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## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the first dekad (1<sup>st</sup> -10<sup>th</sup>) of April 2015

### 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>) 2015

Temperatures increased during the third dekad of March as dry weather continued its dominance into the first seven days of the third dekad with only days eight and nine producing significant rainfall in Trinidad. In Tobago, temperatures decreased slightly as there was significant rainfall on the second, sixth, seventh and eighth days of the third dekad. Overall, the ten-day rainfall total was a moderate 10.3 mm at Piarcos

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and a heavy 26.2 mm at Crown Point and this would have been similar in other districts across the country. The rainfall, no doubt, would have been an improvement for water harvesting on some days in the farming community, particularly in Tobago.

Compared to the previous dekad, the average maximum and minimum temperatures increased by 0.3°C in Trinidad and decreased by 0.4 °C in Tobago, while maximum temperatures peaked at only 33.9 °C at Piarco and 31.4 °C at Crown Point. With moderate to heavy rain falling during the period, the conditions would have improved for agriculture during the third dekad. These conditions would have been adequate for normal plant daily water requirement especially in Tobago. However, for Trinidad it remained a cause for concern especially for the health of young and newly transplanted seedlings and crops, as well as, young livestock during the early part of the dekad. In the absence of sufficient irrigation and water, these conditions would have increased heat and water stress potentials but more so in Trinidad. To reduce these impacts, farmers would have needed to use heat and water stress management practices to protect crops, especially for crops such as lettuce, patchoi, cabbage, tomatoes and rice, as well as, particularly young livestock. However, the rainfall on days eight and nine would have provided some opportunities for water harvesting in in Trinidad.

### **Expected Weather for the First Dekad (1<sup>st</sup> -10<sup>th</sup>) of April, 2015 and Likely Impact on Agriculture**

The forecast for the first ten days of April shows strong possibilities for weather that will be unfavourable for agriculture. Dry and hot weather conditions are favoured for most of the dekad with the exception of days two, three and four which are the most likely days when scanty to moderate or even heavy rainfall could occur. There is a 75% chance for the ten-day rainfall totals to remain below 15.0 mm and range between 3.0 mm and 10.0 mm across varying districts of the country with Tobago and Western Trinidad likely to receive the highest rainfall amounts. Average daily rainfall is expected to be near 1.0 mm in Trinidad and Tobago but on day three rainfall totals could reach 8.0 mm.

Throughout the dekad, temperatures are forecasted to range between 29.0 °C and 32.0 °C during daylight hours in both islands while maximum temperatures in Trinidad are likely to peak near 33.0 °C and near 31.5 °C in Tobago. Average relative humidity values are expected range between the high fifties (50's) to low sixties (60's) percentage in both island during daylight hours, with lower values around midday and higher values during rainfall occurrence. Wind speeds are expected to continue being moderate to high (3 - 6 meters per second) at 2.0 meters from the surface. Although episodes of scanty to moderate rainfall are expected to occur in pockets, these will not benefit agriculture significantly except on day three.

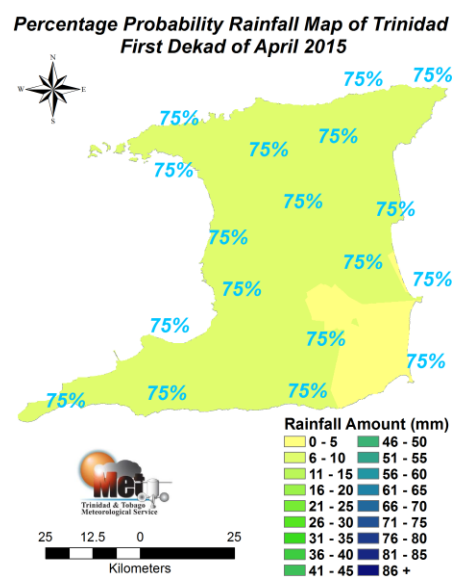
The anticipated conditions will require water management practices such as mulching after rain events to prolong the top soil moisture gained from rainfall episodes, since the dry and hot conditions will quickly

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## Preliminary Rainfall and Temperature Outlook for Second Ten Days of April 2015

## Trinidad Rainfall Forecast for the First Dekad of April (1<sup>st</sup> -10<sup>th</sup>) 2015



### Eastern and North-Eastern areas

### **South-Eastern areas**

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### **Southern areas**

Moderate chance (75 %) of mean daily rainfall up to 1.0 mm.

### **South-Western areas**

Moderate chance (75%) of mean daily rainfall up to 1.0 mm.

### **Northern, North-Western areas**

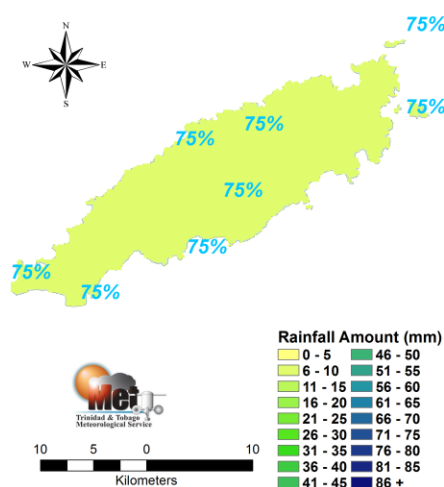
Moderate chance (75 %) of mean daily rainfall up to 1.0 mm.

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

Moderate chance (75 %) of mean daily rainfall up to 1.0 mm.

## **Tobago Rainfall Forecast for the First Dekad of April (1<sup>st</sup> -10<sup>th</sup>) 2015**

**Percentage Probability Rainfall Map of Tobago  
First Dekad of April 2015**



**Figure 2. Rainfall Map of Tobago showing expected mean rainfall totals for districts across Tobago during the third ten days March 2015 and percentage probability of occurrence.**

### **North-Eastern areas**

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Moderate chance (75 %) of mean daily rainfall up to 1.0 mm.

### **South-Western areas**

Moderate chance (75 %) of mean daily rainfall up to 0.5 mm.

## **Temperatures**

### **Trinidad Temperature Forecast for the first dekad of April (1<sup>st</sup> – 10<sup>th</sup>) 2015**

High chance (75 % chance) for above normal mean daily temperatures (warmer than 27.2 °C).

High chance (75 % chance) for the daily maximum temperature to exceed 33.0 °C.

Low chance (25 % chance) for the minimum night-time temperature to remain above 23.5 °C.

### **Tobago Temperature Forecast for the first dekad of April (1<sup>st</sup> -10<sup>th</sup>) 2015**

High chance (80 % chance) for above normal mean daily temperatures (warmer than 26.7 °C).

High chance (75 % chance) for the daily maximum temperatures to exceed 31.8 °C.

Low chance (30 % chance) of the minimum night-time temperatures remaining above 24.5 °C.

## **Summary**

The first ten days of April are expected to be mostly dry with scanty to moderate rainfall expected on days two, three and four. Ten-day rainfall totals are not expected to exceed 15.0 mm but there is a 75 % chance for it to range between 3.0 mm and 10.0 mm across varying agriculture districts. Temperatures are expected to remain warmer than average with average daytime temperatures ranging between 29.0 °C and 32.0 °C in both islands. Maximum temperatures are forecasted to peak near 33.0 °C in Trinidad and 31.5 °C in Tobago. Farmers are encouraged to harvest rainwater from rainfall when it occurs and use mulching to reduce moisture loss from crop root-zone areas.

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