NATIONAL AGROMET BULLETIN



Issued by Climate Branch Meteorological Service, Jamaica 65 ¾ Half Way Tree Road Kingston 10 Telephone: 929-3700/3706 Email: <u>datarequest@metservice.gov.jm</u>

February 2013





4 Above normal rainfall expected April into May.

4 Drought conditions improve slightly over some areas.

Weather Summary for month of January 2013

High pressure ridges dominated weather conditions across the region during the month of February. This resulted in a significant reduction in the levels of rainfall measured across most areas. Both Sangster International airport (Sangster) in the northwest and Norman Manley International airport (Norman Manley) in the southeast recorded below average rainfall. During the month, Sangster recorded 51.4 mm of rainfall, while Norman Manley recorded 3.6 mm. There were six rainfall days reported for Sangster, while Norman Manley had only one rainfall day during the month. Sangster recorded approximately 81% of the 1971-2000 mean while Norman Manley recorded 17% of the 1971-2000 mean.

The lowest minimum temperature recorded for Sangster Airport was 20.5°C (18th February) while 21.9°C (1st February) 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. SPI also allows monitoring of both extremes that is extreme dry and extreme wet conditions.

<u>KEY</u>

SPI Value	Category
-0.50 to 0.50	Normal
0.80 to 0.51	Abnormally wet
1.30 to 0.81	Moderately wet
1.60 to 1.31	Very wet
2.00 to 1.61	Extremely wet
≥ 2.01	Exceptionally wet
-0.80 to -0.51	Abnormally dry
-1.30 to -0.81	Moderately dry
-1.60 to -1.31	Severely dry
-2.00 to -1.61	Extremely dry
≤ -2.01	Exceptionally dry

Table 1. Rainfall and Drought Analysis for Selected Stations						
Parish	Station	January Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for February		
St. Thomas	Serge Island	13	18	-0.52		
KSA	Langley	24	16	0.01		
St. Catherine	Tulloch	37	42	-1.41		
Clarendon	Beckford Kraal	29	51	0.02		
Manchester	Sutton	47	74	0.40		
St. Elizabeth	Y.S Estates	47	42	-0.63		
Westmoreland	Sav-la-mar	25	30	-1.30		
Hanover	Mount Peto	57	52	-1.05		
St. James	Sangster	51	83	-0.63		
Trelawny	Orange Valley	35	59	-0.75		
St. Ann	Cave Valley	65	110	0.30		
St. Mary	Hampstead	58	49	-0.76		
Portland	Shirley Castle	266	71	-0.14		



Standardized Precipitation Index Discussion

Nine of the thirteen stations used in the analysis are showing some level of drought however there has been a slight improvement in most of the monitored stations since January. Savanna-lamar in Westmoreland (moderately dry) and Tulloch in St. Catherine (severely dry) are the worst cases based on the 3 month SPI as was the case for January.

Precipitation Outlook – March to May 2013

The Global Dynamic Models are forecasting that most of the Caribbean including Jamaica will be moving towards a period of near normal rainfall, as well as warmer than normal air temperatures for the period March through to May. This agrees strongly with the outlook from the statistical climate predictability tool (CPT) forecast for Jamaica for the same period. The statistical model is indicating a near normal to above normal rainfall season for most stations that were analyzed for the period March to May 2013. Of a total of ten stations that were examined, eight showed above normal rainfall, while Savanna-la-mar in the west and Serge Island in the east indicated below normal rainfall for the period March through to May. The overall average for Jamaica therefore, reflects a near normal to above normal rainfall pattern for the period March through to May. Strong model signals and high forecast confidence across most areas, especially during late April to May, will bring welcome news of increased rainfall going into the secondary rainfall season.

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley (Kingston)	25	28	47
Sangster (St. James)	25	26	49
Sav. (Westmoreland)	49	27	24



Beckford (Clarendon)	19	26	55
Serge Island (St. Thomas)	43	27	30
Cave Valley (St. Ann)	15	23	62
Tulloch Estate (St. Cath.)	21	26	53
Y.S. Estate (St. Elizabeth)	24	29	47
Hampstead (St. Mary)	32	29	39
Orange Valley (Trelawny)	33	27	40
Jamaica	29	27	44

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 has been a slight improvement in conditions for eight of the thirteen stations however the worst drought conditions still remain in Tulloch and Sav-la-mar. The Precipitation outlook for the island is now forecasting normal to above normal rainfall especially towards the end of April going into May which coincides with the start of the secondary wet season.

Realization of the outlook would definitely mean improvement in drought conditions as the rainy season progresses however immediate interventions might still be necessary especially in the worst affected areas.