

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

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

### **Daily Crop Weather Information as on 16 December 2020**

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

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

- Cold Day to Severe Cold Day conditions very likely in some pockets over Punjab and Haryana & Chandigarh; in isolated pockets over Delhi, north Rajasthan and West Uttar Pradesh during next 24 hours and Cold Day conditions in isolated pockets over these regions during subsequent 24 hours.
- Cold Wave to Severe Cold Wave conditions very likely in some pockets over Punjab and Haryana & Chandigarh during next 3 days and Cold Wave conditions at isolated pockets over these regions during subsequent 24 hours. Cold Wave to Severe Cold Wave conditions very likely in isolated pockets over Rajasthan during next 3 days and Cold Wave conditions at isolated pockets over Rajasthan during subsequent 24 hours. Cold Wave conditions at isolated pockets over Delhi and West Uttar Pradesh during next 2 days.
- Dense Fog in isolated pockets very likely over Uttarakhand, Himachal Pradesh, Haryana, Uttar Pradesh during morning hours of 17th and over Punjab and north Rajasthan during morning hours of 17th & 18th December, 2020. Very Dense Fog in isolated pockets also very likely over Punjab and north Rajasthan during morning hours of 17th December, 2020.
- Under the influence of an easterly wave, scattered to fairly widespread rain/thundershowers very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep area during next 4 days. Isolated heavy falls also very likely over Tamil Nadu, Puducherry & Karaikal during 16th-19th and over Kerala & Mahe during 17th & 18th December, 2020.
- The images showing the latest satellite picture in the figure. 1.

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

- Rain/Thundershowers observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at many places over Andaman & Nicobar Islands and Jharkhand; at a few places over East Madhya Pradesh and Tamil Nadu, Puducherry & Karaikal and at isolated places over Uttar Pradesh, West Madhya Pradesh, Chhattisgarh, Bihar, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

- Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over East Madhya Pradesh and Tamil Nadu, Puducherry & Karaikal.
- Fog observed (from 0530 hours IST to 0830 hours IST of today): Dense to Very Dense Fog in most pockets over Punjab; in some pockets over West Rajasthan and Dense Fog in many pockets over Haryana, Chandigarh & Delhi; in isolated pockets over Jammu division, Himachal Pradesh, West Uttar Pradesh, Odisha, Bihar, Sub-Himalayan West Bengal, Assam and Tripura.
- Cold Wave conditions observed in isolated pockets over Haryana.
- Severe Cold Day conditions were observed in some pockets over West Rajasthan and Haryana, Chandigarh & Delhi and in isolated pockets over Jammu division & Punjab. Cold Day conditions were observed in many pockets over West Uttar Pradesh; in some pockets over Punjab and in isolated pockets over Jammu division and Haryana, Chandigarh & Delhi.
- Maximum Temperature Departures as on 15-12-2020: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at isolated places over Telangana; above normal (1.6°C to 3.0°C) at most places over Marathwada; at many places over Odisha and Madhya Maharashtra; at a few places over Arunachal Pradesh, Assam & Meghalaya, Chhattisgarh and North Interior Karnataka; at isolated places over Vidarbha. They were markedly below normal (- 5.1°C or less) at most places over Haryana, Chandigarh & Delhi; at a few places over West Uttar Pradesh, West Rajasthan and West Madhya Pradesh; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and East Uttar Pradesh; appreciably below normal (-3.1°C to -5.0°C) at most places over Punjab; at many places over East Rajasthan; at a few places over Himachal Pradesh, East Madhya Pradesh and Saurashtra & Kutch; at isolated places over Uttarakhand, Gujarat Region and Konkan & Goa; below normal (-1.6°C to -3.0°C) at many places over Bihar and Jharkhand; at a few places over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands; at isolated places over Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 35.1°C was reported at Vengurla (Konkan & Goa) over the country.
- Minimum Temperature Departures as on 16-12-2020: Minimum temperatures are markedly above normal (5.0°C or more) at many places over East Madhya Pradesh and Jharkhand; at a few places over West Madhya Pradesh, Chhattisgarh, Vidarbha and Marathwada; at isolated places over Madhya Maharashtra; appreciably above normal (3.1°C to 5.0°C) at many places over Nagaland, Manipur, Mizoram & Tripura; at a few places over Assam & Meghalaya, Gangetic West Bengal, Odisha,

Rayalaseema and Telangana; at isolated places over East Uttar Pradesh, Gujarat Region and Tamilnadu; above normal (1.6°C to 3.0°C) at many places over Coastal Andhra Pradesh & Yanam; at a few places over South Interior Karnataka and Kerala & Mahe; at isolated places over Konkan & Goa. They are appreciably below normal (-3.1°C to -5.0°C) at most places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad; at a few places over Himachal Pradesh; at isolated places over Uttarakhand and West Rajasthan; below normal (-1.6°C to -3.0°C) at many places over Haryana, Chandigarh & Delhi and Saurashtra & Kutch; at a few places over West Uttar Pradesh and East Rajasthan; at isolated places over Punjab and near normal over rest parts of the country. The lowest minimum temperature of 2.0°C reported at Amritsar (Punjab) over the plains of the country.

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

- 16 December (Day 1): Heavy rainfall very likely at isolated places over Andaman & Nicobar Islands and Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning very likely at isolated places over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Kerala & Mahe. Cold Wave to Severe Cold Wave conditions very likely in some pockets over Punjab and Haryana and Chandigarh & Delhi and Cold Wave to Severe Cold Wave conditions very likely in isolated pockets over Rajasthan and Cold Wave conditions in isolated pockets over West Uttar Pradesh. Cold Day to Severe Cold Day conditions very likely in some pockets over Punjab and Haryana, Chandigarh & Delhi; in isolated pockets over West Uttar Pradesh and north Rajasthan and Cold Day conditions in isolated pockets over East Uttar Pradesh. Dense to Very Dense fog very likely in isolated pockets Punjab and north Rajasthan and Dense fog in isolated pockets over Himachal Pradesh, Uttarakhand, Haryana, Uttar Pradesh, East Madhya Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 17 December (Day 2): Heavy rainfall very likely at isolated places over Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning very likely at isolated places over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam, Rayalaseema, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Kerala & Mahe. Cold Wave to Severe Cold Wave conditions very likely in some pockets over Punjab and Haryana, Chandigarh & Delhi and Cold Wave to Severe Cold Wave conditions very likely in isolated pockets over Rajasthan and Cold Wave conditions in isolated pockets over West Uttar Pradesh. Cold Day conditions very likely in isolated pockets over

Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and north Rajasthan. Dense fog very likely in isolated pockets Punjab, north Rajasthan, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

- 18 December (Day 3): Heavy rainfall very likely at isolated places over Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning very likely at isolated places over South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Kerala & Mahe. Cold Wave to Severe Cold Wave conditions very likely in some pockets over Punjab and Haryana and Cold Wave to Severe Cold Wave conditions very likely in isolated pockets over Rajasthan. Dense fog very likely in isolated pockets Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 19 December (Day 4): Heavy rainfall likely at isolated places over Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Kerala & Mahe. Cold Wave conditions likely in isolated pockets over Punjab, Haryana and Rajasthan.
- 20 December (Day 5): Thunderstorm accompanied with lightning likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- The weather outlook for seven days i.e., 16 December to 24 December 2020 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)

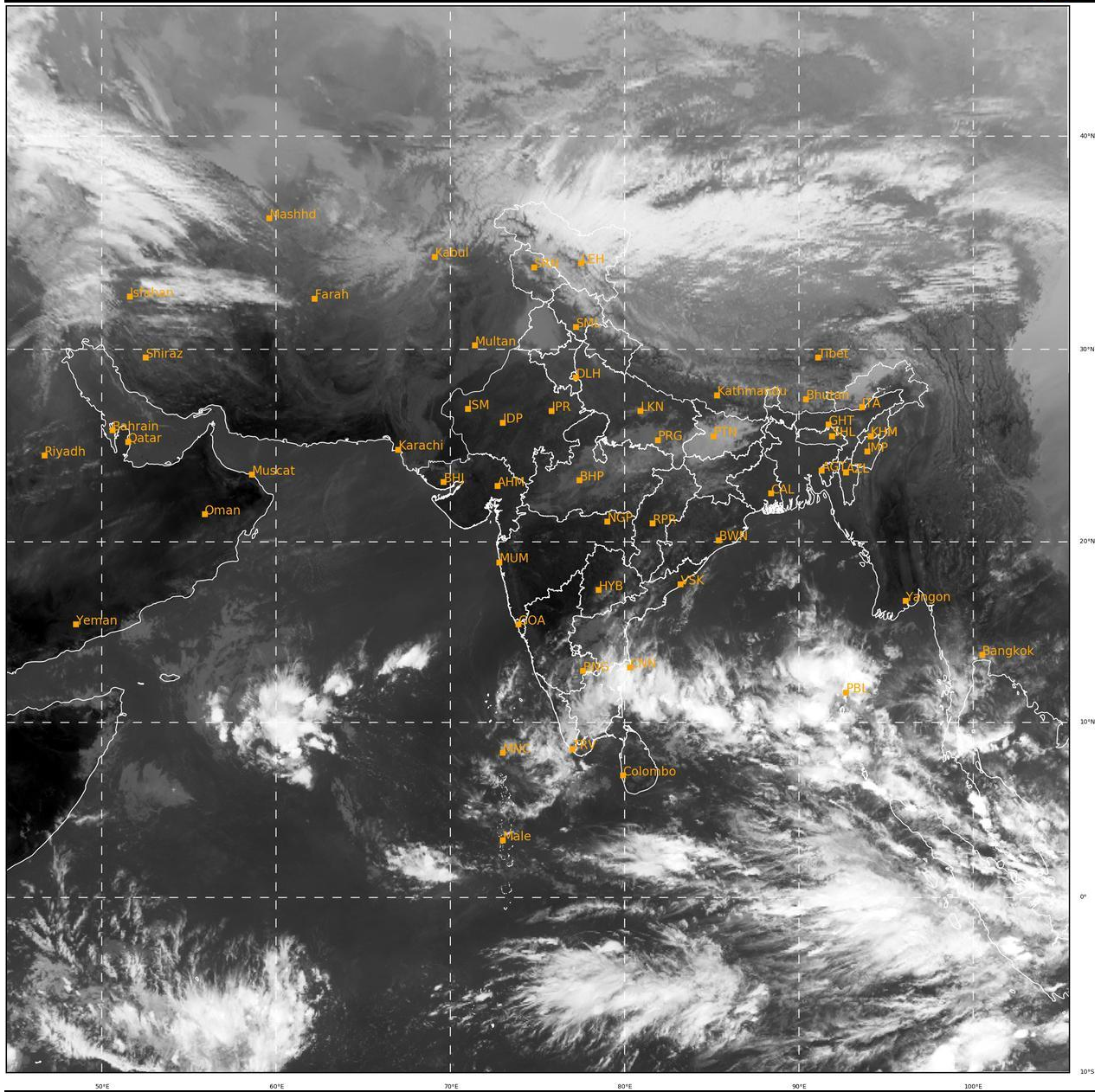
### **Kerala**

#### **Weather condition:**

In Vellanikkara, the maximum temperature ranges from 27.9 to 32.7 Deg C, minimum temperature ranges from 21.0 to 23.3 Deg C. Morning relative humidity ranges from 071% to 093% and afternoon relative humidity ranges from 058% to 070%. Wind speed ranges from 1.8 to 10.5 km/h. Evaporation ranges from 1.2 to 4.5 mm. Sunshine hours range from 0.0 to 5.9 hours. 5cm morning soil temperature ranges from 24.6 to 26.0 Deg C and afternoon soil temperature ranges from 28.6 to 34.8 Deg C.

#### **Contingency measure:**

- Rice- (Mundakan)- Panicle Emergence- Bacterial Leaf blight- As a prophylactic measure, spray 20 gram Pseudomonas in one litre of water. To control the spread of Bacterial Leaf blight in paddy, spray 6 g of Streptocycline in 30 litre of water. Leaf folder- There is a chance of leaf folder attack in mundakan Paddy. It can be controlled by using trichogramma cards (2CC per one acre). Cut the cards in to small pieces and fix in different regions of the field. If the attack is severe, spray Chlorantraniliprole (Coragen) @ 3ml per ten litre of water. Brown Plant Hopper (BPH)- There is a chance of Brown plant hopper attack in rice. Spray 2 g Thiamethoxam (Actara) per ten litre of water.
- Banana- Spodoptera- If the attack is in the initial stage, the affected leaves should be destroyed along with egg, caterpillar and pupa. Neem Kernel suspension (5 percentage) should be sprayed.
- Vegetables- (cowpea)- Fruit borer- If the attack is in the initial stage, the affected leaves should be destroyed along with egg, caterpillar and pupa. Neem Kernel suspension (5 percentage) should be sprayed. If the attack is severe, spray Flubendamide (Tukumi) 2 ml per ten litre of water or Chlorantraniliprole (Coragen) 3 ml per ten litre of water. Cabbage/ Cauliflower Spodoptera- If the attack is in the initial stage, the affected leaves should be destroyed along with egg, caterpillar and pupa. Neem Kernel suspension (5 percentage) should be sprayed. If the attack is severe, spray Flubendamide (Tukumi) 2 ml per ten litre of water or Chlorantraniliprole (Coragen) 3 ml per ten litre of water.
- Animal Husbandry - Take precautions to avoid ecto parasitic infestation. If fever, shivering, brown coloured urine, off feed etc. are noticed, consult veterinary doctor immediately.

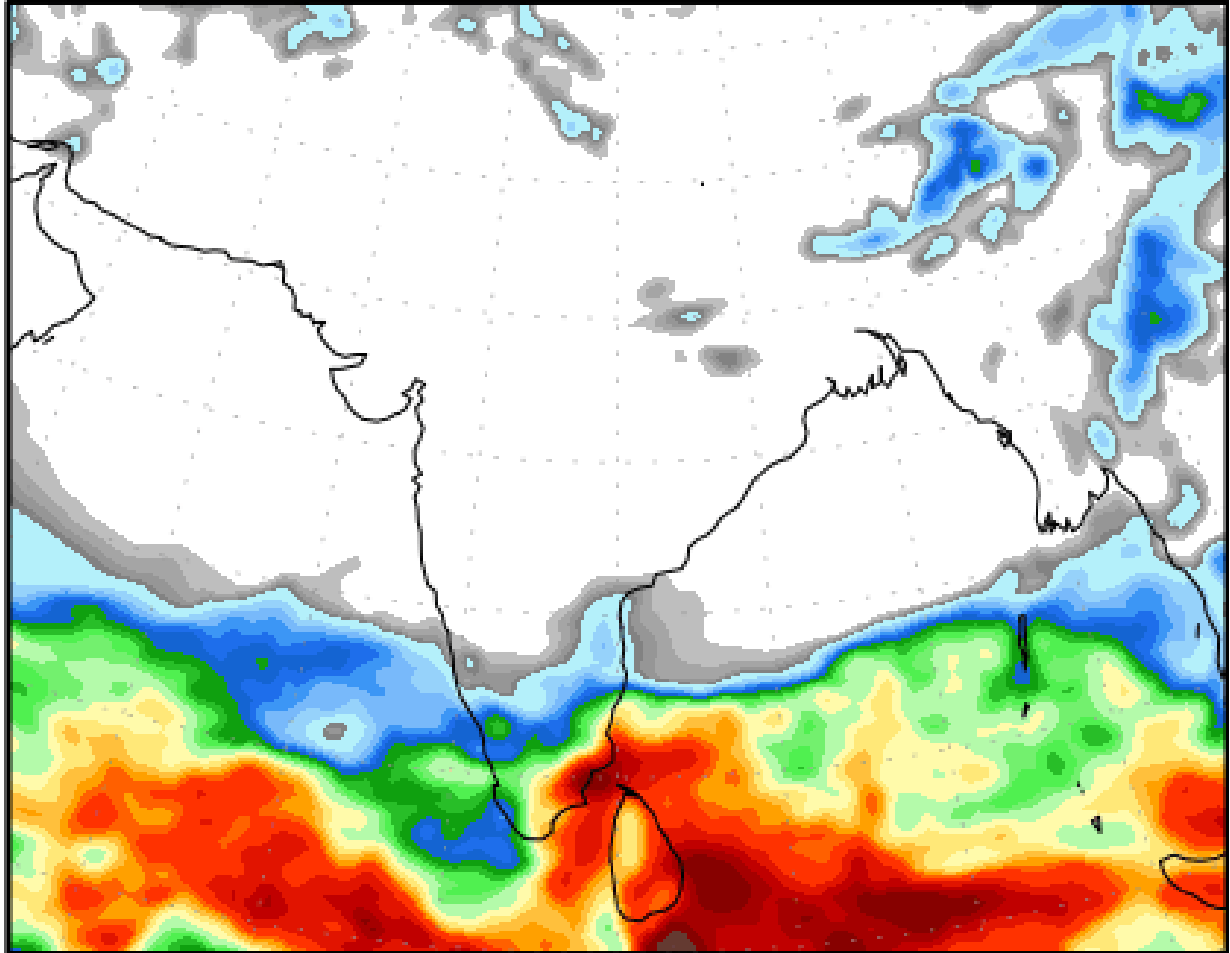


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IMD, DELHI

**Figure: 1. Latest available satellite picture as on 16 December 2020 at 1357 Hrs (IST). (Source: IMD).**



**Figure:2. Precipitation forecast for 16 to 24 December 2020 (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.*