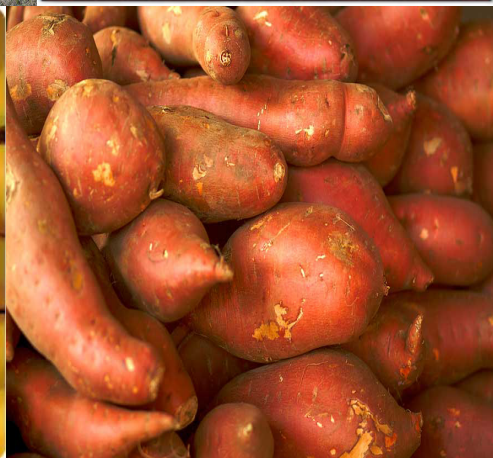
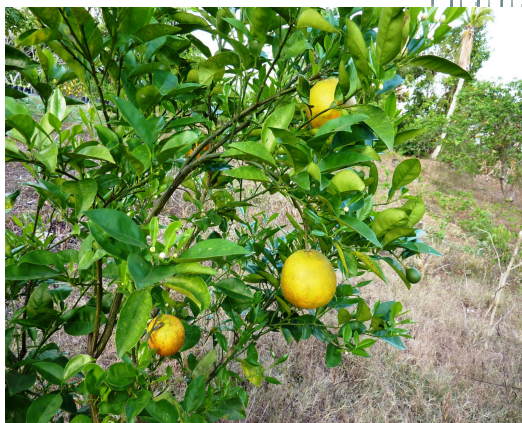


NATIONAL AGROMET BULLETIN



Issued by

Climate Branch

Meteorological Service, Jamaica

65 ¾ Half Way Tree Road

Kingston 10

Telephone: 929-3700/3706

Email: datarequest@metservice.gov.jm

December 2013



Highlights for December 2013

- ✚ **Below normal rainfall predicted for January through March.**
- ✚ **Drought observation is now presented pictorially as well as in tabular form.**
- ✚ **Drought forecast coming in January 2014 issue.**

Weather Summary for month of December 2013

During the month of December the island's main weather features were surface to low level troughs. These troughs dominated the weather conditions across island with a bias towards the northern parishes. Preliminary figures indicate that the rainfall amount for the month of December remained near normal, with Sangster International airport (Sangster) in the northwest recorded 86% of its 30 year monthly. Norman Manley International airport (Norman Manley) in the southeast equalled the 30-year mean rainfall amount of 29.9mm while Sangster recorded 81.4 mm of rainfall. There were seven rainfall days reported for Sangster, while Norman Manley had two rainfall days during the month.

Sangster Airport recorded a maximum temperature of 32.1°C (15th December), while 33.4°C (16th December) 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
-0.5 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)

Parish	Station	December Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for December
St. Thomas	Serge Island	64	62	-0.95
KSA	Langley	197	117	-0.80
KSA	Manley airport	39	130	-0.69
St. Catherine	Tulloch	26	29	-0.85
Clarendon	Beckford Kraal	45	62	-1.09
Manchester	Sutton	170	299	0.85
St. Elizabeth	Y.S Estates	93	124	1.73
Westmoreland	Sav-la-mar	56	70	-0.51
Hanover	Mount Peto	36	39	0.70
St. James	Sangster	81	86	-1.14
Trelawny	Orange Valley	75	66	-0.63
St. Ann	Cave Valley	0	0	-0.40
St. Mary	Hampstead	231	122	-0.42
Portland	Shirley Castle	448	88	-0.73

Standardized Precipitation Index Discussion

Of the fourteen reporting stations eleven (11) were showing varying levels of drought from normal to moderate drought. The worst cases of drought are currently evident over the eastern and central parts of the island as well as coastal St. James at the Sangster station as shown in figure 1.

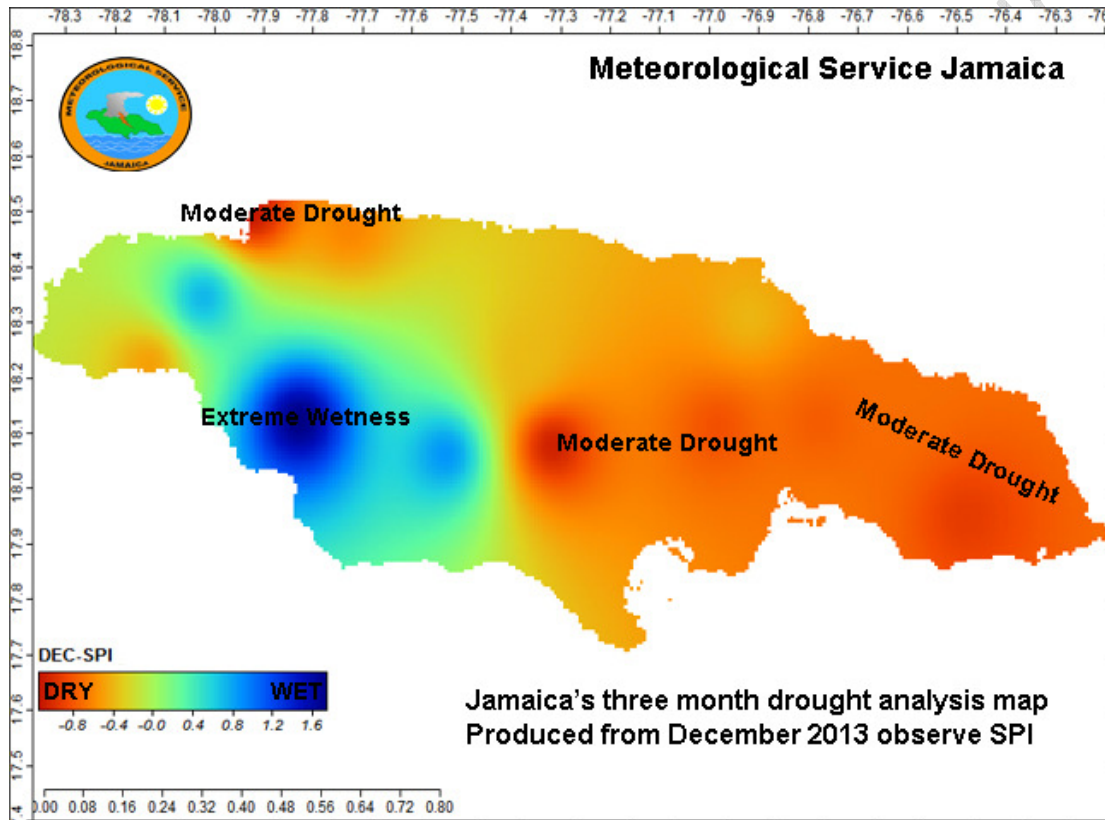


Fig.1 Station drought condition for December 2013

Precipitation Outlook – January to March 2014

The Global Dynamic Models are forecasting below normal conditions across most of the Caribbean with warmer than normal air temperatures over the entire Caribbean basin.

The forecast however, from the statistical climate predictability tool (CPT) agrees strongly with the forecast from the dynamical computer models. The forecast is far below normal rainfall for most areas examined across Jamaica over the same time period. Of a total of fourteen stations that were examined, all except for Hampstead and Sutton showed below normal with high



confidence in the forecast. The overall average for Jamaica reflects a below normal rainfall pattern especially over parts of some eastern and western parishes.

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

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley Airport	38	33	29
Sangster Airport	43	32	25
Sav-la-mar.	48	30	22
Beckford Kraal	41	31	28
Serge Island	53	31	16
Cave Valley	43	30	27
Tulloch Estate	46	31	23
Y.S. Estate	42	31	27
Hampstead	31	33	36
Orange Valley	49	32	19
Langley	42	32	26
Mount Peto	54	29	17
Shirley Castle	36	33	31
Sutton	25	31	44
Jamaica	40	32	28

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



Summary and Expected Agricultural Impacts

There is good confidence in the precipitation forecast for January through March for below normal activity. Drying continues over most stations for the month of December. Drier than normal conditions coupled with a forecast of below normal rainfall might require intervention on the part of farmers to prevent reduced soil moisture content especially for crops which were planted in recent months.

METEOROLOGICAL SERVICE, JAMAICA