

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st - 30th) of November, 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 (21st - 5th) of November/December 2021

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













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21 st	 60% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Very Warm  Max Temp 32.0°C	Feels like 38-44°C	62-78%	 Weak northeasterly 10 km/h Gust
22 nd	 68% chance of showers	1.0 to 9.0 mm of rainfall with higher amounts in the western coast of Trinidad/Tobago	Partly cloudy with one or two showers	Very Warm  Max Temp 32.0°C	Feels like 33-39°C	75-82%	 Weak easterly 10 km/h Gust 20 km/h
23 rd	 60% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Very Warm  Max Temp 32.5°C	Feels like 41-46°C	67-80%	 Weak easterly 10 km/h Gust 20 km/h
24 th	 60% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Very Warm  Max Temp 32.5°C	Feels like 40-42°C	64-70%	 Weak easterly 10 km/h Gust 20 km/h
25 th	 68% chance of showers	1.0 to 9.0 mm of rainfall with higher amounts in the western coast of	Partly cloudy with showers	Very Warm  Max Temp	Feels like	78-82%	 Weak northeasterly 10 km/h















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		Trinidad/Tobago		Max Temp 32.0°C	33-40°C		Gust 20 km/h
26 th	 68% chance of showers	1.0 to 9.0 mm of rainfall with higher amounts in the western coast of Trinidad/Tobago	Partly cloudy with showers	Very Warm  Max Temp 32.0°C	Feels like 34-40°C	64-78%	 Weak easterly 10 km/h Gust 20 km/h
27 th	 70% chance of light/moderate/heavy showers	10.0 to 20.0 mm of rainfall with higher amounts in the eastern, northwestern and southwestern parts of Trinidad	Partly cloudy to cloudy with light to moderate/heavy showers	Warm  Max Temp 31.0°C	Feels like 33-38°C	81-85%	 Weak northeasterly 10 km/h Gust 20 km/h
28 th	 70% chance of light/moderate/heavy showers	10.0 to 20.0 mm of rainfall with higher amounts in the eastern, northwestern and southwestern parts of Trinidad	Partly cloudy to cloudy with light to moderate/heavy showers	Warm  Max Temp 31.5°C	Feels like 33-38°C	72-80%	 Weak northeasterly 10 km/h Gust 20 km/h
29 th	 68% chance of showers	1.0 to 9.0 mm of rainfall with higher amounts in the western coast of Trinidad/Tobago	Partly cloudy with showers	Very Warm  Max Temp 32.5°C	Feels like 42-46°C	70-80%	 Weak easterly 10 km/h Gust 20 km/h





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30 th	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 32.5°C	Feels like 35-40°C	78-81%	 Weak easterly 10 km/h Gust 20 km/h
1 st	 60% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Very Warm  Max Temp 32.0°C	Feels like 33-40°C	73-79%	 Weak easterly 10 km/h Gust 20 km/h
2 nd	 60% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Very Warm  Max Temp 32.0°C	Feels like 38-44°C	78-81%	 Weak easterly 10 km/h Gust 20 km/h
3 rd	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max Temp 32.0°C	Feels like 38-46°C	72-78%	 Weak easterly 10 km/h Gust 20 km/h
		1.0 to 5.0 mm of	Partly cloudy	Very Warm			 Weak easterly

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4 th	65% chance of showers	rainfall is possible	with showers	 Max Temp 32.5°C	Feels like 38-46°C	58-62%	10 km/h Gust 20 km/h
5 th	 60% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Very Warm  Max Temp 32.5°C	Feels like 37-44°C	56-63%	 Weak easterly 10 km/h Gust 20 km/h

Trinidad Rainfall Forecast for the 15-Day period of November/December (21st-5th) 2021

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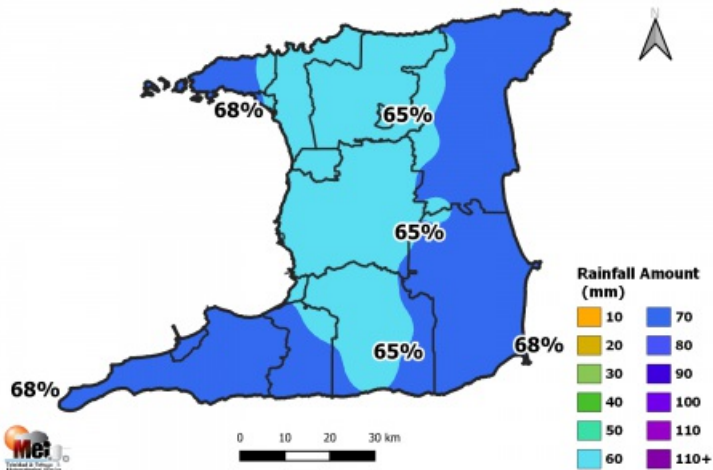


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (21st-5th) November/December 2021 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 7.2 mm.

South-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 7.5 mm.

Southern areas

Moderate chance (68%) of mean daily rainfall up to 7.5 mm.

South-Western areas

Moderate chance (68%) of mean daily rainfall up to 7.1 mm.

Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 6.0 mm.

Northern, North-Western areas

Moderate chance (65%) of mean daily rainfall up to 6.5 mm.

Tobago Rainfall Forecast for the 15-Day period of November/December (21st-5th) 2021

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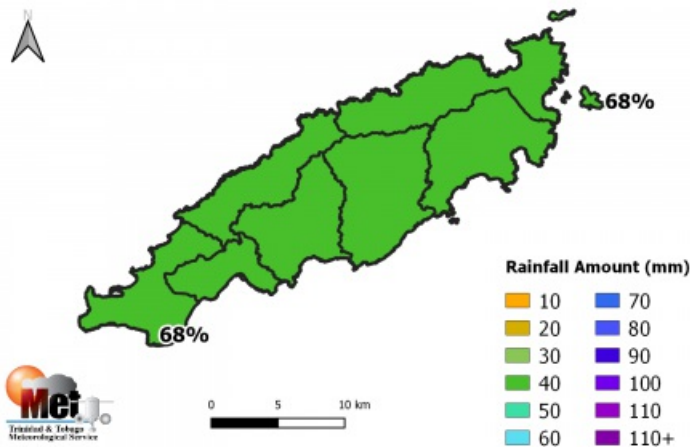


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Trinidad during the 15-day period (21st-5th) November/December 2021 and percentage probability of occurrence.

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 4.0 mm.

Sun and Moon Positions in the Sky November/December (21st-5th) 2021

The sun is presently at 19.8 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from November 21st will be 11 hours 36 minutes, reducing steadily to 11 hours and 32 minutes by the 5th December. During the days that may have patchy or partly cloudy skies and particularly during the hours 11:00 am to 3:00 pm, moderate 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, it will be essential to provide sufficient shade and ventilation together with fresh cool water to livestock when necessary.

According to the moon phases, the 5th of December is a good day for planting aboveground crops, while the 21st, 22nd, 23rd, 29th and 30th of November, and 1st, and 2nd of December are good days for planting belowground crops. However, the 24th, 25th, 26th, 27th (Third Quarter phase) and 28th of November, and 3rd - 4th (New Moon phase) of December 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 moderate to low amounts of rainfall during the second dekad (11th-19th) of November. During this third fifteen-day forecast period of (21st to 5th) November/December, expect similar rainfall amounts to occur as compared to the second fifteen-day 11th to 25th November forecast period. Mostly sunny mornings

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and afternoons will give way to increasingly cloudy evenings with slightly wetter conditions mostly on the northeastern, southeastern, southwestern and northwestern parts of Trinidad and Tobago. The light winds and moderate to low rainfall amounts in this third fifteen-day period of November/December will sustain above average evaporation and evapotranspiration rates overall.

There is a moderate probability (68%) chance for crop irrigation measures at this time due to the moderate to low rainfall amounts and moderate to low soil moisture content at times. However, livestock should be provided with fresh cool water particularly on hot drier periods to rehydrate. There is a moderate probability (45%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is also a moderate probability (45%) chance for fungi spread, insect pests and warm weather diseases to develop in crop beds. There is also a low probability (20%) chance of root rot and fruit rot on crops due to the expected moderate/low amount of rainfall.

Although there are few rainy days, the potential for localized flooding events still exists. River levels will move from low levels to moderate 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 November (11th -19th) 2021.

Mostly dry conditions occurred across Trinidad and Tobago during the period November 11th to 19th. On two days, 18th and 19th of November were rainy days in some parts of Trinidad, while on other days mostly sunny conditions with few showers prevailed. Mostly very warm days, warm winds, low river levels and moderate to low moisture content in soils may have stimulated crop growth and development in general in agricultural lands and vegetation growth in pastures. The rainfall totals maps for the period 11th to 19th of November for Trinidad and Tobago are located below as figure 1 and figure 2.

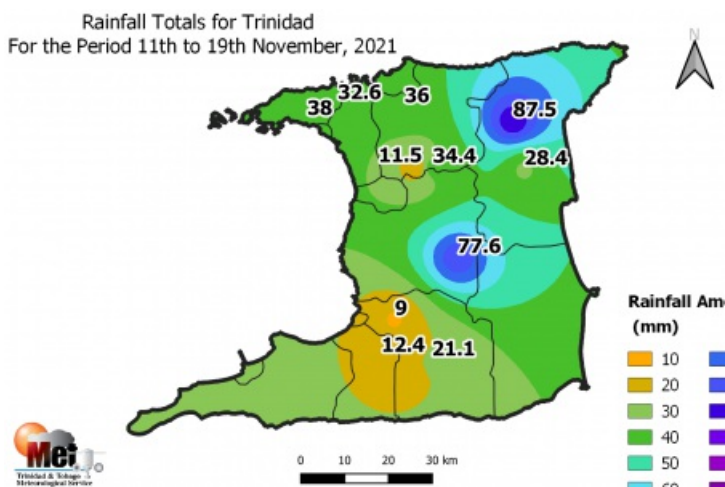


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 11th to 19th November.

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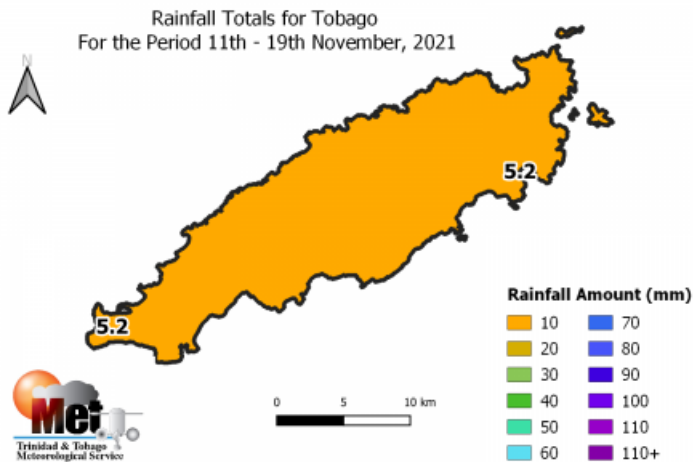


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 11th to 19th November.

Temperatures:

Temperatures remained very warm to hot during the period as maximum daytime temperatures ranged between 30.4 °C and 32.5 °C, in Trinidad.

In Tobago, temperatures were warm to very warm, with maximum daytime temperatures ranging between 30.2 °C and 32.6 °C.

Summary

Summary of Expected Weather: Moderate rainfall amounts are expected on two of the fifteen days. Wet days (rainfall amounts between 10.0 and 20.0 mm) are expected on the 27th and 28th of November, with higher amounts in northeastern, southeastern, southwestern and northwestern parts of Trinidad. However, thirteen relatively wet days with rainfall amounts of 0.1 mm to 9.0 mm are expected on the 21st, 22nd, 23rd, 24th, 25th, 26th, 29th, 30th of November 1st, 2nd, 3rd, 4th, 5th of December 2021. Trinidad: Partly cloudy to cloudy spells are expected on the 27th and 28th of November, which will likely bring light to moderate/heavy rainfall across farmlands in northeastern, southeastern, southwestern and northwestern parts of Trinidad. The daily rainfall totals are forecast to be between 10.0 mm and 20.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 60.0 mm and 75.0 mm. The heaviest and most long-lasting rains are expected over farmlands in the northeastern areas of Sangre Grande, Fishing Pond, Plum Mitan; southeastern areas of Mayaro, Guayaguayare and Moruga; and southwestern areas of Penal, Point Fortin, La Brea, Palo Seco, Granville and Cedros; and northwestern areas of Chaguaramas and Diego Martin. However, on the 21st, 22nd, 23rd, 24th, 25th, 26th, 29th, 30th of November and the 1st, 2nd, 3rd, 4th, 5th of December, expect partly cloudy conditions with few light to moderate showers with daily rainfall amounts ranging between 0.1 mm to 9.0 mm. Tobago: Farmers should expect relatively wet days throughout the forecast period of 21st November to 5th of December. The daily rainfall totals are forecast to be between 0.1 mm and 9.0 mm across farmlands on the island. The

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fifteen-day rainfall totals will average around 40.0 mm across the island. Temperatures & Winds: Maximum temperatures are expected to remain warm (31.0oC) to very warm (32.5oC) throughout the period due to expected afternoon/evening cloud cover. However, temperatures are expected to have a real-feel or feels-like between 33.0oC to 44.0oC on most days. Mostly weak northeasterly to southeasterly winds of an average speed of 10 km/h are expected, with gusts ranging between 20 km/h to 60 km/h particularly in heavy showers or thundershowers. Moderate to low rainfall totals, mostly below average wind speeds, warm days and moderate feels-like temperatures will sustain above average evapo-transpiration rates in crops ranging between 3.5 to 10.0 millimeters per day. Moisture levels: Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be moderate to low, with average daytime relative humidity values in the mid-50s to mid-60s, in terms of percentage. While during possible rainy days (27th and 28th), average daytime relative humidity values will be in the low-70s to mid-80s, in terms of percentage.

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