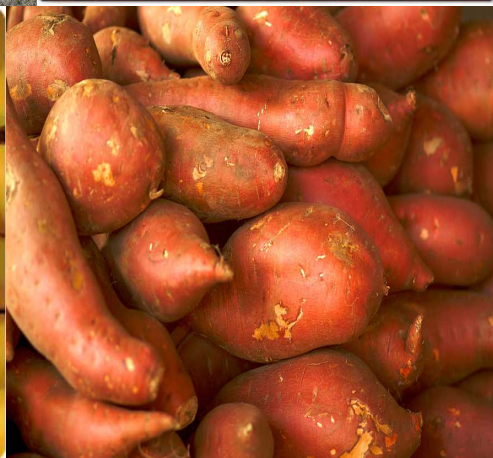
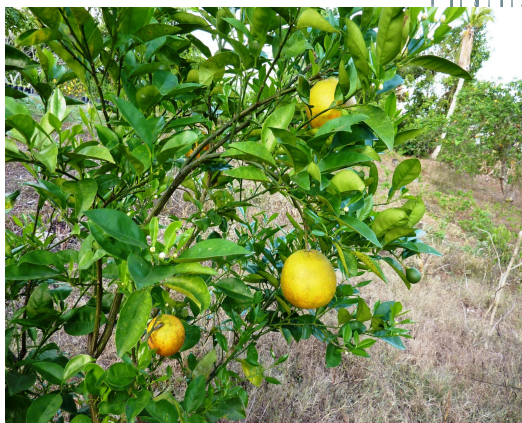


# *NATIONAL AGROMET BULLETIN*



Issued by

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**December 2012**



## Highlights for December 2012

- ✚ **Below normal rainfall expected for the dry season.**
- ✚ **Drought conditions worsen over some areas.**

### Weather Summary for month of November 2012

During the month of December the island observed a significant reduction in the levels of rainfall activity 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. The most significant weather features which affected the island during the month of December were **Low Level Troughs**, most of which developed over the north-western Atlantic and affected mainly north-eastern parishes.

During the month, Sangster in the northwest recorded 17.8 mm of rainfall, while Norman Manley in the southeast recorded 6.9 mm. There were four rainfall days reported for Sangster, while Norman Manley had two rainfall days during the month. Sangster recorded approximately 22% of the 1971-2000 mean while Norman Manley recorded 15% of the 1971-2000 mean. The lowest minimum temperature recorded for Sangster Airport was 20.5°C (23<sup>rd</sup> December) while 21.6°C (19<sup>th</sup> 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. SPI also allows monitoring of both extremes that is extreme dry and extreme wet conditions.

### **KEY**

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

<b>Parish</b>	<b>Station</b>	<b>December Monthly Total (mm)</b>	<b>Percent of 30 year Mean (%)</b>	<b>SPI for December</b>
St. Thomas	Serge Island	90	87	-1.98
KSA	Langley	326	194	1.53
St. Catherine	Tulloch	31	35	-2.00
Clarendon	Beckford Kraal	108	148	-0.24
Manchester	Sutton	83	146	0.90
St. Elizabeth	Y.S Estates	91	121	-0.49
Westmoreland	Sav-la-mar	14	17	-1.81
Hanover	Mount Peto	28	30	-1.27
St. James	Sangster	18	19	0.24
Trelawny	Orange Valley	11	10	-1.47
St. Ann	Cave Valley	67	99	0.33
St. Mary	Hampstead	57	30	-0.75
Portland	Shirley Castle	619	121	0.41



### **Standardized Precipitation Index Discussion**

Based on the SPI indices most of the stations have moved to more severe drought conditions in December. The stations are Savanna-la-mar in Westmoreland (extremely dry), Mount Peto in Hanover (moderately dry), Orange Valley in Trelawny (severely dry), Tulloch in St. Catherine (extremely dry) and Serge Island in St. Thomas (extremely dry). Extremely dry is one level before exceptionally dry which is the worst case for SPI.

### **Precipitation Outlook – January to March 2013**

Of a total of five stations that were examined, four of these stations indicated below normal rainfall while one station (Sangster) returned above normal rainfall. The forecast continues to show strong signals across most stations for below normal rainfall.

The overall average for Jamaica therefore, reflects a near normal to below normal rainfall pattern for the period January through to March 2013 with strong signals and high forecast confidence.

**Table 2. Climate Predictability Tool (CPT) Outlook JFM2013.**

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley	44	30	26
Sangster	31	31	38
Savanna-la-Mar	71	21	8
Beckford Kraal	48	30	22
Serge Island	64	24	12
<b>Jamaica</b>	<b>52</b>	<b>27</b>	<b>21</b>

#### **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**

Several stations are now experiencing extremely dry conditions and the outlook for January through to March is for normal to below normal activity with a greater percentage for below normal rainfall. Realization of this prediction will only exacerbate the existing drought conditions. To prevent a large scale outbreak of drought immediate intervention is required especially in the farming sector which is currently reporting drought conditions especially over western parishes.