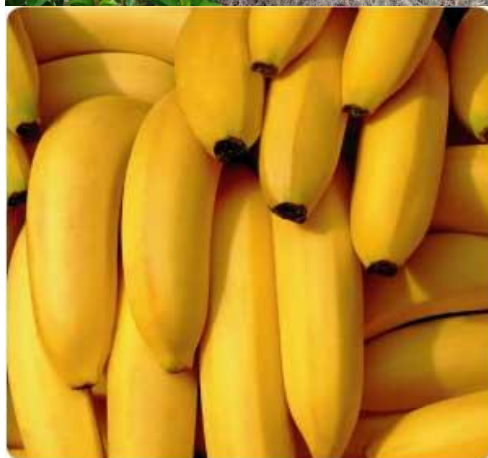


NATIONAL AGROMET BULLETIN



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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

August 2014



Highlights for August 2014

- ✚ **Below normal rainfall forecast for September to November especially over eastern parishes.**
- ✚ **Above normal Temperature forecast to continue for September through November.**
- ✚ **Forecast indicates slight improvement in drought conditions by October 2014.**

Weather Summary for month of August 2014

The island experienced very little rainfall activity especially over eastern parishes during the first half of the month. However, towards the end of the month several tropical waves coupled with a few low level troughs dominated the weather resulting in moderate to heavy showers affecting sections of all parishes.

During the month, Sangster in the northwest recorded 129.2 mm of rainfall, while Norman Manley in the southeast received 122.5mm of rainfall. There were eight rainfall days reported for Sangster while Norman Manley International airports recorded five rainfall days. Both stations received above average rainfall during the period, with Sangster recorded approximately 42% above the 1971-2000 mean while Norman Manley recorded a larger increase of 68% above the mean.

The highest maximum temperatures recorded for Sangster Airport was 35.0°C (19th August) which exceeded the 20-year mean while 34.8°C (18th August) 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	August Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for August
Hanover	Mount Peto	301	97	-1.1
Westmoreland	Sav-la-mar	204	82	-1.0
Manchester	Sutton	289	177	-0.6
St. Elizabeth	Y.S Estates	266	97	-0.8
St. Elizabeth	Potsdam	71	52	-1.3
Clarendon	Beckford Kraal	154	107	-1.3
St. Catherine	Tulloch	220	104	-1.6
Trelawny	Orange Valley	87	109	-0.9
St. James	Sangster	129	143	-0.4
St. Ann	Cave Valley	148	104	-0.4
St. Mary	Hampstead	145	157	-0.6
Portland	Shirley Castle	196	100	-1.5
St. Thomas	Serge Island	155	70	-1.5
KSA	Langley	223	109	-1.1
KSA	Manley Airport	123	167	-0.3

Standardized Precipitation Index Discussion

All fifteen stations were showing various levels of drought to the end of August. From Norman Manley on the coast with normal drought to Tulloch in the hills of St. Catherine which was reporting extreme drought conditions. Although most stations recorded above normal rainfall for the month of August the drought conditions has not improved significantly and therefore marked improvement is not expected before the end of October.

The drought map show moderate to exceptional drought conditions over the eastern and central parishes extending into western parishes especially South St. Elizabeth.

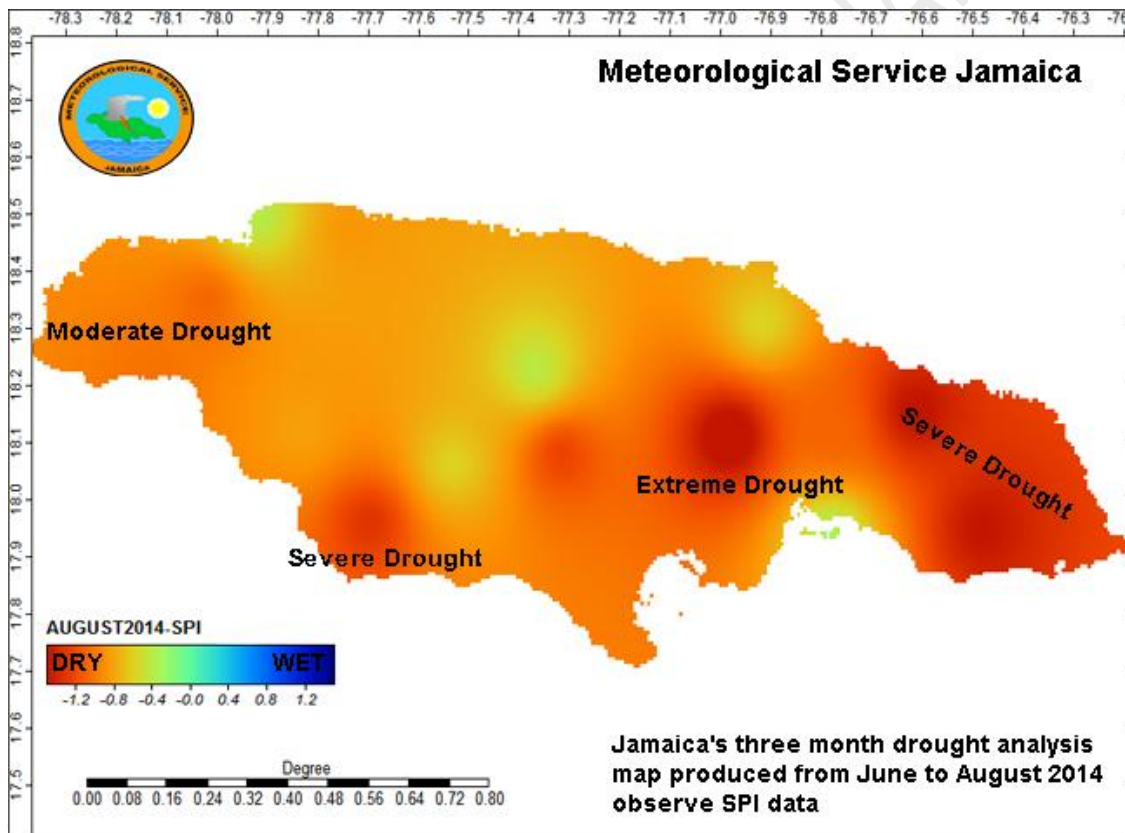


Fig.1 Station observed drought conditions for August 2014



Precipitation Forecast – September to November 2014

Through the period the forecast from the Global Dynamic Models indicates below normal rainfall with warmer than normal temperatures likely to continue across the Caribbean. This strongly agrees with the CPT rainfall and temperature forecast for the same period. Of a total of fifteen rainfall stations that were examined across the island, twelve are likely to receive below normal rainfall during the period. However, stations across western parishes could receive near normal to above normal rainfall.

Strong mid to upper level winds along with drier than normal atmospheric conditions across much of the Caribbean are the main reasons for the below average rainfall as well as warmer than normal temperature across the region.

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

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	43	31	25
Sangster Airport	51	31	18
Sav-la-mar.	26	30	44
Beckford Kraal	43	34	22
Serge Island	50	29	20
Cave Valley	38	37	25
Tulloch Estate	42	30	28
Y.S. Estate	32	30	38
Hampstead	53	29	18
Orange Valley	54	28	18
Langley	50	29	21
Mount Peto	30	32	38



Shirley Castle	58	29	13
Sutton	44	34	22
Potsdam	39	32	28
Jamaica	44	31	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 – October 2014

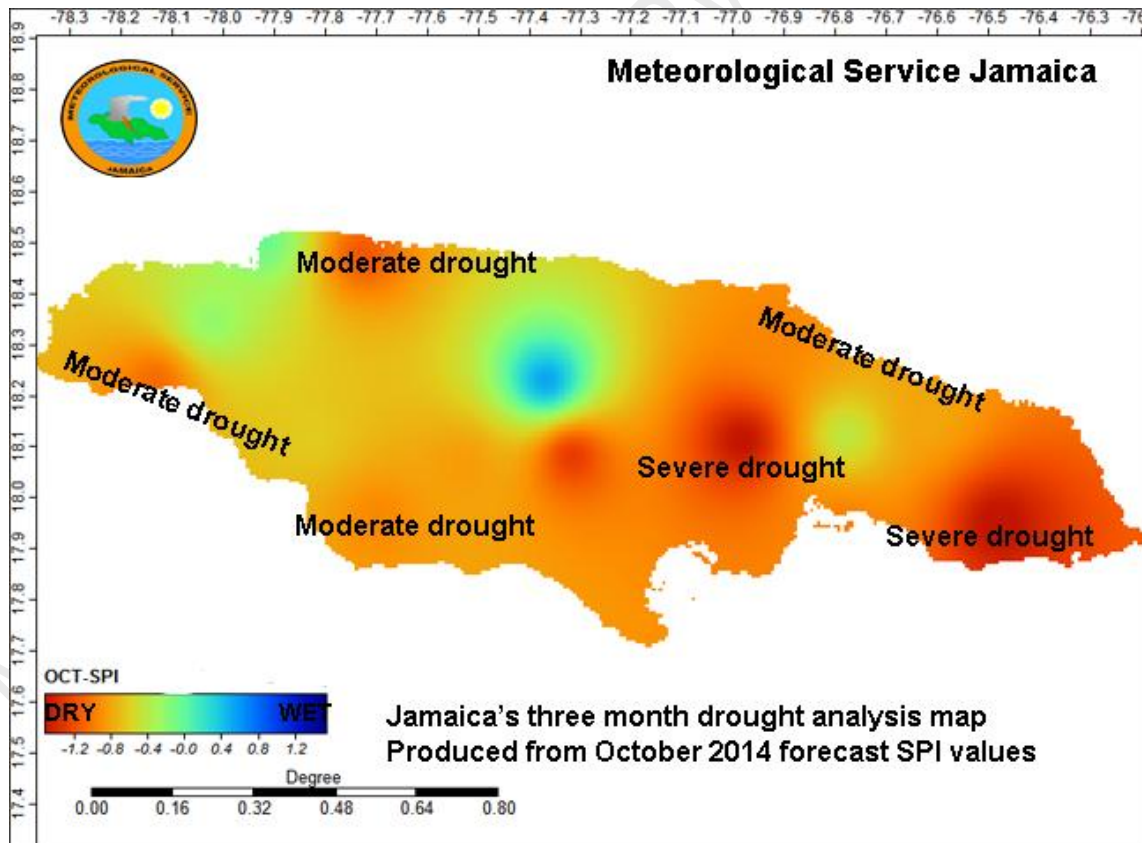


Fig.2 Expected drought conditions by end of October 2014



Location	Below (B) %	Normal (N) %	Above (A) %
Jamaica Temperature Outlook	15	32	53

Summary and Expected Agricultural Impacts

Below normal rainfall forecast for September through November is very troubling for both the agricultural and hydrological interests. This is because following this rainfall season the island will enter its dry season and therefore the reserves in water supply which is usually available would be inadequate. Another issue is that of forecasted above normal temperatures which could result in heat stress for certain crops as well as higher evapotranspiration rates which means accelerated loss of soil moisture.