

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of September, 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 (11th – 25th) of September 2022.

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













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11 th	 68% chance of showers	1.0 to 8.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 32.0/25.0	Feels like 40-43°C	69-76%	 Weak easterly 10 km/h Gust 15 km/h
12 th	 65% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 32.0/24.5	Feels like 40-43°C	68-79%	 Weak south-easterly 15 km/h Gust 25 km/h
13 th	 60% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 33.0/25.5	Feels like 38-43°C	55-68%	 Weak easterly 10 km/h Gust 15 km/h
14 th	 80% chance of showers	10.0 to 25.0 mm of rainfall is possible	Cloudy with light/mod occasional heavy showers mostly over western Trinidad	Very Warm  Max/Min Temperatures °C 34.0/25.0	Feels like 41-48°C	57-73%	 Weak south-easterly 15 km/h Gust 25 km/h
15 th	 70% chance	1.0 to 8.0 mm of rainfall is possible	Cloudy with light/mod occasional heavy showers	Very Warm 	Feels		 Weak south-easterly














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	of showers	possible	mostly over western Trinidad	Max/Min Temperatures °C 34.0/25.0	like 41-48°C	57-73%	15 km/h Gust 25 km/h
16 th	 40% chance of showers	Less than 1.0 mm of rainfall is possible	Partly cloudy with a shower of two.	Very Warm  Max/Min Temperatures °C 34.0/25.5	Feels like 43-48°C	67-77%	 Weak south-easterly 15 km/h Gust 25 km/h
17 th	 40% chance of showers	Less than 1.0 mm of rainfall is possible	Partly cloudy with a shower of two.	Hot  Max/Min Temperatures °C 34.5/25.5	Feels like 45-48°C	62-68%	 Weak south-easterly 15 km/h Gust 25 km/h
18 th	 40% chance of showers	Less than 1.0 mm of rainfall is possible	Partly cloudy with a shower of two.	Hot  Max/Min Temperatures °C 35.0/25.5	Feels like 43-47°C	55-63%	 Weak south-easterly 15 km/h Gust 25 km/h
19 th	 60% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 33.0/26.0	Feels like 41-44°C	64-70%	 Weak south-easterly 15 km/h Gust 25 km/h






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20 th	 60% chance of showers	Less than 1.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 33.0/25.5	Feels like 42-47°C	64-70%	 Moderate easterly 20 km/h Gust 30 km/h
21 st	 80% chance of showers	10.0 to 25.0 mm of rainfall is possible	Partly cloudy with light/mod occasional heavy showers mostly over western Trinidad	Warm  Max/Min Temperatures °C 32.0/25.5	Feels like 40-44°C	73-80%	 Weak easterly 10 km/h Gust 15 km/h
22 nd	 80% chance of showers	10.0 to 25.0 mm of rainfall is possible	Partly cloudy with light/mod occasional heavy showers mostly over western Trinidad	Very Warm  Max/Min Temperatures °C 33.5/25.0	Feels like 44-47°C	68-73%	 Weak easterly 10 km/h Gust 15 km/h
23 rd	 68% chance of showers	1.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 33.0/25.5	Feels like 41-47°C	68-77%	 Weak easterly 10 km/h Gust 15 km/h
			Partly cloudy with light/mod	Warm			 Weak

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24 th	 80% chance of showers	10.0 to 25.0 mm of rainfall is possible	occasional heavy showers mostly over western Trinidad	 Max/Min Temperatures °C 33.0/25.5	Feels like 42-47°C	67-77%	easterly 10 km/h Gust 15 km/h
25 th	 80% chance of showers	10.0 to 25.0 mm of rainfall is possible	Partly cloudy with light/mod occasional heavy showers	Warm  Max/Min Temperatures °C 32.0/25.5	Feels like 38-43°C	62-77%	 Weak easterly 10 km/h Gust 15 km/h

Trinidad Rainfall Forecast for the 15-Day period of September (11th – 25th) 2022.

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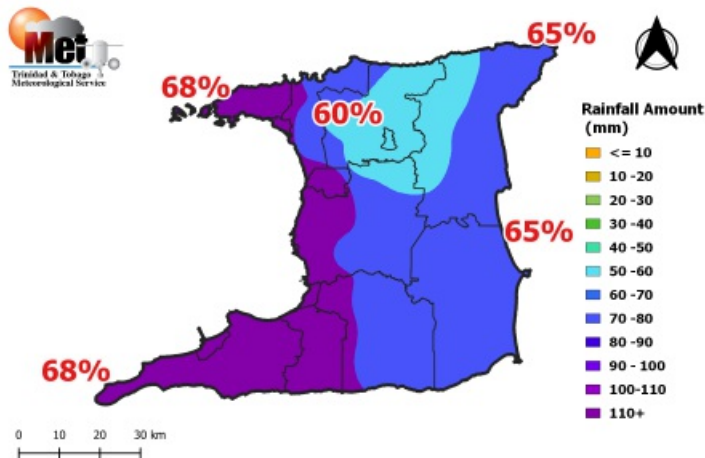


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11th-25th) September 2022 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 6.9 mm.

South-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 7.5 mm.

Southern areas

Moderate chance (65%) of mean daily rainfall up to 10.9 mm.

South-Western areas

Moderate chance (68%) of mean daily rainfall up to 11.7 mm.

Central, West-Central, and inland areas

Moderate chance (68%) of mean daily rainfall up to 10.5 mm.

Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 9.5 mm.

Tobago Rainfall Forecast for the 15-Day period of September (11th -25th) 2022

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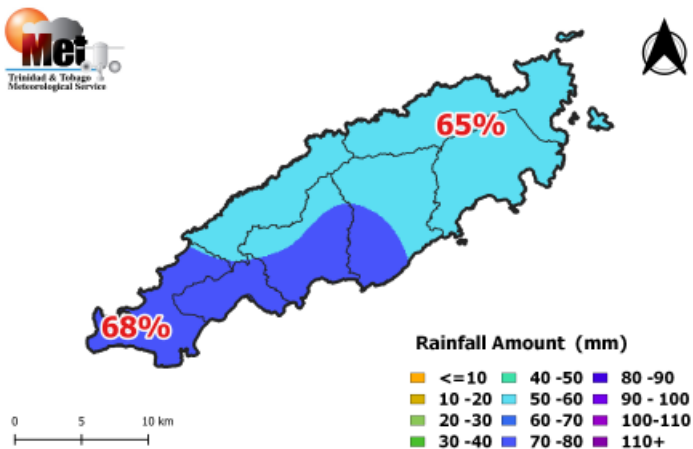


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (11-25th) September 2022 and percentage probability of occurrence.

North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 6.6 mm.

South-Western areas

Moderate chance (68%) of mean daily rainfall up to 6.9 mm.

Sun and Moon Positions in the Sky September (11th –25th) 2022.

The sun is presently at 4.0 degrees North latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from September 11th will be 12 hours and 13 minutes, decreasing slightly to 12 hours and 05 minutes by 25th September 2022. According to the moon's phases, the 25th of September (New Moon Phase) is a good day for planting aboveground crops while the 13th-14th and 18th-19th are good days for planting belowground crops. However, the 11th-12th, 15th-17th (Third Quarter Phase) and 20th-24th of September 2022, 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 (11th to 25th) September 2022, expect warm to hot days with moderate to high rainfall at times over western areas of Trinidad and southwestern Tobago. There is a moderate probability (60%) chance for crop irrigation measures to take place owing to warmer and drier conditions over some areas as compared to the last forecast period. Livestock should be provided with fresh cool water during this forecast period to rehydrate particularly during warmer and drier days. On drier days, there is a high probability (80%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields due to infrequent cloud cover and light winds. However, there is a moderate probability (40%) chance for strong wind events that may cause damage to crops and farm

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infrastructure. There is also a moderate probability (40%) chance for fungi spread, root and/or fruit rot, insect pests and warm weather diseases to develop in crop beds. River levels will remain at generally low/moderate levels during this forecast period but will become high at times during the 14th, 21st-22nd, 24th-25th of September. Farmers should be proactive and store seeds, animals and machinery in elevated locations to minimize losses during flooding events.

Weather Assessment for the period September (1st - 10th) 2022

Wet days occurred on the 5th and 8th of September over Trinidad and Tobago. The moderate rainfall amounts that occurred across the islands allowed for moderate moisture content in soils, moderate river levels. Crop growth and development rates in general across agricultural lands and vegetation growth in pastures had increased significantly. The rainfall totals maps for the period, 1st to 10th of September for Trinidad and Tobago are located below in figure 1 and figure 2.

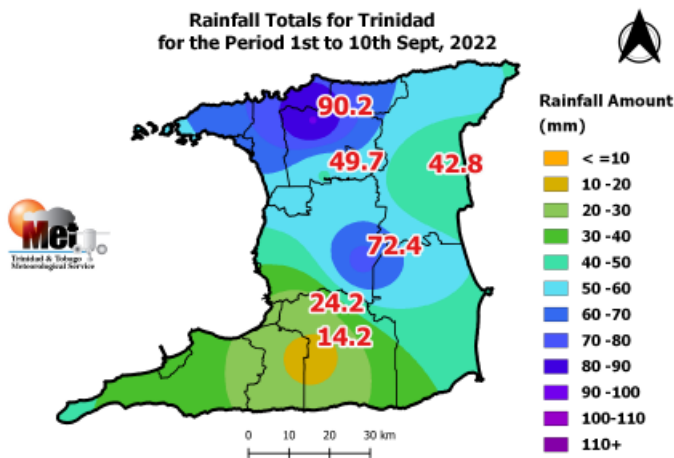


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1st to 10th September 2022.

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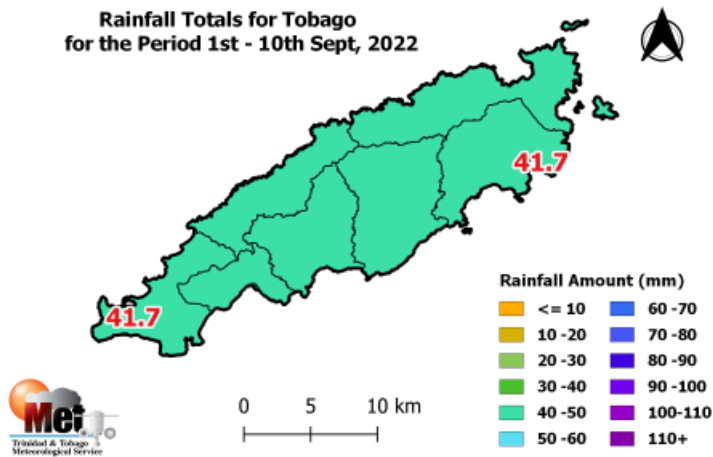


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1st to 10th September 2022.

Temperatures:

Temperatures were cool to warm during the period 1st to 10th September, with the minimum nighttime temperature falling to 21.9 °C and the maximum daytime temperature rising to 33.9 °C, in Trinidad.

Similarly, Tobago temperatures were cool to warm during the period 1st to 10th September, with the minimum nighttime temperature falling to 23.2 °C and the maximum daytime temperature rising to 33.3 °C.

Summary

Moderate rainfall amounts are expected on five of the fifteen days.

Five wet days with rainfall amounts ranging between 10.0 mm and 25.0 mm are expected on the 14th, 21st-22nd, 24th-25th; six relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 11th- 13th, 15th, 19th and 23rd while, four relatively dry days with rainfall less than 1.0 mm are expected on the 16th-18th and 20th of September 2022.

Trinidad:

Five wet days with rainfall amounts ranging between 10.0 mm and 25.0 mm are expected on the 14th, 21st-22nd, 24th-25th; six relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 11th- 13th, 15th, 19th and 23rd while, four relatively dry days with rainfall less than 1.0 mm are expected on the 16th-18th and 20th of September 2022. The daily rainfall totals are forecast to range between 0.1 mm to 25.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 50.0 mm and 125.0 mm. The impactful rainfall events will mostly occur across the western parts of Trinidad. There is a high (90%) probability that flash and riverine flooding will occur during/after heavy

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rainfall events.

Tobago:

Tobago will experience less rainfall than Trinidad. Wet days with rainfall amounts ranging between 10.0 mm and 25.0 mm are expected on the 14th, 21st-22nd, 24th-25th; six relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 11th- 13th, 15th, 19th and 23rd while, four relatively dry days with rainfall less than 1.0 mm are expected on the 16th-18th and 20th of September 2022. The daily rainfall totals are forecast to range between 0.1 mm to 25.0 mm across different farmlands particularly southwestern areas, with fifteen-day rainfall totals ranging between 50.0 mm and 75.0 mm.

Temperatures & Winds:

The maximum temperatures are expected to remain warm to hot, with temperatures ranging between 32.0°C to 34.5°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 38.0°C to 48.0°C on most days. The minimum temperatures will range between 24.5°C to 26.0°C during most nights/early mornings, dropping lower in rural areas and valleys.

A mixture of moderate easterly and weak south-easterly winds of average speeds of 10 km/h and 20 km/h are expected, with gusts of 25-50 km/h at times. Moderate to high rainfall totals, mostly low to moderate wind speeds, warm to hot days and warm to hot feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 2.4 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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