

### **Agromet Bulletin**

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# Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First Dekad (1st -10th) of February, 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	<b>Amount of Rain</b>	Type of day
Scanty Rainfall	Less than 1 mm	Relatively dry day
<b>Moderate Rainfall</b>	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 Third Dekad (21st - 31st) of January, 2018.

Days 21<sup>st</sup>, 22<sup>nd</sup>, 23<sup>rd</sup>, 28<sup>th</sup> and 31<sup>st</sup> of dekad turned out to be relative wet days. Days 21<sup>st</sup>, 22<sup>nd</sup> and 31<sup>st</sup> experiencing slightly greater amounts of rainfall than others across the country. But, it turns out that the rainfall totals in certain sections of the country were below what was expected. The ten-day rainfall total recorded at Piarco Trinidad, was 24.8 mm, very close to what was expected of 25.0 mm. El Reposo and other northeastern districts had slightly lesser amounts of rainfall than what was expected. El Reposo reported 37.4mm which was 12.6 mm less than the 50.0 mm forecasted. Central districts of Carapichiama and Couva had rainfall totals of 10.0 mm and 14.8 mm respectively. Which were 15.0 mm and 10.2 mm below what was expected for those areas. Other southern districts follow with same vein, having less than expect rainfall, except for Chatham which had 37.1mm, slightly more than the 25.0 mm forecasted for that area. Northern and Northwestern districts of Tunapuna and

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West Moorings had rainfall totals of 25.4 mm, 20.8 mm respectively, close to the forecasted 25.0 mm of rainfall. But Carenage had a total of 36.0 mm which was above the forecasted amount of 25.0 mm.

Similarly, Tobago had close to the expected rainfall amounts. ANR Robinson airport had rainfall amount of 30.8 mm which was near to what was forecasted amount of 30.0 mm. Neighboring districts' such as Bethel, Mount Pleasant and Buccoo and environs experienced similar rainfall amounts as well. Similarly, Mount Moriah and Les Coteaux had preliminary rainfall amounts of 21.0 mm, which was above expected value of 15.0 mm.

Temperatures continue to be cool in Trinidad and Tobago. Trinidad's maximum temperature went up to 30.9 °C. At the same time Tobago's maximum got up to 31.0 °C. Conversely, lowest temperatures recorded were 20.7 °C in Trinidad and 21.4 °C in Tobago. The average humidity for both islands remained in the low-seventies but went up to low eighties during rainfall events.

The cloudy and sometimes rainy beginning of the dekad may have reduced the need for irrigation over the days 21<sup>st</sup>, 22<sup>nd</sup> 23<sup>rd</sup>, 28<sup>th</sup> and 31<sup>st</sup> of the dekad. But certainly, regular irrigation processes were necessary during days 23<sup>rd</sup> till 30<sup>th</sup> of the dekad.

### Expected Weather for First Dekad $(1^{st}-10^{th})$ of February, 2018 and Likely Impact on Agriculture.

The forecast for the first dekad of January indicates that farmers can expect lesser amounts of rainfall as compared to the last dekad. Farmers can expect relatively dry to relatively wet conditions during the first half of the dekad. With increasing rainfall events during the second half of the dekad, resulting in relative wet days The ten-day period totals are forecasted to range between 15.0 mm and 25.0 mm in Trinidad and forecast to range between 18.0 mm and 25.0 mm in Tobago.

There is a moderate chance of northeastern and southeastern districts of Trinidad such as Toco, El Reposo, and Mayaro will receive slightly more than 25.0 mm of rainfall. While, northwestern, western, central and southwestern areas of Trinidad such as Port of Spain, Carenage, Carapichiama and Chatham will receive slightly less than 18.0 mm of rainfall.

Similarly, moderate chance that eastern areas of Tobago such as Speyside, Roxborough and environs may experience slightly more rainfall than 25.0 mm. While, the leeward side of Tobago, preferably, along the main ridge such as Mount Moriah, Arnos Vale and Les Coteaux will receive slightly less than 18.0 mm of rainfall.

The average daily temperatures across Trinidad and Tobago are likely to range between 25.8 °C and 26.9 °C. Expect the highest maximum temperature over the dekad to peak near 31.9 °C in Trinidad while the lowest night to early morning minimum temperature could dip below 20.1 °C in Trinidad, especially along the foothills and valleys during relatively cloud free nights. During the dekad, in

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Tobago, the highest maximum temperature will peak near 30.9 °C, while the lowest minimum temperature will be dip below 21.5 °C, mostly during relatively cloud free nights.

For both Trinidad and Tobago, the day time relative humidity (RH) is likely to range between 52% to 69%. But during relatively wet days, RH percentage values will range around 70% to 85%. At the same time, winds speeds are expected to be mostly moderate at 12-22km/h or 3.3-6.1m/s. Also, evaporation rates are expected to be in the range from 3.4 mm/day to 8.4 mm/day but can be slightly more during warmer and windier periods. However, slightly less during wetter and still periods.

Relatively dry to relatively wet conditions over the 1<sup>st</sup> to 5<sup>th</sup> days of dekad will surely require increased irrigation. Wet conditions during the days 6<sup>th</sup> to 10<sup>th</sup> of the dekad, the need for irrigation will become less frequent. Possible warm conditions within some crop canopies following episodes of rainfall, will be favourable for some agricultural insect pests, fungi and diseases to develop and thrive. Moreover, the expected day time wind speeds, together with the funneling effect of wind along narrow paths and undulating landscape, may affect seedlings negatively by causing seedlings' stems and leaves to be damaged. Also, strong winds may hamper some types of fertilizer application and crops' ability to retain flowers.

Trinidad's Mean Daily Rainfall Forecast for the First Dekad of February (1<sup>st</sup>-10<sup>th</sup>) 2018.

#### Northern & Northwestern areas:

Moderate chance (67%) of mean daily rainfall up to 2.2 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 (64%) of mean daily rainfall up to 1.9 mm.

#### South-Eastern areas:

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

#### Southern areas:

Moderate chance (65%) of mean daily rainfall up to 1.9 mm.

#### South-Western areas:

Moderate chance (64%) of mean daily rainfall up to 1.7 mm.

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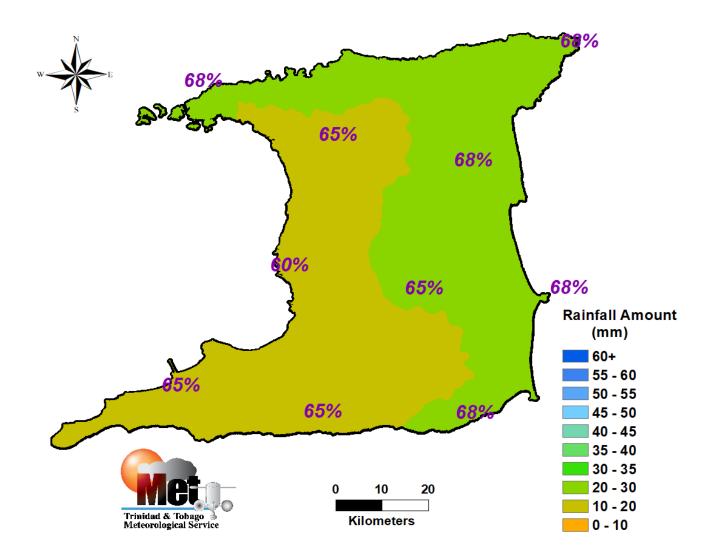


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during First dekad of February, 2018 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the First Dekad of February (1<sup>st</sup> -10<sup>th</sup>) 2018.

#### Northeastern areas:

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

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

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

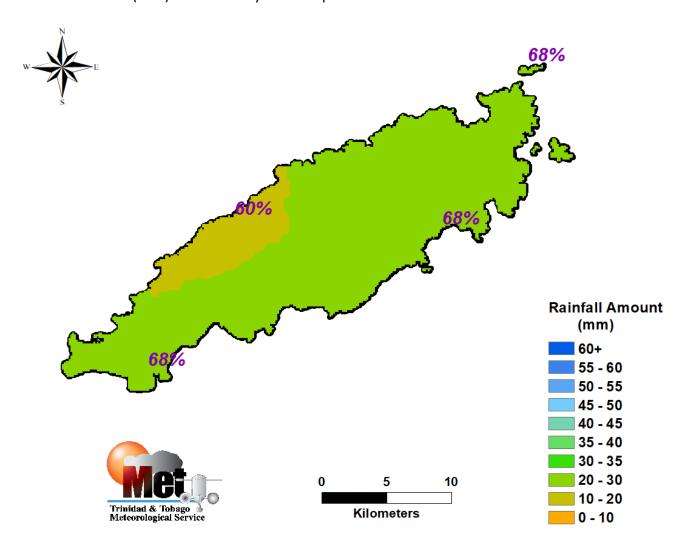


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during First dekad of February, 2018 and percentage probability of occurrence.

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#### **Temperatures:**

#### Trinidad's Temperature Forecast for the First Dekad of February (1st -10th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 30.9 °C, peaking near 31.9 °C.

Moderate chance (70%) of daily minimum temperatures to be below 21.9  $^{0}$ C, dropping as low as 20.1  $^{0}$ C.

#### Tobago's Temperature Forecast for the First Dekad of February (1st -10th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 30.0  $^{0}$ C, peaking near 30.9  $^{0}$ C.

Moderate chance (70%) of daily minimum temperatures to be below 22.9 °C, dropping as low as 21.5 °C.

#### Summary:

The outlook for the First dekad of February calls for relatively dry conditions from the 1<sup>st</sup> till 5<sup>th</sup> of the dekad. A return to relatively wet conditions from days 6<sup>th</sup> to 10<sup>th</sup> of the dekad. Overall, temperatures are expected to be cool with average temperatures ranging between 25.8 °C and 26.9 °C in both islands. 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 20.1 °C in Trinidad and 21.5 °C in Tobago. As the season continues to transition into drier conditions, opportunities for water harvesting are likely to diminish, hence any opportunity to harvest and store rainwater should be undertaken, while irrigation processes continue.