

### **Agromet Bulletin**

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# Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st -30th) of April 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
<b>Extremely Wet Day</b>		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 April 2018.

Mostly mixed conditions dominated Trinidad and Tobago over the dekad, where both islands experienced patchy to cloudy conditions at times with some light to moderate rainfall over few areas. Specifically, days 12<sup>th</sup>, 14<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup>, Trinidad and Tobago experienced some light to moderate rainfall over most areas with ten-day rainfall totals ranging between 1.5 mm to 47.4 mm.

Northeastern, eastern and southeastern areas such as El Reposo, Brasso Vernado and Guayaguare had rainfall totals ranging between 3.8 mm and 30.0 mm; which was slightly above the range forecasted of 10.0 mm to 20.0 mm. Southern and southwestern areas such as San Fernando, Penal, Debe and Chatham had rainfall totals ranging between 1.5 mm to 18.5 mm which was well within the range forecasted. Central districts of Cunupia, Longdenville, Freeport, Caroni and Waterloo, Preysal, and Couva had rainfall ranging between 14.0 mm to 20.0 mm, again which was well within the range

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forecasted. However, northern and northwestern districts areas such as Piarco, Tunapuna and Carenage had rainfall totals ranging between 10.0 mm to 48.00 mm well above the range forecasted.

Similarly, Tobago had experience some rainfall, central areas of Mount Moriah and Castara had rainfall totals ranging between 2.0 mm to 5.6 mm; while western areas such as Crown Point and Buccoo had rainfall totals ranging between 5.0 mm to 10.8 mm; below the forecasted amount of 10.00 mm to 20.0 mm.

Trinidad's temperature was cooler than expected, maximum temperature went up to 31.8  $^{0}$ C, which was below the expected range of 32.6  $^{0}$ C to 33.1  $^{0}$ C. At the same time Tobago's maximum got up to 30.7  $^{0}$ C, below the range expected of 31.1  $^{0}$ C to 31.9  $^{0}$ C. Similarly, lowest temperatures recorded were 22.1  $^{0}$ C in Trinidad and 22.5  $^{0}$ C in Tobago. In Trinidad's case, they were within the expected range, from 20.7  $^{0}$ C to 23.4  $^{0}$ C but below the expected range of 22.7  $^{0}$ C to 24.3  $^{0}$ C for Tobago. The average humidity for both islands remained in the mid-seventies, falling lower during few hot and breezy conditions and going up during cloudy, cool, calm and relatively wet conditions. The mixed conditions during the dekad favoured crops and must have warranted less frequent irrigation.

### Expected Weather for Third Dekad $(21^{st}-30^{th})$ of April 2018 and Likely Impact on Agriculture.

The forecast for the Third dekad of April indicates that farmers can expect slightly less rainfall as compared to the second dekad. During the third dekad, farmers will experience relatively wet days during days 24<sup>th</sup>, 25<sup>th</sup> 28<sup>th</sup>, 29<sup>th</sup> and 30<sup>th</sup> dekad, while relatively dry conditions during the other days of the dekad. The ten-day period totals, forecast to range between 18.0 mm and 25.0 mm in Trinidad and between 10.0 mm to 18.0 mm in Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 26.7 °C and 27.9 °C. Expect the highest maximum temperature over the dekad to peak near 33.0 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 22.0 °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 32.0 °C, while the lowest minimum temperature will be dip below 22.8 °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 70% to 85%. At the same time, wind speeds are expected to range between 30 km/h and 46 km/h. In addition, evaporation rates are expected to range between 2.5 mm/day and 10.4 mm/day, but can be slightly more during warmer and windier periods, but slightly less during relatively wet days.

The initial relatively dry start to the dekad, will definitely increase the need for frequent irrigation. However, during the dekad, on days 24<sup>th</sup>, 25<sup>th</sup>, 28<sup>th</sup>, 29<sup>th</sup> and 30<sup>th</sup> expect relatively wet conditions and a possible decrease in the frequency of irrigation. However, other days will warrant an increase in the

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frequency of irrigation and possible shading of seedlings and young animals from solar radiation during the April/May spring period. There is a moderate chance of frequent visitation of Saharan dust that will occasionally reduce visibility to minimum of 7.5 km. Additionally, owing to the possible initial dry conditions and few relatively wet days, there is a low probability that the expected conditions will be favourable 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.

Trinidad's Mean Daily Rainfall Forecast for the Third Dekad of April (21st-30th) 2018.

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

Moderate chance (66%) of mean daily rainfall up to 2.3 mm.

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

Moderate chance (68%) of mean daily rainfall up to 2.5 mm.

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

Moderate chance (62%) of mean daily rainfall up to 2.0 mm.

#### South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 2.5 mm.

#### Southern areas:

Moderate chance (67%) of mean daily rainfall up to 2.4 mm.

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

Moderate chance (66%) of mean daily rainfall up to 2.3 mm.

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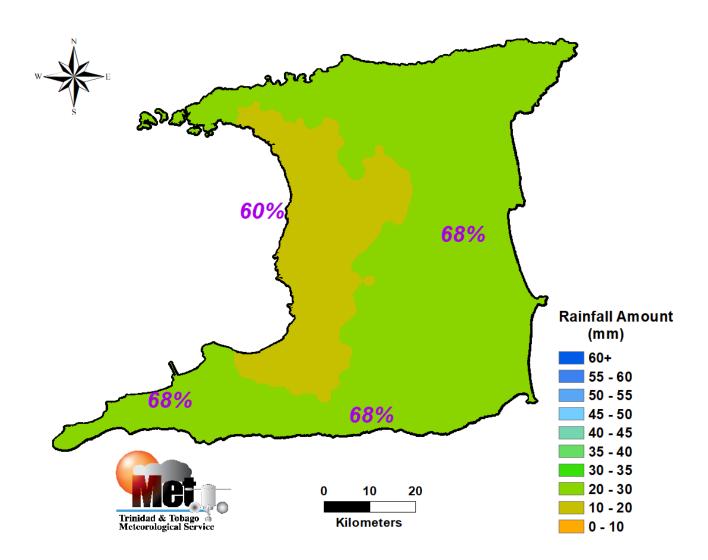


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during third dekad of April 2018 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the Third Dekad of April (21st - 30th) 2018.

#### **Northeastern areas:**

Moderate chance (68%) of mean daily rainfall up to 1.8 mm.

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

Moderate chance (65%) of mean daily rainfall up to 1.5 mm.

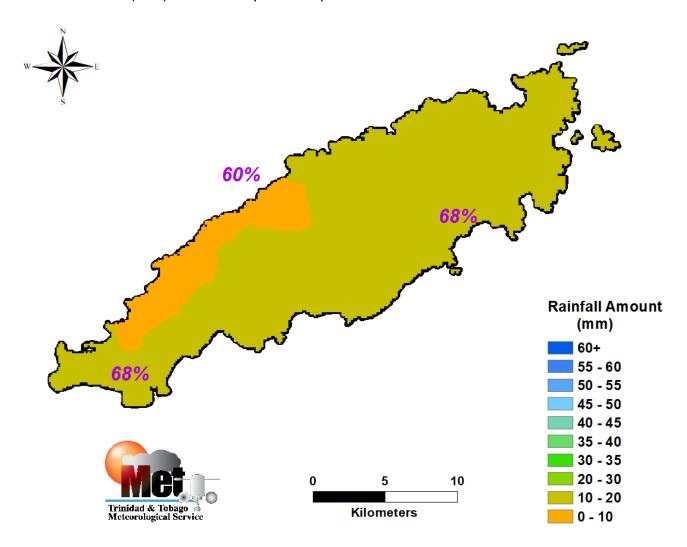


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during third dekad of April 2018 and percentage probability of occurrence.

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#### **Temperatures:**

#### Trinidad's Temperature Forecast for the Third Dekad of April (21st-30th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 32.0 °C, peaking near 33.0 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.8  $^{0}$ C, dropping as low as 22.0  $^{0}$ C.

#### Tobago's Temperature Forecast for the Third Dekad of April (21st-30th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 31.0 °C, peaking near 32.0 °C. Moderate chance (70%) of daily minimum temperatures to be below 24.2 °C, dropping as low as 22.8 °C.

#### Summary:

The outlook for the third dekad of April calls for initially relatively dry days during: 21<sup>st</sup>, 22<sup>nd</sup>, 23<sup>rd</sup>; followed by relatively wet days during: 24<sup>th</sup>, 25<sup>th</sup>, 28<sup>th</sup>,29<sup>th</sup> and 30th of the dekad. Overall, temperatures are warming with **average** temperatures ranging between 26.9 °C and 27.6 °C in both islands over the full dekad. The highest maximum temperatures are likely to reach 33.0 °C in Trinidad and 32.0 °C in Tobago. While, the lowest minimum temperatures are likely reach 22.0 °C in Trinidad and 22.8 °C in Tobago. Dry conditions are expected to continue till the end 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.