

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 -31st) of January, 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 (11th – 20th) of January, 2018.

Days 11th through day 17th of dekad turned out to be relative wet to wet days. We had days 12th, 15th and 16th experiencing greater amounts of rainfall than others across the country. The rainfall totals in certain sections of the country were slightly above what was expected. The ten-day rainfall total recorded at Piarco Trinidad, was 47.3 mm above by 7.3 mm. Some central districts, had similar rainfall amounts than Piarco. These were Longdenville and Preysal, but with lesser amounts reported in Carapichiama and Couva. Their rainfall totals were closer to 27.0 mm, which fits in well with the forecasted conditions. Also, greater amounts than Piarco, were recorded in some southern districts such as Chatham (71.1 mm), Golconda (64.5 mm), Penal (55.3 mm). Some unofficial reports of flash flooding were also reported in some southern areas. However, Northwestern districts of West

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Moorings, Port of Spain and Carenage had slightly lesser amounts, closer to 27.0 mm of rainfall. On the other hand, El Reposo and other northeastern districts had rainfall amounts around 53.1 mm, which was 13.1 mm above the forecasted amounts of 40.0 mm over the ten-day period.

Similarly, Tobago had close to the expected rainfall amounts. ANR Robinson airport had rainfall amount of 26.9 mm which was near enough 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 12.7 mm which was close to what was expected.

Temperatures continue to be cool in Trinidad and Tobago. Trinidad's maximum temperature went up to 31.1 °C. At the same time Tobago's maximum got up to 31.2 °C. Conversely, lowest temperatures recorded were 21.4 °C in Trinidad and 23.4 °C in Tobago. The average humidity for both islands remained in the mid-seventies but went up to low eighties during rainfall events and later on, went down to upper sixty's during days 18th through 20th of the dekad.

The cloudy and sometimes rainy beginning of the dekad may have reduced the need for irrigation over the days 11th to 17th of the dekad. But certainly, regular irrigation processes were necessary over the last three days of the dekad.

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

The forecast for the third dekad of January indicates that farmers can expect similar amounts of rainfall as compared to the last dekad. Farmers can expect relatively wet conditions during the first seven days of the dekad. With increasing rainfall events during the last four days of the month. The ten-day period totals are forecasted to range between 25.0 mm and 50.0 mm in Trinidad and forecast to range between 15.0 mm and 30.0 mm in Tobago.

There is a moderate chance of northeastern, eastern and southeastern districts of Trinidad such as El Reposo, Toco, Brasso Venado and Mayaro will receive slightly more than 50.0 mm of rainfall. However, northwestern, western, central and southwestern areas of Trinidad such as Port of Spain, Carenage, Carapichiama and Chatham will receive slightly less than 25.0 mm of rainfall.

Similarly, eastern areas of Tobago such as Speyside, Roxborough and environs may experience slightly more rainfall than 30.0 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 15.0 mm of rainfall.

The average daily temperatures across Trinidad and Tobago are likely to range between 25.5 °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 19.9 °C in Trinidad,

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especially along the foothills and valleys during relatively cloud free nights. During the dekad, in Tobago, the highest maximum temperature will peak near 30.8 °C, while the lowest minimum temperature will be dip below 21.7 °C, mostly during relatively cloud free nights.

For both Trinidad and Tobago, the day time relative humidity (RH) is likely to range between 50% to 69%. But during relatively wet days, RH percentage values will range around 70% to 88%. 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 3.0 mm/day to 7.0 mm/day but can be slightly more during warmer and windier periods. However, slightly less during wetter and still periods.

Relatively wet conditions over the Days 21st to 27th of dekad will surely require increased irrigation. Conversely, wet conditions during the days 28th to 31st 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 Third Dekad of January (21st–31st) 2018.

Northern & Northwestern areas:

Moderate chance (64%) of mean daily rainfall up to 3.6 mm.

North-Eastern and Eastern areas:

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

Central, West-Central and inland areas:

Moderate chance (62%) of mean daily rainfall up to 3.2 mm.

South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 5.0 mm.

Southern areas:

Moderate chance (66%) of mean daily rainfall up to 4.6 mm.

South-Western areas:

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Moderate chance (66%) of mean daily rainfall up to 4.3 mm.

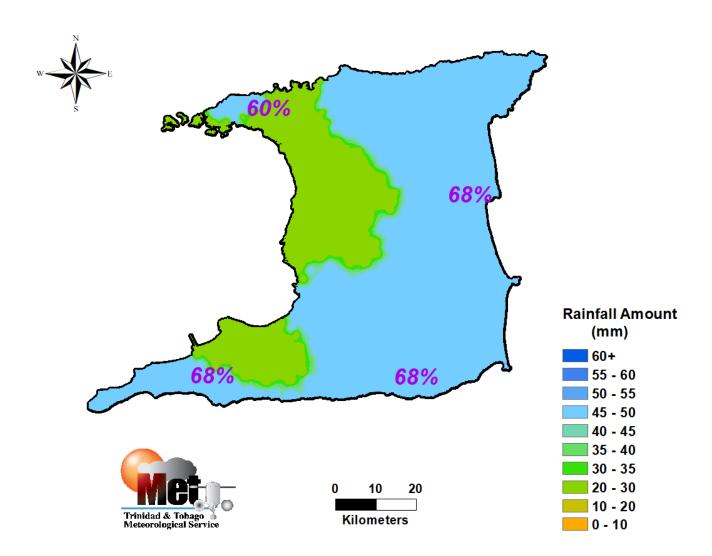


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during Third dekad of January, 2018 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the Third Dekad of January (21st -31st) 2018.

Northeastern areas:

Moderate chance (64%) of mean daily rainfall up to 2.8 mm.

South-Western areas:

Moderate chance (67%) of mean daily rainfall up to 2.6 mm.

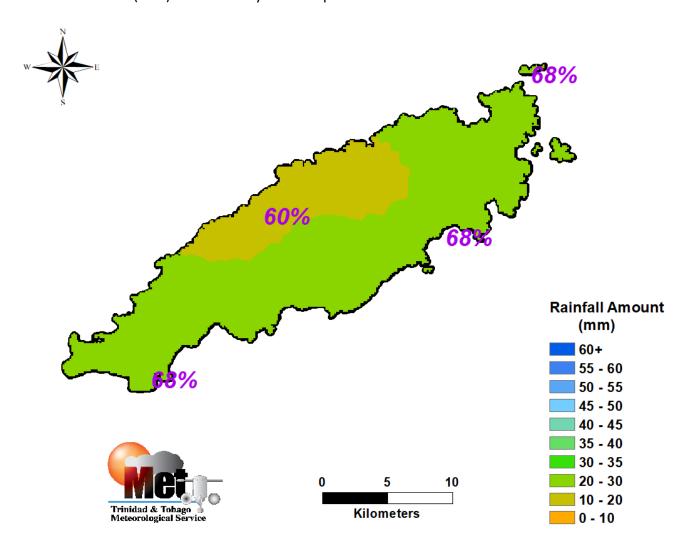


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during Third dekad of January, 2018 and percentage probability of occurrence.

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Temperatures:

Trinidad's Temperature Forecast for the Third Dekad of January (21st -31st) 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 21.6 0 C, dropping as low as 19.9 0 C.

Tobago's Temperature Forecast for the Third Dekad of January (21st -31st) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 29.9 0 C, peaking near 30.8 0 C. Moderate chance (70%) of daily minimum temperatures to be below 22.8 0 C, dropping as low as 21.7 0 C.

Summary:

The outlook for the Third dekad of January calls for relatively wet conditions from days 21^{st} till 27^{th} of the month. A return to wet conditions from days 28^{th} to 31^{st} of the dekad. Overall, temperatures are expected to be cool with average temperatures ranging between $25.5\,^{0}$ C and $26.9\,^{0}$ C in both islands. The highest maximum temperatures are likely to reach $31.9\,^{0}$ C in Trinidad and $30.8\,^{0}$ C in Tobago. While, the lowest minimum temperatures are likely reach $19.9\,^{0}$ C in Trinidad and $21.7\,^{0}$ 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.