NATIONAL AGROMET BULLETIN

Issued by

Climate Branch

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Highlights for September 2014

- **Below normal rainfall forecast to continue into December especially over eastern parishes.**
- **Above normal Temperature forecast to continue for October through December.**
- **Dry conditions forecast to linger over sections of eastern parishes.**

Weather Summary for month of September 2014

The island continued to experience a reduced rainfall activity especially over eastern parishes when compared to the mean however, western parishes experienced about average rainfall. This was due mainly to tropical waves as well as occasional low level troughs.

During the month, Sangster in the northwest recorded 138.7 mm of rainfall, while Norman Manley in the southeast received 10.6 mm of rainfall. There were nine rainfall days reported for Sangster while Norman Manley International airports recorded two rainfall days. Manley received about 8% of the 30-year average rainfall during the period, while Sangster recorded 5% above average (1971-2000 mean).

The highest maximum temperatures recorded for Sangster Airport was 34.2°C (19th September) meanwhile 34.1°C (14th September) 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	September Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for September
Hanover	Mount Peto	335	91	-0.7
Westmoreland	Sav-la-mar	179	81	-0.9
Manchester	Sutton	201	85	-0.1
St. Elizabeth	Y.S Estates	181	70	-0.9
St. Elizabeth	Potsdam	68	41	-1.1
Clarendon	Beckford Kraal	121	60	-0.9
St. Catherine	Tulloch	152	65	-1.0
Trelawny	Orange Valley	125	120	0.2
St. James	Sangster	139	105	0.2
St. Ann	Cave Valley	153	120	-0.5
St. Mary	Hampstead	25	27	-0.5
Portland	Shirley Castle	100	51	-1.1
St. Thomas	Serge Island	203	78	-0.5
KSA	Langley	469	168	0.4
KSA	Manley Airport	11	8	-0.7

Standardized Precipitation Index Discussion

Twelve of fifteen stations were showing various levels of drought to the end of September. There has been improvement in drought conditions following the rainfall activity received during the month however with the exception of Manchester and Kingston and St. Andrew all southern parishes are reporting moderate drought. This was due to these stations recording below normal rainfall for the month.

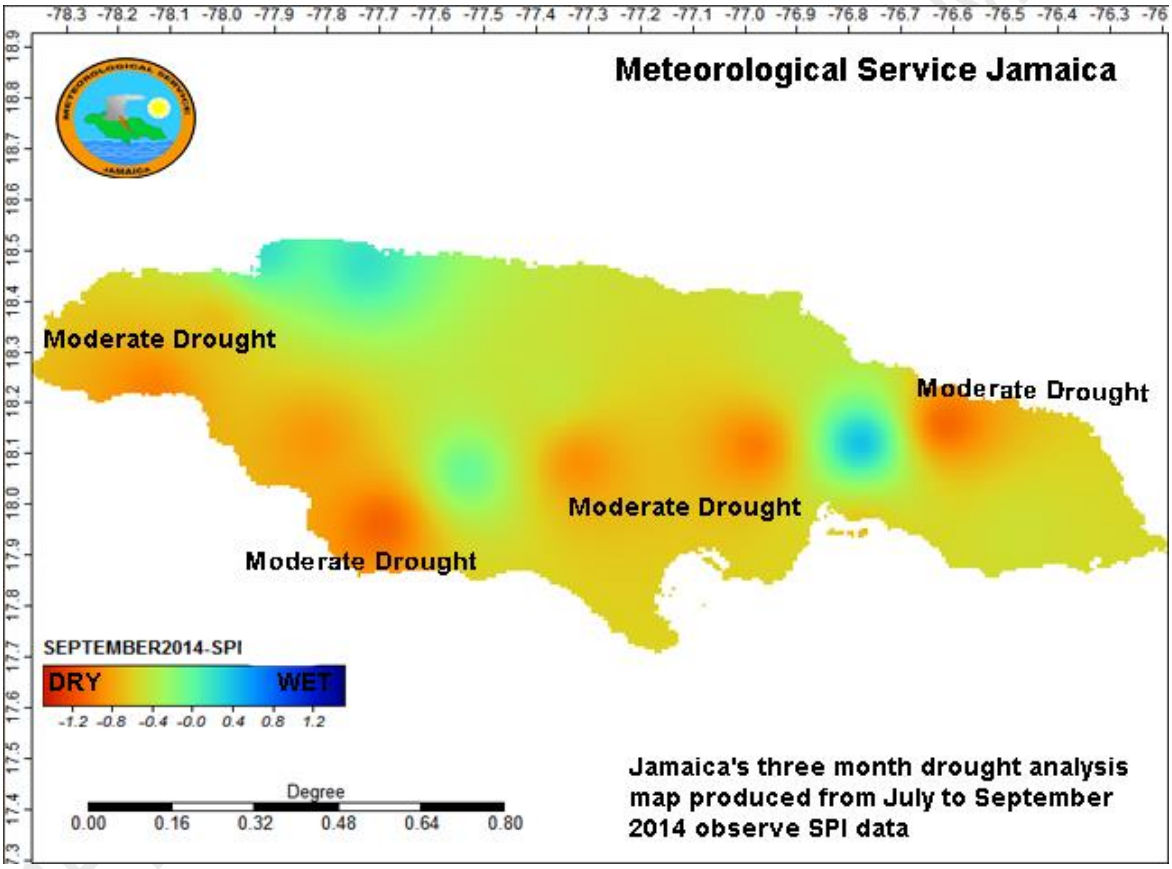

Fig.1 Station observed drought conditions for September 2014

Precipitation Forecast – October to December 2014

For October through December, the forecast from the Global Dynamic Models as well as CPT indicate below normal rainfall with warmer than normal temperatures likely to continue across the Caribbean.

The findings from the CPT indicate of a total of fifteen rainfall stations that were examined across the island, fourteen are likely to receive near normal to below normal rainfall during the period. Stations across eastern parishes are indicating high forecast confidence of below normal rainfall. Pending El Niño conditions as well as drier than normal atmospheric conditions across much of the Caribbean are the main reasons for forecasting below average rainfall as well as warmer than normal temperature across the most areas of the island.

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

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley (Kingston)	51	27	22
Sangster (St. James)	58	23	19
Sav. (Westmoreland)	39	30	31
Beckford (Clarendon)	44	29	27
Serge Island (St. Thomas)	59	23	17
Cave Valley (St. Ann)	42	31	28
Tulloch Estate (St. Cath.)	50	26	24
Y.S. Estate (St. Elizabeth)	37	29	34
Hampstead (St. Mary)	55	23	21
Orange Valley (Trelawny)	58	25	17
Langley (Kingston)	46	26	28

Mount Peto (Hanover)	53	25	22
Shirley Castle (Portland)	46	28	26
Suttons (Manchester)	31	33	36
Potsdam (St. Elizabeth)	39	31	30
Jamaica	**47**	**28**	**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

Drought Forecast – November 2014

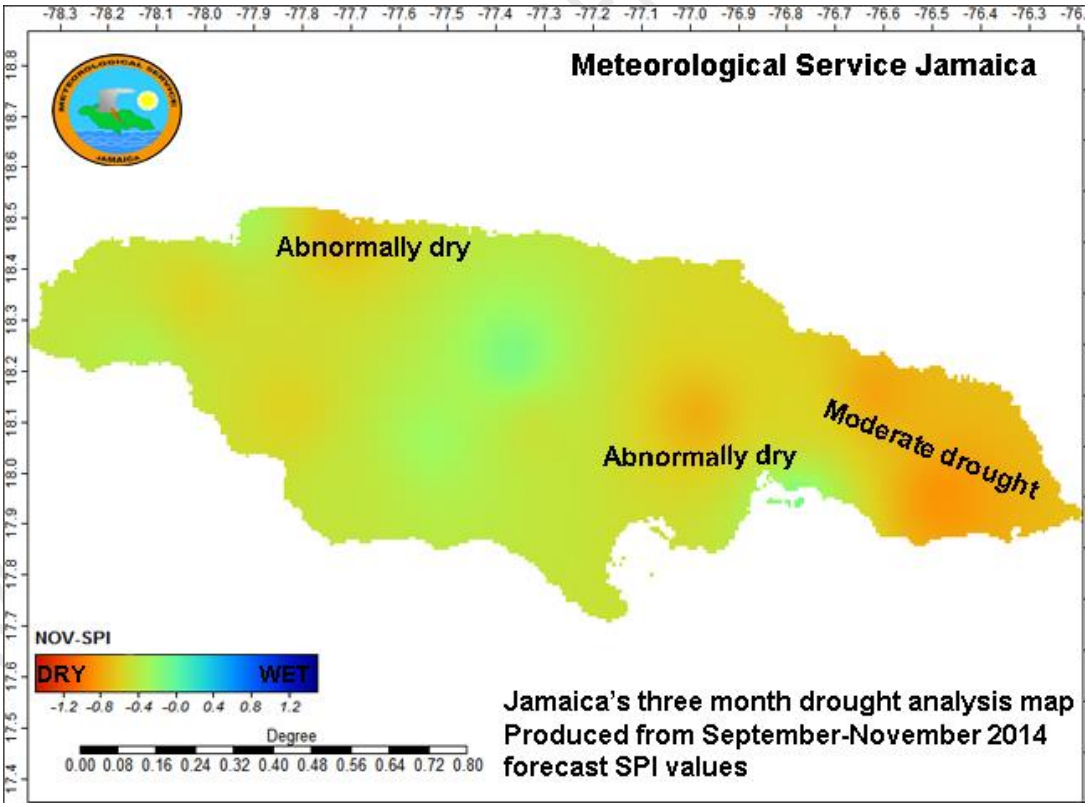

Fig.2 Expected drought conditions by end of November 2014

Location	Below (B) %	Normal (N) %	Above (A) %
Jamaica Temperature Outlook	12	28	60

Summary and Expected Agricultural Impacts

Below normal rainfall is forecast for October through December and although there has been some improvement in drought conditions over most sections of the island there is a concern if the volume of water that will be received by the end of November will be sufficient to meet household needs especially in the eastern section of the island.