of the bulletin is also available at http://imdagrimet.org

> **Monsoon Activity 31 AUGUST 2006** RAINFALL DISTRIBUTION & MONSOON ACTIVITY **FEW PLACES** Monsoon Activity ■ VIGOROUS ACTIVE Vigorous monsoon: Rainfall at most/many places and average rainfall for the subdivision <u>Active monsoon</u>: Rainfall at most/many places and average rainfall for the subdivision is $1\frac{1}{2}$ - 4 times of the normal.

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

Punjab & Haryana

Monsoon has been vigorous in Punjab on 28th August. Rain / thundershowers occurred at many places on 28th August, at few places on 29th August and remained mainly dry on 30th August in Punjab.

Rain / thundershowers occurred at isolated places in Haryana during the period.

Rain / thundershowers are likely to occur at a few places over the State. Rainfall activity is likely to increase over the region from 1^{st} September.

Advisories

- There was excess / normal rainfall in many of the districts except Bhatinda, Faridkot, Ferozpur, Kapurthala, Muktesar, Nawashahar districts and rain / thundershowers are likely at a few places over the state. Under the circumstances, apply irrigation to sugarcane, maize, groundnut, kharif pulses and cotton depending on the soil profile stored moisture. Apply required irrigation to the crops in the above mentioned districts in Punjab.
- There was no significant rainfall in Haryana except Ambala, Chandigarh, Panchkula and Rohtak districts during the last week and rain / thundershowers are likely at a few places over the State for the next three days. Under the circumstances, apply required irrigation to sugarcane, maize, groundnut, *kharif* pulses and cotton. Apply irrigation to the crops in the above mentioned districts depending on the soil profile stored moisture.
- Prevailing weather conditions are favourable for the further spread of bacterial leaf blight in rice.
 There is high risk of leaf folder in Malwa belt due high humid conditions in Punjab. Monitor the
 incidences of the pest, if the pest population crosses economic threshold level, take adequate plant
 protection measures on a non rainy day.
- In view of prevailed high humid and cloudy conditions in preceding days cotton crop is susceptible to the incidence of pink bollworm and other leaf eating caterpillar in Punjab. Farmers are advised to apply integrated pest management with application of synthetic pyrethroid on a non rainy day to check the same, if damage exceeds economic threshold level.
- As high humid and cloudy conditions are prevailing, they may favour infestation and further spread of sucking pests and diseases in standing *kharif* crops in Haryana. Monitor the pests and diseases on crops, adequate chemicals on a non rainy day / mechanical measures may be taken to control them.
- Farmers are advised to monitor the locust and carry out antilocust oprations i.e. spray of pesticides on standing crops and vegetation on non rainy days to manage the damage from any possible locust invasion.
- It is also suggested to conduct weeding and mulching or soil mulching for better utilisation of soil moisture / nutrient by the crop.
- Maintain 3-5 cm water level in rice field.

Rajasthan

Light rainfall occurred at a few places in Udaipur and isolated places in Ajmer, Kota and Bikaner divisions, Weather remained mainly dry in rest divisions of the State.

Rain / thundershowers are likely at many places over East Rajasthan and at a few places over West Rajasthan. Increase in rainfall activity likely over the State from 1st September.

Warning: Fairly widespread rainfall with isolated heavy to very heavy falls are likely over East Rajasthan.

- There was no significant rainfall in the State during last week and rain / thundershowers are likelyat many places over East Rajasthan and at a few places over West Rajasthan, apply required irrigation to cotton, pulses, jowar, maize, soybean and groundnut crops in West Rajasthan and postpone irrigation in East Rajasthan.
- Undertake intercultural operation in groundnut on a non-rainy day in West Rajasthan and postpone the same in East Rajasthan.
- Spray Mancozeb @ 2 g / litre of water to control tikka disease in groundnut after current spells of rain in East Rajasthan and on a non-rainy day in West Rajasthan, if damage exceeds economic threshold level.
- Spray Dimethoate 30EC / Monocrotophos 36WSC @ 1 litre / ha after current spells of rain in East Rajasthan and on a non-rainy day in West Rajasthan, if garda beetle damage in Soyabean exceeds E.T.L.

Uttar Pradesh

Rain occurred at most places with heavy falls at isolated places in Lucknow division on 29th August. Rain occurred at many places in Gorakhpur, Moradabad, Faizabad divisions on 28th August, in Gorakhpur, Faizabad, divisions on 29th August, Gorakhpur, Varanasi, Faizabad, Lucknow, Kanpur divisions on 30th August and at a few places in Varanasi, Bareilly, Lucknow, Kanpur divisions on 28th August, in Allahabad, Kanpur divisions on 29th August, in Allahabad, Bareilley, Moradabad, Jhansi divisions on 30th August. Weather was mainly dry in the remaining divisions of the state on 28th & 29th August. It was isolated in remaining divisions of the State on 30th August.

Rain / thundershowers are likely at a few places over the State. Rainfall activity is likely to increase over the State from 1st September.

Advisories

- There was no significant rainfall in the State during last week except Bahraich Ballia, Balrampur, Banda, Gazipur, Kheri, Gonda, Gorakhpur, Lucknow, Maharajganj, Mirzapur, RaiBarelly, Shrawasti, Sidharthnagar, Sitapur, Varanasi, Bijnor and Mainpuri and rain or thundershowers are likely at a few places in the State for the next three days. Under the circumstance, apply required irrigation to summer sugarcane, vegetables and mango crops. Apply irrigation depending on the soil profile moisture in the above mentioned districts.
- Weeding and hoeing, along with topdressing of nitrogen may be done in rice, maize, jowar, bajra, *kharif* pulses and vegetables and oilseeds on a non rainy day.
- Start the land preparation and sowing of *toria*.
- Monitor the crops and collect and destroy egg masses of *pyrilla* from the lower surface of the leaves of sugarcane. Spray Malathion or Endosulfan @ 1.25 litre / ha on a non rainy day to control the *pyrilla* if the population exceeds E.T.L. To control the white grub dip the small branches of Neem and Peepal around the field to catch and collect insects and spray solutions of 0.5% Monocrotophos on a non rainy day.
- To overcome Anthracanose disease in mango, spray the solution of copper oxychloride @ 3gm / litre in water and to control gummosis disease mix copper sulphate 250 gm, Zinc sulphate 250 gm borax 125 gm and slaked lime 100 gm in soil as manure and light watering may be done.
- To control *khaira* disease in rice, spray the solution of 5 kg Zinc sulphate and 20 kg urea dissolving in 800-1000 litre water per ha and to control phudka disease spray the solution of monocrotophos 35EC @ 1 litre / ha dissolving in 800-1000 litres on a non rainy day.

Himachal Pradesh

Precipitation occurred at a few places during this week in the State.

Rain / thundershowers are likely at many places over the State. Rainfall activity is likely to increase over the State from tomorrow.

Warning: Isolated heavy to very heavy falls likely over the state.

- As rain / thundershowers are likely at many places over the State with isolated heavy to very heavy falls, postpone irrigation to maize, moong, potato and early sown vegetable crops and also make arrangement for draining out of excess water.
- Drain out excess water and maintain 5 7 cm water in rice field.
- Also postpone intercultural operation and application of fertilizer and plant protection measures to the crops under prevailing weather condition.
- If spots are noticed on the leaves of Simla-mirch and attack crosses economic threshold level, Ridomil-MZ (0.25%) may be sprayed after current spells of rain at an interval of 8 –10 days.
- Weather is conducive for attack of tomato borer. Monitor insect population and if crosses economic

threshold level, endosulphan @ 0.07% may be sprayed after current spells of rain and picking should be done after 3-4 days of spray.

- Fruit and shoot borer attack is seen in brinjal. Monitor insect population and if crosses economic threshold level, fenbalerate or cypermethrin @ 0.01% may be sprayed after current spells of rain.
- Weather is conducive for rice blast and rice hispa attack. If blast attack crosses economic threshold level, Blitox 50 (Copper oxychloride) @ 2.25 kg or Bavistin 50 WP @ 750 g or Hinosan @ 750 ml in 750 litre water / ha may be applied. If rice hispa attack crosses economic threshold level, metacid 50 EC @ 1 ml per litre of water may be applied. Use sticker Stickwel @ 0.2 g / litre water. Apply chemicals on a non-rainy day.
- Apply chemicals on a non-rainy day.

Uttaranchal

Light to moderate rain was recorded at many places on 24th & 28th August, light to very heavy rain at a few places on 26th and 30th August, moderate rain at a few places on 25th & 27th and light rain at isolated places on 29th August. Sky remained generally cloudy to overcast.

Rain / thundershowers are likely at many places over the State. Rainfall activity is likely to increase over the State from 1st September.

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

Advisories

- Light to moderate rain occurred at many places and moderate to very heavy rain at a few places in the State during last week. Rain / thunder showers are likely at many places over the State for next three days. Under the circumstances,
 - \triangleright Drain out excess water and maintain 5 7 cm water in rice field.
 - > Postpone irrigation and inter cultural operation and application of fertilizer and plant protection measures to mango, apple, sugarcane and vegetable crops under prevailing weather condition.
 - ➤ Continue transplanting / sowing of rice & cauliflower.

Jammu & Kashmir

Light to moderate rain / thundershowers occurred at many places on 28^{th} & 30^{th} August with heavy falls at isolated places on 28^{th} August. Light to moderate rain again occurred at isolated places on 29^{th} August in J & K State.

Rain / thundershowers are likely to occur at a few places over J & K State. Rainfall activity is likely to increase over the State from 1st September.

- Weather conditions are favourable for breeding and migration of **desert locust**. Undertake antilocust operations immediately to prevent crop damage.
- Light to moderate rain occurred at many / isolated places in J & K State during last week. Rain / thundershowers are likely to occur at a few places in J & K State for the next three days. Under the circumstances, apply irrigation to vegetables, pulses, rice and maize depending upon the soil profile stored moisture.
- Weather is congenial for outbreak of stem borer in rice crop, under such situation apply phorate 10G
 @ 10 kg / ha or carbofuran 3G
 @ 20 kg / ha on a non rainy day if damage exceeds economic threshold level.
- Continue sowing of carrot, beet root and turnip for seed crop by utilizing the monsoon showers.
- Planting of horticultural crops like mango, citrus, litchi, loquat, guava, papaya etc. may be continued by utilizing the monsoon showers.

Delhi

Moderate rain occurred on 30th August at most places. Weather remained mainly dry on rest of the days.

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

Advisories

- As there was rainfall during last week and rain / thundershowers are likely at a few places over the State for next three days, apply irrigation to early sown *kharif* vegetable crops, green gram, black gram, fodder crops, arhar, maize and bajra depending on soil moisture status.
- Drain out water from the field and apply second split dose of N @ 25 30 kg / ha after 45 50 days of transplanting of rice as top dressing. Maintain 3 5 cm water level in rice field after 2 3 days of fertilizer application.
- Prepare land and continue transplanting of 4 6 weeks old early varieties of cauliflower and cabbage plants. Also undertake transplanting of brinjal and chilly.
- Also prepare nursery for cauliflower and cabbage on a non-rainy day. Select varieties from Pusa Synthetic, Pusa Subhra and Pusa Himjyoti.
- Prepare land and perform early sowing of Pusa Reshmi variety of Raddish.
- Monitor ergot disease of bajra and if noticed, remove the plants and burn them well outside the field.

Southern Region (AP, Tamilnadu, Karnataka and Kerala)

Kerala

Southwest monsoon was weak over Kerala on 28^{th} & 29^{th} August. Rain occurred at many places on 30^{th} , a few places on 29^{th} and at isolated places on 28^{th} .

Rain will occur at isolated places in all the districts of Kerala.

Advisories

- As there was no significant rainfall over Kerala during last week and rainfall is likely to occur only at isolated places in the State for the next three days, apply irrigation to the crops.
- Continue intercultural operations and fertilizer application in arecanut, coconut, pepper, rubber and banana. Also continue new planting of the crops by utilizing the monsoon showers.
- Attack of rhinoceros beetle and red palm weevil insects and bud rot and mahali disease is reported in coconut. Hook out the beetles from the affected palms and fill the leaf axils with scvidol 8 G @ 25 gm and fine sand 200 gm. Use Pheramone trap for controlling red palm weevil. If bud rot attack crosses economic threshold level, spray 1% Boardeaux mixture to control the diseases. Spray blitox @ 4 gm/ litre/palm to control mahali disease if attack crosses economic threshold level.
- Attack of spindle bug insect and bud rot and fruit rot diseases is reported in areca nut. Monitor the crop continuously for spindle bug and if crosses economic threshold level, spray the crowns with Carbaryl 50% WP @ 20gm/100 litre of water to control the bug. If bud rot and fruit rot diseases attack crosses economic threshold level, spray 1% Boardeaux mixture to control the diseases.
- Attack of bunchy top and pseudo stem weevil is reported in banana. Eradicate bunchy top affected plants to reduce the spread of the disease. Fill the leaf axils with Chlorophyriphos @ 2.5 ml / litre of water to control pseudo stem weevil.
- Leaf gall and thrips attack is reported in pepper. Monitor the crop continuously and if crosses economic threshold level, spray Monocrotophos or Dimethoate @ 0.05 % to control the pests.

Tamilnadu

Rainfall occurred at isolated places over the State on 29th and 30th August and dry weather prevailed on

Rain / thundershowers likely at isolated places over the State.

Advisories

- There was no significant rainfall in the State during last week except excess / normal rainfall in Chennai, Dindigul, Karur, Pondicherry, Salem, Namakkal, Thanjavur, Theni, Trichy, Thiruvarur and Villupuram districts and rain / thundershowers is likely to occur at isolated places over the State for the next three days. Under the circumstances, apply irrigation to cotton, early / mid sugarcane and millets to bring the soil moisture to its field capacity. Apply irrigation in the above mentioned districts depending on soil profile stored moisture.
- Stem borer egg masses and thrips have been reported in rice nursery (*Kar / Kuruvai*). Monitor the crop continuously for the pest as the weather conditions are favourable for further spread. Spray Dimecron @ 0.5 ml / litre of water to control thrips.
- Attack of internode borer is reported in mid season sugarcane. Monitor the crop continuously as the weather conditions are favourable for further spread. Release egg parasites *viz.*, *Trichogramma chilonis* @ 5 cc / ha to control the pest.
- Weather conditions are favourable for the attack of red hairy caterpillar in groundnut. Monitor the crop for the pest and collect and destroy egg masses to prevent further spread of the pest.

Karnataka

Monsoon was weak over the State on all the days. Rainfall occurred at most places over Coastal Karnataka and at isolated places over Interior Karnataka on all the days.

Rain / thundershowers are likely at a few places over coastal Karnataka and isolated places over Interior Karnataka.

Advisories

- There was no significant rainfall in the State during last week and rain / thundershowers are likely at a few places over coastal Karnataka and isolated places over Interior Karnataka, apply required irrigation in sugarcane, maize, jowar and groundnut. Apply life saving irrigation immediately to maize crops under moisture stress.
- Farmers are advised to continue sowing of *kharif* rice by utilizing the monsoon showers.

Andhra Pradesh

Rain occurred at a few places over Coastal Andhra Pradesh on 24th & 25th August, over Telangana on 28th & 29th August. Isolated rain occurred over Coastal Andhra Pradesh on 28th, 29th & 30th August, over Telangana on 24th, 25th, 26th & 30th August & over Rayalseema on 25th, 26th, 29th & 30th August. Mainly dry weather over Telangana on 27th August and dry weather over Rayalaseema prevailed on 24th, 27th & 28th August.

Rain / thundershowers are likely to occur at isolated places over the State.

- There was no significant rainfall in all the districts except Hyderabad during last week and rain / thunder showers likely to occur at isolated places only over the State for the next three days. Under the circumstances, apply required irrigation to maize, groundnut, cotton, chilly and tur to bring the soil moisture to its field capacity. Apply irrigation depending upon soil profile stored moisture in Hyderabad district.
- Continue intercultural operations, application of fertilizers and pesticides in the standing crops.
- Stem borer incidence is noticed in maize. Monitor the crop continuously for further spread; if damage exceeds economic threshold level, spray Endosulfan @ 2ml / litre of water to control the pest.
- Bud and stem necrosis disease is reported in groundnut. Monitor the crop continuously for further spread; if damage exceeds economic threshold level, spray Dimethoate @ 400 ml / ha or Methyl Dimeton @ 360 ml / ha to control the vector thereby reducing the spread of disease.

Eastern Region (Assam, Bihar, Sikkim, West Bengal)

Assam

Light to moderate rain occurred at many places on 30th, at a few places on 29th and at isolated places on 28th with isolated heavy to very heavy falls on 29th and isolated heavy falls on 30th over the State.

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

Advisories

- As rain / thundershowers are likely at a few places over the State for next three days, apply irrigation to sugarcane, vegetables and arhar to avoid crop damage.
- Maintain 3-5 cm water level in *Sali* rice field wherever crops are at tillering stage.
- Infestation of stem borer is reported in sugarcane in a few localities and weather conditions are favourable for further spread. Monitor the crop for stem borer and if crosses economic threshold level, apply Phosphomidon @ 1.5 ml per litre of water and 400 500 ml per bigha or Endosulfan @ 2 ml per litre of water and 1 1.5 litre per bigha on a non-ariny day two-three rounds fortnightly starting from the rush egg lying.
- Apply plant protection measures to already transplanted *sali* rice when one adult of rice hispa per hill or one leaf is found damaged by hispa. Apply Monocrotophos 40 EC @ 1.5 ml per litre of water or Chloropyriphos 20 EC @ 2 ml per litre of water to control the insect. If attack of Stem borer is noticed apply Monocrotophos 40 EC @ 1.5 ml per litre of water. Apply chemicals on a non-rainy day.
- Continue transplanting of *Sali* rice, if rice seedlings are available.
- Due to less rainfall around 30% of *Sali* rice area is yet to be covered. Where *Sali* rice could not be transplanted, in those areas *Luit* and *Kapili* varieties of rice seeds @ 8 kg per bigha can be sown directly upto 1st week of September. Black gram and green gram may also be sown in those areas.
- Select Black gram varieties from T -9, Pant U-19 and Saonimah (SB-121) and Green gram varieties from T-44, Pratap and AAU-39.

West Bengal

During the said period SW Monsoon was weak over Sub Himalyan West Bengal, but it was vigorous over the districts of the state and active over Gangetic West Bengal on 30^{th} August.

During this period rainfall occurred at a few places on 28th, at most places on 29th along with heavy rain at one or two places, at a few places along with heavy to very heavy falls at isolated places on 30th over Sub Himalyan West Bengal.

But during the said period rain occurred at a few places over Gangetic West Bengal on 28th along with heavy rain at one or two places, at many places over 29th, and at most places on 30th August.

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

- As there was excess rain in Hooghly, 24 Pargana (N), Nadia, Darjeeling, Malda and Dinajpur (N) districts during last week and rain / thundershowers are likely at a few places over the State for next three days, apply irrigation to sugarcane, green gram and groundnut depending on soil moisture status.
- As there was no significant rain in the remaining districts of the State during last week, apply irrigation to the crops to bring soil to its field capacity.
- Maintain 5 7 cm water in the *aus* rice field.
- Apply 1st top dressing of nitrogenous fertilizer @ 25 kg / ha at 25 30 days after transplanting of aman rice. Apply 2nd top dressing of nitrogenous fertilizer @ 25 kg / ha at 50 55 days after transplanting for short duration crops and 60 65 days after transplanting for long duration varieties. Water may be drained out before the application of fertilizer and 3 5 cm water may be maintained

in the field after 2 - 3 days.

• There is mild chance of attack of caterpillar and tikka disease in groundnut. If caterpillar population crosses economic threshold level, apply neem derivative insecticides 1000 ppm @ 4 gm / litre to control the pest. If tikka disease attack crosses economic threshold level, apply mancozeb 2% to control the disease. Apply chemicals on a non-rainy day.

Bihar

Light to moderate rain occurred at many places over the State during last week except 24th & 25th August. Heavy to very heavy rainfall occurred at a few places in the State on 27th & 29th August.

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

Advisories

- Bihar received no significant rainfall during last week in many districts except Araria, Aurangabad, Bhagalpur, Buxar, Darbhanga, East Champaran, Khagadia, Muzaffarpur, Rohtas, Sitamarhi and West Champaran and rain/thundershowers are likely at a few places over the state for next three days. Under the circumstances, apply required irrigation to vegetables, maize, pulses, and oilseed crops. Apply irrigation depending on the soil profile moisture in the above mentioned districts.
- Due to revival of monsoon at most of the places, farmers are advised for top dressing of Nitrogenous fertilizer @ 30 kg N / ha to rice crop after proper weeding on a non rainy day.
- Transplanting of photosensitive rice varieties like Sugandha may be completed by utilizing recent rain, if seedlings are available at places where transplanting could not be done due to deficiency of water.

Jharkhand

Rain occurred at many places.

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

Advisories

- There was no significant rainfall in the State during last week except Dhanbad, Hazaribagh, Palamau, and Ranchi districts and rain / thundershowers are likely at a few places over the State for next three days, apply required irrigation to vegetables, maize and other crops. Apply irrigation depending on the soil profile moisture in the above mentioned districts.
- Also continue intercultural operation, application of fertilizer and plant protection measures on a non rainy day.
- Weather conditions are favourable for the occurrence of tikka leaf spot disease in groundnut. In case of attack, spray the solution of Kavach (2gm / litre water) or Indophil M-45 @ 5 gm + Bavistin @ 1gm in 4 litres of water on a non rainy day.
- Incidence of stem borer and hispa is noticed in rice in some places. Spray Metasystox 1ml / litre of water on a non rainy day to control the pests. Sandovit or Tipole solution should be added as sticker.
- Undertake weeding and top dressing on a non rainy day in rice. Maintain 3-5 cm of standing water in the field.
- Continue sowing of kulthi and niger / sarguja (late crop) by utilizing the monsoon showers.

Sikkim

Sky remained cloudy during the period. Moderate to heavy rain occurred at most places on 29th and 30th August and very light rain at a few places on 28th August over East Sikkim

Rain / thunder showers are likely at a few places over the State.

Advisories

 Moderate to heavy rain occurred at most places in the State during last week and rain / thundershowers are likely to occur at a few places over the State for next three days. Under the circumstances, postpone irrigation to orange, maize and large cardamom crops.

- Continue intercultural operations, application of fertilizers and pesticides in orange, vegetables and ginger on a non rainy day.
- Monitor large cardamom crop for caterpillar infestation as the weather conditions are favourable for the incidence. Collect and destroy manually to prevent further incidences. Rouging of Chirkey and foorkey affected plants may be done at regular intervals and destroyed by burning.
- Monitor orange for trunk borer and plug the holes in case of damage.

Arunachal Pradesh

Rain / thundershower occurred at most places on 24th August, at many places on 25th August and at a few places on 26th, 27th, 29th and 30th August and at one or two places on 28th August. Sky remained partly cloudy over the State during the week.

Rain / thundershower likely to occur at a few places over the State.

Advisories

- As there was no significant rainfall in the State for the past few weeks and rain / thundershower is likely to occur at a few places in the state for the next three days, apply required irrigation to new crop of ginger, *jhum* rice at grain formation stage and wet seeded rice.
- Maintain required depth of standing water in wet seeded rice field.
- Adopt rain water harvesting measures in the field for subsequent use due to deficit rainfall received in the State.

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

Gujarat

Monsoon activity was subdued over Gujarat State, Daman, Dadra Nagar Haveli on 28th to 30th August.

Rain / thunder showers are likely at many places over the State.

Warning: Fairly widespread rainfall with isolated heavy to very heavy falls is likely over the State.

- As rain / thunder showers are likely at many places over Gujarat region with isolated heavy to very heavy falls for next three days, postpone irrigation to sugarcane, *Kharif* groundnut, *Kharif* bajra, *Kharif* maize, pre-monsoon irrigated cotton, *Kharif* cotton and castor.
- Also make arrangement for draining out excess water from the field.
- Drain out excess water and maintain 3 5 cm water in rice fields.
- Postpone intercultural operation and application of fertilizer and plant protection measures to the crops under prevailing weather condition.
- There is possibility of attack of stem borer in *kharif* rice. Monitor the crop for stem borer and if crosses economic threshold level, apply carbofuran 3 % @ 25 kg / ha or cartap hydrochloride 4% @ 20 kg / ha after current spells of rain for the control of the insect.
- If population of sucking pests like Aphid, Jassids, Thrips & Heliothis of cotton crosses economic threshold level, release chrysoperla eggs or first in star larvae @ 10000 / ha twice at the interval of 15 days after current spells of rain.
- For monitoring & management the boll worms & heliothis of cotton hang 5 pheromance traps in one ha. Change the lures at an interval of 15 days. Destroy trapped moths every day. If boll worm population crosses economic threshold level, release parasite tricogamma @ 1.5 lakhs / ha after current spells of rain and 5 to 6 times as per requirement depending upon infestation found in field.
- If white fly population crosses economic threshold level in cotton, spray Neem oil @ 4 liter / ha. For control of top shoot borer of cotton spray endosulphan 35 EC @ 2 liter / ha if population crosses

economic threshold level. Apply chemicals after current spells of rain.

• If groundnut crop appears yellow, mixture of 100 gms. Hirakasi + 10 gms lemon cake dissolved in 10 liter of water by making a solution in 500 liters of water may be sprayed over the crop after current spells of rain.

Special contingency plan after heavy rainfall-flood situation recommendation to farmers for crop saving

For saving standing crops:-

- 1. Remove excess water as early as possible from field.
- 2. Apply Nitrogen as a supplementary dose. If possible, apply Nitrogen in the form of ammonium sulphate in paddy instead of urea.
- 3. Apply 50 gms. Ferrous sulphate & 25 ml solution of lime in 10 litres of water & spray on groundnut to cure ferrous deficiency.
- 4. Zinc defiency in rice & other crops can be recovered by applying 50 gm Zinc sulphate & 25 gm solution of lime in 10 liter of water & spray over standing crops.
- 5. Apply ammonium sulphate instead of urea where sulphur deficiency is observed.

Heavy rainfall / flood affected area of south Gujarat region where total crops are failed. Farmers are advised to follow contingency plan as under:-

South Gujarat (Surat, Navsari & Valsad districts):-

- i) Drain out excess water from field as early as possible.
- ii) Prepare seed bed for plantation of *rabi* vegetable. Following varieties may be selected:

Chillies: S-49, Guj. Chillies 101,111

Brainjal: Guj-Brinjal-1, Gujarat oblong Brinjal-1,

Tomato: Guj. tomato-1, Anand tomato-2.

- iii) Sowing of castor varieties, Guj Hybrid castor-2, 4, 5, 6 can be done.
- iv) Sowing of crops like Jowar-M-35-1, Maize Guj Maize-2, 4, 6, Narmada, Moti etc can be done.
- v) Sunflower EC 68413, Guj-sunflower 1, Modern varieties can be sown at any time during years.

Middle Gujarat:-(Kheda, Anand, Baroda, Bharuch & Narmada Districts)

Paddy: Most areas are affected. Farmers are advised for gap filling or transplanting of paddy wherever seedling is available. If seedlings are not available, broadcast pre-germinated paddy seeds @ 50 to 60 kg / ha after puddling.

Maize: Sowing of Guj-Maize -2, 4, 6, Narmada, Moti varieties should be done.

Ahmedabad, Bhavnagar, Bhal area & Surendranagar districts & Gir area of Junagadh districts:-

Undertake gap filling in deshi cotton.

Sowing of unirrigated high yielding varieties of cotton – Guj. cotton-13, 17, 21, 23 etc can be done.

Undertake gap filling in unirrigated cotton by castor. High yielding castor GAUCH-1, GCH-2, 5 can be sown in unirrigated condition.

North Gujarat & Saurashtra region where crops are decayed by accumulation of excess water:

Gap should be filled by castor in cotton crops.

Semi *rabi* sesamum purva-1 can be grown in september.

Sowing of hybrid castor varieties like Guj-castor-1, 2, 4, 5, 6 can be done.

Chattisgarh

Rain occurred at isolated places in Bilaspur and at a few places in Raipur division and most places in Bastar divisions on 28th August, and at a few places in Bilaspur, Raipur and Bastar divisions on 29th and monsoon was active in all divisions of the State on 30th August.

Rain / thundershowers are likely at many places over Chhattisgarh. Decrease in rainfall activity from tomorrow evening.

Advisories

- As most of the districts received excess or normal rainfall during last week and rain / thundershowers
 are likely at many places over the State for next three days, postpone irrigation to Sugarcane, green
 gram, black gram, red gram, soybean and groundnut and early sown vegetables. Drain out excess
 water from the field.
- Drain out excess water and maintain 3-5 cm water in the *kharif* rice fields.
- Also postpone intercultural operation and application of fertilizer and plant protection measures to the crops under prevailing weather condition.
- Also postpone sowing and transplanting of vegetables.
- There is possibility of attack stem borer in rice. Monitor the crops and if crosses economic threshold level, thimet 10 G @ 10 kg / ha or carbofuran 3 G @ 25 kg / ha may be applied after current spell of rain.
- There is possibility of blast disease in rice in Bastar division. Monitor the crops and if crosses economic threshold level, Hinosan @ 1 ml / litre of water may be applied after current spell of rain.
- There is possibility of attack of leaf eating or leaf curl insects in pulses. Monitor the crops and if crosses economic threshold level, endosulphon 35 EC @ 1000 ml or quinalphos or methyl demeton 25 EC @ 800 ml / ha may be applied after current spell of rain.

Maharashtra

Rainfall occurred at most places over Konkan, at many places over Madhya Maharashtra, at a few places in Vidarbha and at isolated places in Marathwada.

Rain / thundershowers are likely at many places over north Marathwada & Vidarbha, at a few places over Konkan and Goa, Madhya Maharashtra and south Marathwada.

Warning: Fairly widespread rainfall with isolated heavy to very heavy falls are likely over north Madhya Maharashtra & Vidarbha during next 24 hours.

- As there was no significant rain during last week in Madhya Maharashtra and Marathwada and rain / thundershower likely to occur at a few places in Madhya Maharashtra and South Marathwada, apply irrigation to Sugarcane, Jowar, Kharif groundnut, bajra, soybean, sunflower, kharif cotton, tur, moong and Cotton (irrigated). As rain / thundershowers are likely at many places over North Marathwada and vidarbha with the possibility of isolated heavy to very heavy falls are likely over these regions during next 24 hours, postpone irrigation to the crops in these regions. Also make arrangement of drainaing out excess water in North Marathwada and vidarbha in case of heavy rainfall.
- A second dose of 40 kg Nitrogen / ha may be applied after 1 month from transplanting of rice in Konkan and Goa, Madhya Maharashtra and South Marathwada. Water may be drained out before the application of fertilizer and 3 5 cm water may be maintained in the field after 2 3 days.
- Mild incidence of White Woolly Aphids in Aurangabad and Pune and Pyrilla and White fly in Nashik in sugarcane, Stem borer in Raigad, Army worm, Leaf roller, Blue beetle and Hispa in Raigad and Sindhudurga and Aphids and Army worm in Sangli district & Blight and blast in Nagpur division in Kharif rice, Stem borer in Satara dist. & Amraoti div.in jowar, Leaf eating cater pillar and Leaf roller in Kolhapur in Groundnut, Leaf eating cater pillar in Kolhapur, Latur and Amraoti div. and Wardha dist in soybean, Leaf cater pillar in Latur division in sunflower, Aphids and Jassids in Marathwada and Vidarbha, Apex worm in Latur division and Root rot in Nashik in irrigated cotton and Aphids and Jassids in Aurangabad and Vidarbha division in kharif cotton and leaf roller in Amravati division in tur is reported.
- For the control of White Woolly Aphids in sugarcane, release 2500 eggs or larvae of Krisoperla

Karnea or *Konobatra Aphidivora* parasite on the leaves or spray Endosulphan 1 ml plus Metasistox 1 ml mixed in 1 liter water in Madhya Maharashtra and Marathwada on a non-rainy day.

- Monitor the stem borer population in rice in Konkan and if crosses economic threshold level, use phorate 10G @ 10 kg or Quinalphos 5G @ 15 kg / ha on a non rainy day.
- Monitor the army worm population in rice in Konkan and if crosses economic threshold level, spray 25 % Cypermethrin @ 120 ml or 36 % Monocrotophos @ 700 ml / ha in 500 liter water on a non rainy day.
- Monitor the Leaf roller population in rice in Konkan and integrated pest management may be done.
 Spray 5% Neem extract or release 50000 eggs / ha of *Tricogama Japonicam* 3 to 4 times after 10 days interval or on major incidence spray 36 % Monocrotophos @ 700 ml in 500 liter water on a non rainy day.
- Monitor the blast disease in rice and if crosses economic threshold level, Blitox 50 (Copper oxychloride) @ 2.25 kg or Bavistin 50 WP @ 750 g or Hinosan @ 750 ml in 750 litre water / ha may be applied on a non-rainy day in Madhya Maharashtra and South Marathwada.
- Monitor the stem borer population in jowar and if crosses economic threshold level, spray 5 % Neem seed extract or 35 % endosulphon @ 14 ml or 30 % dimethoate @ 10 ml plus 10 ml sticker in 10 liter water on a non rainy day in Madhya Maharashtra and South Marathwada.
- Monitor the leaf roller population in groundnut and if crosses economic threshold level, spray 36% monocrotophos @ 700 ml or 25% quinolphos @ 1000 ml / ha in 500 liter water on a non rainy day in Madhya Maharashtra and South Marathwada.
- Monitor the leaf eating cater pillar population in soybean and if crosses economic threshold level, spray quinolphos 25 EC or monocrotophos 36 EC @ 700 ml / ha in 500 liters of water on a non rainy day in Madhya Maharashtra and South Marathwada.
- Monitor the leaf cater pillar population in sunflower and if crosses economic threshold level, spray 2
 gm Boryak in one liter only on flowers at the time of opening of florets on a non rainy day in Madhya
 Maharashtra and South Marathwada.
- Monitor aphids and jassids population in cotton and if crosses economic threshold level, spray
 methyl dimeton 25EC or dimethoate 30EC @ 500 ml / ha in 500 liter water on a non rainy day in
 Madhya Maharashtra and South Marathwada.
- Monitor Root rot in irrigated cotton and if crosses economic threshold level, spray Carbendanzim 50 WP @ 250 gm / ha in 500 liter water on a non rainy day in Madhya Maharashtra and South Marathwada.
- Monitor leaf roller population in tur and if crosses economic threshold level, spray 1000 ml endosulphon / ha in 500 liter water on a non rainy day in Madhya Maharashtra and Marathwada.
- Postpone intercultural operation and application of fertiliser and plant protection measures in North Marathwada and Vidarbha under prevailing weather condition.

Madhya Pradesh

Monsoon has been active in South East M.P. on 30th August. Rainfall occurred at many places in North East M.P. on 30th, at a few places in South West M.P. on 28th and 30th and at isolated places over rest of the state on remaining period.

Rain / thundershowers likely to occur at most places over southwest Madhya Pradesh and many places over rest of the State.

Warning: Heavy to very heavy falls at few places with isolated extremely heavy falls (25cm or more) over southwest Madhya Pradesh during next 24 hours. Fairly widespread rainfall with isolated heavy to very heavy falls are also likely over rest Madhya Pradesh.

Advisories

• As rain / thundershowers likely to occur at most places over southwest Madhya Pradesh and many places over rest of the State with the possibility of heavy to very heavy falls at a few places with

isolated extremely heavy falls (25cm or more) over southwest Madhya Pradesh and isolated heavy to very heavy falls over rest Madhya Pradesh during next 24 hours, postpone irrigation to sugarcane, moong, *kharif* soybean, jowar, urad, tur, cotton and maize.

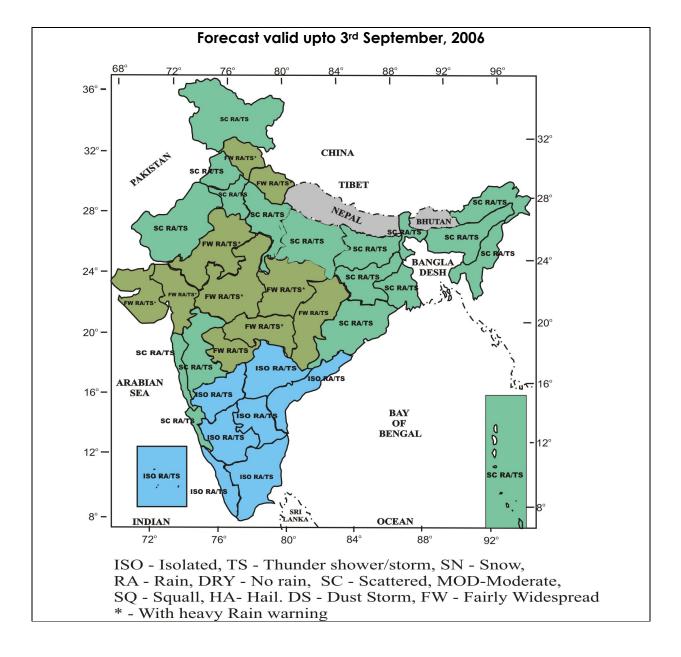
- Make arrangements to drain out excess water and maintain 3-5 cm water level in *Kharif* rice field.
- Also make arrangement for draining out of excess water to avoid water stagnation.
- Also postpone intercultural operation and application of fertilizer and plant protection measures to the crops under prevailing weather condition.

Orissa

The well marked low pressure area over North Bay off Gangetic West Bengal & Coastal Orissa on 28th August became depression on 29th August and crossed Orissa coast close to Paradip towards evening of the same day. Under its influence south west monsoon was vigorous over Orissa on 29th & 30th August. Rain fall occurred at most places over the State on 29th, 30th and at a few places on 28th August.

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

- Excess / normal rainfall occurred at most of the districts over the State except Bhadrak, Jajpur, Malkangiri, and Nawapara during last week. Rain / thundershowers are likely at a few places over the State for next 3 days. Under the circumstances, apply irrigation to vegetables, sugar cane, groundnut and jute crops depending on soil profile stored moisture. Apply required irrigation in the above mentioned districts.
- Farmers are advised to continue land preparation on a non rainy day and sow the *kharif* crops like rice, groundnut and pulses.
- At five months stage of sugarcane crop perform propping by combining plants of two rows so that the crops do not lodge by wind.
- Maintain 3 5 cm water in the rice field wherever crops are at tillering stage.
- Undertake fertilizer and plant protection measures on a non rainy day.



Salient weather features for the week ending 30/08/06

METEOROLOGICAL ANALYSIS

- Last week's well marked low pressure area over Jharkhand and neighbourhood persisted as a low pressure area on 24th & 25th. It lay over Jharkhand and adjoining Gangetic West Bengal and Bihar on 26th and became less marked on 27th.
- A low pressure area formed over north Bay of Bengal off north Orissa-West Bengal coast on 27th and became well marked on 28th. It concentrated into a depression and lay centred at 0830 hours IST of 29th over northwest Bay of Bengal near Lat 20.5° N and Long 87.5° E, about 100 kms east southeast of Chandbali. Moving rapidly west-northwestwards, it crossed north Orissa coast near Paradeep around noon and lay centred at 0830 hours IST of 30th over Chhattisgarh about 50 kms southeast of Champa. The system further moved west-northwestwards and lay centred at 1430 hours IST of 31st over central Madhya Pradesh, about 50 kms west northwest of Sagar. The system is likely to move in a northwesterly direction.
- Last week's low pressure area over southeast Pakistan and adjoining southwest Rajasthan became less marked on 24th. The western end of the monsoon trough lay close to the foothills of the Himalayas during first half of the week. However, eastern end generally lay in its normal position extending from East Uttar Pradesh to north Bay of Bengal during the week.

RAINFALL

Under the influence of the above systems:

- Widespread/fairly widespread rainfall with isolated heavy to very heavy falls occurred over many subdivision of Eastern India including Orissa, Gangetic west Bengal, Jharkhand and adjoining sub-divisions of central India (Chhattisgarh & east Madhya Pradesh) during most days of the week. Enhanced rainfall with scattered heavy to very heavy falls and isolated extremely heavy falls occurred over Orissa on 30th. The monsoon was active/vigorous over above mentioned sub-divisions during a few days of the week. Fairly widespread/ widespread rainfall with isolated heavy to very heavy falls also occurred over Bihar during a few days of the week.
- Fairly widespread rainfall with active monsoon conditions occurred over Western Himalayan regions during first half of the week.
- The rainfall has been subdued over most sub-divisions of remaining parts of the country with scattered/isolated rainfall during many days of the week.

RAINFALL DURING THE WEEK ENDING ON 30TH AUGUST, 2006

Rainfall was excess/normal in 12 and deficient/scanty in 24 out of 36 meteorological subdivisions (Actual: 38.7 mm, Normal: 50.7 mm and Departure: -24%).

CUMULATIVE SEASONAL RAINFALL (1ST JUNE TO 30TH AUGUST, 2006)

Rainfall was excess/normal in 23 and deficient in 13 out of 36 meteorological sub-divisions. (Actual: 699.1 mm, Normal: 710.9 mm and Departure: -2%).

OUTLOOK FOR THE WEEK ENDING ON 6TH SEPTEMBER, 2006.

- Increase in rainfall activity over Rajasthan and northwest India and decrease in rainfall
 activity over eastern India, Chhattisgarh and east Madhya Pradesh during the first half of the
 week.
- Increase in rainfall activity over Orissa and Gangetic West Bengal from middle of the week.

Desert Locust Forecasting



Rainfall (mm)								
Station Name	24.8.06	25.8.06	26.8.06	27.8.06	28.8.06	29.8.06	30.8.06	
Amritsar	0.01	-	-	-	-	0.07	-	
Barmer	0.4	0.003	-	-	-	-	-	
Sriganganagar	-	-	-	-	-	-	0.09	
Jaisalmer	0.019	-	-	-	-	-	-	
Kota	-	-	0.002	-	0.01	-	-	
Deesa	0.14	0.02	0.08	0.01	0.004	-	-	
Churu	-	-	-	-	-	-	-	

Temperature (degree celcius)									
Station Name									
Amritsar	30.0	34.0	30.0	30.5	31.5	-	-		

Barmer	27.0	21.5	36.0	29.5	26.5	-	-
Sriganganagar	33.0	34.0	34.0	34.0	35.0	-	-
Jaisalmer	30.0	27.0	33.0	32.5	30.5	-	-
Kota	26.5	26.5	27.5	28.5	30.5	-	-
Deesa	24.5	25.5	27.0	26.5	26.0	-	-
Churu	-	-	-	-	-	-	-

	Wind													
Station	24.3	8.06	25.	8.06	26.	8.06	27.8	3.06	28.8	8.06	29.	8.06	30	.8.06
Name	Speed	Dir.												
Amritsar	03	Е	04	ESE	-	-	-	-	13	ESE	15	ENE	04	W
Barmer	-	-	-	-	-	-	-	-	-	-	-	-	08	NNE
Sriganga nagar	06	ENE	-	-	-	-	-	-	08	SE	05	NW	-	-
Jaisalmer	-	-	-	-	-	-	-	-	-	-	07	ENE	12	E
Kota	18	W	05	NW	-	-	-	-	-	-	11	W	14	NNE
Deesa	-	-	-	-	-	-	-	-	-	-	17	W	03	WSW
Churu	04	N	15	WSW	-	-	-	-	03	ENE	07	Е	07	NE

Due to prevailing weather conditions in the North & North Western belt, there are chances of migration of locust from the Indo-Pakistan border (especially **Kargil & Leh**). Farmers in J&K, H.P., Punjab, Haryana, Rajasthan, Gujarat, U.P. and **Uttaranchal** are advised to monitor the locust and carry out anti-locust operations i.e. spray pesticides on standing crops and vegetation to minimize the damage from any possible locust invasion.

CROP - STATE - STAGE

Delhi

Vegetable crops	Kharif vegetables	Arhar	Rice	Green gram, black gram
Vegetative/Flowering / fruiting / harvesting	Transplanting	Flowering / pod formation	Tillering	Pod formation
Bajra	Fodder (Mixed maize , Lobia)	Maize		
Flowering / grain formation	Vegetative	Tasseling / silking / cob formation		
		Haryana		

Horticultural crop Sugarcane **Paddy** Maize Cotton Vegetative/early Vegetative to square Vegetative/fruiting Vegetative Vegetative tasseling formation Kharif pulses Bajra Groundnut Flowering/early Seedling/early Early vegetative

vegetative Himachal Pradesh

pod formation

Rice	Maize	Apple	Summer vegetables (Tomato, brinjal, ladies finger)	Fodder crops
Panicle initiation / flowering / grain formation	Tasseling /silking / cob formation	Harvesting	Vegetative/flowering/ fruiting / harvesting	Vegetative
Moong / Mash	Fruit plants	Potato	Summer vegetables Cauliflower/Cabbag e	
Pod development	Fruiting/maturity	Tuber formation/ maturity	Preparation of nursery (Lower hills) Transplanting (Mid hills)	
		Jammu & Kashmi	r	
Vegetables crops	Rice	Maize	Kharif crops	Horticultural crops
Late vegetative	Heading (Jammu) Flowering (Kashmir)	Flowering	Vegetative	Planting

Fodder crops (Maize, Bajra, MP Chari) Vegetative					
		Donalok			
Sugarcane	Paddy	Punjab Maize	Cotton	Kharif pulses	
Vegetative	Vegetative/floweri	Vegetative/early tasseling	Vegetative to square formation	Vegetative	
Groundnut					
Flowering/early pod formation					
Tormation		Rajasthan			
Cotton	Groundnut	Bajra / Maize	Pulses	Soyabean	
Flowering	Vegetative / flowering	Vegetative / flowering	Early vegetative	Vegetative/flowering	
		Uttar Pradesh			
Early sown Pulses	Kharif Pulses (Urad & Moong)	Sugarcane	Kharif Vegetables (Early sown)	Summer vegetables	
Early vegetative/vegetative	Vegetative	Vegetative	Vegetative	Harvesting	
Mango	Kharif Maize, Jowar, Bajra	Kharif rice	Kharif vegetables	Kharif Oilseeds	
Harvesting	Early vegetative / vegetative	Early vegetative / vegetative	Transplanting	Vegetative	
New Mango					
Active growth		 Uttaranchal			
Rice & cauliflower	Mango/Lichi	Lady's finger / French Bean	Sugarcane	Chilli & Tomato	
Vegetative	Seedling	Fruiting	Tillering	Fruiting / maturity	
Apple	Millets (Ragi)				
Maturity	Vegetative	Assam			
37.1			***	Balck gram and	
Maize	Sugarcane Vegetative /cane	Jute	Vegetables Fruiting/Maturity /	Green gram Land preparation /	
Harvesting Already Transplanted	maturity	Harvesting	harvesting	sowing	
Sali rice Vegetative/tillering	Arhar Vegetative	Sali rice			
vegetative/tillering	vegetative	Transplanting Arunachal Prades	<u> </u>		
Wet seeded rice	Ginger	Potato	Summer vegetables	Jhum Paddy	
Grain formation	Harvesting	Land preparation	End Harvesting	Grain formation / maturity stage	
New Ginger crop					
Sprouting		 Bihar			
Vegetables	Rice	Maize	Pulses and Oil seeds		
Vegetative	Early vegetative	Flowering Jharkhand	Vegetative		
Rice	Upland (groundnut,	l crops	Finger millet	Maize	
Early vegetative	Early vegetati		Early vegetative / vegetative	Early vegetative / vegetative	
Kharif vegetables (Tomato, Cabbage, Cauliflower, Brinjal, Chilli)	Early planted k.		vegetative	vegemive	
Transplanting	Early vegetative				
Orange	Rice	Sikkim Large Cardamom	Kharif vegetables	Ginger	
Fruiting/harvesting	Active tillering	Seed development	Vegetative/fruiting/ harvesting	Late vegetative	
Maize Cob harvesting					
	1	1			

A -	C	West Bengal	C C		A	
Aus rice Grain formation / early	Sugarcane	Jute	Green G Flowering		Amar Early veg	
maturity	Vegetative	Harvesting	formati			
Groundnut	Early transplanted rice					
Flowering / pegging	Early vegetative/tillering					
CINI DILII		Chattisgarh	1		ı	
Chilly, Brinjal, Ladies finger, Beans, Bottle gourd	<i>Kharif</i> Vegetables	Sugarcane	Kharif 1	rice	Soy	bean
(Early sown vegetables) Vegetative / flowering / fruiting / harvesing)	Sowing / transplanting	Vegetative	Tillerin	ng	Vegetative / flower	
Green gram / Black gram(early sown)	Blackgram / Greengram	Groundnut	Red Gr	am		
Vegetative / flowering / pod formation	Vegetative/floweri	Vegetative / flowering/	Vegetative / f	lowering		
		pegging Gujarat				
Kharif Maize	Premonsoon	Kharif	Fouly Co-	Diag	C	maore
	irrigated Cotton	groundnut	Early Sown		_	rcane
Vegetative / flowering	Vegetative/ Square formation	Flowering / pegging	Early tillering/til		_	cative / gation
Kharif Cotton	Castor	Kharif bajra	Kharif l		Clong	gation
Vegetative	Germination / vegetative	Vegetative / flowering	Tillering			
		Maharashtra	l			
Kharif Groundnut	Tur	Irrigated Cotton	Sugarcane (Seasonal)		Bajra (Madhya Mahrashtra, Marthwada and Vidarbha)	
Vegetative/flowering/ pegging	Early vegetative/ branching	Vegetative / square formation	vegetative		flag leaf	initation / ering
Jowar	Kharif sunflower	Soyabean	Kharif rice (Konkan)		Kharif rice (Madhy Maharashtra, Marathwada & Vidarbha)	
Vegetative / flag leaf initiation	vegetative/floral bud initiation / flowering	Flowering / pod formation	Tillering / J		Early tilering (in Vidarbha)/ active Tillering (in Madhya Maharashtra, Marathwada &	
Moong	Kharif cotton					
Flowering / pod formation	Early vegetative/vegetati ve					
		Madhya Pradesh				
Sugarcane	Moong	Kharif crops (Jowar, cotton, urad, tur)	Kharif Soy	abean	Khari	f rice
Vegetative	Vegetative / flowering / pod formation	Vegetative / flowering	Flower	ing	Tillering initia	•
Maize						
Silking/tasseling		Orissa	<u> </u>		<u> </u>	
Vegetables	Earlier sown vegetables	Early sown Groundnut	Groundnut Sugarcane (p		-	
Sowing / transplanting /vegetative	Flowering / fruiting / harvesting	Early vegetative / vegetative	Sowing Vege		etative / ering	
Kharif rice	Early	Pulse	s Early so		-	jute

sowing / transplanting	tillering		vegetativ	e / reproduc ve
	T	Andhra Pradesh	T	,
Early sown kharif rice	Kharif rice	Kharif crops(Groundnut/Maize/Chilli es/Cotton /Tur)		
Seedling/early vegetative	Transplanting	Vegetative		
-		Karnataka	•	
Groundnut	Sugarcane	Kharif crops (jowar, maize, cotton)	Kharif rice	Early sown rice
Vegetative/flowering/	Vegetative -ratoon	Vegetative/flowering/grain	Transplantin	Transplant
peg formation	crop	formation	g / tillering	ing
		Kerala		
Rubber	Virippu Rice	Pepper		
Tapping	Early maturity / maturity	Berry development		
		Tamil Nadu		
Rice (Navarai)	Millets	Summer irrigated cotton	Early & mid sugarcane	Late season sugarcane
End Harvesting	Late vegetative Sowing in some areas	Maturity / harvesting	Vegetative / Grand growth	Harvesting
Rice (Kuruvai)	Early transplanted Rice (Kuruvai)	Pulses	Groundnut	
Transplanting	Early vegetative / vegetative Late v		Late vegetative / Sowing continued in some areas	