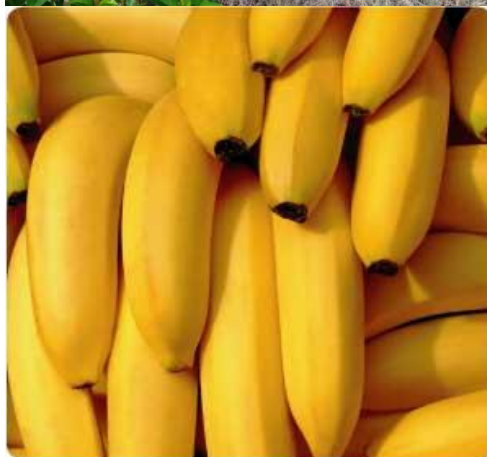


# *NATIONAL AGROMET BULLETIN*



Issued by the  
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**March 2016**



## Highlights for March 2016

- ✚ Dry conditions reported for most southern stations.**
- ✚ Above normal rainfall is forecast for most stations for May into June.**
- ✚ Above normal temperatures forecast to continue through June 2016.**

### **Weather Summary for the month of March 2016**

During the month of March the weather was dominated by High Pressure Ridges.

Sangster Airport in the northwest recorded 5.4 mm of rainfall, while Norman Manley Airport in the southeast recorded 19.3 mm of rainfall. Sangster received only 10% of its 30-year (1971-2000) mean rainfall, while Manley received 80% of its 30-year mean rainfall. There were two (2) rainfall days reported for both Sangster Airport and Manley Airport.

The highest maximum temperature recorded for Norman Manley Airport was 33.1°C (26<sup>th</sup> March) meanwhile, Sangster Airport reported 33.9°C (25<sup>th</sup> March).

## Standardized Precipitation Index (SPI)

The Standardized Precipitation Index (SPI), developed by T.B. McKee, N.J. Doesken, and J. Kleist in 1993, is based only on precipitation. One unique feature is that the SPI can be used to monitor conditions on a variety of time scales namely 1- month, 3-month, 6-month, 9-month and 12-month periods. This temporal flexibility allows the SPI to be useful in both short-term agricultural and long-term hydrological applications.

### KEY

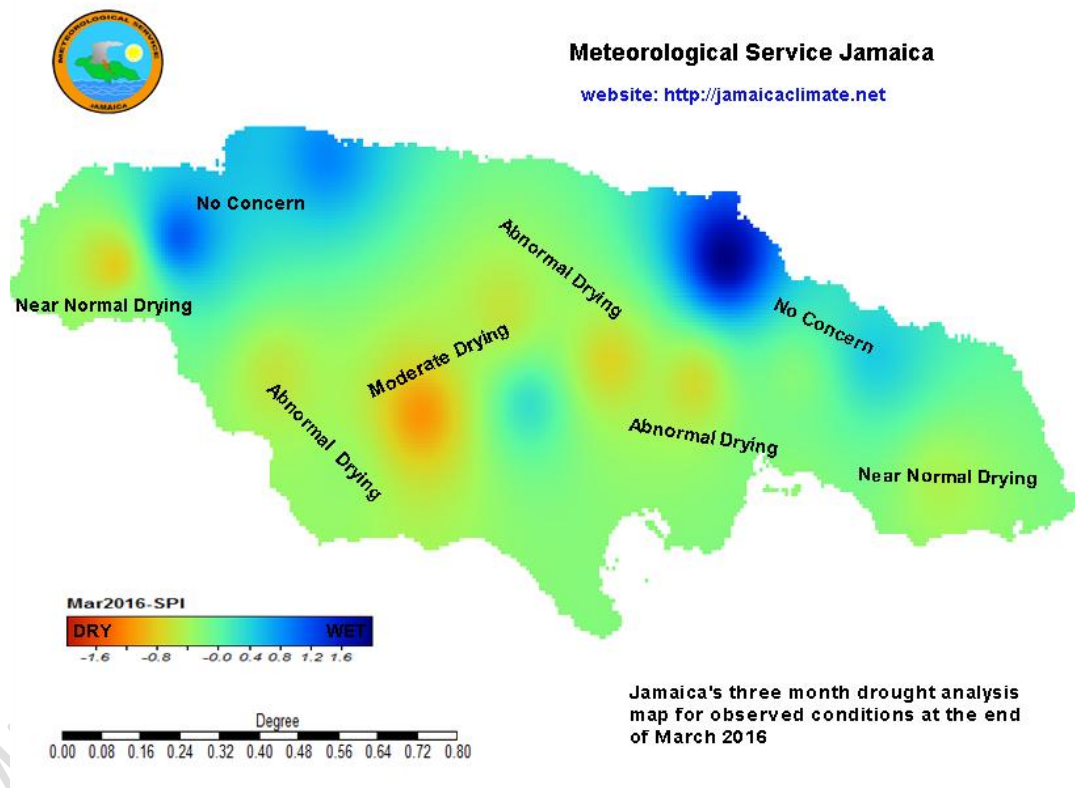
| SPI Value    | Category                        | SPI Value   | Category                         |
|--------------|---------------------------------|-------------|----------------------------------|
| -0.5 to -0.7 | Abnormally Dry<br>(30%tile)     | 0.5 to 0.7  | Abnormal Wetness<br>(70%tile)    |
| -0.8 to -1.2 | Moderate Drought<br>(20%tile)   | 0.8 to 1.2  | Moderate Wetness<br>(80%tile)    |
| -1.3 to -1.5 | Severe Drought<br>(10%tile)     | 1.3 to 1.5  | Severe Wetness<br>(90%tile)      |
| -1.6 to -1.9 | Extreme Drought<br>(5%tile)     | 1.6 to 1.9  | Extreme Wetness<br>(95%tile)     |
| -2.0 or less | Exceptional Drought<br>(2%tile) | 2.0 or more | Exceptional Wetness<br>(98%tile) |

**Table 1. Rainfall and Drought Analyses for Selected Stations**

| Parish        | Station        | March Monthly Total (mm) | Percent of 30 year Mean (%) | SPI for March |
|---------------|----------------|--------------------------|-----------------------------|---------------|
| Hanover       | Mount Peto     | 38                       | 32                          | 1.09          |
| Westmoreland  | Sav-La-Mar     | 8                        | 9                           | -0.26         |
| Westmoreland  | Frome          | 47                       | 55                          | -0.84         |
| Manchester    | Sutton         | 24                       | 23                          | -1.18         |
| St. Elizabeth | Y.S. Estates   | 65                       | 52                          | -0.61         |
| St. Elizabeth | Potsdam        | 67                       | 78                          | -0.31         |
| Clarendon     | Beckford Kraal | 11                       | 13                          | 0.25          |
| St. Catherine | Tulloch        | 8                        | 11                          | -0.70         |
| St. Catherine | Worthy Park    | 11                       | 18                          | -0.78         |
| Trelawny      | Orange Valley  | 14                       | 31                          | 0.87          |
| St. James     | Sangster       | 5                        | 10                          | 0.54          |
| St. Ann       | Cave Valley    | 17                       | 24                          | -0.62         |
| St. Mary      | Hampstead      | 156                      | 174                         | 1.99          |
| Portland      | Shirley Castle | 428                      | 144                         | 0.44          |
| St. Thomas    | Serge Island   | 13                       | 17                          | -0.47         |
| KSA           | Langley        | 62                       | 51                          | -0.23         |
| KSA           | Manley Airport | 19                       | 80                          | -0.27         |

### **Standardized Precipitation Index Discussion**

One station, Hampstead in St. Mary reported exceptional wetness, while Mount Peto in Hanover and Orange Valley in Trelawny reported moderate wetness at the end of March. Abnormal wetness was reported for Sangster in St. James. In contrast Suttons in Manchester, Frome in Westmoreland and Worthy Park in St. Catherine reported moderate drought conditions, which was the worst level of drought reported for this month. Four other stations reported abnormally dry conditions. The month of March represents the end of the dry season. Jamaica received below normal rainfall activity for the month, and this is reflected in the dry conditions over most of the island except for over the northeast and the northwest as shown in the figure 1 (see below).



**Fig.1 Station drought condition for March 2016**



### **Precipitation Outlook – March to May 2016**

Through the period April to June the models continue to indicate an increase in the forecast rainfall amounts across most areas. As we approach the first rainfall season (April-June), the expected increase in rainfall activities is likely to ease most of the current dry patches affecting sections of southern parishes.

The forecast is for the rains to start very late April into early May, and therefore the timeliness of these rains should ease the water stress currently affecting key agricultural areas. Due to the variability in the start date for the rains, we would advise that monitoring activities be continued to reduce any possible impacts that could result should there be any delays in the start of the rains.

METEOROLOGICAL SERVICE, JAMAICA

**Table 2. Climate Predictability Tool (CPT) Outlook AMJ 2016.**

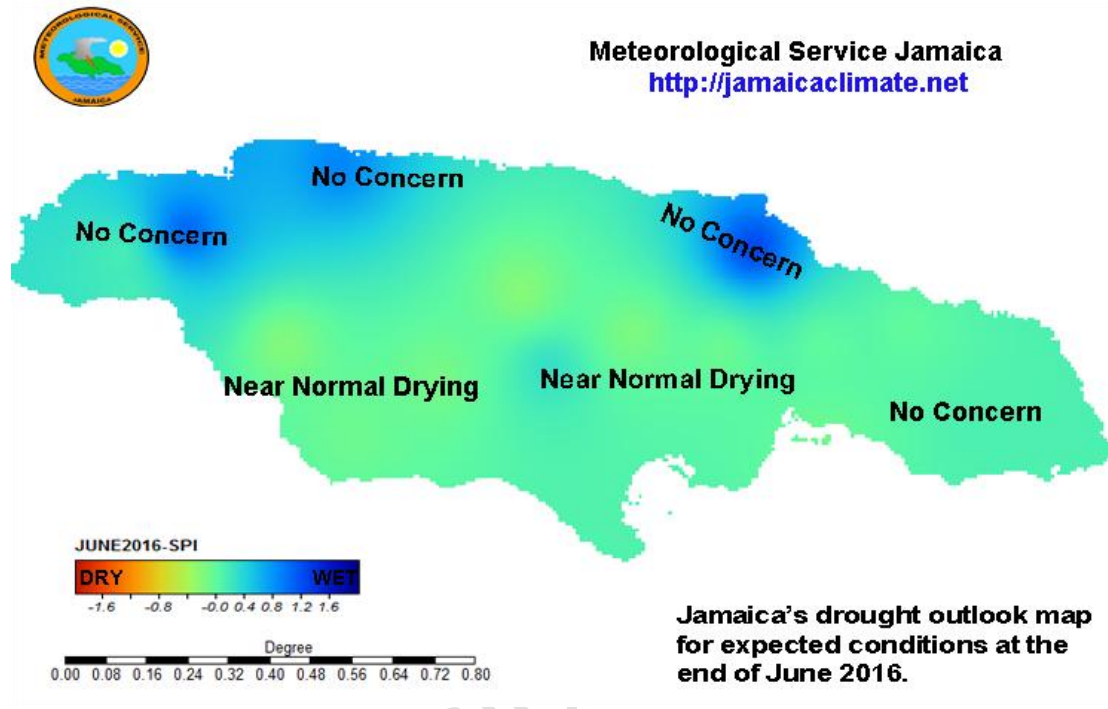
| Stations                       | Below (B) % | Normal (N) % | Above (A)% |
|--------------------------------|-------------|--------------|------------|
| Manley (Kingston)              | 25          | 30           | 45         |
| Sangster (St. James)           | 25          | 30           | 45         |
| Sav. (Westmoreland)            | 25          | 30           | 45         |
| Beckford (Clarendon)           | 25          | 30           | 45         |
| Serge Island (St. Thomas)      | 25          | 30           | 45         |
| Cave Valley (St. Ann)          | 25          | 30           | 45         |
| Tulloch Estate (St. Catherine) | 25          | 30           | 45         |
| Y.S. Estate (St. Elizabeth)    | 25          | 30           | 45         |
| Hampstead (St. Mary)           | 25          | 30           | 45         |
| Orange Valley (Trelawny)       | 25          | 35           | 40         |
| Langley (Kingston)             | 25          | 35           | 40         |
| Mount Peto (Hanover)           | 25          | 35           | 40         |
| Shirley Castle (Portland)      | 30          | 30           | 40         |
| Suttons (Manchester)           | 25          | 30           | 45         |
| Potsdam (St. Elizabeth)        | 25          | 30           | 45         |
| Frome (Westmoreland)           | 25          | 30           | 45         |
| Worthy Park (St. Catherine)    | 25          | 30           | 45         |
| <b>Jamaica</b>                 | <b>25</b>   | <b>30</b>    | <b>45</b>  |

**Key**

- A: Above normal rainfall means greater than 66 percentile of the rank data  
 N: Near normal rainfall means between 33 and 66 percentile of the rank data  
 B: Below normal rainfall means below 33 percentile of the rank data



## Drought Forecast – June 2016



**Fig.2 Expected drought conditions by end of June 2016**

## Temperature Forecast – April to June 2016

| Location                           | Below (B)<br>% | Normal (N)<br>% | Above (A) % |
|------------------------------------|----------------|-----------------|-------------|
| <b>Jamaica Temperature Outlook</b> | 10             | 15              | <b>75</b>   |



## **Summary and Expected Agricultural Impacts**

As Jamaica approaches the start of the first rainfall season, the precipitation forecast through June shows above normal levels for most stations with some western and northeastern parishes likely to benefit the most.

With the El Nino phenomenon showing signs of weakening (and forecast to weaken further), an increase in rainfall for Jamaica during the first rainfall season (April-June) should benefit those areas still experiencing drying or drought conditions.

With the island receiving below normal rainfall for the greater portion of last year, which resulted in a deficit in rainfall and which has carried over into early 2016 for some sections of the island the forecasted increase in rainfall will be a welcome relief especially to recharge our depleted water systems, as well as, agricultural areas which depend heavily on rainfall for day to day activities.

Therefore until the early season rains begin constant drought monitoring needs to be continued to ensure that our critical and sensitive sectors such as agriculture which depends heavily on rainfall can continue alleviation activities.