

Sweet Potato Profile



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Introduction

Sweet potato (*Ipomoea batatas*) belongs to the Convolvulaceae family, adapted mainly to the tropical climate. It is a perennial that is mainly grown as an annual. The sweet potato which is an excellent source of carbohydrate is a major staple in Jamaica. It is one of the most highly demanded tubers in Jamaica, required in the export and fresh food market as well as in the agro processing industry. In 2016, 48,006,000kg was produced while 46,481,000 kg or 96.8% of production was consumed locally. Sweet potato is also one of seven world foods with an annual production of more than 100 million metric tonnes per year. Hence sweet potato is essential to combat world hunger as well as a source of income for especially the rural population.

Health Benefits & Uses

A Sweet Potato a Day Keeps the Doctor Away

- Rated the most nutritious of all tubers.
- Rich source of anti-oxidants for protection against heart disease, stroke, cancer and delaying the progression of Alzheimer's disease.
- Very good source of Vitamin B6, Vitamin C and Manganese.

Sweet Potato is the key ingredient in one of Jamaica's traditional delicious pudding. Also, the tuber can be baked, boiled or fried.

Why Invest in Sweet Potato?

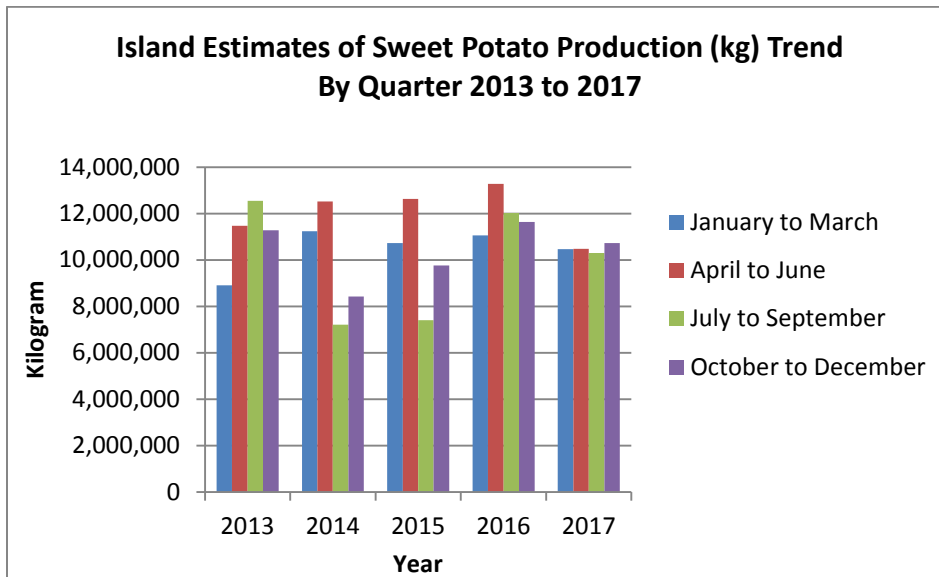
- High demand in both local and export market
- It is adaptable to Jamaica's ecology
- Great foreign exchange earner
- Agro processing opportunities

Supply Availability

Sweet Potato is cultivated island-wide. However, in 2017 the parishes of Manchester, St. Elizabeth, Clarendon and St. Ann were the major producers, boasting seventy nine percent (79%) of total production. The tuber is available all year round. Also, the tuber matures in approximately 4 months.

Sweet Potato Varieties

Although numerous varieties of the tuberous root can be distinguished locally, the Uplifter, Quarter Million, Eustace, Big Red, Clarendon, Blue Bud and Dor are most popular. Recently the Beauregard variety was imported to boost production mainly for the export market. Among the local varieties, the Uplifter with its yellow flesh is in high demand by the ethnic population in the export market.



Production

Sweet potato production declined by 5% over a five year period from 2013 to 2017, moving from 44,224,000 kg in 2013 to 41,996,000 kg in 2017 (see appendix 1). However, production increased by 21.8% over the period from 2014 to 2016 moving from 39,411,500kg in 2014 to 48,006,000kg in 2016. Although Sweet potato is not a seasonal crop, summation of the quarterly production figures over a five year period from 2013 to 2017 shows that production was highest in the months of April to June.

Area Reaped and Yield per Hectare

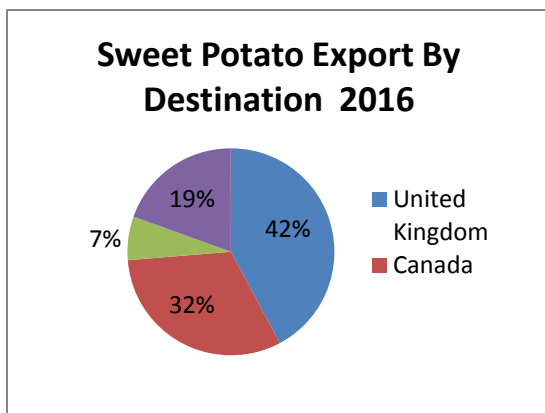
The total area reaped for sweet potato island-wide in 2017 declined by 11.4% to 2,437.5 hectares below the previous year. Also, in 2017, the average yield per hectare declined slightly by 1.2% to 17,229 kg when compared to the 2016 figure.

Yield per hectare varies island - wide. In 2017, St. Mary and Manchester were the parishes with the highest yield per hectare of 19,487kg, and 18,000kg respectively (see appendix 2). However, the 2017 national average yield was 17,229kg per hectare (see appendix 2). Yield for the newly introduced Beauregard variety has not yet being established locally. However, based on the fact that Jamaica will import virus free Beauregard planting material, the yield/hectare is expected to surpass the local varieties of sweet potato.

Target Markets

Export Market

In 2016, Jamaica exported one million, five hundred and twenty five kilograms (1,525,000 kg) of sweet potato valued at three million one hundred and forty seven thousand United State dollars (US\$3,147,000). Over a five year (5yr) period from 2012 to 2016, sweet potato export quantity and value grew by 6.5% and 10.7% respectively. The United Kingdom and Canada are Jamaica's main export destinations, accounting for 89.4% of the export market share. Twelve exporters of sweet potatoes were identified island-wide (see appendix 3A, 3B & 5).



The **fresh market** is the largest consumer of sweet potatoes in Jamaica, absorbing approximately ninety six percent (96%) of total production in 2017.

Three (3) **agro processors** were identified island-wide. All processors expressed a desire to produce sweet potato wedges and pudding mix from either fresh potato or potato flour. To date, only one processor actually created and commercialized a

sweet potato pudding mix. Agro processors preferred the Uplifter variety of potato (see appendix 6).

Market Price

On the week ending April 21, 2018 the most frequent farmgate and retail prices were \$110/kg and \$344/kg respectively.

Profitability of Sweet Potato

A three year (2015 to 2017) observation of the cost of production-farmgate margins for sweet potato shows a range of 159.6% to 279.5% among the years (see appendix 4).

Global Trade

Although sweet potato as a commodity is widely grown throughout the world, only one per cent of production enters world trade with Canada, the United Kingdom, France, Netherlands, Belgium, Thailand, Germany, Argentina and Malaysia being the major importing countries, accounting for 71.7% of the world's import value.

Also, in 2016, four hundred and fifty nine million, two hundred and thirty five thousand kilograms (459,235,000kg) of sweet potato valued at four hundred and forty three million, five hundred and nine thousand United States dollars (US\$443,509,000) was exported worldwide. The USA was the world's largest exporter, accounting for 41.5% of the world's export. Also, the USA was the largest exporter of sweet potato to the UK controlling 72% of the market. Jamaica is ranked fourth among the six major exporting countries in the Canadian market with its traditional sweet potato varieties. Jamaica's other major competitors in the Canadian market are the United States of America, Honduras, China, Costa Rica, Colombia and Peru.

Quarantine Requirements (UK, Canada)

Based on the United Kingdom Phyto-sanitary regulation, sweet potato is allowed from Jamaica. However, the tuber must be accompanied by a Phyto-sanitary Certificate. Canada also accepts sweet potato from Jamaica. No Phytosanitary Certificate is required by Canada. However, tubers must be free from soil.

Quality Standard for Sweet Potato

Minimum Requirements

Sweet potato shall be of similar varietal characteristics, clean, mature, fresh, firm and free from diseases, decay, pest and pest damage (Ministry of Industry, Commerce, Agriculture & Fisheries, Produce Grading Manual Pocket Book). The size categories of weight ranges for sweet potatoes with market opportunities in the UK are Small (100 to 150 grams), medium (150-300grams), large (300-450 grams), Large 2 (450-600 grams), extra-large (600-800 grams) and Grand (800-950 grams).

Packaging Trend: The United Kingdom market prefers a 6kg carton (40x60cm dimension) for display at the retail level. The package should also be attractive and informative about cooking tips, recipes and the health benefits of sweet potatoes.

The recommended temperature and relative humidity for properly cured sweet potatoes and the estimated storage life are as follows:

- Storage temperature: 16°C to 18°C
- Relative humidity: 85% to 95%
- Storage Life: 4 to 7 months

Market Opportunities

The introduction of the Beauregard variety of sweet potato with its red skin orange flesh from the USA will allow Jamaica to expand market share into our main target markets namely the UK and Canada. Jamaica's average annual export to the UK and Canada over the five year period from 2012 to 2016 was 745,200 kg and 518,600 kg respectively. These figures represented only 0.46% and 0.83% of the UK and Canada sweet potato imports in 2016 respectively. The UK based Fresh Produce Consortium, in their quest to diversify their import source of sweet potato, has invited Jamaica to supply 181,818.2 kg (400,000lb) of the Beauregard/Covington variety on a monthly basis.

Jamaica's Competitive Advantage:

Jamaica might be able to supply fresh **Beauregard potatoes** more frequently since unlike the USA, we are not affected by frost. Also, based on the result of a local trial, the Beauregard's time to harvest appeared slightly shorter than the USA's period of harvest.

Markets for the **local sweet potato varieties** are already established in the UK and Canada. The tuber is favoured by the ethnic population in the above mentioned markets. Also, local varieties will not be competing with the UK major sweet potato supplier, the USA as there are distinct product constituent differentials.

Challenges

- Beauregard variety require locally produced certified clean planting material to reduce the cost of production;
- The additional cost to secure infrastructure for the curing of the Beauregard potato.
- The need to meet the UK requirement to be Global Gap Certified, and the
- Contemplated introductory price for locally produced Beauregard orange fresh potatoes in the mainstream market that would allow Jamaica to be competitive.

Appendix 1

All Island Estimates of Sweet Potato Production (kg) By Quarter,
2013 to 2017

Quarter	Kilogram				
	2013	2014	2015	2016	2017
January to March	8,905,000	11,234,200	10,726,000	11,056,000	10,474,000
April to June	11,477,300	12,522,800	12,639,000	13,278,000	10,486,000
July to September	12,555,800	7,220,700	7,401,000	12,028,000	10,309,000
October to December	11,285,900	8,433,800	9,769,000	11,644,000	10,727,000
Total Annual Prod.	44,224,000	39,411,500	40,535,000	48,006,000	41,996,000

Source: MICAFA, Agricultural Marketing Information Division

Appendix 2

Sweet Potato Production, Area Reaped & Yield Per Hectare By Parish, 2016 to 2017

Parish	2016			2017		
	Area Reaped (Hectares)	Yield (kg/Hectare)	Production (kg)	Area Reaped (Hectares)	Yield (kg/Hectare)	Production (kg)
Kgn. & St. Andrew	21.4	15,780	337,700	19.8	15,773	312,300
St. Thomas	39.4	16,000	630,400	50.7	16,000	811,200
Portland	38.3	18,548	710,400	22.9	17,258	395,200
St. Mary	100.9	25,013	2,523,800	90.5	19,487	1,763,600
St. Ann	255.6	16,577	4,237,100	198.3	17,000	3,371,100
Trelawny	88.1	15,000	1,321,500	54.8	14,787	810,300
St. James	37	15,530	574,600	32.9	14,441	475,100
Hanover	34.8	16,316	567,800	35.2	16,000	563,200
Westmoreland	133.2	16,001	2,131,400	129.1	16,000	2,065,600
St. Elizabeth	734.6	16,254	11,940,100	710.3	17,259	12,258,900
Manchester	853.4	18,538	15,820,700	749.6	18,000	13,492,800
Clarendon	295.3	17,517	5,172,800	250.1	16,160	4,041,700
St. Catherine	119.5	17,055	2,038,100	93.3	17,525	1,635,100
Total	2751.5	17,447	48,006,400	2437.5	17,229	41,996,100

Source: MICAFA, Agricultural Marketing Information Division

Appendix 3A

Sweet Potato Export (kg) By Destination, 2012 to 2016

Destination	Kilogram				
	2012	2013	2014	2015	2016
United Kingdom	850,000	771,000	722,000	740,000	643,000
Canada	505,000	625,000	538,000	444,000	481,000
Cayman Islands	73,000	87,000	62,000	78,000	104,000
Other countries	4,000	19,000	10,000	14,000	297,000
Total	1,432,000	1,502,000	1,332,000	1,276,000	1,525,000

Source: MICAFA, FAOSTAT

Appendix 3B

Sweet Potato Export Value (\$US) By Destination, 2012 to 2016

Destination	US\$				
	2012	2013	2014	2015	2016
United Kingdom	1,646,000	2,079,000	1,412,000	1,307,000	1,555,000
Canada	1,007,000	1,261,000	1,063,000	1,025,000	1,038,000
Cayman Islands	179,000	200,000	131,000	189,000.00	253,000
Other countries	10,000	45,000	23000	38,000	301,000
Total	2,842,000	3,585,000	2,629,000	2,559,000	3,147,000

Source: FAOSTAT

Appendix 4

Cost of Production-Farmgate Margins, 2015 to 2017

Year	Cost of Production (\$/kg)	Farmgate Price (\$/kg)	COP/Farmgate Margin %
2015	33	125.23	279.5
2016	46	119.43	159.6
2017	47.5	146.59	208.6

Source: MICAFA, Agricultural Marketing Information Division

Appendix 5

EXPORTERS OF SWEET POTATO

Company/Contact	Vareity of Sweet Potato Required	Address	Telephone/Facsimile
1. McNair Limited Mr. Michael McNair/ Mr. Richard Mcnair	Uplifer	P.O. Box 114 Agro Export Complex 188 Spanish Town Road, Kingston 11	Tel: 923-6576/923-7776 Fax: 923-6105 mcnairltd@cwjamaica.com
2. Edward Tropical Food Mr. Cleveland Edwards	Uplifter	188 Spanish Town Road, Kingston 11	Tel & Fax:758-8584/577-5962 etfoods@yahoo.com
3. Campbell's Green Inc. Ltd Mr. Rupert Campbell	Dor	Top York, Seaforth St. Thomas	Tel: (876)413-0053 8567472/982-4858 campbellsgreen@yahoo.com
4. Choice Packers Co. Ltd. Mr. Uriah Simpson/Couralee Simpson	Uplifter	Spring Ground Dist. Christiana, Manchester	Tel: (876) 964-9807/566-7093 Fax: 964-4072 packerschoice@yahoo.com
5. Belle Tropicals Ms. Idelle Brown/ Edger Stone	Red skin, white or cream flesh type	19-21 Ballater Ave. Kingston, Jamaica	Tel: (876) 926-7427/960-1860 383-8870
6. V & L Chang Export Mrs. Valerie Chang Mr. Leon Chang		130 Dunrobin Sub. Division, Mandeville Manchester	Tel: 962-1784/299-1635/834-7444
7. Kuumba Enterprise Mr. Miguel Kerr Jessica	Uplifer	Bell Plain, Osbourne Store, Clarendon	Tel:(876)533-9448/ 803-7473
8. Tropical Foods/PLG Import Export Ms. Patsy Duncan	Uplifter	Mile Gully, Manchester	Tel: (876) 906-6118 tropicalfoods@hotmail.com
9. Eva Natural Products Mr. Audley Frit/Camille Frit	Uplifter	5 Swaby Crescent Mandeville, Manchester	Tel: (876)4898981/570-8999/570-9000
10. S & S Exporter Mr. Samuel Johnson/S. Johnson	Uplifter	Richmond, Splaudings Manchester	Tel: (876)569-0542,471-2468/964-5149 Fax: 964-9109
12. Du John McNight Export Mr. Omar Powell	Uplifer	New Forest, Manchester	Tel:(876)446-7059

Source: Ministry of Industry, Commerce, Agriculture & Fisheries, Agricultural Service Unit, Sweet Potato Survey

List of Restaurant/Agro Processor Requiring Sweet Potato

Company/Contact	Address	Product/Produce Required	Telephone/Fax/Email
1.Jamaica Flour Mills Mrs. Paula Asphall	209 Windward Road, Kingston 6	Sweet Potato Flour	Tel: (876)928-7221-5 paula.blake@adm.com
2. Campbell Green Inc. Mr. Rupert Campbell	Top York Seaford, St. Thomas, Jamaica W.I	Fresh Sweet potato)	Tel: (876)413-0053 campbellsgreen@yahoo.com
Annilu Ltd Mrs. Annmarie Smith Mrs. Luciene Morrison	38 Range Crescent, Kingston 2, Jamaica W.I	Fresh Sweet potato	Tel: (876)381-0006 (876)857-8247
*Rainforest Seafoods Mr. Andrew Lewis	67 Slipe Road, Kingston 5	Sweet Potato Wedges	(876)920-4230

Source: MICAFA, Agricultural Services Unit, Sweet Potato Demand Survey, April 2018

* Restaurant

Reference

1. Southern Agricultural Economics Association, Orlando, Florida, Marketing Sweet Potatoes to the United Kingdom by Roger A. Hinson and David H. Picha (Louisiana State University), February 2006.
<http://ageconsearch.umn.edu/bitstream/35313/1/sp06hi02.pdf>
2. Ministry of Industry, Commerce Agriculture & Fisheries, Agricultural Marketing Information Division- All Island Estimate of Sweet Potato Production, Annual Farmgate Prices, and Area Reaped, Production.
3. Ministry of Agriculture & Fisheries, Economic and Planning Division- Cost of Production Data.
4. Jamaica Agricultural Marketing Information System (JAMIS) – Farmgate and Retail prices for April 21, 2018.
5. Ministry of Industry, Commerce Agriculture & Fisheries, Rural Agricultural Development Authority, Marketing and Business Profile for Sweet Potato.
- 6.
7. Food and Agriculture organization Statistical Data Base, world export and import data for sweet potato (www.fao.org).
8. Food Storage and Prevention of Infestation Division – Post Harvest Unit, Recommended Storage Temperatures, Relative Humidity and Estimated Storage Life for various Fruits and Vegetables.