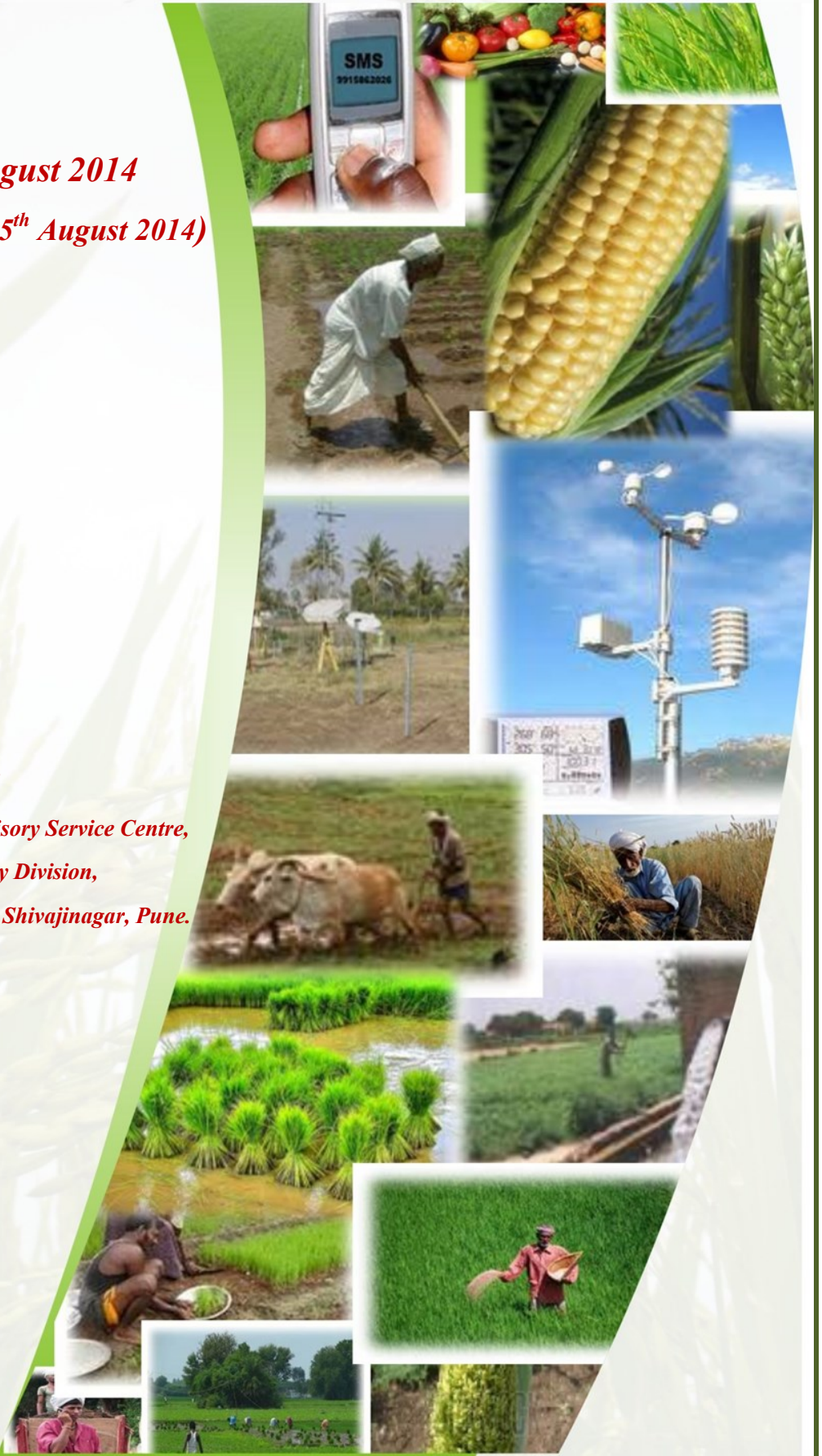


National Agromet Advisory Service Bulletin

Tuesday 12th August 2014
(For the period 12th to 15th August 2014)



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



Monsoon Watch

- Yesterday, the southwest monsoon was active over Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh, Jharkhand and East Rajasthan.

Realised Weather on 12th August 2014

- **Rainfall:** (From 0830 to 1730 hours IST of yesterday): Rain/thundershowers occurred at most places over Konkan & Goa, Coastal Karnataka and Kerala; at many places over Madhya Maharashtra and Chhattisgarh; at a few places over East Rajasthan and rest Karnataka and at isolated places over Odisha, Bihar, Tamilnadu, Andaman & Nicobar Islands and Lakshadweep. Weather remained mainly dry / dry over rest parts of the country. The amounts of rainfall (2 cm or more) recorded at 1730 IST of yesterday were: Kochi 6; Durg, Chittorgarh & Rajgarh 4 each; Agartala, Pasighat, Mahabaleshwar, Valprai, Kottayam & Dharmasala 3 each and Cherrapunji, Pendra, Kodaikanal, Minicoy, Punalur & Nedumbassery 2 each.
- **Temperature:** Yesterday, maximum temperatures were above normal by 2-4°C at most places over Maharashtra and Andhra Pradesh; at many places over Jammu & Kashmir and Gangetic West Bengal; at a few places over Himachal Pradesh, Haryana & Delhi, Rajasthan and Madhya Pradesh and at isolated places over Uttarakhand and Punjab. They were below normal by 2-4°C at many places over rest Rajasthan, rest Madhya Pradesh, Odisha and Kerala and isolated places over Chhattisgarh, Jharkhand and Arunachal Pradesh and near normal over rest parts of the country.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 15th August , 2014)

- Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at most places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Sub-Himalayan West Bengal & Sikkim during the period.
- Rain/thundershowers would occur at isolated places over Gangetic West Bengal during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at many places over Uttarakhand, West Uttar Pradesh, Bihar, Konkan & Goa during the period.
- Rain/thundershowers would occur at most places over Coastal Karnataka during the period.
- Rain/thundershowers would occur at most places over Kerala during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at many places over East Uttar Pradesh during next 48 hours and at most places thereafter.
- Rain/thundershowers would occur at a few places over Himachal Pradesh during next 24 hours and at a many places thereafter.
- Rain/thundershowers would occur at many places over Chhattisgarh and South Interior Karnataka during next 24 hours; over Lakshadweep during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over Jharkhand, Madhya Pradesh, Tamil Nadu & Pudducherry during the period.
- Rain/thundershowers would occur at a few places over Gujarat Region, North Interior Karnataka and Coastal Andhra Pradesh during next 24 hours; over East Rajasthan during next 48 hours and at isolated places thereafter.

Weather Warning during next 3 days

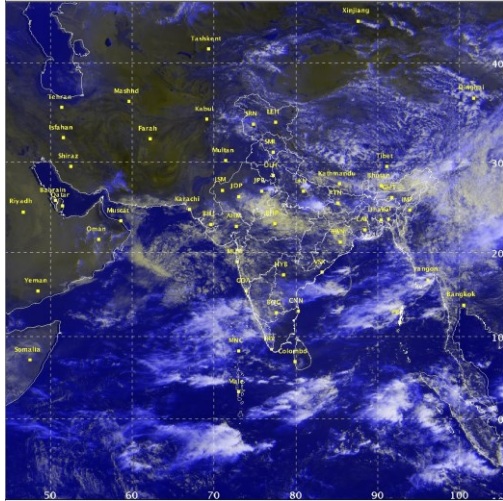
- **12 August (Day 1):** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim. Heavy rainfall would occur at isolated places over Uttarakhand, East Uttar Pradesh, Bihar, Arunachal Pradesh, Coastal Karnataka and Kerala.
- **13 August (Day 2):** Heavy to very heavy rainfall would occur at a few places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and at isolated places over Arunachal Pradesh. Heavy rainfall would occur at isolated places over Uttarakhand, East Uttar Pradesh, Bihar and Nagaland, Manipur, Mizoram & Tripura.
- **14 August (Day 3):** Heavy to very heavy rainfall would occur at a few places over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya and at isolated places over Arunachal Pradesh. Heavy rainfall would occur at isolated places over Uttarakhand, West Uttar Pradesh, East Uttar Pradesh, Bihar and Nagaland, Manipur, Mizoram & Tripura.

Weather Outlook for subsequent 4 days from 15th August 2014 to 19th August 2014

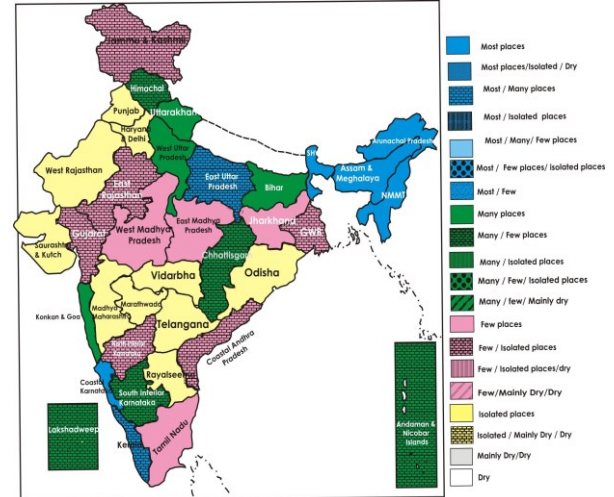
- Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim and northeastern states.
- Rain/thundershowers would occur at many places along west coast.
- Decrease in rainfall activity over plains of northwest India, central & adjoining east and peninsular India.
- Increase in rainfall activity along foothills of Himalayas.

- Rain/thundershowers would occur at isolated places over Jammu & Kashmir during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Punjab, Haryana & Delhi, West Rajasthan, Saurashtra & Kutch, Odisha, Madhya Maharashtra, Marathwada, Vidarbha, Telangana and Rayalaseema during the period.

Satellite image dated, 12.08.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 15th August, 2014)



Salient Advisories

- In **Madhya Maharashtra**, in Ahmednagar and Solapur districts, apply supplementary irrigation to standing crops and undertake hoeing to preserve soil moisture. Also undertake mulching with crop residue or polythene mulch. In other districts, continue intercultural operations in cotton, vegetables, bajra and soybean.
- In **Marathwada**, as no significant rainfall is expected, avoid sowing of contingency crops during the period.
- In **South and Middle Gujarat region**, complete sowing of contingency crops like soybean (cv. GS-1,GS-2, JS-335), short duration varieties of sunflower (cv. Modern and EC-68414 and Guj-1) and sesame (cv. Guj. Tal 1,2, 10), blackgram (cv. T-9, Guj. Udid-1), green gram (cv. GM-4, K-851, Meha), cowpea (cv. Guj. Cowpea 1,2,4, Pusa Falguni). Also complete sowing of grain sorghum (cv. GJ-35, 36 and 37) and fodder sorghum (cv. S-1049, C-10-2, Gundari, GFS 4,5).
- In **North Gujarat Region**, complete sowing of contingency crops like sesame (varieties like Guj.Tal-1,2,10), sunflower (Modern, EC 68414 and bajra (GHB- 538,732).
- In **Saurashtra region**, complete sowing of contingent crops like black gram (T-9, Guj. Udid-1), green gram (GM-4, K-851, Meha), pigeon pea (cv. BDN-2, ICPL-87, GT-100, GT-101, Vaishali), sesame (cv. Purva-1) and cotton (G. cot-13, 21, 23, V-797). For fodder purpose take sorghum cv. CSH-6 and CFS-4.
- In **West Rajasthan**, complete sowing of black gram, green gram, cluster bean and sesame. Short duration improved varieties of cluster bean RGC-936, moth (RMO-40 and RMO-225), sesame (RT-46, RT-125) may be preferred. Intercropping of groundnut cv. JL-24, Pratap mungphali-2 with sesame at 6:2 row ratio is suggested, utilizing the realised rainfall.

Detailed Zonewise Agromet Advisories

SOUTH INDIA [TN, AP, KERALA, KARNATAKA]



Transplanting of Rice



Sugarcane



Okra



Soybean

- **Realised Weather:** Rain/thundershowers occurred at most places over Coastal Karnataka and Kerala; at a few places over rest Karnataka and at isolated places over Tamilnadu and Lakshadweep. Weather remained mainly dry / dry over rest parts of the region. Maximum temperatures were above normal by 2-4° C at most places over Andhra Pradesh. They were below normal by 2-4°C at many places over Kerala and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Coastal Karnataka; at a few places over Tamil Nadu & Pudducherry and at isolated places over Telangana and Rayalaseema during the period. Rain/thundershowers would occur at most places over Kerala and at many places over Lakshadweep during next 48 hours and decrease thereafter. Rain/thundershowers would occur at many places over South Interior Karnataka and at a few places over North Interior Karnataka and Coastal Andhra Pradesh during next 24 hours and decrease thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Coastal Karnataka and Kerala on 12th August.
- **Weather Outlook:** Decrease in rainfall activity over peninsular India.
- **Advisories:**
 - **Karnataka:**
 - As rain/thundershowers would occur at most places over Coastal Karnataka during the period and many places over South Interior Karnataka on 12th, along with heavy rainfall at isolated places over Coastal Karnataka on 12th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - Continue sowing of rice, ragi, desi cotton, cowpea, soybean and horse gram in the Southern Dry Zone of Karnataka utilising the realised and expected rainfall.
 - Continue transplanting of lowland and upland rice and undertake planting of black pepper utilizing the realized and expected rainfall in the Hill Zone of Karnataka.
 - Undertake planting of bananas and continue transplanting of rice and vegetables in the Southern Transition Zone of Karnataka.
 - Continue sowing of short duration varieties of ragi and sunflower after proper seed treatment, in the Central Dry Zone of Karnataka.
 - Undertake sowing of groundnut, horsegram, sunflower and fodder crops using the realized rainfall in the North Dry Zone of Karnataka.
 - Continue sowing of fodder crops like sorghum, maize (African tall), cowpea and short-duration bajra in the North East Dry and North East Transition Zone of Karnataka.
 - **Kerala:**
 - As rain/thundershowers would occur at most/many places during the period along with heavy rainfall at isolated places on 12th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - Continue cultivation of monsoon vegetables in the Northern Zone of Kerala.
 - High humid and moist conditions are congenial for sheath blight disease in rice, mahali disease in coconut and leaf eating caterpillar in vegetables in the Central Zone of Kerala. Apply Propiconazole 25 EC @ 500 ml per 1 ha to manage sheath blight, 1% Bordeaux mixture to manage mahali disease and use tobacco decoction to manage leaf eating caterpillar after current spells of rain.
 - Present cloudy weather with high humidity condition is congenial for the incidences of stem borer and leaf roller attack on rice crop in the Problem Area Zone of Kerala. Monitor the crop and spray Asataf @ 2 g/litre at the basal part of the plant after current spells of rain after draining the field.
 - High humidity and moist conditions are congenial for the incidence of rice bug in rice and pseudostem weevil in coconut in the Southern Zone of Kerala. Apply Sevin @ 600 g in 200 litre of water / acre to manage rice bug and drench the leaf axils with Chlorpyrifos @ 4 g/litre to manage pseudostem weevil after current spells of rain.
 - **Andhra Pradesh:**
 - In Krishna Godavari Zone of Andhra Pradesh, continue nursery sowing of rice, cotton and pulses and direct seeding

of chillies.

- In the Southern Telangana Zone of Andhra Pradesh, complete sowing of rainfed crops like cotton, maize, groundnut, pulses, castor etc. at the earliest. Continue nursery sowing and transplanting of tomato, brinjal and chilli and direct sowing of cucurbits, beans and bhendi utilizing the realized and expected rainfall.
- In Scarce Rainfall Zone of Rayalaseema, continue sowing of red gram and intercropping of *korra* + redgram @ 5:1 in the rainfed tracts in Kurnool district. In Anantapur district, instead of groundnut, undertake sowing of alternate crops like red gram, jowar, bajra, *korra*, cowpea, sunflower, green gram and field bean as contingency plan. To avoid moisture stress in groundnut, spray 2% urea at 25-30 DAS.
- Incidence of sugarcane mosaic virus was found in all varieties of sugarcane (March planted crop) on a large scale and likely to spread in the North Coastal Zone of Andhra Pradesh. Spray Monocrotophos @ 1.6 ml/l or Acephate @ 1.5 g/l and apply Urea @ 25 kg + MOP @ 25 kg per acre for the control of virus transmitting vector on a non rainy day.
- **Tamil Nadu:**
 - Continue land preparation and nursery sowing of *samba* rice in Nagapattinam, Thanjavur and Trichy districts in the Cauvery Delta Zone of Tamil Nadu with irrigation.
 - Since prevailing wind speed is high, five months old banana and sugarcane may be propped against lodging in the Southern Zone of Tamil Nadu.
 - Continue sowing of irrigated maize in the South Zone of Tamil Nadu.
 - Due to humid condition, damping off disease is observed in tomato nursery which is likely to spread in some areas in the Western Zone of Tamil Nadu. Undertake drenching with Copper oxychloride @ 2.5 g/litre to manage the disease on a non rainy day.
 - Leaf mite incidence was noticed in *kuruvai* rice in tillering stage in the Cauvery Delta Zone of Tamil Nadu and is likely to increase. Spray Dicofol @ 500 ml/ acre. or wettable sulphur @ 600 g/ acre to manage the incidence on a non rainy day.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - Prevailing weather conditions are congenial for Anthrax and Enterotoxaemia in livestock in the Scarce Rainfall Zone of Andhra Pradesh. Vaccinate the animals to prevent the diseases.

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



Trasplanting of Rice

Okra

Jute

Green Gram

- **Realised Weather:** Weather remained mainly dry / dry over the region. Maximum temperatures were below normal by 2-4°C at isolated places over Arunachal Pradesh and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during the period.
- **Weather Warning:** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya on 12th August and at a few places on 13th and 14th August. Heavy to very heavy rainfall would occur at isolated places over Arunachal Pradesh on 13th and 14th August. Heavy rainfall would occur at isolated places over Arunachal Pradesh on 12th August and over Nagaland, Manipur, Mizoram and Tripura on 13th and 14th August.
- **Weather Outlook:** Rain/thundershowers would occur at most places over northeastern states.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - As rain/thundershowers would occur at most places over Assam, Meghalaya and Arunachal Pradesh during the period, along with heavy to very heavy rainfall at a few places over over Assam and Meghalaya and at isolated places over Arunachal Pradesh, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - In Assam, continue transplanting of *sali* rice. The proper age of seedling for transplanting is 21days for short duration varieties, 30-35 days for medium duration varieties. Replanting of dead hills or gap filling with seedlings of similar age should be done within 7-10 days of transplanting.
 - In flood affected areas of Lower Bramhaputra Valley Zone of Assam, the following contingency measures may be adopted for *sali* rice:

- Raising of community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (If more than 50% damaged).
 - Nursery raising of the photo insensitive short duration variety like Luit for replanting (in case of total damage)
 - Wet seeding of sprouted seeds (@75-80 kg/ha) of short to medium duration varieties like Disang, Luit, (100 days) Kapili and Kalong (120 days)
 - Direct seeding with the photo insensitive short duration variety like Luit.
 - Adoption of submergence tolerance varieties like Jalashree and Jalkuwari for repeat flood prone areas
 - In partially affected fields, drain out excess water and apply 1/2rd N + 50% K₂O as top dressing during the tillering stage.
- In Central Brahmaputra Valley Zone of Assam, continue transplanting of medium duration (130-135 days) *sali* rice. Continue sowing of arhar and sesame after current spells of heavy rain.
 - In Meghalaya, complete transplanting of *sali* rice. In high upland fields, continue planting of tuber crops like sweet potato, colocassia, tapioca, etc. after current spells of heavy rain.
 - In Arunachal Pradesh, complete transplanting of *Kharif* rice utilising realised and expected rainfall.
 - In North Bank Plain Zone of Assam, there is chance of continuing attack of fruit fly, red pumpkin beetle and epilechna beetle in summer gourds; spray Malathion 50 EC @ 1 ml per litre after current spells of rain.
 - Due to prevailing humid weather conditions, there is chance of attack of aphids on black gram in Arunachal Pradesh. Spray Methyl Demeton 25 EC or Dimethoate @ 500 ml /500 litres of water per ha after current spells of rain. Also there is chance of collar rot/wilting/damping off in green gram. Spray Carbandazim @1g per litre of water or Endofil M45 @ 2.5g per litre of water after current spells of rain.
- **Nagaland, Manipur, Mizoram and Tripura:**
 - As rain/thundershowers would occur at most places over Nagaland, Manipur, Mizoram and Tripura during the period, along with heavy rainfall at isolated places on 13th & 14th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - In Mizoram, continue transplanting of rice utilizing the realized and expected rainfall. Drain out excess water from cucurbits fields.
 - Complete transplanting of main *kharif* rice, continue nursery raising of cole crops in Manipur.
 - In Mild Tropical Plain Zone of Tripura, complete transplanting of *aman* rice and continue sowing of vegetables.
 - In Tripura, due to cloudy and humid weather there is chance of Panama wilt disease in banana. Drench with Bavistin @ 1g per liter of water and Trichodermaviride and *Pseudomonas flourosence* may be incorporated in the soil after current spells of rain. Also there are chances of attack of yellow stem borer in *aman* rice. To manage the attack, spray Validamycin 3 L @ 2.5 ml or Hexaconazole 5 EC @ 2.0 ml per litre of water after current spells of rain.
 - In Nagaland, cloudy weather is conducive for attack of thrips in chilli, spray 3% and 5% neem oil for control after current spells of rain.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - In Nagaland, high humidity is favourable for occurrence of coccidial disease in poultry, provide anti-coccidial drugs.
 - In Meghalaya, due to prevailing high relative humidity & warm temperature, there is chance for growth of molds (especially *Aspergillus sps.*) in animal feeds. So always keep animal feeds in dry and clean place and avoid direct contact with ground/soil.
- **Fisheries**
 - In flood affected areas of Lower Brahmaputra Valley Zone of Assam, protect the fish ponds by putting nylon net or bamboo net around the ponds. Due to heavy rainfalls & muddy water influx from the surrounding areas, the ponds may result reduction of dissolved oxygen. Stirring the water with a bamboo pole will help in increasing the oxygen and protect the fishes from suffocation.

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



Sugarcane

Jute

Onion

Transplanting of Rice

- **Realised Weather:** Rain/thundershowers occurred at isolated places over Odisha, Bihar, and Andaman & Nicobar Islands. Weather remained mainly dry / dry over rest parts of the region. Maximum temperatures were above normal by 2-4°C at many places over Gangetic West Bengal. They were below normal by 2-4°C at many places over Odisha; at isolated places over Jharkhand and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim; at many places over Bihar and at a few places over Jharkhand during the period. Rain/thundershowers would occur at isolated places over Odisha during the period. Rain/thundershowers would occur at isolated places over Gangetic West Bengal during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during next 48 hours and at many places thereafter.
- **Weather Warning:** Heavy to very heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim on 12th August and at a few places on 13th and 14th August. Heavy rainfall would occur at isolated places over Bihar during the period.
- **Weather Outlook:** Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim. Decrease in rainfall activity over east India adjoining to central India.
- **Advisories:**
 - **West Bengal:**
 - As rain/thundershowers would occur at most places over Sub-Himalayan West Bengal and Sikkim during the period along with heavy to very heavy rainfall at a few places, postpone irrigation, intercultural operations, application of plant protection measures and fertilizers in the standing crops. Provide adequate drainage in crop fields to avoid water stagnation.
 - In Sub Himalayan West Bengal, continue transplanting of *aman* rice utilizing the realised and expected rainfall.
 - Continue transplanting of *aman* rice in New Alluvial and Laterite and Red Soil Zone of West Bengal utilizing the realised and expected rainfall. In Bankura and Purulia districts, follow dry nursery/adopt dry seeding or drum seeding of paddy.
 - In New Alluvial Zone of West Bengal, due to cloudy weather and humid conditions fungal and bacterial diseases are prevalent in maize and likely to continue. For fungal attack, spray Mancozeb @ 2.5g per litre of water and in case of bacterial rot, spray Streptocycline @ 0.1g per litre of water on a non rainy day.
 - In Terai Zone, due to humid and wet weather there is chance of *Phytophthora* in betel vine and there is possibility of fruit and branch rotting in pointed gourd. To manage *Phytophthora*, spray Mancozeb 64% + Matalaxyl 8% @ 1.5 g/litre of water and to prevent fruit and branch rotting, spray Metalaxyl 8% + Mancozeb 64% @ 1.5 g per litre of water after current spells of rain.
 - **Andaman & Nicobar Islands:**
 - In North and Middle Andaman & Nicobar Islands, provide support to the fruit bearing banana plants to protect from high winds.
 - **Odisha:**
 - Due to heavy rains during last week there was flood in some districts of East, South Eastern and North Eastern Coastal Plain Zone of Odisha. Rice crops were completely submerged for three to five days. In the flood affected areas, the following contingent measures may be taken up after the flood water recedes;
 - In direct seeded rice, if the entire crop is damaged, wet seeding with sprouted seeds should be done by taking 120-130 days duration varieties.
 - Apply 50% N & K₂O and full dose of P₂O₅ at the time of sowing and rest dose at tillering stage.
 - If loss in seedlings is less than 50%, go for distribution of clonal tillers with application of 50 % N and 50 % K₂O.
 - In transplanted rice, in case of silt deposit, go for water spray in nursery areas.
 - Avoid application of urea and go for spraying of 1% K₂SO₄.
 - Go for clonal propagation if the loss in plant stand is less than 50%.
 - In Western Undulating Zone of Odisha, continue transplanting of rice with 3 week aged seedlings. Continue sowing of maize, arhar and cotton in upland areas taking the advantage of the realised and expected rainfall.

- In East and South Eastern Coastal Plain Zone of Odisha, continue transplanting of *kharif* rice and beushening in 21 days old direct sown rice in low land areas. Also continue sowing of green gram, black gram and soybean in upland areas. Drain out excess water from jute fields.
- In North Central Plateau Zone of Odisha, complete the sowing of green gram and black gram in fallow uplands. Grow high yielding varieties such as for green gram- K-851, PDM-54, PDM-11, OUM-11-5, black gram- T9, Pant-U-11, Pant-U-19 or Pant-U-30.
- In Western Undulating Zone of Odisha, the humid weather is conducive for swarming caterpillar development in rice. Monitor the crop. Clean the bunds of rice fields and apply Methyl chloropyrifos 1.5% dust @ 12 kg/acre on the bunds as preventive measures. Keep 20 nos. bird perchs per acre.
- In East and South Eastern Coastal Plain Zone of Odisha, due to cloudy and humid weather, there is chance of sucking insects like leaf hopper in cotton. Monitor the crops and in case of severe attack, spray Methyl demeton @ 2 ml/litre of water.
- **Bihar:**
 - As rain/thundershowers would occur at many places over Bihar, along with heavy rainfall at isolated places during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - In Bihar, in upland areas, continue sowing of urad (cv. Navin) and arhar up to middle of August. Direct seeding of short duration paddy varieties (Shabhagi, Riccharya, Turanta, Prabhat, NDR-97, Pusa 834) may be taken up in medium lands up to 15th August. If transplantings are delayed in low lands, farmers may use 45 days old seedlings of medium duration paddy varieties (Sita, Rajshree, Subhasini, Rajendra Kasturi, Rajendra Bhagwati) and 40-50 days old seedling of long duration paddy varieties (Swarna Sub-1, Rajendra Manasuri, Sambha Sub- 1 (BPT 5204), Kasturi, Vaidahi, Sudha, Rajshree) up to 15th August.
 - In North East Alluvial Plain Zone of Bihar, continue planting of mango, litchi, guava and papaya. In transplanted rice crop do top dressing of 1/3rd urea (44 kg/ha) after 1st hand weeding at 25-30 days after transplanting and apply remaining 1/3rd urea (44 kg/ha) after 2nd hand weeding at 40-45 days after transplanting. Continue transplanting of chilli, brinjal and cauliflower in raised bed. Continue sowing of short duration varieties of maize, urad, moong if rice transplanting cannot be done due to limited irrigation facilities.
 - In South Bihar Alluvial Zone, complete transplanting of short duration and scented rice variety which is 20-22 days old. Apply Butachlor @ 3 lit/ha with 700-800 lit of water after 2-3 days of transplanting to control weed in rice crop. Also complete transplanting of *kharif* onion and sowing of *kharif* brinjal, chilli, early tomato, mid season cauliflower. Continue planting of Mango, Litchi, Guava and Papaya.
- **Jharkhand:**
 - In South Eastern Plateau Zone of Jharkhand, in upland areas, continue sowing of maize, pigeon pea, niger, lobia, rice bean, urad, moong, guar, sesame, linseed, safflower and castor upto 2nd week of August.
 - In Western Plateau Zone of Jharkhand, complete transplanting of rice in low and medium land areas and complete transplanting of finger millet. Continue transplanting of tomato, cauliflower, cabbage, brinjal and chilli. In low lands.
 - In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of urad, til and groundnut and planting of mango, guava and litchi. Continue sowing of horse gram and sweet potato.
 - In South Eastern Plateau Zone of Jharkhand, weather is conducive for the attack of fruit and shoot borer in brinjal and okra and fruit fly in cucurbitaceous vegetables; spray Malathion @ 2 ml per litre of water for fruit and shoot borer and arrange Bait trap for control of fruit fly on a non rainy day.
 - Cloudy weather and high humidity during last week favours the occurrence and spreading of Brown spot disease in direct seeded upland rice in South Eastern Plateau Zone of Jharkhand; spray Bavistin @ 1 g or Beam (Tricyclazole) @ 6 g per 10 liter of water by mixing Teepol @ 0.5 ml per liter of water on a non rainy day.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - Provide dry and clean shelter to dairy animals in Old Alluvial Zone of West Bengal. Clean and hygenic water should be provided to dairy animals. De-worming and FMD-HS-BQ vaccination should be done to protect the livestock animals.
- **Poultry**
 - In Nicobar Islands, South, North and Middle Andaman, newly hatched chicks should be provided warm condition with electric bulbs under enclosed dry area with sufficient feeding and watering facility.
 - Because of high humidity, there are chances 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.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Transplanting of Rice

Okra

Green Gram

- **Realised Weather:** Rain/thundershowers occurred at many places over Chhattisgarh. Weather remained mainly dry / dry over rest parts of the region. Maximum temperatures were above normal by 2-4°C at a few places over Madhya Pradesh. They were below normal by 2-4°C at many places over rest Madhya Pradesh; at isolated places over Chhattisgarh and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Madhya Pradesh during the period. Rain/thundershowers would occur at many places over Chhattisgarh during next 24 hours and at a few places thereafter.
- **Weather Warning:** Nil
- **Weather Outlook:** Decrease in rainfall activity over central India.
- **Advisories:**
 - **Madhya Pradesh:**
 - Complete transplanting of rice and vegetables in east Madhya Pradesh.
 - In West Madhya Pradesh, complete sowing of early maturing varieties of maize (JVM 421, JM 12), red gram (UPAS 120, Pusa 9, TJT 501), sunflower (Modern, sesame variety TKG-8) and black gram (T 9, JU 86).
 - Due to cloudy weather, there is possibility of attack of red pumpkin beetle and fruit fly in cucurbit crops in Bundelkhand Zone of Madhya Pradesh; spray Trizophas 40 E.C. @ 2.0 ml per litre of water on a non rainy day
 - Due to cloudy and humid weather there are chances of attack of sucking pest in cotton in Jhabua Hill Zone of Madhya Pradesh, spray Thiomithaxam @ 0.35 g per litre of water on a non rainy day.
 - Due to cloudy weather, there are chances of incidence of leaf spot in urad crop in West Madhya Pradesh, spray Mancozeb @ 2.5 g per litre of water on a non rainy day.
 - **Chhattisgarh:**
 - In Chhattisgarh Plain Zone, complete sowing of maize, moong and urad. Maintain 5 cm water in the transplanted rice fields.
 - Complete transplanting of rice and continue planting of horticultural crops like papaya, mango, guava etc. in North Hill Zone of Chhattisgarh.
 - In Bastar Plateau Zone of Chhattisgarh due to cloudy weather there are chances of swarming caterpillar in rice , spray DDVP @ 1ml per litre of water after current spells of rain.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - In Madhya Pradesh, supplement cattle feeds with vitamins and energy food material along with calcium content to dairy animals. Vaccinate the milch cattle against H.F. and B.Q disease. Provide four to five hours of bulb light in Poultry Farms.
 - In Chhattisgarh, create smoke in cattle sheds to protect from mosquitoes.

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



Transplanting of Rice

Sugarcane

Bottle Gourd

Onion

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

Uttarakhand and Punjab. They were below normal by 2-4°C at many places over rest Rajasthan and near normal over rest parts of the region.

- **Weather Forecast:** Rain/thundershowers would occur at many places over West Uttar Pradesh and Uttarakhand and at isolated places over Haryana and Delhi, Punjab and West Rajasthan during the period. Rain/thundershowers would occur at many places over East Uttar Pradesh during next 48 hours and at most places thereafter. Rain/thundershowers would occur at a few places over Himachal Pradesh during next 24 hours and at many places thereafter. Rain/thundershowers would occur at a few places over East Rajasthan during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Jammu & Kashmir during next 48 hours and at a few places thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Uttarakhand and east Uttar Pradesh during the period and over west Uttar Pradesh on 14th August.
- **Weather Outlook:** Decrease in rainfall activity over plains of northwest India. Increase in rainfall activity along foothills of Himalayas.
- **Advisories:**
 - As rain/thundershowers would occur at many places in Uttar Pradesh and Uttarakhand during the period, over Himachal Pradesh on 13th and 14th, along with heavy rainfall at isolated places over Uttarakhand and east Uttar Pradesh, during the period and over west Uttar Pradesh on 14th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in crop fields to remove excess water.
 - **Jammu & Kashmir:**
 - In Valley Temperate Zone of Jammu & Kashmir, continue transplanting of cole crops and apply second top dose of nitrogen @ 3.25 kg urea per kanal in rice after 38-42 days of transplanting and complete second top dose of nitrogen @ 3.25 kg urea per kanal in maize.
 - Due to humid condition there are chances of aphid attack on vegetables, in Cold Arid Zone of Jammu & Kashmir. To control, apply Chloropyriphos 20EC @ 2 ml/litre of water, on a non rainy day
 - **Himachal Pradesh:**
 - Continue nursery sowing of cauliflower and transplanting of cabbage in Sub-Montane & Low Hills Sub-Tropical Zone and in Bilaspur district of Mid-Hills Sub-Humid Zone of Himachal Pradesh, utilizing realized and expected rainfall. Apply second dose of urea @40-50 kg per hectare to tomato, brinjal, capicum, chilli and cucurbits after current spells of rain.
 - Under prevailing humid weather condition, there are chances of incidence of stalk rot in maize. Drench maize fields with bleaching powder @16 kg/ha a week before tasseling. Attack of hairy caterpillar is also observed in mash and til crops. For control spray Cypermethrin 25 EC @ 0.5 ml per litre of water after current spells of rain.
 - In view of humid weather condition, there are chances of attack of fruit and stem borer in brinjal and ladies finger in Mid Hills Sub-Humid Zone of Himachal Pradesh. Spraying of neem based insecticides @ 2ml per litre or Lambda-cyhelathrin @ 1ml per litre of water along with sticker prior to flowering in brinjal and Cyhelathrin (Ripcard 10 EC) @ 5ml per litre in ladies finger is advised after current spells of rain.
 - Under prevailing humid weather condition, there are chances of attack of Anar butter fly in anar in Mild Hills Sub-Humid Zone of Himachal Pradesh. Spray Cypermethrin 10EC @ 80ml per 200 litres of water after current spells of rain. Mix sticker (100 ml Sandovit or 40g Selwet) to the spray emulsion to avoid washing off during rainy season.
 - **Uttarakhand:**
 - In Sub Humid Sub Tropic Zone of Uttarakhand, to control weeds, apply Butachlor @ 3 liter or Anilophos @ 1 litre with 700-800 litre of water 7 DAT as post emergent herbicides after current spells of rain.
 - In Sub Humid Sub Tropic Zone of Uttarakhand, due to low temperature and high humidity there is chances of leaf hopper in vegetables, to control apply Dichlorvas @ 1ml/liter of water after current spells of rain.
 - Due to high humidity (above 80%), there are chances of late blight in potato in Hill Zone of Uttarakhand. Spray of Carbendazim or Diathem M-45 @ 2g per litre of water dissolved with sticker after current spells of rain.
 - **Punjab, Haryana and Delhi:**
 - In Western Zone of Punjab, continue nursery sowing of tomato and transplanting of brinjal. Utilising the realised and expected rainfall.
 - In Undulating Plain Zone of Punjab, there are chances of fungal diseases in vegetables due to cloudy weather. Spray Infofil M 45 @ 390 g per acre in 100-200 litres of water.
 - Due to cloudy weather, there are chances of occurrence of sucking pests viz. white fly and Jassids in cotton in Western Zone of Punjab. Monitor the crops and spray the Oberon @ 200ml/acre for white fly and Ulala 80g/acre for the management of Jassids.
 - In Western Zone of Haryana, complete sowing of guar, bajra, pulses, fodder crops such as jowar mixed with cowpea to increase the nutritive value for continuous supply of green fodder.
 - In Delhi, continue sowing of pigeon pea, bajra, cluster bean, spinach, amaranths, okra, cucurbits sweet corn and baby corn during the week with realised and expected rainfall.
 - **Uttar Pradesh:**
 - In Central Plain Zone of Uttar Pradesh, , continue planting of fruit crops like mango, guava, litchi, amla, lemon,

banana, papaya, etc. utilizing the realized and expected rainfall. Complete sowing of urd, moong, jowar and bajra. Undertake second top dressing in maize at silking stage after current spells of rain.

- Undertake sowing of sesame (T-4, 12, 13, 18, Shekhar, Pragati, Tarun) and planting of mango, lemon, guava, litchi and amla in Eastern Plain Zone of Uttar Pradesh utilizing the realized and expected rainfall.
- Undertake planting of fruit crops like mango, guava, amla, lemon, papaya, etc. and horticultural crops like shisham, citrus, neem, etc. in Bundelkhand Zone of Uttar Pradesh, utilizing the realized and expected rainfall.
- Continue nursery sowing/transplanting of cauliflower, tomato, cabbage and chilli, sowing of groundnut and soybean in Central Plain Zone of Uttar Pradesh utilizing the realized and expected rainfall.
- Under prevailing humid weather condition, there are chances of attack of stem borer and shoot fly in maize in Central Plain Zone of Uttar Pradesh. Spray Dimethioate 30 EC @ 1litre or Quinolphos 25 EC @ 1.5 litre in 700-800 litre of water per hectare after current spells of rain.
- Under prevailing humid weather condition, there are chances of incidence of rice blast disease in rice in Western Plain Zone of Uttar Pradesh. For control, spray Beem @ 120 g per 200 litre of water after current spells of rain.
- Under prevailing humid weather condition, there are chances of attack of mite in rice in Central Plain Zone of Uttar Pradesh. Spray Phoret G @ 10 kg per ha or Monocrotophos 36 EC @ 1.5 litre per ha, after current spells of rain.
- Under prevailing humid weather condition, there are chances of incidence of yellow mosaic in soybean in Central Plain Zone of Uttar Pradesh. Spray Dimethioate 30 EC @ 1 litre in 100 litres of water, after current spells of rain.

▪ **Rajasthan:**

- In Semi-Arid Eastern Plain Zone of Rajasthan, continue planting of fruit crops like mango, pomegranate and aonla and transplanting of papaya seedlings.
- Complete transplanting of tomato, brinjal, chilli and cabbage in Arid Western Plain Zone of Rajasthan utilizing the realised and expected rainfall.
- In West Rajasthan, complete sowing of black gram, green gram, cluster bean and sesame. Short duration improved varieties of cluster bean RGC-936, moth (RMO-40 and RMO-225), sesame (RT-46, RT-125) may be preferred. Intercropping of Groundnut cv. JL-24, Pratap munghali-2 with sesame at 6:2 row ratio is suggested, utilizing the realised and expected rainfall.
- Due to warm and humid weather condition, there is chances of attack of grasshopper and hock moth insects in kharif crops, to control dust Methyl Parathion 2% @ 25 kg per hectare on clear weather day in Semi Arid Eastern Plain Zone of Rajasthan. Also there is incidence of small brown spots on leaves of green gram, moth bean and cowpea are the symptoms of bacterial blight disease. Spray Streptocyclin @ 1 gm and copper fungicide @ 20 gm per 10 litre water on clear weather day.
- Due to warm and humid weather condition, there is chance of attack of pod borer in *kharif* pulses in Transitional Plain Zone of Inland Drainage of Rajasthan. To control spray Cunalphos 25 EC 1 litre / ha.
- Due to cloudy weather condition, there is chance of sucking pests in legumes and mealybug in okra in Flood Prone Eastern Plain Zone of Rajasthan. To control spray Dimethoate 30 EC @ 1 litre/ ha and to control mealy bug, spray a solution of Acephate 70 SP @ 1 g or Profenophos @ 3 ml per litre of water on a non rainy day.

• **Floriculture**

- Due to prevailing humid weather condition there are chances of attack of blue beetle in balsam, zenia, cleome and rose in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. For control, spray Cypermethrin @ 20 ml in 10 litres of water. In poly houses attack of thrips and mites is also expected. For control spray Rogor @ 20 ml in 10 litres of water for thrips and for beetle spray Diclofol @ 20 ml in 10 litres of water after current spells of rain.

• **Horticulture**

- Complete plantation of evergreen plants like Mango, litchi, guava, citrus, laquat and amla in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. For control of attack of citrus canker in the horticultural crops, spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres after current spells of rain. Keep the basins of the plants free from weeds and arrange for drainage.

• **Animal Husbandry:**

- Under prevailing humid weather condition, there are chances of attack of ticks and mites on animals in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. For control spray Butox @ 2.0 ml per litres of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.
- Keep cattle indoors during heavy rainfall periods in Uttarakhand, Uttar Pradesh and East Rajasthan.
- Under prevailing rainy weather condition, animals may be attacked by parasites like ticks, flies, mosquitoes etc. in Uttar Pradesh. Spray Butox @ 2.0 ml per litres of water on the animals body and in the surrounding areas.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Transplanting of Rice

Sugarcane

Okra

Soybean

- **Realised Weather:** Rain/thundershowers occurred at most places over Konkan & Goa, at many places over Madhya Maharashtra. Weather remained mainly dry / dry over rest parts of the region. Maximum temperatures were above normal by 2-4°C at most places over Maharashtra and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Konkan & Goa; at isolated places over Madhya Maharashtra, Marathwada, Vidarbha, Saurashtra & Kutch region during the period. Rain/thundershowers would occur at a few places over Gujarat region during next 24 hours and at isolated places thereafter.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at many places along west coast.
- **Advisories:**
 - **Maharashtra:**
 - As rain would occur at many places over Konkan & Goa during the period, postpone irrigation, intercultural operations, application of plant protection measures and fertilizers in the standing crops.
 - In Konkan, maintain water level upto 5 cm in main rice field.
 - In Madhya Maharashtra, in Ahmednagar and Solapur districts, apply supplementary irrigation to standing crops and undertake hoeing to preserve soil moisture. Also undertake mulching with crop residue or polythene mulch. In other districts, continue intercultural operations in cotton, vegetables, bajra and soybean.
 - In Marathwada, as no significant rainfall is expected, avoid sowing of contingency crops during the period.
 - In Central Vidarbha, in areas where sowing was not undertaken, continue sowing of sunflower (TAS 82, PKV SF-9, PKVSH-27, KBSH 1 and KBSH 44) and sesame (AKT-64 and JLT-7). Intercropping of sunflower + pigeonpea (2:1), sesame + pigeonpea (4:1) may be undertaken.
 - Prevailing cloudy weather in Central Vidarbha is favourable for incidence of powdery mildew in green gram; spray Dinocap @ 10 ml per 10 liters of water.
 - **Gujarat:**
 - In South and Middle Gujarat region, complete sowing of contingency crops like soybean (cv. GS-1, GS-2, JS-335), short duration varieties of Sunflower (cv. Modern and EC-68414 and Guj-1) and Sesame (cv. Guj. Tal 1,2, 10), blackgram (cv. T-9, Guj. Udid-1), green gram (cv. GM-4, K-851, Meha), cowpea (cv. Guj. Cowpea 1,2,4, Pusa Falguni). Also complete sowing of grain sorghum (cv. GJ-35, 36 and 37) and fodder sorghum (cv. S-1049, C-10-2, Gundari, GFS 4,5).
 - In North Gujarat Region, complete sowing of contingency crops like sesame (varieties like Guj.Tal-1,2,10), sunflower (Modern, EC 68414 and bajra (GHB- 538,732).
 - In Saurashtra region, complete sowing of contingent crops like black gram (T-9, Guj. Udid-1), green gram (GM-4, K-851, Meha), pigeon pea (cv. BDN-2, ICPL-87, GT-100, GT-101, Vaishali), sesame (cv. Purva-1) and cotton (G. cot-13, 21, 23, V-797). For fodder purpose take sorghum cv. CSH-6 and CFS-4.
 - Continue sowing of cluster bean (GC-2), continue planting of different horticultural crops in Bhal and Coastal Zone of Gujarat. Continue nursery preparation for vegetable crops like brinjal, tomato and chilli in South Saurashtra Zone and transplanting of these vegetables in Bhal and Coastal Zone of Gujarat, North Gujarat Zone and in North Saurashtra Zone. Apply Carbofuran 3G @ 1.5 kg/ha at the time of transplanting.
 - Continue sowing of certified hybrid varieties of castor crop (GAUCH-2, GCH-5,6 and GCH-7) in Bhal and Coastal Zone of Gujarat, North Gujarat Zone, North West Zone and South Gujarat Heavy Rainfall Zone. Carry out gap filling and thinning in already sown crops in in Bhal and Coastal Zone of Gujarat.
 - Continue intercultural operations and weeding in rice after 15 days of transplanting in South Gujarat Heavy Rainfall Zone and in cotton and sesame in North West Zone. Complete planting of new orchards.
 - Cloudy weather and humid conditions are conducive for the incidence of *Sigatoka* leaf spot in banana in South Gujarat Zone; if incidence is noticed, spray Carbendazim @ 1 gm / 1 liter of water on a non rainy day.
 - Due to high humidity conditions, there is a chance of heavy attack of *Helicoverpa Armigera* sp. in soybean in South Saurashtra Zone. Spray Dichlorvos 0.05 (5ml) or Fenitrothion 0.05 (10 ml) or Fozelon 0.07 (20 ml) in 10 liter of water at 15 days interval and use Feromen trap for control of this pest. Due to cloudy weather condition, there is chance of incidence of collar rot in groundnut; apply Tricoderma at 6 kg/ha for control.

- **Animal Husbandry**

- In Gujarat, clean animal byres and spray neon insecticide 1 to 1.5 ml per litre of water for control of ecto parasites in animal house. Spray phenyl in the animal sheds to avoid flies, mosquitoes. Make arrangement for artificial light to birds to maintain egg production. Keep fodder in safe place to avoid spoilage due to rainfall.

Annexure I

List of varieties

Andhra Pradesh:

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

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

Red gram: black soils LRG-41, ICPL-85063 and for red soils PRG-158, PRG-100.

Tamil Nadu:

Samba rice : CR 1009/Savithri/Ponmani and ADT 50

Karnataka:

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

Medium to Long Duration Varieties of redgram: PT-221, GS-1, ICP-8863 (Maruti), ICPL-87119 (Asha) WRP-1, **Short Duration Varieties of redgram:** ICPL-87(Pragati), Selection-31(irrigated areas), GCS-11-39

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

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

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

Banana : Mortoman, Chapa, Kathali, Singapuri

Tomato: Avinash-2, 448

Bihar

Kharif Maize: Shaktiman 1, 2, Pusa agat sankar makka-3 and 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

Pigeon Pea: arhar: Bahar, Pusa 9, Narendra Arhar 1

Urd: T-9, Pant U-19, Pant Urd 31, PDU-1

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

Urd: T 9, Pant U 19, 30, 35 and Birsa urd 1

Moong: Pusa Vishal, S M L 668, K 885, P S 16, Pant Moong 2 and P D M 11.

Arhar: Birsa Arhar (210 days), Bahar (240 Days) and ICPH 2671 (210 days),

Soybean: Birsa soybean 1, Birsa safed soybean 2;

Madhya Pradesh

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

Medium- IR-36, IR-64, Pusa sugandha-5, MTU-1001, MTU-1010, MTU-81, Mahamaya

Late-Mahsuri, Safari-17, Syamla, Swarna

Maize: Short duration-JVM- 421, JM-12, JM-13, JM- 216, JS-20-29, JS-20-34.

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), JS-97-52, JS-335, JS-20-29, JS-20-34

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

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

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

Arhar: Early: TJT-501, JKM-189,

Medium : ICPL-87-119, ICPL88039

Chhattisgarh

Rice - MTU 1010, Mahamaya, IR 36, IR 64

Maize - Pusa early, Navjot 3, Chandana 3

Ragi - JPU 28, JPU 45, JK 155

Uttar Pradesh

Urd: Uttara, Narendra urd-1, Pant Urd-30, Type-27,66, Shekhar-1,2,3, Azad-1,2,3, WBU-108

Moong: Pant-1,3,4, Samrat, Narendra Moong-1, Malaveey- Jyoti,-Janchetana, Janpriya, Jagruti, Jankalyani, Samrat,

Asha, Neha, Shweta, MH-215, IPM-23

Groundnut: TG-37A, Kaushal, Amber

Jowar: Bundela, CSV-13, 15,17; CSH-14, 16, 18, 23

Bajra: WCC-75, Raj-171, ICMB-155, Pusa-322, 23, ICMH-451

Maize: Azad Uttam, Shweta

Arhar: Upas-120, Narendra-1A, Bahar

Soybean: PK-472, JS-335, MAUS-47, NRC-37

Lobia: UPC-4200

Rice: Saket-4, Ratna, Givind, Narendra-97, Narendra-80

Jammu & Kashmir:

Mash : Pant U-19, Uttra, T-9)

Moong : ML-131, PDM-54, SML-668, PS-16.

Maize : Vivek-25, Vivek QPM-9 HM-5 and HQPM-1