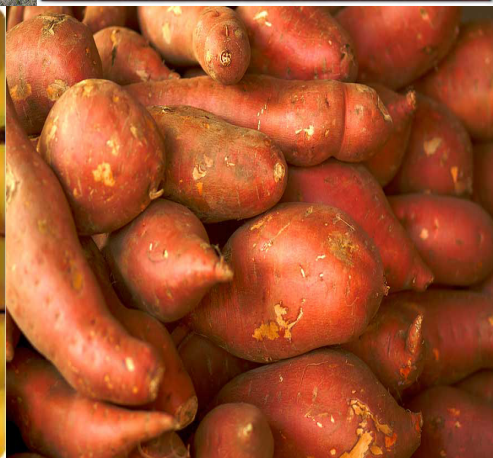


NATIONAL AGROMET BULLETIN



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Climate Branch

Meteorological Service, Jamaica

65 ¾ Half Way Tree Road

Kingston 10

Telephone: 929-3700/3706

Email: datarequest@metservice.gov.jm

March 2014



Highlights for March 2014

- ✚ **Medium chance of above normal secondary rainfall season.**
- ✚ **Drought observations show mainly normal drought conditions for most stations.**
- ✚ **Drought forecast shows near normal conditions for May 2014.**

Weather Summary for month of March 2014

Surface troughs coupled with a few occasional frontal systems were the dominant weather features across the island during the month of March. During the month, most of the rainfall was confined mainly over northern parishes. Therefore Sangster International Airport (Sangster) in the northwest recorded above average rainfall while Norman Manley International Airport (Norman Manley) in the southeast recorded near average rainfall.

During the month, Sangster recorded 87.2 mm of rainfall, while Norman Manley recorded 24.7 mm. There were three rainfall days reported for Sangster while four rainfall days were reported for Norman Manley during the month. Sangster recorded 64% above the 1971-2000 mean while Norman Manley recorded near its mean for the month of March. The highest maximum temperature recorded for Sangster Airport was 32.7°C (23rd March) while 31.9°C (15th March) was reported for Norman Manley Airport.



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	March Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for March
Hanover	Mount Peto	67	58	0.47
Westmoreland	Sav-la-mar	54	65	0.21
Manchester	Sutton	148	143	1.50
St. Elizabeth	Y.S Estates	137	110	0.64
St. Elizabeth	Potsdam	117	138	1.35
Clarendon	Beckford Kraal	85	99	0.53
St. Catherine	Tulloch	33	47	0.06
Trelawny	Orange Valley	24	53	0.43
St. James	Sangster	87	164	0.26
St. Ann	Cave Valley	0	0	0.18
St. Mary	Hampstead	59	66	-0.45
Portland	Shirley Castle	147	50	-1.21
St. Thomas	Serge Island	50	68	0.30
KSA	Langley	97	79	-0.51
KSA	Manley airport	25	103	0.14

Standardized Precipitation Index Discussion

Of the fifteen reporting stations three (3) were showing various levels of drought however Shirley Castle in Portland is reporting moderate drought conditions which is the worst of the three stations.

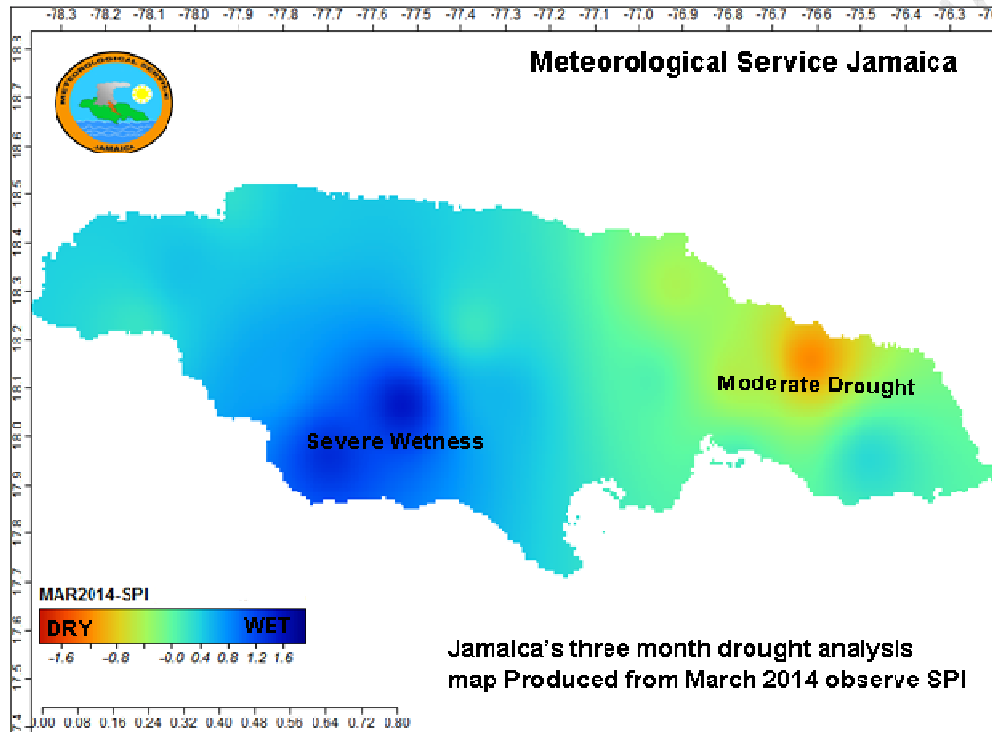


Fig.1 Station observed drought conditions for March 2014

Precipitation Forecast – April to June 2014

The Global Dynamic Models are forecasting near normal to below normal rainfall across most of the Caribbean with warmer than normal sea temperatures as well as above normal rainfall over most of the Bahamas Islands. However, the CPT rainfall forecast for April to June indicates a medium chance of getting an above normal rainfall season, this was observed for all stations examined during the period.



A surface warm pool area over the Bahamas as well as the North Atlantic Oscillation, that is forecasted to remain in its positive phase are some of the signals that favours an above normal forecast. However, with a pending El Niño expected to form this summer, Jamaica's late rainfall season could be significantly affected with rainfall amount forecasted to be well below normal.

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

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	24	33	43
Sangster Airport	24	31	45
Sav-la-mar.	22	32	46
Beckford Kraal	24	31	45
Serge Island	24	32	44
Cave Valley	27	33	40
Tulloch Estate	23	32	45
Y.S. Estate	26	30	44
Hampstead	27	30	43
Orange Valley	28	32	40
Langley	23	33	44
Mount Peto	22	32	46
Shirley Castle	26	31	43
Sutton	29	31	40
Potsdam	23	31	46
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

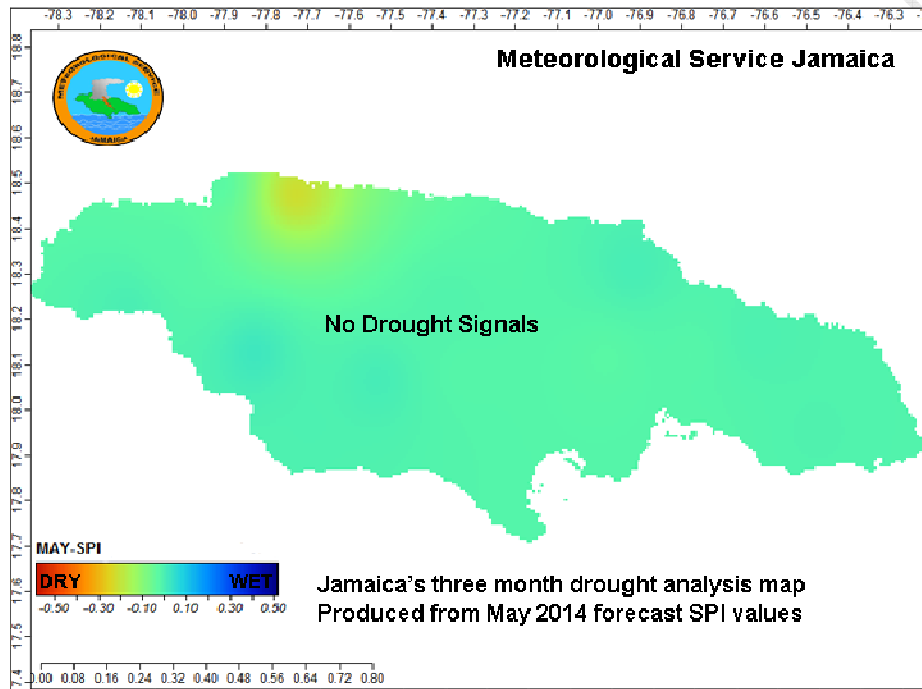
Drought Forecast – May 2014

Fig.2 Station forecast drought conditions for May 2014

Summary and Expected Agricultural Impacts

Although the Statistical model (Climate Predictability Tool) is in disagreement with the Dynamic models there is medium confidence in the CPT precipitation outlook for April through June for above normal rainfall. Realization of this forecast is extremely important to break the current drought over sections of the island and also to replenish water supplies which have been significantly depleted in certain parishes.