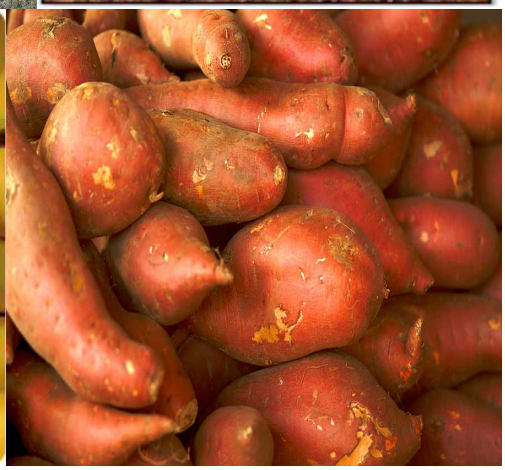
NATIONAL AGROMET BULLETIN



Issued by

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Highlights for April 2013

- **Below normal rainfall expected for early rainfall season**.
- **Drought conditions improve slightly over some areas.**
- **Southern parishes continue to experience severe to extreme drought conditions.**

Weather Summary for month of April 2013

Throughout the month of April the island was impacted mainly by high pressure ridges as well as a few intense surface troughs. There was an increase in the levels of rainfall activity across most western parishes, especially towards the latter part of the month. Sangster International airport (Sangster) in the northwest recorded above 50% of its monthly average while Norman Manley International airport (Norman Manley) in the southeast received below its 30 year mean rainfall. During the month, Sangster recorded 98.4 mm of rainfall, while Norman Manley recorded 11.8 mm. There were six rainfall days reported for Sangster, while Norman Manley had three rainfall days during the month. Sangster recorded approximately 88% above the 1971-2000 mean while Norman Manley recorded 44%.

The highest maximum temperature recorded for Sangster Airport was 33.2°C (14th April), which exceeded the 20-year mean for the station, while 32.7°C (18th April) 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
-0.50 to 0.50	Normal		-0.80 to -0.51	Abnormally dry
0.80 to 0.51	Abnormally wet		-1.30 to -0.81	Moderately dry
1.30 to 0.81	Moderately wet		-1.60 to -1.31	Severely dry
1.60 to 1.31	Very wet		-2.00 to -1.61	Extremely dry
2.00 to 1.61	Extremely wet		≤ -2.01	Exceptionally dry
≥ 2.01	Exceptionally wet			

Table 1. Rainfall and Drought Analysis for Selected Stations

Parish	Station	April Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for April
St. Thomas	Serge Island	44	50	-0.79
KSA	Langley	128	85	-0.38
St. Catherine	Tulloch	37	33	-1.49
Clarendon	Beckford Kraal	38	32	-1.92
Manchester	Sutton	188	107	0.64
St. Elizabeth	Y.S Estates	324	155	0.18
Westmoreland	Sav-la-mar	no data	no data	no data
Hanover	Mount Peto	182	94	-0.55
St. James	Sangster	98	159	0.60
Trelawny	Orange Valley	25	37	0.30
St. Ann	Cave Valley	121	114	0.36
St. Mary	Hampstead	22	14	-0.45
Portland	Shirley Castle	40	12	-0.24

Standardized Precipitation Index Discussion

Six of the twelve reporting stations used in the analysis are showing some level of drought however while there has been a slight improvement in some parishes others are reporting more intense drought. Beckford Kraal in Clarendon is now reporting extremely dry conditions while Tulloch in St. Catherine is reporting severely drought. These figures indicate that the drought conditions remain more significant for southern parishes.

Precipitation Outlook – May to July 2013

The Global Dynamic Models are forecasting that most of the Caribbean including Jamaica will be moving towards a period of near normal to above normal rainfall, as well as warmer than normal air temperatures for the period May through to July. However, the outlook from the statistical climate predictability tool (CPT) for Jamaica for the same period takes a more robust approach and shows a near normal to below normal for most stations analysis across the island.

The statistical (CPT) model is indicating a below normal rainfall season for most stations that were analyzed for the period May to July 2013. Of a total of ten stations that were examined, eight showed a below normal rainfall pattern, while two indicated above normal rainfall for the period for the same period.

The overall average for Jamaica reflects a below normal rainfall pattern for the period May through to July. However, western parishes will continue to receive above normal precipitation for the same period. Very weak model confidences as well as low signals from the sea surface temperatures (SST's) through the period continue to affect the forecast.

Table 2. Climate Predictability Tool (CPT) Outlook MJJ 2013.

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley (Kingston)	36	34	30
Sangster (St. James)	29	32	39
Sav. (Westmoreland)	51	29	20
Beckford (Clarendon)	36	33	31

Serge Island (St. Thomas)	39	33	28
Cave Valley (St. Ann)	40	32	28
Tulloch Estate (St. Cath.)	40	32	28
Y.S. Estate (St. Elizabeth)	31	32	37
Hampstead (St. Mary)	38	32	30
Orange Valley (Trelawny)	41	32	27
Jamaica	**38**	**32**	**30**

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 drought conditions for the communities being monitored because there are less stations reporting drought at this time. South central and western parishes continue to be the worst affected areas.

The Precipitation outlook for the island is now forecasting below normal activity for the early rainfall season however the confidence is low and therefore we have to be cautious when using this prediction. Realization of the outlook however, would mean worsening drought conditions for most areas and insufficient replenishment for dams and reservoirs which would also mean inadequate supply of potable water.