

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of October, 2021

Definitions used in the forecast and bulletin:












Term	Meaning	
Dekad	10 day rainfall measuring period	
Rain Day	A day with 1.0 mm or more of rainfall amount	
Wet Day	A day with 10.0 mm or more rainfall amount	
Extremely Wet Day	A day with 25.0 mm or more of rainfall amount	
Normal Rainfall	Between 75% and 125% of the average	
Below Normal Rainfall	Rainfall below 75% of the average	
Above Normal Rainfall	Rainfall in excess of 125% of the average	
Much Below Normal Rainfall	Rainfall below 50% of the average	
Much Above Normal Rainfall	Rainfall above 150% of the average	
Scanty Rainfall	Less than 1 mm	
Moderate Rainfall	1-10 mm	
Heavy Rainfall	10-50 mm	
Very Heavy Rainfall	Greater than 50 mm	
Probability of 1-30 %	Low Chance	
Probability of 30-70 %	Moderate Chance	
Probability greater than 70 %	High Chance	
Term	Amount of Rain	Type of day
Scanty Rainfall	Less than 1 mm	Relatively dry day
Moderate Rainfall	1-10 mm	Relatively wet day
Heavy Rainfall	10-50 mm	Wet day
Very Heavy Rainfall	Greater than 50 mm	Excessively wet day

Weather Bulletin for Farmers and Livestock Producers of Trinidad and Tobago for the 15-Day period (11th – 25th) of October 2021

Date	Weather	Temperature	Heat Real Feel	Day Moisture (Relative) (Humidity)	Wind
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11 th	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 33.0°C	Feels like 38-46°C	64-77%	Moderate easterly 20 km/h Gust 30 km/h
12 th	 68% chance of showers	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 32.5°C	Feels like 38-46°C	75-86%	 Moderate south-easterly 20 km/h Gust 30 km/h
13 th	 68% chance of showers	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 33.0°C	Feels like 38-48°C	72-78%	 Weak south-easterly 10 km/h Gust 20 km/h
14 th	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 33.5°C	Feels like 38-46°C	59-73%	 Weak south-easterly 10 km/h Gust 20 km/h













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15 th	 60% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 33.8°C	Feels like 38-48°C	64-74%	 Weak south-easterly 10 km/h Gust 20 km/h
16 th	 60% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with showers mostly on the western coast of Trinidad	Hot  Max Temp 34.0°C	Feels like 38-50°C	59-66%	 Weak south-easterly 10 km/h Gust 20 km/h
17 th	 85% chance of light/moderate/heavy showers	10.0 to 40.0 mm of rainfall with higher amounts in the eastern and western parts of Trinidad/Tobago	Cloudy with light to moderate/heavy showers	Warm  Max Temp 32.0°C	Feels like 32-38°C	62-82%	 Weak south-easterly 10 km/h Gust 20 km/h
18 th	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with showers mostly on the western coast of	Hot  Max Temp	Feels like	50-60%	 Weak south-easterly










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			Trinidad	Max Temp 34.0°C	38-50°C		10 km/h Gust 20 km/h
19 th	 85% chance of light/moderate/heavy showers	10.0 to 60.0 mm of rainfall with higher amounts on the east coast of Trinidad/Tobago	Cloudy with light to moderate/heavy showers	Warm  Max Temp 30.0°C	Feels like 35-38°C	72-93%	 Weak easterly 10 km/h Gust 20 km/h
20 th	 90% chance of light/moderate/heavy showers	10.0 to 60.0 mm of rainfall with higher amounts on the eastern parts of Trinidad/Tobago	Cloudy with light to moderate/heavy showers	Warm  Max Temp 30.0°C	Feels like 35-38°C	65-92%	 Weak easterly 10 km/h Gust 20 km/h
21 st	 80% chance of light/moderate/heavy showers	10.0 to 40.0 mm of rainfall with higher amounts on the eastern parts of Trinidad/Tobago	Cloudy with light to moderate/heavy showers	Warm  Max Temp 32.5°C	Feels like 35-38°C	74-84%	 Weak south-easterly 10 km/h Gust 20 km/h
22 nd	 80% chance of light/moderate/heavy showers	10.0 to 60.0 mm of rainfall with higher amounts on the eastern and southwestern parts of	Cloudy with light to moderate/heavy showers	Warm  Max Temp	Feels like 33-38°C	77-89%	 Weak north-easterly 10 km/h

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		Trinidad/Tobago		30.0°C			Gust 20 km/h
23 rd	 75% chance of light/moderate/heavy showers	10.0 to 40.0 mm of rainfall with higher amounts on the eastern and western parts of Trinidad/Tobago	Cloudy with light to moderate/heavy showers	Warm  Max Temp 30.0°C	Feels like 35-38°C	82-90%	 Weak north-easterly 10 km/h Gust 20 km/h
24 th	 80% chance of light/moderate/heavy showers	10.0 to 40.0 mm of rainfall with higher amounts on the western of Trinidad/Tobago	Afternoon cloudiness with light to moderate/heavy showers	Warm  Max Temp 32.0°C	Feels like 36-40°C	70-80%	 Weak south-easterly 10 km/h Gust 20 km/h
25 th	 80% chance of light/moderate/heavy showers	10.0 to 40.0 mm of rainfall with higher amounts on the western parts of Trinidad/Tobago	Afternoon cloudiness with light to moderate/heavy showers	Warm  Max Temp 32.0°C	Feels like 35-38°C	82-90%	 Weak easterly 10 km/h Gust 20 km/h

Trinidad Rainfall Forecast for the 15-Day period of October (11th-25th) 2021

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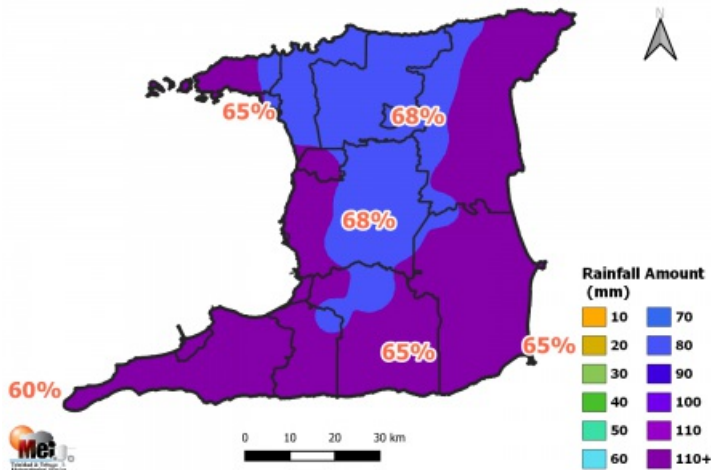


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11th-25th) October 2021 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 10.1 mm.

South-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 12.0 mm.

Southern areas

Moderate chance (65%) of mean daily rainfall up to 13.7 mm.

South-Western areas

Moderate chance (60%) of mean daily rainfall up to 14.4 mm.

Central, West-Central, and inland areas

Moderate chance (68%) of mean daily rainfall up to 9.3 mm.

Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 9.3 mm.

Tobago Rainfall Forecast for the 15-Day period of October (11th –25th) 2021

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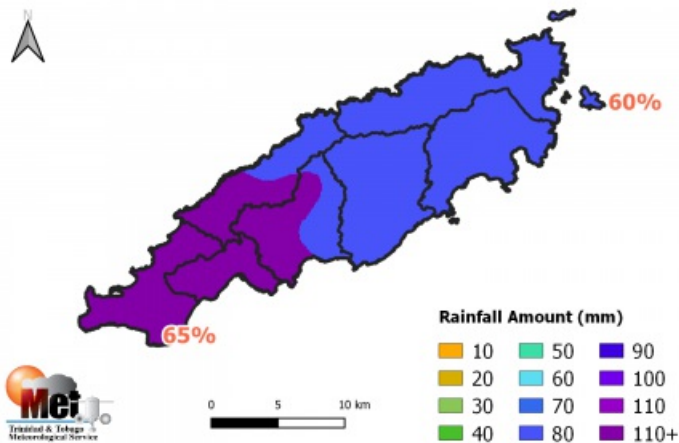


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11th-25th) October 2021 and percentage probability of occurrence.

North-Eastern areas

Moderate chance (60%) of mean daily rainfall up to 8.0 mm.

South-Western areas

Moderate chance (65%) of mean daily rainfall up to 10.0 mm.

Sun and Moon Positions in the Sky October (11th-25th) 2021

The sun is presently at 6.5 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from October 11th will be 11 hours 56 minutes, reducing steadily to 11 hours and 48 minutes by the 25th October. During the days that may have patchy or partly cloudy skies and particularly during the hours 11:00 am to 3:00 pm, high solar radiation intensity will be experienced. Farmers must be proactive at these times to prevent heat stroke and other heat-related ailments from affecting young, sick livestock and seedlings. Therefore, sufficient shade and ventilation together with fresh cool water provided to livestock when necessary will be essential.

According to the moon phases, the 11th, 12th (First Quarter phase), 15th, 16th and 17th of October are good days for planting aboveground crops, while the 20th (Full Moon phase), 21st, 22nd and 25th of October are good days for planting belowground crops. However, the 13th, 14th, 18th, 19th, 23rd and 24th of October are poor planting days. These days should be used for removing weeds, clearing land and ploughing fields.

Highlighted Possible Impacts on Agriculture:

Farmlands in Trinidad and Tobago received mostly low to moderate amounts of rainfall during the last dekad (1st-9th) of October. During this second fifteen-day forecast period of (11th to 25th) October; expect slightly less rainfall amounts to

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occur as compared to the last fifteen-day 1st to 15th October forecast period. Mostly sunny mornings will give way to increasingly cloudier afternoons and evenings with wetter conditions mostly on the northwestern, western and southwestern parts of Trinidad and southwestern Tobago. The light winds and moderate to high rainfall amounts in this second fifteen-day period of October will sustain below average evaporation and evapotranspiration rates overall.

There is a low probability (25%) chance for crop irrigation measures at this time owing to the moderate/high rainfall amount and moderate/high soil moisture content expected. However, livestock should be provided with fresh cool water particularly on hot drier periods to rehydrate. There is a moderate probability (68%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is also a moderate probability (68%) chance for fungi spread, insect pests and warm weather diseases to develop in crop beds. There is also a high probability (80%) chance of root rot and fruit rot on crops owing to the expected moderate/high amount of rainfall and flooded fields and pastures.

River levels will move from moderate levels to high levels at times, particularly on wet days. Therefore, farmers should remain prepared with necessary flood alleviating actions such as using portable water pumps, sandbags and elevated structures on the ground to store animals, seedlings, machinery and other equipment.

Weather Assessment for the period October (1st -9th) 2021.

A mixture of dry and wet conditions occurred across Trinidad and Tobago. The 3rd, 4th, 6th, 8th and 9th of October were rainy days, while on other days mostly sunny conditions with few showers prevailed. Mostly very warm days, warm winds and low/moderate river levels and moderate moisture content in soils may have stimulated crop growth and development in agricultural lands and vegetation growth in pastures. The rainfall totals maps for the period 1st to 9th of October for Trinidad and Tobago are located below as figure 1 and figure 2.

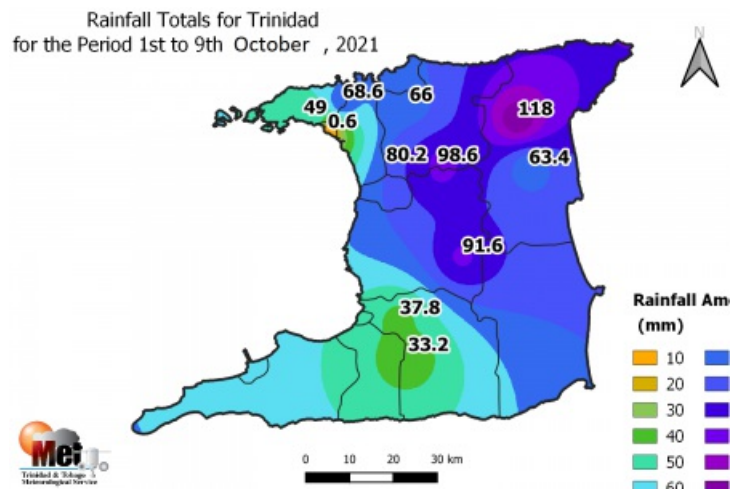


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1st to 9th of October 2021.

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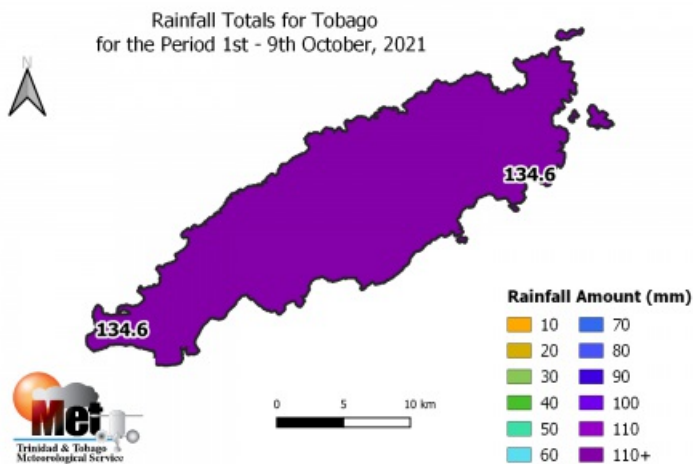


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1st to 9th of October 2021.

Temperatures:

Temperatures remained very warm to hot during the period as maximum daytime temperatures ranged between 30.9 °C and 33.3 °C, in Trinidad.

In Tobago, temperatures were warm to very warm, with maximum daytime temperatures ranging between 30.0°C and 33.5 °C.

Summary

Summary of Expected Weather: Moderate to high rainfall amounts are expected on eight of the fifteen days. Mostly wet days (rainfall amounts greater than 10.0 mm), are expected for the 15-day period 11th to 25th of October 2021. Eight wet days with rainfall amounts greater than 10.0 mm are expected on the 17th, 19th, 20th, 21st, 22nd, 23rd, 24th and 25th mostly on eastern and western parts of Trinidad and southwestern Tobago. However, seven relatively wet days with rainfall amounts of 1.0 mm to 9.0 mm are expected on the 11th, 12th, 13th, 14th, 15th, 16th and 18th. Trinidad: Partly cloudy to cloudy spells are expected on 17th, 19th, 20th, 21st, 22nd, 23rd, 24th and 25th which will likely bring light to moderate/heavy rainfall across farmlands in the northwestern, northeastern, eastern, southwestern and central areas of Trinidad. Daily rainfall totals are forecast to be between 10.0 mm and 60.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 80.0 mm and 160.0 mm. The heaviest and most long-lasting rains are expected over farmlands in the northwestern areas of Chaguaramas, northeastern areas of Sangre Grande, Fishing Pond, Plum Mitán and Vega De Oropouche; southwestern areas of Penal, Point Fortin, La Brea, Palo Seco and Cedros and central areas of Claxton Bay, Couva, Felicity, Chaguanas and Charlieville. However, on the 11th, 12th, 13th, 14th, 15th, 16th and 18th expect partly cloudy conditions with few light to moderate showers with daily rainfall amounts ranging between 1.0 mm to 9.0 mm. Tobago: Tobago will experience similar conditions as compared to Trinidad. Farmers should expect eight days of light to moderate/heavy rainfall amounts particularly on the 17th, 19th, 20th, 21st,

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22nd, 23rd, 24th and 25th. The daily rainfall totals are forecast to be between 10.0 mm and 60.0 mm across farmlands, particularly on the southwestern parts of the island. The fifteen-day rainfall totals will range between 80.0 mm and 120.0 mm across the island. However, on the 11th, 12th, 13th, 14th, 15th, 16th and 18th expect partly cloudy conditions with few light to moderate showers with daily rainfall amounts ranging between 1.0 mm to 9.0 mm, Temperatures & Winds: Maximum temperatures are expected to remain warm (30.0oC) to very warm (33.5oC) throughout most of the period but can reach (34.0oC) on the 16th and 18th October. However, temperatures are expected to have a real-feel or feels-like between 34.0oC to 48.0oC on most days. Mostly weak northeasterly to southeasterly winds of an average speed of 12 km/h are expected, with gusts ranging between 20 km/h to 60 km/h particularly in heavy showers or thundershowers. Moderate to high rainfall totals, mostly below average wind speeds, warm to hot days and moderate to high feels-like temperatures will sustain average evapo-transpiration rates in crops ranging between 1.7 to 8.0 millimeters per day. Moisture levels: Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be moderate to high, with average daytime relative humidity values in the mid-50s to high-60s, in terms of percentage. While during possible rainy days (17th, 19th, 20th, 21st, 22nd, 23rd, 24th and 25th), average daytime relative humidity values will be in the high-70s to low-90s, in terms of percentage.

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