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## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the first dekad (01<sup>st</sup> – 10<sup>th</sup>) of April 2018

### Definitions used in the forecast and bulletin:

<b>Term</b>	<b>Meaning</b>	
<b>Dekad</b>	10 day rainfall measuring period	
<b>Rain Day</b>	A day with 1.0 mm or more of rainfall amount	
<b>Wet Day</b>	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	
<b>Normal Rainfall</b>	Between 75% and 125 % of the average	
<b>Below Normal Rainfall</b>	Rainfall below 75% of the average	
<b>Above Normal Rainfall</b>	Rainfall in excess of 125 % of the average	
<b>Much below Normal Rainfall</b>	Rainfall below 50% of the average	
<b>Much above Normal Rainfall</b>	Rainfall above 150% of the average	
<b>Scanty Rainfall</b>	Less than 1 mm	
<b>Moderate Rainfall</b>	1-10 mm	
<b>Heavy Rainfall</b>	10-50 mm	
<b>Very heavy Rainfall</b>	Greater than 50 mm	
<b>Probability of 1-30 %</b>	Low Chance	
<b>Probability of 30-70 %</b>	Moderate Chance	
<b>Probability greater than 70%</b>	High Chance	
<b>Term</b>	<b>Amount of Rain</b>	<b>Type of day</b>
<b>Scanty Rainfall</b>	Less than 1 mm	Relatively dry day
<b>Moderate Rainfall</b>	1-10 mm	Relatively wet day
<b>Heavy Rainfall</b>	10-50 mm	Wet day
<b>Very heavy Rainfall</b>	Greater than 50 mm	Excessively wet day

### Weather Assessment for the third dekad of March (21<sup>st</sup> -31<sup>st</sup>) 2018

Hot and dry conditions dominated the last dekad of March across Trinidad and Tobago, accompanied by moderate to strong winds and low relative humidity values most of the times. At Piarco in Trinidad and Crown Point in Tobago, measurable rainfall occurred sporadically on a few days to total close to 15.0mm in both islands. At the same time, maximum temperatures remained above 31.0 °C in Trinidad and above 30.0 °C in Tobago on most days. These temperatures along with strong winds resulted in high pan evaporation rates, which tend to result in high water loss from crops.

The hot temperatures and limited rainfall meant top soil in crop root- zone areas would have been relatively hot and when taken together with the windy conditions and low humidity values, there would

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have been significant increase in the water needs of crops, especially in grown crops. These conditions also meant that top soil moisture content, ponds and rain-harvesting container water levels would have decreased over the period. Heat and water stress would have affected young and newly planted seedlings and crops in critical stages of development, in the absence of sufficient watering. With the type of heat observed during the period, farmers should see an increase in dropping of leaves and flowers, all of which can negatively affect crop yields.

### **Expected Weather for the First Dekad (01<sup>st</sup> – 10<sup>th</sup>) of April 2018 and Likely Impact on Agriculture.**

After a particularly dry start to the dekad, scanty to moderate rainfall is expected on the sixth (6<sup>th</sup>) which should provide brief relief from the dry conditions. However, despite this, dry conditions are set to dominate the rest of the period before some brief rainfall return on the tenth (10<sup>th</sup>). There is a moderate chance (70 %) for the ten-day rainfall totals to remain below 15.0 mm and range between 2.0 mm and 12.0 mm, with the largest amounts expected in parts of eastern of Trinidad and northeastern Tobago. Farmers can expect maximum temperatures to remain near 32.0 °C on most days in Trinidad and peak near 32.7 °C, while in Tobago it will remain around 30.0 °C, peaking near 30.5 °C.

Relative humidity (RH) percentage values during daylight hours are forecasted to be low to moderate (50s to 60s) on most days. At the same time, wind speeds will remain moderate to strong (6 to 11 meters per second) at 2.0 meters from the surface.

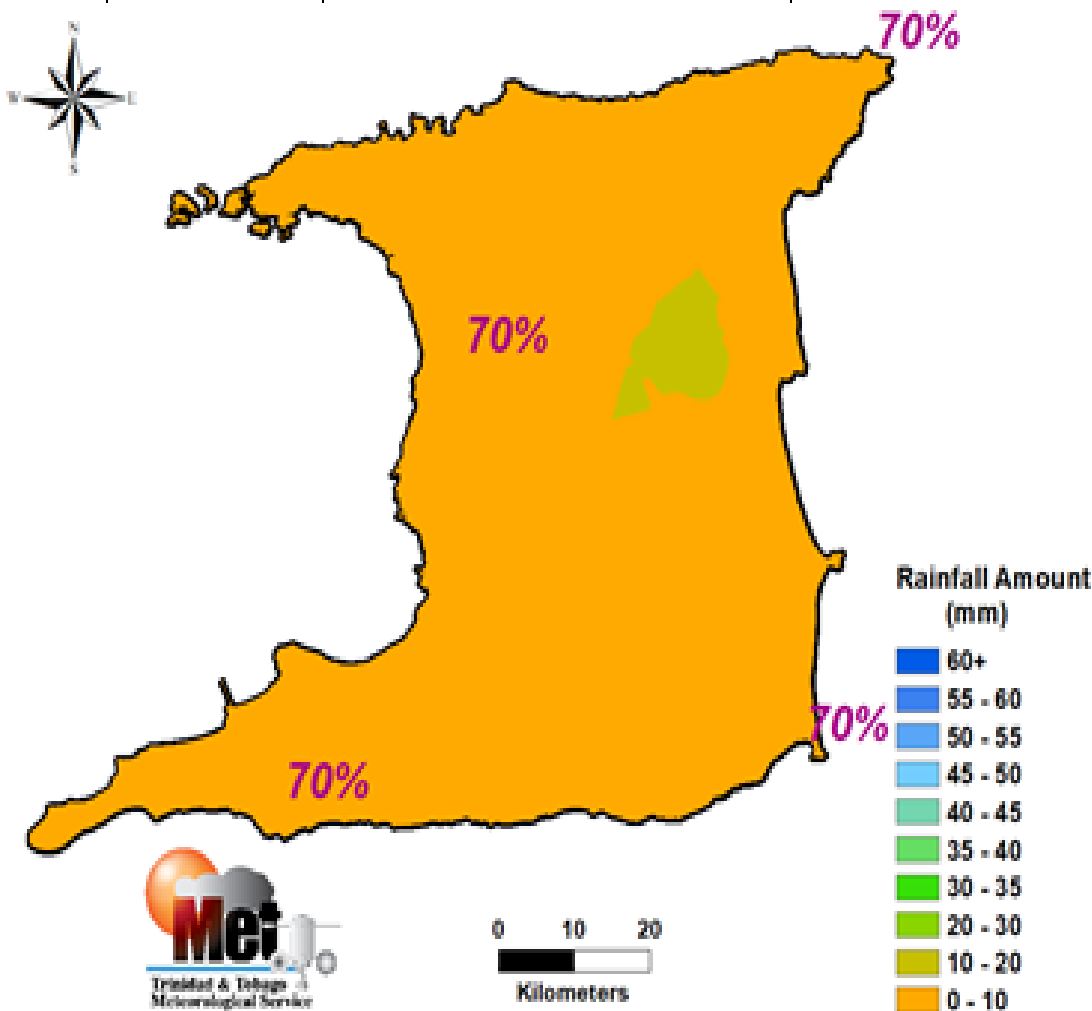
Based on the anticipated conditions, farmers should expect an increase in water and heat stress in crops on during the period and should put in place water management practices like placing dry grass or other practical material over crop root areas (mulching) after wetting or rain events, to retain the top soil moisture longer and to keep crops cooler. Farmers should also try to harvest rainwater when it rains. The expected conditions will favour certain crop pest and disease like the sweet potato weevil that thrive in dry conditions, while high temperatures following rain events are also likely to aid some pests and diseases.

### **Preliminary Rainfall and Temperature Outlook for Second Ten Days of April 2018**

All indications suggest that the second ten days should see an improvement, especially at the start of dekad with beneficial rainfall likely on the 11<sup>th</sup> and 12<sup>th</sup>. At the same time, maximum temperatures are expected to continue being hotter than usual.

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### Trinidad Rainfall Forecast for the First Dekad of April (01<sup>st</sup> – 10<sup>th</sup>) 2018

Figure 1 . Rainfall Map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the first ten days of April 2018 and percentage probability of occurrence.

#### Eastern and North-Eastern areas

Moderate chance (70 %) of mean daily rainfall up to 1.2 mm.

#### South-Eastern areas

Moderate chance (70 %) of mean daily rainfall up to 1.0 mm.

#### Southern areas

Moderate chance (70 %) of mean daily rainfall up to 1.0 mm.

#### South-Western areas

Moderate chance (70%) of mean daily rainfall up to 0.8 mm.

#### Northern, North-Western areas

Moderate chance (70 %) of mean daily rainfall up to 0.8 mm.

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

Moderate chance (70 %) of mean daily rainfall up to 0.8 mm.

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### Tobago Rainfall Forecast for the First Dekad of April (01<sup>st</sup> – 10<sup>th</sup>) 2018

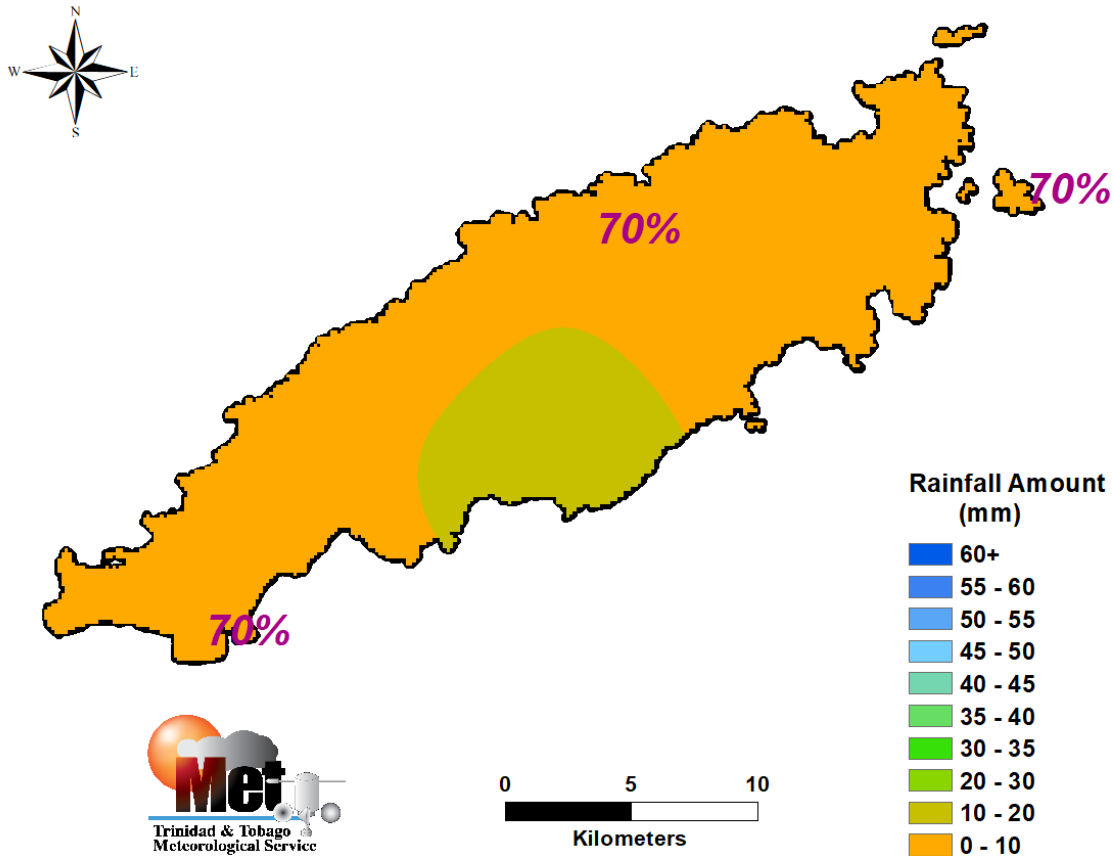


Figure 2. Rainfall Map of Tobago showing expected mean rainfall totals for districts across Tobago during the first ten days April 2018 and percentage probability of occurrence.

**North-Eastern areas**

Moderate chance (70 %) of mean daily rainfall up to 1.2 mm.

**South-Western areas**

Moderate chance (70 %) of mean daily rainfall up to 0.8 mm.

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## Temperatures

### **Trinidad Temperature Forecast for the first dekad of April (01<sup>st</sup> – 10<sup>th</sup>) 2018**

High chance (85 % chance) for daily maximum temperatures to exceed 31.5°C and peak near 32.7°C.

High chance (80%) for minimum nighttime temperatures between 23.0°C and 25.5°C.

### **Tobago Temperature Forecast for the first dekad of April (01<sup>st</sup> – 10<sup>th</sup>) 2018**

High chance (75 % chance) for daily maximum temperatures to exceed 30.0°C and peak near 30.5°C.

High chance (80 % chance) for minimum nighttime temperatures between 23.5 °C and 26.0 °C.

#### **Summary:**

Even though days six and ten are expected to produce beneficial scanty to moderate rainfall, farmers should still expect dry and hot weather to dominate the rest of the dekad. Ten-day rainfall totals are favoured to range between 2.0 mm and 12.0 mm with most of this occurring on days six and ten. Temperatures are expected to remain relatively hot with maximum temperatures likely to peak at 32.7<sup>o</sup> C in Trinidad and 30.5<sup>o</sup> C in Tobago. Farmers should aim to keep crops cool by retaining moisture in crop root areas for longer periods after rainfall and wetting, through covering crops root areas with grass (mulching).

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