

All India Coordinated Research Project on Agrometeorology

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Daily Crop Weather Information as on 30 September 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- With westward movement of the Depression over northeast Arabian Sea, away from Indian Coast, Numerical Weather Prediction models consensus indicate, establishment of westerly & northwesterly winds at lower & middle tropospheric levels over northwest India and development of lower level anti-cyclonic circulation over the region from 5th Oct 2021. Under its influence, drastic reduction in moisture and absence of rainfall over extreme northwestern parts of India is very likely. Thus conditions are very likely to be favourable for commencement of withdrawal of southwest monsoon from some parts of northwest India from around 6th October 2021.
- The Depression over northeast Arabian Sea & adjoining Kutch moved nearly westwards with a speed about 28 kmph during past 03 hours and lay centered at 0830 hours IST of today, the 30th September 2021, over northeast Arabian Sea off Gujarat coast, near Lat. 22.7° N and Long. 68.6° E, about 60 km westnorthwest of Devbhoomi Dwarka (Gujarat), 280 km east-southeast of Karachi (Pakistan) and 860 km east-southeast of Chabahar Port (Iran). It is very likely to move west-northwestwards and intensify into Deep Depression over northeast Arabian Sea off north Gujarat coast during next 12 hours. Then it is very likely to move further west-northwestwards and intensify into a Cyclonic Storm during the subsequent 24 hours. Thereafter, it is likely to continue to move westnorthwestwards close to Pakistan- Makran coasts, moving away from the Indian coast.
- The Well Marked Low Pressure Area now lies over north Jharkhand & adjoining Bihar and the associated cyclonic circulation extends upto 7.6 km above mean sea level. The system & its remnant is very likely to move over Bihar & adjoining Sub-Himalayan West Bengal Sikkim during next 3-4 days.
- A trough in easterly runs from Southeast Bay of Bengal to south Andhra Pradesh coast at lower tropospheric levels and likely to persists during next 2-3 days. Under the influence of the above systems: i) Heavy to very heavy rainfall very likely at isolated places over Saurashtra & Kutch on today, the 30th September, 2021 and significant reduction thereafter. ii) Isolated heavy falls is very likely over

Bihar and Sub-Himalayan West Bengal & Sikkim till 03rd Oct; very Heavy rainfall also likely over Gangetic West Bengal on 30th Sept.; over Bihar on 02nd Oct.; Sub-Himalayan West Bengal & Sikkim on 02nd & 03rd Oct; extremely heavy falls (> 20 cm) very likely at isolated places over Jharkhand on 30th Sep; over Bihar on 30th Sept. & 01st Oct. iii) Rainfall activity is very likely to increase over south Peninsular India from 01st October with heavy falls over Tamil Nadu, Kerala, Coastal & South Interior Karnataka during 01st-04th October. Isolated very heavy falls also likely over Tamilnadu during 02nd-04th October.

- Fishermen are advised not to venture into north & adjoining central Arabian Sea and along & off Gujarat & north Maharashtra coasts from 30th September till 2nd October 2021.
- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rainfall/Thundershowers observed (0830 hrs IST of yesterday to 0830 hrs IST of today): at most places over Jharkhand, Coastal Karnataka, Lakshadweep, Gujarat state, Gangetic West Bengal and Konkan & Goa; at many places over Odisha, Kerala & Mahe and Andaman & Nicobar Islands; at a few places over Uttarakhand, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Rayalaseema and Interior Karnataka; at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Marathawada, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal.
- Heavy Rainfall recorded (0830 hrs IST of yesterday to 0830 hrs IST of today): Extremely Heavy rainfall at isolated places over Saurashtra & Kutch, Gangetic West Bengal and Jharkhand and heavy rainfall at isolated places over Gujarat region, Odisha, Chhattisgarh, Tamilnadu, Rayalaseema and Tripura.
- Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Himachal Pradesh, Uttarakhand, Odisha, West Rajasthan, Gujarat State, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Assam & Meghalaya, Rayalaseema, Nagaland, Manipur, Mizoram & Tripura and Coastal Andhra Pradesh.
- Maximum Temperature Departures as on 29-09-2021: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad; above normal (1.6°C to 3.0°C)

at many places over Uttarakhand, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal; at isolated places over Punjab and West Uttar Pradesh. They were markedly below normal (-5.1 or less) at many places over Gujarat state; at a few places over Gangetic West Bengal; appreciably below normal (-3.1°C to -5.0°C) at many places over East Rajasthan and Jharkhand; at a few places over West Rajasthan and West Madhya Pradesh; at isolated places over Madhya Maharashtra and Odisha; below normal (-1.6°C to -3.0°C) at many places over Marathawada; at a few places over Vidarbha; at isolated places over Andaman & Nicobar islands, Haryana, Chandigarh & Delhi and East Madhya Pradesh and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 37.0°C was reported at Barmer (West Rajasthan).

- Minimum Temperature Departures as on 30-09-2021: Minimum temperatures are markedly above normal (5.1°C or more) at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Himachal Pradesh; at isolated places over Punjab; appreciably above normal (3.1°C to 5.0°C) at most places over Haryana Chandigarh & Delhi; at many places Uttarakhand and East Rajasthan; at a few places over West Madhya Pradesh and West Rajasthan; at isolated places over Sub-Himalayan West Bengal & Sikkim and East Madhya Pradesh; above normal (1.6°C to 3.0°C) at a few places over Bihar and Coastal Andhra Pradesh & Yanam; at isolated places over Vidarbha, Odisha, Assam & Meghalaya, Uttar Pradesh and Tamilnadu, Puducherry & Karaikal and near normal over rest parts of the country. Today, the lowest minimum temperature of 17.5°C reported at Bulsar (Gujarat region) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 30 September (Day 1): Heavy to very heavy rainfall with extremely heavy falls very likely at isolated places over Bihar and Jharkhand; Heavy to very heavy rainfall very likely at isolated places over Saurashtra & Kutch and Gangetic West Bengal and Heavy rainfall at isolated places over Uttarakhand, Chhattisgarh, south Coastal Andhra Pradesh & Yanam, Rayalaseema and Tamilnadu, Puducherry and Karaikal. Thunderstorm accompanied with lightning and hail very likely at isolated places over Uttarakhand; with lightning at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, East Uttar Pradesh, Rajasthan, East Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalseema and Tamil Nadu, Puducherry & Karaikal. Squally wind

speed reaching 45-55 kmph gusting to 65 kmph likely to prevail over northeast Arabian Sea and along & off south Gujarat coast and 40 - 50 kmph gusting to 60 kmph over east-central Arabian Sea along & off north Maharashtra coast till today evening. It would gradually increase thereafter, becoming squally wind speed reaching 50-60 kmph gusting to 70 kmph over northeast Arabian Sea and along & off Gujarat coast and 45 - 55 kmph gusting to 65 kmph over east-central Arabian Sea along & off north Maharashtra coast from the evening of today, the 30th September, till late night. Sea condition will be rough to very rough over northeast Arabian Sea and adjoining east-central Arabian Sea & along & off Gujarat - north Maharashtra coasts till today, the 30th Sept. 2021 evening. Squally wind speed reaching 40-50 kmph gusting to 60 kmph over Southwest & adjoining Southeast Bay of Bengal. Squally wind speed reaching 40-50 kmph gusting to 60 kmph over Southwest & Westcentral Arabian Sea. Fishermen are advised not to venture into these areas.

- 01 October (Day 2): Heavy to very heavy rainfall with extremely heavy falls very likely at isolated places over Bihar and Heavy rainfall at isolated places over Uttarakhand, East Uttar Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Coastal & South Interior Karnataka, Kerala & Mahe and Tamilnadu, Puducherry and Karaikal. Thunderstorm accompanied with lightning and hail very likely at isolated places over Uttarakhand; with lightning at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalseema, Kerala & Mahe and Tamilnadu, Puducherry & Karaikal. Gale wind speed reaching 90-100 kmph gusting to 110 kmph over northeast & adjoining northwest Arabian Sea & along & off Pakistan - Makran coasts, 70- 80 kmph gusting to 90 kmph along & off Gujarat coast and squally wind speed reaching 40 - 50 kmph gusting to 60 kmph over central Arabian Sea from the evening of 01st October. Sea condition will be 'High' over Northeast Arabian Sea and along & off Gujarat coast and adjoining eastcentral Arabian Sea and along and off Pakistan coast and rough to very rough along & off north Maharashtra coast on 01st October 2021. Squally wind speed reaching 40-50 kmph gusting to 60 kmph over Southwest & Westcentral Arabian Sea. Fishermen are advised not to venture into these areas.
- 02 October (Day 3): Heavy to very heavy rainfall very likely at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and

Tamilnadu, Puducherry and Karaikal and heavy rainfall at isolated places over East Uttar Pradesh, Gangetic West Bengal, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, ghat areas of Madhya Maharashtra, south Konkan & Goa, Coastal & South interior Karnataka, Lakshadweep and Kerala & Mahe. Thunderstorm accompanied with lightning likely at isolated places over Uttarakhand, East Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Madhya Maharashtra, Marathawada, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal. Gale wind speed reaching 90-100 kmph gusting to 110 kmph over north Arabian Sea and along & off Pakistan – Makran coasts, and 60-70 kmph gusting to 80 kmph along & off north Gujarat coast on 2nd October 2021. Sea condition will be ‘High to very High’ over north Arabian Sea and along and off north Pakistan – Makran coasts and ‘High’ over adjoining central Arabian Sea, very rough to High along & off north Gujarat coast on 2nd October. Strong wind (speed 40-50 kmph to gusting 60 kmph) likely over Comorin area and Gulf of Mannar. Fishermen are advised not to venture into these areas.

- 03 October (Day 4): Heavy to very heavy rainfall likely at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and Tamilnadu, Puducherry and Karaikal and heavy rainfall at isolated places over Bihar, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, ghat areas of Madhya Maharashtra, south Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & South interior Karnataka, Lakshadweep and Kerala & Mahe. Thunderstorm accompanied with lightning likely at isolated places over Madhya Maharashtra, Marathawada, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal. Strong wind (speed 40-50 kmph to gusting 60 kmph) likely over Comorin area and Gulf of Mannar. Fishermen are advised not to venture into these areas.
- 04 October (Day 5): Heavy to very heavy rainfall likely at isolated places over Tamilnadu, Puducherry and Karaikal and heavy rainfall at isolated places over ghat areas of Madhya Maharashtra, south Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & South Interior Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning likely at isolated places over Madhya Maharashtra, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal. Strong wind (speed 40-50 kmph to gusting 60 kmph) likely over Comorin area and Gulf of Mannar. Fishermen are advised not to venture into these areas.

- The weather outlook for seven days i.e., 30 Sep to 08 Oct 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)

Gujarat

Weather condition:

The actual maximum temperature was 3.3 °C lower and the actual minimum temperature was 1.2 °C higher as compare to their normals. Total BSS was 4.1 hrs. with an average of 0.6 hrs. The daily average evaporation and wind speed was 1.8 mm and 4.2 km/hr respectively. The daily average RH during morning and afternoon was 95.1 % and 86.0 % respectively.

Contingency measure:

- Pearl millet : Maturity/Harvesting : Protect the crop from bird damage. Harvest the mature crop and keep it in safe place to protect from rainfall.
- Tobacco : Weeding in tobacco nursery is advised. Preprepare land for tobacco transplanting. Carry out transplanting of seedlings of tobacco crop at recommended spacing (90 cm x 75 cm or 105 cm x 90 cm). Gap filling, inter-culturing and hand weeding in established transplanted crop is advised. Drain out excess rain water from the field.
- Paddy : At initial stage of incidence of paddy stem borer, install pheromone trap. In heavy incidence of stem borer, apply carbosulfan 5 G (4 kg) or cartap hydrochloride 4 G (5 kg) or carbofuran 3 G (6 kg) per vigha (20 guntha) after removal of water from field. For control of Brown Leaf hopper in paddy spray Monocrotophose 36% (15 ml) + Dichlorvos (5 ml) or Fenobucarb 15 ml/10 litre water.
- Chilli : For control of thrips, spray Profenofos 20 ml or neem seed oil 50 ml in 10 liter water. In case of severe attack, spray Spinosad or Spinetoram 3 ml per 10 liter of water.
- Castor : Vegetative Growth : Cercospora leaf spot disease is caused by cercospora fungus. For controlling of this disease Mencozeb 75% WP 25gm in 10 lit of water should be sprayed. If disease severity is higher, do second spray after 15 days.
- Vegetable Crop: Growth: Due to variable weather farmers are advised to constant monitoring against attack of pest and disease in vegetable crop, if symptom observed, take protection measures as per recommendation when sky remain

clear.

- Mango : Farmers are advised to clean the orchards by removing dead plant debris and prepare for excess water drain out from the field. It is the best time for plantation of fruit orchard. Cattle: Provide adequate fodder and keep the animals in clean shed. Give stored fodder balanced mineral mixture in diet. Protect shed from rain and wind. Care should be taken in rainy days for cattle and stored dry fodder..

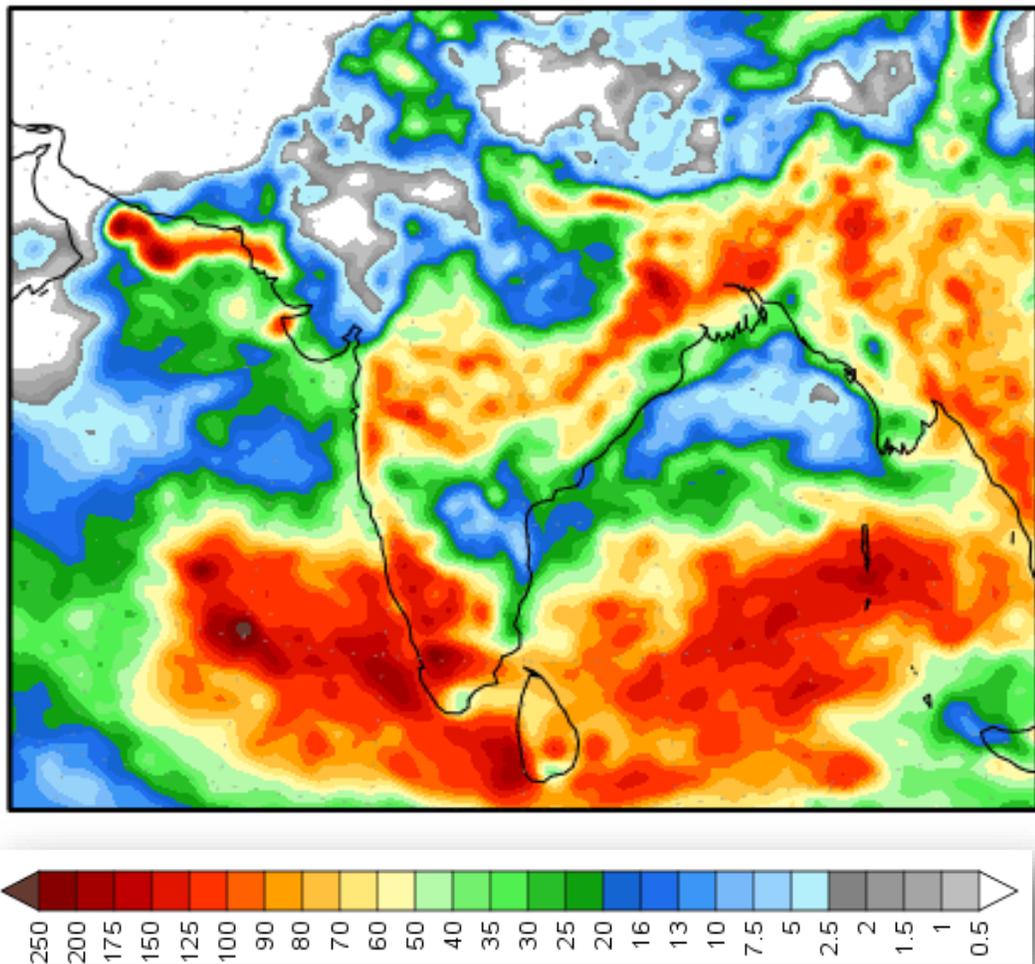


Figure:2. Precipitation forecast for 30 Sep to 08 Oct 2021 (Source: NOAA NCEP).

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