NATIONAL AGROMET BULLETIN

Issued by the

Climate Branch

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Highlights for May 2016

- **Wet conditions reported for some central stations.**
- **Near normal rainfall is forecast for most stations for June into July.**
- **Above normal temperatures forecast to continue through August 2016.**

Weather Summary for the month of May 2016

During the month of May weather conditions were dominated by Troughs resulting in above normal rainfall for the island.

During the month, Sangster in the northwest recorded 107.6 mm of rainfall, while Norman Manley in the southeast recorded 65.1 mm of rainfall. Both stations recorded rainfall amounts close to their 30-year means. There were eleven (11) rainfall days reported for Sangster Airport while Manley Airport reported six (6) rainfall days.

The highest maximum temperature recorded for Norman Manley Airport was 33.4°C (16th May) while Sangster Airport reported 35.0 °C (18th May) which exceeded the 20-year (1992-2011) mean temperature of 33.5˚C.

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 (30%tile)		**0.5 to 0.7**	Abnormal Wetness (70%tile)
-0.8 to -1.2	Moderate Drought (20%tile)		**0.8 to 1.2**	Moderate Wetness (80%tile)
-1.3 to -1.5	Severe Drought (10%tile)		**1.3 to 1.5**	Severe Wetness (90%tile)
-1.6 to -1.9	Extreme Drought (5%tile)		**1.6 to 1.9**	Extreme Wetness (95%tile)
-2.0 or less	Exceptional Drought (2%tile)		**2.0 or more**	Exceptional Wetness (98%tile)

Table 1. Rainfall and Drought Analyses for Selected Stations

Parish	Station	May Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for May
Hanover	Mount Peto	539	134	0.32
Westmoreland	Sav-La-Mar	324	135	0.36
Westmoreland	Frome	316	110	-0.03
Manchester	Sutton	362	146	1.78
St. Elizabeth	Y.S. Estates	286	87	0.54
St. Elizabeth	Potsdam	83	47	-0.14
Clarendon	Beckford Kraal	178	76	0.22
St. Catherine	Tulloch	152	76	-0.96
St. Catherine	Worthy Park	158	85	0.33
Trelawny	Orange Valley	116	129	-0.12
St. James	Sangster	101	95	-0.82
St. Ann	Cave Valley	268	139	0.93
St. Mary	Hampstead	186	129	0.65
Portland	Shirley Castle	286	93	0.59
St. Thomas	Serge Island	195	86	0.45
KSA	Langley	426	165	0.15
KSA	Manley Airport	80	120	0.00

Standardized Precipitation Index Discussion

One station, Sutton in Manchester reported extreme wetness, while Cave Valley in St. Ann reported moderate wetness, while abnormal wetness was reported for another four (4) stations at the end of May. In contrast Tulloch in St. Catherine and Sangster in St. James were the only two (2) stations to report (moderate) drought conditions. The month of May represents the peak of the first wet season. Jamaica received above normal rainfall activity for the month, and this is reflected in the wet or near wet conditions over a large number of areas with the most significant contribution being from central parishes, while, below normal activity was seen over the extreme northwest and the southeast. This rainfall activity resulted in many areas being above drought conditions based on the cumulative effect of activity recorded from March to May as shown in the figure 1 (see below).

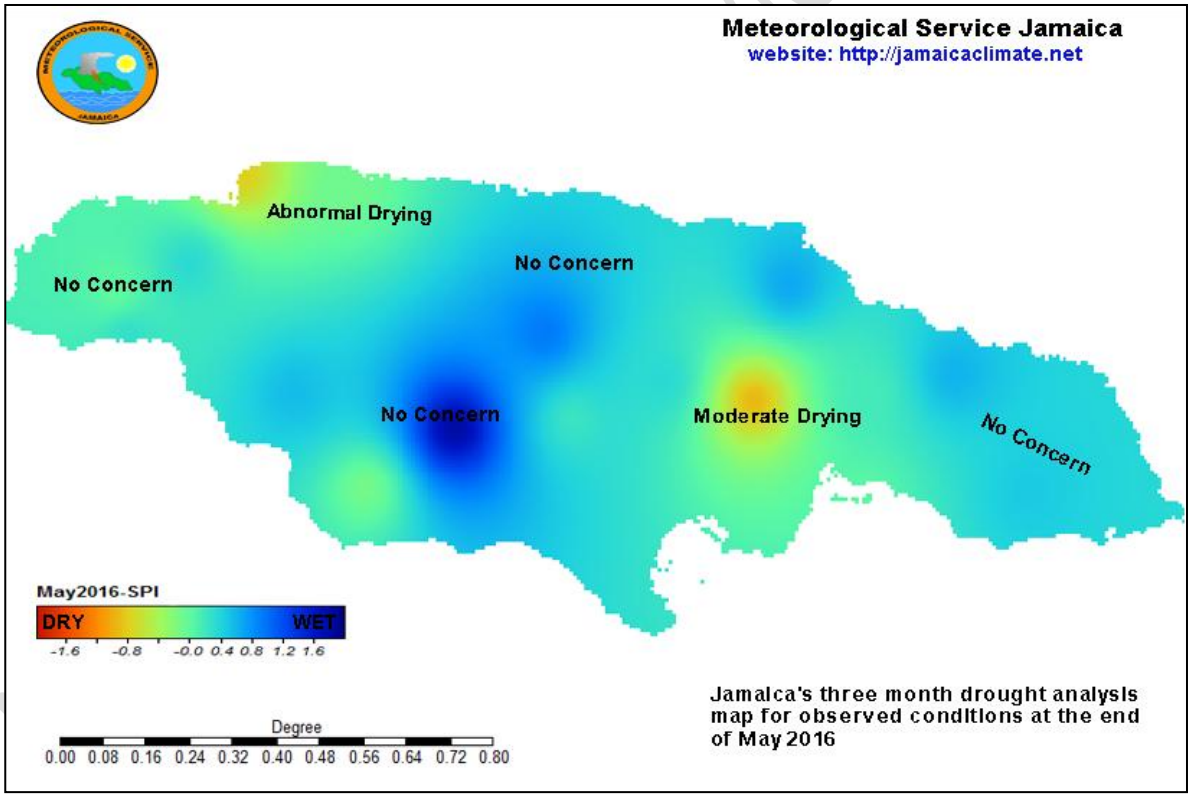

Fig.1 Station drought condition to May 2016

Precipitation Outlook – June to August 2016

Through the period June to August the models are indicating near to above normal rainfall amounts across most areas. As we progress through the first three months of the hurricane season, rainfall activities seem likely to be near to above normal with ten (10) of seventeen stations likely to receive above normal rainfall.

The forecast for June and July remains for near normal rainfall, however as we approach the month of August the models indicate an increase in rainfall amounts. Although we are predicting a slight decline in rainfall activity especially for July, this should not significantly impact key agricultural areas, especially over southern parishes.

However, we will continue to monitor the model outputs in order to advise our farming communities should the situation change and warrant action on their part.

Table 2. Climate Predictability Tool (CPT) Outlook JJA 2016.

Stations	Below (B) %	Normal (N) %	Above (A)%
Manley (Kingston)	25	35	40
Sangster (St. James)	25	35	40
Sav. (Westmoreland)	50	30	20
Beckford (Clarendon)	20	30	50
Serge Island (St. Thomas)	25	35	40
Cave Valley (St. Ann)	20	30	50
Tulloch Estate (St. Catherine)	20	35	45
Y.S. Estate (St. Elizabeth)	25	35	40
Hampstead (St. Mary)	50	30	20
Orange Valley (Trelawny)	45	30	25
Langley (Kingston)	25	35	40
Mount Peto (Hanover)	45	30	25
Shirley Castle (Portland)	50	30	20
Suttons (Manchester)	20	30	50
Potsdam (St. Elizabeth)	40	35	25
Frome (Westmoreland)	20	35	45
Worthy Park (St. Catherine)	40	35	25

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

Table 3 - Temperature and rainfall forecast for June to August 2016

Location	Below (B) %	Normal (N) %	Above (A) %
Jamaica Rainfall Outlook	25	35	40
Jamaica Temperature Outlook	15	25	60

Drought Forecast – August 2016

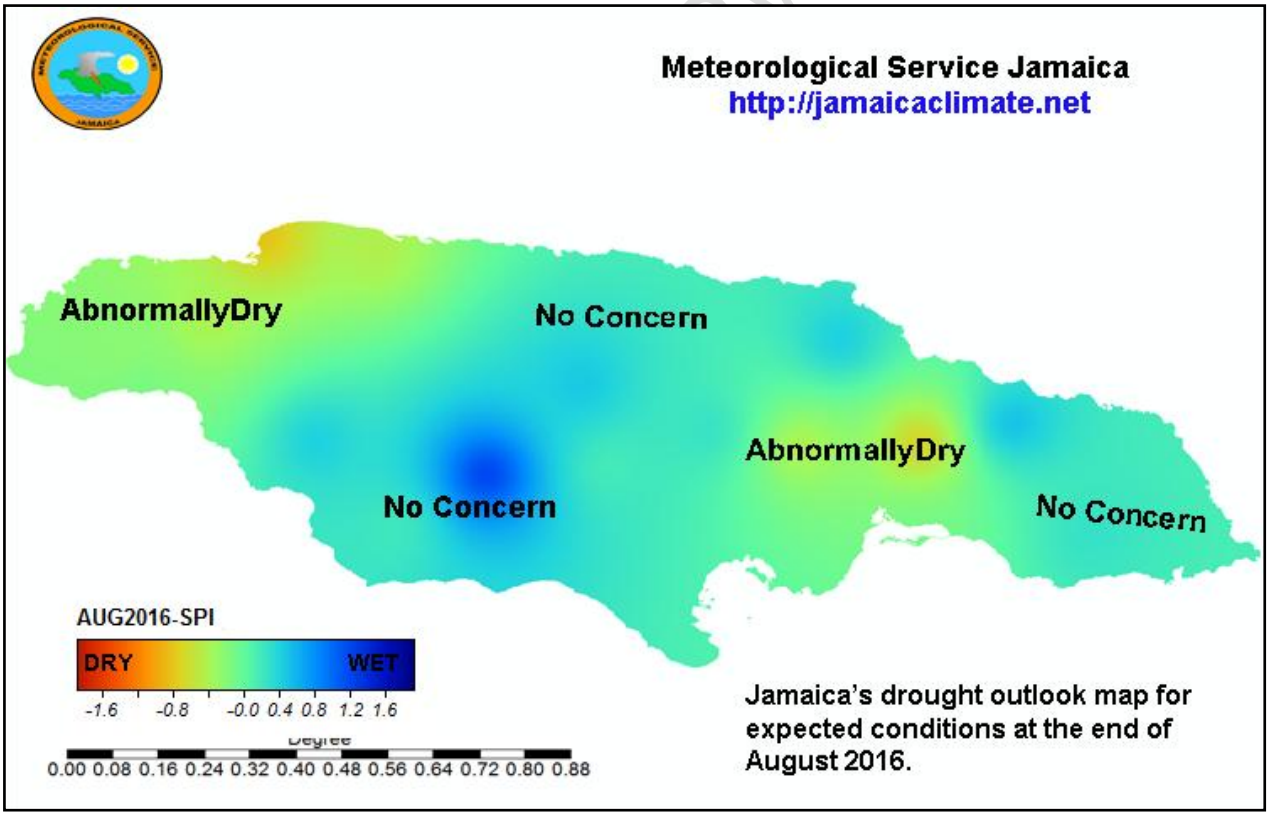

Fig.2 Expected drought conditions by the end of August 2016

Summary and Expected Agricultural Impacts

As Jamaica progresses through the early months of the hurricane season, the precipitation forecast through July (the next dry period) shows near normal levels of rainfall for most stations. The above normal rainfall received in April and May should have been a welcome relief from the drying/drought conditions and provided much needed recharge of our depleted water systems.

With the island receiving above normal rainfall during the first rainfall season and despite the forecast for a decline in rainfall activity for the next two (2) months, it is anticipated that this decline should not impact negatively on the critical and sensitive sectors such as agriculture.