

# National Agromet Advisory Service Bulletin

**Tuesday 27<sup>th</sup> January 2015**

**(For the period 27<sup>th</sup> to 30<sup>th</sup> January 2015)**



**Issued by**

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



## Realised Weather on 27<sup>th</sup> January 2015

- **Significant Weather Observations:** Dense/very dense fog has been observed at isolated places over Punjab, Haryana & Delhi, north Rajasthan, East Uttar Pradesh, Bihar, Madhya Pradesh and Sub-Himalayan West Bengal & Sikkim. The visibility (50 m or less) has been recorded at 0830 hours IST of today: Amritsar, Shimla, Tehri, Hissar, Churu, Delhi (Palam), Bhiwani, Ajmer, Barabanki, Fursatganj, Seoni, Baghdogra, Jalpaiguri and Dhubri. Cold day conditions were prevailed at isolated places over Haryana & Delhi, northwest Rajasthan, West Uttar Pradesh and northwest Madhya Pradesh.
- **Rainfall:** (From 0830 hours IST of yesterday to 0830 hours IST of today): Light rain/snow has occurred at many places over Himachal Pradesh and at a few places over Jammu & Kashmir and Uttarakhand. Light rain/thundershower has occurred at many places over Delhi; at a few places over East Uttar Pradesh; at isolated places over West Uttar Pradesh and Madhya Pradesh. Weather remained dry over rest of the country. The amounts of rainfall (1 cm and more) recorded at 0830 hours IST of today are: Khajuraho 2; Pahalgam, Fursatganj, Batote, Manali, Sundernagar, Nahan, Kalpa, Tehri and Shimla 1 each.
- **Temperature: Minimum temperatures** are below normal by 2-4° C at many places over West Rajasthan, Saurashtra & Kutch; at a few places over Punjab; at isolated places over East Rajasthan, Gujarat region, Konkan & Goa, North Interior Karnataka and Andhra Pradesh. They are above normal by 2-4° C at many places over Uttar Pradesh, Madhya Pradesh and Chhattisgarh; at a few places over Jammu & Kashmir and Himachal Pradesh; at isolated places over Jammu & Kashmir, Himachal Pradesh, Haryana & Delhi, Bihar, West Bengal & Sikkim, Assam, Odisha, Madhya Maharashtra, Marathawada and Tamilnadu and nearly normal over rest of the country. **The lowest minimum temperature of 2.0°C** has been recorded at Churu ( Rajasthan ) in plains of the country.

## Weather Forecast

### Weather Forecast for next 3 days (upto 0830 hours IST of 30<sup>th</sup> January, 2015).

- Rain/snow would occur at isolated places over Jammu & Kashmir during the period.
- Rain/snow would occur at isolated places over Himachal Pradesh and Uttarakhand during next 24 hours and dry weather would prevail thereafter.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh during the period.
- Rain/thundershowers would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, West Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Kerala and Lakshadweep during next 24 hours; over East Uttar Pradesh, Bihar, Tamil Nadu & Puducherry during next 48 hours and dry weather would prevail thereafter.
- Dry weather would prevail over rest parts of the country during the period.
- Fog would occur at a few places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, North Rajasthan, North Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura.
- Fall in night temperatures by 2-3°C over northwest India and adjoining central India from tomorrow.

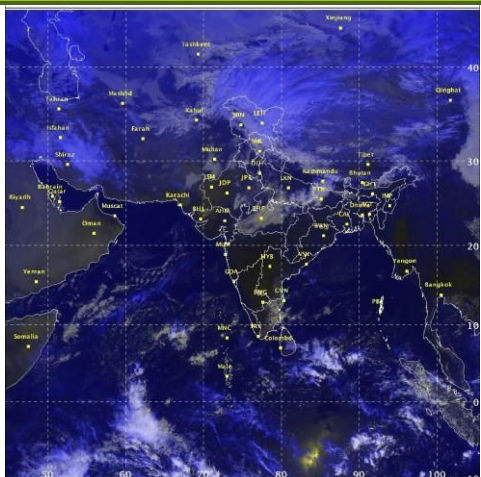
### Weather Warning during next 3 days

- **27 January (Day 1):** Dense fog would occur at a few places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, north Madhya Pradesh and Nagaland, Manipur, Mizoram & Tripura. Cold day conditions would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan and West Madhya Pradesh.
- **28 January (Day 2):** Dense fog would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Rajasthan, north Madhya Pradesh and Nagaland, Manipur, Mizoram & Tripura.
- **29 January (Day 3):** Dense fog would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and north Rajasthan.

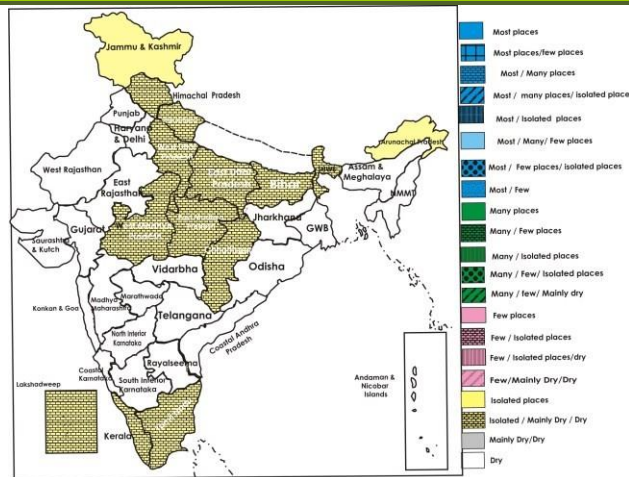
### Weather Outlook for subsequent 4 days from 30<sup>th</sup> January 2015 to 3<sup>rd</sup> February 2015.

- A fresh Western Disturbance is likely to affect Western Himalayan region from 31<sup>st</sup> January.
- Rain/ thundershowers would occur at isolated places over east and northeast India.
- Weather would be dry over rest of the country.

Satellite image dated, 27.01.2015, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 30<sup>th</sup> January 2015)



### Salient Advisories

- As cold day conditions would occur at isolated places over **Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh, East Rajasthan** and **West Madhya Pradesh** on 27<sup>th</sup> January, apply light and frequent irrigation in standing crops and arrange for smoking around the crop fields during night hours to protect the crops from cold injury.
- Foggy weather is conducive for the incidence of blight disease in tomato and potato in Central Plain Zone of **Uttar Pradesh**. For control of blight disease in tomato, spray Mancozeb 75 WP or Ridomil MZ-27 (64% Mancozeb + 8% Metalaxyl) @ 2g/litre followed by Dithane M-45 @ 2.5g/litre of water. For control of blight in potato, spray Cymoxanil+ Mancozeb or Metalaxyl+ Mancozeb @ 1.5g/litre of water.
- Due to foggy weather, there are chances of leaf curl disease in brinjal, chilli and papaya in Bundelkhand Zone of **Madhya Pradesh**, spray Methyl Demeton 25 E.C. @ 2.0 ml per litre of water.

### Detailed Zonewise Agromet Advisories

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



*Sorghum*



*Sugarcane*



*Chilli*



*Rice Transplanting*

- **Realised Weather:** Weather remained dry over the region. Minimum temperatures are below normal by 2-4° C at isolated places over North Interior Karnataka and Andhra Pradesh. They are above normal by 2-4° C at isolated places over Tamilnadu and nearly normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Kerala during next 24 hours; over Tamil Nadu & Puducherry 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:** Weather would be dry over the region.
- **Advisories:**
  - **Andhra Pradesh:**
    - Complete harvesting of red gram, Bengal gram and castor in Anantapur district in the Scarce Rainfall Zone.
    - Continue harvesting of sugarcane and undertake spraying of Propiconazole @ 1 ml/litre of water on sugarcane immediately after stubble shaving against smut disease in ratoon crop in the North Coastal Zone.
    - As dry weather prevailing, apply light and frequent irrigations to mango crop to get synchronised flowering in

the Southern Zone.

- In the Scarce Rainfall Zone, prevailing dry weather and low temperature conditions are congenial for incidence of mango hoppers. For control, undertake spraying of Dichlorovas @ 0.5 ml/ litre or Carbaryl @3g/ litre of water in the early stages of flowering and Monochrotophos @ 1.6-2 ml/litre of water at the time of flowering.

▪ **Telangana:**

- In Telangana, as dry weather is prevailing, apply irrigation in rice nurseries.
- Prevailing low temperature is congenial for increase in *maruca* pod borer in red gram at flowering to pod formulation stage in Northern Telangana Zone. To control pod borer, spray Chlorpyriphos@ 2.5 ml + Dichlorvos @1ml/ litre of water or Spinosad @ 0.4 ml/ litre of water.
- Prevailing cool and dry weather conditions are congenial for incidence leaf blight and tobacco mosaic virus in tomato in Southern Telangana Zone. Spray Carbendazim 12 % + Mancozeb 63% WP @ 2 g or Mancozeb + Metalaxyl @ 2 g per litre of water to manage leaf blight and Fipronil @ 2 ml or Dimethoate @ 2 ml per litre of water to manage tobacco mosaic virus.

▪ **Karnataka:**

- Continue planting of sugarcane in North Transition and North East Transition Zone after proper set treatment and harvest early sown Bengal gram and pigeon pea in the North East Transition Zone.
- Continue sowing of sunflower, maize, groundnut and ragi in the Eastern Dry Zone.
- Continue nursery preparation for sowing of rice and sowing of summer maize in the North East Transition Zone.
- As dry weather is prevailing, apply irrigation to wheat and summer groundnut. Continue planting of sugarcane and harvesting of red gram, Bengal gram and safflower in the North East Dry Zone.
- Dry weather and high humidity in the morning hours is congenial for incidence of powdery mildew disease and leaf hopper in mango orchard in the North East Dry Zone, Eastern Dry Zone and Hill Zone. Spray Carbaryl WP@ 4 g/ litre of water or Carbendazim @ 1 g / litre of water to manage the incidence.
- Cloudy weather and prevailing minimum temperature is congenial for incidence of rust disease in wheat at flowering to grain filling stage in the North East Transition Zone. Spray Proficonazol 25EC @ 1ml per litre of water and repeat the same after 15 days if the disease increases.

▪ **Kerala:**

- Due to increase in temperature, powdery mildew is noticed on vegetables and likely to spread in the Central Zone. Apply wettable Sulphur @ 3 g in one litre of water.
- Prevailing humid condition is congenial for the attack of leaf rot, root wilt and leaf eating caterpillar in coconut in the Southern Zone. Remove and destroy the affected leaves and apply Copper Oxy Chloride or Dithane M 45 @ 4 g/ 1 litre of water to manage leaf rot and root wilt disease and apply Malathion1ml/ 1litre water.

▪ **Tamil Nadu:**

- Continue sowing of rice fallow pulses under waxy condition in *samba* rice fields under rice fallow condition in the Cauvery Delta Zone.
- Under prevailing clear weather condition, apply irrigation in banana and maize and undertake harvesting of rice in the Western Zone.
- As mainly dry weather would prevail, harvest the matured sunflower and rice in the South Zone.
- Prevailing low temperature and high relative humidity conditions is congenial for incidence of bacterial leaf blight in rice crop. To control, apply Streptomycin Sulphate + Tetracycline combination @ 300 g + Copper Oxychloride @ 1250 g/ha and if necessary repeat after 15 days in the Western Zone.

• **Animal Husbandry**

- Prevailing low temperature condition is congenial for *kokkera* disease in poultry in the Northern Telangana Zone. Vaccinate the birds as per the recommended age, provide clean and fresh water daily and provide artificial heating through lighting of electric bulb during night time to protect the poultry birds (day old to 25 days old) from low temperature.

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



*Rice transplanting*



*Mustard*



*Potato*



*Cabbage*

- **Realised Weather:** Weather remained dry over the region. Minimum temperatures are above normal by 2-4° C at isolated places over Assam and nearly normal over rest of the region.

- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh during the period. Dry weather would prevail over rest parts of the region during the period. Fog would occur at a few places over Nagaland, Manipur, Mizoram and Tripura.
- **Weather Warning:** Dense fog would occur at a few places over Nagaland, Manipur, Mizoram and Tripura during next 24 hours and at isolated places on 28<sup>th</sup> January.
- **Weather Outlook:** Rain/ thundershowers would occur at isolated places over the region
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
    - In Assam, continue transplanting of *boro* rice of about 45 days old (5- 6 leave stage) seedlings. Maintain 6 cm of standing water in the main fields of transplanted *boro* rice. Continue gap filling in *boro* rice after 10-15 days after transplanting.
    - In Lower Brahmaputra Valley Zone of Assam, apply irrigation in wheat at CRI stage. Continue sowing of sunflower.
    - In Central Brahmaputra Valley Zone of Assam, undertake land preparation for sowing of summer green gram and black gram.
    - In Meghalaya, continue transplanting of *boro* rice. Gap filling with seedlings of similar age should be done within 7-10 days of transplanting. Apply irrigation to mustard / rapeseed at flowering stage and cole crops. Also prepare basin around plants of khasi mandarin followed by mulching with local grasses and apply irrigation at 15-20 days interval to avoid moisture stress.
    - In Lower Brahmaputra Valley Zone of Assam, there is chance of infestation of stem borer in *rabi* maize, spray Phosphamidon 100 EC, Fenitrothion 50 EC to control the infestation.
    - In Barak Valley Zone of Assam, apply Furadon @ 2.5 g/plant at 20 days after transplanting to control fruit and shoot borer and stem borer of brinjal. Undertake soil drenching of Streptocycline 6gm/20 litre of water for effective controlling of wilting of brinjal.
    - In Central Brahmaputra Valley Zone and North Bank Plain Zone of Assam, humid weather is congenial for wilt lentil, linseed and khesari crops. Drench the soil with Bavistin @ 1ml/litre of water to protect lentil, linseed and khesari from wilt.
  - **Nagaland, Manipur, Mizoram and Tripura:**
    - In Mizoram, apply irrigation to mustard, toria, banana, brinjal, early cole crops, pea and tomato.
    - In Manipur, continue sowing of winter rice under irrigation.
    - In Nagaland, apply light irrigation in toria and pea. Apply mulching to vegetables and cole crops.
    - In Mild Tropical Plain Zone of Tripura, apply light irrigation on every alternate day in cole crops, mustard, maize and lentil. Mulching is essential after irrigation to conserve moisture. Continue land preparation for transplanting of *boro* rice. Undertake nursery preparation for summer brinjal and tomato.
    - In Tripura, due to the prevailing foggy condition there may be infestation of early blight in potato. Apply Cymoxanil+ Mancozeb or Metalaxyl+ Mancozeb @ 1.5 g per litre of water for control of early blight. Due to cloudy and humid weather, there is chance of attack of aphids in mustard. Spray Monocrotophos or Emidachloprid @ 2ml per litre of water to manage the attack.
    - In Nagaland, humid and foggy weather is favourable for occurrence of Pseudostem Weevil in banana. Remove the dried and diseased leaves and kill the weevil.
    - In Mizoram, due to foggy weather condition, there is chance of infestation of aphids in pea. For control, apply Imidachloprid @ 1.5 ml/litre of water.
    - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
  - In Northeastern States, provide artificial heating through lighting of electric bulb to protect poultry birds (upto 25 days old) from low temperature. Cover poultry and pig house with gunny bags/ polythene sheet to protect the animals from cold. During this period vaccinate poultry birds against *Ranikhet* disease.
  - In Barak Valley Zone of Assam, prevailing cold weather is favourable for attack of pneumonia in newly born chicks. Special care must be taken against pneumonia.
- **Fishery**
  - During winter season, apply Potash @ 4-5 mg/litre of water / Sukrena WS @ 1 litre per bigha of water / lime in required doses to protect the fish population against various bacterial diseases in Lower, Central and Upper Brahmaputra Valley Zone and North Bank Plain Zone of Assam.

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



*Sugarcane*



*Wheat*



*Rice transplanting*



*Onion*

- **Realised Weather:** Dense/very dense fog has been observed at isolated places over Bihar and Sub-Himalayan West Bengal & Sikkim. Weather remained dry over the region. Minimum temperatures are above normal by 2-4° C at isolated places over Bihar, West Bengal & Sikkim, Odisha and nearly normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Sub-Himalayan West Bengal & Sikkim during next 24 hours; over Bihar during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.  
Fog would occur at a few places over Bihar and Sub-Himalayan West Bengal & Sikkim.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/ thundershowers would occur at isolated places over East India.
- **Advisories:**
  - In Old Alluvial and Terai Zone, complete transplanting of *boro* rice. Cover the nursery bed with polythene or apply water in the nursery bed at night and drain water at morning to protect the seedlings from cold.
  - Due to high humidity and foggy weather, there are chances of attack of aphids and diamond back moth in vegetables during its fruiting stage in Hill Zone. To control aphids, apply Imidacloprid @ 1ml/4 litres of water and for control of diamond back moth, apply Lamda Cyhalothrin @ 10 ml/15 litres of water.
  - In Coastal Saline Zone of West Bengal, continue transplanting of *boro* rice and sowing of sunflower. Remove morning dew by stirring the seedlings of *boro* rice with bamboo stick or rope.
  - Due to low temperature and foggy weather condition, brown rust disease may become a major problem in wheat at vegetative stage in Laterite and Red Soil Zone. To control the disease, spray Zineb @ 0.2% or Mancozeb 75 WP and Sandovit @ 0.1%.
  - In Old Alluvial Zone and Terai Zone, due to low temperature and foggy weather, there is chance of attack of late blight in potato. For control, spray Mancozeb @ 2 g /litre of water and Blitox @ 4 g/litre of water alternately at 7-10 days interval by completely wetting the leaves.
  - In New Alluvial Zone, Laterite and Red Soil Zone due to prevailing foggy weather condition, attack of aphids in mustard and early blight in potato may be found. For control of aphids, apply Imidacloprid 17.8 SL @ 3 ml /10 litres of water or Quinalphos 25 EC @ 2 ml/ litres of water and for early blight, apply Mancozeb @ 2.5g/ litre of water.
- **Andaman and Nicobar Islands:**
  - In North and Middle Andaman, South Andaman, continue intercultural operations like weeding and earthing up in vegetable crops.
- **Odisha:**
  - In Western Undulating Zone, continue field preparation and planting of sugarcane. Continue nursery sowing of summer rice.
  - In East and South Eastern Coastal Plain Zone, continue nursery sowing of rice and continue transplanting of onion. Continue sowing of sunflower and groundnut.
  - In East and South Eastern Coastal Plain Zone of Odisha, cloudy weather may favour infestation of aphids in potato and pulses. Spray Dimethoate @ 400 ml or Imidachloprid @ 50 ml in 200 litres of water per acre.
  - In East and South Eastern Coastal Plain Zone of Odisha, cold weather may aggravate the infestation of downey mildew in mustard. To control, spray Redomil-MZ @ 2 g in 1 litre of water. Also cold and cloudy weather favours the infestation of powdery mildew and aphids in green gram, black gram and pea. To control powdery mildew, spray Sulfex WP @ 1 kg in 200 litres of water per acre and to control aphids, spray Imidacloprid @ 50 ml in 200 litre water per acre.
  - In North Eastern Coastal Plain Zone of Odisha, rise in temperature will favour the growth of stem borer population in rice nurseries. To control it, spray Traizophos or Chloropyriphos @2ml/litre of water.
  - In North Eastern Plateau Zone of Odisha, due to cool weather, there is chance of pod borer in gram. Monitor the gram install Pheromone trap @ 3-4 traps per acre if flowering has reached 20-25%. "T" shaped bird perches in and around crop fields may also be installed for controlling insect population.

▪ **Bihar:**

- In South Bihar Alluvial Zone, as dry weather is prevailing, continue plucking of matured pods of pea and irrigate the crop. Undertake harvesting of early sown potato, stop irrigation 15 days before harvesting.
- In North West Alluvial Plain Zone of Bihar, continue transplanting of *rabi* onion.
- In North East Alluvial Zone of Bihar, to protect the nursery of *boro* rice from cold stress, apply irrigation during evening time. Continue field preparation for planting of spring sugarcane. Undertake field preparation for sowing of early cucurbits, melons, bitter gourd, ridge gourd and lady's finger. To protect from cold injury, apply light and frequent irrigation to mango/banana /papaya/guava orchards and cover tender nursery plants by polythene sheet or keep under thatches.
- In North West Alluvial Plain Zone of Bihar, due to foggy weather there is a chance of white rust in mustard/rapeseed, spray Chlorothalonil 75 WP @ 1 g/ litre of water.
- In South Bihar Alluvial Zone, cool and humid weather is favourable for the attack of aphids in mustard/toria, spray Cartap hydrochloride or Metasystox or rogor @1.5 ml/litre of water.

▪ **Jharkhand:**

- In Western Plateau Zone, continue nursery sowing of summer rice. Undertake harvesting of timely sown potato.
- In South Eastern Plateau Zone of Jharkhand, apply irrigation in wheat, arhar, mustard, field pea and potato. Continue nursery sowing of summer rice. Undertake land preparation for sowing of vegetables like bottle gourd, khira, kakri, sponge gourd, ridge gourd, bitter gourd, okra, brinjal and shimla mirch.
- In Central & North Eastern Plateau Zone of Jharkhand, continue land preparation for sowing of vegetables like long gourd, round gourd, bitter gourd, sponge gourd, cucumber, water melon and musk melon. Continue nursery sowing of summer rice. Continue transplanting of onion.
- In Central & North Eastern Plateau Zone and South Eastern Plateau Zone of Jharkhand, low temperature and foggy weather is favourable for the attack of early and late blight disease in early planted potato crop; spray Krilaksil or Ridomil MZ @ 1.5 g per litre of water to control the disease.
- In Central & North Eastern Plateau Zone of Jharkhand, cool and dry weather is favourable for incidence of powdery mildew disease in pea. To control it, spray Kairathen @ 1 ml or Sulfex @ 3 ml per litre of water.
- In South Eastern Plateau Zone of Jharkhand, cool and humid weather in the morning and later on clear sunny weather is favourable for the attack of aphids in mustard/toria, spray Thiamethoxam 25 % WG @ 3-4 g or Rogar (Dimethoate) @ 2 ml or Monochrotophos @ 1 ml per litre of water. Also decreased sunshine hours with high humidity is congenial for the attack of diamond back moth, aphids and thrips in cole crops and tomato, spray Dimethoate (30%) @ 1 ml per litres of water to control the attack.
- Suitable varieties are given in Annexure I.

• **Animal Husbandry**

- In Bihar and Jharkhand it is advised to keep the animals inside the sheds and provide dry bedding and use heaters inside cattle sheds to protect them from cold. Increase protein level and minerals in the feed concentrate to cattle.

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



*Sugarcane*



*Wheat*



*Mustard*



*Onion*

- **Realised Weather:** Dense/very dense fog has been observed at isolated places over Madhya Pradesh. Cold day conditions were prevailed at isolated places over northwest Madhya Pradesh. Light rain/thundershower has occurred at isolated places over West Uttar Pradesh and Madhya Pradesh. Weather remained dry over rest of the region. Minimum temperatures are above normal by 2-4° C at many places over Madhya Pradesh and Chhattisgarh.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Madhya Pradesh and Chhattisgarh during next 24 hours and dry weather would prevail thereafter. Fog would occur at a few places over north Madhya Pradesh. Fall in night temperatures by 2-3°C over central India adjoining to northwest India from tomorrow.
- **Weather Warning:** Dense fog would occur at a few places on 27<sup>th</sup> and at isolated places on 28<sup>th</sup> over north Madhya Pradesh. Cold day conditions would occur at isolated places over West Madhya Pradesh on 27<sup>th</sup> January.
- **Weather Outlook:** Weather would be dry over the region.

- **Advisories:**

- **Madhya Pradesh:**

- As cold day conditions would occur at isolated places over west Madhya Pradesh on 27<sup>th</sup> January, apply light and frequent irrigation in standing crops to protect the crops from cold injury.
    - Continue transplanting of medium and late sown cauliflower, cabbage, carrot, radish and onion in main fields in Kymore Plateau and Satpura Hill Zone.
    - Continue transplanting of onion, tomato, brinjal, chilli, cabbage and cauliflower in Malwa Plateau Zone.
    - Undertake picking up of matured vegetables like pea, tomato, brinjal, chilli etc. in Vindya Plateau Zone.
    - Continue nursery preparation for summer tomato and transplanting of onion in Grid Zone.
    - Due to foggy weather, there are chances of leaf curl disease in brinjal, chilli and papaya in Bundelkhand Zone, spray Methyl Dematon 25 E.C. @ 2.0 ml per litre of water.
    - Due to cloudy and foggy weather there are chances of leaf blight disease in mustard in Satpura Plateau Zone and Bundelkhand Zone, spray Dimethoate 30 E.C. @ 2.0 ml. per litre of water.

- **Chhattisgarh:**

- As dry weather would prevail, continue digging of matured potato and undertake harvesting of matured onion in Bastar Plateau Zone.
    - Continue land preparation for transplanting of summer rice and sowing of cowpea and okra in Chhattisgarh Plain Zone and North Hill Zone. Undertake intercultural operations in sugarcane and sowing of cucurbitaceous crops in polythene and also undertake sowing of leafy vegetables.
    - Due to cloudy weather, there are chances of incidence of aphids in mustard in North Hill Zone and Plain Zone of Chhattisgarh, for control spray Methyl Demeton and Dimethioate @ 0.05% at evening hours.

- **Animal Husbandry**

- Keep animals indoors in west Madhya Pradesh to protect from cold. Increase light duration in poultry farms.

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



*Wheat*



*Sugarcane*



*Mustard*



*Cabbage*

- **Realised Weather:** Dense/very dense fog has been observed at isolated places over Punjab, Haryana & Delhi, north Rajasthan and East Uttar Pradesh. Cold day conditions were prevailed at isolated places over Haryana & Delhi, northwest Rajasthan and West Uttar Pradesh. Light rain/snow has occurred at many places over Himachal Pradesh and at a few places over Jammu & Kashmir and Uttarakhand. Light rain/thundershower has occurred at many places over Delhi; at a few places over East Uttar Pradesh; at isolated places over West Uttar Pradesh. Weather remained dry over rest of the region. Minimum temperatures are below normal by 2-4° C at many places over West Rajasthan; at a few places over Punjab; at isolated places over East Rajasthan. They are above normal by 2-4° C at many places over Uttar Pradesh; at a few places over Jammu & Kashmir and Himachal Pradesh; at isolated places over Jammu & Kashmir, Himachal Pradesh, Haryana & Delhi and nearly normal over rest of the region. **The lowest minimum temperature of 2.0°C** has been recorded at Churu (Rajasthan) in plains of the country.
- **Weather Forecast:** Rain/snow would occur at isolated places over Jammu & Kashmir during the period. Rain/snow would occur at isolated places over Himachal Pradesh and Uttarakhand during next 24 hours and dry weather would prevail thereafter. Rain/thundershowers would occur at isolated places over West Uttar Pradesh during next 24 hours; over East Uttar Pradesh during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.  
Fog would occur at a few places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, North Rajasthan. Fall in night temperatures by 2-3°C over northwest India from tomorrow.
- **Weather Warning:** Dense fog would occur at a few places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan during next 24 hours and at isolated places on 28<sup>th</sup> and 29<sup>th</sup> January. Dense fog would occur at isolated places over Uttar Pradesh on 28<sup>th</sup> and 29<sup>th</sup> January. Cold day conditions would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and East Rajasthan on 27<sup>th</sup> January.
- **Weather Outlook:** A fresh Western Disturbance is likely to affect Western Himalayan region from 31<sup>st</sup> January. Weather would be dry over rest of the region.



• **Advisories:**

➤ As cold day conditions would occur at isolated places over Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh and East Rajasthan on 27<sup>th</sup> January, apply light and frequent irrigation in standing crops and arrange for smoking around the crop fields during night hours to protect the crops from cold injury.

▪ **Jammu & Kashmir:**

➤ In Cold Arid Zone of Jammu & Kashmir, undertake direct sowing of turnip, coriander and radish in Green Houses. Also keep the trenches covered with UV film to avoid heat loss due to sudden temperature dip (< 15°C). An additional layer of black polythene from sunset to sun rise also will be beneficial for standing crops.

➤ In Sub Tropical and Intermediate Zone of Jammu & Kashmir, due to cold and humid weather there may be attack of termite in wheat crop, to control apply Chlorpyriphos 20 EC @ 4 litre/ha.

➤ Continue mulching in knol Khol, cabbage and root crops in Valley Temperate Zone of Jammu & Kashmir to protect the crops from frost injury.

▪ **Himachal Pradesh:**

➤ In Low and mid-hill areas of Sub-Montane and Low Hills Sub-Humid Tropical Zone, continue transplanting of onion.

➤ In Mid Hills Sub-Humid Zone, continue transplanting of late season cauliflower (Pusa-snowball) and cabbage and planting of onion at a distance of 15x10cm. Complete sowing of pea, radish, turnip, methi and spinach.

➤ Under prevailing low temperature and cloudy weather condition, there are chances of occurrence of yellow rust in wheat in Sub-Montane and Low Hills Sub-Humid Tropical Zone. For control, spray Tebuconazole 25 EC or Bayletan 25 WP @ 30ml or 30 g per 30 litres of water per kanal and repeat the spray at 15 days interval. Downy mildew is also expected in cruciferous vegetables. For control, spray Redomil M-Z @ 25 g per litres of water and repeat at 15 days interval.

➤ Under prevailing low temperature and cloudy weather condition, there are chances of attack of aphids in sarson, gobhi-sarson and cole crops viz. cabbage and cauliflower in Sub-Montane and Low Hills Sub-Humid Tropical Zone. Spray Malathion 50 EC @ 1 ml per litre of water and repeat at 15 days interval. For control of powdery mildew in peas, spray Celfex @ 25 g/10 litres of water or Karathane @ 5 ml/10 litres of water.

➤ Under prevailing low temperature and cloudy weather condition, there is chance of attack of woolly apple aphid in apple orchards. Spray Thiamethoxam (Ektara) @ 100g or Carbosulfan (Marshal) @ 100ml or Chlorpyriphos (Durmet) @ 200ml per 100 litres of water.

➤ Under low temperature condition, there are chances of incidence of collar rot in apple in Mild Hills Sub Humid Zone. For control, spray Ridomil @ 75 g per 20 litres of water or Bavistin @ 15-20g/20 litres of water or Dithane-M-45 @ 90-100g/15 litres of water.

▪ **Uttarakhand:**

➤ Continue sowing of sunflower after the harvesting of ratoon sugarcane in Bhabar and Tarai Zone of Uttarakhand.

➤ In Hill Zone, due to prevailing foggy weather condition, there are chances of attack of Mau in toria. For control, spray Neem oil @ 5 ml per litre of water and repeat at 10 days interval.

➤ Foggy weather is conducive for incidence of blight disease in potato in Sub humid Sub Tropic Zone of Uttarakhand. For control, spray Diethane M-45/Radomil @ 20-25 g per 10 litre of water.

▪ **Punjab, Haryana and Delhi:**

➤ In Eastern Zone of Haryana, provide polythene sheet/Sarkanda/Kahi/ rice straw to protect the plants from cold/frost injury. Dwarf vegetable varieties can be protected from frost injury by covering with 100 gauge thick white plastic bags of 35 x 25 cm size.

➤ In Undulating Plain Zone of Punjab, apply light irrigation and cover the newly planted plants with thatches for protection from cold and apply light irrigation in mustard in the evening to protect from cold/frost injury. Complete sowing of late sown wheat and transplanting of onion.

➤ In Western Semi-arid Zone of Delhi, continue transplanting of mature seedlings of tomato, cauliflower, cabbage, knolkhol and broccoli crop in the raised bed.

➤ In Western Zone of Haryana, continue transplanting of onion, mature seedlings of tomato, cauliflower and cabbage. Apply light and frequent irrigation to vegetables and young fruit plants to protect from cold and cover the young fruit plants with Bhusa /thatch to protect from cold weather.

➤ Due to foggy weather, constant monitoring of aphids in mustard is advised in Western Semi-Arid Zone of Delhi, if the attack reaches above ETL, spray Dimethoate 30 EC or Quinalphos 25 EC @ 2.0 ml\ litre of water.

➤ Due to foggy weather, there is chance of incidence of late blight disease on potato and tomato in Western Zone and Undulating Plain Zone of Punjab. To control spray Indofil-M-45/Kavach/Antracol @ 500-700 g/acre or Blitox @ 750-1000 g/acre using 250-350 litres of water/acre at weekly interval.

➤ In Punjab, due to foggy weather, there is chance of incidence of yellow rust in wheat in the form of yellow powder/stripes on the leaves. The susceptible varieties are PBW-343, PBW-502, PBW-550, HPW-184, HPW-42, HS-240, HS-295, HS-420, UP-2328 and WL-711. Farmers are advised to monitor the crop and spray the fungicides Tilt (Propiconazole) 25 EC/folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30 ml or 30 g per 30 litres of water per kanal with the appearance of the symptoms and repeat the spray after 15 days interval.

- Due to foggy weather, there is chance of aphids in mustard/rapeseed in Western plain Zone of Punjab; spray 40 g Actara 25 WG or 400 ml of Metasystox 25 EC or Rogor 30 EC or Ekalux 25 EC/Malathion 50 EC or 600 ml Dursban/Coroban 20 EC in 80-125 litres of water/acre.
- **Uttar Pradesh:**
- Under prevailing dry weather conditions, apply second irrigation in wheat 40-45 days after sowing, third after 60-65 days and fourth at 80-85 days after sowing in Central Plain Zone. Undertake sowing of summer maize and planting of sugarcane. Undertake intercultural operation in barley for soil moisture conservation.
- Continue nursery sowing of tomato and chilli and transplanting of onion in Central plain Zone.
- Under prevailing dry weather condition, apply irrigation in wheat at 25-30 days interval and in sugarcane at 20 days interval in Western Plain Zone.
- Continue land preparation for planting summer sugarcane and transplanting of onion (Pusa red) and sowing of urad and moong in Eastern Plain Zone.
- Undertake top dressing of remaining half dose of nitrogen and urea in wheat in Bundelkhand Zone. For control of weeds in wheat, apply Sulphuron Methyl 5% WG @ 40 g in 800 litres of water per hectare. Also undertake intercultural operations like weeding and hoeing in gram, pea, rajma, masoor crops.
- Foggy weather is conducive for the incidence of blight disease in tomato and potato in Central Plain Zone. For control of blight disease in tomato, spray Mancozeb 75 WP or Ridomil MZ-27 (64% Mancozeb + 8% Metalaxyl) @ 2g/litre followed by Dithane M-45 @ 2.5g/litre of water. For control of blight in potato, spray Cymoxanil+ Mancozeb or Metalaxyl+ Mancozeb @ 1.5g/litre of water.
- Under low temperature and foggy condition, there are chances of incidence blight disease in gram in Central Plain Zone. For control, spray Ziram 90%, @ 2kg/ha. For control of powdery mildew in pea, apply soluble Sulphur @3 kg or Carbendazim @500g or Tridemorph 80 EC @500ml/ha at the interval of 12-12 days.
- Under foggy weather condition, there are chances of incidence of *Alternaria* blight in mustard and late blight in potato in North Eastern Plain Zone. Spray Quinalphos @ 1g or Ridomil MZ @ 2 g/litre of water for control of *Alternaria* blight in mustard and for control of late blight in potato, spray Ridomil MZ @ 2g+ Coper Oxichloride @ 1g per litre of water. For control of attack of aphids in potato and mustard, spray Imidachloprid @ 1ml/litre of water.
- Under foggy weather condition, there is chance of attack of aphids in mustard in Western Plain Zone. For control, spray Metasystax @ 250ml/250 litres of water.
- **Rajasthan:**
- In Arid Western Plain Zone of Rajasthan (Bikaner), provide the 3<sup>rd</sup> irrigation to wheat crops of 55 days after sowing on late jointing stages and also top dressing of remaining dose of urea along with 2<sup>nd</sup> irrigation in barley 65-70 days after sowing.
- In Semi Arid Eastern Plain Zone of Rajasthan, continue land preparation for sowing of early cucurbits like muskmelon, watermelon, ridge gourds, bitter gourds, round gourd etc.
- In Southern Humid Plain Zone of Rajasthan, apply second irrigation in wheat at tillering stage with remaining 1/3<sup>rd</sup> dose of nitrogen through urea and 30% of N dose as top dressing in maize.
- Due to low temperature, there may be attack of rust in wheat, barley and pod borer in gram in Southern Humid Plain Zone of Rajasthan. For control of rust, dust Sulphur powder @ 25 kg /ha and for pod borer in gram spray of Azadiractin @ 5 ml/ litre of water.
- Suitable varieties are given in Annexure I.
- **Floriculture**
- Under prevailing low temperature, red scales are observed in roses in Sub-Montane and Low Hills Sub-Humid Zone of Himachal Pradesh. For control, spray Carbofuran @ 1 teaspoon per plant.
- **Apiculture**
- In view of prevailing low temperature, give winter packing immediately to bee colonies in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Check the colonies for nectar and give artificial food to honey bees as there is scarcity of flowers during these days. Keep colonies in sun on clear day.
- **Animal Husbandry:**
- Due to prevailing low temperature in Punjab, Haryana & Delhi, East Rajasthan and Uttar Pradesh, keep cattle in cowsheds to protect them from cold. Also give 40-50g mineral mixture with the daily feed. Also make arrangements in poultry houses for protection of birds from cold.

## WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



**Banana**



**Sugarcane**



**Sorghum**



**Mango**

- **Realised Weather:** Weather remained dry over the region. Minimum temperatures are below normal by 2-4° C at many places over Saurashtra & Kutch; at isolated places over Gujarat region, Konkan & Goa. They are above normal by 2-4°C at isolated places over Madhya Maharashtra and Marathwada and nearly normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
  - **Maharashtra:**
    - In Konkan, as dry weather is likely to prevail, apply irrigation, fertilizers and undertake intercultural operations in groundnut, vegetable crops and mango and cashew orchards. Complete transplanting of seedlings of *rabi* rice and finger millet. Maintain 2-3 cm transplanted rice field and finger millet for 8-10 days and maintain water level upto 5 cm at vegetative state.
    - In Madhya Maharashtra, apply light irrigation to vegetables, sugarcane, safflower, *rabi* jowar, wheat, gram and pomegranate orchards. Complete preparatory tillage and undertake planting of *suru* sugarcane. Continue intercultural operations like weeding and apply fertilizers in sugarcane and vegetables. Prepare the field for sowing of summer groundnut.
    - In Marathwada, as dry weather prevailed during last week and dry weather is likely to prevail during next 3 days, apply light irrigation in gram (pod development stage), wheat (booting stage), jowar and vegetables. Apply irrigation to sugarcane by drip irrigation or by alternate furrow method due to water stress condition. Continue intercultural operations in vegetables and sugarcane. Continue planting of *suru* sugarcane.
    - In Vidarbha, apply light irrigation to vegetables, gram and wheat. Continue transplanting of 30 -35 days old summer rice seedlings. Maintain 2-3 cm water level in transplanted rice field. As day temperature is rising, undertake preparatory tillage for the sowing of summer groundnut in Central Vidarbha zone.
    - Due to partly cloudy weather in south Konkan there may be attack of thrips on mango inflorescence and small fruits, spray Spinosad 45% @2.5 ml per 10 litres of water on whole tree.
    - Prevailing cold and humid weather during morning hours followed by rise in temperature in Pune region is favourable for attack of aphids in tomato, bean, wheat, gaur and gourd vegetables spray Carbosulfan @ 10 ml per 10 l of water.
  - **Gujarat:**
    - Continue land preparation for sowing of *summer* crops (groundnut, moong and pearl millet) in South Gujarat Heavy Rainfall Zone. Apply irrigation in Indian bean (pod formation stage), castor, gram and onion (bulb formation/development stage). Provide irrigation to banana orchards at 10 to 12 days interval. Harvest matured spikes of castor.
    - Carry out hand weeding and intercultural operations in wheat in North Gujarat Zone and North West Zone and in vegetable crops (brinjal, chilli, tomato and cabbage) in North West Zone.
    - Apply irrigation in mustard (pod formation stage) and light irrigation in fruit crops in Bhal and Coastal Zone of Gujarat.
    - In North Saurashtra Zone, apply irrigation in wheat (grain development stage). Keep inputs ready for summer sowing (sesame, groundnut and green gram).
    - Due to low temperature condition, there are chances of outbreak of blight disease in potato in North Gujarat Zone, spray Metalaxil MZ (Ridomil gold) @ 20 g in 10 litres of water for late blight control.
    - Due to prevailing low temperature condition, there is a chance of attack of powdery mildew and aphids in mustard crop in South Gujarat Heavy Rainfall Zone; for control of powdery mildew, spray Mancozeb (75%) @ 25g/10 litre water and for control of aphids, spray Phosphomidon (100%) 3 ml or Dimethoate (30%) 10 ml in 10 litre water.
- **Animal Husbandry**
  - Provide ad lib warm water to lactating animals. Keep young calves indoors during night time in Gujarat.

## Annexure I List of varieties

### Assam

**Boro rice:** Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Kanaklata and Dinanath, Boro-1, -2, -3, Kalinga-3, Joymati, Dinanath, Swarnav.

### 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.

**Sunflower:** Morden, Sunrise, Surya and Hybrid varieties like KBSH-1, KBSH-3 and MSFH.

**Groundnut:** Smruti, TAG-27, TAG – 24 and JL-24

**Rainfed Mustard:** Parbhathi, Anuradha, TS-29 & M-27.

**Onion:** Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan, Arka Pragati

**Sesame:** Vinayak, Kanak, Kalika, Prachi, Nirmala, Usha and Uma

### Bihar

**Boro rice:** Gutum, Prabhat, Richaria, Dhanlaxmi, Saroj Rajendra Bhagvati, and R.A.U

### Jharkhand:

**Summer Rice:** IR-36, IR-64, Naveen, lalat, Parijat (80-85 days).

### Jammu & Kashmir

**Wheat:** VL-738 and PBW-175, VL-738, VL-804, HS-240, HD-1553, HS-277, HS-240, VL-616 & SKW-196, VL-829, PBW-175, VL-892, VL-738, VL-804, HS-507, VL-829 & VL-892, VL-907, HS-240 & PBW-154.

**Onion:** Agrifound Parvati, Pusa red, N-53.

### Uttarakhand

**Wheat:** UP-2572, UP-2584, UP-1109, VL-802, VL-804, VL-738, VL-421, HS-240, VL-616, HS-277, VL-829, VL-738(mandri), HS-277 etc.

**Onion:** VL-3.

**Lentil:** T 36, BL 406, Sihore 74-7 and K 75.

**Barley:** RD 2035, RD 2052, RD 2503, RD 2668,

### Himachal Pradesh

**Wheat:** HPW-155, HPW-89, HPW-147, HPW-236, HPW-211 in low and mid hill and HPW-155, HPW-236, HPW-42 in high hill

**Late variety of Cauliflower:** broccoli

**Cauliflower:** Pusa-snowwall

**Radish:** Japanese white, Chinese pink and mino early white

**Turnip:** PTWG-1

**Carrot:** Pusa kesar

**Fenugreek:** I.C. 74, Kasoori

### East Uttar Pradesh

**Wheat:** Narendra-1012, HD-2824, 2733, HP-1731, UP-2382, PWD-343, CVW-38, DBW-39, UO-2382, HUW-510

**Wheat (Late varieties):** Malaveey-234, HP-1633, H-1744, Narendra-1014, UP-2425

**Onion:** Pusa red, Kalynpur red, light red

**Lentil:** T-8, Pant L-406, 234

### West Uttar Pradesh:

**Wheat (non-irrigated):** K-9644, Maghar(K-8027), Mandakini(K-9351), Indra(K-8962), Gomati(K-9465), HDR-77, HD-2888

**Wheat (Irrigated):** K-307, DBW-17, PBW-343,502,550, GW-366, K-1006, 607,402, DVW-39

KRL-210, 213, 19, K-8434(Prasad), NW-1067

**Lentil:** Narendra-1, DPL-62, Pant-5, L-4076, K-75, HUL-57, Shekhar-3,2, IPL-81

**Sunflower:** No.1, PAC-302, SH-322

### Rajasthan

**Mustard:** Pusa Jai Kisan (115-120 days), P.R-15 (125-130 days), Pusa bold (130-135 days), R.H. 30 and R.H. 9304 (130-135 day)

**Wheat:** HI-8381, 8498, 1544 GW-273, Raj-3077, 4037, DL-803-3, GW-322, 190, 366

**Linseed:** RL-6, RDB-1, RD-31,387, 2552, 2035, 103, BL-2

**Gram:** BG-256, Phuleji-5, RSG-44, Samrat, Pratap-1, GNG-469,149,663, Kabuli-2

**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

**summer Groundnut:** SB-11, JL-286, Phule Unati, TPG-41, TG-26 or JL-501

**Marathwada**

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

**suru Sugarcane:** CO-86032, COM- 7125, CO-8014 or CO-740

**Vidarbha**

**summer Groundnut:** TAG-24, TG-26 or SB-11.