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# Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second 15-Day Period (16<sup>th</sup> – 30<sup>th</sup>) of September, 2024

ISSUED AT: 12:05 PM

Date: Monday 16th 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

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

Moderate to heavy rainfall from September 1<sup>st</sup> to 15<sup>th</sup> resulted in cumulative rainfall amounts at Crown Point, 98.4 mm and Piarco, 154.3 mm. The rainfall totals maps for the period 1<sup>st</sup> to 15<sup>th</sup> of September for Trinidad and Tobago are located below as figure 1 and figure 2.

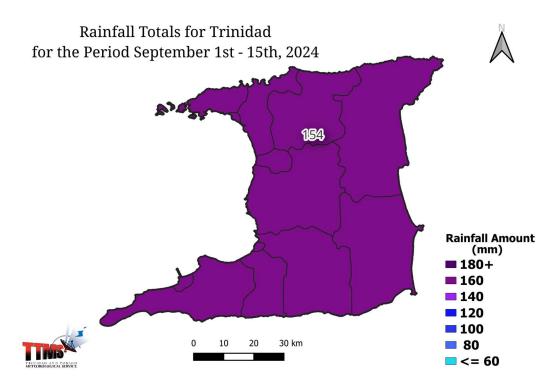


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 1<sup>st</sup> to 15<sup>th</sup> of September.



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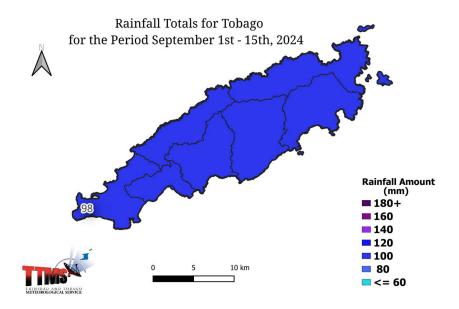


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 1<sup>st</sup> to 15<sup>th</sup> of September.

#### **Temperatures:**

Hot conditions dominated the first half of September. In Trinidad, a maximum daytime temperature of 34.9  $^{\rm o}$ C and four hot days (maximum temperatures over 34.0  $^{\rm o}$ C at Piarco) occurred during the 1<sup>st</sup> to 15<sup>th</sup> of September. Factoring the relative humidity however, these temperatures had a 'real feel' that was higher than the observed maximum. The minimum night-time temperatures ranged from 23.2  $^{\rm o}$ C to 25.6  $^{\rm o}$ C in Trinidad.

Tobago also experienced hot conditions with the maximum daytime temperature of 33.1 °C and two hot days (maximum temperatures above 33.0 °C at Crown Point) observed during the 1<sup>st</sup> to 15<sup>th</sup> of September. However, these temperatures felt hotter considering the relative humidity. The minimum night-time temperature ranged from 22.5 °C to 28.6 °C.



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### **Summary of Expected Weather:**

Hot conditions and moderate to heavy amounts of rainfall are possible during the fifteen days.

During the second half of September, wet days are expected  $16^{th}$ - $18^{th}$ ,  $22^{nd}$ - $24^{th}$  and  $26^{th}$ - $28^{th}$  with the daily rainfall totals forecast up to 25 mm. Relatively wet days of up to 10.0 mm of rainfall are expected for the remainder of the period.

Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
16 <sup>th</sup>	70% chance of showers	5-12 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorms	Very Warm  Max/Min Temperatures 33.0 °C /26.0 °C	Feels like 392	63 - 78%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h
17 <sup>th</sup>	70% chance of showers	5-12 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorms	Hot  Max/Min Temperatures 34.0°C / 26.0°C	Feels like 41₽	60 - 75%	Moderate  East to Southeasterly  18 - 27 km/h  Gust 40 km/h

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Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
18 <sup>th</sup>	40% chance of showers	5-12 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorms	Very Warm  Max/Min Temperatures 33.5°C / 26.0°C	Feels like 392	59 - 75%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h
19 <sup>th</sup>	30% chance of showers	2-9 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorm	Hot  Max/Min Temperatures 34.5°C / 26.0°C	Feels like 40⊉	58 - 64%	Moderate  East to Southeasterly  18 - 27 km/h  Gust 40 km/h
20 <sup>th</sup>	30% chance of showers	2-9 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorm	Hot  Max/Min Temperatures 34.5°C / 26.0°C	Feels like 40⊡	58 - 62%	Moderate  East to Southeasterly  18 - 27 km/h  Gust 40 km/h

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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
21 <sup>st</sup>	30% chance of showers	2–9 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorm	Hot  Max/Min Temperatures 34.5°C / 26.0°C	Feels like 402	55 - 70%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h
22 <sup>nd</sup>	70% chance of showers	5-12 mm of rainfall is possible	Partly to mostly cloudy with showers, thunderstorms	Hot  Max/Min Temperatures 34.0°C / 26.0°C	Feels like 40₪	56 - 73%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h
23 <sup>rd</sup>	70% chance of showers	5-25 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⊠	65 - 76%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h

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Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
24 <sup>th</sup>	70% chance of showers	5-25 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 39º	61 - 78%	Moderate  East to Southeasterly  18 - 27 km/h  Gust 40 km/h
25 <sup>th</sup>	40% chance of showers	2–8 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max/Min Temperatures 33.0°C / 25.0°C	Feels like 39₪	57 - 64%	Moderate  East to Southeasterly  18 - 27 km/h  Gust 40 km/h
26 <sup>th</sup>	40% chance of showers	5-12 mm of rainfall is possible	Partly cloudy with showers	Very Warm  Max/Min Temperatures 33.5°C / 24.0°C	Feels like 38₪	54 - 62%	Moderate East-northeasterly 18 - 27 km/h Gust 40 km/h

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Date		Weather		Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
27 <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  33.0°C / 24.0°C	Feels like 39₪	62 - 71%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h
28 <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 / 25.0°C	Feels like 39₪	65 - 75%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h
29 <sup>th</sup>	70% chance of showers	2–8 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorm	Very Warm  Max/Min Temperature s 33.5°C / 25.0°C	Feels like 39₪	56 - 68%	Moderate  East-northeasterly  18 - 27 km/h  Gust 40 km/h

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Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
30 <sup>th</sup>	70% chance of showers	2–8 mm of rainfall is possible	Partly cloudy with showers, isolated thunderstorm	Hot  Max/Min  Temperature s 34.0°C / 25.0°C	Feels like 40⊡	56 - 70%	Moderate East-northeasterly 18 - 27 km/h Gust 40 km/h



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Trinidad Rainfall Forecast for the 15-Day period of September (16<sup>th</sup> – 30<sup>th</sup>) 2024.

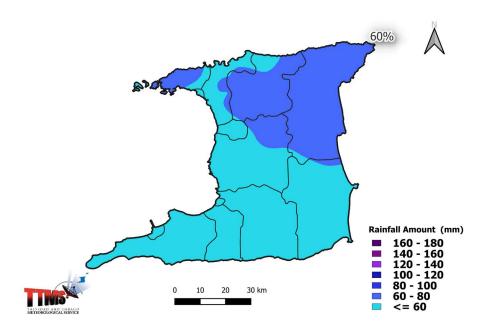


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (16<sup>th</sup> – 30<sup>th</sup>) September 2024 and percentage probability of occurrence.

### **Eastern and North-Eastern areas:**

Moderate chance (60%) of mean daily rainfall up to 4.5 mm.

### **South-Eastern areas:**

Moderate chance (60%) of mean daily rainfall up to 2.9 mm.

### Southern areas

Moderate chance (60%) of mean daily rainfall up to 2.9 mm.

### **South-Western areas**

Moderate chance (60%) of mean daily rainfall up to 2.9 mm.

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

Moderate chance (60%) of mean daily rainfall up to 3.4 mm.

### Northern, North-Western areas

Moderate chance (60%) of mean daily rainfall up to 3.8 mm.

Tobago Rainfall Forecast for the 15-Day period of September (16<sup>th</sup> – 30<sup>th</sup>) 2024.

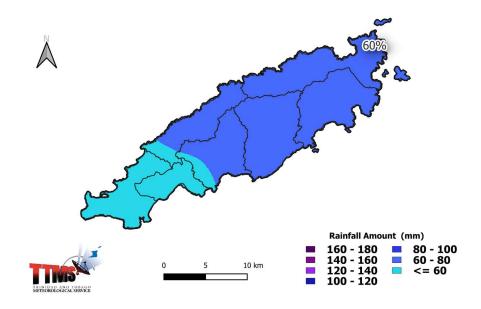


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period  $(16^{th} - 30^{th})$  September and percentage probability of occurrence.

#### **North-Eastern areas**

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

#### **South-Western areas**

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



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### **Trinidad and Tobago:**

Hot conditions and moderate to heavy amounts of rainfall are possible during the fifteen days.

During the second half of September, wet days are expected 16<sup>th</sup>-18<sup>th</sup>, 22<sup>nd</sup> - 24<sup>th</sup> and 26<sup>th</sup> - 28<sup>th</sup> with the daily rainfall totals forecast up to 25 mm alongside relatively wet days of up to 10.0 mm of rainfall expected for the remainder of the period.

In Trinidad, the 15-day rainfall totals range between 44.0 mm and 69.0 mm across different farmlands favouring northern and northeastern areas of Trinidad: Petit Valley, Diego Martin, Toco, Sangre Grande, Fishing Pond, Cumuto and Valencia. In Tobago, 15-day rainfall totals range between 54.0 mm and 74.0 mm favouring northern and eastern areas: Hillsborough, Roxborough, Speyside and Charlotteville.

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

Hot conditions are likely from  $16^{th}$  to  $30^{th}$  September. Daily maximum temperatures are expected to range from 31.0 °C to 35.0 °C. Factoring humidity on the hottest days, these temperatures are expected to feel as hot as 35.0 °C to 45.0 °C. The minimum temperatures will range from 25.0 °C to 27.0 °C during most nights/early mornings.

In general, mostly 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 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-80s, in terms of percentage.

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### **Highlighted Possible Impacts on Agriculture:**

During the second half of September expect 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 short hot spells will 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 September (16th - 30th) 2024.

The sun is presently at 2.3 degrees North latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago on September 16<sup>th</sup> will be 12 hours, 9 minutes and 59 seconds decreasing to 12 hours, 1 minute, 50 seconds on September 30<sup>th</sup>.

Moon Phases: Full Moon occurs on September  $17^{th}$ , Third Quarter on September  $24^{th}$ . According to the tradition of moon's phases: September  $16^{th} - 17^{th}$  are good days for planting above-ground crops;  $20^{th} - 21^{st}$  and  $24^{th} - 25^{th}$  are good days for planting below-ground crops; the remaining days are poor planting days and are useful for removing weeds, clearing land and ploughing fields.

### Disclaimer

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