

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 27 December 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- I. Wet spell over northwest India on 27th & 28th; over central India during 27th-29th and over east India during 28th - 30th December, 2021.
- The Western Disturbance as a cyclonic circulation now lies over north Haryana & neighbourhood at lower tropospheric levels. A fresh Western Disturbance as a trough at middle tropospheric levels runs roughly along Long. 68°E to the north of Lat. 30°N. A trough runs from the northeast Rajasthan to Vidarbha across West Madhya Pradesh at lower tropospheric levels. Under the influence of above systems:
 - i) Light/moderate isolated to scattered rainfall/snowfall very likely over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad and Himachal Pradesh on 27th & 28th; and over Uttarakhand during 27th to 29th December, 2021.
 - ii) Light isolated rainfall very likely over Punjab, Haryana, Chandigarh & Delhi, Rajasthan on 27th & 28th and scattered rainfall over Uttar Pradesh during 27th to 29th December, 2021. Isolated thunderstorm, lightning & hailstorm also likely over East & adjoining West Uttar Pradesh and East Rajasthan on 28th December, 2021.
 - iii) Light/moderate isolated to scattered rainfall very likely over Madhya Pradesh, Vidarbha and Chhattisgarh; scattered to fairly widespread rainfall over Bihar, Jharkhand, Odisha and Gangetic West Bengal during 28th to 30th December. Isolated thunderstorm, lightning & hailstorm also likely over Sub-Himalayan West Bengal & Sikkim on 27th & 28th; over East Madhya Pradesh, Vidarbha and Chhattisgarh on 28th & 29th; over West Madhya Pradesh, Bihar and Jharkhand on 28th December, 2021.
- II) Minimum Temperatures, Cold Wave, Cold Day and Fog:
 - i) Minimum temperatures are 2-5°C above normal over many parts of Northwest & adjoining Central India and East India. They are near normal over rest parts of Central India.
 - ii) No significant change in minimum temperatures very likely over most parts of Northwest India and Gujarat state during next 2 days and fall by 3-5°C thereafter.

No significant change in minimum temperatures over most parts of central & East India during next 3 days and fall by 2-4°C thereafter.

iii) Cold Wave Conditions likely to prevail over Punjab, Haryana and Chandigarh on 31st December. Cold Day Conditions likely to prevail over Bihar on 29th & 30th December.

iv) Dense fog in isolated pockets very likely over Punjab, Haryana and north Rajasthan in night/morning hours during next 4 days and over Uttar Pradesh & Saurashtra & Kutch during next 2 days.

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

Main Weather Observations (IMD)

- Rainfall/snowfall observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Jammu & Kashmir, Ladakh, GilgitBaltistan, Muzaffarabad; at a few places over Himachal Pradesh and at isolated places over Uttarakhand. Rainfall/thundershower observed at a few places over Haryana, Chandigarh & Delhi and at isolated places over West Uttar Pradesh, Rajasthan, Punjab, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- Fog observed (at 0830 hours IST of today): Dense to Very dense fog in isolated pockets over West Rajasthan; Moderate to Dense fog in isolated pockets over Punjab, East Uttar Pradesh, Odisha and Saurashtra & Kutch and Moderate fog in isolated pockets over East Rajasthan, Chhattisgarh, east Bihar, Jharkhand and Assam.
- Minimum Temperature Departures (as on 27-12-2021): Minimum temperatures are markedly above normal (5.1°C or more) at many places over East Rajasthan; at isolated places over West Rajasthan and Saurashtra & Kutch; appreciably above normal (3.1°C to 5.0°C) at most places over Odisha; at many places over Haryana, Chandigarh & Delhi, Bihar, Jharkhand, Gangetic West Bengal and Telangana; at a few places over Jammu & Kashmir, Ladakh, GilgitBaltistan, Muzaffarabad, Madhya Pradesh, Vidarbha and Uttar Pradesh; at isolated places over Gujarat region; above normal (1.6°C to 3.0°C) at most places over Chhattisgarh; at many places over Nagaland, Manipur, Mizoram & Tripura, Marathawada and Madhya Maharashtra; at a few places over Himachal Pradesh and Coastal Andhra Pradesh & Yanam; at isolated places over Punjab. They are below normal (-1.6°C to -3.1°C) at a few places over Rayalaseema; at isolated places over Assam & Meghalaya and Tamilnadu Puducherry & Karaikal and near normal over rest parts of the

country. Today, the Lowest minimum temperature of 4.3°C reported at Ludhiana (Punjab) over the plains of the country.

- Maximum Temperature Departures (as on 26-12-2021): Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Interior Karnataka; at a few places over Madhya Maharashtra, Rayalaseema and Telangana; at isolated places over East Madhya Pradesh, Odisha and Tamilnadu, Puducherry & Karaikal. They were markedly below normal (-5.1°C or less) at many places over Himachal Pradesh; at a few places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad; at isolated places over West Rajasthan; appreciably below normal (-3.1°C to -5.0°C) at many places over Punjab; below normal (-1.6°C to -3.0°C) at most places over Konkan & Goa; at many places over Haryana, Chandigarh & Delhi and Uttarakhand; at a few places over Uttar Pradesh and Andaman & Nicobar Islands; at isolated places over West Bengal & Sikkim and West Madhya Pradesh and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 34.5°C was reported at Kozhikode (Kerala).

Weather Warning during the next 5 days (IMD)

- 27 December (Day 1): Thunderstorm accompanied with lightning & hail at isolated places very likely over Sub-Himalayan West Bengal & Sikkim. Dense to very dense Fog in isolated pockets very likely over Punjab, Haryana and dense Fog in isolated pockets over north Rajasthan, Uttar Pradesh, Saurashtra & Kutch, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 28 December (Day 2): Thunderstorm accompanied with lightning & hail at isolated places very likely over East & adjoining West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim and with lightning at isolated places over Marathwada. Dense Fog in isolated pockets very likely over Punjab, Haryana, north Rajasthan, Uttar Pradesh and Saurashtra & Kutch.
- 29 December (Day 3): Thunderstorm accompanied with lightning & hail at isolated places very likely over East Madhya Pradesh, Vidarbha and Chhattisgarh. Dense Fog in isolated pockets very likely over Punjab, Haryana and north Rajasthan. Cold Day conditions in isolated pockets very likely over Bihar.
- 30 December (Day 4): Dense Fog in isolated pockets likely over Punjab, Haryana and north Rajasthan. Cold Day conditions in isolated pockets likely over Bihar.
- 31 December (Day 5): Cold Wave conditions in isolated pockets likely over Punjab, Haryana and Chandigarh.
- The weather outlook for seven days i.e., 27 Dec to 04 Jan 2022 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 (51 MW) at AICRPAM Akola centre: T max 27.6°C (normal 29.5°C), T min 8.8°C (normal 10.6°C). RH I 83 % (normal 70 %), RH II 31 % (normal 28 %). Evaporation rate 3.7 mm (normal 3.9 mm), Wind 0.6 km/hr (normal 3.4 km/hr) and BSH 7.9 hrs (normal 8.3 hrs). Maximum temperature across the week was 1.9°C below normal with a deviation of -4.0 to -0.2°C from normal. Minimum temperature across the week was 1.7°C below normal with a deviation of -4.6 to +2.1°C from normal.

Contingency measure:

- Block level forecast (Akola) indicates prevalence of dry weather during 23- 26 December and isolated light rainfall on 27 December. During this time with prevalence of cold weather, avoid soil moisture deficit condition and apply need based light irrigation to protect the susceptible field crops (pigeonpea), orchards and vegetables from cold. Create air blanket of smoke over the field by burning waste materials/weeds and crop residues in the evening/ night. This will trap the outgoing long wave radiation and the fall in temperature is reduced to a great extent.
- To avoid pink boll worm carry over to next season, farmers are advised to complete harvesting /picking of cotton by the month end of December. After harvesting remove cotton stalks from field. Ratooning of cotton should be discouraged, instead sowing of very late sown wheat by 7 January OR vegetable crop may be preferred.
- Prevailing weather conditions of partly cloudiness and fall in minimum 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.
- 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.

- Prevailing intermittent cloudy weather and fall in minimum temperature favours aphid incidence in safflower. Safflower crop should be protected from the attack of aphids by using 5 % NSKE or Dimethoate 30 EC 10 ml per 10 lit 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* 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.
- For very late sowing of irrigated wheat (December 15-January 7), use varieties - AKAW 4627 and PDKV Sardar (AKAW 4210-6). Follow seed treatment with carbendazim @ 2.5 g/kg seed and also Azotobacter and PSB each @ 250 g per 10-12 kg of wheat seed. Use recommended seed rate for very late wheat sowing @ 150 kg/ha. Use fertilizer @ 40:40:40 kg NPK/ha at sowing and remaining N @ 40 kg/ha at 18-20 days stage at first irrigation in wheat.
- Application of organic mulches in fruit crop tree basins is advisable for thermal insulation to reduce cooling of soil surface during cold weather period. Undertake nursery sowing of chilli, brinjal and tomato for summer plantation.
- During this time with prevalence of cold weather, it is advised to keep the animals in closed shelter and take special care of young cattle to protect from cold. Shelter floor should be covered with straw litter which provides thermal mulch. Protect poultry birds/chicks from cold winds by hanging curtain/clothing from outside the poultry shed. Use of electric bulbs (5-6 hrs) for heat is advisable.

27-12-2021/(0800 to 0827) GMT
27-12-2021/(1330 to 1357) IST

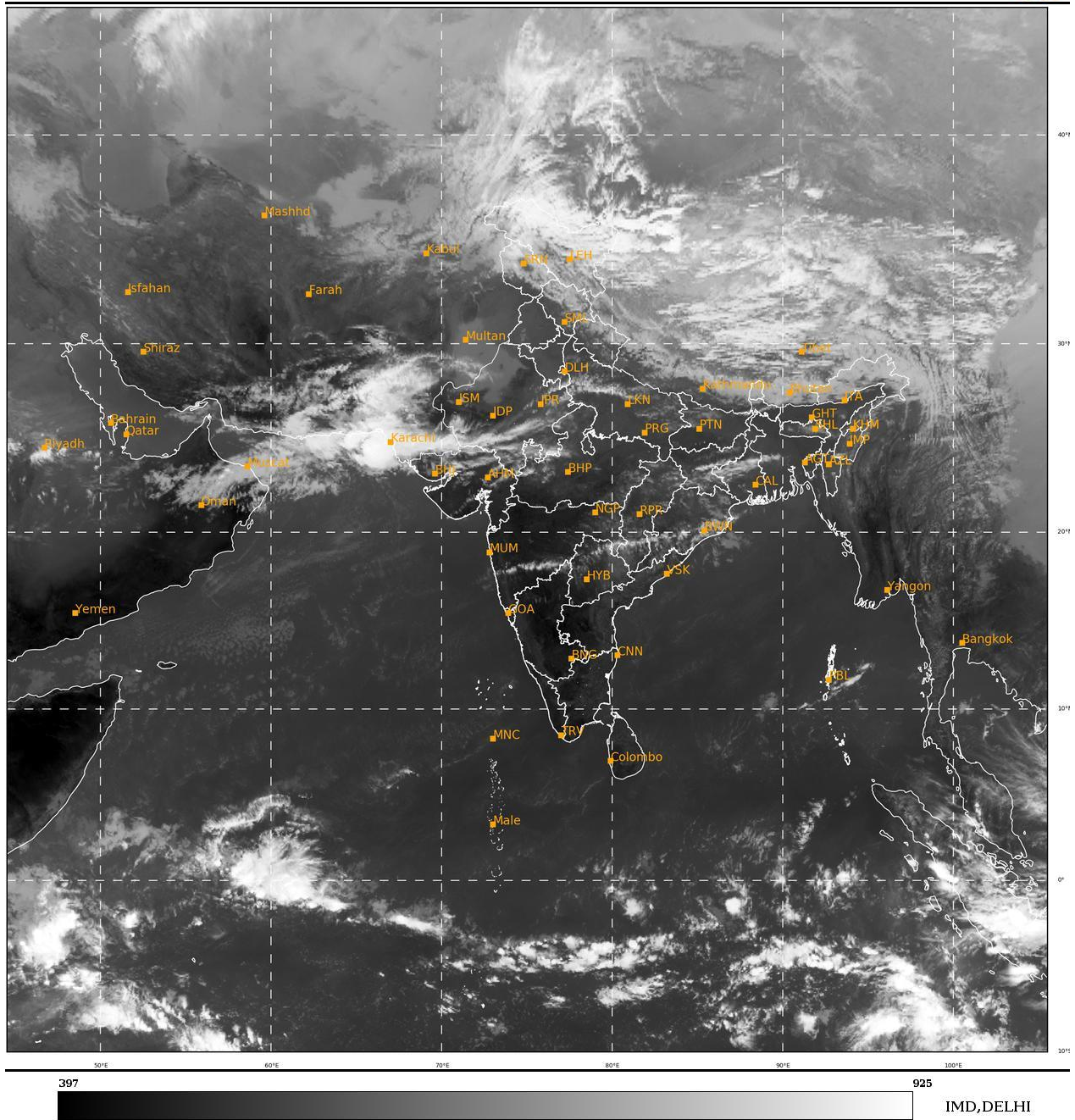


Figure: 1. Latest available satellite picture as on 27 Dec 2021 at 1357 Hrs (IST). (Source: IMD).

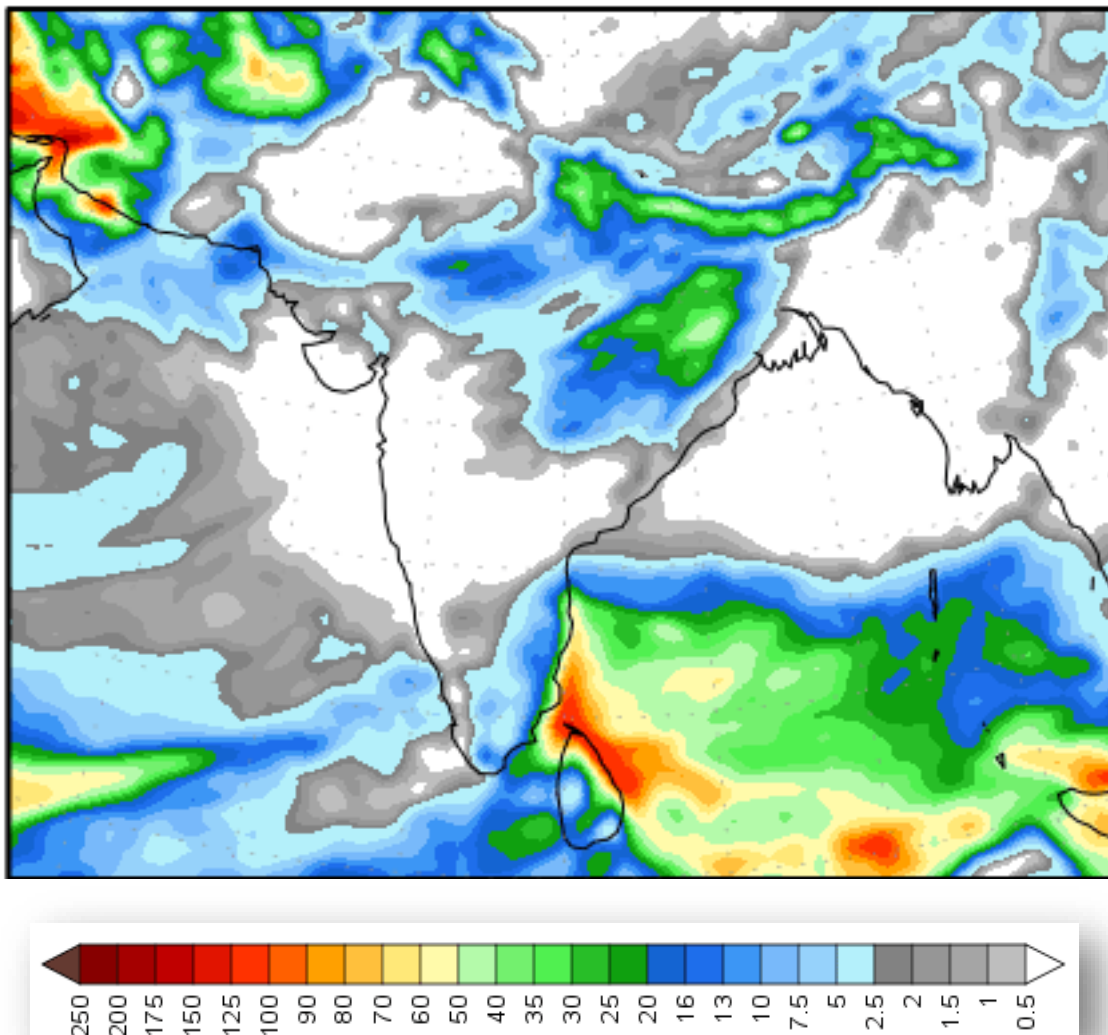


Figure:2. Precipitation forecast for 27 Dec to 04 Jan 2022 (Source: NOAA NCEP).

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