

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 13 July 2020

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- The monsoon trough at mean sea level now passes through Amritsar, Chandigarh, Bareilly, Azamgarh, Jamui, Dumka, Canning and thence southeastwards to North Bay of Bengal. It is likely to shift further southwards during next 48 hours. Under its influence, fairly widespread to widespread rainfall with isolated heavy falls is likely over the plains of Northwest India during 15-17 July, 2020 with maximum intensity and distribution of rainfall on 16th July.
- Under the influence of strong lower level wind convergence along the West coast, isolated to scattered heavy to very heavy falls are likely over north Madhya Maharashtra and north Konkan & Goa during 14-16 July, 2020 with Isolated extremely heavy falls on 15th July.
- In view of reduction in convergence of lower level southwesterly/southerly winds from Bay of Bengal and revival of the monsoon trough, intensity of rainfall over Northeast India has substantially reduced. However, Isolated heavy falls are likely over the region during next 3-4 days. Isolated heavy to very heavy falls are likely over Bihar and Sub-Himalayan West Bengal & Sikkim during next 3 days.
- Intense thunderstorm & lightning potential zone: Moderate to severe thunderstorm & lightning very likely over East Uttar Pradesh, south Bihar, Jharkhand, Gangetic West Bengal, north Madhya Pradesh and East Rajasthan during next 12 hours.
- 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 most places over Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Bengal & Sikkim, Gujarat Region, Konkan & Goa, Vidarbha, Chhattisgarh, Coastal Karnataka and Lakshadweep; at many places over Odisha, Jharkhand, Bihar, Haryana, Chandigarh & Delhi, Punjab, East Rajasthan, Saurashtra & Kutch,

Coastal Andhra Pradesh & Yanam and Kerala; at a few places over West Rajasthan, Madhya Pradesh, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema and Interior Karnataka and at isolated places over Uttar Pradesh, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Tamil Nadu, Puducherry & Karikal.

- Heavy to very heavy rainfall observed at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, and Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands; heavy rainfall at isolated places over Gangetic West Bengal, Chhattisgarh, Coastal Andhra Pradesh & Yanam, West Rajasthan, Konkan & Goa, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.
- Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Haryana, Chandigarh & Delhi, East Uttar Pradesh, Bihar, Jharkhand, Odisha, Vidharbha, Coastal Andhra Pradesh & Yanam, Nagaland, Manipur, Mizoram & Tripura, West Rajasthan, West Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Tamil Nadu, Puducherry & Karaikal and Rayalaseema.
- Maximum Temperature Departures as on 12-07-2020: Maximum temperatures were above normal (1.6°C to 3.0°C) at most places over Vidharbha; at many places over Uttarakhand, Jharkhand and East Madhya Pradesh; at a few places over Himachal Pradesh, East Uttar Pradesh, Chhattisgarh, Marathawada, Odisha, Gangetic West Bengal, Madhya Maharashtra and Telangana; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Rajasthan, West Uttar Pradesh, West Madhya Pradesh, Saurashtra & Kutch, Rayalaseema, South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal. They were appreciably below normal (-3.1°C to -5.0°C) at many places over Punjab and Haryana, Chandigarh & Delhi; at a few places over Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya; at isolated places over Andaman & Nicobar Islands; below normal (-1.6°C to -3.0°C) at a few places over Konkan & Goa; at isolated places over Gujarat region and near normal over rest parts of the country. Yesterday, the highest Maximum temperature of 39.8°C was reported at Bikaner (West Rajasthan).
- Minimum Temperature Departures as on 13-07-2020: Minimum temperatures are above normal (1.6°C to 3.0°C) at a few places over Jharkhand; at isolated places over West Rajasthan, East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Telangana and Kerala & Mahe. They are appreciably below normal (-3.1°C to -5.0°C) at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan

& Muzaffarabad and Rayalaseema; below normal (-1.6°C to -3.0°C) at a few places over and Himachal Pradesh and Punjab; at isolated places over Haryana, Chandigarh & Delhi, East Rajasthan, West Madhya Pradesh and Konkan & Goa and near normal over rest parts of the country. The lowest minimum temperature of 20.0°C reported at Khargone (West Madhya Pradesh) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 13 July (Day 1): Heavy to very heavy rainfall very likely at isolated places over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Konkan & Goa and heavy rainfall at isolated places over East Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Gujarat Region, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. Moderate to severe thunderstorm accompanied with lightning very likely at a few places over East Uttar Pradesh; thunderstorm accompanied with lightning at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal. Strong Wind (speed reaching 45-55 kmph) very likely over Southwest and Westcentral Arabian Sea and along & off south Maharashtra coast. Squally weather (wind speed reaching 40-50 kmph) along & off Karnataka coast. Fishermen are advised not to venture into Sea over these areas.
- 14 July (Day 2): Heavy to very heavy rainfall very likely at a few places over Konkan & Goa; at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim and Madhya Maharashtra and heavy rainfall at isolated places over Uttarakhand, Madhya Pradesh, East Uttar Pradesh, Vidarbha, Jharkhand, Chhattisgarh, Gangetic West Bengal, Odisha, Arunachal Pradesh, Gujarat Region, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & North Interior Karnataka and Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning at a few places over Madhya Pradesh, Vidarbha and Chhattisgarh; at isolated places over East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura,

Gujarat State, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal. Strong Wind (speed reaching 45-55 kmph) very likely over Southwest and Westcentral Arabian Sea and along & off Maharashtra coast. Fishermen are advised not to venture into Sea over these areas.

- 15 July (Day 3): Heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places very likely over Konkan & Goa; Heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places very likely over Madhya Maharashtra; Heavy to very heavy rainfall at isolated places over Uttarakhand, East Madhya Pradesh, Chhattisgarh and Coastal Karnataka and heavy rainfall at isolated places over Uttar Pradesh, Rajasthan, West Madhya Pradesh, Vidarbha, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Marathwada, Telangana, Interior Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning at a few places over Madhya Pradesh, Vidarbha and Chhattisgarh; at isolated places over East Uttar Pradesh, Rajasthan, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Strong Wind (speed reaching 45-55 kmph) likely over Southwest and Westcentral Arabian Sea; (speed reaching 40-50 kmph) over Eastcentral & Southeast Arabian Sea and along & off Maharashtra-Karnataka-Kerala coasts and Lakshadweep areas. Fishermen are advised not to venture into Sea over these areas.
- 16 July (Day 4): Heavy to very heavy rainfall likely at isolated places over Gujarat State, Madhya Maharashtra, Konkan & Goa and Coastal Karnataka and heavy rainfall at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe. Thunderstorm accompanied with lightning at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan and Jharkhand. Strong Wind (speed reaching 45-55 kmph) likely over Southwest and Westcentral Arabian Sea and (speed reaching 40-50 kmph) over Eastcentral & Southeast Arabian Sea along & off Maharashtra-Karnataka-Kerala coasts and Lakshadweep areas. Fishermen are advised not to venture into Sea over these areas.

- 17 July (Day 5): Heavy to very heavy rainfall likely at isolated places over Saurashtra & Kutch and heavy rainfall at isolated places over Uttarakhand, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Gujarat Region, Madhya Maharashtra, Konkan & Goa, Coastal Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning at isolated places over East Uttar Pradesh and Jharkhand. Strong Wind (speed reaching 45-55 kmph) likely over Southwest and Westcentral Arabian Sea and (speed reaching 40-50 kmph) over Eastcentral Arabian Sea. Fishermen are advised not to venture into Sea over these areas.
- The weather outlook for seven days i.e., 13 to 21 July 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)

Jammu

Weather condition:

Mainly clear weather prevailed during this week with 18.2 mm rainfall in one rainy day. Both maximum and minimum temperatures was observed above normal by 1 to 4 0C and remained in the range between 35.6 to 41.8 0C and 22.4 to 28.5 0C. The morning and evening relative humidity were observed between 60 to 80 % and 41 to 55 %, respectively. The total evaporation during this week was observed 61.2 mm and bright sunshine in the range of 5.3 to 8.9 hrs per day.

Contingency measure:

- Paddy Transplanted Direct seeded rice Transplanting 25 days crop Due to chances of rainfall, farmers can go for the transplanting of rice seedlings which are 20-30 days old/ which have attained 4-6 leaves (varieties: IET-1410, PC-19, SJR-5, Jaya, Basmati 370 and Ranbir Basmati). Apply the basal dose of fertilizer at time of transplanting. Farmers are advised to bund their fields for in situ storage of rain water and utilize the same for puddling. To control weeds Spray Bispyribac-sodium@25gm ai in 500lts of water/ha in 25 days old crop during clear weather.
- Maize Sowing Postpone sowing for next 3 days. Farmers may go for sowing of maize after receipt of rain at optimum soil moisture condition in rainfed areas (var.: Vivek-25, Vivek QOM-9, HM-5 and HQPM-1) upto 15th of July with seed rate of 20-30 kg/ha. Treat the seed with Bavistin @ 3g/Kg of seed to manage soil borne diseases.

- Pulses *Kharif* Mash Sowing Postpone sowing for next 3 days. Farmers may go for sowing of Mash (var.:Pant U-19, Uttara) & Moong (var. :SML-668) after receipt of rain at optimum soil moisture condition in rainfed areas. Inoculate the seed with Rhizobium culture before sowing to get better yield. *Kharif* Fodder (maize+ cowpea+charri) & bajra Sowing Sowing of the mixed fodder crop can be undertaken after receipt of rain at optimum soil moisture.
- Vegetables: Cucurbits Turmeric Brinjal Sun hemp (Daincha) Fruiting Vegetative Fruiting Sowing Postpone irrigation due to chances of rainfall. Avoid direct contact of fruit with soil. Earthing up is recommended. Cover ridges with local grass to protect them (ridges) against rainfall as well as conserve soil moisture. Fruit borer attack can be minimized by the application of dichlorovos @ 2.0ml/lit of water during clear weather. Regular hand picking of infested fruits and shoots and their proper disposal is very important. Plough the fallow field, if any, followed by sowing of daincha @ 2kg/kanal as green manure to increase fertility of soil and get good yield of rabi vegetables.
- Floriculture: Gladiolus Shrubs/hedges/tree (Ficus,Plumeria, Hamelia, Duranta, Irsesine) Harvesting of corms Mother stock Due to chances of rainfall, harvesting of corms as soon as possible. Cutting preparation with the onset of rain. Take 8-10 cm semi hard terminal cutting for propagation. Treat the cuttings with NAA @500ppm and plant in sand.
- Sericulture Mulberry Cocoon crop Tree plantation Harvested cocoons Immediate pruning of dead wood is recommended. Postpone irrigation due to chances of rainfall. The bags should be kept in wire mesh covered racks to avoid rodent attack till sale of the crop.
- Horticulture Mango Citrus Young/Bearing Young/Bearing Apply need based irrigation. Remove water suckers. Pits for rainy season plantation may be dug. Due to rise in temperature farmers are advised to protect young fruit plants from heat by providing thatches/cover but ensure free circulation of air. Spray dimethoate @ 1ml/lit during clear weather to control citrus psylla, leaf miner, if observed. Milky mushroom Spawn run Disinfect the crop room. Farmers interested in growing milky mushroom should book the spawn of milky mushroom from a reliable agency. Apiculture To control mite, dust sulphur on top bars @ 1g/frame /oxalic acid treatment @ 3.5% / litre water. Poultry Vaccinate chicks against new castle disease and gumbroo disease. Spread clean litter material uniformly in the poultry house at thickness of 2-3 inches.
- Live stock: Dairy animals/ Sheep & Goat Sprinkle water in sheds to reduce heat stress or keep all the animals under shade and if possible provide coolers to cross

bred cattles during the day time. Provide adequate amount of fresh cool and clean drinking water to the animals at frequent intervals to save animals from heat stroke. Provide water bath 3-4 times in a day. Sheep and goat should be allowed to graze/browse during cooler parts of the day i.e. morning and evening. Supplementary mineral mixture should be given regularly to the milking and pregnant animals. If not vaccinated yet, get the animals vaccinated against foot and mouth and Gal Gotu diseases.

- Fisheries Carp farming Fry/ yearlings Farmers who have stocked fish livestock in their ponds are advised to maintain proper water level in their fish ponds. Cover face with thick cloth or wear mask and maintain social distance while doing agricultural operations in field.

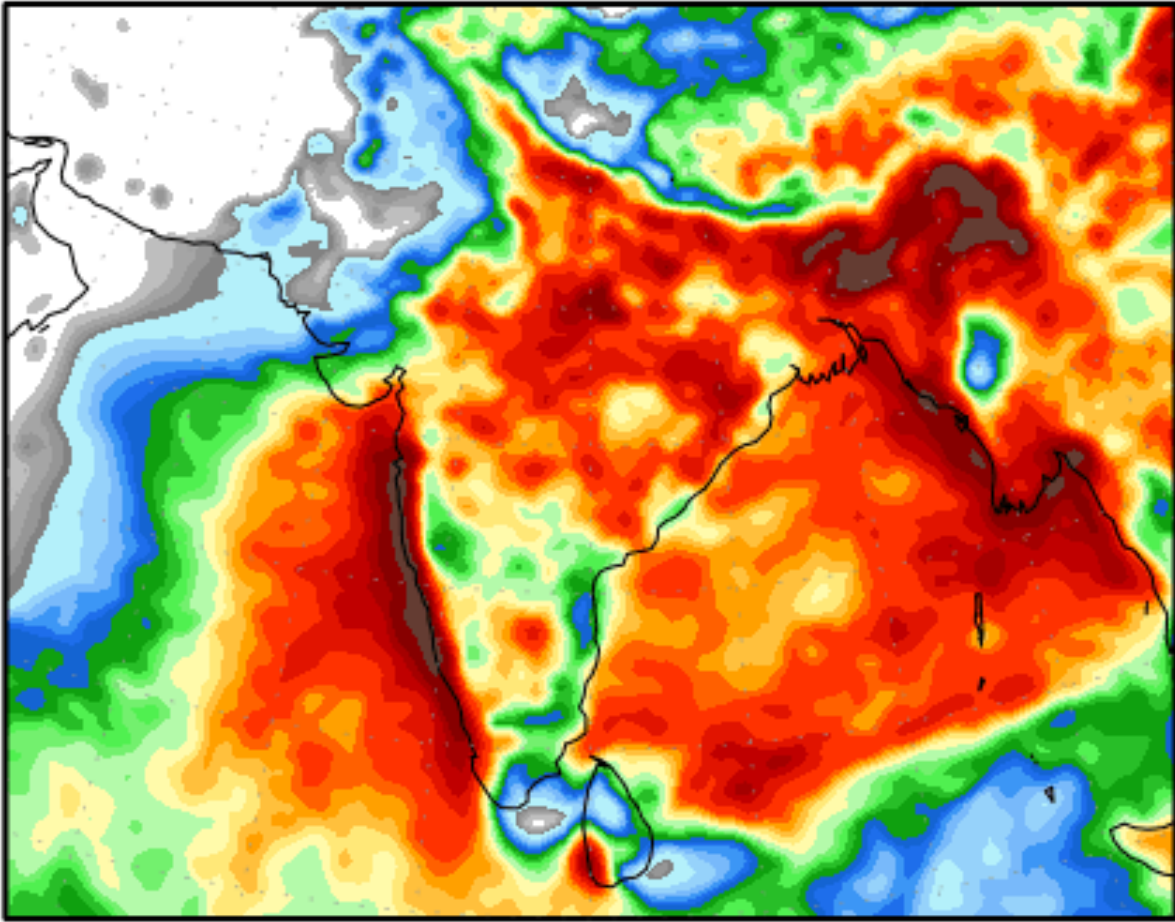


Figure:2. Precipitation forecast for 13 to 21 July 2020 (Source: NOAA NCEP).

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.