

National Agromet Advisory Service Bulletin

Tuesday 24th February 2015
(For the period 24th to 27th February 2015)



Issued by

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



Realised Weather on 24th February 2015

- **Significant weather observations:** Dense/very Dense fog has been observed at isolated places over Punjab and Haryana. The visibility (50 m or less) has been observed at 0830 hours IST of today are: Ludhiana, Patiala, Hissar and Meerut.
- **Rainfall:** (From 0830 hours IST of yesterday to 0830 hours IST of today): Rain/snow has occurred at isolated places over Jammu & Kashmir. Rain/thundershower has occurred at isolated places over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya. Weather remained dry over rest of the country.
- **Temperature: Minimum temperatures** are below normal by 2-4°C at most places over Rayalaseema; at many places over Coastal Andhra Pradesh and at a few places over Tamil Nadu. They are above normal by 5-8°C at most places over Uttarakhand and Rajasthan; at many places over Jammu & Kashmir, Himachal Pradesh, Punjab, West Uttar Pradesh, Bihar, West Bengal & Sikkim and Gujarat; by 2-4°C at many places over Haryana & Delhi, East Uttar Pradesh, northeastern states and West Madhya Pradesh; at a few places over East Madhya Pradesh, Madhya Maharashtra and Konkan & Goa and near normal over rest of the country.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 27th February, 2015).

- Rain/snow would occur at most places over Jammu & Kashmir during the period.
- Rain/snow would occur at many places over Himachal Pradesh during next 24 hours and at most places thereafter.
- Rain/snow would occur at isolated places over Uttarakhand during next 24 hours and at many places thereafter.
- Rain/thundershowers would occur at a few places over Punjab during the period.
- Rain/thundershowers would occur at isolated places over Haryana & Delhi during next 24 hours and at a few places thereafter.
- Dry weather would prevail over West Uttar Pradesh during next 24 hours and rain/thundershowers would occur at isolated places on 25th and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, West Rajasthan and Tamil Nadu & Puducherry during the period.
- Dry weather would prevail over Arunachal Pradesh, East Uttar Pradesh, East Rajasthan, Kerala and Lakshadweep during next 24 hours; over South Interior Karnataka during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- Dry weather would prevail over rest parts of the country during the period.
- Fog would occur at isolated places over Bihar & Sub-Himalayan West Bengal & Sikkim.
- No significant change would occur in minimum temperatures over northwest India during next 48 hours and maximum temperatures would fall by 2-4°C during next 24 hours over the same area.
- No large change in day & night temperatures over west and central India during next 48 hours.

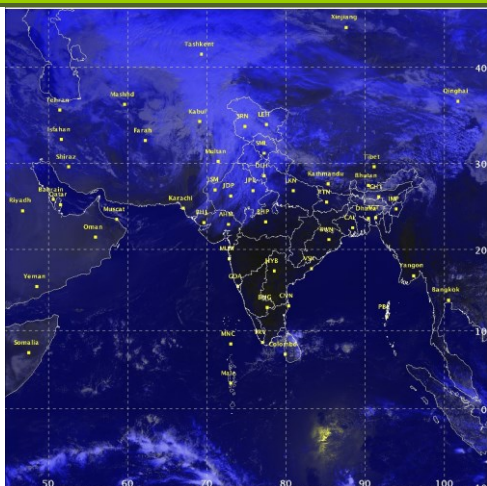
Weather Warning during next 3 days

- **24 February (Day 1):** ♦ Heavy rain/snow would occur at a few places with isolated very heavy falls over Jammu & Kashmir and Himachal Pradesh. Thunderstorm accompanied with hailstorm would occur at isolated places over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and West Rajasthan.
- **25 February (Day 2):** Heavy rain/snow would occur at a few places with isolated very heavy falls over Jammu & Kashmir and Himachal Pradesh. Heavy rain/snow would occur at isolated places over Uttarakhand. Thunderstorm accompanied with hailstorm would occur at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and West Rajasthan.
- **26 February (Day 3):** Heavy rain/snow would occur at isolated places over Jammu & Kashmir, Himachal Pradesh and Uttarakhand.

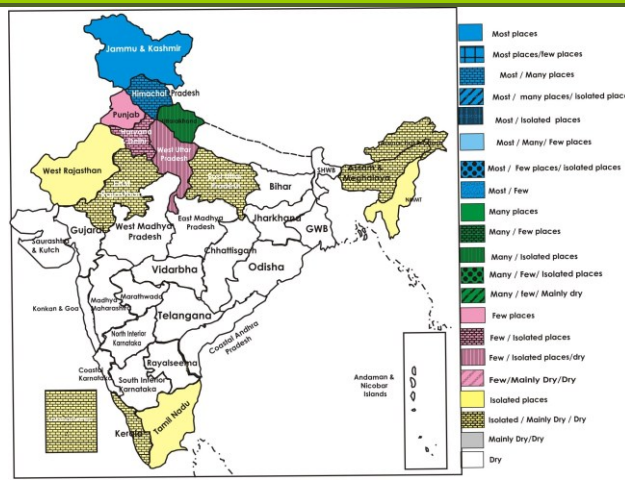
Weather Outlook for subsequent 4 days from 27th February 2015 to 3rd March 2015:

- A fresh Western Disturbance would affect Western Himalayan region and plains of northwest India from 28th onwards.
- Rain/thundershowers would occur at isolated to a few places over northeastern states and extreme south peninsular India.

Satellite image dated, 24.02.2015, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 27th February, 2015)



Salient Advisories

- As rain/snow would occur at most places over **Jammu & Kashmir** and **Himachal Pradesh** along with heavy rain/snow at a few places with isolated very heavy falls during the period, rain/snow would occur at many places over **Uttarakhand** along with heavy rain/snow at isolated places on 25th and 26th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops to avoid water stagnation in the crop fields. Keep already harvested crops at safe places.
- As thunderstorm accompanied with hailstorm would occur at isolated places over **Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and West Rajasthan** on 24th & 25th February and over **Uttarakhand** on 25th February, farmers are advised to use hail net for orchard crops to protect from mechanical damage. Also provide mechanical support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep already harvested crops at safe places.

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 most places over Rayalaseema; at many places over Coastal Andhra Pradesh and at a few places over Tamil Nadu and near normal over rest of the region.
- Weather Forecast:** Rain/thundershowers would occur at isolated places over Tamil Nadu & Puducherry during the period. Dry weather would prevail over Kerala during next 24 hours; over South Interior Karnataka during next 48 hours and rain/thundershowers would occur at isolated places 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 to a few places over extreme south peninsular India.

- **Advisories:**

- **Andhra Pradesh:**

- Incidence of late tikka leaf spot in groundnut and thrips incidence in tomato was noticed in few parts of Anantapur district due to prevailing weather (rise in day temperature) in the Scarce Rainfall Zone. For control of late tikka leaf spot, undertake spraying of Mancozeb @ 400 g + Carbendazim @ 200 g or Hexaconazole @ 400 ml or Tebuconazole @ 200 ml/ 200 litres of water. Repeat after 15 days depending on the severity. If tomato crop is in transplanting stage, raise maize or bajra as a border crop to manage thrips incidence. Spray Fipronil @ 2 ml/litre of water if incidence of thrips is severe.
- Present temperature conditions are congenial for the incidences of leaf folder and thrips in groundnut in the Southern Zone. To control leaf folder, spray Quinalphos @ 2 ml/litre of water and to control thrips, spray Imidachloprid @ 0.3 ml/litre of water.

- **Telangana:**

- Prevailing hot weather conditions are congenial for stem borer incidence in rice crop. Apply Carbofuran 3G @ 25 kg /ha at 15 DAT in 1– 2 inches of standing water in the Northern Telangana Zone.
- Incidence of aphids is noticed in safflower in the Southern Telangana due to prevailing dry weather. Spray Dimethoate @ 2 ml per litre of water to manage the incidence.

- **Karnataka:**

- Undertake sowing of water melon, planting of fodder crops in areas having irrigation facility and continue planting of sugarcane and harvesting of safflower and wheat in the North East Transition Zone.
- Undertake sowing of cowpea and green gram and transplanting of bottle gourd and ridge under irrigated condition and complete harvesting of chickpea, wheat, sorghum and safflower in the North Dry Zone.
- Complete harvesting of chilli, cotton, chickpea and wheat and continue planting of sugarcane in the North Transition Zone.
- Irrigate areca nut, coconut and black pepper gardens either by furrow or drip irrigation in the Hill Zone and continue harvesting of black pepper.

- **Kerala:**

- Undertake wet sowing of *puncha* rice and continue sowing of summer cucurbitaceous vegetables and bhindi in the Southern Zone.
- Prevailing dry weather is congenial for incidence of wilt and yellowing in black pepper in the Northern Zone. Harvest as much spikes as possible immediately and protect the vines from drought by thoroughly mulching the basins and giving life-saving basin irrigations fortnightly.
- Due to increase in temperature, there is chance of attack of leaf eating caterpillar in coconut tree in the Central Zone. The affected leaves may be cut and burnt and spray the undersurface of the fronds with Quinalphos @ 0.05%.
- Warm climate coupled with high humidity is congenial for jassids and aphids incidence in vegetables in the Southern Zone. Apply Quinalphos @ 0.05 % as foliar spray against jassids and spray Dimethoate @ 0.05 % against aphids.

- **Tamil Nadu:**

- Continue nursery preparation of *navarai* rice and complete harvesting of matured *samba and thaladi* rice in the Cauvery Delta Zone.
- As dry weather would prevail, irrigate the sugarcane and banana crop using drip irrigation system in the South Zone.
- Continue sowing of sesame in the North Western Zone.
- Prevailing dry weather is congenial for incidence of aphids in peas. To control, spray Fipronil @ 1 ml/litre of water or Imidacloprid @ 1 ml/litre of water.
- Suitable varieties are given in Annexure I.

- **Animal Husbandry**

- Undertake de-worming of sheep and goats to control endo-parasites in the Cauvery Delta Zone of Tamil Nadu.
- Since there increase in day temperature in the Western Zone, feed the animals and birds during early morning and late evening hours.
- Vaccinate poultry birds for chronic respiratory disease and follow farm bio-security measures in the North Western Zone.

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



Rice transplanting



Mustard



Potato



Cabbage

- **Realised Weather:** Rain/thundershower has occurred at isolated places over Assam & Meghalaya. Weather remained dry over rest of the region. Minimum temperatures are above normal by 2-4°C at many places over northeastern states.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during the period. Dry weather would prevail over Arunachal Pradesh during next 24 hours and rain/thundershowers would occur at isolated places thereafter.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershowers would occur at isolated to a few places over the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Assam, maintain 5cm of standing water in the fields of *boro* rice.
 - In Hill Zone of Assam, continue nursery bed preparation and sowing of early *ahu* rice and sowing of cucurbits and okra.
 - In Central Bramhaputra Valley Zone of Assam, undertake nursery bed preparation for early *ahu* rice and land preparation for sowing of summer green / black gram, summer vegetables like *okra*, bottle guard, pumpkin, ridge guard, cucumber, etc. and *capsularis* jute in low lying areas.
 - In Lower Bramhaputra Valley Zone of Assam, continue land preparation for planting of sugarcane in upland area. Undertake land preparation and sowing early *ahu* rice (direct seeded) and seed bed preparation and nursery sowing of early *ahu* rice.
 - In Meghalaya, continue hoeing and earthing up in 60 day old potato without disturbing the stolons.
 - In Hill Zone of Assam, due to humid weather, there is chance blast disease in *boro* rice, spray Mancozeb 0.2% @ 2 g/litre or Ediphenphos 0.1% @ 1g/litre of water for control of the disease.
 - In Meghalaya, due to humid weather, there is chance of attack of blast /brown spot disease in *boro* rice and powdery mildew and rust in pea. Spray Carbendazim @ 1g/litre of water against blast/brown spot. Spray Wettable Sulphur @ 2 g/litre or Dinocap @ 1 ml/litre of water or Dust Sulphur @ 25 kg/ha against powdery mildew and spray Dithane M-45 (0.2 %) against rust in pea.
 - **Manipur, Mizoram, Nagaland and Tripura:**
 - In Manipur, continue nursery bed preparation of pre-*kharif* rice. Soaking and incubation of seeds may be started before sowing.
 - In Nagaland, as mainly dry weather is prevailing, apply light irrigation in pea. Apply mulching in vegetables and cole crops. Continue land preparation and sowing for summer moong /urad. Undertake land preparation for sowing of summer crops like beans, maize, ginger, turmeric, pumpkin and squash.
 - In Mild Tropical Plain Zone of Tripura, apply light irrigation in cole crops, banana and maize. Undertake mulching after irrigation to conserve moisture. Continue transplanting of summer brinjal and tomato. Maintain 2 to 3cm standing water in the field of *boro* rice at tillering stage.
 - Suitable varieties are given in Annexure I.

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



Sugarcane

Wheat

Rice transplanting

Onion

- **Realised Weather:** Rain/thundershower has occurred at isolated places over Sub-Himalayan West Bengal & Sikkim. Weather remained dry over rest of the region. Minimum temperatures are above normal by 5-8°C at many places over Bihar, West Bengal & Sikkim and near normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period. Fog would occur at isolated places over Bihar & Sub-Himalayan West Bengal & Sikkim.
- **Weather Warning:** Nil
- **Advisories:**
 - **West Bengal:**
 - In New Alluvial Zone of West Bengal, maintain 3-5 cm stagnant water in the transplanted *boro* rice fields. Stop irrigation in the mustard field after pod formation or the pod started browning. Undertake land preparation for sowing of sesame and green gram.
 - As dry weather is prevailing, apply irrigation in wheat, potato and vegetables in Laterite and Red Soil Zone of West Bengal.
 - In Laterite and Red soil Zone of West Bengal, tikka leaf spot disease in groundnut and aphids in wheat was observed which is likely to spread due to prevailing temperature and humid weather conditions. Spray Carbendazim @ 0.05% with an interval of 7-10 days to control tikka disease and spray Dimethoate (ROGOR) 30 EC @ 1.75 ml/lit of water to control aphids.
 - In New Alluvial Zone, Laterite and Red soil Zone of West Bengal, due to cloudy and humid weather, there are chances of late blight in potato. To control late blight, spray Blitox or Mancozeb @ 2.5 g / litre of water thrice at an interval of 5-7 days.
 - **Andaman and Nicobar Islands:**
 - In North, Middle and South Andaman, as dry weather is prevailing, carryout weeding, earthing up and apply vermicompost @ 5 tonnes /ha in vegetables followed by irrigation.
 - **Odisha:**
 - In Western Undulating Zone of Odisha, as dry weather is prevailing, apply irrigation to vegetables and onion. Continue harvesting of matured cotton, sugarcane, arhar and niger. Complete nursery sowing for summer rice. Continue field preparation for planting of sugarcane.
 - In East and South Eastern Coastal Plain Zone, continue nursery sowing of rice and ragi, sowing of sunflower and groundnut and planting of sugarcane.
 - In North Eastern Plateau Zone of Odisha, as dry weather is prevailing, apply irrigation in rice nursery. Continue land preparation for transplanting of rice.
 - In North Eastern Coastal Plain Zone of Odisha, rise in temperature along with prevailing humid condition will favour the incidences of stem borer population in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2 ml/litre of water.
 - In North Eastern Coastal Plain Zone of Odisha, due to variation in temperature during last week and forecasted weather, there is possibility of attack of Tobacco caterpillar (*Spodoptera litura*) in mustard. The forecasted weather is also favourable for its proliferation. For control i) use Pheromone trap using Spodo lure to monitor adult population of the insect, ii) bird perching should be encouraged and night fire should be widely popularized iii) In case of appearance of the caterpillar, prepare poison bait with 1 kg rice bran+ 200 g jaggery/gur+10 g Methomyl 40% SP+Water. Keep the bait at 20-25 different places in the affected field. iv) in case of severe infestation, spray Emamectin Benzoate @ 3 g/10 litres of water.
 - **Bihar:**
 - In South Bihar Alluvial Zone, as dry weather is prevailing, apply irrigation to onion. Continue harvesting of early sown potato. Continue planting of sweet potato and complete transplanting of arvi crop.
 - In North West Alluvial Plain Zone of Bihar, as dry weather is prevailing, apply irrigation to garlic and onion. Continue sowing of summer vegetables. Continue harvesting of early sown matured mustard and potato. Continue sowing of okra, planting of spring sugarcane and land preparation for sowing of green gram/ black gram and maize.
 - In North East Alluvial Zone of Bihar, as dry weather is prevailing apply irrigation to maize crop. Complete

planting of spring sugarcane and sowing of cucumber, bottle gourd, muskmelon, watermelon, bitter gourd, ridge gourd and ladies finger. Continue harvesting of potato. In North East Alluvial Zone of Bihar, rise in temperature along with prevailing humid condition will favour the incidence of stem borer in maize, apply Carbofuran 3G granules @ 25 kg/ha.

▪ **Jharkhand:**

- In Western Plateau Zone, continue sowing of cucurbitaceous vegetables like sponge gourd, bottle gourd, pumpkin, watermelon, muskmelon etc. Farmers, who have already raised the seedlings in polythene bag, may transplant the seedlings in the main field @ 2-3 seedlings per pit. Apply light irrigation after transplanting of seedlings. Continue transplanting of summer rice and harvesting of mustard. As dry weather is prevailing, apply irrigation to wheat at heading stage. Continue sowing of mung after harvesting of potato.
- In South Eastern Plateau Zone of Jharkhand, apply irrigation in wheat. Continue transplanting of summer rice and transplanting of vegetables like bottle gourd, khira, kakri, sponge gourd, ridge gourd, bitter gourd, okra, brinjal and Shimla mirch. Continue sowing of mung after harvesting of potato.
- In Central & North Eastern Plateau Zone of Jharkhand, as dry weather is prevailing, apply irrigation to wheat which is at heading to milk stage. Continue transplanting of summer rice, onion and harvesting of potato and pigeon pea. Undertake cultivation of high yielding variety of summer maize with assured irrigation. Undertake cultivation of sugarcane.
- Suitable varieties are given in Annexure I.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Wheat



Mustard



Onion

- **Realised Weather:** Weather remained dry over the region. Minimum temperatures are above normal by 2-4°C at many places over West Madhya Pradesh; at a few places over East Madhya Pradesh and near normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period. No large change in day & night temperatures over central India during next 48 hours.
- **Weather Warning:** Nil.
- **Advisories:**
 - **Madhya Pradesh:**
 - As dry weather is prevailing, apply irrigation in gram at pod formation and pod filling stage in Jhabua Hill Zone.
 - Undertake harvesting of matured mustard in Satpura Plateau Zone.
 - Continue sowing of cucurbitaceous crops, okra and moong in Grid Zone.
 - Continue transplanting of summer vegetables like tomato, brinjal, chilli, okra, cabbage and cauliflower on the prepared beds and sowing of cucurbitaceous crops in Malwa Plateau Zone and Bundelkhand Zone.
 - Continue picking up of matured vegetables like pea, tomato, brinjal, chilli etc. in Vindya Plateau Zone.
 - Due to rise in temperature, there are chances of attack of sucking pests in papaya in Malwa Plateau Zone and Grid Zone, spray Dimethoate 25 EC @ 1/1.5 ml per litre of water.
 - Due to rise in temperature, there are chances of attack of pod borer in chickpea, spray Quinolphos @ 2.0 ml per litre of water.
 - **Chhattisgarh:**
 - Continue nursery sowing of cucurbitaceous crops and sowing of groundnut and sesame in Bastar Plateau Zone. Undertake harvesting of matured toria.
 - Continue transplanting of summer rice. Continue sowing of cucurbitaceous crops, leafy vegetable, cowpea and okra in North Hill Zone. Continue harvesting of matured mustard and potato. As dry weather is prevailing, apply irrigation in wheat at heading stage.
 - Complete sowing of vegetables like pumpkin, bitter gourd, bottle gourd, okra etc. in Chhattisgarh Plain Zone.
 - Due to rise in temperature, there are chances of attack of sucking pests in vegetables in Bastar Plateau Zone, spray Dimethoate 40 EC @ 1.5 ml per litre of water.
- **Animal Husbandry**
 - Provide green fodder along with mineral mixture and fresh water for milch animals in Madhya Pradesh.

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 and Haryana. Rain/snow has occurred at isolated places over Jammu & Kashmir. Weather remained dry over rest of the region. Minimum temperatures are above normal by 5-8°C at most places over Uttarakhand and Rajasthan; at many places over Jammu & Kashmir, Himachal Pradesh, Punjab and West Uttar Pradesh; by 2-4°C at many places over Haryana & Delhi, East Uttar Pradesh.
- **Weather Forecast:** Rain/snow would occur at most places over Jammu & Kashmir during the period. Rain/snow would occur at many places over Himachal Pradesh during next 24 hours and at most places thereafter. Rain/snow would occur at isolated places over Uttarakhand during next 24 hours and at many places thereafter. Rain/thundershowers would occur at a few places over Punjab; at isolated places over West Rajasthan during the period. Rain/thundershowers would occur at isolated places over Haryana & Delhi during next 24 hours and at a few places thereafter. Dry weather would prevail over West Uttar Pradesh during next 24 hours and rain/thundershowers would occur at isolated places on 25th and at a few places thereafter. Dry weather would prevail over East Uttar Pradesh and East Rajasthan during next 24 hours and rain/thundershowers would occur at isolated places thereafter. No significant change would occur in minimum temperatures over northwest India during next 48 hours and maximum temperatures would fall by 2-4°C during next 24 hours over the same area.
- **Weather Warning:** Heavy rain/snow would occur at a few places with isolated very heavy falls over Jammu & Kashmir and Himachal Pradesh on 24th and 25th February. Heavy rain/snow would occur at isolated places over Uttarakhand on 25th & 26th and over Jammu & Kashmir and Himachal Pradesh on 26th. Thunderstorm accompanied with hailstorm would occur at isolated places over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and West Rajasthan on 24th and 25th February and over Uttarakhand on 25th February.
- **Weather Outlook:** A fresh Western Disturbance would affect Western Himalayan region and plains of northwest India from 28th onwards.
- **Advisories:**
 - As rain/snow would occur at most places over Jammu & Kashmir and Himachal Pradesh along with heavy rain/snow at a few places with isolated very heavy falls during the period, rain/snow would occur at many places over Uttarakhand along with heavy rain/snow at isolated places on 25th and 26th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops to avoid water stagnation in the crop fields. Keep already harvested crops at safe places.
 - As thunderstorm accompanied with hailstorm would occur at isolated places over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and West Rajasthan on 24th & 25th February and over Uttarakhand on 25th February, farmers are advised to use hail net for orchard crops to protect from mechanical damage. Also provide mechanical support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep already harvested crops at safe places.
 - **Jammu & Kashmir:**
 - In Valley Temperate Zone of Jammu & Kashmir, undertake nursery sowing of tomato, cauliflower, cabbage, knol khol, kale after current spells of heavy rain/snow.
 - In Sub Tropical and Intermediate Zone of Jammu & Kashmir, continue nursery sowing of tomato, brinjal and chilli, sowing of beans and cucumber after current spells of heavy rain/snow.
 - **Uttarakhand:**
 - Undertake sowing of chickpea, rajmash, lentil, okra and continue planting of sugarcane and also continue transplanting of onion in Bhabar and Tarai Zone of Uttarakhand.
 - In Hill Zone of Uttarakhand, undertake land preparation for planting of potato, continue nursery sowing of tomato, brinjal and capsicum.
 - Due to humid weather, there may be incidence of yellow rust on wheat in Sub humid sub tropic Zone of Uttarakhand, for control, spray Propiconazole 25 EC (Tilt 25 EC) @ 0.1% after current spells of rain.
 - **Rajasthan:**
 - Undertake sowing of summer okra and summer groundnut, in Sub Humid Southern Plain and Aravali Hill Zone

of Rajasthan.

- Undertake sowing of zaid moong in Transitional Plain Zone of Inland Drainage of Rajasthan.
- Undertake planting of sugarcane in Irrigated North Western Plain Zone of Rajasthan
- Continue harvesting of early mustard crop when 80% pods turn yellow in Flood Prone Eastern Plain Zone, during morning hours to avoid shattering losses.
- In Arid Western Plain Zone of Rajasthan, in timely sown wheat crop, apply irrigation at grain formation stage, and 2nd irrigation to the barley 65-70 days after sowing.
- Due to dry weather, there may be attack termite in wheat and barley crop. To control, apply Chlorpyrifos 20 EC @ 4.0 litre per hectare with irrigation water in Semi Arid Eastern Plain Zone and Arid Western Plain Zone of Rajasthan.

▪ **Himachal Pradesh:**

- Undertake sowing of sunflower in low and mid-hill areas and sowing of okra, French bean, cucumber, summer squash, bitter gourd, bottle Gourd in low hill areas and nursery raising of high yielding varieties of tomato, brinjal, chilli and capsicum in mid hill areas of Sub-Montane and Low Hills Sub-Humid Tropical Zone after current spells of heavy rain.
- Due to cloudy weather, 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 @ 15-20 g/20 litres of water or Dithane-M-45 @ 90-100 g/15 litres of water after current spells of rain.

▪ **Punjab, Haryana and Delhi:**

- Continue planting of sugarcane in Western Plain Zone of Punjab.
- In Western Semi-Arid Zone of Delhi, continue sowing of ladies finger, cucurbitaceous crops and nursery sowing of vegetables like chilli, tomato and brinjal and transplanting of young seedlings of tomato, chilli and cole crops.
- In Western Zone of Punjab, prepare the field for transplanting of summer vegetables viz. chilli, tomato and bell pepper, undertake sowing of cucumber, bottle gourd, pumpkin, muskmelon, watermelon, bitter gourd in plastic trays or polythene bags.
- Prevailing humid weather is conducive for severe attack of aphids in mustard in Western Plain Zone of Punjab, monitor the crop regularly, if pest population reaches to ETL, spray Actara 25 WG @40g /acre on a non rainy day.
- Cloudy weather condition is favourable for yellow rust in wheat crop in Central Plain Zone of Punjab. To control spray the crop with tilt 25 EC/Shine 25 EC/Bumper 25 EC or Folicur 25 EC @ 200 ml or Bayleton 25 WP @ 200 g in 200 litres of water/acre on a non rainy day.
- Under prevailing cloudy weather condition, there is chance of incidence of yellow rust in wheat in Undulating Plain Zone of Punjab and Western Semi-Arid Zone of Delhi. To control, spray 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 on a non rainy day and repeat the spray after 15 days interval.

▪ **Uttar Pradesh:**

- Complete sowing of ladies finger, continue nursery sowing of tomato and chilli and sowing of urad and summer maize in Central plain Zone.
- Undertake sowing of ladies finger, lobia, toria, bitter gourd and cucurbits in Eastern Plain Zone
- Undertake transplanting of tomato, chilli, brinjal and cruciferous crops and continue planting of onion in Bundelkhand Zone. Undertake land preparation for sowing of ladies finger.
- Under humid weather condition, there is chance of attack of fruit borer and semi-looper in gram in Bundelkhand Zone. For control, spray Malathion 50 EC @ 2 litre/ha in 500-600 litres of water.
- Under humid weather and favourable temperature (24^oC) condition, there is also chance of attack of aphids in mustard in Central Plain Zone. For control of aphids, spray Malathion 50 EC @ 2 ml or Dimethoate 30 EC or Chloropyrifos @ 0.5 ml or Imidachlopid @ 1.5 ml per litre of water/ha.
- Under prevailing favourable temperature (24-28^oC) condition, there is chance of attack of pod borer in gram in Central Plain Zone. Spray Monocrotophos @ 1 ml/litre of water twice at an interval of 15 days.
- Under prevailing humid weather condition, there is chance of occurrence of leaf blight in wheat in Bundelkhand Zone. Spray Ziram 80 WP @ 2 kg or Mancozeb 75 WP @ 2 kg/ha in 500 litres of water.
- Under prevailing dry weather condition, there is chance of fruit dropping in mango in Eastern Plain Zone. For control, spray soluble sulphur @ 2 g per litre of water.
- Suitable varieties are given in Annexure I.

• **Animal Husbandry**

- In Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and West Rajasthan, keep cattle/goats indoor during thunderstorm / hailstorm period.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana

Sugarcane

Sorghum

Mango

- **Realised Weather:** Weather remained dry over the region. Minimum temperatures are above normal by 5-8°C at many places over Gujarat; by 2-4°C at a few places over Madhya Maharashtra and Konkan & Goa and near normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period. No large change in day & night temperatures over west India during next 48 hours.
- **Weather Warning:** Nil.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, as dry weather would prevail, apply irrigation to groundnut (at 10–12 days interval) and vegetables. Apply fertilizers and continue intercultural operations in summer rice, finger millet, vegetable crops and mango and cashew orchards. As mango is at pea/marble size, considering the rise in day temperature, apply 150 to 200 litres of water per mango tree at 15 days interval. Apply grass mulch in lateritic soil to avoid water loss in mango orchards. As day temperature is rising, to avoid fruit dropping, spray *Amrashakti* @ 1 litre per four trees in 25 litres of water on inflorescence. Maintain upto 5 cm water level in early tillering stage of rice and finger millet field. Make shed, to protect the cashew, arecanut and mango grafts from bright sunshine.
 - In Madhya Maharashtra, as dry weather prevailed, apply irrigation to vegetables, sugarcane, wheat, gram and pomegranate, banana orchards and summer groundnut. Continue harvesting of already matured jowar, gram and safflower.
 - In Marathwada, as dry weather prevailed during last week and dry weather is likely to prevail, apply irrigation in wheat (dough stage), summer groundnut, vegetables and sugarcane. Due to decrease in humidity there is flower dropping in mango, apply irrigation. Continue harvesting of jowar, gram and safflower during morning hours. To protect banana from bright sunshine, cover bunches with plastic sheet or dry leaves and apply drip irrigation.
 - In Vidarbha, as dry weather is prevailing, apply irrigation to vegetables, wheat (milk stage) and orchards (sweet lime and orange). Apply mulch with crop residue to vegetables, wheat (dough stage) and orchards (sweet lime, orange). Maintain upto 5 cm water level in summer rice field (early tillering) in east Vidarbha. Complete planting of summer okra.
 - Due to cloudy weather in Vidarbha region there may be attack of hoppers in mango, spray Dimethoate 30% @ 10 ml or Quinolphos 25% @ 20 ml per 10 litres of water.
 - **Gujarat:**
 - Undertake transplanting of rice, continue sowing of sowing of green gram and procure seeds of cowpea for summer sowing under assured irrigation in South Gujarat Heavy Rainfall Zone. Continue harvesting of matured spikes of castor and undertake harvesting of tomato. Spray 2% Potassium Nitrate in mango orchard for effective control of fruit dropping and higher flower setting.
 - As dry weather is prevailing, apply irrigation to vegetables at an interval of 3 to 4 days in South Gujarat Zone. Spray 2% Potassium Nitrate in mango orchard for effective control of fruit dropping and higher flower setting in South Gujarat Zone and Middle Gujarat Zone.
 - Continue sowing of sesame, summer groundnut, vegetable crops (lady's finger, cluster bean, bottle gourd, sponge gourd, ridge gourd and bitter gourd), watermelon and transplanting of tomato and brinjal in North Saurashtra Zone.
 - Undertake sowing of groundnut and bajra in North Gujarat Zone. Carry out harvesting of matured mustard during early morning hours to reduce the yield losses. Continue land preparation for sowing of sesame and keep inputs ready for sowing.
 - Due to rise in temperature there are chances of occurrence of powdery mildew in mustard in Middle Gujarat Zone; for controlling it, spray wettable Sulphur (80%) 25 g or Dinocap (48%) 5 ml in 10 litres of water.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - Arrange for adequate amount of fresh drinking water for cattle in Gujarat.

Annexure I List of varieties

Karnataka

Cowpea: C-152

Green gram: selection-4 and Pusa Bisaki

Tamil Nadu:

Lady's finger: Arka Anamika, Arka Abhay and Arka Kranthi and hybrids like CoBh H 1 and Co3

Irrigated sesame: TMV 4, TMV 6 and SVPR1

Assam

Sunflower: Jwalamukhi.

Green gram: Pratap, T-44, Kopergaon, AAU-39, K-851 and ML-55.

Black gram: T-9, Pant-U-19, UG-157.

Direct seeded ah rice: Banglami, Rangadoria, Ahu joha, Rasi, Banglami, Rangadoria, Ahu joha, Rasi.

Okra: Pusa Sawani, Arka Anamika, Parbhdani Kranti

Odisha

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

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

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

Ragi: HYVs. like Subhra, Vairabi, Dibyasingh, Nilachala, Subhra, Godavari and Chilka.

Bihar

Boro rice: Gutum, Prabhat, Richaria, Dhanlaxmi, SarojRajendraBhagvati, and R.A.U

Sweet Potato: Cross 4 and Rajendra shakarkand 35

Okra: Parvani kranti, Arka abhay, Arka anamika, Barsha Uphar, KS 312, Okra 4, Punjab 7, Pant Bhindi 1

Jharkhand:

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

Summer maize: Birsa Makka-1, Birsa Makka-2, Suwan-1(Hybrid), HQPM (Hybrid)

Green gram: mung S.M.L.- 668

Jammu & Kashmir

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

Uttarakhand

Tomato: VL Tomato-3, Pant T-3, Him Sona, Him Shikhar.

Capsicum: California Vander, Pus Dipti, Anupam. Heera, Indira, Supriya & Bharat.

Potato: Kufri- Jyoti, Ashok, Anand

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

Chilli: Patasi-1, Jwala, Sadabahar

Lobia: lobia 263, Pusa Phaguni

Tomato: Pant T-2, Azad T-2, Narendra-1,2,4,5,6

Maize: Navjyoti, Kanchan, Gaurav, Surya, Navin, Shweta, Azad Uttam,Prakash, Deccan-115, MMH-135, Ganga-11, Pusa, Maize-2, JH-3459

Urd: T-9, Narendra-1, Azad-1, Uttar Azad-2, Shekhar-2

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

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89

Rajasthan

Groundnut: T.A.G.24, T.G.37A, G.G.2, D.H.86.

Maharashtra

Madhya Maharashtra

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

Sunflower: SS-56, Modern, EC-68414 or bhanu and hybrid varieties like KBSH-1 or phule Raviraj or MSFH-17.

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

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

Okra: Parbhani Kranti

Vidarbha

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

Water Melon: Sugar baby, Arka Jyoti or Arka Manik.

Okra: Arka Anamika, Parbhani Kranti, Akola Bahar or Phule Utkarsha.

Sesamum: AKT-101 or NT-11-99.

Gujarat

Groundnut: GG-2, 4 and GG-20, TAG-24, TG-37-A, TPG-41,GG-2, GJG-3.

Sesamum: G.Til-2, G.Til-3.

Cowpea: Guj. Cowpea-4, 5 and Pusa Falguni.

Green gram: Guj. Mung-3, 4.

Brinjal: Junagadh oblong, Junagadh long, Guj. Bringle-2.

Lady' finger: Guj. Hy.-1 & 2.

Ridge gourd: Pusa nasdar, Jaipuri.

Bottle gourd: Junagadh tender long, Pusa summer prolific long.

Sponge Gourd: Pusa chikni.

Bitter Gourd: Priya, Pusa domosmi.

Cluster bean: Pusa sadabahar, Pusa navbahar, IC-11388.

Watermelon: Sugar baby, Arka jyoti.