

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st - 31st) of May, 2019

### 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 Assessment for the Second Dekad (11<sup>th</sup> -20<sup>th</sup>) of May, 2019.

Trinidad and Tobago experienced fewer relatively wet days with some beneficial rainfall during the dekad than the previous dekad. Trinidad had some rainfall on 11<sup>th</sup>, 12<sup>th</sup>, 14<sup>th</sup> and 20<sup>th</sup>; while Tobago had rainfall on the 15<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup>. As of the 19<sup>th</sup> May, 2019, the preliminary results of rainfall amounts for Trinidad, showed that north-eastern and eastern areas had rainfall totals as follows: North Oropouche (36.2 mm), Navet (5.6 mm) and Sangre Grande (9.8 mm) were generally below the forecasted range of 30.0 mm to 40.0 mm. Similarly, northern areas such as Piarco (5.3 mm) and St Anns (1.6 mm) had rainfall amounts mostly below the range 20.0 mm to 30.0 mm. Additionally, north-western areas of Trinidad such as Moka (0.0 mm) and Diamond Vale (0.2 mm) were mostly below expected range of 10.0 mm to 20.0 mm.

Conversely, central areas had rainfall totals as follows: Arena (8.0 mm), Mamoral (13.0 mm), Flanagin Town (4.0 mm),

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Tamana (12.0 mm), which were below the range forecasted of 20.0 mm to 30.0 mm. Likewise, southern-western areas had the following rainfall amounts: Point Fortin (3.0 mm), Barrackpore (2.6 mm) were below the range forecasted of 20.0 mm to 30.0 mm. Similarly, south-eastern areas had the following rainfall amounts: CatsHill (4.8 mm) and Guayaguayare (10.4 mm) and Mayaro (8.7 mm) were below the range forecasted of 20.0 mm to 30.0 mm.

Tobago had experienced some rainfall, western areas such as Crown Point had rainfall totals of 7.7 mm, which was below the forecasted amount of 20.0 mm to 30.0 mm for south-western Tobago.

Trinidad's temperature was generally inside of the expected range, the maximum temperature went up to 33.8 °C, which was slightly above the expected high range of 32.6 °C to 33.6 °C. At the same time Tobago's maximum got up to 31.7 °C, below the expected high range of 31.3 °C to 32.7 °C. Conversely, lowest temperatures recorded were 22.9 °C in Trinidad and 24.6 °C in Tobago. In Trinidad's case, the minimum temperature was below the expected minimum range of 24.2 °C to 23.1 °C. However, the minimum temperature was within the expected minimum range of 25.0 °C to 23.7 °C for Tobago. The average humidity for Trinidad was in the mid-seventies while Tobago was in the low seventies, throughout the dekad.

#### **Expected Weather for Third Dekad (21<sup>st</sup>– 31<sup>st</sup>) of May 2019 and Likely Impact on Agriculture.**

The forecast for the third dekad of May indicates that farmers can expect relative wet days with more intense rainfall as compared to the second dekad of May, 2019. Relatively wet days: on the 22<sup>nd</sup>, 24<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup> and 27<sup>th</sup>; and relatively dry days: 21<sup>st</sup>, 23<sup>rd</sup>, 28<sup>th</sup>, 29<sup>th</sup>, 30<sup>th</sup> and 31<sup>st</sup>. During relatively wet days, expect patchy cloudy to cloudy conditions, with light/moderate occasionally heavy rainfall over some areas; while during relatively dry days, expect cloudy patches with a possible light shower of rainfall or two. Trinidad's ten-day period rainfall totals, forecast to range between 20.0 mm and 50.0 mm, while Tobago's ten-day period rainfall totals, forecast to range between 20.0 mm and 30.0 mm.

The average daily temperatures across Trinidad and Tobago are likely to range between 27.8 °C and 28.3 °C. Expect the highest maximum temperature over the dekad to peak near 33.5 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 23.1 °C. Especially along the foothills and valleys during relatively cloud-free nights. Likewise, during the dekad, in **Tobago**, the highest maximum temperature will peak near 32.1 °C, while the lowest minimum temperature will dip below 23.4 °C, mostly during relatively cloud-free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 68% and 79%. However, during relatively wet days, RH percentage values will range around 85% to 100%. At the same time, wind speeds are expected to range between 25 km/h and 28 km/h but can gust to 40 km/h. In addition, evaporation rates are expected to range between 3.0 mm/day and 10.0 mm/day.

There is also a moderate (80%) probability of visitation of Saharan dust/haze that will occasionally reduce visibility to less than 10.0 km, particularly during days: 21<sup>st</sup>, 23<sup>rd</sup>, 28<sup>th</sup>, 29<sup>th</sup>, 30<sup>th</sup> and 31<sup>st</sup>.

#### **Impacts on Agriculture:**

Although, mostly dry soils and vegetation/foilage exist presently, a transition to slightly wetter conditions during this dekad is expected. This will aid in moisten soils and vegetation with a possible decrease in frequency of irrigation during this

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dekad. Having said that, Farmers should remain vigilant to protect, crops, livestock and property from possible bush fire damage.

#### **Sun, Moon and bright objects in the sky:**

The sun is presently at latitude of 20.0 degrees' north latitude, and with this position, the day length for this dekad will be 12.6 hours. Less frequent episodes of intense solar radiation will occur during this dekad when the sky is generally cloud free. There is moderate probability (65%) of heat stress on certain variety plant seedlings and young animals from direct exposure to solar radiation and high temperatures. Additionally, the moon's third quarter phase will be on the 26<sup>th</sup>, given low moon illumination throughout the dekad. As the sun sets in the west, planets: Mars, Jupiter and Saturn will be seen in the evening sky.

#### **Trinidad's Mean Daily Rainfall Forecast for the Third Dekad of May (21<sup>st</sup> -31<sup>st</sup>) 2019.**

##### **Northern & Northwestern areas:**

Moderate chance (60%) of mean daily rainfall up to 2.2 mm.

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

Moderate chance (68%) of mean daily rainfall up to 4.3 mm.

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

Moderate chance (60%) of mean daily rainfall up to 2.3 mm.

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

Moderate chance (68%) of mean daily rainfall up to 4.9 mm.

##### **Southern areas:**

Moderate chance (60%) of mean daily rainfall up to 3.3 mm.

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

Moderate chance (60%) of mean daily rainfall up to 2.4 mm.

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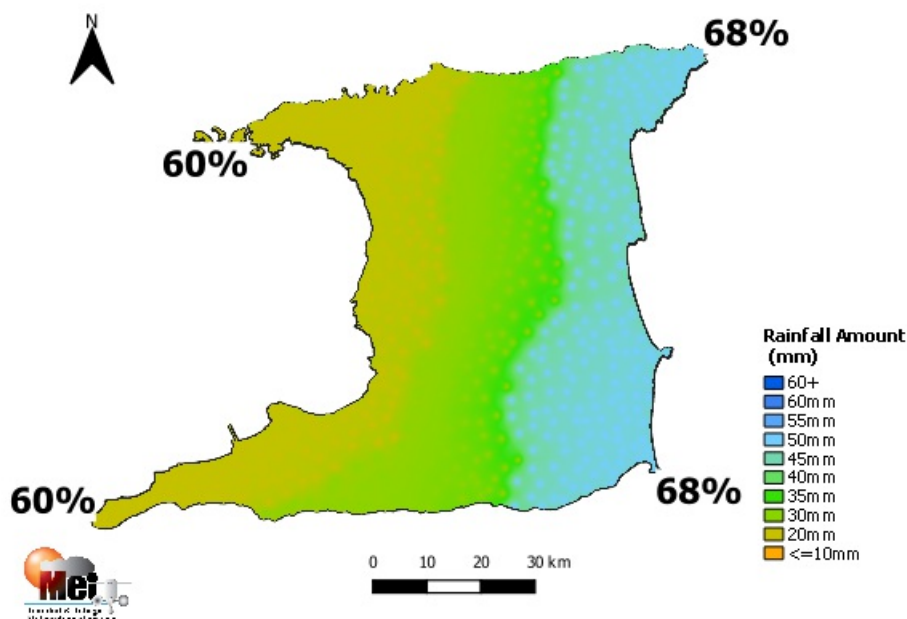


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during third dekad of May 2019 and percentage probability of occurrence.

## Tobago's Mean Daily Rainfall Forecast for the Third Dekad of May (21<sup>st</sup>-31<sup>st</sup>) 2019.

### Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 2.9 mm.

### South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 2.6 mm.

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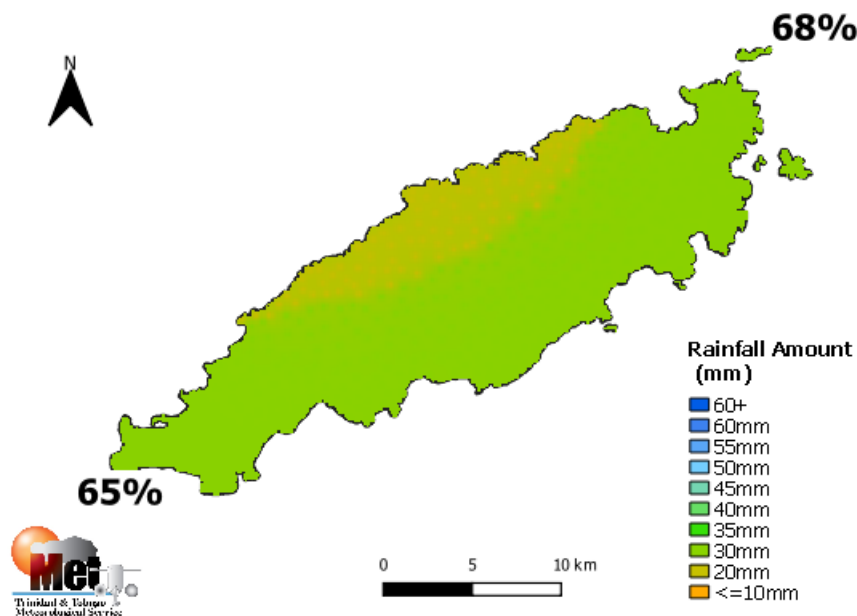


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during third dekad of May 2019 and percentage probability of occurrence.

## Temperatures:

### Trinidad's Temperature Forecast for the Third Dekad of May (21<sup>st</sup>-31<sup>st</sup>) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 32.3 °C, peaking near 33.5 °C.

Moderate chance (70%) of daily minimum temperatures to be below 24.1 °C, dropping as low as 23.1 °C.

### Tobago's Temperature Forecast for the Third Dekad of May (21<sup>st</sup>-31<sup>st</sup>) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 31.3 °C, peaking near 32.1 °C.

Moderate chance (70%) of daily minimum temperatures to be below 24.9 °C, dropping as low as 23.4 °C.

## Summary:

### Expected Weather for Third Dekad (21<sup>st</sup>- 31<sup>st</sup>) of May 2019 and Likely Impact on Agriculture.

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