

# Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21<sup>st</sup> -31<sup>st</sup>) of March 2018.

**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 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 Second Dekad $(11^{th} - 20^{th})$ of March 2018.

Relatively dry days occurred over most of the country. The ten-day rainfall total recorded at Piarco Trinidad, was 3.9 mm, well below the expected range of 10.0 mm to 20.0 mm. El Reposo and other northeastern districts had experienced similar rainfall amounts as Piarco. Central and southern districts such as Chaguanas, Freeport, San Fernando and Chatham had similar rainfall amounts ranging from 0.0 mm to 2.0 mm. Dry conditions pervaded through the northwestern districts such as Port of Spain and Carenage with rainfall totals ranging between 0.0 mm and 2.0 mm, well below the 10.0 mm to 20.0 mm range forecasted.

Similarly, Tobago had the very least amounts of rainfall expected. ANR Robinson airport recorded 0.9 mm, which was well below the forecasted range of 10.0 mm to 20.0 mm Neighboring districts

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such as Bethel, Mount Pleasant and Buccoo and Mount Moriah had experienced similar rainfall totals ranging between 0.3 mm to 0.9 mm.

Temperatures continued to be cool in Trinidad and Tobago. Trinidad's maximum temperature went up to 31.4 <sup>o</sup>C, which was slightly less than the expected range of 31.5 <sup>o</sup>C to 32.0 <sup>o</sup>C. At the same time Tobago's maximum got up to 30.9 <sup>o</sup>C, well within the range expected of 30.4 <sup>o</sup>C to 31.4<sup>o</sup>C. Similarly, lowest temperatures recorded were 20.3 <sup>o</sup>C in Trinidad and 22.4 <sup>o</sup>C in Tobago. In both cases they were within the expected ranges of: 19.8 <sup>o</sup>C to 21.6 <sup>o</sup>C in Trinidad and 21.8 <sup>o</sup>C to 23.1 <sup>o</sup>C in Tobago. The average humidity for both islands remained in the mid-sixties and falling lower during hot and breezy conditions. The mostly sunny and relatively dry conditions must have warranted frequent irrigation of crops.

# Expected Weather for Third Dekad $(21^{st} - 31^{st})$ of March 2018 and Likely Impact on Agriculture.

The forecast for the third dekad of March indicates that farmers can expect similar amounts of rainfall as compared to the second dekad of March. During the third dekad farmers will experience relatively dry days, except for days 21<sup>st</sup> and 23<sup>rd</sup>, where there is a low probability of being relatively wet days. The ten-day period totals, forecast to range between 10.0 mm and 15.0 mm in Trinidad and Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 25.4  $^{0}$ C and 27.2  $^{0}$ C. Expect the highest maximum temperature over the dekad to peak near 31.9  $^{\circ}$ C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 20.0  $^{0}$ 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 30.9  $^{0}$ C, while the lowest minimum temperature will be dip below 22.0  $^{0}$ C, mostly during relatively cloud free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 48% and 69%. However, during relatively wet days, RH percentage values will range around 68% to 78%. At the same time, wind speeds are expected to range between 33 km/h and 46 km/h. In addition, evaporation rates are expected to range between 4.5 mm/day and 9.4 mm/day, but can be slightly more during warmer and windier periods, but slightly less during relatively wet days.

Mostly relatively dry conditions over this dekad, will definitely increase the need for frequent irrigation and possible shading of seedlings and young animals from intense solar radiation during the March equinox. There is a moderate chance of frequent visitation of Saharan dust that will occasionally reduce visibility to minimum of 8 km. The expected mostly relatively dry and breezy conditions will be unfavourable for some agricultural insect pests, fungi and diseases to develop and thrive. Moreover, the expected daytime wind speeds, together with the funneling effect of wind along narrow paths and undulating landscapes, may affect seedlings negatively by causing seedlings' stems and leaves to be damaged. In addition, strong winds may hamper some types of fertilizer application and crops' ability to retain flowers.

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Trinidad's Mean Daily Rainfall Forecast for the Third Dekad of March (21<sup>st</sup>-31<sup>st</sup>) 2018.

## Northern & Northwestern areas:

Moderate chance (62%) of mean daily rainfall up to 1.1 mm.

## North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.5 mm.

## Central, West-Central and inland areas:

Moderate chance (61%) of mean daily rainfall up to 1.1 mm.

#### South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.5 mm.

#### Southern areas:

Moderate chance (63%) of mean daily rainfall up to 1.2 mm.

#### South-Western areas:

Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

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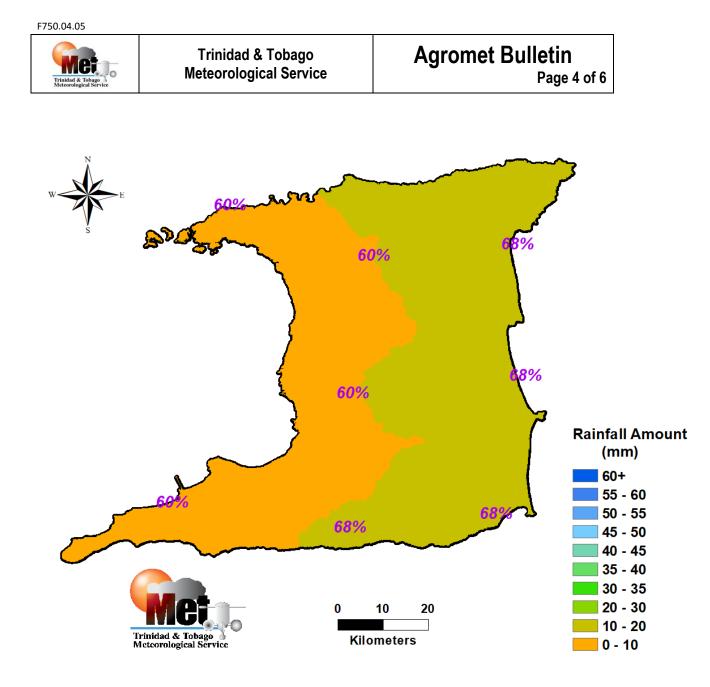


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during third dekad of March 2018 and percentage probability of occurrence.

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# Tobago's Mean Daily Rainfall Forecast for the Third Dekad of March (21<sup>st</sup> -31<sup>st</sup>) 2018.

## Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.5 mm.

### South-Western areas:

Moderate chance (66%) of mean daily rainfall up to 1.0 mm.

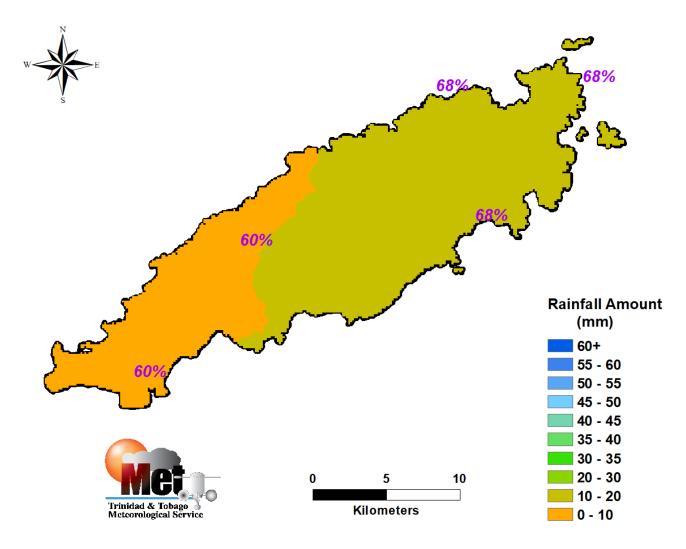


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during third dekad of March 2018 and percentage probability of occurrence.

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# Temperatures:

# Trinidad's Temperature Forecast for the Third Dekad of March (21<sup>st</sup>-31<sup>st</sup>) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 31.0 °C, peaking near 31.9 °C.

Moderate chance (70%) of daily minimum temperatures to be below 22.0  $^{0}$ C, dropping as low as 20.0  $^{0}$ C.

# Tobago's Temperature Forecast for the Third Dekad of March (21<sup>st</sup> -31<sup>st</sup>) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 30.0 °C, peaking near 30.9 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.4 <sup>o</sup>C, dropping as low as

22.0 °C.

# Summary:

The outlook for the third dekad of March calls for relatively dry, breezy and at times hazy conditions, with the exception of days 21<sup>st</sup> and 23<sup>rd</sup> of dekad, where farmers can expect low probability of relatively wet days. Overall, temperatures are expected to be cool with average temperatures ranging between 25.8 °C and 27.2°C in both islands over the full dekad. The highest maximum temperatures are likely to reach 31.9 °C in Trinidad and 30.9 °C in Tobago. While, the lowest minimum temperatures are likely reach 20.0 °C in Trinidad and 22.0 °C in Tobago. Dry conditions are expected to continue into the months of April and first part of May. Opportunities for water harvesting have diminished significantly, hence any opportunity to harvest and store rainwater should be undertaken, while irrigation processes continue.

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