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Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of February, 2021

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 period (1st-9th) of February 2021.

During the period 1^{st} to 9^{th} of February, mostly relatively dry days occurred over Trinidad and Tobago. The few relatively wet days that occurred over Trinidad, were due to cloudiness and rainfall associated with convergence bands of clouds and localize effects. Rainfall totals' maps for the period 1^{st} to 9^{th} of February are located below as figure 1 and figure 2.

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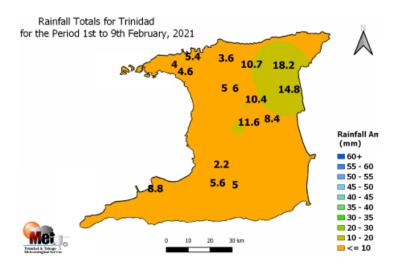


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1st to 9th of February 2021.

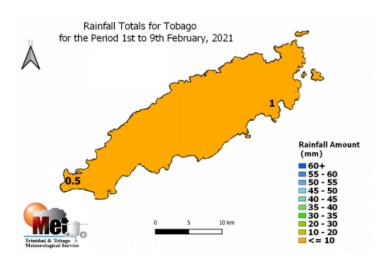


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1st to 9th of February 2021.

The observed temperatures (maximum/minimum), average relative humidity (maximum/minimum) and long-term

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10-day (10dys) averages for Piarco International Airport and ANR Robinson International Airport during first dekad of February 2021.

Location	Temperature OC/Long term	Temperature OC /Long term	(%)/ Long term 10	Average minimum Relative humidity (%)/Long term 10 dys average (%)
Trinidad (Piarco International airport)			81/92 (1990-2010)	67/64 (1990-2010)
Tobago (ANR Robinson International airport)			76/87 (1990-2010)	61/62 (1990-2010)

Table 1 shows the expected weather conditions during the second Dekad (11^{th} $^{-}20^{th}$) of February 2021, for Trinidad and Tobago.

Table 1.

Days:	Expected weather:
11 th	Intermittent cloudy patches with a moderate probability (40%) of showers.
12 th	Intermittent cloudy patches with a moderate probability (45%) of showers.
13 th	Intermittent cloudy patches with a moderate probability (65%) of showers.
14 th	Sporadic cloudy patches with a low probability (25%) of a shower.
15 th	Sporadic cloudy patches with a low probability (25%) of a shower.
16 th	Sporadic cloudy patches with a low probability (25%) of a shower.

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17 th	Intermittent cloudy patches with a moderate probability (45%) of showers.
18 th	Sporadic cloudy patches with a low probability (25%) of a shower.
19 th	Intermittent cloudy patches with a moderate probability (45%) of showers.
20 th	Sporadic cloudy patches with a low probability (25%) of a shower.

Table 2 shows the expected temperatures, humidity and dust haze days during the second Dekad of February 2021for Piarco, Trinidad.

Table 2.

Day	Maximum Temperature	li elliberature	1 11 (0()	Dust Haze
	°C	°C		Yes/No
11 th	31.4	22.0	75	Yes
12 th	31.5	22.0	72	Yes
13 th	31.2	21.5	78	No
14 th	31.5	22.5	72	Yes
15 th	32.0	20.5	72	Yes
16 th	32.0	20.5	72	Yes
17 th	32.0	20.5	72	Yes
18 th	32.0	20.5	72	Yes
19 th	32.5	21.0	75	Yes
20 th	32.5	22.0	75	Yes

Table 3 shows the expected temperatures, humidity and dust haze days during the second Dekad of February

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2021 for the ANR Robinson, Tobago.

Table 3

Day	Maximum Temperature ⁰ C	li ciliberature	Average Relative humidity (%)	Dust Haze Yes/No
11 th	31.4	22.5	75	Yes
12 th	31.5	22.5	72	Yes
13 th	31.4	22.5	78	No
14 th	31.5	22.5	72	Yes
15 th	31.8	22.5	72	Yes
16 th	32.0	22.0	72	Yes
17 th	31.5	22.5	72	Yes
18 th	31.5	22.5	72	Yes
19 th	31.8	22.8	75	Yes
20 th	31.8	23.8	75	Yes

Trinidad's Mean Daily Rainfall Forecast for the second Dekad of February (11th -20th) 2021.

Northern & Northwestern areas:

Moderate chance (65%) of mean daily rainfall up to 1.0 mm.

North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.3 mm.

Central, West-Central and inland areas:

Moderate chance (65%) of mean daily rainfall up to 1.0 mm.

South-Eastern areas:

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

Southern areas:

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Moderate chance (65%) of mean daily rainfall up to 1.2 mm.

South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 1.0 mm.

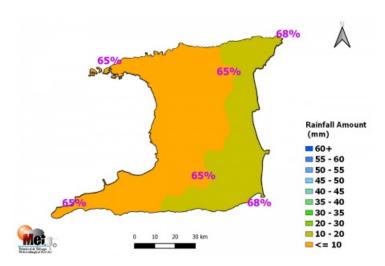


Figure 3. Rainfall map of Trinidad showing possible rainfall totals for varying districts during the second dekad of February 2021 and percentage probability of occurrence.

Tobago's Mean Daily Rainfall Forecast for the second Dekad of February (11th -20th) 2021.

Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

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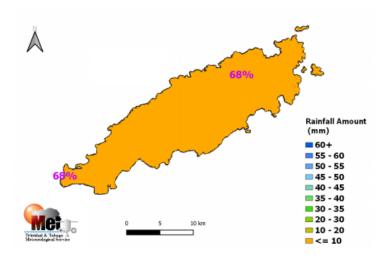


Figure 4. Rainfall map of Tobago showing possible rainfall totals for varying districts during the second dekad of February 2021 and percentage probability of occurrence.

Impacts on Agriculture:

During the second dekad of February 2021, relatively dry days are expected on the 14th, 16th, 18th and 20th; while relatively wet days are expected on the 11th, 12th, 13th, 15th, 17th, and 19th. There is a low (25%) probability that the anticipated rainfall will return sufficient soil moisture across Trinidad and Tobago. Therefore, irrigation measures will be needed at times to maintain soil moisture across crop fields and pastures. Shrubs and grass-growth will continue at a slow pace. Additionally, with low average temperatures at this time and seldom-moist vegetation, there is a low (25%) probability for fungi spread, insect pests and warm weather diseases to develop.

Sun and Moon positions in the sky:

The sun is presently at a latitude of approximately 14.5 degrees South, and with this position, the day-length will be 11.7 hours. There is moderate probability (35%) of intense solar radiation during this second dekad of February, when the sky is generally cloud free. There is also moderate probability (30%) of heat stress on a variety of plant seedlings and young/sick/elderly animals from direct exposure to solar radiation, high temperatures with occasional calm winds. Additionally, the new moon phase will be on the 11th and first quarter on the 19th of February. As a result, there will be low to medium moon illumination over crop fields and livestock at night during the dekad.

Summary

During the second dekad of February 2021, relatively dry days are expected on the 14th, 16th, 18th and 20th; while relatively wet days are expected on the 11th, 12th, 13th, 15th, 17th, and 19th. On relatively dry days expect sporadic cloudy patches with a low probability (25%) of a shower and on relatively wet days expect intermittent cloudy periods with a moderate probability range (40% to 65%) of showers.

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