NATIONAL AGROMET BULLETIN

Issued by

Climate Branch

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Highlights for January 2014

- **Below normal rainfall predicted for February through April.**
- **Drought observations show mainly normal drought conditions for most stations.**
- **Drought forecast shows near normal conditions.**

Weather Summary for month of January 2014

During the month of January one major rainfall event was recorded which resulted in several parishes over the northern side of the island been affected. The parishes mostly affected were Portland and St Mary in the northeast where several days of flooding were reported.
During the month, Sangster in the northwest recorded 90.0 mm of rainfall, while Norman Manley in the southeast recorded 12.1 mm. There were eight rainfall days reported for Sangster, while Norman Manley had only three measured rainfall days during the month. When compared to the 30 year mean, Sangster recorded approximately 11% above the 1971-2000 mean while Norman Manley recorded 48% of the 1971-2000 mean. Sangster Airport recorded a minimum temperature of 20.1°C (31st January), while 22.3°C (12th January) 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	January Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for January
St. Thomas	Serge Island	106	120	-0.20
KSA	Langley	179	94	-0.40
KSA	Manley airport	12	48	0.22
St. Catherine	Tulloch	80	118	-0.27
Clarendon	Beckford Kraal	66	110	-0.02
Manchester	Sutton	91	155	1.13
St. Elizabeth	Y.S Estates	30	36	1.30
Westmoreland	Sav-la-mar	48	65	0.16
Hanover	Mount Peto	111	130	0.33
St. James	Sangster	90	111	0.06
Trelawny	Orange Valley	151	190	0.44
St. Ann	Cave Valley	76	133	-0.26
St. Mary	Hampstead	54	30	-0.03
Portland	Shirley Castle	351	77	-0.57

Standardized Precipitation Index Discussion

Of the fourteen reporting stations six (6) were showing normal drought while Shirley Castle in Portland is reporting abnormally dry conditions.

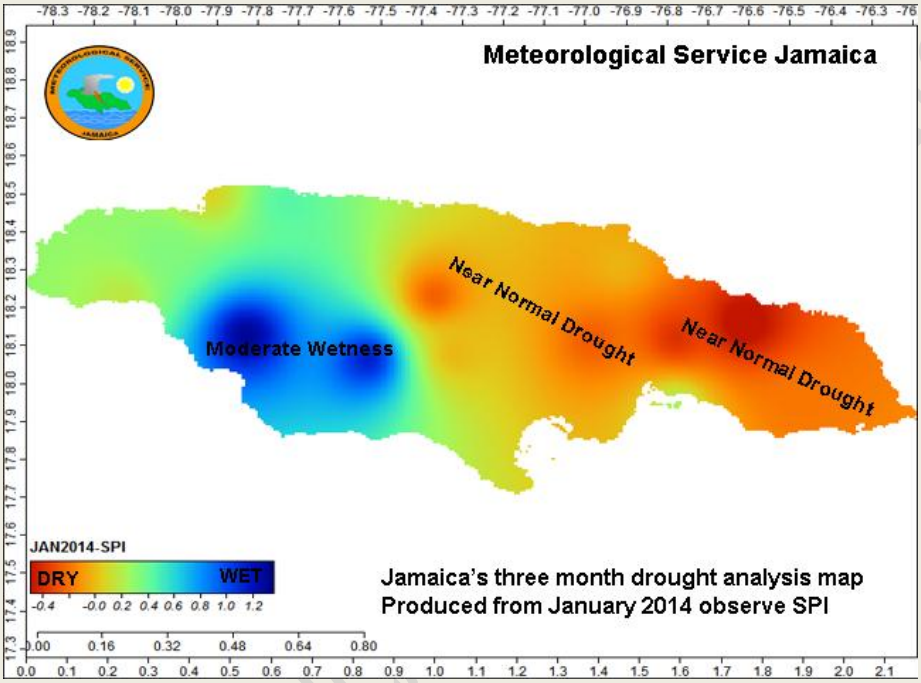

Fig.1 Station observed drought conditions for January 2014

Precipitation Forecast – February to April 2014

The Global Dynamic Models are forecasting below normal rainfall across most of the Caribbean with warmer than normal air temperatures over the Bahamas Islands. The forecast however, from the statistical climate predictability tool (CPT) agrees with the forecast from the dynamical computer models, however with less confidence in the forecast. The forecast indicates below normal rainfall for above half of the stations examined during period. Of a total of fourteen stations that were examined, seven returned a below normal rainfall pattern, six showed above and one station show near normal conditions. The overall average for Jamaica reflects a below normal rainfall pattern especially over sections of eastern and western parishes, while central parishes are indicating above normal rainfall pattern.

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

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	32	**35**	33
Sangster Airport	**40**	33	27
Sav-la-mar.	**40**	33	27
Beckford Kraal	25	30	**45**
Serge Island	**43**	25	32
Cave Valley	30	32	**38**
Tulloch Estate	31	33	**36**
Y.S. Estate	30	32	**38**
Hampstead	30	32	**38**
Orange Valley	**40**	32	28
Langley	**42**	30	28
Mount Peto	**37**	32	31
Shirley Castle	**38**	33	29
Sutton	26	29	**45**
Jamaica	**35**	**33**	**32**

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

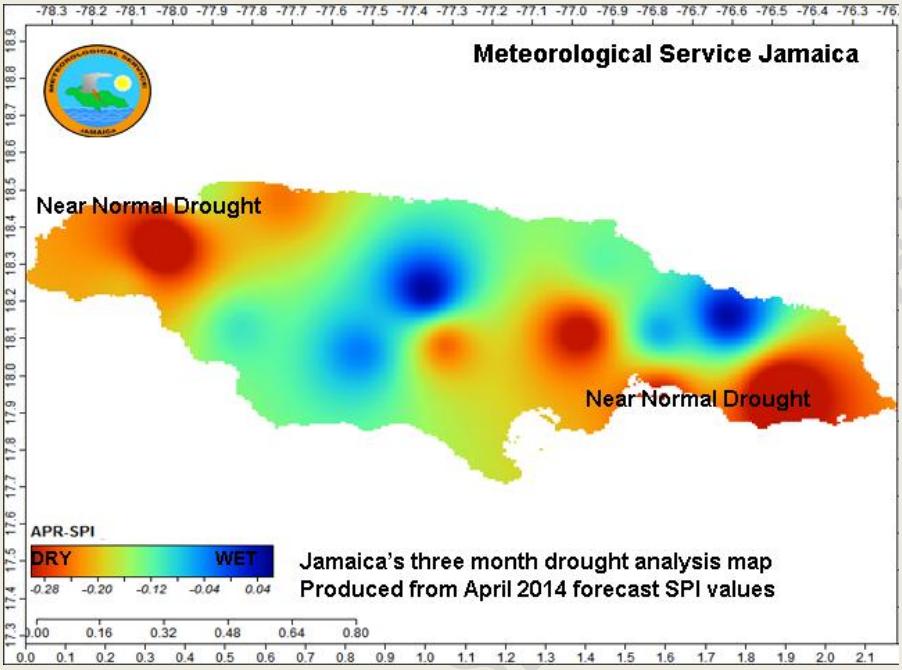

Fig.2 Station forecast drought conditions for April 2014

Summary and Expected Agricultural Impacts

There is low confidence in the precipitation forecast for February through April, however due to rainfall amounts recorded over the stations and the current level of drought or lack thereof there is no alarm for possible onset of severe drought conditions at this time as evidenced in fig. 2 where the red areas on the map correspond to normal drought conditions (0 to -0.4). Cooler night time temperatures (characteristic of this time of year) may also have contributed to a reduction in drying in the farming areas therefore maintaining good moisture conditions for crops.