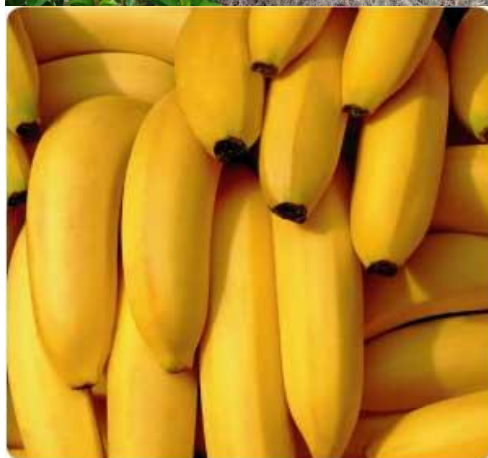


NATIONAL AGROMET BULLETIN



Issued by

Climate Branch

Meteorological Service, Jamaica

65 ¾ Half Way Tree Road

Kingston 10

Telephone: 929-3700/3706

Email: datarequest@metservice.gov.jm

April 2014



Highlights for April 2014

- ✚ **Medium chance of above normal secondary rainfall season.**
- ✚ **Drought observations show severe drought conditions for Portland.**
- ✚ **El Nino conditions likely to develop in summer.**

Weather Summary for month of April 2014

Surface troughs coupled with a few frontal systems were the dominant weather features across the island during the month of April. Most of the rainfall occurred mainly over western parishes with eastern parishes recording below average. Rainfall data from Sangster International Airport (Sangster) in the northwest indicates above average rainfall while Norman Manley International Airport (Norman Manley) in the southeast recorded below average.

During the month, Sangster recorded 81.0 mm of rainfall, while Norman Manley recorded 19.2 mm. There were four rainfall days reported for Sangster while only two rainfall days was reported for Norman Manley. Sangster recorded 30% above the 1971-2000 mean while Norman Manley recorded 60% of its mean for the month of April.

The highest maximum temperature recorded for Sangster Airport was 33.5°C (7th April) while 33.8°C was reported for Norman Manley Airport on the 10th April. It was noted that the 20-year mean extreme maximum temperature was exceeded at both airports.



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 to -0.4	Normal drought	0 to 0.4	Normal Wetness
-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 Analysis for Selected Stations

Parish	Station	April Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for April
Hanover	Mount Peto	360	185	1.1
Westmoreland	Sav-la-mar	165	138	0.7
Manchester	Sutton	161	92	0.8
St. Elizabeth	Y.S Estates	288	138	1.1
St. Elizabeth	Potsdam	91	78	0.4
Clarendon	Beckford Kraal	40	33	-0.3
St. Catherine	Tulloch	85	75	-0.6
Trelawny	Orange Valley	39	58	-0.7
St. James	Sangster	81	131	0.3
St. Ann	Cave Valley	155	145	0.2
St. Mary	Hampstead	124	78	-0.5
Portland	Shirley Castle	151	45	-1.4
St. Thomas	Serge Island	34	39	-0.4
KSA	Langley	151	100	-0.8
KSA	Manley airport	19	64	0.1

Standardized Precipitation Index Discussion

Of the fifteen reporting stations, seven (7) were showing various levels of drought. Of these stations Shirley Castle in Portland is the worst affected with severe drought conditions while Langleigh in St. Andrew is reporting moderate drought conditions.

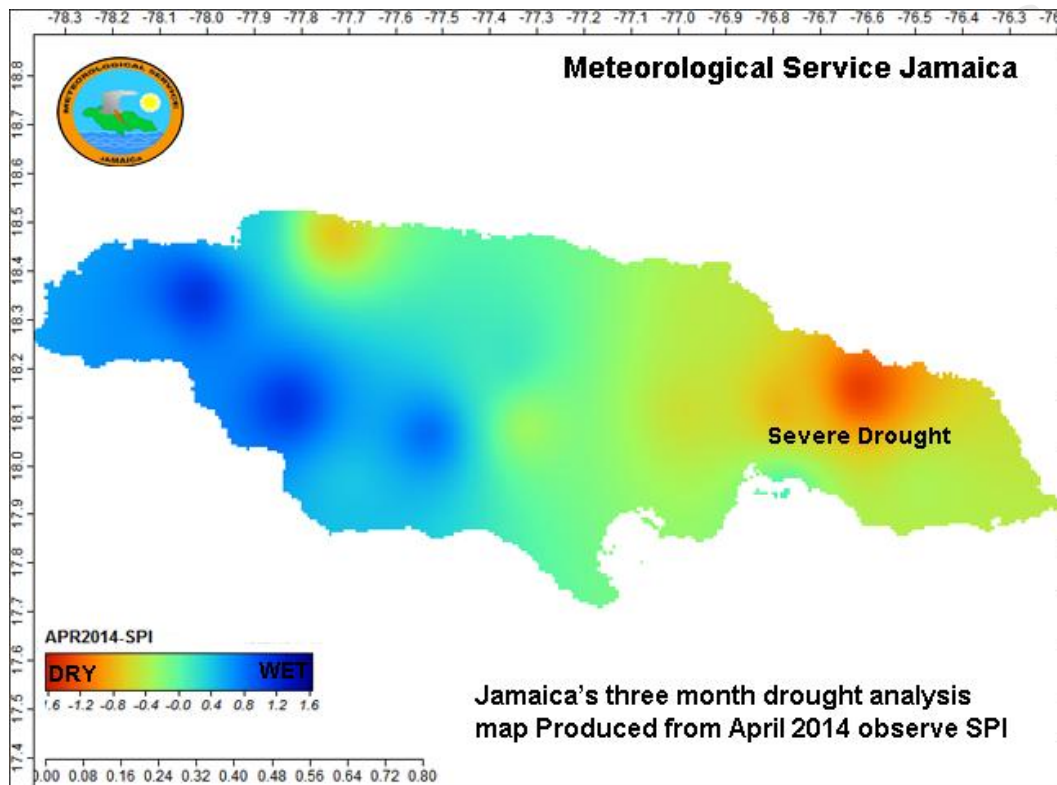


Fig.1 Station observed drought conditions for April 2014

Precipitation Forecast – May to July 2014

The Global Dynamic Models are forecasting near normal to above normal rainfall across most of the northern Caribbean, while below normal rainfall is forecasted across the eastern Caribbean. However, the CPT rainfall forecast for May to July indicates a medium chance of above normal rainfall for all stations examined during the period for Jamaica.

A persistent surface warm pool area over the Bahamas as well as a positive North Atlantic Oscillation will continue to be the main drivers across the western Caribbean as well as the



Bahamas during the period. The models continue to forecast that an El Niño will develop this summer. This could affect mid-summer drought as well as late rainfall season across Jamaica.

Table 2. Climate Predictability Tool (CPT) Outlook MJJ 2014.

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	23	34	43
Sangster Airport	26	33	41
Sav-la-mar.	26	33	42
Beckford Kraal	24	32	44
Serge Island	25	33	42
Cave Valley	24	34	42
Tulloch Estate	24	33	44
Y.S. Estate	27	33	40
Hampstead	25	31	44
Orange Valley	27	33	40
Langley	25	34	40
Mount Peto	28	33	39
Shirley Castle	25	33	42
Sutton	26	31	42
Potsdam	23	33	44
Jamaica	25	32	43

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 – May 2014

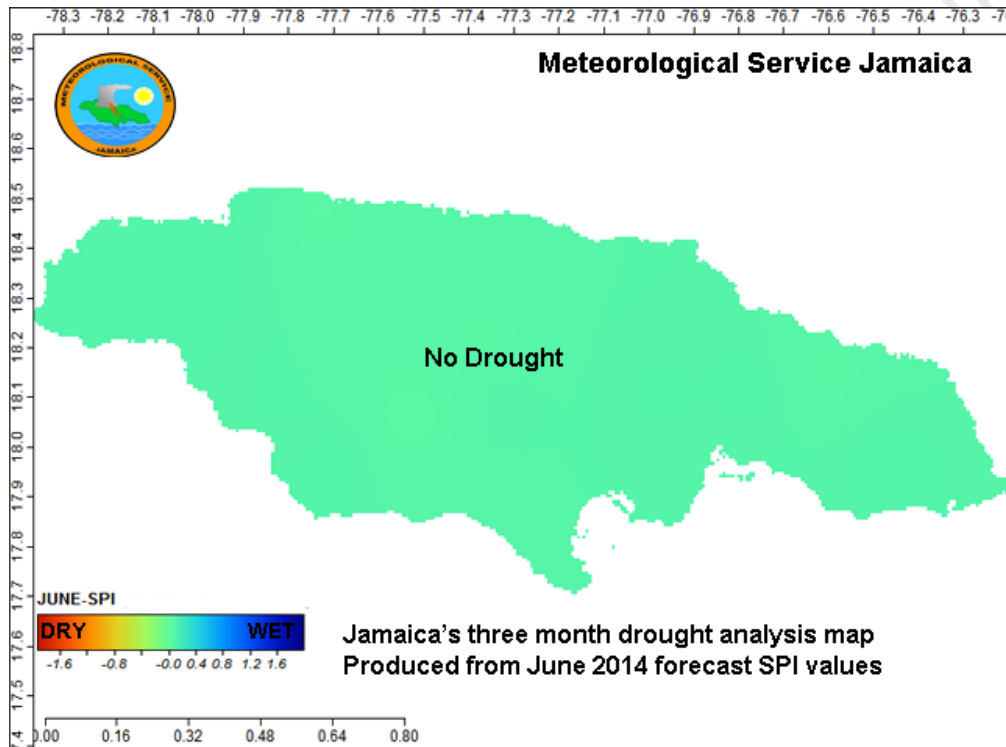


Fig.2 Station forecast drought conditions for June 2014

Summary and Expected Agricultural Impacts

Medium confidence is maintained in the CPT precipitation outlook for May through July for above normal rainfall for all stations. Realization of this forecast is extremely important to break the current drought over sections of eastern parishes especially in Portland and Kingston as evident in figure 1.