Annual Report
2015

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Mission Statement

The mission of the Sugar Industry Authority is to enforce the provisions of the Sugar Industry Control Act, so as to ensure the viability of the sugar industry. This it does by taking a leadership role in the development of the industry and by being a strong and efficient organization with highly motivated and professional employees.
Delay in the Publication of the 2014/2015 Annual Report

The delay in the publication of the 2014/2015 Sugar Industry Authority Annual Report was due to the unavailability of the Independent Auditors’ Report, a key input to the annual report.

In order not to further prolong the delay, a decision was taken to publish the annual report without the inclusion of the Independent Auditors’ Report which will be made available as soon as the auditing process has been completed.
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BOARD OF DIRECTORS FOR THE PERIOD
NOVEMBER 1, 2014 – DECEMBER 31, 2014

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Mr. Robert Henriques - Member
Mr. Allan Rickards - Member
Mrs. Cynthia Sankar - Member
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Mr. Leonard Green - Member
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BOARD OF DIRECTORS FOR THE PERIOD
January 1, 2015 – OCTOBER 31, 2015

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Mr. Robert Henriques - Member
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INTRODUCTION
The Sugar Industry Authority (SIA), which serves as the regulatory body for the Jamaica Sugar Industry, marked its forty-fifth year of existence in 2015; a year which saw important changes being made to the management structure of the organization such as, the abolishment of the executive chairman post and the appointment of a Chief Executive Officer by the newly appointed board headed by Dr. Wesley Hughes, as the move towards executive agency status intensified.

The 2014/2015 sugar crop commenced on January 7, 2015 at the Worthy Park Estates and lasted for 179 days; 49 days less than the 2013/2014 crop.

As a result of being seriously impacted by several challenges such as, drought conditions, low productivity and factory efficiencies and declining cane quality, the industry experienced notable reductions in cane and sugar production during 2014/2015 when compared to 2013/2014.

PRODUCTION
A total of 134,224 tonnes of 96° sugar was produced during the 2014/2015 crop. This represents a 13 % decline from the 154,361 tonnes produced during the previous crop. All six factories experienced some amount of decline in their sugar production, ranging from a high of 21% at Appleton Estate, to a low of approximately 0.1% at the Worthy Park Estates.

Cane ground for sugar production fell by 12%, moving from 1,779,258 tonnes in 2013/2014 to 1,572,367 tonnes. The decline in cane production was a result of several factors, chief among them being the prolonged drought experienced by the island. The illicit burning of canes particularly in the Frome area also played a significant role in this regard as well as in the reduction in cane quality.

The reduction in canes supplied to the factories were much more significant in the case of canes supplied by the estate, which saw a 15% reduction, than for canes supplied by independent farmers where the reduction was only 4%. Of the total amount of canes supplied to the factory, 836,270 tonnes or 53% were supplied by estate farms while 47% or 736,097 tonnes were supplied by farmers.
As shown in Figure 1 below, with the exception of a few intermittent spikes, the reduction in cane supply and sugar production in 2014/2015 is a continuation of the general downward trend over the past ten years.

**Figure 1: Cane & Sugar Production 1994 – 2015**

There was a slight reduction in efficiency in the conversion of canes to sugar with the tonnes cane per tonne sugar (TC/TS) ratio moving from 11.53 in the previous year to 11.71. With the exception of Frome and Golden Grove which experienced significant improvement in their conversion rates, all factories experienced some degree of decline in this regard (See Figure 2 below).
As is shown in Table 1 below, cane production and productivity both fell in 2014/2015. The area of cane reaped declined to 27,530 hectares in 2015 from the 29,700 hectares reaped during the previous year. Productivity declined from 59.89 tonnes cane per hectare (TC/H) in 2013/2014 crop to 57.11 TC/H in 2014/2015.

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cane Ground</td>
<td>1,779</td>
<td>1,572</td>
</tr>
<tr>
<td>Farmers</td>
<td>763</td>
<td>736</td>
</tr>
<tr>
<td>Estates</td>
<td>1,013</td>
<td>836</td>
</tr>
<tr>
<td>96° Sugar Production</td>
<td>154.36</td>
<td>134.22</td>
</tr>
<tr>
<td>Hectares Reaped ('000)</td>
<td>29.70</td>
<td>27.53</td>
</tr>
<tr>
<td>Tonnes cane/hectare</td>
<td>59.89</td>
<td>57.11</td>
</tr>
<tr>
<td>Tonnes cane/tonne sugar</td>
<td>11.53</td>
<td>11.71</td>
</tr>
<tr>
<td>Tonnes Sugar/hectare</td>
<td>5.20</td>
<td>4.88</td>
</tr>
</tbody>
</table>

Table1: Selected Production Statistics for 2014/2015
CANE QUALITY
Cane quality as measured by The Jamaica Recoverable Cane Sugar (JRCS), increased from 9.93 in 2013/2014 to 10.02 in 2014/2015. This was due largely to the improvements in the quality of canes supplied to Frome, Monymusk and Golden Grove. There were relatively small decreases in the JRCS for Appleton and Worthy Park. At Everglades in Trelawny however, JRCS declined by almost 1 unit. Worthy Park recorded the highest JRCS of 11.35, while Golden Grove had the lowest of 9.16. Both Appleton and Everglades recorded their lowest JRCS in five years.

FACTORY EFFICIENCY
The industry average Factory Recovery Index (FRI) – a key measure of factory efficiency – for 2014/2015 was 84.59%, the lowest achieved since 2010. Worthy Park with an FRI of 98.09% was the only factory to achieve the industry standard of 91%. Appleton, Everglades and Golden Grove achieved FRI’s which were only slightly below the industry standard. Monymusk and Frome on the other hand achieved FRIs significantly lower than the industry standard.

Factories that fail to meet the industry standard of 91% will suffer losses in revenue, as farmers are paid assuming the achievement of 91% FRI irrespective of the factories’ actual FRI. Frome and Monymusk as a result of them achieving FRI’s of 75.27% and 70.16% respectively would have suffered significant losses.

CANE AND SUGAR PRICES
The declared price per tonne sugar used in the determination of payment to growers and manufacturers decreased by 12%, moving from $80,020 in 2013/2014 to $70,419 in 2014/2015.

The average price per tonne cane paid to farmers at the factories was $4,001.08. Worthy Park paid out the highest average price per tonne for cane at $4,785.86. The lowest average price per tonne of $3,447.87 was paid at Golden Grove. These prices do not include the price for molasses.

In spite of the reduction in the declared sugar price, the industry continues to benefit from fairly attractive prices in the EU, mainly as a result of changes to the EU Common Agricultural Policy and subsequent termination of the Sugar Protocol. The changes have resulted in a short-fall in the amount of sugar exported to the EU by preferential suppliers. As a result, refiners are competing aggressively and consequently prices have been increasing.
It is widely expected however, that there will be a reduction in future sugar prices when the current three-year contract ends. Also it is expected that prices will fall when the Sugar Protocol ends in 2017.

The division of the payment between cane growers and manufacturers, according to the split of 62% to growers and 38% to manufacturers was as follows:

<table>
<thead>
<tr>
<th></th>
<th>2013/14</th>
<th>2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cane Growers (62%)</td>
<td>$49,612</td>
<td>$43,660</td>
</tr>
<tr>
<td>Sugar Manufacturers (38%)</td>
<td>$30,408</td>
<td>$26,759</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$80,020</strong></td>
<td><strong>$70,419</strong></td>
</tr>
</tbody>
</table>

**TIME EFFICIENCY**

The average grinding time for all factories was 68.56% of the total available time. This represents a marginal decrease compared to the previous year’s figure of 70.12%. Time loss attributed to the factory was 14.93%, which was higher than the 11.82% in 2013/2014. Mechanical stoppages were the main contributor to factory stoppages accounting for 7.60%.

Non-factory stoppages accounted for 19.08% of the time lost at the factories. Short deliveries and premeditated stops were the main contributors to non-factory stoppages.

Worthy Park, operating at 87.54% of the available time was the only factory to have surpassed the generally accepted target for operating time of 85%. All other factories found it difficult to achieve this level of time efficiency.

**MARKETING**

**Export Market**

The volume of sugar exported in 2014/2015 was 78,476 tonnes, this represents an 11% decline when compared to 2013/2014. Of the total sugar exported, 64,571 tonnes valued at US$49,483,000 (gross value) were shipped to the EU, 13,202 tonnes went to the United States at a value of US$ 6,302,000 and the remaining 703 tonnes were shipped to CARICOM and other markets at a value of US$ 393,000.
There was a 3% reduction in the average price per tonne sugar received from exports, decreasing from US$738 in 2013/2014 to US$716 in 2014/2015. While exports to the European Union declined when compared to 2013/2014; exports to the USA and other markets increased.

Exports to the European market offered the best price of US$766 per tonne sugar. Exports to the USA averaged US$477 per tonne and exports to other markets fetched US$559 per tonne.

Figure 3: EU Sugar Export Prices 2000 – 2015

**Domestic Market**

The amount of locally produced raw sugar sold on the domestic market during the 2014/2015 crop was 51,972 tonnes. This represents a 14% increase over the 44,669 tonnes sold for the 2013/2014 crop. It is important to note that there was no importation of brown sugar during the period. Given the changes in the international sugar market, mainly the European Union with falling sugar prices, the local sugar market now offers one of the best prices for sugar.
SUGAR INDUSTRY RESEARCH INSTITUTE (SIRI)

The Sugar Industry Research Institute has the mandate to plan and design research projects and acquire and test technologies that will move the Industry forward, build competitiveness and ensure sustainability. For the year under review, the following summary of activities highlights outcomes of its 2014/2015 work programme.

VARIETY DEVELOPMENT
The department evaluated several promising new sugar cane varieties with potential to be used for commercial sugar and value-added products, including energy production. Among the characteristics considered desirable in the new varieties were tolerance to varied pest conditions, positive response to certain environmental influences, to fertilisers, and other inputs.

One BJ94 Series final trial at Long Pond was harvested and analysed. Two BJ2004 lattice trials, one at Monymusk and the other at Fred M. Jones Estate in St. Thomas, were reaped and analysed. Final trial evaluations were done on seven foreign varieties that were being tested at New Yarmouth. Data collected from the BJ04, BJ99, BJ07, and BJ08 series enabled the development of maturity curves for different agro-ecological zones. The results showed where the approach can be used to aid each grower’s ability to optimise sugar yields through correct timing of planting and harvest.

A total of 3,400 samples were processed using the SpectraCane Analyser donated to the Institute (SIRI) under a special project funded by the European Union. The samples were evaluated for brix, pol, purity, and fibre contents, and the data used to guide the variety breeding and selection process. Ten high fibre sugar cane varieties obtained from the West Indies Central Sugar Cane Breeding Station were established at Appleton Estate in a collaborative effort with SIRI for evaluation in an energy framework.

A green cane harvesting study was conducted at Handal’s Farm in St. Catherine to assess the suitability of different methods for the management of trash generated from mechanical and manual harvest operations. An off-barring (reversed moulding) tool was found to be very practical in managing trash from mechanically-harvested sugar canes.

ENTOMOLOGY
The Entomology Department increased the amount of parasitic wasp, *Cotesiaflavipes*, reared for biological control of the sugarcane borer. Larvae of the borer collected from fields at various locations within the Industry and reared in the laboratory provided the core of borers used as hosts in the rearing of *C. flavipes*. The bulk of wasps produced were released in fields at
Bullhead, Sheckles, and Kinloss. *Cotesiaflavipes* is now well established in Exeter, Monymusk, and is showing persistence at Sheckles.

The other major challenge encountered was an attack of the cane fly at Holland Estate, which prompted mitigation measures against economic losses. All varieties of sugarcane suffered from some degree of attack. The mitigation strategies used included securing the necessary insecticide and crop dusting services prior to the start of the new crop. Natural enemies, including the assassin bug, were active in the field but their numbers were insufficient to curb the severe cane fly attack. The high susceptibility of the variety CR892023 was one of the reasons that led to the call during 2015, for a reduction in hectares of that variety being grown.

**WEED MANAGEMENT & SUGARCANE PHYSIOLOGY**

*Weed Management*

The molecules of popular herbicides are constantly being re-engineered for improved efficacy against rank weeds, and economy of use. The new line of Pilar products containing re-organised molecules of *ametryn*, *diuron* and *metribuzin* was re-introduced to the Industry and, as such, was re-evaluated to verify competence, and to determine a new rate of economic application. The products were used at both pre and post emergence on traditional estates as well as on independent farms. The results indicated that the molecules have not lost effectiveness and as such retain favour among growers. The re-organised molecules brought along improvements in solubility and miscibility, but were less favourable for odour and ease of handling.

*Physiology*

Growth promoting substances, commonly called bio-stimulants, were again tested on selected varieties in specified locations. The purpose was to exploit the potential of the various substances to increase nutrient uptake and improve overall plant performance that can be manifested through building of crop yield, and improvement in quality of plant products. The outcomes reveal instances of progress, but no definite trend in location or variety was detected. Studies will continue.

Substances to promote sucrose accumulation were applied at JWN Farms in St. Elisabeth (Wet West) and Clarendon (Irrigated Southern Plains), and at F.M. Jones and Golden Grove Sugar Estates in the Wet East. The substances, whether herbicides or growth regulators, did improve cane quality and caused a concomitant increase in sugar recovery.
ECONOMICS AND STATISTICS

The Economics and Statistics Department analysed data collected from Industry stakeholders during the annual Cane Yield Survey (CYS) and Cost of Production (COP) survey programmes.

The CYS covered 45% of total hectares reaped, 49% of the canes produced, and provides an insight into farm performance. The Industry average cane yield was 56.02 Tc/ha and represents a 7.79% decline from the 60.75 t/ha productivity level of 2014. Total area harvested declined by 7.3% from 29,705 in 2014 to 28,760 hectares. The major sugar cane varieties grown were BJ7015, BJ7465, BJ7504 and BJ78100.

Data derived from the surveys yielded information that the rainfall distribution and totals were less than adequate for good cane growth. In most cases the averages were less than the 30-year mean for the areas. The Central Uplands, Dry North Coast, and the Irrigated Plains were most affected. Conversely, there was above-average rainfall in the Wet West and Wet East during some months of the harvest season that resulted in instances of depressed juice quality.

There were many fields that yielded at levels sufficient for sustainability. Worthy Park performed best with an average 8.97 ts/ha, even though approximately 9% below that of 2014. New Yarmouth, under drought-stricken conditions had dismal productivity of 4.66 ts/ha, even though cane quality was good. Among the areas that showed increases in productivity were Frome Estate at 75.53 Tc/ha (4%) and Bernard Lodge at 63.30 Tc/ha (75%). Productivity at Worthy Park Estates declined to 72.23 Tc/ha (9%).

Industry benchmarks for good sugar productivity for the Irrigated, and Rain-fed areas are 8.50 ts/ha and 7.50 ts/ha, respectively. Break-even levels are 4.25 ts/ha for Irrigated, and 4.00 ts/ha for Rain-fed areas. These yields were only adequate to cover farm operating costs in 2015. Industry statistics showed that the average price paid for sugar declined by 12%, resulting in a spiralling decrease in cane price. Everglades showed the largest decline (20.9%), but the lowest, and below average payment (J$3,727.44) was received at Golden Grove.

Harvesting rates varied by factory area and showed a spread from 28% of total cane production costs at Monymusk to approximately 45% at Worthy Park. High costs were attributed to increased fuel costs among other contractor demands. Mechanical harvesting rates were higher than manual cutter rates.

From the COP, establishment costs per hectare and cost per tonne cane were estimated at $281,800.20 and $3,548.56 for the Rain-fed, and $299,633.65 and $3,696.57 for the Irrigated areas. Cultivation activities accounted for 70% of the costs. Break-even yield for the Irrigated
areas was estimated at 62.77 Tc/ha; for the Rain-fed areas was 78.00 Tc/ha (except at Worthy Park where the break-even yield was 59.00 Tc/ha). Returns on Investment (ROI) for farm operations showed reasonable net returns with high productivity above the break-even cane yields and corresponding good JRCS values of 10.00 and above.

**AGRICULTURAL ENGINEERING**

Over the period under review, the department completed GPS/GPS-based mapping for irrigation and drainage designs implemented at Newton Farms and the monitoring of irrigation and drainage operations in St Catherine and Clarendon plains.

One officer was trained in Life Cycle Assessment (LCA) by the Ministry of Science, Technology, Energy and Mining (MSTEM) and the Organization of American States (OAS), through the Department of Sustainable Development and the Centre for Life Cycle Analysis and Sustainable Design, (CADIS). This workshop was held in Kingston and a part of the ‘Biofuels Outreach programme in support of the implementation of the US/Brazil MOU for Biofuels Development in Third Party Countries.

Members of the department participated in the European Union (EU) funded green cane harvesting (GCH) project lead by the Sugar Transformation Unit (STU) for the investigation of trash management options at Handal’s farm, St Catherine. This exercise was conducted over several weeks on 10 hectares of land. The study revealed the need for identifying equipment suitable for the raking and baling of mechanically harvested canes for use as a source of fuel.

In response to a request from the Frome harvesting committee, a review of harvesting rates for canes supplied to the Frome Factory during 2014/15 crop was done and rates were recommended for 2015/2016 crop.

**CENTRAL LABORATORY**

The Central Laboratory successfully maintained both the ISO 17025 accreditation mark for its methods of sugar analyses and the approved wastewater testing facility status. The Laboratory continued its progress towards the expansion of the scope of accreditation to include soil methods. During the period, the laboratory conducted its monthly meetings, quarterly evaluations of its management system as well as the annual management review meeting. The laboratory also underwent the annual surveillance and verification visit from Jamaica National Agency for Accreditation (JANAAC), which resulted in the retention of its accreditation status for the sugar methods. Currently the laboratory is involved in three testing schemes, namely, Sugar PT Scheme offered by LGC Laboratories, UK, and WEPAL scheme for plant tissue and soils.
During the year the laboratory partnered with the Rural Agricultural Development Agency (RADA) in conducting a four-part seminar series entitled “Precision Nutrition.”

**Test Methods in Use at the Laboratory**
The Central laboratory continues to provide analytical testing service to meet the demands of the Sugarcane Industry. Figure 1 below, provides a breakdown of the analytical tests performed during the 2015 period. For this period the laboratory analysed a total of 9,700 samples.

![Figure 1: Breakdown of analytical test performed for 2015](image)

**Laboratory Training**
The laboratory continued to focus on internal training activities which ensured that the staff remained current and knowledgeable about the quality management system as well as all test methods. It also provided training for factory laboratory personnel, and facilitated partnership with The University of the West Indies and The University of Technology with internship for three students. Internships were also offered to three high school students who were exposed to different analytical procedures. The laboratory continued it partnership with the SRC to facilitate the annual “Science Month Tours,” and science students from four high schools from across Jamaica toured the laboratory and participated in hands-on activities.

**EU-ACP Funded Projects**
The EU-ACP Sugar Research Programme came to an end in December 2015. The objectives of the two projects, ‘Development of a Phosphate Index for Soils’ and ‘Development of a Method for Dextran’ were fully met.
TECHNICAL SUPPORT SERVICES
The Technical Support Services Department carried out its core functions of monitoring the operations of the Core Laboratories in the analyses for grower payment; maintaining all laboratory equipment; providing general maintenance services to Core laboratories, sugar factories, sugar warehouses, the sugar pier; and to SIRI and SIA. The department’s mandate also covers the performance of compliance audits, the monitoring of sugar factory operations, and the provision of technical advice as required.

In keeping with the mandate to identify new and emerging technologies that will benefit the industry, the Institute welcomed the Managing Director of Jeffress Engineering Pty Ltd, Australia, and manufacturers of JEFFCO InfraCana II Automated Cane Analyser Model IC02. The technology used in the analysis of sugarcane for cane payment was described in details to Industry stakeholders at a seminar hosted by the Institute. Several research activities were concluded during the period and the findings were presented at the 78th Annual Conference of the Jamaica Association of Sugar Technologists (JAST) and at the Final Dissemination Workshop of the European Union’s Sugar Research Programme held in Mauritius.

THE CANE EXPANSION FUND (CEF)
In 2006, as a response to changes to the European Union Sugar Regime, including a 36 percent reduction in the price paid for African, Caribbean and Pacific (ACP) sugar entering the EU market, the Government of Jamaica approved a strategy to restructure the sugar cane sector. The Revised Jamaica Country Strategy for the Adaptation of the Sugar Industry: 2006 to 2020 (JCS II) was approved in September 2008. Subsequently, the Revised Sugar Area Development Programme (SADP II) was developed to guide the implementation of JCS II.

SADP II consists of three (3) Components, as follows:

- **Component 1:** Strengthening Commercial Competitiveness (Sugar Cane Sector);
- **Component 2:** Socio-Economic Development of Sugar Dependent Areas;
- **Component 3:** Supporting the National Policy Environment.

In support of Component One (1), the Cane Expansion Fund was established to provide capital injection by way of loans and grants to the sugar cane sector to boost productivity and strengthen the commercial competitiveness of the industry.

Since the inception of the CEF the fund has seen some J$1.8 Billion injected with outflows in the form of loans and grants to registered farmers and contractors in the sugar cane industry.
Operations since December 2014
The CEF administrative unit formally established in December 2014 has made several improvements to the system in terms of loan administration, collections and delinquency management, which are key mandates of the Unit. With a cadre of nine employees the CEF was able to carry out various activities up to the end of 2015; which includes approving loans for harvesting maintenance, field maintenance, planting/replanting and drip irrigation.

With the uncertainties that cloud the industry some farmers are unwilling to take up loan offers and others have diverted from cane planting coupled with the poor weather conditions for the past two years, the CEF has manoeuvred some turbulent times.

The CEF has taken on several projects which include approval of 85 new loan applications for land clearing, planting/replanting and drip irrigation which approximates to J$112M with 279.69 hectares of cane being planted. Other outflows include disbursements on previous cane planting projects, field and harvesting equipment maintenance. See table 1 below:

Table 1 Loan Application/Approval

<table>
<thead>
<tr>
<th>Loan Type</th>
<th># of applications/projects</th>
<th>Hectares</th>
<th>Loan approval Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Planting/Replanting **</td>
<td>85</td>
<td>457.27</td>
<td>104,186,220.00</td>
</tr>
<tr>
<td>Land Clearing</td>
<td>19</td>
<td>77.348</td>
<td>2,776,440.00</td>
</tr>
<tr>
<td>Drip Irrigation **</td>
<td>2</td>
<td>11.729</td>
<td>6,495,167.43</td>
</tr>
<tr>
<td>Harvesting Equipment Repairs and other Maintenance</td>
<td>21</td>
<td>--</td>
<td>4,767,736.70</td>
</tr>
<tr>
<td>Ongoing projects (Feb 15-Mar 16)</td>
<td>45</td>
<td>--</td>
<td>82,562,258.00</td>
</tr>
<tr>
<td>**TOTAL</td>
<td>172</td>
<td></td>
<td>200,787,822.13</td>
</tr>
</tbody>
</table>

** Total include grants
Collections
An approximate total of J$249.5M was collected from the J$486.5M expected payments. The reduction in collections for the 2015 crop is largely due to the two year prolonged drought and illicit fires faced by farmers throughout the island. With these conditions in mind the government took the decision for the CEF to collect only 80 percent of the total payment due. See Table 2 below. Total collections averaged 49 percent which is a decline over last year’s collection that averaged 78 percent. See Chart 1 below.

Table 2 2014-2015 Crop Actual Collection by Factory Area

<table>
<thead>
<tr>
<th>FACTORY</th>
<th>TOTAL AMOUNT DUE FOR PAYMENT</th>
<th>TOTAL COLLECTIONS</th>
<th>TOTAL AMOUNT OUTSTANDING</th>
<th>% Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appleton</td>
<td>62,856,115.38</td>
<td>50,739,532.77</td>
<td>12,116,582.61</td>
<td>81</td>
</tr>
<tr>
<td>Everglades</td>
<td>50,549,136.27</td>
<td>10,369,273.68</td>
<td>40,179,862.59</td>
<td>21</td>
</tr>
<tr>
<td>Golden Grove</td>
<td>58,009,557.68</td>
<td>24,221,937.29</td>
<td>33,787,620.39</td>
<td>42</td>
</tr>
<tr>
<td>Frome</td>
<td>61,547,958.36</td>
<td>16,280,472.59</td>
<td>45,267,485.77</td>
<td>26</td>
</tr>
<tr>
<td>Worthy Park</td>
<td>125,889,795.64</td>
<td>68,311,117.56</td>
<td>57,578,678.08</td>
<td>54</td>
</tr>
<tr>
<td>Monymusk</td>
<td>126,819,602.11</td>
<td>66,635,098.24</td>
<td>60,184,503.87</td>
<td>53</td>
</tr>
<tr>
<td>Equipment</td>
<td>886,875.15</td>
<td>873,994.42</td>
<td>12,880.73</td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>486,559,040.59</strong></td>
<td><strong>237,431,426.55</strong></td>
<td><strong>249,127,614.04</strong></td>
<td><strong>49</strong></td>
</tr>
</tbody>
</table>

It must be noted that due to a ministerial decision only 80 percent of the total amount due for payment was requested.
GLOBAL SUGAR SITUATION

For 2014/2015 world sugar consumption was almost in equilibrium with output. After four years of supply considerably outstripping demand, the gap was significantly reduced to just about 406,000 tonnes; coming from as much as 6.5 million tonnes in 2013/2014 and a record 10.4 million tonnes in 2011/2012.

World production decreased by 4.0 million tonnes to 169.1 million tonnes with the EU (-2.5 M tonnes), China (-2.2M tonnes), Brazil (-1.3M tonnes) and the Ukraine (-0.6) experiencing significant declines. This was however, counterbalanced partially by India (+2.8 M tonnes), Pakistan (+0.7M tonnes and the US (+0.5M tonnes) experiencing record output when compared with 2013/2014.
During the year world sugar consumption experienced a modest increase of 1.2% over the previous year moving from approximately 167 million tonnes to 169 million tonnes.

The volume of sugar traded globally rose to 59.6 million tonnes; an increase of approximately 2 million tonnes when compared to 2013/2014.

A slight increase (less than 0.5 million tonnes) saw world sugar stocks moving to 104.2 million tonnes or 62% of world consumption during the period under review.

Due to the stocks accumulated over the previous four years of surplus, world sugar prices remained under significant pressure during 2014/2015. The annual average of the International Sugar Agreement (ISA) daily price for raw sugar fell to 13.43 cents per lb coming from 17.00 cents per lb in 2013/2014; a 21% drop.

**2015/2016 Global Outlook**  
According to the International Sugar Organization (ISO) 2015/2016 should see a 2.3 million tonnes production deficit; the first in six years. This deficit is expected to increase to 6.7 million tonnes in 2016/2017.  
However, according to the ISO, despite the projected return to a global deficit in 2015-16, the prospects of a significant recovery in prices will be dampened by the global surplus built up over the last several years.
### Table 1: Cane Milled (Tonnes) 2014 & 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frome</td>
<td>251,454</td>
<td>254,502</td>
<td>505,956</td>
<td>227,731</td>
<td>199,250</td>
<td>426,981</td>
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<tr>
<td>Monumysk</td>
<td>169,052</td>
<td>101,126</td>
<td>270,178</td>
<td>155,787</td>
<td>97,628</td>
<td>253,415</td>
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<tr>
<td>Everglades</td>
<td>67,161</td>
<td>64,119</td>
<td>131,280</td>
<td>67,473</td>
<td>65,508</td>
<td>132,981</td>
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<tr>
<td>Golden Grove</td>
<td>112,781</td>
<td>142,243</td>
<td>255,024</td>
<td>77,517</td>
<td>119,114</td>
<td>196,631</td>
</tr>
<tr>
<td>Appleton</td>
<td>293,896</td>
<td>75,906</td>
<td>369,802</td>
<td>219,687</td>
<td>95,065</td>
<td>314,752</td>
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<tr>
<td>Worthy Park</td>
<td>121,889</td>
<td>125,129</td>
<td>247,018</td>
<td>88,075</td>
<td>159,532</td>
<td>247,607</td>
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<tr>
<td>TOTAL</td>
<td>1,016,233</td>
<td>763,025</td>
<td>1,779,258</td>
<td>836,270</td>
<td>736,097</td>
<td>1,572,367</td>
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Table 2: Tonnes 96° Sugar Produced: 2010-2015

<table>
<thead>
<tr>
<th>FACTORIES</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
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<tbody>
<tr>
<td>Frome</td>
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<td>41,686.00</td>
<td>34,278.00</td>
<td>36,700.00</td>
<td>38,603.00</td>
<td>32,785.00</td>
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<tr>
<td>Monumysk</td>
<td>17,004.00</td>
<td>28,668.00</td>
<td>26,329.00</td>
<td>18,501.00</td>
<td>23,091.00</td>
<td>19,775.36</td>
</tr>
<tr>
<td>Everglades</td>
<td>1,457.00</td>
<td>3,984.00</td>
<td>6,674.00</td>
<td>11,724.00</td>
<td>11,103.00</td>
<td></td>
</tr>
<tr>
<td>Golden Grove</td>
<td>12,587.00</td>
<td>16,123.00</td>
<td>15,524.00</td>
<td>14,107.00</td>
<td>19,403.00</td>
<td>16,018.00</td>
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<tr>
<td>Appleton</td>
<td>29,025.00</td>
<td>31,033.00</td>
<td>29,794.00</td>
<td>29,513.00</td>
<td>33,890.00</td>
<td>26,915.00</td>
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<tr>
<td>Worthy Park</td>
<td>20,903.00</td>
<td>22,083.00</td>
<td>21,680.00</td>
<td>22,701.00</td>
<td>27,650.00</td>
<td>27,628.00</td>
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<tr>
<td>TOTAL</td>
<td>121,806.00</td>
<td>139,593.00</td>
<td>131,589.00</td>
<td>128,196.00</td>
<td>154,361.00</td>
<td>134,224.36</td>
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</table>
Table 3: Cane Quality – Jamaica Recoverable Cane Sugar (JRCS) 2010 – 2015

Note: Since the inception of the core sampling method of testing cane quality in 1991, cane suppliers have been paid by the Jamaica Recoverable Cane Sugar (JRCS) as measured by the core sampling operation.

Table 4: Factory Recovery Index (FRI) 2009 – 2015
Note: Cane payments are now based on a standard Factory Recovery Index (FRI) of 91%. Factories below 91% are required to make up for their inefficiency while those above gain benefits. The FRI is derived from the core sample testing of the sugar cane entering a factory and this measure has replaced a former measure of Overall Efficiency which was derived in the Factory, that is to say, the sugar is measured coming into the factory rather than going out.

<table>
<thead>
<tr>
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<tr>
<td>Frome</td>
<td>26.16</td>
<td>41.47</td>
<td></td>
<td>9.64</td>
<td>15.24</td>
<td>16.52</td>
<td>26.23</td>
<td>1.43</td>
<td>1.34</td>
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<td>Monymusk</td>
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<td>46.47</td>
<td></td>
<td>25.96</td>
<td>32.79</td>
<td>8.60</td>
<td>13.68</td>
<td>4.37</td>
<td>2.01</td>
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<tr>
<td>Everglades</td>
<td>41.26</td>
<td>42.44</td>
<td></td>
<td>13.01</td>
<td>14.04</td>
<td>28.25</td>
<td>28.40</td>
<td>1.52</td>
<td>2.79</td>
</tr>
<tr>
<td>Golden Grove</td>
<td>45.16</td>
<td>32.63</td>
<td></td>
<td>12.10</td>
<td>16.21</td>
<td>33.06</td>
<td>16.42</td>
<td>5.50</td>
<td>6.42</td>
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<tr>
<td>Appleton</td>
<td>25.19</td>
<td>27.53</td>
<td></td>
<td>9.94</td>
<td>7.91</td>
<td>15.25</td>
<td>19.62</td>
<td>6.05</td>
<td>4.20</td>
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<tr>
<td>Worthy Park</td>
<td>13.58</td>
<td>12.46</td>
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<td>3.69</td>
<td>2.77</td>
<td>9.89</td>
<td>9.69</td>
<td>5.68</td>
<td>5.99</td>
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<tr>
<td>TOTAL</td>
<td>31.04</td>
<td>34.01</td>
<td></td>
<td>12.41</td>
<td>14.93</td>
<td>18.63</td>
<td>19.08</td>
<td>4.05</td>
<td>3.75</td>
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</table>

Table 5: Time account 2013 & 2014 (time loss as a % of total available time)

Total time loss (time not available for milling) is broken down into causes for stoppages related to (1) "factory" such as factory breakdown (11) "non-factory" such as weather, lack of cane or strikes and (111) time devoted to weekend cleaning and expressed as a percentage of total available time.
<table>
<thead>
<tr>
<th>DESTINATION</th>
<th>2011 QTY (TONNES)</th>
<th>2011 VALUE (USD) ($'000)</th>
<th>2012 QTY (TONNES)</th>
<th>2012 VALUE (USD) ($'000)</th>
<th>2013 QTY (TONNES)</th>
<th>2013 VALUE (USD) ($'000)</th>
<th>2014 QTY (TONNES)</th>
<th>2014 VALUE (USD) ($'000)</th>
<th>2015 QTY (TONNES)</th>
<th>2015 VALUE (USD) ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>94,441</td>
<td>51,119</td>
<td>103,118</td>
<td>95,341</td>
<td>82,405</td>
<td>71,086</td>
<td>77,457</td>
<td>59,406</td>
<td>64,571</td>
<td>49,483</td>
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<tr>
<td>USA</td>
<td>16,283</td>
<td>13,187</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11,016</td>
<td>5,883</td>
<td>13,202</td>
<td>6,302</td>
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<tr>
<td>Other</td>
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<td>33</td>
<td>36</td>
<td>41</td>
<td>64</td>
<td>78</td>
<td>36</td>
<td>51</td>
<td>703</td>
<td>393</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>64,339</td>
<td>103,154</td>
<td>95,382</td>
<td>82,469</td>
<td>71,164</td>
<td>88,509</td>
<td>65,340</td>
<td>78,476</td>
<td>56,178</td>
</tr>
</tbody>
</table>

Table 6: Sugar Exports by Destination 2011 – 2015