

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of September, 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 First Dekad (1st- 10th) of September, 2019.

Although mostly relatively dry to relative wet days dominated Trinidad and Tobago during this first dekad of September, wet days occurred particularly on the 3rd, 4th and 5th. On those days 3rd, 4th and 5th; light to moderate rainfall fell in most areas, while heavy rainfall fell in mostly western parts of both islands. As of the 9th of September, preliminary rainfall totals are as follows: northeastern areas such as Piarco (13.8 mm), North Oropouche (49.6 mm), Cumaca (43.9 mm), Hollis (57.2 mm) and Sangre Grande (90.6 mm) had rainfall mostly below the forecasted range 50.0 mm to 70.0 mm. Northwestern areas such as St. Barbara (44.8 mm), St Anns (11.0 mm), Moka (35.8 mm) and Diego Martin (0.6 mm) had rainfall mostly below the forecasted 50.0 mm. Central areas had rainfall totals as follows: Flanagin Town (28.2 mm), Tamana (39.6 mm) and Plum Mitan (35.8 mm) and Navet (22.0 mm) had rainfall mostly below the forecasted 50.0 mm to 70.0 mm range.

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Southwestern, southern and southeastern areas had the following rainfall amounts: Granville (13.0 mm), Barrackpore (1.8 mm), Penal (10.4 mm), Cats Hill (12.2 mm) and Guayaguayare (39.4 mm) had rainfall mostly below the forecasted 50.0 mm to 70.0 mm range. Tobago experienced low rainfall amounts; western areas such as Crown Point had rainfall totals of 5.1 mm and below the forecasted 30.0 mm to 50.0 mm range.

Trinidad's temperature was within expected range, maximum temperature went up to 34.0 °C, which was within the expected range of 32.5 °C to 34.9 °C. At the same time Tobago's maximum got up to 33.2 °C, within the range expected of 31.7 °C to 33.4 °C. Similarly, lowest temperatures of 23.5 °C were recorded in Trinidad which was within the expected range of 24.0 °C to 23.0 °C. Likewise Tobago's minimum temperature was 25.3 °C and within the expected range of 25.5 °C to 24.0 °C. The average humidity for Trinidad ranged between 73% to 90% while Tobago average humidity range between 70% to 78%.

Expected Weather for Second Dekad (11th – 20th) of September 2019 and Likely Impact on Agriculture.

The forecast for the second dekad of September indicates that farmers can expect similar conditions as compared to the first dekad of September. Expect relatively wet days on the 11th, 12th, 13th, followed by relatively dry days on the 14th, 15th; returning to alternating wet and relatively wet days on the 16th, 17th, 18th, 19th and 20th. There is a high probability of isolated thundershowers along the western coast of Trinidad during the dekad. The ten-day period rainfall totals are forecasted to range between 50.0 mm and 70.0 mm in Trinidad and 50.0 mm in Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 28.2 °C and 29.5 °C. Expect the highest maximum temperature over the second dekad to peak near 35.0 °C in **Trinidad**, while the lowest night to early morning minimum temperature could fall below 23.6 °C. While during the second dekad in **Tobago**, the highest maximum temperature will peak near 33.5 °C, while the lowest minimum temperature will be fall below 25.0 °C.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 65% and 76%. However, during relatively wet and wet days, RH percentage values will range around 77% to 90%. At the same time, wind speeds are expected to range between 16 km/h and 20 km/h but can gust to 30 km/h in heavy showers or thundershowers. In addition, evaporation rates are expected to range between 5.0 mm/day and 11.0 mm/day. There is also a moderate (68%) probability of frequent visitation of Saharan dust that will occasionally reduce visibility to less than 11.0 km, particularly during the 14th and 15th.

Impacts on Agriculture:

As a result of the mixed conditions that occurred during the first dekad of September, the soils are a bit moist and vegetation/foilage growth rates have increase. During the second dekad of September, soils will continue to dry out to some extent, reducing soil moisture content, particularly on days 14th and 15th; which will hinder vegetative growth. Rivers will slowly replenish their waters from ground water runoff, while shrubs and grass growth will continue at a much slower pace. The expected alternating conditions of relatively wet, relatively dry days followed by relative wet to wet conditions of the second dekad of September, may decrease the need for frequent irrigation in the first quarter and last quarter of the dekad. Additionally, with the expected high mean temperatures and relative humidity, there is a moderate (65%) probability of some agricultural insects, pests, fungi and diseases get a foot in and possibly develop and thrive.

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Sun and Moon positions in the sky:

The sun is presently at latitude of approximately 5 degrees' north latitude, and with this position, the day length for this dekad will be 12.0 hours. A high probability (75%) of frequent episodes of intense solar radiation will occur during the second dekad of September when the sky is generally cloud free. There is moderate probability (70%) of heat stress on certain variety plant seedlings and young/sick/elderly animals from direct exposure to solar radiation and high temperatures. Additionally, the moon's full moon phase will be on the 14th and as a result, there will be mostly medium to high moon illumination over crop fields and livestock at night during the dekad.

Trinidad's Mean Daily Rainfall Forecast for the Second Dekad of September (11th–20th) 2019.

Northern & Northwestern areas:

Moderate chance (60%) of mean daily rainfall up to 6.0 mm.

North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 7.0 mm.

Central, West-Central and inland areas:

Moderate chance (60%) of mean daily rainfall up to 5.0 mm.

South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 7.0 mm.

Southern areas:

Moderate chance (60%) of mean daily rainfall up to 6.0 mm.

South-Western areas:

Moderate chance (60%) of mean daily rainfall up to 5.0 mm.

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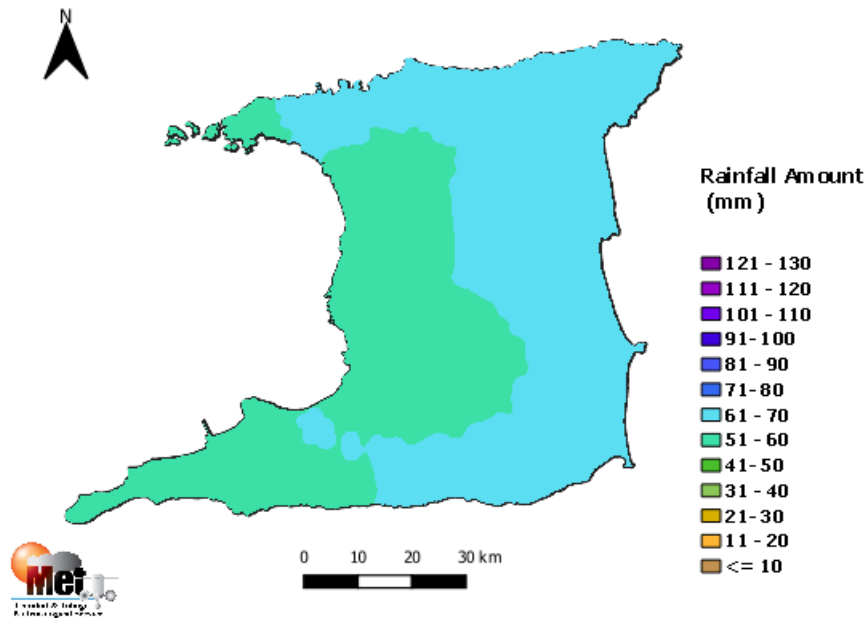


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during second dekad of September 2019 and percentage probability of occurrence.

Tobago's Mean Daily Rainfall Forecast for the Second Dekad of September (11th–20th) 2019.

Northeastern areas:

Moderate chance (65%) of mean daily rainfall up to 6.0 mm.

South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 6.0 mm.

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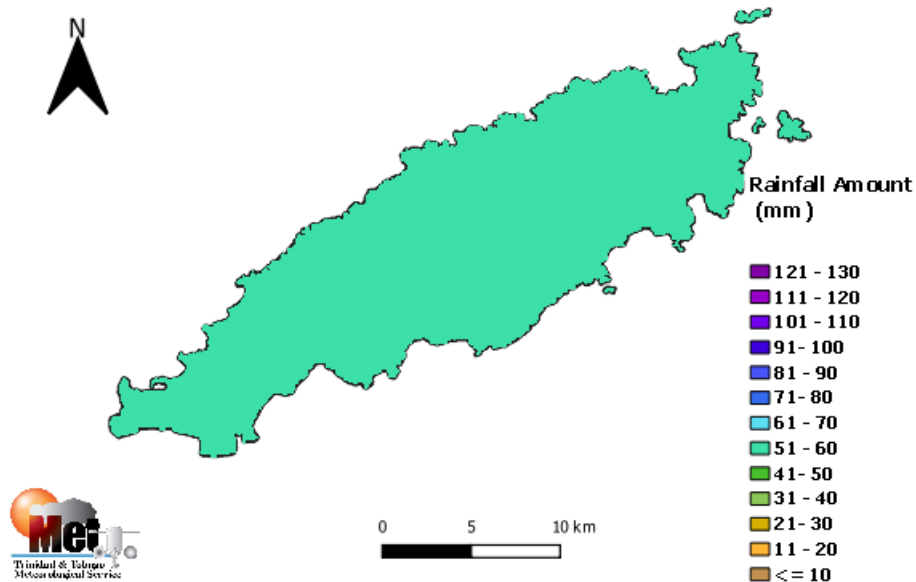


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during second dekad of September 2019 and percentage probability of occurrence.

Temperatures:

Trinidad's Temperature Forecast for the Second Dekad of September (11th-20th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 32.7 °C, peaking near 35.0 °C.

Moderate chance (70%) of daily minimum temperatures to be below 25.0 °C, dropping as low as 23.6 °C.

Tobago's Temperature Forecast for the Second Dekad of September (11th-20th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 31.8 °C, peaking near 33.5 °C.

Moderate chance (70%) of daily minimum temperatures to be below 26.0 °C, dropping as low as 25.0 °C.

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Summary:

Expected Weather for Second Dekad (11th – 20th) of September 2019 and Likely Impact on Agriculture.

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