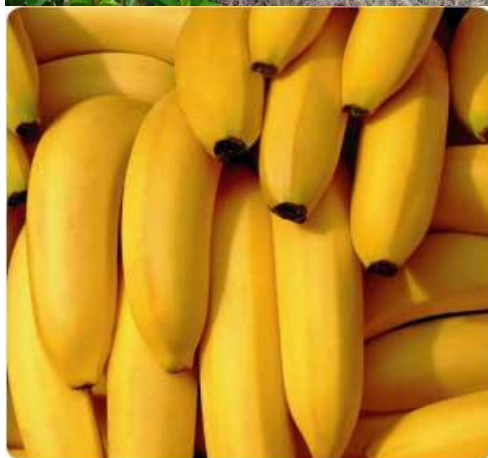


NATIONAL AGROMET BULLETIN



Issued by

Climate Branch

Meteorological Service, Jamaica

65 ¾ Half Way Tree Road

Kingston 10

Telephone: 929-3700/3706

Email: datarequest@metservice.gov.jm

July 2014



Highlights for July 2014

- ✚ Medium to high confidence of continued below normal rainfall forecast for August to October.**
- ✚ Temperature Outlook now available for the island.**
- ✚ Forecast indicates slight improvement in drought conditions by September 2014.**

Weather Summary for month of July 2014

Throughout the month, the island experienced very little rainfall activity especially over the eastern half of the island. Sections of Hanover, Westmoreland and St. Elizabeth accounted for most of the rainfall. Throughout the month high pressure ridges and Tropical Waves were the dominant weather features affecting the island.

During the month, Sangster in the northwest recorded 30.9 mm of rainfall, while Norman Manley in the southeast recorded 8.5 mm. There were four rainfall days reported for Sangster and one for Manley. Both Sangster and Manley recorded below average rainfall or approximately 59% and 28% of their respective 1971-2000-mean. The highest maximum temperatures recorded for Sangster Airport was 35.4°C (23rd July) and for Norman Manley Airport 34.9°C (25th July) which exceeded the 20 year mean maximum temperature by 0.9°C and 0.2°C respectively.



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	July Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for July
Hanover	Mount Peto	173	70	0.2
Westmoreland	Sav-la-mar	56	32	0.6
Manchester	Sutton	32	34	-0.9
St. Elizabeth	Y.S Estates	139	77	-0.3
St. Elizabeth	Potsdam	45	54	-1.2
Clarendon	Beckford Kraal	16	18	-1.4
St. Catherine	Tulloch	56	37	-2.3
Trelawny	Orange Valley	7	13	-0.6
St. James	Sangster	31	59	0.6
St. Ann	Cave Valley	53	61	1.0
St. Mary	Hampstead	3	4	-0.8
Portland	Shirley Castle	3	2	-0.9
St. Thomas	Serge Island	18	11	-1.5
KSA	Langley	70	73	-0.4
KSA	Manley Airport	9	29	-1.1

Standardized Precipitation Index Discussion

Of the fifteen reporting stations, eleven (11) were showing various levels of drought. All of the stations on the southern section of the island are reporting drought with the worst case in St. Catherine at Tulloch followed by Serge Island in St. Thomas.

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

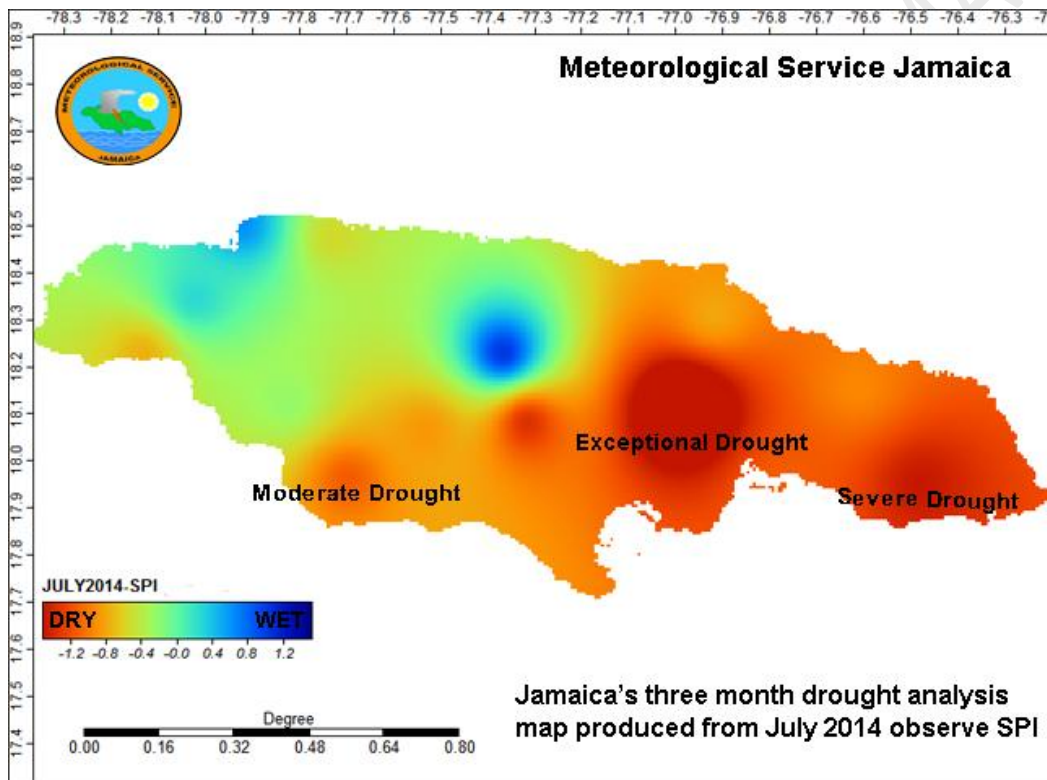


Fig.1 Station observed drought conditions for July 2014



Precipitation Forecast – July to September 2014

The Global Dynamic Models continues to forecast below normal rainfall across the entire Caribbean, with warmer than normal temperatures. 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, thirteen are likely to receive below normal rainfall during the period. However, stations across western parishes could receive near normal to above normal rainfall. Strong surface winds along with drier than normal atmospheric conditions coupled with above normal temperature 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 ASO 2014.

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	42	34	25
Sangster Airport	48	33	20
Sav-la-mar.	32	30	38
Beckford Kraal	40	35	25
Serge Island	46	30	23
Cave Valley	41	35	24
Tulloch Estate	41	33	26
Y.S. Estate	46	30	24
Hampstead	61	25	14
Orange Valley	52	31	18
Langley	49	33	18
Mount Peto	31	32	37



Shirley Castle	57	29	14
Sutton	49	35	16
Potsdam	37	33	30
Jamaica	40	31	29

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 – September 2014

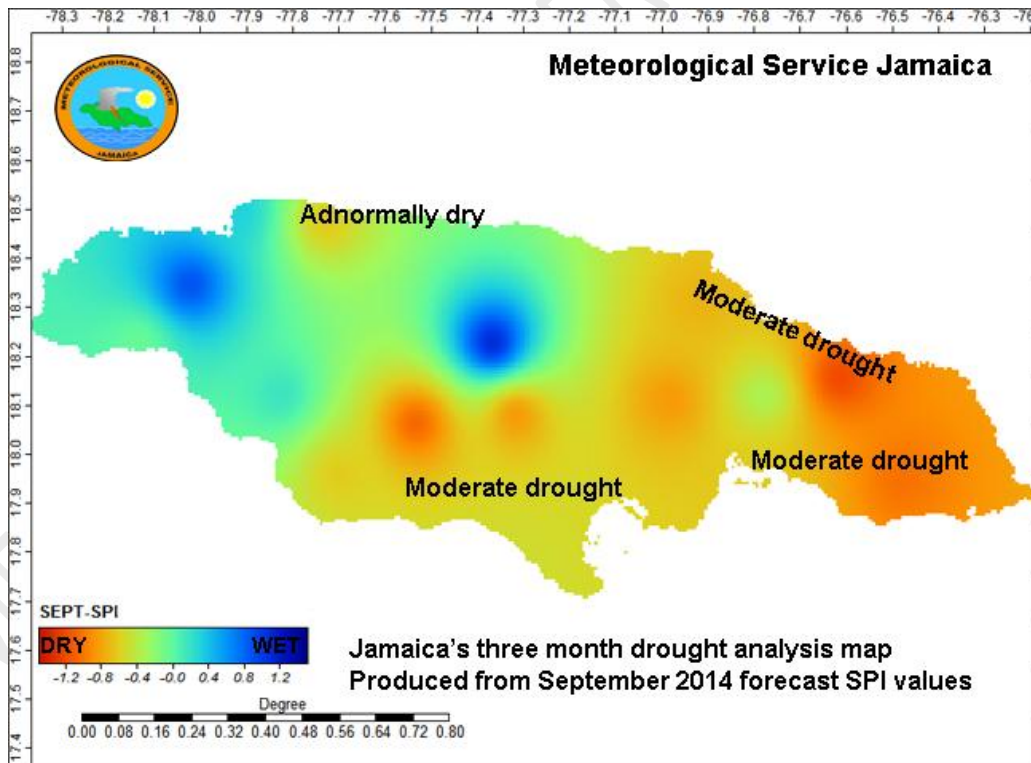


Fig.3 Expected drought conditions by end of September 2014



Location	Below (B) %	Normal (N) %	Above (A) %
Jamaica Temperature Outlook	21	34	45

Summary and Expected Agricultural Impacts

There is medium to high confidence in the CPT precipitation outlook for August through October for below normal rainfall to continue for most stations. The greatest concern exists now for stations that are already significantly affected by drought and expecting below normal rainfall through to September. Farmers and other interests should therefore maintain alternative measures and plan for conditions to continue until the end of September before any significant change is expected. The temperature outlook forecast of above normal temperatures combined with already parched conditions in some parishes will only exacerbate evapotranspiration rate which will be a key issue for the farming sector. Increased temperatures could also see the introduction of pests in the fields and therefore preventative measures should also be considered.