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Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second 15-Day Period (16th - 31st) of January, 2024

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 Rainfa	I	Rainfall below 50% of the average				
Much Above Normal Rainfa	II	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 (16th – 31st) of January 2024

Date Weather Temperature Real	Moisture (Relative	Wind
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		T			Feel	(Humidity)	
16 th	40% chance of showers	Less than 5.0 mm of rainfall is possible	Partly cloudy with a light or moderate shower in some areas	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-90%	Moderate to strong easterly 20 km/h Gust 35 km/h
17 th	40% chance of showers	Less than 5.0 mm of rainfall is possible	Partly cloudy with a light or moderate shower in some areas	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	50-90%	Moderate to strong easterly 20 km/h Gust 35 km/h
18 th	20% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	50-90%	Moderate to strong easterly 20 km/h Gust 30 km/h
19 th	20% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Temperatures °C 32.0/22.0 Disclaimer	Feels like 33-35°C	50-85%	Moderate to strong east-southeasterly 20 km/h Gust 30 km/h



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	÷	Less than 3.0 mm	Sunny with	Warm			Moderate to strong east-southeasterly
20 th	20% chance of showers	of rainfall is possible	brief showers in some areas	Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-85%	20 km/h Gust 35 km/h
21 st	30% chance of showers	Less than 3.0 mm of rainfall is possible	Partly cloudy patches interrupting sunshine in some areas with a light or moderate shower	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	50-90%	Moderate to strong easterly 20 km/h Gust 35 km/h
22 nd	20% chance of showers	Less than 3.0 mm of rainfall is possible	Partly cloudy patches interrupting sunshine in some areas with a light or moderate shower	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-90%	Moderate to strong east-northeasterly 20 km/h Gust 35 km/h
23 rd	30% chance of showers	Less than 5.0 mm of rainfall is possible	Partly cloudy patches interrupting sunshine in some areas with a light or moderate shower	Warm Max/Min Temperatures °C 32.0/21.0	Feels like 33-35°C	55-85%	Moderate to strong east-northeasterly 20 km/h Gust 35 km/h

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24 th	40% chance of showers	Less than 5.0 mm of rainfall is possible	Partly cloudy with light or moderate showers in a few areas	Warm Max/Min Temperatures °C 32.0/20.0	Feels like 33-35°C	45-85%	Moderate to strong east-northeasterly 20 km/h Gust 30 km/h
25 th	30% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Temperatures °C 32.0/21.0	Feels like 33-35°C	50-85%	Moderate to strong east-northeasterly 20 km/h Gust 30 km/h
26 th	30% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Temperatures °C 32.0/21.0	Feels like 33-35°C	55-95%	Moderate to strong easterly 20 km/h Gust 30 km/h
27 th	40% chance of showers	Less than 5.0 mm of rainfall is possible	Partly cloudy patches interrupting sunshine in some areas with a light or moderate shower	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-95%	Moderate to strong east-northeasterly 20 km/h Gust 35 km/h

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28 th	30% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-90%	Moderate to strong easterly 20 km/h Gust 35 km/h
29 th	30% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-85%	Moderate to strong easterly 20 km/h Gust 35 km/h
30 th	30% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	45-85%	Moderate to strong easterly 20 km/h Gust 35 km/h
31 st	30% chance of showers	Less than 3.0 mm of rainfall is possible	Sunny with cloudy patches producing a brief shower in some areas	Warm Max/Min Disclaimer	Feels like 33-35°C	50-90%	Moderate to strong easterly 20 km/h



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		Temperatures °C 32.0/22.0		35 km/h]

Trinidad Rainfall Forecast for the 15-Day period of January (16th - 31st) 2024.

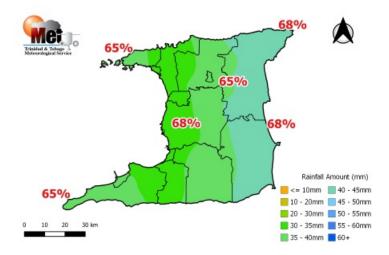


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (16th – 31st) January 2024 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 4.5 mm.

South-Eastern areas

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Southern areas

Moderate chance (65%) of mean daily rainfall up to 3.8 mm.

South-Western areas

Moderate chance (65%) of mean daily rainfall up to 3.8 mm.

Central, West-Central, and inland areas

Moderate chance (68%) of mean daily rainfall up to 3.2 mm.

Northern, North-Western areas

Moderate chance (65%) of mean daily rainfall up to 3.8 mm.

Tobago Rainfall Forecast for the 15-Day period of January (16th - 31st) 2024.

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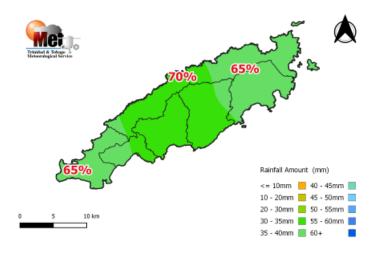


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (16th – 31st) January 2024 and percentage probability of occurrence.

North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 3.8 mm.

Central areas

Moderate chance (70%) of mean daily rainfall up to 3.5 mm.

South-Western areas

Moderate chance (65%) of mean daily rainfall up to 3.8 mm.

Sun and Moon Positions in the Sky January (16th - 31st) 2024.

The sun is presently at 21.1 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from January 16 th 2024 will be 11 hours and 34 minutes, increasing to 11 hours and 40 minutes by 31st of January 2024.

The moon's phases are, first quarter on January 17th 2024, full moon on January 25th 2024, and third quarter on February 02nd 2024.

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Summary of Expected Weather:

Generally Low to Moderate rainfall amounts are expected during the fifteen days.

Most of the days are expected to see less than 3.0 mm of rainfall. Out of the fifteen-day period, relatively wet days of less than 5 mm of rainfall are expected on five days $(16^{th}, 17^{th}, 23^{rd}, 24^{th}, 27^{th})$.

Trinidad and Tobago:

Relatively wet days are expected on the 16th,17th, 23rd, 24th and 27th with less than 5.0 mm of rainfall, while on other days less than 3.0 mm is expected.

The daily rainfall totals are forecast to range between 1.0 mm to 4.5 mm across different farmlands over the islands. The fifteen-day rainfall totals ranging between 10.0 mm and 45.0 mm in Trinidad, and around 38.0 mm in Tobago.

Temperatures & Winds:

The maximum temperatures are expected to become warm, with daily maximum temperatures at or near 32.0°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 33.0°C to 35.0°C on most days. The minimum temperatures will range between 22.0°C to 20.0°C during most nights/early mornings, dropping lower in rural areas and valleys.

In general, mostly moderate to strong easterly winds, at times oscillating between east-northeasterly and east-southeasterly, with an average speed of 20-35 km/h, are expected.

Low to moderate rainfall totals, mostly moderate to strong wind speeds, warm days, and warm feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 4.0 to 8.0 mm per day.

Moisture levels:

Over the fifteen-day period across Trinidad and Tobago, on the days with moderate rainfall, moisture levels are expected to with a high in the 90% to 95% range but generally in the mid 80%s. On dryer days moisture levels can get down to a low of between 45% to 50% but generally in the 50% to 55% range.

Highlighted Possible Impacts on Agriculture:

During this 15-day (16th – 31st) forecast period of January 2024, expect mostly sunny to partly cloudy periods at times. Mostly light showery events, sometimes moderate in a few areas, will produce some wet periods during the forecast

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period. Rescheduling of irrigation days on fields to maintain optimal soil moisture would be necessary on days that will have low rainfall. There is a low (20%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is a low (20%) probability for flash and riverine flooding episodes. River levels will be low to moderate at times during the forecast period. There is also a low probability (28%) chance for fungi spread, insect pests and warm/moist weather diseases to develop in crop beds.

Weather Assessment for the period January (1st - 15th) 2024.

At Piarco for the period January 1^{st} – 15^{th} 2024, mostly relatively dry rainfall days were recorded, with two relatively wet days recorded on the 8^{th} , 9^{th} and one relatively wet to wet day on the 14^{th} . At Crown Point for the period, eight relatively dry days were recorded with six relatively wet days on the 1st, 2^{nd} , 3^{rd} , 9^{th} , 13^{th} and 15^{th} , and a wet day on the 14^{th} .

The rainfall totals maps for the period, 1st to 15th of January 2024 for Trinidad and Tobago are located below as figure 1 and figure 2.

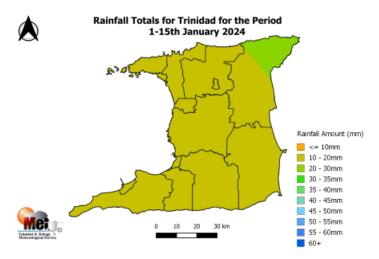


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1^{st} to 15^{th} January 2024.

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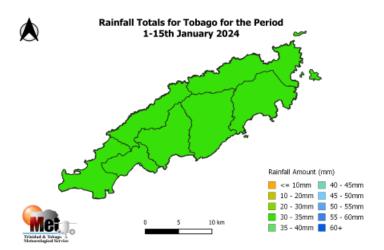


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1st to 15th of January 2024.

Temperatures:

Temperatures for Trinidad were cool to warm during the period 1^{st} to 15^{th} of January, 2024, with the minimum nighttime temperature falling to 21.7° C and the maximum daytime temperature rising to 32.5° C, in Trinidad.

Similarly, Tobago temperatures were cool to warm during the period 1st to 15th of January, 2024, with the minimum nighttime temperature falling to 24.0°C and the maximum daytime temperature rising to 32.4°C.

Summary

Generally Low to Moderate rainfall amounts are expected during the fifteen days.

Most of the days are expected to see less than 3.0 mm of rainfall. Out of the fifteen-day period, relatively wet days of less than 5 mm of rainfall are expected on five days $(16^{th}, 17^{th}, 23^{rd}, 24^{th}, 27^{th})$.

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Relatively wet days are expected on the 16^{th} , 17^{th} , 23^{rd} , 24^{th} and 27^{th} with less than 5.0 mm of rainfall, while on other days less than 3.0 mm is expected.

The daily rainfall totals are forecast to range between 1.0 mm to 4.5 mm across different farmlands over the islands. The fifteen-day rainfall totals ranging between 10.0 mm and 45.0 mm in Trinidad, and around 38.0 mm in Tobago.

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Highlighted Possible Impacts on Agriculture:

During this 15-day (16th – 31st) forecast period of January 2024, expect mostly sunny to partly cloudy periods at times. Mostly light showery events, sometimes moderate in a few areas, will produce some wet periods during the forecast period. Rescheduling of irrigation days on fields to maintain optimal soil moisture would be necessary on days that will have low rainfall. There is a low (20%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is a low (20%) probability for flash and riverine flooding episodes. River levels will be low to moderate at times during the forecast period. There is also a low probability (28%) chance for fungi spread, insect pests and warm/moist weather diseases to develop in crop beds.

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