

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

Definitions used in the forecast and bulletin

Term	Meaning
Rain Day	A day with 1.0 mm or more of rainfall amount
Wet Day	A day with 10.0 mm or more of 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

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Weather Assessment for the period October 1st to 15th 2024.

During the first half of October, moderate rainfall resulted in 15-day rainfall amount at Crown Point of 37.8 mm. Meanwhile extremely heavy rainfall on 5th October at Piarco, resulted in 15-day rainfall amount of 117.5 mm. The rainfall totals maps for the period 1st to 15th of October for Trinidad and Tobago are located below as figure 1 and figure 2.

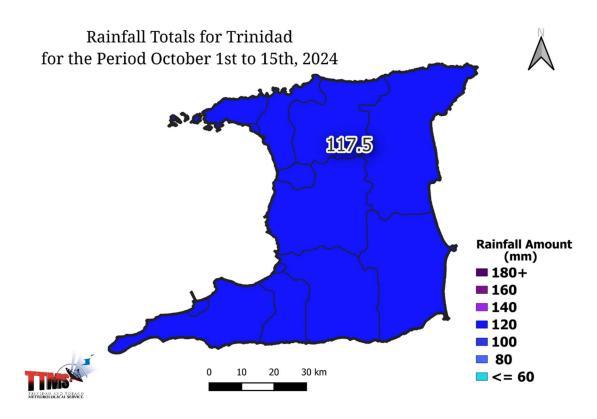


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 1st to 15th of October.

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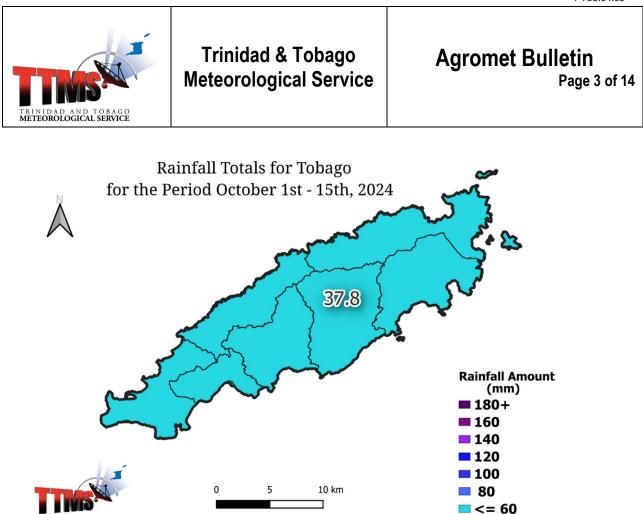


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 1st to 15th of October.

Temperatures:

Hot conditions dominated the first half of October. In Trinidad, a maximum daytime temperature of 35.0 °C and five hot days (maximum temperatures over 34.0 °C at Piarco) occurred during the 1st to 15th of October. The minimum night-time temperatures ranged from 22.7 °C to 25.1 °C in Trinidad.

Tobago also experienced hot conditions with the maximum daytime temperature of 33.4 °C and five hot days (maximum temperatures above 33.0 °C at Crown Point) observed during the 1st to 15th of October. The minimum night-time temperature ranged from 24.8 °C to 26.6 °C. Factoring the relative humidity however, these temperatures had a 'real feel' that was higher than the observed temperature.



Summary of Expected Weather:

Very warm to hot conditions and moderate to heavy amounts of rainfall are possible during the fifteen days.

During the second half of October, we expect wet days on $19^{th} - 21^{st}$, $24^{th} - 26^{th}$ and $28^{th} - 29^{th}$ with the daily rainfall totals forecast over 10 mm and relatively wet days with moderate rainfall of 1 - 10 mm expected for the remainder of the period.

Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
16 th	60% chance of showers	1-8 mm of rainfall is possible	Mostly sunny with isolated showers /thunderstorms	Hot Max/Min Temperatures 34.0 °C /24.0 °C	Feels like 37-46₪	54 - 68%	Gentle, Easterly 10 - 18 km/h Gust 40 km/h
17 th	60% chance of showers	1-8 mm of rainfall is possible	Mostly sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.5 °C /24.0 °C	Feels like 38-442	53 - 68%	Gentle, Easterly 10 - 18 km/h Gust 40 km/h

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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
18 th	20% chance of showers	1-5 mm of rainfall is possible	Mostly sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.5 °C /25.0 °C	Feels like 38-442	55 - 68%	Gentle, Easterly 10 - 18 km/h Gust 40 km/h
19 th	40% chance of showers	1-6 mm of rainfall is possible	Mostly sunny with isolated showers /thunderstorms	Hot Max/Min Temperatures 34.0 °C /25.0 °C	Feels like 38-49₪	52 - 75%	East-southeasterly 18 - 27 km/h Gust 40 km/h
20 th	60% chance of showers	6-15 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Very Warm Max/Min Temperatures 33.5 °C /25.0 °C	Feels like 39-472	56 - 75%	East-southeasterly 10 - 18 km/h Gust 40 km/h



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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
21 st	60% chance of showers	3-10 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /25.0 °C	Feels like 38-47₪	58 - 78%	East-southeasterly 18 - 27 km/h Gust 40 km/h
22 nd	40% chance of showers	1-8 mm of rainfall is possible	Mostly sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /25.0 °C	Feels like 39-4712	64 - 78%	East-southeasterly 18 - 27 km/h Gust 40 km/h
23 rd	40% chance of showers	1-8 mm of rainfall is possible	Mostly sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /25.0 °C	Feels like 39-432	58 - 70%	East-southeasterly 10 - 18 km/h Gust 40 km/h

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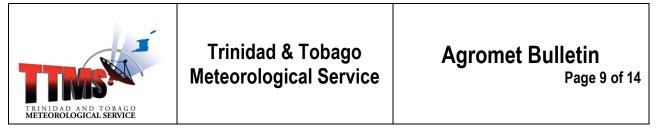
Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
24 th	60% chance of showers	3-15 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Warm Max/Min Temperatures 32.5 °C /25.0 °C	Feels like 41-441	68 - 75%	Easterly 10 - 18 km/h Gust 40 km/h
25 th	60% chance of showers	3-15 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Warm Max/Min Temperatures 32.5 °C /25.0 °C	Feels like 40-46	70 - 80%	East-northeasterly 18 - 27 km/h Gust 40 km/h
26 th	60% chance of showers	3-15 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Warm Max/Min Temperatures 32.5 °C /24.0 °C	Feels like 40-46ℤ	70 - 80%	East-southeasterly 18 - 27 km/h Gust 40 km/h

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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
27 th	40% chance of showers	1-8 mm of rainfall is possible	Partly cloudy with isolated showers /thunderstorms	Warm Max/Min Temperatures 32.5 °C /24.0 °C	Feels like 39-442	61 - 75%	Easterly 18 - 27 km/h Gust 40 km/h
28 th	70% chance of showers	3-15 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Very Warm Max/Min Temperatures 32.5 °C /24.0 °C	Feels like 40-44	67 - 75%	East-southeasterly 18 - 27 km/h Gust 40 km/h
29 th	70% chance of showers	3-15 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Very Warm Max/Min Temperatures 32.5 °C /25.0 °C	Feels like 40-492	70 - 85%	East-southeasterly 18 - 27 km/h Gust 40 km/h
30 th	40% chance of showers	3-9 mm of rainfall is possible	Sunny to partly cloudy with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /25.0 °C	Feels like 39-462	69 - 76%	East-southeasterly 18 - 27 km/h Gust 40 km/h



Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
31 st	40% chance of showers	3-9 mm of rainfall is possible	Sunny to partly cloudy with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /25.0 °C	Feels like 39-462	69 - 76%	East-southeasterly 18 - 27 km/h Gust 40 km/h



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

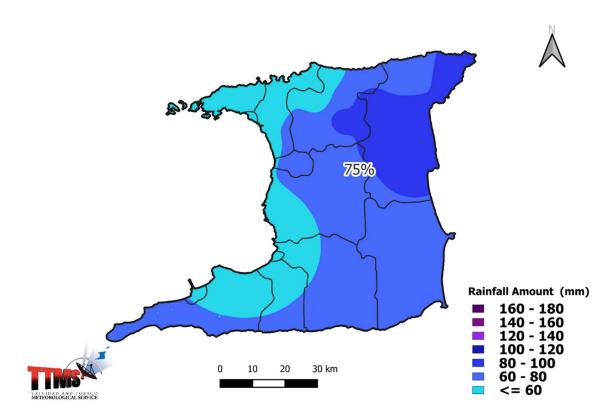


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period ($16^{th} - 31^{st}$) October 2024 and percentage probability of occurrence.

Eastern and North-Eastern areas:

High chance (75%) of mean daily rainfall up to 5.5 mm.

South-Eastern areas:

High chance (75%) of mean daily rainfall up to 4.0 mm.

Southern areas

High chance (75%) of mean daily rainfall up to 4.0 mm.

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South-Western areas

High chance (75%) of mean daily rainfall up to 4.0 mm.

Central, West-Central, and inland areas

High chance (75%) of mean daily rainfall up to 4.0 mm.

Northern, North-Western areas

High chance (75%) of mean daily rainfall up to 3.8 mm.

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

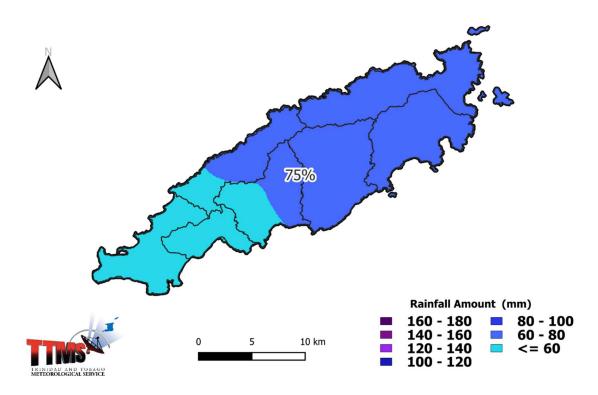


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period $(16^{th} - 31^{st})$ October and percentage probability of occurrence.

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North-Eastern areas

High chance (75%) of mean daily rainfall up to 4.3 mm.

South-Western areas

High chance (75%) of mean daily rainfall up to 3.1 mm.

Trinidad and Tobago:

Very warm to hot conditions and moderate to heavy amounts of rainfall are possible during the fifteen days.

During the second half of October, we expect wet days on $19^{th} - 21^{st}$, $24^{th} - 26^{th}$ and $28^{th} - 29^{th}$ with the daily rainfall totals forecast over 10 mm and relatively wet days with moderate rainfall of 1 - 10 mm expected for the remainder of the period.

In Trinidad, the 15-day forecast rainfall will range between 30.0 mm and 85.0 mm across different farmlands favouring central, eastern and northeastern areas of Trinidad: Las Lomas, Tabaquite, Sangre Grande, Fishing Pond, Cumuto and Valencia. In Tobago, 15-day forecast rainfall ranges between 40.0 mm and 65.0 mm, favouring the hillsides of northern and eastern areas such as Belle Garden.

Temperatures & Winds:

Very warm to hot conditions are likely from 1st to 15th October. Forecast daily maximum temperatures will range from 30.0 °C to 34.0 °C. Factoring humidity on the hottest days, these temperatures are expected to feel as hot as 35.0 °C to 46.0 °C. The minimum temperatures will range from 24.0 °C to 27.0 °C during most nights/early mornings.

In general, mostly gentle to moderate northeasterly to southeasterly winds of 18–27 km/h are expected with strong gusts during heavier showers/thunderstorms. Moderate to heavy rainfall totals combined with very warm/hot days and higher feels-like temperatures will sustain average evapotranspiration rates in crops between 4.0 to 10.0 mm per day.

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Moisture levels:

Over the fifteen-day period across Trinidad and Tobago, expect moderate moisture levels with average daytime relative humidity values mainly from the mid-50s to upper 70s, in terms of percentage.

Highlighted Possible Impacts on Agriculture:

A few showery episodes will interrupt the hot conditions during the last month of the Heat Season. Until the end of October, expect very warm to hot conditions under mostly sunny days and partly cloudy nights. Despite heavy and/or thundery showers especially after midday, 15-day rainfall totals will be near normal to slightly below normal, and hot days will further increase soil moisture loss. Scheduling of irrigation days on fields to maintain optimal soil moisture will be necessary on most days. There is a high (70%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is a moderate probability (40-60%) that strong winds and heavy showers may cause physical damage to young plants and flowering mature plants in exposed hilly areas. There is also a moderate probability (40%) chance for fungal spread, insect pests and warm/moist weather diseases to develop in crop beds.

Sun and Moon Positions in the Sky October (16th – 31st) 2024.

The sun is presently at 9.25 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago on October 16th will be 11 hours, 52 minute and 44 seconds decreasing to 11 hours, 44 minutes, 50 seconds on October 31st.

Moon Phases: Full Moon occurs on October 17^{th} with Third Quarter on October 24^{th} . According to the tradition of moon's phases: October $17^{th} - 18^{th}$, $21^{st} - 23^{rd}$ and $29^{th} - 31^{st}$ are good days for planting below-ground crops; $21^{st} - 23^{rd}$ are good days for planting above-ground crops; the remaining days are poor planting days and are useful for removing weeds, clearing land and ploughing fields.

<u>Disclaimer</u>

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