

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

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

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11 th	 45% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 30.3/19.5	Feels like 32-36°C	80-83%	 Weak north-easterly 15 km/h Gust 25 km/h
12 th	 55% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 29.8/21.9	Feels like 32-38°C	64-70%	 Weak north-easterly 15 km/h Gust 25 km/h
13 th	 68% chance of showers	10.0 to 25.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 29.9/23.2	Feels like 30-34°C	60-80%	 Weak north-easterly 15 km/h Gust 25 km/h
14 th	 60% chance of showers	5.0 to 9.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.0/23.5	Feels like 31-36°C	55-70%	 Weak easterly 10 km/h Gust 15 km/h
15 th	 45% chance	0.1 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C	Feels like		 Weak easterly 10 km/h
















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	of showers	possible		Max/Min Temperatures °C 31.0/19.0	31- 36°C	57-75%	Gust 15 km/h
16 th	 45% chance of showers	0.1 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 32.0/22.0	Feels like 32- 38°C	62-73%	 Weak north- easterly 15 km/h Gust 25 km/h
17 th	 45% chance of showers	0.1 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 32.0/20.0	Feels like 32- 38°C	68-78%	 Weak north- easterly 15 km/h Gust 25 km/h
18 th	 45% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 32.0/21.0	Feels like 32- 38°C	65-75%	 Weak north- easterly 15 km/h Gust 25 km/h
19 th	 45% chance of showers	0.1 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.0/21.0	Feels like 31- 37°C	63-68%	 Weak north- easterly 15 km/h Gust 25 km/h
				Warm			




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20 th	 45% chance of showers	0.1 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	 Max/Min Temperatures °C 31.0/21.0	Feels like 31-37°C	73-82%	 Weak north-easterly 15 km/h Gust 25 km/h
21 st	 65% chance of showers	5.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 32.0/22.0	Feels like 32-38°C	70-78%	 Weak north-easterly 15 km/h Gust 25 km/h
22 nd	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 30.0/23.0	Feels like 32-38°C	65-77%	 Weak north-easterly 15 km/h Gust 25 km/h
23 rd	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 30.0/20.0	Feels like 30-36°C	50-67%	 Weak easterly 10 km/h Gust 15 km/h
24 th	 65% chance	5.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 30.0/20.0	Feels like		 Weak north-easterly 15 km/h

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	of showers	possible		Max/Min Temperatures °C 30.0/19.0	30- 36°C	65-74%	Gust 25 km/h
25 th	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 31.0/19.0	Feels like 32- 36°C	70-80%	 Weak north- easterly 15 km/h Gust 25 km/h

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

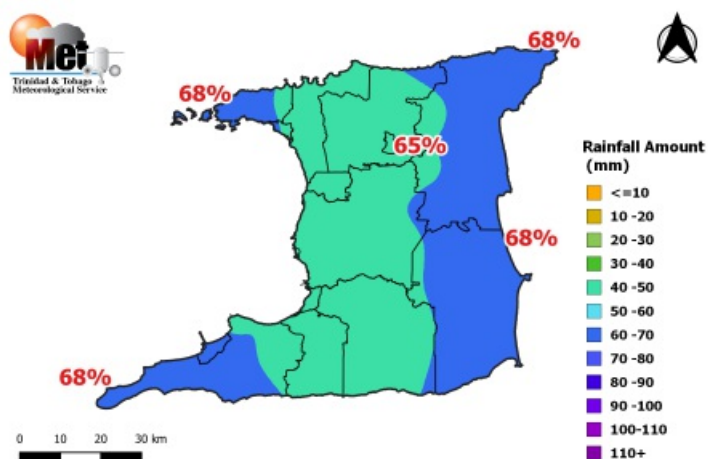


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day

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period (11th - 25th) December 2022 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 7.0 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 6.8 mm.

South-Western areas

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

Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 5.0 mm.

Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 5.7 mm.

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

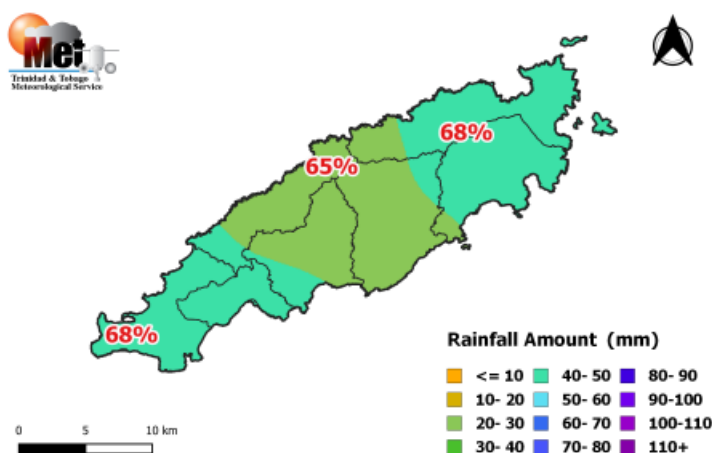


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (11th - 25th) December 2022 and percentage probability of occurrence.

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North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 4.0 mm.

South-Western areas

Moderate chance (68%) of mean daily rainfall up to 4.2 mm.

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

The sun is presently at 23.0 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from December 11th will be 11 hours and 31 minutes, decreasing slightly to 11 hours and 30 minutes by 25th December 2022. According to the moon's phases, the 23rd (New Moon Phase) and 24th of December are good days for planting aboveground crops. While the 16th (Third Quarter Phase), 17th - 20th are good days for planting belowground crops, the 11th - 15th and 21st - 22nd of December 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 - 25th) December 2022, expect less wet conditions to occur as compared to the first 15-day (1st - 15th) December forecast period. During the 13th of December, river levels will become moderate at times and will return to low levels, during the rest of the forecast period. There is a moderate probability (40%) chance for crop irrigation measures to take place during the forecast period, owing to already moistened soils from the last forecast period. Temperatures are expected to become warm and there is a low probability (20%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is also a moderate probability (60%) chance for fungi spread, root and/or fruit rot, insect pests and warm weather diseases to develop in crop beds.

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

Mostly dry days occurred during the 1st - 10th of December over Trinidad and Tobago. Crop growth and development rates may have increased due to many sunny days. In areas that had experienced water - logged soils, vegetation growth may increase and spread. The rainfall totals maps for the period, 1st - 10th of December for Trinidad and Tobago are located below as figure 1 and figure 2.

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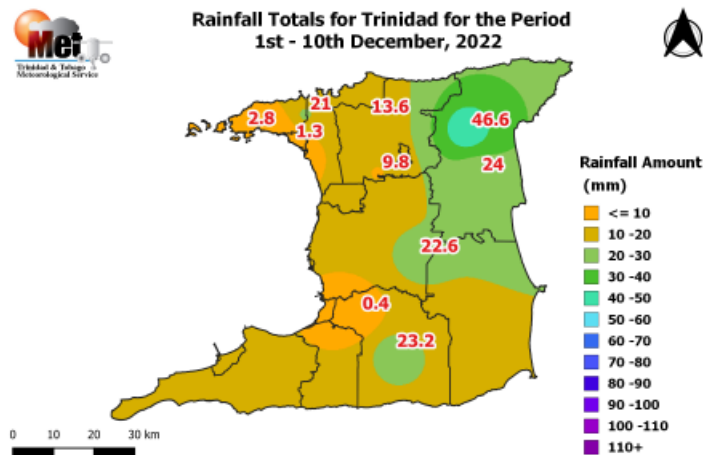


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 1st to 10th December 2022.

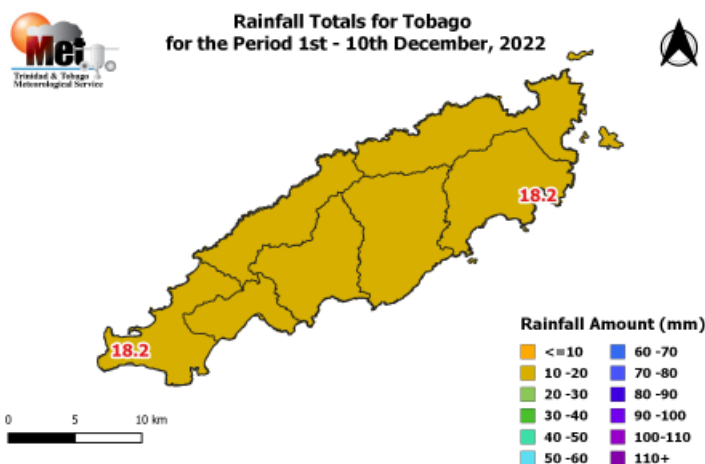


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 1st to 10th December 2022.

Temperatures:

Temperatures were cool to warm during the period 1st - 10th of December, with the minimum nighttime temperature falling to 20.3 °C and the maximum daytime temperature rising to 32.5 °C, in Trinidad.

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Similarly, temperatures in Tobago were cool to warm during the period 1st - 10th of December, with the minimum nighttime temperature falling to 22.4 °C and the maximum daytime temperature rising to 30.7 °C.

Summary

Summary of Expected Weather:

Low to Moderate rainfall amounts are expected on one of the fifteen days.

Only one wet day is expected on the 13th of December with rainfall amounts between 10.0 mm and 25.0 mm, while fourteen relatively wet days are expected on the 11th - 12th and 14th - 25th of December 2022 with rainfall amounts between 0.1 mm and 9.0 mm.

Trinidad:

One wet day with rainfall amounts between 10.0 mm and 25.0 mm is expected on the 13th December, while fourteen relatively wet days with rainfall amounts between 0.1 mm and 9.0 mm are expected on the 11th - 12th and 14th - 25th of December 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 75.0 mm. The impactful rainfall events will mostly occur across the eastern, southeastern, southern, southwestern and northwestern parts, specifically along coastal areas of Trinidad. There is a low to moderate (20 - 45%) probability that flash and riverine flooding will occur during/after heavy rainfall events.

Tobago:

Similar to Trinidad, on the 13th of December, Tobago will experience one wet day with rainfall amounts between 10.0 mm and 25.0 mm, while fourteen relatively wet days are expected on the 11th - 12th and 14th - 25th of December 2022, with rainfall amounts between 0.1 mm and 9.0 mm. The daily rainfall totals are forecast to range between 0.1 mm to 25.0 mm across different farmlands across the island, especially along the southwestern coastal areas, with fifteen-day rainfall totals ranging between 30.0 mm and 50.0 mm.

Temperatures & Winds:

The maximum temperatures are expected to remain warm, with temperatures ranging between 29.8°C to 32.0°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 31.0°C to 38.0°C on most days. The minimum temperatures will range between 19.0°C to 23.5°C during most nights/early mornings, dropping lower in rural areas and valleys.

In general, weak easterly to north-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. Low to moderate rainfall totals, mostly low wind speeds, cool to warm days, and warm feels-like temperatures will sustain average evapotranspiration rates in crops, ranging between 3.5mm and 11.0mm.

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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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