

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First 15-Day Period (1st-15th) of October, 2023

### 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 (1<sup>st</sup>-15<sup>th</sup>) of October 2023.

Date	Weather	Temperature	Heat Real Feel	Day Moisture (Relative) (Humidity)	Wind

### Disclaimer













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Issue date: 2023-09-29

1 <sup>st</sup>	 30% chance of showers	Less than 2.0 mm of rainfall is possible	Partly cloudy with a shower or two	<b>Very warm</b>  Max/Min Temperatures °C 33.0/25.5	Feels like 33-38°C	56-74%	 Weak easterly 10 km/h Gust 20 km/h
2 <sup>nd</sup>	 55% chance of showers	Less than 6.0 mm of rainfall is possible	Partly cloudy with showers mostly in western areas	<b>Warm</b>  Max/Min Temperatures °C 33.0/25.5	Feels like 33-37°C	56-64%	 Weak easterly 10 km/h Gust 20 km/h
3 <sup>rd</sup>	 55% chance of showers	Less than 6.0 mm of rainfall is possible	Partly cloudy with showers mostly in western areas	<b>Warm</b>  Max/Min Temperatures °C 33.0/26.0	Feels like 33-37°C	56-62%	 Weak south-easterly 10 km/h Gust 20 km/h
4 <sup>th</sup>	 55% chance of showers	Less than 8.0 mm of rainfall is possible	Partly cloudy with showers mostly in western areas	<b>Warm</b>  Max/Min Temperatures °C 32.0/27.0	Feels like 33-37°C	55-61%	 Weak south-easterly 10 km/h Gust 20 km/h
5 <sup>th</sup>	 30% chance of showers	Less than 3.0 mm of rainfall is possible	Partly cloudy with showers	<b>Hot</b>  Max/Min	Feels like		 Weak south-easterly 10 km/h
















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		possible		Temperatures °C 34.0/27.0	34- 40°C	51-68%	Gust 20 km/h
6 <sup>th</sup>	 75% chance of showers	Less than 15.0 mm of rainfall is possible	Partly cloudy with showers mostly in western areas	<b>Warm</b>  Max/Min Temperatures °C 32.5/26.5	Feels like 32- 38°C	55-70%	 Weak south- easterly 10 km/h Gust 20 km/h
7 <sup>th</sup>	 75% chance of showers	Less than 15.0 mm of rainfall is possible	Partly cloudy with showers mostly in western areas	<b>Warm</b>  Max/Min Temperatures °C 30.0/26.0	Feels like 30- 33°C	65-70%	 Weak south- easterly 10 km/h Gust 20 km/h
8 <sup>th</sup>	 60% chance of showers	Less than 8.0 mm of rainfall is possible	Partly cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 30.0/26.0	Feels like 30- 33°C	62-68%	 Weak south- easterly 10 km/h Gust 20 km/h
9 <sup>th</sup>	 60% chance of showers	Less than 8.0 mm of rainfall is possible	Partly cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 31.0/26.0	Feels like 31- 33°C	62-68%	 Weak south- easterly 10 km/h Gust 20 km/h




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10 <sup>th</sup>	 75% chance of showers	Less than 30.0 mm of rainfall is possible	Partly cloudy to cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 30.0/27.0	Feels like 30-32°C	62-80%	 Weak easterly 10 km/h Gust 20 km/h
11 <sup>th</sup>	 75% chance of showers	Less than 15.0 mm of rainfall is possible	Partly cloudy to cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 30.0/25.0	Feels like 30-32°C	62-70%	 Weak easterly 10 km/h Gust 20 km/h
12 <sup>th</sup>	 75% chance of showers	Less than 15.0 mm of rainfall is possible	Partly cloudy to cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 30.0/25.0	Feels like 30-32°C	62-70%	 Weak easterly 10 km/h Gust 20 km/h
13 <sup>th</sup>	 75% chance of showers	Less than 25.0 mm of rainfall is possible	Partly cloudy to cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 29.0/26.5	Feels like 30-32°C	65-72%	 Weak easterly 10 km/h Gust 20 km/h
14 <sup>th</sup>	 75% chance of showers	Less than 15.0 mm of rainfall is possible	Partly cloudy to cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C	Feels like		 Weak easterly 10 km/h

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		is possible		30.0/26.0	30-32°C	56-63%	Gust 20 km/h
15 <sup>th</sup>	 30% chance of showers	Less than 3.0 mm of rainfall is possible	Partly cloudy with showers	<b>Warm</b>  Max/Min Temperatures °C 32.0/26.5	Feels like 33-45°C	52-70%	 Weak easterly 25 km/h Gust 35 km/h

Trinidad Rainfall Forecast for the 15-Day period of October (1<sup>st</sup>–15<sup>th</sup>) 2023.

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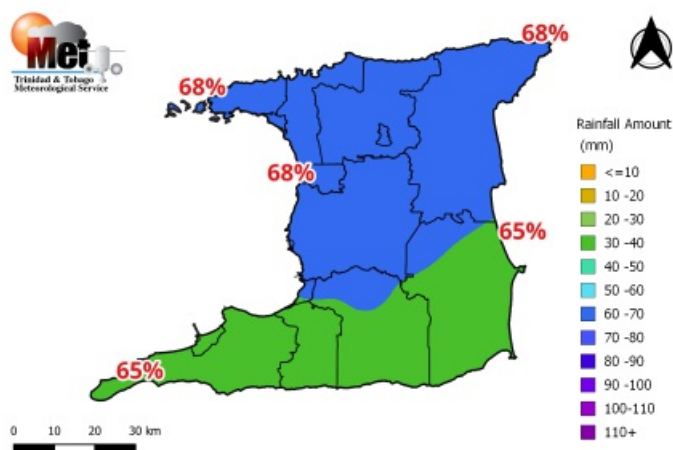


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (1<sup>st</sup>-15<sup>th</sup>) October 2023 and percentage probability of occurrence.

### Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 6.8 mm.

### South-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 7.0 mm.

### Southern areas

Moderate chance (65%) of mean daily rainfall up to 6.7 mm.

### South-Western areas

Moderate chance (65%) of mean daily rainfall up to 7.4 mm.

### Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 4.0 mm.

### Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 6.5 mm.

Tobago Rainfall Forecast for the 15-Day period of October (1<sup>st</sup>-15<sup>th</sup>) 2023.

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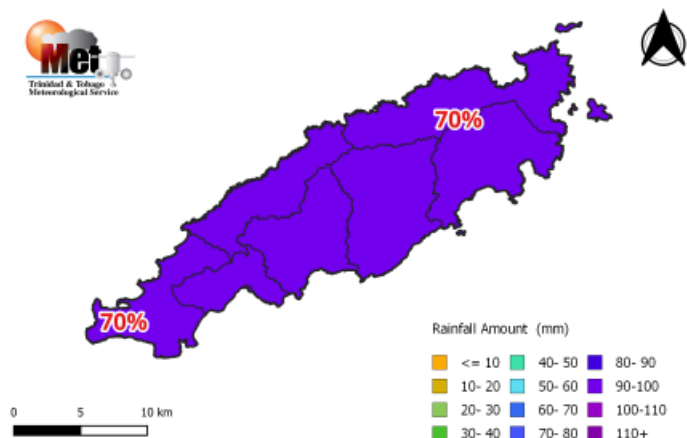


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (1<sup>st</sup>-15<sup>th</sup>) October 2023 and percentage probability of occurrence.

### North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 6.0 mm.

### South-Western areas

Moderate chance (65%) of mean daily rainfall up to 4.0 mm.

### Sun and Moon Positions in the Sky October (1<sup>st</sup>–15<sup>th</sup>) 2023.

The sun is presently at 2.5 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from October 1<sup>st</sup> will be 12 hours and 02 minutes, decreasing slightly to 11 hours and 54 minutes by the 15<sup>th</sup> of October 2023. According to the moon's phases, the 14<sup>th</sup>-15<sup>th</sup> (New Moon Phase) of October are good days for planting aboveground crops, while the 1<sup>st</sup>-2<sup>nd</sup>, 5<sup>th</sup>-6<sup>th</sup> (Third Quarter Phase) and 12<sup>th</sup>-13<sup>th</sup> of October are good days for planting below ground crops. However, 3<sup>rd</sup>-4<sup>th</sup>, 7<sup>th</sup>-11<sup>th</sup> of October are poor planting days. These days should be used for removing weeds, clearing land and ploughing fields.

### Highlighted Possible Impacts on Agriculture:

During this first 15-day (1<sup>st</sup>-15<sup>th</sup>) forecast period of October 2023, expect frequent partly cloudy to cloudy periods with showery episodes as compared to the last 15-day forecast period of September. Mostly light to moderate/heavy showery events will produce many wet days during the forecast period. Therefore, rescheduling of irrigation activity on fields to maintain optimal soil moisture would be necessary on days that will have low rainfall. There is a moderate (65%) chance of

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heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is a moderate (60%) probability for flash and riverine flooding episodes. River levels will be low to moderate at times during the forecast period. There is also a moderate probability (68%) chance for fungi spread, insect pests and warm/moist weather diseases to develop in crop beds.

## Weather Assessment for the period September (16<sup>th</sup>-28<sup>th</sup>) 2023.

Moderate amounts of rainfall occurred during the 23<sup>rd</sup> and the 28<sup>th</sup> of September across both islands. The rainfall totals maps for the period, 16<sup>th</sup> to 28<sup>th</sup> of September for Trinidad and Tobago are located below as figure 1 and figure 2.

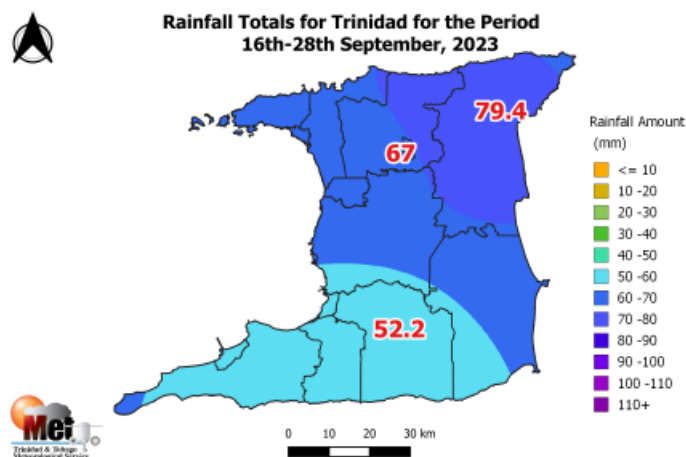
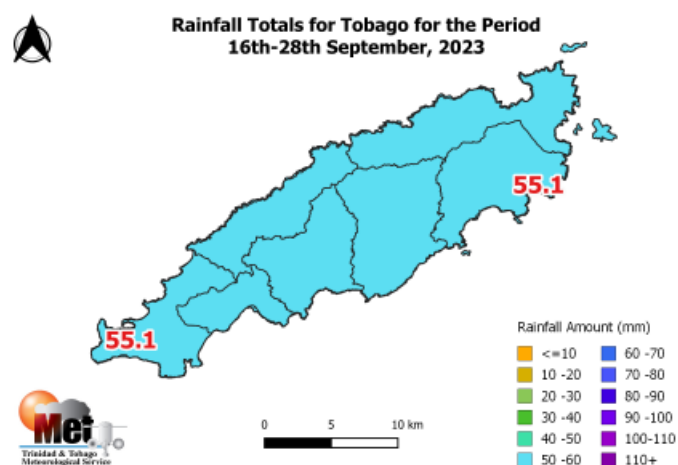


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 16<sup>th</sup> to 28<sup>th</sup> of September 2023.



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**Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 16<sup>st</sup> to 28<sup>th</sup> of September 2023.**

#### **Temperatures:**

Temperatures were cool to very warm during the period 16<sup>th</sup> to 28<sup>th</sup> of September, with the minimum nighttime temperature falling to 23.3°C and the maximum daytime temperature rising to 35.9 °C, in Trinidad.

Similarly, Tobago temperatures were cool to very warm during the period 16<sup>th</sup> to 28<sup>th</sup> of September, with the minimum nighttime temperature falling to 23.9 °C and the maximum daytime temperature rising to 33.5 °C.

#### **Summary**

##### **Summary of Expected Weather:**

##### **Moderate rainfall amounts are expected during the fifteen days.**

Wet days with rainfall amounts ranging between 10.0-30.0 mm are expected on the 6<sup>th</sup>-7<sup>th</sup> and 10<sup>th</sup>-14<sup>th</sup> of October while relatively wet (1.0-9.0 mm) are expected on all other days.

##### **Trinidad and Tobago:**

Wet days with rainfall amounts ranging between 10.0-30.0 mm are expected on the 6<sup>th</sup>-7<sup>th</sup> and 10<sup>th</sup>-14<sup>th</sup> of October while relatively wet (1.0-9.0 mm) are expected on all other days. The daily rainfall totals are forecast to range between 0.0 mm to 15.0 mm across different farmlands across the islands, especially along the eastern and western coastal areas of Trinidad, and Tobago. The fifteen-day rainfall totals range between 40.0 mm and 75.0 mm in Trinidad, and average around 100.0 mm in Tobago.

##### **Temperatures & Winds:**

The maximum temperatures are expected to become warm to very warm to hot, with daily temperatures ranging between 31.0°C to 34.0°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 29.0°C to 40.0°C on most days. The minimum temperatures will range between 25.0°C to 27.0°C during most nights/early mornings, dropping lower in rural areas and valleys.

In general, mostly weak easterly to southeasterly winds with an average speed of 10-20 km/h are expected. Moderate rainfall totals, mostly light speeds, warmer days, and warm to hot feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 4.0 to 11.0 mm per day.

##### **Moisture levels:**

Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be low to moderate, with average daytime relative humidity values in the low-50s to low-80s, in terms of percentage.

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