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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 April, 2022

#### Definitions used in the forecast and bulletin:

Term		Meaning				
Dekad		10 day rainfall measuring period				
		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 Bulletin for Farmers and Livestock Producers of Trinidad and Tobago for the 15-day period (11<sup>th</sup> – 25<sup>th</sup>) of April 2022.

Date	Weather		Temperature	Heat Real Feel	Day Moisture (Relative) (Humidity)	Wind	



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11 <sup>th</sup>	30% chance of a shower	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower or two	Max/Min Temperatures °C 32.0/23.0	Feels like 37- 39°C	60-65%	Moderate easterly 25 km/h Gust 35 km/h
12 <sup>th</sup>	20% chance of a shower	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower or two	Warm  Max/Min  Temperatures °C  32.5/23.0	Feels like 33- 36°C	45-55%	Moderate easterly 20 km/h Gust 30 km/h
13 <sup>th</sup>	20% chance of a shower	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower or two	Warm  Max/Min  Temperatures °C  32.5/22.5	Feels like 35- 38°C	50-59%	Moderate easterly 20 km/h Gust 30 km/h
14 <sup>th</sup>	10% chance of a shower	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower or two	Warm  Max/Min  Temperatures °C  32.8/22.5	Feels like 36- 39°C	55-62%	Moderate easterly 20 km/h Gust 30 km/h
15 <sup>th</sup>	10% chance	Less than 1.0 mm of rainfall is	Patchy cloudy skies with a light shower or	Warm	Feels like		Moderate easterly 20 km/h



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	of a shower	possible	two	Max/Min Temperatures °C 32.8/22.5	35- 40°C	55-63%	Gust 30 km/h
16 <sup>th</sup>	68% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C  31.0/22.5	Feels like 33- 36°C	65-77%	Moderate easterly 20 km/h Gust 30 km/h
17 <sup>th</sup>	68% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C  31.0/23.0	Feels like 33- 36°C	70-78%	Moderate easterly 20 km/h Gust 30 km/h
18 <sup>th</sup>	68% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C  32.0/23.0	Feels like 36- 40°C	57-68%	Moderate south- easterly 20 km/h Gust 30 km/h
19 <sup>th</sup>	68% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C  32.0/23.0	Feels like 35- 39°C	59-65%	Moderate easterly 20 km/h Gust 30 km/h

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20 <sup>th</sup>	68% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Max/Min Temperatures °C 32.0/23.0	Feels like 37- 40°C	61-68%	Moderate easterly 20 km/h Gust 30 km/h
21 <sup>st</sup>	60% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C 32.0/23.0	Feels like 38- 41°C	63-71%	Moderate easterly 20 km/h Gust 30 km/h
22 <sup>nd</sup>	60% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C  32.0/23.0	Feels like 34- 40°C	50-76%	Moderate easterly 20 km/h Gust 30 km/h
23 <sup>rd</sup>	68% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min  Temperatures °C  32.5/23.0	Feels like 37- 41°C	57-68%	Moderate easterly 20 km/h Gust 30 km/h
24 <sup>th</sup>	60% chance	1.0 to 3.0 mm of rainfall is	Partly cloudy with one or two showers	Warm Disclaime	Feels like		Moderate easterly 20 km/h



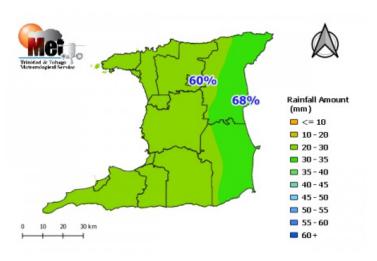
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	of showers	possible		Max/Min Temperatures °C 32.5/23.5	37- 42°C	56-71%	Gust 30 km/h
25 <sup>th</sup>	60% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers		Feels like 36- 44°C	59-74%	Moderate easterly 20 km/h Gust 30 km/h

#### Trinidad Rainfall Forecast for the 15-Day period of April (11th -25th) 2022



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Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11<sup>th</sup>-25<sup>th</sup>) April 2022 and percentage probability of occurrence.

#### Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 2.3 mm.

#### **South-Eastern areas**

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

#### Southern areas

Moderate chance (60%) of mean daily rainfall up to 1.6 mm.

#### South-Western areas

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

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

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

#### Northern, North-Western areas

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

Tobago Rainfall Forecast for the 15-Day period of April (11<sup>th</sup> -25<sup>th</sup>) 2022

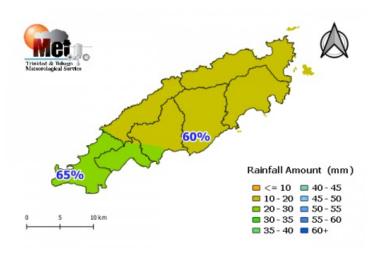


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day

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#### period (11<sup>th</sup>-25<sup>th</sup>) April 2022 and percentage probability of occurrence.

#### **North-Eastern areas**

Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

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

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

#### Sun and Moon Positions in the Sky April (11th-25th) 2022

The sun is presently at 8.4 degrees North latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from April 11<sup>th</sup> will be 12 hours and 20 minutes, increasing slowly to 12 hours and 27 minutes by 25<sup>th</sup> April 2022. According to the moon phases 14<sup>th</sup>, 15<sup>th</sup> and 25<sup>th</sup> of April are good days for planting aboveground crops, while 16<sup>th</sup> (Full Moon Phase), 17<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup> and 22<sup>nd</sup> are good days to plant belowground crops. However, 11<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup>, 23<sup>rd</sup> (Third Quarter Moon Phase) and 24<sup>th</sup> of April 2022, are poor planting days. These days should be used for removing weeds, clearing land and ploughing fields.

#### Highlighted Possible Impacts on Agriculture:

Farmlands in Trinidad and Tobago received low amounts of rainfall during the first dekad (01<sup>st</sup> -10<sup>th</sup>) of April. During this second 15-day forecast period of (11<sup>th</sup> to 25<sup>th</sup>) April 2022, expect similarly small amounts of rainfall to occur as compared to the first 15-day (1<sup>st</sup> to 15<sup>th</sup>) April forecast period. Partly cloudy periods with few showers will interrupt sunny and hazy days. Slightly wetter conditions are most likely in the northeastern, eastern and southeastern parts of Trinidad and southern western Tobago.

There is a high probability (80%) chance for crop irrigation measures during the forecast period due to expected low rainfall amounts. However, livestock should be provided with fresh cool water during this forecast period to rehydrate. There is a moderate probability (60%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is also a moderate probability (60%) chance for fungi spread, insect pests and warm weather diseases to develop in crop beds. River levels will remained at low levels during this forecast period.

#### Weather Assessment for the period April (1st-10th) 2022

Mostly warm, dry and at times windy conditions occurred across Trinidad and Tobago during the 1<sup>st</sup> to 10<sup>th</sup> of April 2022. Only one wet day with rainfall of 10.0 mm or more occurred on the 7<sup>th</sup> of April over central areas of Trinidad only, otherwise mostly sunny and hazy conditions with few showers. Warm days, warm winds, low river levels and low moisture content in soils may have stymied crop growth and development in general on agricultural lands and vegetation growth in pastures. The rainfall totals maps for the period, 1<sup>st</sup> to 10<sup>th</sup> of April for Trinidad and Tobago are located below as figure 1 and figure 2.

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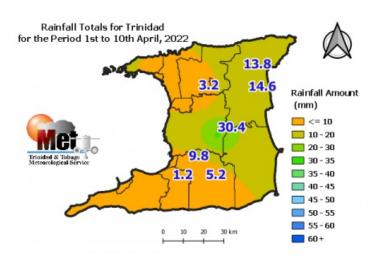


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 10<sup>th</sup> April 2022.

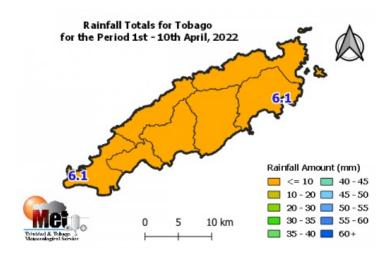


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 10<sup>th</sup> April 2022.

#### **Temperatures:**

Temperatures were cool to warm during the period  $1^{st}$  to  $10^{th}$  April, as the minimum nighttime temperature fell to  $21.6\,^{\circ}$ C and the maximum daytime temperature rose to  $32.8\,^{\circ}$ C, in Trinidad.

Similarly, Tobago temperatures were cool to warm during the period  $1^{st}$  to  $10^{th}$  April, with the minimum nighttime temperature fell to  $23.1\,^{\circ}$ C and the maximum daytime temperature rose to  $31.5\,^{\circ}$ C.

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#### **Summary**

Summary of Expected Weather: Low rainfall amounts are expected on ten of the fifteen days. Relatively wet days with rainfall amounts ranging between 1.0 mm and 5.0 mm are expected on the 16th-25th of April 2022. However, relatively dry days with rainfall amounts less than 1.0 mm are expected on the 11th-15th of April 2022. Trinidad: Partly cloudy periods are expected on the 16th-25th of April 2022, which is likely to bring mostly light rainfall in farmlands across northeastern, eastern and southeastern parts of Trinidad. The daily rainfall totals are forecast to range between 1.0 mm to 5.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 15.0 mm and 25.0 mm. The occasionally moderate rains are expected over farmlands in the northeastern areas of Sangre Grande, Fishing Pond; eastern areas of Plum Mitan, Nariva and Manzanilla; southeastern areas of Mayaro, Guayaguayare and Moruga. However, five relatively dry days with rainfall amounts less than 1.0 mm are expected on the 11th-15th of April 2022. Tobago: Tobago will experience similar conditions as Trinidad. Partly cloudy periods on the 16th-25th of April 2022, will likely bring light rainfall across farmlands in southwestern Tobago. The daily rainfall totals are forecast to range between 1.0 mm to 5.0 mm across different farmlands, with the fifteen-day rainfall totals ranging between 15.0 mm to 20.0 mm across the island. However, five relatively dry days with rainfall amounts less than 1.0 mm are expected on the 11th-15th of April 2022. Temperatures & Winds: The maximum temperatures are expected to remain warm, with temperatures ranging between 31.0oC to 32.8oC throughout the period. However, temperatures are expected to have a real-feel or feels-like between 34.0oC to 44.0oC on most days. The minimum temperatures will range between 22.5oC to 23.5oC during most nights/early mornings, dropping lower in rural areas and valleys. Mostly moderate easterly winds of an average speed of 20 km/h are expected, with gusts of 30 km/h at times. Low rainfall totals, mostly average wind speeds, warm days and warm feels-like temperatures will sustain average evapo-transpiration rates in crops ranging between 6.0 to 12.0 millimeters per day. Moisture levels: Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be low, with average daytime relative humidity values in the upper-40s to upper-70s, in terms of percentage.

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