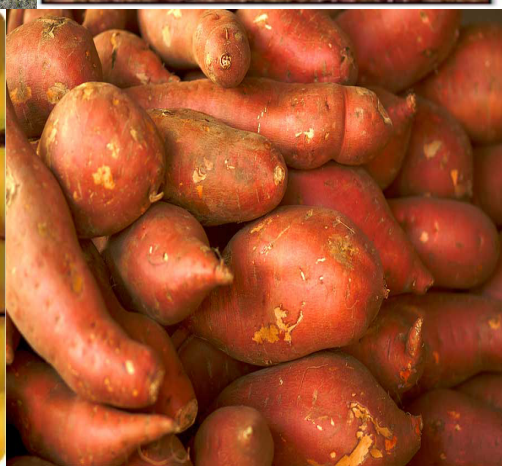
NATIONAL AGROMET BULLETIN



Issued by

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February 2014

Highlights for February 2014

- **Above normal rainfall predicted for March through May.**
- **Drought observations show mainly normal drought conditions for most stations.**
- **Drought forecast shows near normal conditions.**

Weather Summary for month of February 2014

High pressure ridges and troughs were the dominant weather features which affected the island during the month of February. Although the troughs featured more frequently than high pressure ridges there was very little rainfall associated with these systems. Both Sangster International airport (Sangster) in the northwest and Norman Manley International airport (Norman Manley) in the southeast recorded below average rainfall.

During the month, Sangster recorded 20.8 mm of rainfall, while Norman Manley recorded 15.3 mm. There were three rainfall days reported for Sangster and Norman Manley during the month. Sangster recorded approximately 34% of the 1971-2000 mean while Norman Manley recorded 72% of the 1971-2000 mean.

The highest maximum temperature recorded for Sangster Airport was 32.1°C (21st February) while 33.0 °C (09th February) 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-monrth, 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	February Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for February
Hanover	Mount Peto	143	129	0.55
Westmoreland	Sav-la-mar	103	126	0.31
Manchester	Sutton	151	238	1.91
St. Elizabeth	Y.S Estates	214	190	0.95
St. Elizabeth	Potsdam	132	227	0.82
Clarendon	Beckford Kraal	103	179	0.58
St. Catherine	Tulloch	71	82	-0.17
Trelawny	Orange Valley	15	25	0.26
St. James	Sangster	21	34	-0.13
St. Ann	Cave Valley	90	152	0.14
St. Mary	Hampstead	34	29	0.01
Portland	Shirley Castle	72	19	-0.87
St. Thomas	Serge Island	33	45	0.13
KSA	Langley	0	0	-0.29
KSA	Manley airport	15	72	0.19

Standardized Precipitation Index Discussion

Of the fifteen reporting stations three (3) were showing normal drought while Shirley Castle in Portland is reporting moderate drought conditions which indicates a worsening of the drought situation for February.

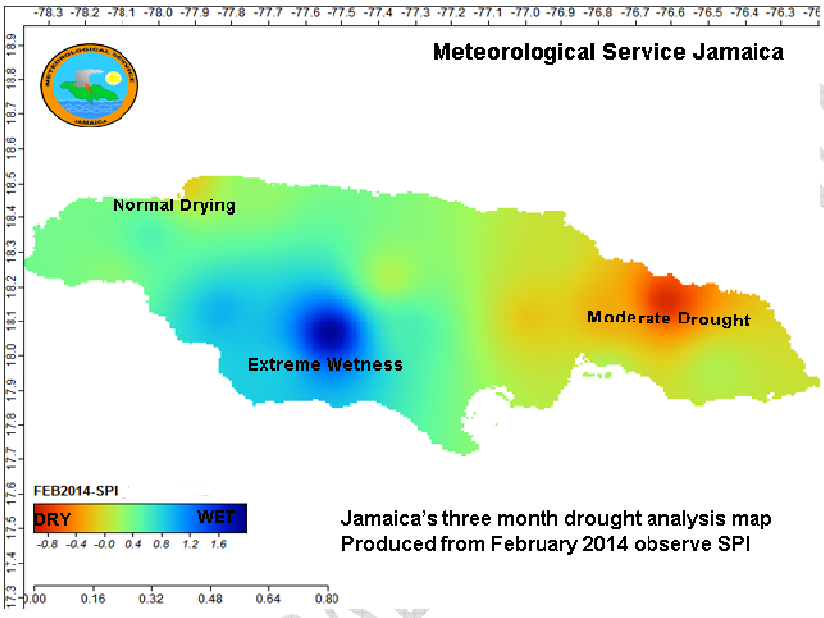

Fig.1 Station observed drought conditions for February 2014

Precipitation Forecast – March to May 2014

The Global Dynamic Models are forecasting near normal to below normal rainfall across most of the Caribbean with warmer than normal air temperatures to continue over most of the Bahamas Islands. However, the forecast from the statistical climate predictability tool (CPT) somewhat disagrees with the forecast from the dynamical computer models.

The CPT rainfall forecast for March to May indicates very high confidence levels in the forecast with above normal rainfall for all stations examined during period. This could be related to the surface warm pool over the Bahamas as well as the North Atlantic Oscillation that is forecast to remain in its positive phase and therefore an extended dry season is not likely to affect the region. Of a total of fourteen stations that were examined, all returned above normal rainfall pattern, especially those stations across the parishes of St Catherine, Clarendon and Manchester.

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

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	12	26	62
Sangster Airport	20	28	52
Sav-la-mar.	19	29	52
Beckford Kraal	14	25	61
Serge Island	18	28	54
Cave Valley	17	27	56
Tulloch Estate	13	25	62
Y.S. Estate	29	31	40
Hampstead	24	28	48
Orange Valley	27	31	42
Langley	21	30	49
Mount Peto	25	30	45
Shirley Castle	27	30	43
Sutton	22	28	50
Jamaica	**21**	**28**	**51**

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 – April 2014

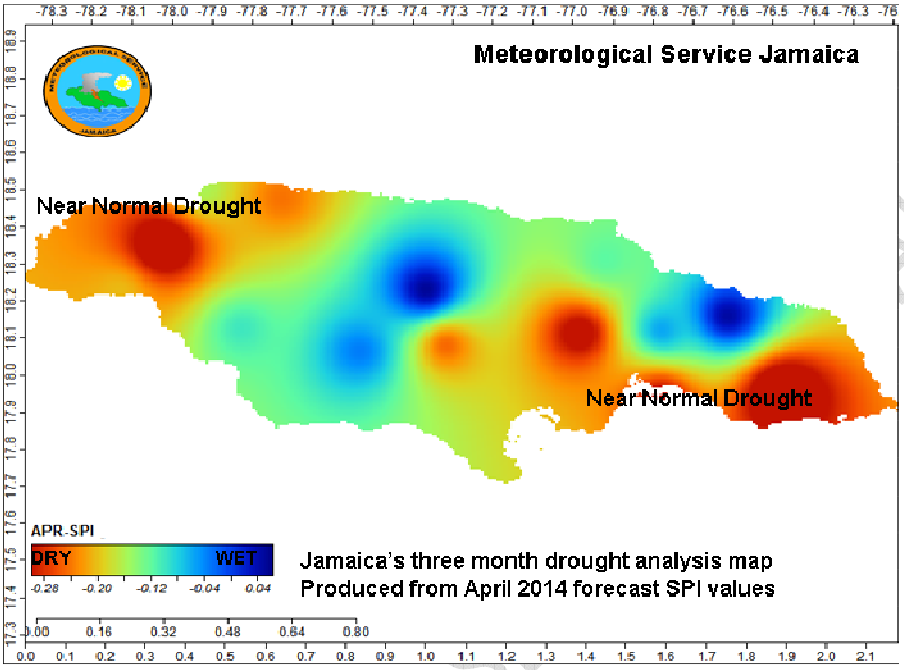

Fig.2 Station forecast drought conditions for April 2014

Summary and Expected Agricultural Impacts

Although the Statistical model (Climate Predictability Tool) is in disagreement with the Dynamic models there is high confidence in the CPT precipitation outlook for March through May with the likelihood of a break in the dry season occurring in April. This would be welcomed especially by farmers planning to plant for the early rainfall season (AMJ) and would be preparing their farms at this time.