# Weather Forecast and Bulletin for Farmers and Livestock Producers of Trinidad and Tobago for the 15-day period 

 ( $16^{\text {th }}$ to the $31^{\text {st }}$ ) of July 2024.| Date | Weather |  |  | Temperature | Heat Real Feel | Day <br> Moisture <br> (Relative <br> Humidity) | Wind |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $16^{\text {th }}$ | $80 \%$ chance of showers | Up to 25 mm of rainfall is possible | Variably cloudy, showers with thunderstorms | Warm <br> Max/Min <br> Temperatures ${ }^{\circ} \mathrm{C}$ <br> 31.5/24.0 | Feels like $33^{\circ} \mathrm{C}$ | 80-90\% | Moderate <br> Southeasterly <br> $18-27 \mathrm{~km} / \mathrm{h}$ <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| 17 ${ }^{\text {th }}$ | $80 \%$ chance of showers | Up to 25 mm of rainfall is possible | Cloudy, showers with thunderstorms | Warm O Max $/$ Min Temperatures ${ }^{\circ} \mathrm{C}$ $30.5 / 24.0$ | Feels like $35^{\circ} \mathrm{C}$ | 70-80\% | Gentle <br> Southeasterly <br> 18 km/h <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $18^{\text {th }}$ |  | $\begin{gathered} 10-25 \mathrm{~mm} \text { of } \\ \text { rainfall is } \\ \text { possible } \end{gathered}$ | Partly cloudy to cloudy with showers, thunderstorms |  | Feels like $35^{\circ} \mathrm{C}$ | 70-80\% | $\begin{gathered} r_{r} \\ \text { Gentle } \\ \text { Southeasterly } \\ 18 \mathrm{~km} / \mathrm{h} \\ \text { Gust } 40 \mathrm{~km} / \mathrm{h} \end{gathered}$ |
| $19^{\text {th }}$ |  | $\begin{aligned} & 10-25 \mathrm{~mm} \text { of } \\ & \text { rainfall is } \\ & \text { possible } \end{aligned}$ | Partly cloudy to cloudy with showers, thunderstorms |  | Feels like $35^{\circ} \mathrm{C}$ | 62-80\% | Moderate <br> Southeasterly <br> $18-27 \mathrm{~km} / \mathrm{h}$ <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $20^{\text {th }}$ |  | $\begin{aligned} & 5-10 \mathrm{~mm} \text { of } \\ & \text { rainfall is } \\ & \text { possible } \end{aligned}$ | Partly cloudy with showers. |  | Feels like $37^{\circ} \mathrm{C}$ | 67-76\% | Moderate <br> Easterly |


|  | 40\% chance of showers |  |  | Max/Min Temperatures ${ }^{\circ} \mathrm{C}$ $31.5 / 24.0$ |  |  | $27-37 \mathrm{~km} / \mathrm{h}$ <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $21^{\text {st }}$ |  | $\begin{aligned} & 5-10 \mathrm{~mm} \text { of } \\ & \text { rainfall is } \\ & \text { possible } \end{aligned}$ | Partly cloudy with showers. | Very Warm <br> Max/Min Temperatures ${ }^{\circ} \mathrm{C}$ 32.5/25.0 | Feels like $39^{\circ} \mathrm{C}$ | 67-78\% | Moderate <br> Easterly <br> $27-37 \mathrm{~km} / \mathrm{h}$ <br> Gust 40 km/h |
| $22^{\text {nd }}$ |  | Up to 5 mm of rainfall is possible | Partly cloudy with showers |  | Feels like $40^{\circ} \mathrm{C}$ | 63-75\% | Moderate SouthEasterly $27-37 \text { km/h }$ <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $23^{\text {rd }}$ | $\begin{aligned} & 60 \% \text { chance } \\ & \text { of showers } \end{aligned}$ | Up to 20 mm of rainfall is possible | Variably cloudy with showers, thunderstorms | Warm Max/Min Temperatures ${ }^{\circ} \mathrm{C}$ $31.0 / 25.0$ | Feels like $38^{\circ} \mathrm{C}$ | 79-88\% | Moderate <br> East-northeasterly $18-27 \mathrm{~km} / \mathrm{h}$ <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $24^{\text {th }}$ | 60\% chance of showers | Up to 20 mm of rainfall is possible | Variably cloudy with showers, thunderstorms |  | Feels like $38^{\circ} \mathrm{C}$ | 71-82\% | Moderate <br> East-southeasterly $18-27 \mathrm{~km} / \mathrm{h}$ <br> Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $25^{\text {th }}$ |  | $\begin{aligned} & 5-10 \mathrm{~mm} \text { of } \\ & \text { rainfall is } \\ & \text { possible } \end{aligned}$ | Partly cloudy to cloudy with showers |  | Feels like $38^{\circ} \mathrm{C}$ | 65-80\% | $r_{r}$ <br> Moderate Southeasterly $18-27 \mathrm{~km} / \mathrm{h}$ Gust $40 \mathrm{~km} / \mathrm{h}$ |


| $26^{\text {th }}$ |  | $\begin{gathered} 5-10 \mathrm{~mm} \text { of } \\ \text { rainfall is } \\ \text { possible } \end{gathered}$ | Partly cloudy to cloudy with showers |  | Feels like $36^{\circ} \mathrm{C}$ | 70-80\% | Moderate <br> Easterly $18-27 \mathrm{~km} / \mathrm{h}$ Gust $27 \mathrm{~km} / \mathrm{h}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $27^{\text {th }}$ | $60 \%$ chance of showers | Up to 10 mm of rainfall is possible | Partly cloudy to cloudy with showers, thunderstorms | Warm <br> Max/Min <br> Temperatures ${ }^{\circ} \mathrm{C}$ 30.0/24.0 | Feels like $35^{\circ} \mathrm{C}$ | 70-80\% | Moderate <br> East-northeasterly $18-27 \mathrm{~km} / \mathrm{h}$ <br> Gust 40 km/h |
| $28^{\text {th }}$ |  | Up to 10 mm of rainfall is possible | Partly cloudy to cloudy with showers, thunderstorms |  | Feels like $35^{\circ} \mathrm{C}$ | 70-80\% | Moderate Southeasterly $18-27 \mathrm{~km} / \mathrm{h}$ Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $29^{\text {th }}$ | $40 \%$ chance of showers | $\begin{gathered} \text { Less than } 10 \\ \mathrm{~mm} \text { of rainfall is } \\ \text { possible } \end{gathered}$ | Partly cloudy with showers |  | Feels like $38^{\circ} \mathrm{C}$ | 65-75\% | Moderate <br> Easterly $18-27 \mathrm{~km} / \mathrm{h}$ <br> Gust 40 km/h |
| $30^{\text {th }}$ | $40 \%$ chance of showers | $\begin{gathered} \text { Less than } 10 \\ \mathrm{~mm} \text { of rainfall is } \\ \text { possible } \end{gathered}$ | Partly cloudy with showers |  | Feels like $38^{\circ} \mathrm{C}$ | 65-75\% | Moderate Southeasterly $18-27 \mathrm{~km} / \mathrm{h}$ Gust $40 \mathrm{~km} / \mathrm{h}$ |
| $31^{\text {st }}$ |  | $\begin{aligned} & \text { Less than } 10 \\ & \mathrm{~mm} \text { of rainfall is } \\ & \text { possible } \end{aligned}$ | Partly cloudy with showers |  | Feels like $38^{\circ} \mathrm{C}$ | 65-75\% | Moderate Southeasterly $18-27 \mathrm{~km} / \mathrm{h}$ Gust $40 \mathrm{~km} / \mathrm{h}$ |

Trinidad Rainfall Forecast for the 15-Day period of July $\left(16^{\text {th }}-\mathbf{3 1}^{\text {st }}\right) 2024$.


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period ( $\left.16^{\text {th }}-31^{\text {st }}\right)$ July 2024 and percentage probability of occurrence.

## Eastern, and North-Eastern areas:

Moderate chance ( $70 \%$ ) of mean daily rainfall up to 8.0 mm .

## South-Eastern areas:

Moderate chance ( $70 \%$ ) of mean daily rainfall up to 8.0 mm .

## Southern areas

Moderate chance (70\%) of mean daily rainfall up to 8.0 mm .

## South-Western areas

Moderate chance ( $70 \%$ ) of mean daily rainfall up to 8.0 mm .

## Central, West-Central, and inland areas

Moderate chance (60\%) of mean daily rainfall up to 5.3 mm .

## Northern, North-Western areas

Moderate chance ( $60 \%$ ) of mean daily rainfall up to 6.6 mm .

Tobago Rainfall Forecast for the 15-Day period of July (16 $\left.{ }^{\text {th }}-\mathbf{3 1}^{\text {st }}\right) 2024$.


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period ( $16^{\text {th }}-31^{\text {st }}$ ) July 2024 and percentage probability of occurrence.

## North-Eastern areas

Moderate chance ( $70 \%$ ) of mean daily rainfall up to 7.0 mm .

## South-Western areas

Moderate chance ( $70 \%$ ) of mean daily rainfall up to 7.0 mm .

## North-Central areas

Moderate chance (70\%) of mean daily rainfall up to 5.0 mm .
Sun and Moon Positions in the Sky July (16 $\left.{ }^{\text {th }}-\mathbf{3 1}^{\text {st }}\right) 2024$.
The sun is presently at 21.2 degrees North latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago on July $16^{\text {th }}$ will be 12 hours, 40 minutes and 45 seconds decreasing to 12 hours, 35 minutes, 7 seconds on July $31^{\text {st }}$.

Full Moon occurs July $21^{\text {st }}$ and Third Quarter on July $27^{\text {th }}$. According to the tradition of moon's phases: July $19^{\text {th }}-20^{\text {th }}$ are good days for planting aboveground crops; July $23^{\text {rd }}-24^{\text {th }}, 27^{\text {th }}-$ $28^{\text {th }}$ and $31^{\text {st }}$ are good days for planting belowground crops; The remaining days are poor planting days and are useful for removing weeds, clearing land and ploughing fields.

## Summary of Expected Weather:

## Moderate to heavy rainfall amounts are expected during the fifteen days.

Wet days are expected during the second half of July: from $16^{\text {th }}-19^{\text {th }}$ with the daily rainfall totals forecast up to $25.0 \mathrm{~mm} ; 23^{\text {rd }}-24^{\text {th }}$ with the daily rainfall totals forecast up to 20 mm ; and $27^{\text {th }}-28^{\text {th }}$ with up to 10 mm forecast daily. Relatively wet days of less than 10.0 mm of rainfall are expected for the remainder of the period.

## Trinidad and Tobago:

Wet days are expected during the second half of July: from $16^{\text {th }}-19^{\text {th }}$ with the daily rainfall totals forecast up to $25.0 \mathrm{~mm} ; 23^{\text {rd }}-24^{\text {th }}$ with the daily rainfall totals forecast up to 20 mm ; and $27^{\text {th }}-28^{\text {th }}$ with up to 10 mm forecast daily. Relatively wet days of less than 10.0 mm of rainfall are expected for the remainder of the period.

In Trinidad, the 15-day rainfall totals range between 80.0 mm and 120.0 mm across different farmlands favouring the southern, eastern and north-eastern areas of Trinidad: Sangre Grande, Fishing Pond; Plum Mitan, Nariva and Manzanilla and south-eastern areas of Mayaro, Guayaguayare, Moruga, Barrackpore and Penal. In Tobago, 15-day rainfall totals range between 75.0 mm and 105.0 mm favouring northern eastern and southwestern Tobago.

## Temperatures \& Winds:

Very warm, humid conditions are expected. Daily Maximum temperatures range between 30.0 ${ }^{\circ} \mathrm{C}$ to $33.0^{\circ} \mathrm{C}$ throughout the period. However, temperatures are expected to have a real-feel or feels-like between $36.0^{\circ} \mathrm{C}$ to $42.0^{\circ} \mathrm{C}$ on most days. The minimum temperatures will range between $23.0^{\circ} \mathrm{C}$ to $25.0^{\circ} \mathrm{C}$ during most nights/early mornings.

In general, mostly moderate easterly to southeasterly winds with wind speed of $18-27 \mathrm{~km} / \mathrm{h}$ are expected. Moderate to heavy rainfall totals, mostly moderate wind speeds, very warm days, and warm feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 5.0 to 15.0 mm per day.

## Moisture levels:

Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be moderate to high with average daytime relative humidity values in the mid-60s to upper 80s, in terms of percentage.

## Highlighted Possible Impacts on Agriculture:

Warm, wet conditions are expected for the first half of July: partly to mostly cloudy with very warm, humid conditions interrupted by showers with heavy and/or thundery outbreaks. The anticipated rainfall, moist and warm conditions are expected to increase soil moisture leading to saturation in places across Trinidad and Tobago. Land slippage is possible however especially during the wettest period. Scheduling of irrigation days on fields to maintain optimal soil moisture may be less necessary on some days. There is a moderate ( $40 \%$ ) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is a moderate probability ( $40-60 \%$ ) that strong winds and heavy showers may cause physical damage to young plants and flowering mature plants in exposed areas. There is also a low probability ( $30 \%$ ) chance for fungi spread, insect pests and warm/moist weather diseases to develop in crop beds.

Weather Assessment for the period July $1^{\text {st }}$ to $\mathbf{1 5}^{\text {th }} 2024$.
Extremely heavy rainfall occurred during the first half of July mainly due to the passage of Hurricane Beryl. Periods of rain and heavy showers from July $1^{\text {st }}$ to $15^{\text {th }}$ resulted in above normal cumulative rainfall amounts at Crown Point, 91.5 mm and exceeded 100 mm elsewhere in Tobago, meanwhile Piarco observed 72.8 mm . The rainfall totals maps for the period $1^{\text {st }}-15^{\text {th }}$ of July for Trinidad and Tobago are located below as figure 1 and figure 2.


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period $1^{\text {st }}$ to $15^{\text {th }}$ of July 2024.


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period $1^{\text {st }}$ to $15^{\text {th }}$ of July 2024.

## Temperatures:

Warm and humid conditions dominated the first half of July. In Trinidad, a maximum daytime temperature $33.6^{\circ} \mathrm{C}$ was observed during the $1^{\text {st }}$ to $15^{\text {th }}$ of July. No hot days (maximum temperatures over $34.0^{\circ} \mathrm{C}$ ) occurred however, temperatures felt hotter factoring the relative humidity. The minimum night-time temperatures ranged from $23.5^{\circ} \mathrm{C}$ to $25^{\circ} \mathrm{C}$ in Trinidad.

Similarly to Trinidad, Tobago experienced warm conditions from the $1^{\text {st }}$ to $15^{\text {th }}$ July as the maximum daytime temperature was $32.1^{\circ} \mathrm{C}$ and the minimum night-time temperature ranged from $24.3^{\circ} \mathrm{C}$ to $26.9^{\circ} \mathrm{C}$.

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 of 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 |  | $1-10 \mathrm{~mm}$ |
| Heavy Rainfall |  | $10-50 \mathrm{~mm}$ |
| 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 | $1-10 \mathrm{~mm}$ | Relatively wet day |
| Heavy Rainfall | $10-50 \mathrm{~mm}$ | Wet day |
| Very heavy Rainfall | Greater than 50 mm | Excessively wet day |

