

# **All India Coordinated Research Project on Agrometeorology**

## **CRIDA, Santoshnagar, Hyderabad – 500 059**

### **Daily Crop Weather Information as on 21 December 2021**

**Attention: Rajiv Maheshwari, OSD, ICAR**

#### **Significant Weather Features (IMD)**

- Wet spell over Western Himalayan Region and plains of Northwest India:
- Under the influence of a Western Disturbance as a cyclonic circulation over north Pakistan & neighbourhood at lower tropospheric levels, isolated rainfall/snowfall very likely over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Himachal Pradesh on 22nd & 23rd December.
- Thereafter, two Western Disturbances in quick succession, the 1st from 24th and 2nd from 26th December are very likely to influence northwest India. Under their influence;
  - 1) Light to moderate scattered/fairly widespread rainfall/snowfall very likely over Western Himalayan Region during 24th to 29th December with possibility of isolated heavy falls over Kashmir region and Himachal Pradesh on 27th December.
  - 2) Light to moderate isolated/scattered rainfall is also likely over adjoining plains of Northwest India during 26th to 29th December, 2021. Abatement of Cold Wave Conditions over most parts of Northwest & Central India from 23rd December.
- Gradual rise in minimum temperatures by 3-5°C very likely over most parts of Northwest & Central India during next 4 days and no significant change thereafter. No significant change in minimum temperatures over most parts of East India during next 2 days and rise by 2-3°C thereafter.
- Cold Wave conditions in isolated pockets very likely over Uttarakhand, Uttar Pradesh, East Madhya Pradesh, Chhattisgarh and Odisha during next 2 days and over Punjab, Haryana, East Rajasthan, West Madhya Pradesh, Vidarbha, Saurashtra & Kutch, Telangana, Bihar, Jharkhand and Gangetic West Bengal during next 24 hours and abatement thereafter.
- Cold day conditions in isolated pockets very likely over East Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar and Odisha during next 24 hours and abatement thereafter.
- Dense fog in the morning hours in isolated pockets very likely over Punjab and Haryana during 23rd - 26th and over West Rajasthan during 24th-26th December,

2021. Wet spell over Northeast India: Light to moderate isolated/scattered rainfall very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 5 days with isolated thunderstorm & lightning over the region on 22nd & 23rd December. Isolated hailstorm also likely over Arunachal Pradesh on 22nd & 23rd; over Assam & Meghalaya and Nagaland, Manipur on 22nd December, 2021.

- The images showing the latest satellite picture in the figure. 1.

### **Main Weather Observations (IMD)**

- Rainfall observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at a few places over Andaman & Nicobar Islands and at isolated places over Assam & Meghalaya. Isolated rainfall/snowfall at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad.
- Fog observed (at 0830 hours IST of today): Moderate fog in isolated pockets over Haryana, Delhi, East Uttar Pradesh, Assam & Meghalaya and Shallow fog in isolated pockets over Punjab, West Uttar Pradesh and Nagaland, Manipur, Mizoram & Tripura.
- Cold Wave to Severe Cold Wave Conditions prevailed in some parts of East Madhya Pradesh, Vidarbha and in isolated pockets over Haryana, north Rajasthan, Chhattisgarh and Odisha; Cold Wave Conditions in isolated pockets over Uttarakhand, Punjab, Delhi, Uttar Pradesh, West Madhya Pradesh, Bihar, Jharkhand, Saurashtra & Kutch, Telangana and Gangetic West Bengal.
- Cold Day Conditions prevailed at isolated places over Uttar Pradesh, Madhya Pradesh, Jharkhand, Odisha and Gangetic West Bengal.
- Minimum Temperature Departures (as on 21-12-2021): Minimum temperatures are markedly below normal ( $-5.1^{\circ}\text{C}$  or less) at isolated places over Madhya Pradesh; appreciably below normal ( $-3.1^{\circ}\text{C}$  to  $-5.0^{\circ}\text{C}$ ) at many places over Saurashtra & Kutch, Vidarbha, Telangana, and Gangetic West Bengal; at a few places over East Rajasthan, East Uttar Pradesh and Coastal Andhra Pradesh & Yanam; at isolated places over Haryana, Chandigarh & Delhi, Gujarat Region, Chhattisgarh, Bihar; below normal ( $-1.6^{\circ}\text{C}$  to  $-3.0^{\circ}\text{C}$ ) at many places over Jharkhand, Uttarakhand; at a few places over West Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim; at isolated places over Rayalseema, North Interior Karnataka, Tamilnadu, Puducherry & Karaikal and East Rajasthan and near normal over rest parts of the country. Today, the Lowest minimum temperature of  $1.3^{\circ}\text{C}$  reported at Nowgong (East Madhya Pradesh) over the plains of the country.

- Maximum Temperature Departures (as on 20-12-2021): Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Assam & Meghalaya; at a few places over Kerala & Mahe; at isolated places over West Rajasthan and Tamilnadu, Puducherry & Karaikal . They were markedly below normal (-5.1°C or less) at a few places over East Uttar Pradesh, Madhya Pradesh, Odisha and Gangetic West Bengal; appreciably below normal (-3.1°C to -5.0°C) at most places over Chhattisgarh; at many places over Bihar; at a few places over Vidarbha and at isolated places over West Uttar Pradesh; below normal (-1.6°C to -3.0°C) at many places over Gujarat Region and Marathwada; at a few places over Haryana, Chandigarh & Delhi, Saurashtra & Kutch, Telangana and Andaman & Nicobar Islands and at isolated places over East Rajasthan and Madhya Maharashtra and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 35.0°C was reported at Cannur (Kerala).

### **Weather Warning during the next 5 days (IMD)**

- 21 December (Day 1): Cold Wave conditions in isolated pockets very likely over Uttarakhand, Punjab, Haryana, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Saurashtra & Kutch, Telangana, Bihar, Jharkhand, Gangetic West Bengal and Odisha. Cold day conditions in isolated pockets very likely over East Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar and Odisha. Ground frost conditions in the morning hours in isolated pockets very likely over East Madhya Pradesh.
- 22 December (Day 2): Cold wave conditions in isolated pockets very likely over Uttarakhand, Uttar Pradesh, East Madhya Pradesh, Chhattisgarh and Odisha. Dense fog in isolated pockets very likely over Punjab and Haryana. Thunderstorm accompanied with lightning & hail at isolated places very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 23 December (Day 3): Dense fog in isolated pockets very likely over Punjab, Haryana and northwest Rajasthan. Thunderstorm accompanied with lightning & hail at isolated places very likely over Arunachal Pradesh and with lightning at isolated places over Nagaland, Manipur, and Assam & Meghalaya.
- 24 December (Day 4): Dense fog in isolated pockets likely over Punjab, Haryana and northwest Rajasthan.
- 25 December (Day 5): Dense fog in isolated pockets likely over Punjab, Haryana and northwest Rajasthan
- The weather outlook for seven days i.e., 21 Dec to 29 Dec 2021 forecasted (Provided by Real-Time Weather Forecasts from NOAA/NCEP collected from

<http://monsoondata.org/wx2/>) rain/thundershower may occur over Some parts of Extreme northern parts of India. (Fig. 2).

## **Agricultural activities (AICRPAM-CRIDA)**

### **Maharashtra-Vidarbha**

#### **Weather condition:**

Weekly average means (50 MW) at AICRPAM Akola centre: T max 29.1°C (normal 29.7°C), T min 13.4°C (normal 11.0°C). RH I 79 % (normal 71 %), RH II 36 % (normal 29 %). Evaporation rate 3.6 mm (normal 4.0 mm), Wind 1.4 km/hr (normal 3.2 km/hr) and BSH 6.3 hrs (normal 8.1 hrs). Maximum temperature across the week was 0.5°C below normal with a deviation of -1.3 to +0.2°C from normal. Minimum temperature across the week 2.5°C above normal with a deviation of +1.1 to +5.0°C from normal.

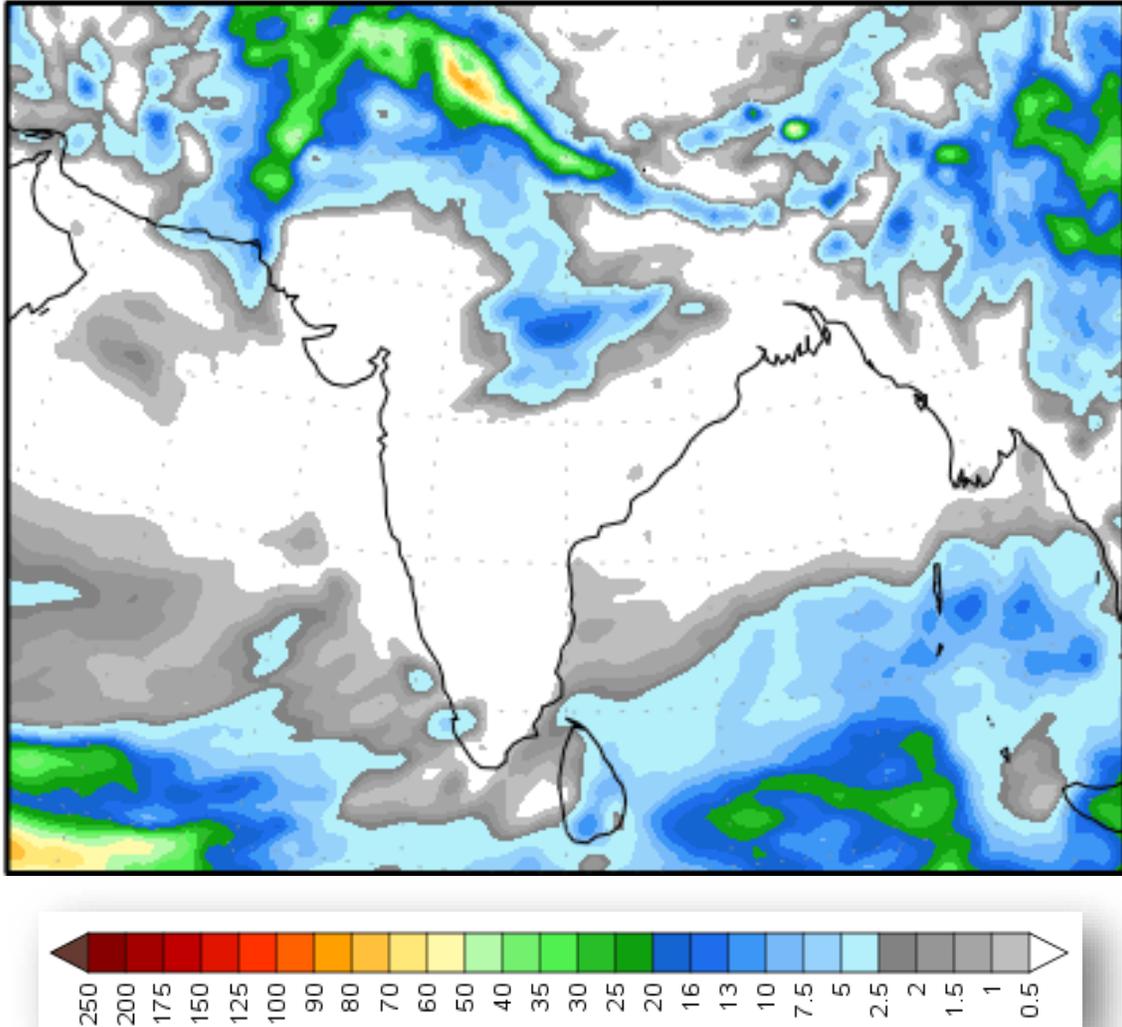
#### **Contingency measure:**

- Block level forecast (Akola) indicates dry weather likely to prevail during 16-20 December. Undertake clean picking of burst cotton bolls properly, dry and keep the picked produce variety wise. Use cotton bags instead of gunny or plastic bags for picking and storing of cotton to avoid contamination of the lint. Prevailing weather conditions of partly cloudiness and lowering night time temperature are congenial for pod borer incidence in pigeonpea.
- To manage the initial incidence of pod borer (*Helicoverpa*) in pigeonpea at flowering stage/pod formation (3/plant or 5 to 10% pod damage), undertake first spray of 5% NKSE OR Azadirachtin 300 PPM @ 50 ml per 10 litres of water. Subsequently to control incidence of pod borer in pigeonpea, undertake spray of Emamectin benzoate 5% SG @ 3 g OR Lambdacyhalothrin 5% EC @ 10 ml OR Chlorantraniliprole 18.5% SC @ 2.5 ml per 10 litres of water.
- Intermittent cloudy weather and lowering night time temperature favour infestation of pod borer in chickpea crop. IPM practices should be followed for the control of *Helicoverpa* in chickpea crop by using 5 Pheromone traps per hectare, one spray of 5 % NSKE in chickpea at flowering stage and ETL based spray of Quinalphos 25 EC 20 ml or Emamectin benzoate 5 SG @ 3 g or Chlorantraniliprole 18.5 SC @ 2.5 ml per 10 lit of water.
- In timely sown rabi sorghum for control of stem borer and fall armyworm undertake spray of Thiamethoxam 12.6 % + Lambdacyhalothrin 9.5 ZC @ 5 ml or Spinetoram 11.7 SC @ 4 ml per 10 litres of water.
- Wheat crop should be irrigated at the critical stages of irrigation i.e., CRI stage (18-20 days), tillering stage (30-35 days), flowering (65-70 days), grain filling stage

(80-85 days) and grain maturity stage (95-100 days). If only one irrigation is available, it should be applied at 40-42 DAS, if two irrigations are available, it should be applied at 18-20 and 60-65 DAS and if three irrigations are available, it should be applied at 18-20, 40-42 and 60-65 DAS for better yield in wheat.

- Prevailing intermittent cloudy weather and lowering night temperature favours aphid incidence in mustard. For control of aphid incidence in mustard, undertake spray of Thiometon 25 EC 8 ml per 10 lit of water or Dimethoate 30 EC 10 ml per 10 lit of water.
- During this time on irrigation in Mrig Bahar Nagpur mandarin & Sweet orange (Mosambi) orchards should be continued by drip irrigation. Apply by drip irrigation 41 litres/day/tree for six year old trees and for 10 years old and above trees apply 82 litres/day/tree by drip irrigation.
- Undertake need based intercultural operations timely and keep the field weed free. With continued dry weather need based irrigation is advisable in vegetables.
- With lowering night temperature, suitable protection measures may be undertaken to protect newly born calf, milch animals and poultry birds from cold.





**Figure:2. Precipitation forecast for 21 Dec to 29 Dec 2021 (Source: NOAA NCEP).**

*Disclaimer: The predictability of weather depends on many dynamic factors. The success of Agromet advisories provided here depends on the accuracy of the forecasts. In no event will India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) be liable to the user or any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of the information on this bulletin.*