

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of October, 2022

### 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 (11<sup>th</sup>-25<sup>th</sup>) of October 2022.

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













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11 <sup>th</sup>	 70% chance of showers	10.0 to 45.0 mm of rainfall is possible	Cloudy with light/mod occasional heavy showers	<b>Warm</b>  Max/Min Temperatures °C 31.0/23.5	Feels like 31-36°C	70-82%	 Weak easterly 10 km/h Gust 15 km/h
12 <sup>th</sup>	 80% chance of showers	10.0 to 40.0 mm of rainfall is possible	Cloudy with light/mod occasional heavy showers	<b>Warm</b>  Max/Min Temperatures °C 31.0/24.0	Feels like 31-36°C	69-77%	 Weak easterly 10 km/h Gust 15 km/h
13 <sup>th</sup>	 70% chance of showers	10.0 to 25.0 mm of rainfall is possible	Partly cloudy with light/mod occasional heavy showers	<b>Warm</b>  Max/Min Temperatures °C 31.5/24.0	Feels like 31-40°C	65-78%	 Weak south-easterly 15 km/h Gust 25 km/h
14 <sup>th</sup>	 65% chance of showers	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.5/23.5	Feels like 35-40°C	65-72%	 Weak south-easterly 15 km/h Gust 25 km/h
15 <sup>th</sup>	 60% chance	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.5/23.5	Feels like		 Weak south-easterly 15 km/h
















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	of showers	possible		Max/Min Temperatures °C 32.5/23.5	35- 40°C	65-78%	Gust 25 km/h
16 <sup>th</sup>	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.0/24.0	Feels like 38- 44°C	63-72%	 Weak south- easterly 15 km/h Gust 25 km/h
17 <sup>th</sup>	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.0/23.0	Feels like 40- 45°C	70-75%	 Weak south- easterly 15 km/h Gust 25 km/h
18 <sup>th</sup>	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.5/24.0	Feels like 36- 46°C	56-73%	 Weak easterly 10 km/h Gust 15 km/h
19 <sup>th</sup>	 60% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.0/24.0	Feels like 36- 48°C	53-78%	 Weak easterly 10 km/h Gust 15 km/h
				<b>Warm</b>			




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20 <sup>th</sup>	 60% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with few showers	 Max/Min Temperatures °C 32.0/23.5	Feels like 36-44°C	63-67%	 Weak easterly 10 km/h Gust 15 km/h
21 <sup>st</sup>	 60% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.5/24.0	Feels like 34-45°C	59-69%	 Weak easterly 10 km/h Gust 15 km/h
22 <sup>nd</sup>	 70% chance of showers	10.0 to 25.0 mm of rainfall is possible	Cloudy with light/mod occasional heavy showers	<b>Warm</b>  Max/Min Temperatures °C 31.0/23.5	Feels like 31-36°C	77-80%	 Weak easterly 10 km/h Gust 15 km/h
23 <sup>rd</sup>	 60% chance of showers	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 33.0/24.0	Feels like 34-45°C	59-67%	 Weak south-easterly 15 km/h Gust 25 km/h
24 <sup>th</sup>	 60% chance	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b> 	Feels like		 Weak easterly 10 km/h

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	of showers	possible		Max/Min Temperatures °C 32.0/24.0	34- 45°C	64-70%	Gust 15 km/h
25 <sup>th</sup>	 60% chance of showers	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	<b>Warm</b>  Max/Min Temperatures °C 32.0/24.0	Feels like 36- 45°C	69-75%	 Weak easterly 10 km/h Gust 15 km/h

Trinidad Rainfall Forecast for the 15-Day period of October (11<sup>th</sup> – 25<sup>th</sup>) 2022.

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Issue date: 2022-10-11

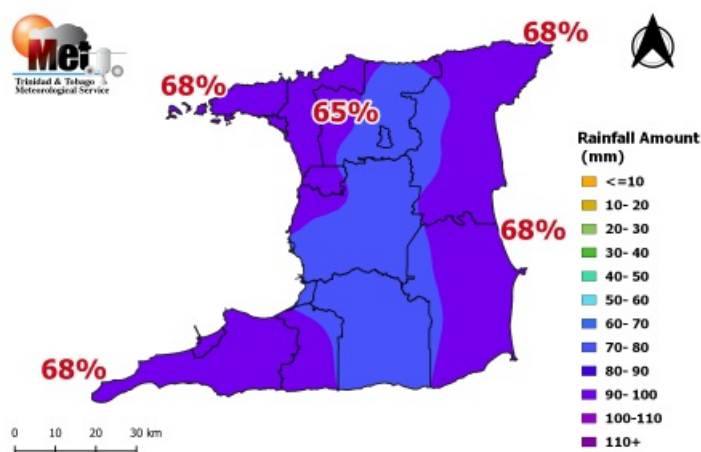


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11<sup>th</sup>-25<sup>th</sup>) October 2022 and percentage probability of occurrence.

## Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 9.6 mm.

## South-Eastern areas

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

## Southern areas

Moderate chance (65%) of mean daily rainfall up to 9.6 mm.

## South-Western areas

Moderate chance (68%) of mean daily rainfall up to 10.0 mm.

## Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 8.1 mm.

## Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 10.0 mm.

## **Tobago Rainfall Forecast for the 15-Day period of October (11<sup>th</sup> –25<sup>th</sup>) 202**

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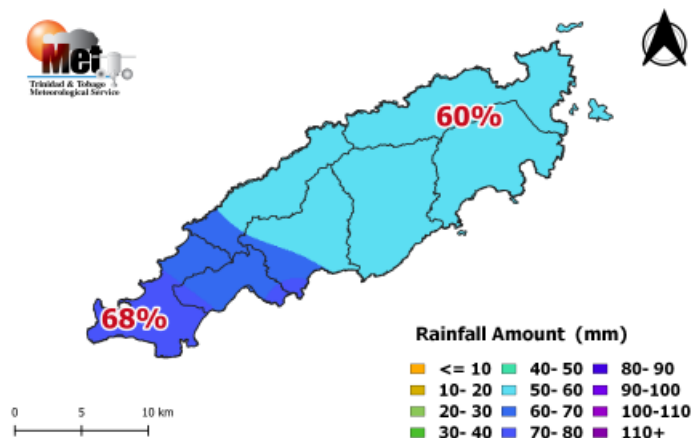


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (11<sup>st</sup>-25<sup>th</sup>) October 2022 and percentage probability of occurrence.

### North-Eastern areas

Moderate chance (60%) of mean daily rainfall up to 5.0 mm.

### South-Western areas

Moderate chance (68%) of mean daily rainfall up to 6.3 mm.

### **Sun and Moon Positions in the Sky October (11<sup>th</sup> –25<sup>th</sup>) 2022.**

The sun is presently at 6.8 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from October 11<sup>th</sup> will be 11 hours and 56 minutes, decreasing slightly to 11 hours and 48 minutes by 25<sup>th</sup> (New Moon Phase) October 2022. According to the moon phases, the 22<sup>nd</sup>-25<sup>th</sup> of October are good days for planting aboveground crops. While 11<sup>th</sup>-12<sup>th</sup>, 15<sup>th</sup>-17<sup>th</sup> (Third Quarter Phase) and 22<sup>nd</sup>-24<sup>th</sup> are good days for planting belowground crops. However, the 13<sup>th</sup>-14<sup>th</sup> and 18<sup>th</sup>-21<sup>st</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 second 15-day forecast period of (11<sup>th</sup> to 25<sup>th</sup>) October 2022, expect similar conditions to occur as compared to the first 15-day (1<sup>st</sup> to 15<sup>th</sup>) September forecast period. There is a low probability (25%) chance for crop irrigation measures to take place due to already waterlogged soils and wet conditions during the forecast period. However, livestock should be provided with fresh, cool water during this forecast period to rehydrate, particularly during warmer and drier

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periods. There is also a high probability (70%) chance for fungi spread, root and/or fruit rot, insect pests and warm weather diseases to develop in crop beds. River levels will become high at times during the 11<sup>th</sup>-13<sup>th</sup> and 25<sup>th</sup> of October and will in general return to moderate to low levels during the rest of the forecast period.

## Weather Assessment for the period October (1<sup>st</sup> -9<sup>th</sup>) 2022

Wet days occurred on the 3<sup>rd</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 9<sup>th</sup> of October over Trinidad and Tobago. Moderate to high rainfall amounts that occurred across the islands resulted in flooding and landslides in northeastern areas of Tunapuna, Arima; central areas of Cunupia, Piarcó and Ravine sable and Scarborough Tobago. Crop growth and development rates varied across agricultural lands and vegetation growth in pastures due to waterlogged soils at times. The rainfall totals maps for the period, 1<sup>st</sup> to 9<sup>th</sup> of October for Trinidad and Tobago are located below as figure 1 and figure 2.

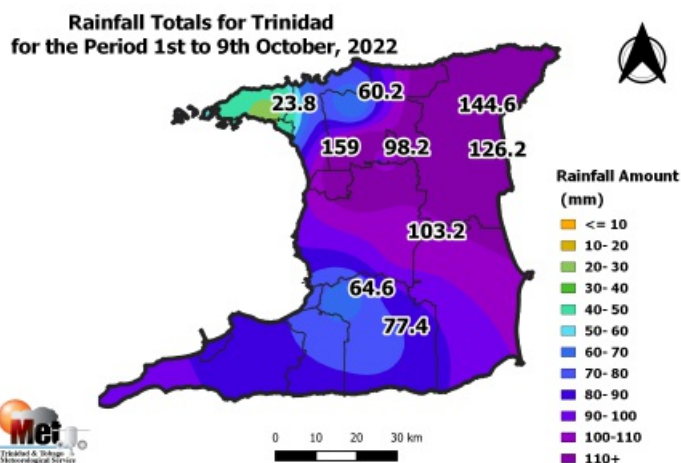
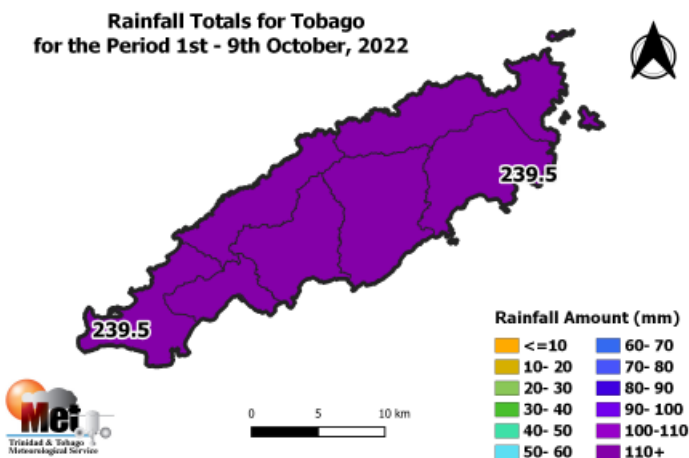


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 1<sup>st</sup> to 9<sup>th</sup> October 2022.



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**Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 1<sup>st</sup> to 9<sup>th</sup> October 2022.**

### **Temperatures:**

Temperatures were cool to warm during the period 1<sup>st</sup> to 9<sup>th</sup> October, with the minimum nighttime temperature falling to 22.9 °C and the maximum daytime temperature rising to 34.0 °C, in Trinidad.

Similarly, Tobago temperatures were cool to warm during the period 1<sup>st</sup> to 9<sup>th</sup> October, with the minimum nighttime temperature falling to 22.7 °C and the maximum daytime temperature rising to 32.3 °C.

### **Summary**

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

**Moderate to high rainfall amounts are expected on four of the fifteen days.**

Four wet days with rainfall amounts ranging between 10.0 mm and 45.0 mm are expected on the 11<sup>th</sup>-13<sup>th</sup> and 22<sup>nd</sup> of October, while eleven relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 14<sup>th</sup>-21<sup>st</sup> and 23<sup>rd</sup>-25<sup>th</sup> of October.

#### **Trinidad:**

Four wet days with rainfall amounts ranging between 10.0 mm and 45.0 mm are expected on the 11<sup>th</sup>-13<sup>th</sup> and 22<sup>nd</sup> of October, while eleven relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 14<sup>th</sup>-21<sup>st</sup> and 23<sup>rd</sup>-25<sup>th</sup> of October. The daily rainfall totals are forecast to range between 1.0 mm to 45.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 75.0 mm and 100.0 mm. The impactful rainfall events will mostly occur across the eastern and western parts, specifically along coastal areas of Trinidad. There is a high (90%) probability that flash and riverine flooding will occur during/after heavy rainfall events.

#### **Tobago:**

Similar to Trinidad, Tobago will experience four wet days with rainfall amounts ranging between 10.0 mm and 45.0 mm on the 11<sup>th</sup>-13<sup>th</sup> and 22<sup>nd</sup> of October, while eleven relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 14<sup>th</sup>-21<sup>st</sup> and 23<sup>rd</sup>-25<sup>th</sup> of October. The daily rainfall totals are forecast to range between 1.0 mm to 45.0 mm across different farmlands across the island, with fifteen-day rainfall totals ranging between 50.0 mm to 75.0 mm.

### **Temperatures & Winds:**

The maximum temperatures are expected to remain warm, with temperatures ranging between 31.0°C to 33.0°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 31.0°C to 48.0°C on most days. The minimum temperatures will range between 23.5°C to 24.0°C during most nights/early mornings, dropping lower in rural areas and valleys.

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In general, mostly weak easterly to south-easterly winds of an average speed of 10-20 km/h are expected, however, gusts can reach speeds of up to 50-70 km/h, especially during heavy showers. Moderate to high rainfall totals, mostly low wind speeds, warm days, and warm feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 1.5 to 11.0 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 lower-50s to lower-80s, in terms of percentage.

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