

# National Agromet Advisory Service Bulletin

**Tuesday 18<sup>th</sup> November 2014**  
**(For the period 18<sup>th</sup> to 21<sup>st</sup> November**



**Issued by**

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



## Realised Weather on 18<sup>th</sup> November 2014

- Significant Weather Observations:** Yesterday's cold wave was observed at isolated places over northeast Madhya Pradesh. Yesterday's minimum temperatures were observed less than 10°C at many places over western Himalayan Region and at a few places over Punjab, Haryana & Delhi, north Rajasthan and Uttar Pradesh and at isolated places over Bihar and north Madhya Pradesh. Thunderstorm has been observed at isolated places over Saurashtra & Kutch, Madhya Maharashtra and south Tamilnadu between 0830 hours IST of yesterday to 0530 hours IST today.
- Rainfall:** (From 0830 to 1730 hours IST of yesterday): Weather remained dry over the country.
- Temperature:** Yesterday, maximum temperatures were below normal by 2-4°C at many places over West Bengal & Sikkim; at a few places over West Uttar Pradesh, south Haryana & Odisha and at isolated places over Marathwada and north Chhattisgarh. They were above normal by 2-4°C at many places over Assam & Meghalaya, Vidarbha, Saurashtra & Kutch, Telangana, Karnataka and Kerala; at a few places over Rajasthan and at isolated places over south Chhattisgarh and East Madhya Pradesh and near normal over rest of the country. The lowest minimum temperature of 5.7°C was observed at Churu (Rajasthan) in the plains of the country.

## Weather Forecast

### Weather Forecast for next 3 days (upto 0830 hours IST of 21<sup>st</sup> November, 2014)

- Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at isolated places over Tamil Nadu & Puducherry during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Kerala and Lakshadweep during the period.
- Rain/thundershowers would occur at isolated places over Assam & Meghalaya during next 24 hours; over Arunachal Pradesh during next 48 hours and dry weather would prevail thereafter.
- Dry weather would prevail over rest parts of the country during the period.
- No significant change in minimum temperatures over northwest and adjoining central India during next 2-3 days.

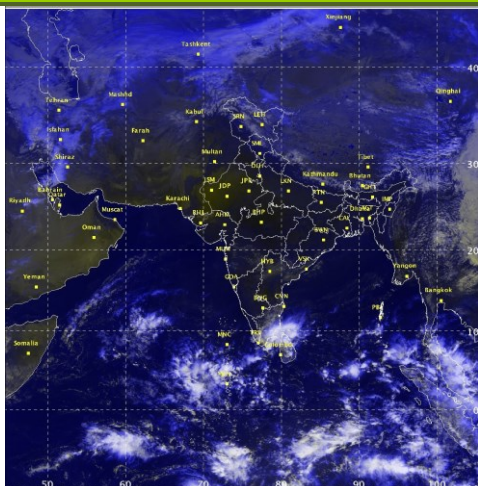
### Weather Warning during next 3 days

- 18 November (Day 1):** No weather warning.
- 19 November (Day 2):** No weather warning.
- 20 November (Day 3):** No weather warning.

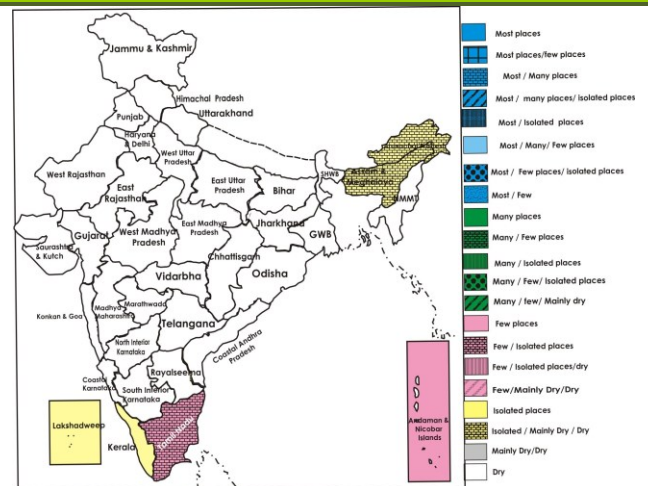
### Weather Outlook for subsequent 4 days from 21<sup>st</sup> November to 25<sup>th</sup> November 2014

- Rain/thundershowers would occur at many places over Andaman & Nicobar Islands and at a few places over extreme south peninsular India.
- Rain/ thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya and rest south peninsular India.
- Weather would be dry over rest of the country.

### Satellite image dated, 18.11.2014, 0600 UTC



### Weather Forecast Map (Valid upto 0830 hours of 21<sup>st</sup> November 2014)



## Other Salient Advisories

- Continue sowing of wheat and chickpea in the North Dry Zone of Karnataka and continue sowing of *rabi* sunflower in Central Dry Zone of **Karnataka**.
- Continue transplanting of *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu. Continue direct sowing of rice in the North Western Zone of **Tamil Nadu**.
- Continue sowing of maize, groundnut, sunflower, chickpea and safflower under optimum residual moisture conditions in the Southern **Telangana** region.
- Continue sowing of *rabi* groundnut and Bengal gram in Scarce Rainfall Zone of **Rayalaseema**.
- In Undulating Plain Zone of **Punjab**, continue sowing of long duration wheat, lentil and continue sowing of gram.
- Continue sowing of early wheat, planting of potato and sowing of early varieties of pea and onion in Lower and Mid Hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of **Himachal Pradesh**.

## Detailed Zonewise Agromet Advisories

### SOUTH INDIA [TAMIL NADU, TELANGANA, ANDHRA PRADESH, KARNATAKA, KERALA]



*Land preparation*

*Sugarcane*

*Cotton*

*Rice Transplanting*

- **Realised Weather:** Thunderstorm has been observed at isolated places over south Tamilnadu between 0830 hours IST of yesterday to 0530 hours IST today. Weather remained dry over the region. Yesterday, maximum temperatures were above normal by 2-4°C at many places over Telangana, Karnataka and Kerala and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Tamil Nadu & Puducherry during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Kerala and Lakshadweep during the period. Dry weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over extreme south peninsular India. Rain/thundershowers would occur at isolated places over rest south peninsular India. Weather would be dry over rest of the region.
- **Advisories:**
  - **Andhra Pradesh**
    - Continue sowing of *rabi* groundnut and Bengal gram in Scarce Rainfall Zone of Rayalaseema.
    - Due to hot and humid weather, fruit and flower drop incidence was observed due to thrips damage in cotton in Anantapuram district in the Scarce Rainfall Zone of Rayalaseema. Spray Acetamiprid @0.2g/litre of water to manage thrips incidence.
  - **Telangana:**
    - Continue sowing of maize, groundnut, sunflower, chickpea and safflower under optimum residual moisture conditions in the Southern Telangana region.
    - Incidence of leaf hoppers, mealy bug and grey mildew is noticed in cotton due to prevailing humid weather conditions in the Southern Telangana Zone. Spray Monocrotophos @ 1.6 ml or Acephate @ 1.5 g per litre of water to control leaf hopper, Profenophos @ 3 ml per litre of water to control mealy bug and Wettable Sulphur @ 3 g or Karathane @ 1 ml per litre of water to control grey mildew.
  - **Karnataka:**
    - Continue sowing of wheat and chickpea in the North Dry Zone of Karnataka.
    - Continue sowing of *rabi* sunflower in Central Dry Zone of Karnataka.
    - Undertake planting of potatoes in the Eastern Dry Zone of Karnataka.
    - As dry weather would prevail, continue picking of early sown cotton in the North East Dry Zone of Karnataka.
    - Continue harvesting of maize and groundnut and in the Southern Transition Zone of Karnataka.

- Cloudy and humid weather is congenial for incidences of mite in redgram the Eastern Dry Zone of Karnataka. Spray Dicofol @ 2.0 ml/litre of water for control
- In the Southern Dry Zone of Karnataka, blue beetle insects were noticed in rice due to wet and humid conditions. To manage this pest, spray Chloropyriphos 20EC @ 2 ml/liters of water.
- **Kerala:**
- Continue planting of banana, sowing of vegetables and fodder grass as intercrops in coconut gardens in the Southern Zone of Kerala.
- Undertake land preparation for nursery sowing of *puncha* rice in the Problem Area Zone of Kerala.
- High relative humidity is congenial for the incidence of rhizome rot in ginger in the Central Zone of Kerala. Dig out the affected plants and drench the beds with 1% Bordeaux mixture or trichoderma / pseudomonas cultures.
- **Tamil Nadu:**
- Continue transplanting of *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
- Undertake cultivation of small onions and continue direct sowing of rice in the North Western Zone of Tamil Nadu utilizing the realized rainfall.
- Due to prevailing weather humid and wet conditions, alternaria leaf spot incidence in cotton and thrips incidence in *thaladi* rice is noticed in the Cauvery Delta Zone of Tamil Nadu. Spray Mancozeb @ 400g/ac, or Propiconazole @ 200ml/ac to manage alternaria leaf spot and Azadiractin @ 200 ml or thiamethoxam @ 40 ml /acre to manage thrips.
- High cloud cover and high humidity is congenial for the incidence of shoot fly in sorghum in the South Zone of Tamil Nadu. Monitor the crop and spray Dimethoate @ 500 ml/ ha crop if pest incidence crosses ETL(10%).
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- Vaccinate livestock against foot and mouth disease in in the Scarce Rainfall Zone of Andhra Pradesh.

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



*Rice*



*Okra*



*Cole Crops (Nursery)*



*Green Gram*

- **Realised Weather:** Weather remained dry over the region. Yesterday, maximum temperatures were above normal by 2-4°C at many places over Assam & Meghalaya and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Assam & Meghalaya during next 24 hours; over Arunachal Pradesh during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/ thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya. Weather would be dry over rest of the region.
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
  - In Upper Bramhaputra Valley Zone and Lower Bramhaputra Valley Zone of Assam, continue sowing of rapeseed/ mustard, rabi maize, wheat and nursery sowing of winter tomato and planting of potato.
  - In Hill Zone, North Bank Plain Zone and Lower Bramhaputra Valley Zone of Assam, continue nursery raising of *boro* rice.
  - In Upper Bramhaputra Valley Zone, North Bank Plain Zone, Lower Bramhaputra Valley Zone and Central Bramhaputra Valley Zone of Assam, continue harvesting of matured and ripen sali rice.
  - In Hill Zone of Assam, continue nursery raising of winter vegetables. Continue land preparation and sowing of lentil, planting of potato. Complete sowing rapeseed and mustard at earliest.
  - In Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, continue transplanting of cole crops, land preparation and sowing of *rabi* pulses like lentil, rajmah, pea, lathyrus and oilseeds, wheat and planting of potato.
  - In Meghalaya, continue harvesting of *Kharif* rice. Continue sowing of pea, toria & lentil after harvesting of rice under zero tillage condition for utilization of residual moisture. Continue harvesting of groundnut. Continue sowing of mustard/rapeseed, maize. Apply mulching in ginger/ turmeric and potato with locally available weed biomass, maize stalk, etc

- In Arunachal Pradesh, drain out water from the fields of normal transplanted *kharif* rice 7-10 days before harvesting to hasten maturity.
- In Hill Zone of Assam, there is chance of *Cercospora* leaf spot/ YMV in black gram and green gram, spray with Bavistin @0.5g/ litre of water on clear weather.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Manipur, complete harvesting of matured *kharif* rice, groundnut and tomato. Continue sowing of rapeseed/ mustard, field pea and land preparation and planting of potato, nursery raising of onion.
- In Mizoram, continue sowing of pea, mustard and toria, nursery raising of tomato.
- In Mild Tropical Plain Zone of Tripura, continue sowing of toria, sesame, lentil etc. and planting of potato.
- In Nagaland, continue nursery sowing of winter vegetables. Continue sowing of toria and harvesting of matured *jhum* rice and soybean.
- In Mizoram, weather is congenial for attack of stem borer, gundhi bug and leaf blast in rice, spray Monocrotophos @ 20 ml/10 litres water or Imidacloprid @ 20 ml/10 litres of water against stem borer. Spray Monocrotophos 36 WSC @ 1.5 ml/litre of water against gundhi bug. Spray Triclozole (Beam) @ 0.5 g/litre against leaf blast.
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- In Meghalaya, provide poultry birds (day old to 25 days old) artificial heating through lighting of electric bulb to protect from low temperature.

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



**Sugarcane**

**Groundnut**

**Onion**

**Rice**

- **Realised Weather:** Yesterday's minimum temperatures were observed less than 10°C at isolated places over Bihar. Weather remained dry over the region. Yesterday, maximum temperatures were below normal by 2-4°C at many places over West Bengal & Sikkim; at a few places over Odisha and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during the period. Dry weather would prevail over West Bengal & Sikkim, Odisha, Jharkhand and Bihar during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at many places over Andaman & Nicobar Islands. Weather would be dry over rest of the region.
- **Advisories:**
  - **West Bengal:**
    - Continue field preparation for sowing of wheat and planting of potato in Laterite and Red Soil Zone of West Bengal. Continue land preparation for nursery sowing of winter vegetables and sowing of mustard.
    - In New Alluvial Zone, continue land preparation for sowing of mustard and nursery sowing of winter vegetables. Continue harvesting of early transplanted aman rice, if 80% of rice is ripened and prepare the main field for sowing of *rabi* crops.
    - In Coastal Saline Zone, continue harvesting of *aman* rice. Undertake sowing of lentil and lathyrus and land preparation for planting of onion.
    - In Old Alluvial Zone, continue harvesting of matured *aman* rice. Continue land preparation and sowing of mustard, lentil, wheat and planting potato.
    - In Terai Zone, continue planting of potato, sowing of mustard, wheat. As temperature is decreasing thatching of betel vine should be renovated with new straw or kuch grass to make it dense to protect from coming winter.
    - In Coastal Saline Zone, apply Chlorpyrifos dust or Sevidol dust @3.5kg/bigha against gandhi bug in aman rice ( late sown variety) at afternoon hours.
  - **Odisha:**
    - In Western Undulating Zone of Odisha, undertake land preparation and sowing of groundnut. Prepare the land for sowing of mustard in residual moisture immediately after harvesting of rice as the soil becomes ploughable. Apply irrigation to transplanted cabbage, cauliflower and tomato which are at two to three week stage.
    - In North Central Plateau Zone of Odisha, continue land preparation and sowing of wheat.
    - In East and South Eastern Coastal Plain Zone of Odisha, present weather is optimum for sowing of rainfed

groundnut, green pea and mustard. Also continue nursery raising of onion and sowing of sunflower. Medium duration rice is at maturity stage. Harvest on 85% maturity of the panicles. The current temperature and weather is favourable for pyra cropping. Go for pyra cropping of green gram, black gram, lentil, mustard etc. Undertake planting of banana and cole crops. Undertake sowing of garlic in irrigated upland and medium land. Undertake sowing of lentil, field pea and chickpea and planting of potato.

- In North Eastern Plateau Zone of Odisha, undertake sowing of wheat, groundnut, gram, peas, rapeseed, mustard and onion. Undertake harvesting of rice. As dry weather is prevailing apply irrigation to potato.
- In North Eastern Coastal Plain Zone of Odisha, as no rainfall is expected, maintain 5 cm standing water in the medium and late duration rice varieties which are at flowering and grain filling stage. Undertake transplanting of tomato, cabbage and cauliflower.
- In Mid Central Table Land Zone of Odisha, undertake harvesting of rice.

▪ **Bihar:**

- In North West Alluvial Plain Zone of Bihar, continue sowing of maize, gram and fodder crop like barseem, oat etc. and planting of potato. Complete sowing of lentil and garlic. Continue harvesting of matured rice. Complete nursery bed for onion crop. Continue field preparation for sowing of wheat. Carry Out intercultural operations like thinning and weeding in timely sown mustard crop.
- In North East Alluvial Zone of Bihar, continue sowing of lentil, sunflower and transplanting of vegetables. Continue harvesting of matured rice. Undertake sowing of wheat, maize and mustard. Undertake harvesting of matured sugarcane and prepare the field for planting of autumn sugarcane.
- In South Bihar Alluvial Zone, undertake sowing of mustard and planting of potato, continue sowing of fodder crop berseem. Continue harvesting of matured rice. Prepare the field for sowing of wheat, sunflower, pea, lentil, and gram.

▪ **Jharkhand:**

- In Western Plateau Zone of Jharkhand, continue sowing of gram, lentil, linseed. Also continue sowing of mustard and rainfed wheat. Continue planting of early potato and sowing of green peas. Continue harvesting of already matured rice. Continue sowing of barley.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, mustard, green pea and planting of potato. Continue nursery raising of onion. Continue sowing of wheat, gram, lentil, linseed. Continue harvesting of rice.
- In South Eastern Plateau Zone of Jharkhand, continue land preparation/sowing of chick pea. Continue nursery raising of onion. After harvesting of rice, undertake sowing of rainfed wheat. Continue sowing of field pea and linseed.
- Due to humid weather, there are chances of infestation of beetles in pigeon pea in South Eastern Plateau Zone of Jharkhand, spray Chlorpyrifos @ 1.5 ml per liter of water for control.
- Suitable varieties are given in Annexure I.

• **Animal Husbandry**

- In North West Alluvial Plain Zone of Bihar, low temperature condition may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep the animal in the open.
- In Coastal Saline Zone of West Bengal, provide poultry birds (day old to 25 days old) artificial heating through lighting of electric bulb to protect from low temperature.

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



*Sugarcane*



*Land preparation*



*Okra*



*Onion*

- **Realised Weather:** Yesterday cold wave was observed at isolated places over northeast Madhya Pradesh. Yesterday's minimum temperatures were observed less than 10°C at isolated places over north Madhya Pradesh. Weather remained dry over the region. Yesterday, maximum temperatures were below normal by 2-4°C at isolated places over north Chhattisgarh. They were above normal by 2-4°C at isolated places over south Chhattisgarh and East Madhya Pradesh and near normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region. No significant change in minimum temperatures over central India adjoining to northwest India during next 2-3 days.

- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
  - **Madhya Pradesh:**
    - Continue sowing of wheat in Bundelkhand Zone. Also continue transplanting of tomato, chilli, brinjal, cauliflower and cabbage on raised beds. Complete sowing of chickpea and linseed. As dry weather is prevailing, apply irrigation in mustard crop. Undertake transplanting of onion in the main fields.
    - Continue sowing of wheat, green pea and nursery sowing of tomato, chilli, brinjal, cauliflower, cabbage, capsicum, onion, early planting of potato and ginger in Vindhya Plateau Zone of Madhya Pradesh.
    - Continue sowing of vegetable pea, mustard, toria and field preparation for planting of potato in Kymore Plateau and Satpura Hill Zone.
    - Continue sowing of pea and planting of potato in Malwa Plateau Zone. Also undertake transplanting of onion, tomato, brinjal, chilli, cabbage and cauliflower on the prepared beds. Undertake sowing of wheat.
    - Undertake harvesting of matured soybean and continue land preparation and sowing of wheat, gram in Nimar Valley Zone.
    - In Jhabua Hills Zone continue land preparation for sowing of mustard, gram and wheat. Apply irrigation to winter vegetables like tomato, chilli, brinjal, cauliflower, cabbage, capsicum, early green pea and early potato. Continue sowing of garlic. Apply irrigation in cotton at flowering/boll formation stage under moisture stress condition.
    - Due to cloudy weather there are chances of attack of sucking pest in vegetables in Vindhya Plateau Zone of Madhya Pradesh, spray Imidacloprid or Thiamethoxam @ 0.35 g per litre of water.
  - **Chhattisgarh:**
    - Continue harvesting of matured rice in North Hill Zone. Continue land preparation and sowing of *rabi* crops and transplanting of vegetables like cauliflower, tomato, brinjal, chilli etc. Undertake planting of potato, garlic and raising seedlings of onion. Complete sowing of field pea, mustard and linseed as early as possible upto 20<sup>th</sup> November. Undertake sowing of wheat.
    - Undertake transplanting of cauliflower, tomato, brinjal, chilli etc. and continue sowing of leafy vegetables like coriander, fenugreek and palak and continue sowing of wheat, peas, lentil, chickpea and linseed in Chhattisgarh Plain Zone. Undertake sowing of garlic, planting of potato and raising seedlings of onion.
    - Continue land preparation for sowing of toria, green pea, linseed and nursery sowing of vegetables like, chilli, cauliflower, tomato etc. in Bastar Plateau Zone.
    - Suitable varieties are given in Annexure I.

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



**Land preparation**

**Sugarcane**

**Bottle Gourd**

**Onion**

- **Realised Weather:** Yesterday's minimum temperatures were observed less than 10°C at many places over western Himalayan Region and at a few places over Punjab, Haryana & Delhi, north Rajasthan and Uttar Pradesh. Weather remained dry over the region. Yesterday, maximum temperatures were below normal by 2-4°C at a few places over West Uttar Pradesh, south Haryana. They were above normal by 2-4°C at a few places over Rajasthan and near normal over rest of the region. The lowest minimum temperature of 5.7°C was observed at Churu (Rajasthan) in the plains of the country.
- **Weather Forecast:** Dry weather would prevail over the region during the period. No significant change in minimum temperatures over northwest India during next 2-3 days.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
  - **Jammu & Kashmir:**
    - Continue sowing of wheat, barley, oilseeds (toria, mustard), pulses (chickpea, pea), vegetables viz. (cauliflower, cabbage, broccoli and knolkhol) in Intermediate Zone of Jammu & Kashmir .
    - In Sub-Tropical Zone of Jammu & Kashmir, continue sowing of wheat, barley, oilseeds crops (toria, mustard), Vegetables crops viz. (cauliflower, radish, spinach, methi, coriander, turnip, knolkhol, broccoli, cabbage), *rabi*

pulses (peas, gram, lentil), and planting of potato and garlic.

- In Cold and Arid zone of Jammu & Kashmir, undertake field preparation for sowing of cereal crops and direct sowing of spinach, turnip and radish in greenhouses. Continue harvesting of Chinese cabbage, palak, pakchoi and lettuce from protected structures.
- Continue land preparation for sowing of vegetables viz. peas, spinach and methi and planting of garlic in Valley Temperate Zone of Jammu & Kashmir.

▪ **Himachal Pradesh:**

- Continue sowing of early wheat, planting of potato and sowing of early varieties of pea and onion in Lower and Mid Hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Continue direct sowing of radish, turnip, carrot and fenugreek and transplanting of cabbage, cauliflower and broccoli. Continue sowing of gobhi sarson, linseed and sowing of berseem, lucerne and oats as fodder crops. Continue sowing of barley in high altitude areas
- Complete sowing of radish, turnip and spinach in Mid Hills Sub-Humid Zone of Himachal Pradesh. Continue nursery preparation for sowing of late season cauliflower and cabbage..
- Continue harvesting of cauliflower and apple and sowing of Chinese cabbage, cabbage and coriander in High Hill Dry Temperate Zone of Himachal Pradesh.
- Under prevailing humid weather condition, there are chances of attack of blister blight in tea in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Spray Calixin @ 0.2% or folicure 0.1% and if attack is severe then repeat spray at 15 days with alternate spray of Blitox 0.3% at seven days interval.
- Under prevailing humid weather condition, there are chances of attack of cut worm in cauliflower in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Chloropyriphos 20 EC @ 80ml mixed in 1kg of sand can be spread in the fields.

▪ **Uttarakhand:**

- Continue land preparation for sowing of wheat and planting of potato in Hill Zone. Complete transplanting of onion and sowing of garlic, mustard, palak, methi, radish, early toria, pea.
- After harvesting of matured rice and soybean, continue land preparation and sowing of wheat, mustard, vegetables viz. pea, coriander, spinach, radish and planting of autumn sugarcane in Bhabar and Tarai Zone of Uttarakhand.
- Complete sowing of mustard, chickpea, pea, nursery sowing of vegetables like brinjal, tomato and planting of potato and planting of winter sugarcane in Sub Humid Sub Tropical Zone of Uttarakhand.

▪ **Punjab, Haryana and Delhi:**

- In Western Undulating Zone of Punjab, continue nursery sowing of mid-season cauliflower, desi varieties of radish, carrot under irrigation and turnip and planting of mango, litchi and apply irrigation in rice, cotton and maize.
- In Central Plain Zone of Punjab, continue sowing of desi varieties of carrot, radish and turnip crops and undertake transplanting of tomato under irrigation. Continue planting of potato and nursery sowing of cauliflower. Continue harvesting of matured maize and groundnut in Ludhiana district. Continue planting of early maturing autumn sugarcane.
- In Undulating Plain Zone of Punjab, continue sowing of long duration wheat, lentil and continue sowing of gram.
- In Western Zone of Punjab, continue sowing of raya, gobhi sarson, *rabi* onion, carrot, tomato. Prepare the field for planting of potato and undertake sowing of wheat.
- In Western Zone of Haryana, continue sowing of mustard and gram. As dry weather would prevail, harvest rice crop and continue the picking of matured cotton bolls of early sown cotton.
- Present weather is favourable for attack of top borer in sugarcane in Western Zone of Haryana, apply Carbofuran 3G @13 kg or Phorate 10G @ 8 kg in furrows and apply light irrigation.
- In Delhi, continue transplanting of onion seedlings and planting of early potato, winter sugarcane. Continue land preparation for sowing of early mustard, pea and early toria and sowing of radish, spinach, sarson, *rabi* onion, carrot and coriander.

▪ **Uttar Pradesh:**

- Under prevailing dry weather condition, apply first irrigation in wheat after 20-25 days after sowing at crown root stage, after 30-35 days sowing of barely at tillering stage, in French bean at flowering stage and second irrigation at pod development stage and in sugarcane in Allahabad, Chitrakut, Kausmbi, Pratapgarh and Fatehpur districts of Central Plain Zone of Uttar Pradesh. Also apply regular irrigation in vegetables and protect them against frost. Undertake harvesting of Anola.
- Complete harvesting of rice, sowing of rapeseed, gram, peas, matar and maize and planting of potato in Central Plain Zone of Uttar Pradesh. Undertake sowing of wheat with available soil moisture. Complete transplanting of cauliflower, cabbage, chilli, brinjal and tomato and continue sowing of spinach, fenugreek, radish, carrot and garlic.
- Complete sowing of normal wheat and undertake sowing of late varieties of wheat in Eastern Plain Zone of Uttar Pradesh. Also undertake sowing of mustard and rapeseed. Complete harvesting of rice.
- Undertake sowing of gram, peas, lentil, rajma in Bundelkhand Zone of Uttar Pradesh. Complete sowing of linseed.



- Due to hot and humid weather condition, there are chances of attack of fruit borer in brinjal and tomato in Eastern Plain Zone of Uttar Pradesh. Spray DDVP-76 EC@ 750 ml or Malathion 50 EC @ 2 litre in 600-800 litre of water per hectare.
- Under prevailing hot weather condition, there are chances of attack of army bug in rice in Central Plain Zone of Uttar Pradesh. For control, spray Chlopyriphos 20 EC or Quinolphos 25Ec @ 1.5 ml per 400-600 litres of water.
- **Rajasthan:**
- In Southern Humid Plain Zone continue sowing of wheat, gram and undertake sowing of rabi maize. Cluster bean- wheat is the most profitable cropping sequence in the in Flood Prone Eastern Plain Zone of Rajasthan. Continue sowing of lentil, barley, gram, carrot and irrigate potato crop within 15 days interval.
- Continue field preparation for the sowing of wheat and barley and complete sowing of mustard, gram and rainfed taramira, toria in Semi Arid Eastern Plain Zone of Rajasthan.
- Continue land preparation and sowing of wheat, lentil, gram in South eastern Humid Plain Zone of Rajasthan
- Complete land preparation and sowing of lucerne, taramira, methi and mustard in Transitional Plain Zone of Inland Drainage of Rajasthan.
- In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, continue sowing of wheat gram and mustard and continue harvesting of maize and sorghum.
- The present weather conditions are conducive for attack of cutworm and painted bug in mustard in Flood Prone Eastern Plain Zone of Rajasthan. To control, apply Quinalphos dust @1.5%.
- Due to slight increase in day temperature, mustard may be infested by saw fly or painted bug in Arid Western Plain Zone of Rajasthan. To control apply Methyl Parathion 2% or Malathion 5% dust @ 24 kg/ha during morning or evening time and repeat after 15 days.
- Mango, Guava and pomegranate may be attacked by mealbug insect. Hopper of this bug suck sap of tender leaves of these trees. To control this mix Qinalphos 1.5 % @ 50-100 g per tree in soil at a depth of 10-25 cm in Semi Arid Eastern Plain Zone of Rajasthan.
- Suitable varieties are given in Annexure I.
- **Floriculture**
- Continue nursery raising of winter flowers in poly houses in Sub Montane and Low Hills Sub-Tropical; Zone of Himachal Pradesh. For the control of blue beetle in roses and balsam, spray Cypermythrin @0.05%. Present weather is conducive for attack of mites in carnation. For control, spray Cypermythrin @0.05% at 15 days interval.
- **Animal Husbandry:**
- Due to fall in night temperature, keep cows in their cowshed to protect them from cold in High Hill Temperate Dry Zone of Himachal Pradesh. Also give 40-50g minerals mixture with the daily.
- Under prevailing humid weather condition, there are chances of attack of ticks and mites on animals in Sub Montane and Low Hills Sub-Tropical; Zone of Himachal Pradesh and Intermediate Zone of Jammu & Kashmir. For control spray Butox @ 2.0 ml per litre of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.

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



**Onion**



**Sugarcane**



**Cotton**



**Mango**

- **Realised Weather:** Thunderstorm has been observed at isolated places over Saurashtra & Kutch, Madhya Maharashtra between 0830 hours IST of yesterday to 0530 hours IST today. Weather remained dry over the region. Yesterday, maximum temperatures were below normal by 2-4°C at isolated places over Marathwada. They were above normal by 2-4°C at many places over Vidarbha, Saurashtra & Kutch and near normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
  - **Maharashtra:**
  - In Konkan, apply irrigation, fertilizers and intercultural operations in vegetable crops and mango and cashew orchards. Utilizing the residual moisture in the harvested rice field, continue sowing of *wal*, *kulthi* and cow pea.
  - In Madhya Maharashtra, continue intercultural operations like weeding and fertilizer application in sugarcane, vegetables, rabi jowar and orchards. Complete sowing of irrigated wheat and gram and planting of pre-seasonal

sugarcane. Continue picking fully opened cotton bolls during morning hours. Continue the planting of banana (*Kandebaug*).

- In Marathwada, as dry weather would prevail, apply irrigation to sugarcane, red gram and vegetables. Considering the water stress condition, apply micro irrigation like drip and sprinkle irrigation in sugarcane and orchards like banana, pomegranate, sweet lime and orange. Continue intercultural operation like weeding and fertilizer application to sugarcane, rabi jowar and vegetables. Complete sowing irrigated gram and wheat. Complete planting of pre-seasonal sugarcane. Continue picking fully opened cotton bolls during morning hours.
- In Vidarbha, as dry weather is prevailing, apply irrigation to vegetables and orange, sweet lime orchards. Apply fertilizers and continue intercultural operations in vegetables. Continue picking fully opened cotton bolls in West Vidarbha. Complete sowing of irrigated wheat.
- There may be attack of mango hoppers on new flush and inflorescence in South Konkan due to cloudy weather; spray Cypermethrin 25% @ 3 ml per 10 litres of water.
- Due to humid weather there may be incidence of blight and thrips on onion in Pune region; spray Dithane M 45 @ 30 g and Profenofos @ 10 g per 10 litres of water with sticker at 15 days interval.
- **Gujarat**
  - Continue sowing of mustard, gram and fennel in North Gujarat Zone, sowing of mustard fennel in North West Zone, sowing of wheat, gram and mustard in Bhal and Coastal Zone, sowing of wheat, mustard, gram, cumin, coriander, peas, carrot and garlic in North Saurashtra Zone, sowing of gram in Middle Gujarat Zone, sowing of onion, castor, chickpea, sweet corn and planting of sugarcane in South Gujarat Heavy Rainfall Zone, sowing of wheat and gram in South Saurashtra Zone.
  - As dry weather is prevailing, apply irrigation in alternate row in cotton at 8-10 days interval for better boll development in North Gujarat Zone.
  - Carryout inter-cultural operation and weeding in castor crop to conserve soil moisture in North Gujarat Zone, North West Zone, Bhal and Coastal Zone and Middle Gujarat Zone. Apply irrigation to vegetable nursery in Middle Gujarat Zone.
  - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
  - In Gujarat, increase the green fodder quantity for feeding. Arrange adequate amount of fresh drinking water for cattle.

## Annexure I List of varieties

### Tamil Nadu

**Late Samba/ Thaladi rice:** ADT 38, ADT 46, ADT 49, Improved white Ponni, IR 20, ASD 19, Paiyur1, TRY 1, TRY 3, CO 48, CO 49, BPT 5204 and CO 50

**Direct seeded rice:** (White Ponni or ADT 39)

### Assam

**Green gram:** T-44, Kopergaon, K-851, ML-56, ML-131 etc.

**Black gram :** T-9, T-27, Pant U-19, T-122.

**Radish :** Pusa Deshi, Pusa Chetki, Pusa Himani

**Cauliflower :** Improved Japanese, Pusa Synthetic, Pusa Snowhall and Main Crop Patna.

Early maturity Cabbage varieties : Golden Acre, Pride of India, Pusa Mukta (Sel – 8).

**Early maturity Knol Khol :** White Vienna.

**Winter brinjal :** Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, Pant Samrat

### Meghalaya

**Pigeon pea:** short duration : UPAS-120, ICPL 87. long duration WB 20, Pusa 9 & Sarita.

**Cabbage:** H-139, Pride of India

**Cauliflower:** Meghalaya Local

**Carrot:** New Karoda, Nantesh

**Radish:** Local genotype

**Broccoli:** Puspa, Aiswarya

**French bean:** Naga Local

**Pea:** Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

**Potato:** Kufri Joyti, Kufri Megha, Kufri Giriraj, Kufri Girdhari, Kufri Himsona, Kufri Himalini.

**Pea:** Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

### Tripura

**Tomato:** Trishul, Allrounder, T- 1408, T- 1458, Anup.

**Cauliflower:** CFL- 4048, Pusa early synthetic, Kamaya, Suhasihi.

**Cabbage:** BC- 76, Pusa Drum Head, Pusa Synthetic.

**Broccoli:** Everest, Ayeshwaria.

### **Odisha**

**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**

**Banana:** Mortoman, Chapa, Kathali, Singapuri.

**Tomato:** Avinash-2, 448.

**Cabbage:** Pride of India, Pusa early, Kranti.

**Cauliflower:** Jawhar moti, Bharat Jyoti, Early banaras

### **Bihar**

**Shakarkand:** Rajendra Shakarkand- 5, Rajendra Shakarkand-35, Rajendra Shakarkand-43, Rajendra Shakarkand-47, Kalmegh and Rajendra Shakarkand-92.

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

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

**Radish:** Pusa Chetki, Pusa Himani, Pusa Rashmi, Japani Saphed

**Pointed gourd:** Rajendra Parwal-1, Rajendra parwal-2, FP1 and 3

### **Jharkhand:**

**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),

**Maize:** short duration variety: Birsa Vikas Maize-2 and medium duration variety: Birsa Maize-1.

### **Madhya Pradesh**

**Gram:** JG-130, JG-11, JG-315, JG-16

**Wheat:** Sujata, HW-2004, HI-1500

**Winter Sugarcane:** KJN 86-572, KJN 86-141

**Green Pea:** Arkel, PSM-3, Jawahar Pea 1, Jawahar Pea 2

**Chickpea:** J.G-11, J.G-74

### **Jammu & Kashmir**

**Berseem:** Mescavi, Pusa Giant, BL-1 and Vardan

### **Uttarakhand**

**Pea:** VL Ageti Mater-7, Vivel Mater-10, Pant Subjee Mater-3, Azad Mater-3 and Arkel

**Potato:** Kufri- Jyoti, Ashok, Anand

**Toria :** Pant Toria-30, 303, 507 or local varieties.

### **Himachal Pradesh**

**Peas:** Palam Triloki, Arkel, VL-7 and Matar Ageta

**Late variety of Cauliflower:** broccoli

### **East Uttar Pradesh**

**Cabbage:** Imprabad Japani, Pusa chipali and Pusa kartiki

**Radish:** Japani white, Pusa chetakij, Hisar Muli No.1 and kalyanpur-1

**Toria:** T-9, T-36, Pant -30,303, B-9

**Potato:** Kuferi - Chandramukhi, Bahar

**Mustard:** Basati, Maya, Kanti, Urvashi, Narendra, Swarna-8, Narendra Ageti-4

**Ageti Matar:** Kashi - Nandini, Uday, Mukti, Arkel, Azad-3

### **West Uttar Pradesh:**

**Toria:** Sangam, TL-17, 67

**Ageti matar:** Azad P-3, Arkel

### **Maharashtra**

#### **Madhya Maharashtra**

**rabi jowar:** Selection-3, Phule Mauli, Phule Anuradha in light soil, Phule Chitra, Maldandi-35-1 in medium soil and Phule Vasudha, Phule Yashodha in black soil

**Safflower:** Bhima or Phule Kusuma

#### **Marathwada**

**Jowar:** Parbhani Moti or Parbhani Jyoti.

**Gujarat:**

**Pea:** Pusa Pragati.

**Carrot:** Pusa Rudhira and Pusa Kesar.