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# Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First 15-Day Period (1<sup>st</sup> – 15<sup>th</sup>) of October, 2024

Issued: Monday 30th of September 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



#### Weather Assessment for the period September 16<sup>th</sup> to 30<sup>th</sup> 2024.

Moderate to very heavy rainfall from September 16<sup>th</sup> to 30<sup>th</sup> resulted in rainfall amounts at Crown Point, 4.1 mm and at Piarco, 55.1 mm. The rainfall totals maps for the period 16<sup>th</sup> to 30<sup>th</sup> of September for Trinidad and Tobago are located below as figure 1 and figure 2.

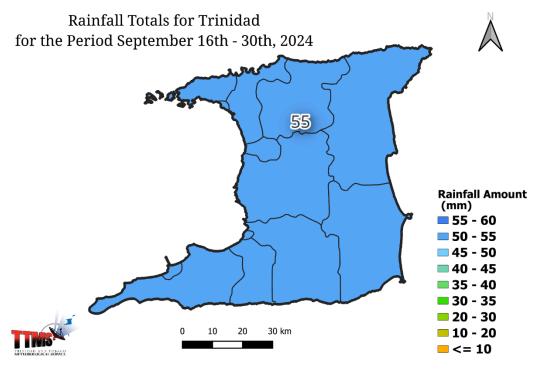
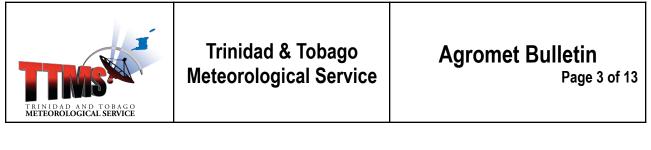
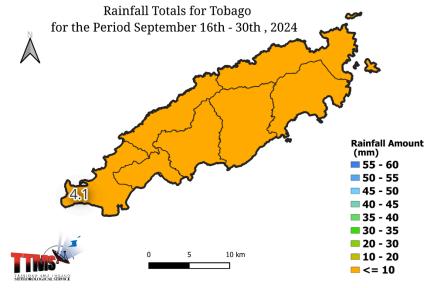
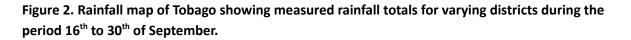


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 16<sup>th</sup> to 30<sup>th</sup> of September.







#### Temperatures:

Hot conditions dominated the second half of September. In Trinidad, a maximum daytime temperature of 34.7 °C and seven hot days (maximum temperatures over 34.0 °C at Piarco) occurred during the 16<sup>th</sup> to 30<sup>th</sup> of September. The minimum night-time temperatures ranged from 22.6 °C to 25.6 °C in Trinidad.

Tobago also experienced hot conditions with the maximum daytime temperature of 34.2 °C and seven hot days (maximum temperatures above 33.0 °C at Crown Point) observed during the 16<sup>th</sup> to 30<sup>th</sup> of September. The minimum night-time temperature ranged from 26.2 °C to 28.4 °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 first half of October, we expect wet days on  $7^{th} - 10^{th}$  and  $13^{th} - 15^{th}$  with the daily rainfall totals forecast up to 12 mm, with 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
1 <sup>st</sup>	20% chance of showers	1-5 mm of rainfall is possible	Sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /24.0 °C	Feels like 38-44°C	67 - 71%	Weak Weak North-northeasterly 10 - 18 km/h Gust 40 km/h
2 <sup>nd</sup>	20% chance of showers	1-5 mm of rainfall is possible	Sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /24.0 °C	Feels like 38-47°C	66 - 78%	Weak Weak North-northeasterly 10 - 18 km/h Gust 40 km/h



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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
3rd	20% chance of showers	1-5 mm of rainfall is possible	Sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /24.0 °C	Feels like 39-46℃	63 - 76%	Weak Weak North-northeasterly 10 - 18 km/h Gust 40 km/h
4 <sup>th</sup>	20% chance of showers	1-5 mm of rainfall is possible	Sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.0 °C /24.0 °C	Feels like 39-48°C	67 - 79%	Weak Weak North-northeasterly 10 - 18 km/h Gust 40 km/h
5 <sup>th</sup>	40% chance of showers	1-5 mm of rainfall is possible	Sunny with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.5 °C /25.0 °C	Feels like 40-47°C	66 - 74%	Weak South-southwesterly 10 - 18 km/h Gust 40 km/h



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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
6 <sup>th</sup>	40% chance of showers	1-10 mm of rainfall is possible	Partly cloudy with isolated showers /thunderstorms	Very Warm Max/Min Temperatures 33.5 °C /25.0 °C	Feels like 40-47°C	66 - 74%	Weak South-southwesterly 10 - 18 km/h Gust 40 km/h
7 <sup>th</sup>	60% chance of showers	5-12 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 39-50°C	54 - 79%	Weak Weak South-southeasterly 10 - 18 km/h Gust 40 km/h
8 <sup>th</sup>	60% chance of showers	5-12 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 39-51℃	72 - 85%	Weak Weak South-southeasterly 10 - 18 km/h Gust 40 km/h



Date

9<sup>th</sup>

 $10^{\text{th}}$ 

 $11^{th}$ 

# Trinidad & Tobago Meteorological Service

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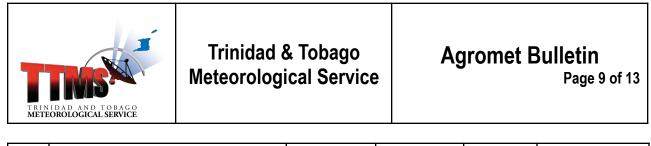
Weather Temperature Heat 'Real Feel' Wind Dav Moisture (Relative Humidity) Partly to mostly 5-12 mm ~~~ of rainfall cloudy with is showers. Feels like Weak Easterly possible thunderstorms 39-44°C 62 - 72% Very Warm 60% chance of 10 - 18 km/h Max/Min showers Temperatures Gust 40 km/h 33.0 °C /24.0 °C 5-12 mm Partly to mostly of rainfall cloudy with showers, is 62 - 72% Feels like Weak Easterly possible thunderstorms 39-44°C Very Warm 60% chance of 10 - 18 km/h Max/Min showers Temperatures Gust 40 km/h 33.0 °C /24.0 °C 1-10 mm Partly to mostly of rainfall cloudy with is showers, Feels like 54 - 62% Weak Easterly possible thunderstorms 38-40°C Very Warm 60% chance of 10 - 18 km/h Max/Min showers Temperatures Gust 40 km/h

33.0 °C /24.0 °C



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Weather Date Temperature Heat 'Real Feel' Wind Dav Moisture (Relative Humidity)  $12^{\text{th}}$ 1-10 mm Sunny with of rainfall isolated showers is /thunderstorms Feels like 62 - 71% Moderate Easterly possible 39-44°C Very Warm 60% chance of 18 - 27 km/h Max/Min showers Temperatures Gust 40 km/h 33.0 °C /24.0 °C  $13^{\text{th}}$ 5-12 mm Partly to mostly of rainfall cloudy with showers, is Feels like 65 - 75% Moderate Easterly possible thunderstorms 37-44°C Very Warm 70% chance of 18 - 27 km/h Max/Min showers Temperatures Gust 40 km/h 32.5 °C /24.0 °C  $14^{th}$ 5-12 mm Partly to mostly ~ of rainfall cloudy with is showers, Feels like 65 - 75% Moderate Easterly possible thunderstorms 37-44°C Very Warm 70% chance of 18 - 27 km/h Max/Min showers Temperatures Gust 40 km/h 32.5 °C /24.0 °C



Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
15 <sup>th</sup>	70% chance of showers	5-12 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 37-42°C	56 - 70%	Moderate Easterly 18 - 27 km/h Gust 40 km/h



Trinidad Rainfall Forecast for the 15-Day period of October  $(1^{st} - 15^{th})$  2024.

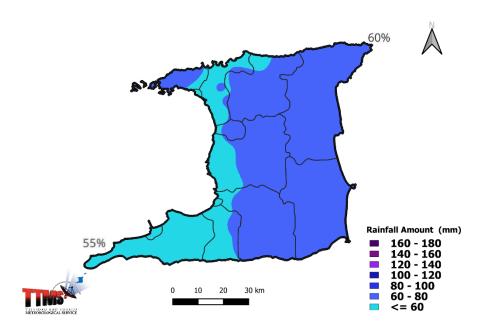


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period  $(1^{st} - 15^{th})$  October 2024 and percentage probability of occurrence.

#### Eastern and North-Eastern areas:

Moderate chance (60%) of mean daily rainfall up to 4.9 mm.

#### South-Eastern areas:

Moderate chance (55%) of mean daily rainfall up to 3.6 mm.

#### Southern areas

Moderate chance (55%) of mean daily rainfall up to 3.3 mm.

#### South-Western areas

Moderate chance (55%) of mean daily rainfall up to 3.3 mm.

This is a new product initiative that the Trinidad and Tobago Meteorological Service has embarked upon with the aim of meeting specific demands of the stakeholders in the Agricultural sector. It is envisaged to produce this forecast at the beginning of each 10 day period in the month. This product can also be accessed on the Trinidad and Tobago Meteorological Service website (<u>http://www.metoffice.gov.tt</u>). Any comments regarding this product are welcomed and can be sent via the <u>metfeedback@gov.tt</u> in the contact segment on the website.



#### Central, West-Central, and inland areas

Moderate chance (60%) of mean daily rainfall up to 4.0 mm.

#### Northern, North-Western areas

Moderate chance (60%) of mean daily rainfall up to 3.9 mm.

#### Tobago Rainfall Forecast for the 15-Day period of October (1<sup>st</sup> – 15<sup>th</sup>) 2024.

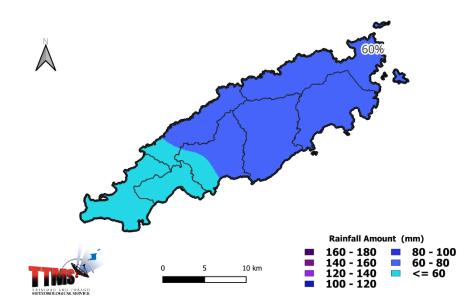


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (1<sup>st</sup>- 15<sup>th</sup>) October and percentage probability of occurrence.

#### North-Eastern areas

Moderate chance (60%) of mean daily rainfall up to 4.8 mm.

#### South-Western areas

Moderate chance (60%) of mean daily rainfall up to 3.5 mm.

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#### Trinidad and Tobago:

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

During the first half of October, we expect wet days on  $7^{th} - 10^{th}$  and  $13^{th} - 15^{th}$  with the daily rainfall totals forecast up to 12 mm, with relatively wet days with moderate rainfall of 1 - 10 mm expected for the remainder of the period.

In Trinidad, the 15-day rainfall totals range between 35.0 mm and 75.0 mm across different farmlands favouring central, northeastern and northwestern areas of Trinidad: Las Lomas, Tabaquite, Petit Valley, Diego Martin, Toco, Sangre Grande, Fishing Pond, Cumuto and Valencia. In Tobago, 15-day rainfall totals range between 47.0 mm and 72.0 mm favouring northern and eastern areas: Hillsborough, Roxborough, Speyside and Charlotteville.

#### **Temperatures & Winds:**

Very warm to hot conditions are likely from 1<sup>st</sup> to 15<sup>th</sup> October. Daily maximum temperatures are expected to range from 31.0 °C to 34.0 °C. Factoring humidity on the hottest days, these temperatures are expected to feel as hot as 35.0 °C to 51.0 °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 southerly winds of 10–27 km/h are expected with strong gusts during heavier showers/thunderstorms. Moderate to heavy rainfall totals combined with hot days and higher feels-like temperatures will sustain average evapotranspiration rates in crops between 4.0 to 10.0 mm per day.

#### **Moisture levels:**

Over the fifteen-day period across Trinidad and Tobago, expect moderate moisture levels with average daytime relative humidity values mainly from the lower-60s to upper-70s, in terms of percentage.



#### Highlighted Possible Impacts on Agriculture:

During the first half of October, expect very warm to occasionally hot conditions interrupted by showery episodes: mostly sunny days and partly cloudy nights with occasional showers that can be heavy and/or thundery especially after midday. Near normal to slightly below normal rainfall and a short hot spell 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 (1<sup>st</sup> – 15<sup>th</sup>) 2024.

The sun is presently at 3.5 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago on October 1<sup>st</sup> will be 12 hours, 1 minute and 15 seconds decreasing to 11 hours, 53 minutes, 17 seconds on October 15<sup>th</sup>.

Moon Phases: New Moon occurs on October  $2^{nd}$ , with First Quarter on October  $10^{th}$ . According to the tradition of moon's phases: October  $1^{st} - 3^{rd}$  are good days for planting below-ground crops;  $4^{th} - 5^{th}$  and  $9^{th} - 10^{th}$  and  $13^{th} - 14^{th}$  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.

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