

# National Agromet Advisory Service Bulletin

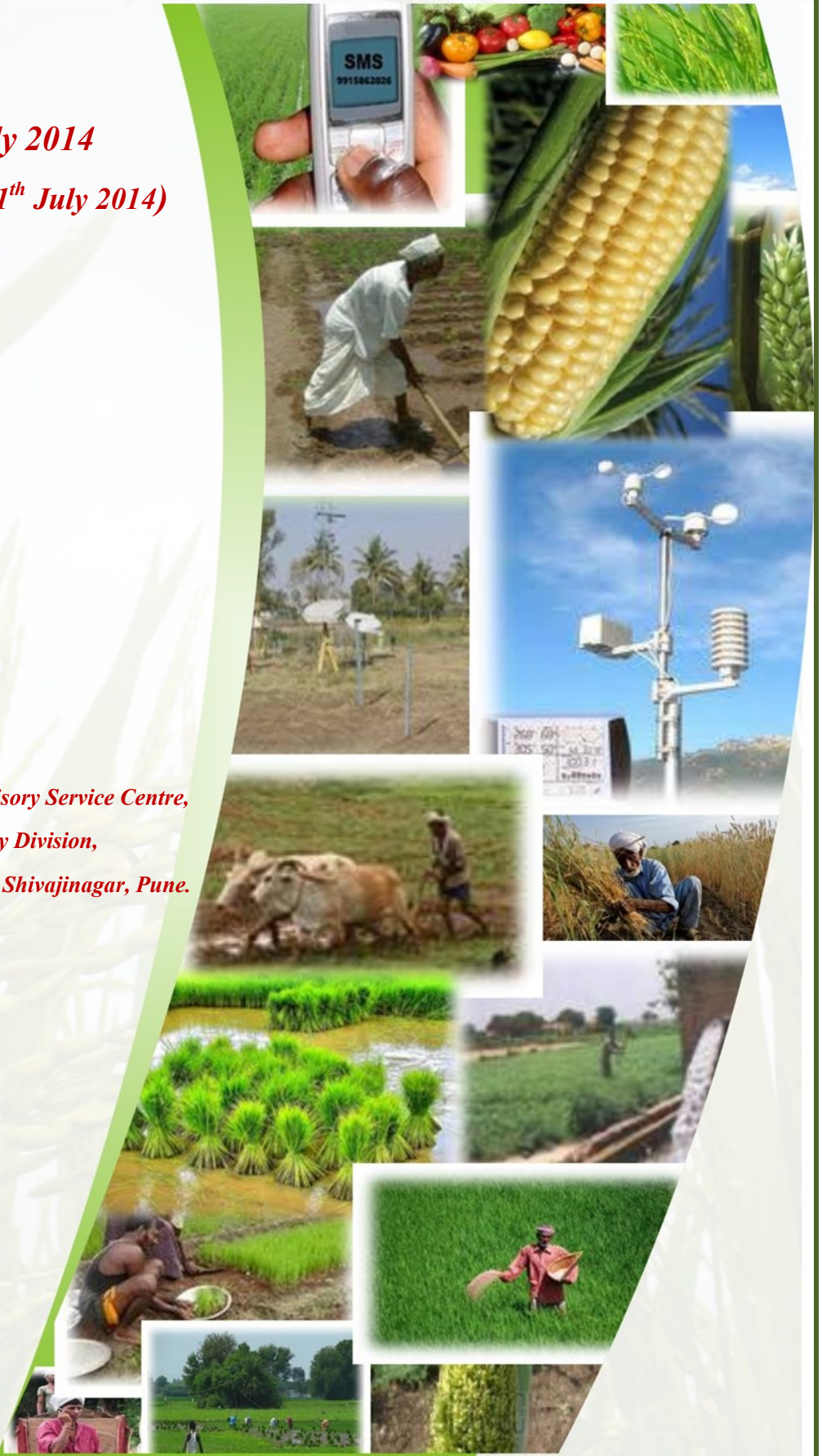
**Tuesday 8<sup>th</sup> July 2014**

**(For the period 8<sup>th</sup> to 11<sup>th</sup> July 2014)**



**Issued by**

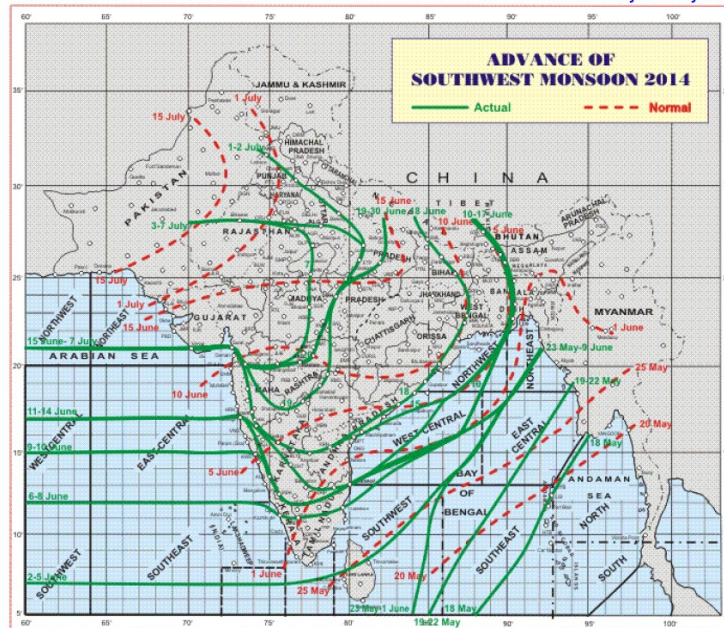
**National Agrometeorological Advisory Service Centre,  
Agricultural Meteorology Division,  
India Meteorological Department, Shivajinagar, Pune.**



## Monsoon Watch

Northern Limit of Monsoon

Tuesday 08 July 2014



- The Northern Limit of Monsoon (NLM) continues to pass through Lat. 21°N / Long. 60°E, Lat. 21°N / Long. 65°E, Veraval, Surat, Nasik, Aurangabad, Bhopal, Shivpuri, Alwar, Bikaner and Lat. 28°N / Long. 72°E.

## Realised Weather as on 8<sup>th</sup> July 2014

**Rainfall:** (From 0830 to 1730 hours IST of yesterday): Rain/thundershowers occurred at many places over Konkan & Goa and Coastal Karnataka; at a few places over east Uttar Pradesh, Bihar, Arunachal Pradesh, Assam & Meghalaya, Lakshadweep and Andaman & Nicobar Islands and at isolated places over Jammu & Kashmir, coastal Andhra Pradesh, interior Karnataka and Kerala. Weather remained mainly dry/dry over rest of the country. The amounts of rainfall (2 cm or more) recorded at 1730 hours IST of yesterday were: Cherrapunji 19; Malda 7; Passighat & Mumbai (SCZ) 6 each; Mangalore 5; Sultanpur, Mumbai (CLB), Harnai and Carnicobar 2 each.

**Temperatures:** Heat wave conditions were prevailed at isolated pockets of East Rajasthan and West Madhya Pradesh. Maximum temperature of 42°C or more recorded at: Chittorgarh 43.0; Churu & Kota 42.6; Ganganagar 42.1 and Hissar 42.0. Maximum temperatures were above normal by 5-7° C at a few places over west Madhya Pradesh and isolated places over east Rajasthan and Vidarbha; by 2-4° C at many places over Himachal Pradesh, rest Rajasthan, east Madhya Pradesh, Chhattisgarh, Odisha, Gujarat, interior Maharashtra; at a few places over Punjab, Haryana & Delhi, Jharkhand, Gangetic West Bengal and north Andhra Pradesh and at isolated places over Jammu & Kashmir, Tamilnadu and Kerala. They were below normal by 2-4° C at isolated places over Uttar Pradesh and near normal over rest parts of the country.

## Weather Forecast

### Weather Forecast for next 3 days (upto 0830 hours IST of 11<sup>th</sup> July, 2014)

- Rain/thundershowers would occur at many places over Andaman & Nicobar Islands during next 24 hours and at most places thereafter.
- Rain/thundershowers would occur at most places over Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim and at many places over Nagaland, Manipur, Mizoram and Tripura during the period.
- Rain/thundershowers would occur at many places over Assam & Meghalaya during next 48 hours and at most places thereafter.
- Rain/thundershowers would occur at isolated

### Weather Warning during next 3 days

- **08 July (Day 1):** Heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Telangana, Konkan & Goa, Coastal Karnataka and Andaman & Nicobar Islands.
- **09 July (Day 2):** Heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Coastal Karnataka and Andaman & Nicobar Islands.
- **10 July (Day 3):** Heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya,



places over Gangetic West Bengal during next 24 hours; over Jharkhand during next 48 hours and increase thereafter.

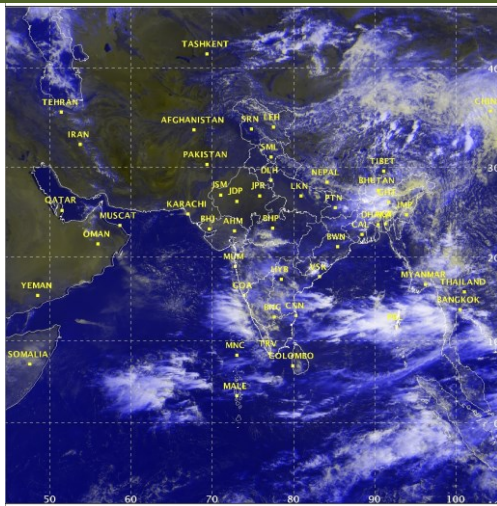
- Rain/thundershowers would occur at a few places over Odisha and Bihar during the period.
- Rain/thundershowers would occur at most places over Coastal Karnataka and at many places over Konkan & Goa, Kerala, Lakshadweep and at a few places over Coastal Andhra Pradesh, Rayalaseema and Interior Karnataka during the period.
- Rain/thundershowers would occur at many places over Telangana during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over Uttarakhand and East Uttar Pradesh during next 24 hours and at isolated places thereafter.
- Rain/thundershowers would occur at a few places over Vidarbha on 8<sup>th</sup>; at isolated places on 9<sup>th</sup> and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir, Himachal Pradesh, West Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Gujarat region, Tamilnadu & Pudducherry during the period.
- Mainly dry weather would prevail over Punjab, Haryana & Delhi, Rajasthan, Saurashtra & Kutch during the period.
- No significant change in maximum temperatures likely over many parts of the country during next 2-3 days.

Konkan & Goa, coastal Karnataka, Andaman & Nicobar Islands.

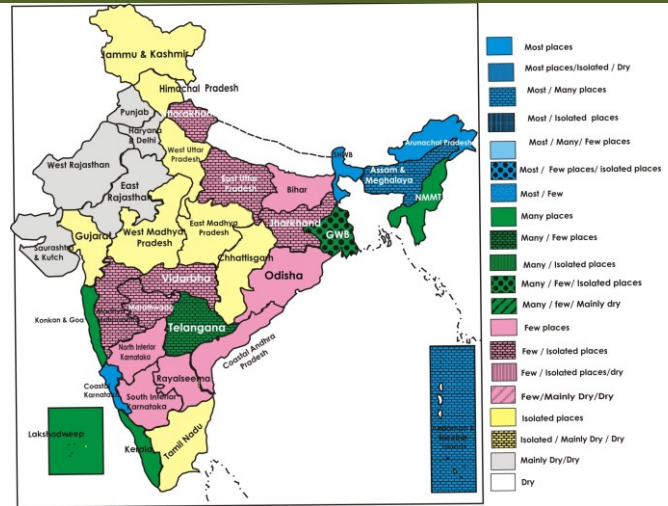
**Weather Outlook for subsequent 4 days from 11<sup>th</sup> July to 15<sup>th</sup> July 2014.**

- A low pressure area may form over northwest and adjoining west central Bay of Bengal around 11<sup>th</sup> July, which may subsequently increase rainfall activity over peninsular and central India.
- Rain/thundershowers would occur at most places along west coast.
- Rain/thundershowers would occur at many places over northeast and east India.
- Rain/thundershowers would occur at isolated places over rest parts of the country.

**Satellite image dated 08.07.2014, 0600 UTC**



**Weather Forecast Map (Valid upto 0830 hours of 11<sup>th</sup> July, 2014)**



## Salient Advisories

- Continue transplanting of *Virippu* rice in the Central and Northern Zones of **Kerala**.
- Continue nursery sowing of *kharif* rice and continue transplanting of rice in **Coastal Zone of Karnataka**, continue sowing of *kharif* crops like sorghum, pulses viz., cowpea, green gram, black gram and oilseed crops like sesamum and continue land preparation for transplanting of ragi in the Southern Dry Zone with realised/expected rainfall.
- Continue land preparation for nursery sowing and direct sowing of rice and planting of rainfed sugarcane in the North Coastal Zone of **Andhra Pradesh**.
- In Assam and Meghalaya, continue nursery sowing of *sali* rice and in **Arunachal Pradesh** continue sowing of *kharif* rice utilizing the realized and expected rainfall. Drain out excess water from rice nursery. Undertake transplanting of *sali* rice with 25-30 day old seedlings.
- Continue nursery sowing of main *kharif* rice and early cauliflower, sowing of black gram and rice bean in **Manipur**, continue sowing of soybean in **Nagaland** and continue nursery sowing of *aman* rice in **Tripura**.
- In **West Bengal**, continue land preparation and nursery sowing of *aman* rice utilizing the realized and expected rainfall.
- In North Eastern Coastal Plain Zone of **Odisha**, continue nursery sowing, direct sowing of *kharif* rice, continue sowing of maize, arhar and cotton in upland areas in Western Undulating Zone utilizing the realised rainfall.
- Continue nursery sowing of rice and sowing of maize in **Bihar** and sowing of maize, pigeon pea, urad, moong, groundnut, soybean and sesame in **Jharkhand**.
- Continue nursery sowing and transplanting of *kharif* rice in **Himachal Pradesh** and **Uttarakhand**.
- **There is probability of revival of monsoon from second week of July over many parts of the country. The agricultural situation in Gujarat, Interior Karnataka and major parts of Maharashtra needs to be monitored continuously and preparation may be taken up for adoption of contingency plan and arrangements may be made for availability of sufficient seeds and other inputs for agricultural operations.**

## Detailed Zonewise Agromet Advisories

### SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP]



*Land preparation/ Sowing*

*Rice Nursery*

*Sugarcane*

*Rice Transplanting*

- **Realised Weather:** Rain/thundershowers occurred at many places over coastal Karnataka; at a few places over Lakshadweep and at isolated places over Coastal Andhra Pradesh, interior Karnataka and Kerala. Weather remained mainly dry/dry over rest of the region. Maximum temperatures were above normal by 2-4° C at a few places over north Andhra Pradesh and at isolated places over Tamilnadu and Kerala. They were near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Coastal Karnataka; at many places over Kerala and at a few places over Coastal Andhra Pradesh, Rayalaseema and Interior Karnataka during the period. Rain/thundershowers would occur at many places over Telangana during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Tamilnadu & Pudducherry during the period. No significant change in maximum temperatures likely over many parts of the region during next 2-3 days.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Coastal Karnataka during the period and over Telangana on 8<sup>th</sup> July.
- **Weather Outlook:** A low pressure area may form over northwest and adjoining west central Bay of Bengal around 11<sup>th</sup>

July, which may subsequently increase rainfall activity over peninsular India.

• **Advisories:**

▪ **Karnataka:**

- Continue transplanting of *kharif* rice of proper age of seedlings in the Coastal Zone of Karnataka.
- Continue sowing of maize and cotton and nursery preparation for lowland and upland rice and apply basal dose of fertilizer to plantation crops in the Hill Zone of Karnataka utilising the realized rainfall.
- Continue sowing of *kharif* crops like sorghum, pulses viz., cowpea, green gram, black gram and oilseed crops like sesamum and continue land preparation for transplanting of ragi in the Southern Dry Zone with realised/ expected rainfall.
- Undertake sowing of red gram, ragi, groundnut and maize in the Eastern Dry Zone of Karnataka utilizing the realized and expected rainfall.
- Undertake sowing of red gram and intercropping in places where bajra is grown in Bellary and Raichur districts and undertake sowing tur, niger, castor, groundnut, bajra, sorghum individually or by intercropping with tur and sowing / dibbling of irrigated cotton in Gulbarga and Yadgir districts in the North East Dry Zone of Karnataka utilizing the realized and expected rainfall.
- Undertake sowing of soybean first and then pigeon pea in the North East Transition Zone of Karnataka.
- The monsoon was weak in districts of North Dry Zone of Karnataka during June hence sowing of *kharif* crops has not been commenced. Detailed contingency measures for alternate crops and moisture conservation measures recommended for July first fortnight in Bijapur, Gadag and Bagalkote districts in North Interior Karnataka is given in Annexure I.

▪ **Kerala:**

- Continue transplanting of *virippu* rice in the Central and Northern Zones of Kerala.
- Continue direct sowing of rice and planting of coconut seedlings in the Problem Area Zone of Kerala. Also continue mat nursery preparation in places where mechanized transplanting can be done, planting of nendran banana and land preparation for transplanting of brinjal and chilli.
- As rain/thundershowers would occur at many places, postpone intercultural operations and application of fertilizers and plant protection measures in standing crops.
- High humidity is congenial for bud rot in coconut in the Southern Zone of Kerala. Cut and remove the affected portion and apply Bordeaux paste after current spells of rain.

▪ **Andhra Pradesh:**

- Continue nursery sowing of rice, direct seeding of rice and planting of rainfed sugarcane in the North Coastal Zone of Andhra Pradesh.
- In Southern Telangana Zone of Andhra Pradesh, undertake sowing of rainfed crops like cotton, maize, groundnut, pulses etc., continue nursery sowing and transplanting of tomato, brinjal and chilli and direct sowing of cucurbits, beans and bhendi utilizing the expected rainfall.
- Continue sowing of groundnut, lady's finger and cluster bean under irrigation in the Scarce Rainfall Zone of Andhra Pradesh. Continue sowing of maize and castor, raising of onion nursery and planting of medium and long duration varieties of turmeric in Kurnool district in areas having irrigation facilities.

▪ **Tamil Nadu:**

- Continue transplanting of *kuruvai* rice in the Cauvery Delta Zone of Tamil Nadu with irrigation. Also continue nursery raising of rice for transplanting under SRI cultivation.
- Undertake propping up of banana crop of more than five months to prevent lodging due to high wind speed in the Western and South Zone of Tamil Nadu.
- Prevailing weather condition is congenial for thrips attack in onion in the Western Zone of Tamil Nadu. Monitor the crops and spray Monocrotophose @ 1 ml per litre of water to manage the attack. Monitor for thrips incidence in rice nurseries.
- Suitable varieties are given in Annexure II.

• **Animal Husbandry**

- Prevailing weather conditions are congenial for Anthrax in cattles in the Scarce Rainfall Zone of Andhra Pradesh. Vaccinate the animals to prevent the disease.
- Since prevailing temperature is high, provide sufficient quantity of water to the poultry birds in the Western Zone of Tamil Nadu.



## NORTHEAST INDIA [ARUNACHAL PRADESH, NMM&T, ASSAM, MEGHALAYA]



*Rice Nursery*



*Land preparation/Sowing*



*Rice Transplanting*



*Jute*

- **Realised Weather:** Rain/thundershowers occurred at a few places over Arunachal Pradesh, Assam & Meghalaya. Weather remained mainly dry/dry over rest of the region. Maximum temperatures were near normal over the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Arunachal Pradesh and at many places over Nagaland, Manipur, Mizoram and Tripura during the period. Rain/thundershowers would occur at many places over Assam & Meghalaya during next 48 hours and increases thereafter.  
No significant change in maximum temperatures likely over many parts of the region during next 2-3 days.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya during the period.
- **Weather Outlook:** Rain/thundershowers would occur at many places over northeast India.
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
    - As rain/thundershowers would occur at most/ many places over Assam, Meghalaya and Arunachal Pradesh during the period along with isolated heavy spells, postpone intercultural operations, application of fertilizers and plant protection measures in the standing crops. Also provide adequate drainage to remove excess water from crop fields.
    - In Arunachal Pradesh, continue transplanting of 25-30 days old seedling of *kharif* rice utilizing the realized and expected rainfall. Complete transplanting of local varieties in mid altitude. If nursery is not raised, then undertake sowing of short duration varieties like Vivek, Dhan 82.
    - In Assam, undertake transplanting of 21-30 days old seedlings of long duration *sali* rice. (varieties like Ranjit, Mahsuri etc.). Continue sowing of arhar, sesame in Hill zone and Central Brahmaputra Valley Zone of Assam.
    - In Lower Brahmaputra Valley Zone of Assam, continue sowing of sesame and groundnut.
    - In Meghalaya, continue sowing of pigeon pea. Complete sowing of groundnut, soybean and transplanting of local varieties of *sali* rice in mid altitude areas at the earliest. Undertake transplanting of HYV of *Sali* rice.
    - Due to cloudy weather, there is chance of stem borer infestation in sugarcane in Hill Zone of Assam. Spray Phosphamidon @ 400-500ml in 800 litre of water after current spells of rain.
    - Due to prevailing humid weather conditions, there is chance of attack of stem borer on maize in Arunachal Pradesh. Spray Quinalphos 25 EC @ 2ml/litre of water after current spells of rain. Also there is chance of collar rot / wilting / damping off in green gram, for control, spray Carbandazim @ 1g per litre of water or Endofil M45 @ 2.5 g per litre of water after current spells of rain.
    - Due to humid weather and increase in humidity, there is chance of attack of blast, Gundhi bug and stem borer in ahu rice in Temperate Sub Alpine Zone of Meghalaya. Spray Mancozeb @ 2g/litre of water or Carbendazim @ 1 g/litre of water against blast, spray Malathion 5% dust @ 6.25 kg/ha against rice Gandhi bug and Chloropyriphos @ 0.02% or Monocrotophos @ 0.04% or Carbofuran 3G @ 30 kg/ha for stem borer after current spells of rain.
  - **Nagaland, Manipur, Mizoram and Tripura:**
    - In Mizoram, continue sowing of cucurbits, okra, nursery raising of brinjal and planting of ginger and turmeric utilizing the realized and expected rainfall.
    - In Nagaland, continue sowing of soybean, groundnut and pulses like black gram, green gram utilizing the realized and expected rainfall. Undertake nursery preparation of TRC rice/ lowland rice.
    - In Manipur, continue nursery sowing of main *kharif* rice. Complete sowing black gram. Also continue land preparation and transplanting of main *Kharif* rice with 25-35 days old seedlings.
    - In Mild Tropical Plain Zone of Tripura, continue nursery sowing of *aman* rice and sowing of *kharif* vegetables utilizing the realized and expected rainfall.
    - As rain/thundershowers would occur at many places over Nagaland, Manipur, Mizoram and Tripura during the period, postpone intercultural operations, application of plant protection measures and fertilizers in the standing crops.
    - Warm and humid conditions may cause canker, aphids and Psyllid attack in young and new shoots of khasi mandarin in Mid Tropical Hill Zone of Mizoram. It can be controlled by pruning and burning the infected shoots and then smearing the cut portions with 1 % Bordeaux paste and spray Streptomycin 2g/ 10 litre of water against canker and spray Imadacloprid @ 1.5 ml/litre of water against aphids and psyllid after current spells of rain.

- Due to cloudy weather and increase in humidity, there is chance of attack of blast disease in *jhum* rice in Mild Tropical Hill Zone of Nagaland. Spray Carbendazim @ 1 g/litre of water after current spells of rain.
- In Tripura, due to cloudy and humid weather there is chance of infestation of sheath blight in *jhum* rice. Spray Surf @ 1g per litre of water. Also monsoon weather is conducive for Panama wilt disease in banana. Drench with Bavistin @1g per litter of water and Trichodermaviride and Pseudomonas fluorescence may be incorporated in the soil. Apply the chemicals after current spells of rain.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In the Northeastern States, animal sheds should be kept dry and avoid dampness during rainy days.
- Monsoon weather could lead to gastrointestinal parasites infection in pigs and poultry in Tripura. Farmers are advised to keep good sanitary conditions in pig/ poultry sheds.

## EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM, ANDAMAN & NICOBAR ISLANDS]



**Sugarcane**

**Jute**

**Rice Nursery**

**Land Preparation/Sowing**

- **Realised Weather:** Rain/thundershowers occurred at a few places over Bihar, Andaman & Nicobar Islands. Weather remained mainly dry/dry over rest of the region. Maximum temperatures were above normal by 2-4° C at many places over Odisha; at a few places over Jharkhand and Gangetic West Bengal. They were near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim during the period. Rain/thundershowers would occur at isolated places over Gangetic West Bengal during next 24 hours; over Jharkhand during next 48 hours and increase thereafter. Rain/thundershowers would occur at a few places over Odisha and Bihar during the period.  
No significant change in maximum temperatures likely over many parts of the region during next 2-3 days.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands during the period.
- **Weather Outlook:** Rain/thundershowers would occur at many places over east India.
- **Advisories:**
  - **West Bengal:**
    - In West Bengal, continue nursery sowing of *aman* rice utilizing the realised and expected rainfall. Drain out excess water from rice nurseries and vegetable crop fields in Sub- Himalayan West Bengal.
    - Undertake sowing of direct seeded *aman* rice in Laterite and Red Soil Zone of West Bengal using realized and expected rainfall.
    - In Terai Zone of West Bengal, continue land preparation for nursery raising of early cauliflower. Select high land with proper drainage facilities. Undertake transplanting of moderate and long duration variety seedling in the main field.
    - As rain/thundershowers would occur at most places over Sub Himalayan West Bengal and Sikkim along with heavy spells at isolated places during the period, postpone intercultural operations, application of plant protection measures and fertilizers in the standing crops. Provide adequate drainage in crop fields to remove excess water.
    - Due to humid weather, there is a chance of the attack of in ladies finger and fruit borer in chilli in Laterite and Red Soil Zone of West Bengal. Apply Imidachloprid 17.8 S. L. @ 4 ml per 10 litre for white-fly and spray Dichlorovos @ 1.5 – 2.0 ml per litre of water against fruit borer after current spells of rain.
    - Due to prevailing cloudy and humid weather conditions, there is a chance of attack of caterpillar and mites in jute in New Alluvial Zone of West Bengal. To control mite, apply Dicofol @2 ml/litre of water or Propagite 57 E.C. @ 1.5 ml/lire of water after current spells of rain.
  - **Andaman & Nicobar Islands:**
    - In North, Middle and South Andaman, continue nursery sowing of rice, in Nicobar Island, undertake sowing of leafy vegetables, cucurbit and cowpea.
  - **Odisha:**
    - In East and South Eastern Coastal Plain Zone of Odisha, undertake nursery sowing of *kharif* rice and land preparation and direct sowing of rice in low land areas utilizing the realised and expected rainfall. Also undertake sowing of ragi,

maize, groundnut and sesame.

- In Western Undulating Zone of Odisha, continue sowing of maize, arhar and cotton in upland areas taking the advantage of the realised and expected rainfall.
- In North Eastern Plateau Zone of Odisha, continue sowing of maize, groundnut, green gram and blackgram and groundnut, ragi, arhar, maize, green gram, black gram and sesame, sowing of okra and cluster bean in North Central Plateau Zone of Odisha. Also undertake nursery raising of brinjal, tomato and chilli in upland areas.
- Due to humid weather there is chance of occurrence of fruit & shoot borer in brinjal and tomato in Mid Central Table Land Zone of Odisha. Install Pheromone trap and spray Sevin WP @ 4g or Malathion @ 2 ml in 1 litre of water on a non rainy day.
- Fruit and shoot borer in brinjal has been found in East and South Eastern Coastal Plain Zone of Odisha. To control it install Pheromone traps and spray 4 g Sevin WP or 2 ml Malathion in 1 litre water alternatively. Drying of fruit and stem of brinjal has been occurred. Spray 2 g Saaf or Sixer or Companion in 1 litre water. Root rot of pointed gourd. Spray 10 g Plantomycine along with 20 g Blitox 50 in 10 litre water. Fruit fly in cucurbit and bitter gourd. Spray 3 ml Sevin WP in 1 litre water.
- **Bihar:**
- In North West Alluvial Plain Zone of Bihar, continue transplanting of rice in low and medium land areas with realised and expected rainfall. Continue transplanting of tomato and brinjal. Continue land preparation in upland areas for sowing of arhar.
- Continue nursery sowing of short duration rice varieties in South Bihar Alluvial Zone. Continue sowing of *kharif* maize. Continue transplanting of *kharif* finger millet. Undertake planting of Mango and Litchi.
- In North East Alluvial Plain Zone of Bihar, prepare the nursery for sowing of short duration rice varieties. In upland areas, prepare nursery for rice till 10th July.
- **Jharkhand:**
- In South Eastern Plateau Zone of Jharkhand, continue sowing of direct seeded upland rice and prepare the nursery for sowing of long duration rice varieties and continue sowing of maize and pigeon pea, urad, moong, groundnut, soybean, sesame and also rainy season vegetables with realised and expected rainfall.
- Continue nursery bed preparation for *kharif* rice in Western Plateau Zone of Jharkhand. Undertake transplanting of tomato, cauliflower and cabbage and continue sowing of bhindi, bean and French bean. In upland areas, continue sowing of urad, groundnut and arhar and direct seeded rice. Continue nursery sowing of finger millet and sowing of maize.
- In Central & North Eastern Plateau Zone of Jharkhand, continue land preparation and sowing of maize and pigeon pea with realised and expected rainfall. Continue nursery sowing of rice. Undertake sowing of urad and til.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- Keep the cattle in the sheds during heavy rainfall periods in Sub-Himalayan West Bengal.
- In Odisha, the monsoon weather is favourable for Foot and Mouth disease in cows. Vaccinate the animals for protection.
- In South Bihar Alluvial Zone, to carry out vaccination of animals against *Anthrax*, *Black Quarter (Dakaha)*, *Galgotu* disease to protect them during rainy season.
- In provide dry and clean shelter to dairy animals in Old Alluvial Zone of West Bengal. Clean and hygienic water should be provided to dairy animals.
- **Poultry**
- Because of high humidity, there chance of occurrence of fungal diseases in poultry birds in South Eastern Plateau Zone of Jharkhand, lime should be mixed thoroughly in poultry litter. RD vaccine should be given immediately to the chicks which are 7 days old. To prevent coxidirosis disease, spray antibiotic solution in the poultry house.
- In Nicobar Island and South, North and Middle Andaman, to prevent the rain water going into the poultry sheds an overhang of 3feet is necessary and it should be 9-12 inch above the surrounding area with good drainage facilities.



## CENTRAL INDIA [M.P., CHHATTISGARH]



*Sugarcane*

*Land Preparation/Sowing*

*Okra*

*Green Gram*

- **Realised Weather:** Weather remained mainly dry/dry over the region. Heat wave conditions were prevailed at isolated pockets of West Madhya Pradesh. Maximum temperatures were above normal by 5-7° C at a few places over west Madhya Pradesh; by 2-4° C at many places over east Madhya Pradesh and Chhattisgarh.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Madhya Pradesh and Chhattisgarh during the period.  
No significant change in maximum temperatures likely over many parts of the region during next 2-3 days.
- **Weather Warning:** Nil.
- **Weather Outlook:** A low pressure area may form over northwest and adjoining west central Bay of Bengal around 11<sup>th</sup> July, which may subsequently increase rainfall activity over central India.
- **Advisories:**
  - **Madhya Pradesh:**
    - Continue nursery sowing of rice and sowing of maize, soybean in east Madhya Pradesh utilizing the realized rainfall.
    - Continue sowing of early maturing varieties of maize and soybean in Jhabua Hill Zone and in Grid Zone in west Madhya Pradesh utilizing the realized rainfall. Also undertake nursery sowing of *kharif* vegetables in Grid Zone of west Madhya Pradesh.
    - Continue land preparation for nursery sowing of rice in Malwa Plateau Zone and for sowing of *kharif* crops and nursery sowing of vegetables in Vindya Plateau of West Madhya Pradesh utilizing the realized rainfall.
    - Undertake sowing of cotton in Nimar Valley Zone of west Madhya Pradesh utilizing the realized rainfall.
    - Due to partly cloudy weather, there is possibility of attack of fruit and stem borer in vegetables in Bundelkhand Zone of Madhya Pradesh. For control, spray Malathion 50 E.C. @ 1.0 ml per litre of water.
    - Due to cloudy weather, there is possibility of attack of sucking insect and leaf curl disease in vegetables in Central Narmada Valley Zone of Madhya Pradesh, spray Imidachlorpid @ 0.03% solution at 15 days interval.
  - **Chhattisgarh:**
    - In Chhattisgarh Plain Zone, continue nursery sowing of rice and sowing of maize, soybean, moong and urad utilizing the realized rainfall and also undertake nursery sowing of *kharif* vegetables.
    - Continue nursery sowing of rice and rainy season vegetables in North Hill Zone of Chhattisgarh, utilizing the realized rainfall.
    - Continue nursery sowing of rice and sowing of maize and urad in Bastar Plateau Zone of Chhattisgarh utilizing the realized rainfall.
    - Suitable varieties are given in Annexure II.

## NORTH INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]



*Land Preparation/ Sowing*

*Sugarcane*

*Bottle Gourd*

*Rice Transplanting*

- **Realised Weather:** Rain/thundershowers occurred at a few places over east Uttar Pradesh and at isolated places over Jammu & Kashmir. Weather remained mainly dry/dry over rest of the region. Heat wave conditions were prevailed at isolated pockets of East Rajasthan. Maximum temperatures were above normal by 5-7° C at isolated places over east Rajasthan; by 2-4° C at many places over Himachal Pradesh, rest Rajasthan; at a few places over Punjab, Haryana & Delhi

and at isolated places over Jammu & Kashmir. They were below normal by 2-4° C at isolated places over Uttar Pradesh and near normal over rest parts of the region.

- **Weather Forecast:** Rain/thundershowers would occur at a few places over Uttarakhand and East Uttar Pradesh during next 24 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Jammu & Kashmir, Himachal Pradesh and West Uttar Pradesh during the period. Mainly dry weather would prevail over Punjab, Haryana & Delhi and Rajasthan during the period.

No significant change in maximum temperatures likely over many parts of the region during next 2-3 days.

- **Weather Warning:** Nil.

- **Weather Outlook:** Rain/thundershowers would occur at isolated places over the region.

- **Advisories:**

- **Jammu & Kashmir:**

- Continue land preparation for transplanting of rice and sowing of maize in Intermediate Zone of Jammu & Kashmir and apply irrigation to vegetables viz. tomato, brinjal, chilli, capsicum, cucurbits, beans, bhindi etc. at regular intervals to avoid flower and fruit dropping. Also continue sowing of moong, sunflower in Valley Temperate Zone of Jammu & Kashmir.

- Undertake nursery sowing of basmati rice, direct sowing of maize in Sub Tropical Zone of Jammu & Kashmir utilising the realised rainfall.

- **Himachal Pradesh:**

- Continue nursery sowing of rice and sowing of cucurbits like cucumber, bitter gourd, bottle guard and summer squash, direct sowing of rice; undertake transplanting of rice, tomato, chilli, *capsicum* and brinjal in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh utilizing the realised rainfall. Complete sowing of maize, moong, mash and kulthi.

- Due to prevailing humid weather conditions, there are chances of attack of cut worms and white grubs in maize in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. Apply Chloropyriphos 20 EC @ 2 litres mixed with 25 kg of sand per hectare.

- Due to prevailing humid weather conditions, there are chances of attack of red pumpkin beetle and fruit fly in cucurbits in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. Spray Malathion 50EC @ 1ml per litre of water.

- **Uttarakhand:**

- Continue transplanting of rice and sowing of sorghum, millets, groundnut, soybean and pigeon pea in Bhabar & Tarai Zone of Uttarakhand utilizing the realised rainfall.

- Continue transplanting of rice and continue sowing of palak, methi, coriander, okra and French bean in Hill Zone of Uttarakhand.

- Undertake sowing of direct seeded rice with short duration varieties like Pant-4, Narendra-359, and Saket-4 etc. in Sub humid sub tropic zone of Uttarakhand utilizing the realised rainfall.

- Due to humid weather conditions there are chances of fruit borer in vegetables, spray Neem oil @ 20-25ml in 5 litres of water every after 10 to 15 days in Hill zone of Uttarakhand.

- **Punjab, Haryana and Delhi:**

- In Western Plain Zone of Punjab, it is advised to complete transplanting of rice with irrigation. Give first dose of Nitrogen to counteract the high temperature and to minimize the burning of cotton seedlings. Save the young fruit trees from high temperature by erecting thatches of sarkanda or rice straw. If rain is not sufficient, apply irrigation at regular basis and increase the frequency of irrigation at critical growth stages of crops.

- In Western Zone of Punjab complete transplanting of rice with 25 to 30 days old seedlings utilizing realised rainfall during last week. Undertake nursery sowing of basmati rice.

- In Undulating Plain Zone of Punjab, continue transplanting of rice and complete sowing of maize with irrigation. Undertake land preparation for sowing of mash and til.

- In Central Plain Zone and in Western Plain Zone of Punjab, complete transplanting of rice with irrigation and undertake sowing of okra.

- In Sub-Montane Undulating Zone of Punjab, undertake transplanting of rice and sowing of maize and okra with irrigation. To avoid fruit drop in Kinnow orchards, apply irrigation at 3-4 days interval (with Basin irrigation system) or 6-7 hours/day in drip irrigation system.

- In Eastern Zone of Haryana, transplant one month old rice seedlings with irrigation. Undertake sowing of guar, bajra and pulses with certified seeds after receipt of sufficient rain.

- In Western Zone of Haryana, undertake sowing of guar, bajra, pulses, fodder crops such as jowar mixed with cowpea to increase the nutritive value for continuous supply of green fodder and transplanting of rice with irrigation, cultivate less area for paddy.

- In Delhi, continue nursery preparation of rice, early cauliflower and brinjal with irrigation facilities. Undertake transplanting of brinjal, chilli and early cauliflower if the seedlings are ready. Undertake sowing of pigeon pea, maize, guar, bajra, cluster bean, spinach, amaranths, okra and cucurbits during the week with irrigation facilities. Where irrigation facility is limited, it is advised to cultivate crops such as arhar, pearl millet, guar, pulses etc. which require

less water.

▪ **Uttar Pradesh:**

- In Central Plain Zone of Uttar Pradesh, undertake nursery sowing of short duration varieties of rice utilizing the realized rainfall. Continue sowing of maize, urad, mung, cucurbits like bottle guard, cucumber, bitter guard, tinda and planting of fruit crops and undertake land preparation for sowing arhar and soybean. Complete sowing of groundnut and undertake nursery sowing of early variety of brinjal, chilli and cauliflower. Undertake intercultural operation in pigeon pea.
- In Western Plain Zone of Uttar Pradesh, undertake direct sowing of rice in lowland areas and undertake sowing of guar, bajra, jowar and moong as fodder crops in uplands.
- Due to humid weather condition, there are chances of attack of shoot/fruit borer in ladies finger in Central Plain Zone of Uttar Pradesh. Remove the infected stem/fruits from the plants and spray Quinolphos @ 2 ml per litre of water or Carbryl @ 4 g per litre of water on a non rainy day.

▪ **Rajasthan:**

- As there is delay in onset of monsoon, undertake land preparation for sowing of short duration varieties of *kharif* crops like pearl millet, cowpea, green gram, moth bean and urad bean etc. in Semi Arid Eastern Plain Zone of Rajasthan after receipt of sufficient rain. Undertake sowing of green gram and sesame in Flood Prone Eastern Plain Zone of Rajasthan, after receipt of sufficient rain. Arrange for seeds and fertilizers in advance so that sowing of these crops may be undertaken as soon as there is onset of monsoon.
- Continue land preparation for sowing of maize, jowar, soybean, moong, urad, til, groundnut and arhar in southern humid Plain Zone and maize, moong, urad, cow pea in Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan after receipt of sufficient rain.
- Continue land preparation for sowing of bajra, moong, moth, guar and groundnut in Arid Western Plain Zone and bajra, moong, moth, guar and til in Irrigated North Western Plain Zone of Rajasthan after receipt of sufficient rain.
- Suitable short duration varieties are given in Annexure II.

• **Floriculture**

- Due to prevailing humid weather condition there are chances of incidence of gladiolus blight in gladiolus in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. Spray Dithane M45 (Mancozeb) @ 25 g in 10 liters of water.

• **Horticulture**

- Due to prevailing humid weather condition, there are chances of attack of citrus canker in horticultural crops like peach, pear, plum, almonds, apricot and apple in Mid-Hills Sub-Humid Zone of Himachal Pradesh. Spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres of water.
- Due to prevailing humid weather condition there be chance of Black tip disease in mango crop, to control spray borax @ 1 % or other alkaline solutions like caustic 0.8 % or washing soda 0.5 % regularly at 10 days interval in Sub Humid Sub Tropic Zone of Uttarakhand.

**WEST INDIA [GOA, MAHARASHTRA, GUJARAT]**



**Land Preparation/ Sowing**

**Sugarcane**

**Rice Nursery**

**Okra**

- **Realised Weather:** Rain/thundershowers occurred at many places over Konkan & Goa. Weather remained mainly dry/dry over rest of the region. Maximum temperatures were above normal by 5-7° C at isolated places over Vidarbha; by 2-4° C at many places over Gujarat, interior Maharashtra and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Konkan & Goa during the period. Rain/thundershowers would occur at few places over Vidarbha on 8<sup>th</sup>; at isolated places over 9<sup>th</sup> July and at a few places on 10<sup>th</sup>. Rain/thundershowers would occur at isolated places over Madhya Maharashtra and Marathawada during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Gujarat region and mainly dry over Saurashtra, Kutch and Diu region during the period. No significant change in maximum temperatures likely over many parts of the region during next 2-3 days.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Konkan & Goa during the period.
- **Weather Outlook:** Rain/thundershowers would occur at most places along west coast. Rain/thundershowers would occur at isolated places over remaining parts of the region.



- **Advisories:**

- **Maharashtra:**

- From second week of July condition may be favourable for sowing of *kharif* crops like cotton, soybean, red gram, jowar, sunflower, bajra, groundnut, green gram and black gram in Madhya Maharashtra, cotton, soybean, red gram, jowar, sunflower, green gram and black gram in Marathwada, transplanting of rice, sowing of cotton soybean and pigeon pea in Vidarbha.
- As rain would occur at many places over Konkan, continue transplanting of rice with 20-22 days old seedlings of rice and finger millet.
- As no significant rainfall is expected in Vidarbha, apply irrigation to rice nursery, early sown *kharif* cotton, summer vegetables and orchards.
- As no significant rainfall is expected in Madhya Maharashtra, apply irrigation to the rice nursery. Also apply irrigation to sugarcane by alternate furrow method.
- As no significant rainfall is expected in Marathwada, apply irrigation to summer sugarcane, orchard crops like banana, pomegranate, fig (drip irrigation) and vegetable crops in morning or evening hours. Apply mulch of crop residues and other plant waste products in the orchards and sugarcane trash in sugarcane. Apply irrigation in banana orchards through drip, apply mulch to preserve the soil moisture.

- **Gujarat:**

- Due to non-receipt of rainfall during June, in the districts like Ahmedabad, Anand, Dahod, Kheda, Panachmahal, and Vadodara, cotton and other crops could not be sown. Under this situation and expected rainfall during the period, contingent crops like cotton (Desi Hybrid: Desi hybrid-7, Desi hybrid-9, Guj. Cot-13, Guj. Cot-21, Anand Desi Cot-1), and recommended varieties of maize, paddy, soybean, black gram, green gram, cowpea, pigeon pea, castor, pearl millet etc. (see the Annexure I) could be sown. In the rest of the districts of the region, still there is time to sow the normal crops.
- **Gujarat region:** As no significant rainfall is expected, wait for sowing of rainfed *kharif* crops, carry out inter-cultural operations, weeding and gap filling in earlier sown groundnut and cotton to conserve soil moisture, apply irrigation in earlier sown vegetables in North Gujarat Zone; to set the transplanting time with occurrence of sufficient rain, raise the paddy nursery at 10 days intervals, select the short duration and late sowing crop varieties for sowing of *kharif* crops in Bhal and Coastal Zone and Middle Gujarat Zone. Keep farm inputs ready and wait for sowing of cotton crop in South Gujarat Zone and for nursery sowing of mid / late maturing varieties of rice, sowing of pearl millet, groundnut and pigeon pea in Middle Gujarat Zone till sufficient rain occurs.
- As no significant rainfall is expected, apply irrigation in hybrid / B.T. cotton in alternate row at short intervals, in vegetable crops and in nurseries of fruit crops; carryout weeding, intercultural operation and mulching in cotton to conserve soil moisture in Bhal and Coastal Zone and in cotton and early sown groundnut in North Gujarat Zone. Alternate crops like sesame, gram, castor can be selected in Middle Gujarat Zone.
- Due to prevailing dry weather conditions in Gujarat Region, detailed contingency measures and moisture conservation measures for alternate crops recommended for July first fortnight is given in Annexure I.
- Due to partly cloudy weather in Valsad district, there are chances of incidence of sucking pests in earlier sown cotton; spray Imidacloprid @ 4 ml (200 SL) per 10 liter of water.
- **Saurashtra & Kutch:**
- As mainly dry weather would prevail in South Saurashtra Zone, apply irrigation in early sown groundnut, cotton and soybean and carry out hand weeding and intercultural operations to conserve moisture.
- In North West Zone, as mainly dry weather would prevail, apply irrigation in hybrid / B.T. cotton in alternate row at short intervals, in vegetable crops and in nurseries of fruit crops; carryout weeding, intercultural operation and mulching to conserve soil moisture in hybrid cotton / B.T. cotton. For sowing of groundnut select high yielding varieties.
- Due to prevailing mainly dry conditions in North Saurashtra Zone, detailed contingency measures and moisture conservation measures for alternate crops recommended for July first fortnight is given in Annexure I.
- Suitable varieties are given in Annexure II.

**Annexure I**  
**Contingency measures for the meteorological subdivisions**

**1. North Interior Karnataka**

- Bajra, Pigeonpea, Groundnut, Sesamum, Niger, Fاختail millet, Horsegram, , Castor, Bajra + Pigeonpea (2:1), Bajra + castor (2:1), Groundnut + pigeonpea ( 4:2) Bajra + groundnut ( 2:4), Bajra + pigeonpea (2:1). Sow the crops across the slope.
- Soak the seeds for recommended time in Calcium Chloride solution before sowing.
- Select short duration, drought resistant crops and variety.
- Take up sowing of crops in wider rows to overcome moisture stress and to get higher yields

**Contingency planning for North Interior Karnataka**

Meteorological subdivision	Districts	Major crops	District wise Contingency planning for crops if monsoon delayed by 4 weeks
North Interior Karnataka	Bidar	Jowar, red gram, soybean, black gram	Red gram, soybean and bajra.
	Bagalkote	Sorghum, sugarcane, maize, greengram, groundnut	Pearl millet, sunflower
	Dharwad	Maize, rice, soybean, groundnut , cotton	Maize+Redgram (4:2), Groundnut + Redgram (4:2)
	Belgaum	Sugarcane, maize, cotton, soybean, groundnut	Short duration varieties of Groundnut
	Bellary	Rice, maize, sorghum, sunflower, groundnut	Bajra, pigeonpea, groundnut or sunflower
	Koppal	Sunflower, rice, bajra, sorghum, groundnut	Sesamum and castor

**2. Gujarat Region and Saurashtra & Kutch**

- Apply life saving irrigation through drip system to early sown crops like cotton and groundnut.
- If irrigation water is not sufficient then spray solution Cycocel @ 500 ppm (50 gm in 100 litre of water) or Kaolin @ 4% solution (4 kg in 100 litre of water) or PMA (Phenyl Mercury Acetate) @ 0.005 % solution (5 gm in 100 litre of water) to reduce evapotranspiration.
- As no forecast of significant rainfall till the end of first week of July, continue sowing of cotton and groundnut with irrigation in Gujarat and South Saurashtra region. Prefer semi spreading or bunch variety of groundnut for sowing and early and medium duration varieties of cotton for sowing.
- As no rain significant rain is expected, keep farm inputs ready and wait for sowing of *kharif* pulses, sesame, groundnut, pearl millet and rainfed cotton.
- Continue bunding to harvest rainwater.

**Contingency crops from 1-15 July 2014 for the districts Ahmedabad, Anand, Dahod, Kheda, Panachmahal, and Vadodara.**

Crops		Varieties
Maize		Gujarat Maize-4, Gujarat Maize-6
Paddy	Early	GURJARI. GR-5, 8
	Medium	GR-3, 4, 7, 9, GNR-2, IR-64, NAUR-1, GNR-3, IR-28
	Late	GR-12, 11, GAR-13, JAYA, MASURI, GR-101, 102, 103 & 104 and Narmada
	Drilled paddy	Sathi-34-36, Sukhvel-20, GR-5, GR-8, GR-9, GR-12, Ashoka-200F, I.R.-28, ADR-1
Bidi Tobacco (Rainfed)		Anand-119, GT-4, GT-5, GT-7, GT-9, GTH-1, ABT-1
Soybean		Gujarat Soybean-1, 2, JS-335, NRC-37
Greengram		K-851, GM-4, Meha
Blackgram		T-9, Guj.Urd-1
Cowpea		Gujarat cowpea-1, Gujarat cowpea-2, Gujarat cowpea-4

Pigeonpea	BDN-2, ICPL-87, GT-100,GT-101, Guj.AnandTur-102, AGT-2, Vaishali
Castor	GAUC-1, GCH-2, GCH-4, GCH-5, GCH-7
Pearl millet	GHB-577, GHB-558 and MH-179
Cotton	DesiHybrid :Deshi hybrid-7, Deshi hybrid-9, Guj. Cot-13, Guj. Cot-21, Anand Deshi Cot-1
Nagli	Guj.Nagli-1, Guj.Nagli-2, Guj.Nagli-3, Guj.Nagli-4
Kodra	Guj.Kodra-1, Guj.Kodra-2
Banti	Guj.Banti-1

### 3. Maharashtra

#### Contingency planning for Madhya Maharashtra, Marathwada and Vidarbha

Subdivision	District	Contingency crops if monsoon is delayed by 6-8 weeks
Madhya Maharashtra	Madhya Maharashtra except Western Ghat Region	Sunflower Sunflower Bajra (fodder) Groundnut short duration variety Red gram short duration.
Marathwada	Marathwada	Soybean + tur 4:2 Cotton + tur 6:2 Jowar + tur 4:2 Same/Soybean + tur 4:2 Soybean + tur 4:2
Vidarbha	East Vidarbha	Drilled rice with early maturing variety Instead of soyabean, cotton and red gram, take early rabi jowar, seasamum, linseed, maize
	West Vidarbha	Red gram / sunflower hybrid / sesame / castor / bajra / bajra + red gram 2:1 Red gram

### 4. Rajasthan

Undertake following improved short duration varieties of the crops.

#### **East Rajasthan**

Maize: Navjot, GM-6, Mahi Kanchan, Pratap Hybrid Maize-1, Pratap Hybrid Maize-2, PEHM-1 and PEHM-2.

Sorghum: CSV-17, SPV-837

Soybean: PK-472, JS-71-05, Pratap Soya-1, Pratap Soya-2, Pratap Raj Soya-24

Pearl millet: Raj-171, Hybrid: RHB-173, RHB-177, ICMH-356, HHB-60, HHB-67(improved)

Green gram:RMG-492, RMG-268, SML-668 and RMG-344

Cowpea:C-152, RS-9, FS-68, RC-19 and RC-101.

Mothbean:improved varieties are: RMO-40, RMO-225, RMO-435, IPCMO-912.

Urad bean improved varieties are: Pant U-19, Krishna, T-19.

#### **West Rajasthan**

Bajra:HHB-60, RHB-121, HHB-67, RHB-90 and ICMH-356.

Moong :SML-668, MUM-2, RMG-62, RMG-268 and K-851.

Moth: RMO-257, 225, 435, 423 and 40.

Guar RGC-936, 197,986, 1002 and 1003. Groundnut HNG-10, Chandra, M-13, T.G. 37A and T.B.G.-39.



## **Annexure II**

### **List of varieties**

#### **Andhra Pradesh:**

**Castor:** PCH-111, PCH-222, Kranti, GCH-4, Haritha

**Irrigated groundnut:** Kadiri-6, Kadiri-9, Narayani and dharani

#### **Tamil Nadu:**

**Kuruvai rice :** ADT 36, ADT 43, ADT 45 and ADT 47

#### **Karnataka:**

**Redgram :** TTB -7, BRG -01, BRG- 02, HYD -3C, BSMR 736, TS-3R

**Ragi:** GPU- 28,MR -01, 02 and 06, KMR-301

**Green gram :** Selection – 4, BGS-9, China mung, Pusa bisaki

**Black gram :** TAU – 1, DU – 1

**Soybean :** JS – 335

**Jowar :** DSV – 2, CSV-15, DSV-3, and DSV-6

**Maize:** Hybrid – DMH-2 and Arjun

#### **Groundnut:**

Bunch type – GPBD-4, JL-24 and TMV-2

Spreading type – DSG-1 and JSP-39

**Cotton:** DHH-11, NCH-145, NHH-44, DHB-105 and Sahana, Bunny, Neeraja, Bhakti, Kanaka

**Irrigated green gram:** VBN 2, VBN 3 and CO (Gg) 7

**low land paddy:** Intan, Abhilash, Hemavati and jaya.

**upland paddy:** arut or prasanna

**Medium to Long Duration Tur :** PT-221,GS-1,ICP-8863 (Maruti), ICPL-87119 (Asha) WRP-1.

**Short Duration:** ICPL-87(Pragati), Selection-31(Zone 2 irrigated areas ), GCS-11-39 (Zone-2)

#### **Assam:**

**Sali rice:** Ranjit, Bahadur, Vasundhara, Kushal, Piyoli, Moniram, Rangali, Bhogali, Ketkijah

**Long duration varieties:** Pankaj, Mashuri, Manohar Sali and other tall varieties.

**Short duration varieties :** Vivek Dhan 82

**Groundnut :** TG-1A, JL-24

**Pigeon pea :** T-21

**Seasame :** SP1181, GOURI, VINAYAK

#### **Meghalaya:**

**Red gram :** UPAS-120, ICPL 87 (short duration), WB 20, Pusa 9 & Sarita (long duration)

#### **Odisha**

**Rice:** Heera, ZHU-11-26, Pathara, Vandana, Khandagiri and Parijat

**Ragi:** Dibyasingh, Godavari, Subhra, Vairabi, Neelachala, Chilika

**Maize:** Navjot, Sakti-1, Decan-103, Ganga-5, Kargil

**Groundnut:** Smruti, TAG-26, TAG-24, ICGS-11, JL-24

**Sesame:** Kanak, Kalika, Uma, Usha, Tilotama, Nilima, Prachi

**Greengram:** K-851, PDM-11, PDM-54, OUM-11-5

**Blackgram:** T-9, Pant U-11, Pant U-19, Pant U-30

**Cowpea:** SEB-2, Pusa Barsati Niger: Deomali, Niger-1 and for Okra: Utkal Gourav.

#### **West Bengal**

**Aman rice :** BCC-17, BCC-33, BCC-02, BCC-01, BCC-09

**Onion:** Rupsa, Sukhsagar

**Sunflower:** Surya (90-95days), Pack(104days)KBSH(90-95 days)

**Green Gram:** Sonali, T44,Samrat,PDM-84, Basanti

**Sesame :** Tilotoma, B-64, B-14.

**Mango :** Himsagar, Mallicka, Langra

**Coconut:** Eastcoastal, Hazari

**Moong :** Sonali (B-1), Panna (B-105), Pusa-Baishakhi

#### **Bihar**

**Kharif Maize:** Shaktiman 1, 2. Pusa agat sankar makka-3and ganga, hybrid: Shaktiman-1, Shaktiman-2, Pusa early hybrid maize-3, Ganga-11, and composite: Suawan and Devki.

**Rice:**short duration rice:Turanta, Prabhat, Richhariya, Saroj, Dhanlakshmi, Saketwork. Scented rice var. Sugandha, Kamini, Rajendra suwasini, Rajendra kasturi and Rajendra bhagwati

**Kharif finger millet:** GPU 45, 67, 28 and RAU 8

### Jharkhand:

**Rice:** short duration: Birsa Dhan - 108, Birsa Vikas Dhan 109 & 110, Vandana etc.

**Maize:** short duration: Birsa maize-1, Birsa Vikas maize-2 etc

**Pigeon Pea:** Birsa Arhar-1, Narendra Arhar-1, Bahar, ICPH-2671

**Groundnut:** short duration: A.K.-12-24, Birsa Bol

### Madhya Pradesh

**Rice:** Short duration-JR-201, JRH -4, JRH-5, JRH -8

Medium- IR-36, IR-64, Pusa sugandha-5, MTU-1001

Late-Mahsuri, Safari-17, Syamla, Swarna

**Maize:** Short duration-JVM- 421, JM-12, JM-13, JM- 216, Hybrid varieties.

Medium- Navjot, Arun, H-216, JM-13, Sartaj, Daccan 107

Late-Ganga-11, Prabhat, Trisulta, Daccan 103, Daccan 105

**Soybean:** Short duration-JS 95-60 (85 days), JS- 93-05(95 days)

Medium-JS 335 (105 days), NRC 37( 110 days)

**Black gram:** JU 86, JU- 3, T- 9

**Jowar:** Jawahar- 741, Jawahar -938, Jawahar- 1022

### Chhattisgarh

**Rice :** MTU 1010, Mahamaya

### Maharashtra

**Kharif jowar:-** Hybrid- CSH5, CSH 9, CSH13, CSH14, CSH16, CSH17, CSH18, CSH2, Improved- SPV 462, CSV 13, CSV15, CSV17, PKV 801 for Pune region and CSH14, CSH16, CSH25 for Marathwada.

**Kharif bajra:-** Hybrid variety Shraddha (RHRBH 8609), Saburi (RHRBH 8924), Phule Shanti (RHRBH 9808) and Improved variety – ICTP 8203, ICMV – 155 for Pune region and GHB558, Shraddha, Saburi, Pratibha for Marathwada.

**Kharif groundnut** – SD 11, Phule Pragati, Phule Vyas, Phule Unnati, TPG 41, TG 26.

Red Gram – ICPL 87, Vipula, BSMR-853, BSMR-736, AKT8811, Amol for Madhya Maharashtra, ICPL-87119 (Asha), C-11 for Central Vidarbha and BSMR 736, BSMR 853, BDN 711 (for rain shadow area) for Marathwada.

**Sunflower** – EC-68414, SS-56 and Bhanu.

**Soybean** – JS-335, Phule Kalyani (DS-228) for North Madhya Maharashtra, MAUS 71, JS-335 for Marathwada.

**Kharif Rice** – PKVHMT, PKV Khamang, PKV Makarand, PKV Ganesh, PKV Kisan, Sindewahi 2001, Sindewahi 1 for East Vidarbha.

**Kharif Cotton:** – Improved variety – AKA-5, AKA-7, AKA-8, American improved variety – AKH-081, PKV-Rajat, AKH-8828 and PKV DH-1 (hybrid) for Central Vidarbha Zone.

**Green Gram:** - Jalgaon 781, S8, Phule M2 for Western Maharashtra Scarcity Zone, BM-2002-1, BM 2003-2, AKM-4 and Green Gold for Marathwada.

### Gujarat

**Paddy:** GR-3, GR-4, IR – 28, Gurjary.

**Pearl millet:** GHB-558,577,538,719,732,744.

**Kharif groundnut:** Semi spreading GG-20, GG-11,13, GG-7, GAUG-10, Bunch GG-2, GG-5, TAG-24, TG-37 A, TPG-41, TLG-45, TG-26.

**Cotton:** GCH-4,6, GCH-8, Agritop-444, Solar-76, Beejdhan-2, Ajit-155, Mallika, RCH-II, Vikram-5, Sankar-4,6,8,10.

**Green gram:** GM-3, GM-4, K-851.

**Black gram:** T-9, GU-1.

**Cowpea:** Gujarat cowpea-1,2,4, pusa falguni.

**Pigeon pea:** BDN-2, GT-100, GTH-1.

**Sesame:** GT-1, GT-2 or GT-3 variety.

**Soybean:** Gujarat soyabean-1, 2, 3.

**Castor:** GAUCH-1, GCH-2,4,5,6,7 and GC-2,3.

**Maize:** Ganga safed-2, Ganga-5, African tall.

**Okra:** Gujarat Bhinda -2, Gujarat hybrid bhinda-1, Parbhani kranti

**Brijal:** PLR-1, PUSA hybrid-5,6 ,GBH-1,2.

**Tomato:** PUSA rubi, Gujarat Tameti-1,2, Hybrid-2,4, Pusa hybrid-2,4.

**Fodder Sorghum :** Sorghum-Gundari, GFS-4 & 5.

### Uttar Pradesh

**Kharif Rice:** Short duration varieties: Ratna, Govind, Pant-4, 12, Narendra-80, Saket-4, Malaviy -3022, Pushk Samrat, IR-50, Baranideep, Kasturi, CSR-10, 13; Hybrid varieties: Pant hybrid-1, Pusa RH-10, Proagro-6444, 6201, Narendra-1, 2

**Kharif Maize:** Ganga-1, Deccan, Prakash, Sartaj, HQPM-5, Prabhat, Pro-316(4640), wai-1402, Navjyoti, Shweta, Navin, Azad Uttam, Pragati, Gaurav, Kanchan, Surya, KH-9451, KH-570

**Kharif Jowar:** CSV-15,13, Vijeta, CSH-16,14,23,18

**Kharif Bajra:** Raj, WCC-75, ICMB-155, Pusa-322, ICMH-451