

# SUGAR INDUSTRY AUTHORITY

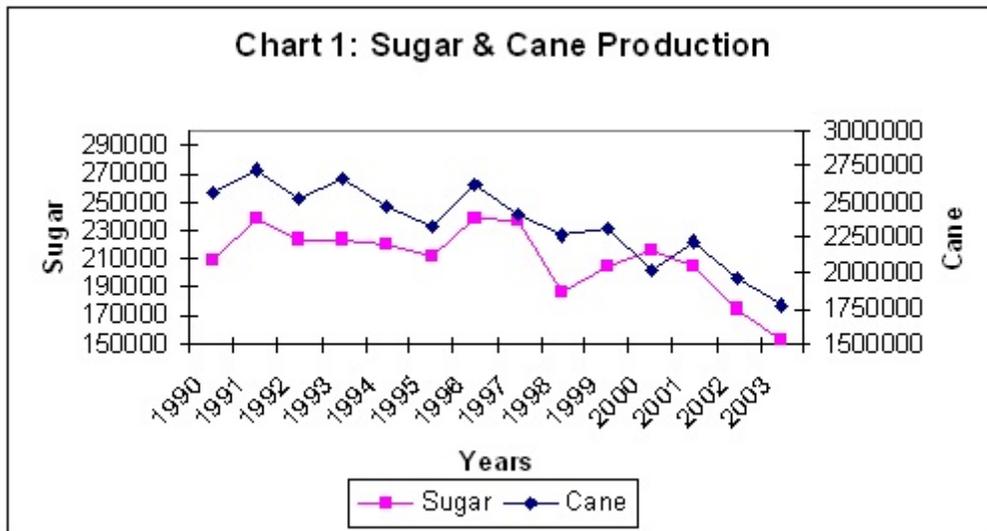
## ANNUAL REPORT 2003

### INTRODUCTION

The 2002/03 crop commenced on December 8, 2002 at Frome and ended on July 30, 2003 at Trelawny Sugar Company (Long Pond). The duration of the crop was 235 days compared with 247 days for the previous crop. The performance of the crop was adversely affected by unseasonable weather, illicit cane fires, cane lost in St Catherine as a result of the construction of highway 2000, inadequate replanting in the previous year and low cane yield which resulted in insufficient throughput and high factory downtime. The performance was further exacerbated by relatively poor cane and sugar quality.

### PRODUCTION

Sugar production for the crop was 152, 536 tonnes of 96 sugar, 12.7 per cent below the comparative figure of 174, 640 tonnes for the previous year (Table 2). This level of production was the lowest recorded in 62 years, being less than the 159, 105 tonnes produced in 1940. The volume of cane crushed, excluding cane to the distilleries, was 1,775,725 tonnes, 9.7 per cent less than last year's 1,965,439 tonnes (Table1).

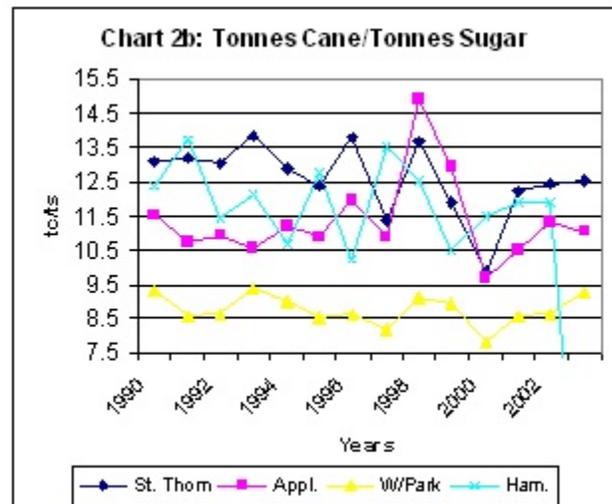
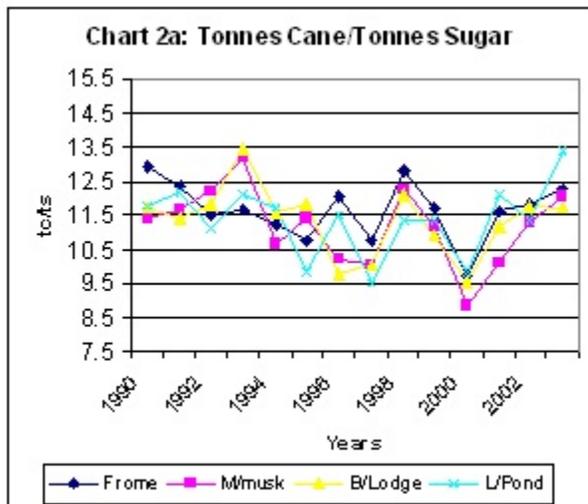


### Selected Production Statistics for the 2002 & 2003 Crops

	2002	2003
Cane Milled ('000 tonnes)	1,966	1,776
Farmers	852	749
Estates	1,114	1,027
96° Sugar Production ('000 tonnes)	174.6	152.5
Hectares Reaped ('000)	34.2	30.40
Tonnes cane/hectare	57.43	58.42
Tonnes cane /tonne sugar	11.25	11.65
Tonnes sugar/hectare	5.10	5.02

The lower level of sugar production is explained mainly by the lower volume of cane crushed and a deterioration of the tc/ts ratio from 11.25 in 2001/02 to 11.65 in 2002/03.

Two factories, Trelawny Sugar Company (Long Pond) and Worthy Park crushed a higher volume of cane than the previous year. Trelawny Sugar Company, consequent on the closure of Hampden, produced more sugar for the comparative period. Worthy Park experienced a decline in sugar production as a result of a deterioration in its tc/ts ratio from 8.61 in 2002 to 9.26 in 2003.



## CANE QUALITY

Performances, measured by Factory Recovery Index (FRI) and the Jamaica Recoverable Cane Sugar (JRCS), showed mixed results. JRCS declined from 10.05 in 2001/02 to 9.57 in 2002/03 while FRI improved from 88.44 to 90.49 during the same period. Three factories, Frome, Appleton and Worthy Park surpassed the standard FRI level of 91.00 units with Frome showing significant improvement in this regard. Three factories, Frome, Bernard and Appleton, improved their JRCS performance in 2002/03 (Tables 3 & 4).

## PRICES

The price paid to growers and millers was significantly higher than last year's due mainly to increased earnings from exports to the EU which was boosted by the strength of the euro. Growers and millers were paid \$27,787 per tonne of sugar, an increase of 44.0 per cent over the \$19,300 per tonne paid in 2001/02. The division of the payment between cane growers and manufacturers according to the established split of 62% to growers and 38% to manufacturers was as follows:

		2001/02	2002/03
<b>Cane Growers</b>	<b>(62%)</b>	<b>\$11,966.00</b>	<b>\$17,228.00</b>
<b>Sugar Manufacturers</b>	<b>(38%)</b>	<b>\$ 7,334.00</b>	<b>\$10,559.00</b>
		<b>\$19,300.00</b>	<b>\$27,787.00</b>

## TIME LOSS

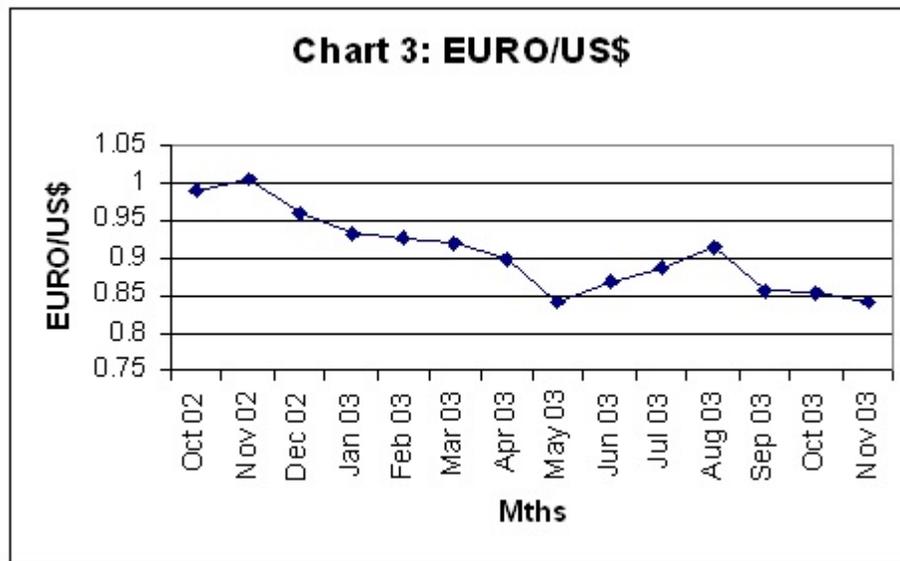
The actual grinding time for all factories was 54.36 per cent, an improvement of 1.6 per cent over the 53.51 per cent achieved in 2002. Non-factory stoppages increased from 28.96% to 31.70 per cent and continued to be a major negative factor in the drive to attain higher levels of efficiency. The major causes of the low utilisation rate continued to be the lack of cane, unfavourable weather conditions and mechanical stoppages. Stoppages due to weather actually decreased from 13.38 per cent in 2001/02 to 7.47 per cent in 2002/03, while stoppages due to "out-of-cane" increased from 7.96% in 2001/02 to 15.22 per cent in 2002/03. Four factories, Worthy Park, Frome and Appleton and St. Thomas Sugar Co., surpassed the 50 per cent mark in actual grinding time (Table 5).

## MARKETING

The total (gross) value of sugar exports in 2002/03 was US\$74,379,855 and this was 11.3 per cent above the value of US\$66,808,785 in 2001/02. The volume of sugar exported was 128,537 tonnes, of which 124,190 tonnes of Protocol sugar went to the United Kingdom at a value of US\$71,993,347. The amount of 4,295 tonnes was shipped under the SPS arrangement at a value of US\$2,354,058. No sugar was exported to the USA because of the low level of local production (Table 7).

The euro continued to strengthen vis-à-vis the US dollar in 2003 and this resulted in significantly higher export earnings per tonne sugar sold to the United Kingdom. Earnings per tonne moved from US\$471.20 in 2001/02 to US\$579.70 in 2002/03, while the earnings per tonne for Special Preferential Sugar increased from US\$488.75 per tonne to US\$548.09 per tonne. The base price of 520.37 for protocol sugar remained the same.

The industry benefitted by some US\$13.73 million from the sale of protocol and SPS sugar as a result of the increase in the average price of sugar in US\$ terms in those markets. Farmers and processors benefitted by approximately US\$9.60 per tonne cane or US\$111.7 per tonne sugar.



### LOCAL SALES OF RAW SUGAR

The amount of local raw sugar sold on the domestic market during the 2002/03 crop was 17,908 tonnes, compared with 38,080 tonnes in 2001/02. When sale of imported brown sugar was added to the above, the comparative figures were 53,278 tonnes and 56,069 tonnes respectively. The volume of locally produced raw sugar consumed within a crop year is dependent on the level of domestic production because the first objective of the industry is to supply sugar to the preferential markets. Thus, the volume of imported raw sugar increases in times of low production, as was the case in 2002/03.

### INDUSTRY REVIEW

**Green Paper #3** on the industry was completed and presented to Parliament in April 2003. It summarizes the conclusions and recommendations of a Committee which was established to harmonize the findings and recommendations of three previous studies.

The paper notes the desire of the Government of Jamaica to have in place a viable, efficient and competitive sugar industry which will contribute to rural development and social stability and is sustainable in the new global environment. It states that none of the previous studies recommended the abandonment of the sugar in Jamaica.

However, it identifies a number of issues that must be considered and action taken if the industry is to survive. These include the need to transform the present operations of the industry into well-run commercial entities, to quantify and project demand for Jamaica's raw sugar output in the medium to long term, to assess the importance of independent farmers and workers to the industry and to provide training in the transformed businesses.

During the period under review attention continued to be focused on critical areas of the industry. These include :

**Markets:** The preservation of our preferential markets in the European Union and the United States.

**Production Volume and Costs:** Increasing our sugar production to 290,000 tonnes by 2005 in the most cost-effective manner.

**Field Development:** The Certified Seed Cane and Ratoon Maintenance Programmes continued to be implemented. Other areas of focus include the control of livestock damage and illicit burning of cane.

**Factory Development:** As a part of the drive to increase efficiency in the industry the Hampden Sugar Factory was closed. It did not commence operations for the 2002/03 crop. The factory had accumulated heavy operational losses because it was inefficient and the cost to refurbish it was prohibitive. Canes from the Hampden area were milled at Trelawny Sugar Company (Long Pond). The Hampden area will continue to grow sugar cane for processing at Trelawny Sugar Company.

**Diversification:** Several products, other than raw sugar, that can be produced from cane have been identified and research is being carried out on some of them. During the period under review priority study was given to Ethanol production, cogeneration and refining of sugar.

**SUGAR INDUSTRY RESEARCH INSTITUTE**  
**Agricultural Services Division**

**Varieties**

The Institute continued to promote expansion to new areas of varieties emerging from the selection programme through the Certified Seed Cane Project during 2003. This, the third year of the programme, saw a much better island-wide distribution of varieties such as J9501, BJ7938, BJ78100, BJ82156 and BJ8252 as a direct result of this scheme funded by the SIA. Use of seed cane generated by the programme was again unsatisfactory as with very low replanting of commercial fields by farmers, much of the material ended up being factory-processed.

Observations at New Yarmouth on the growth of CP85 384, the variety that transformed the Louisiana industry, suggests that while exhibiting features such as exceptional tillering and good juice quality, it is not well adapted to the more tropical environment of Jamaica. Early growth proved quite vigorous but increases in height ceased by about 9 months and stalks were extremely thin and trashy. The variety was passed on to the Breeding Station where hopefully the desirable traits may be bred into future varieties for the region.

**Pests and Diseases**

Work continued in the rearing and release of the imported parasite, *Cotesia flavipes*, in the biological control programme against the stalk borer. Field collection confirmed the presence of the parasite in New Yarmouth and Monymusk but at levels much lower than shortly after establishment during the 1980s. During 2003 strains of the parasite were imported from Guyana and crossbred with local strains prior to release in the field.

Meanwhile, field surveys showed damage from the borer remained at unacceptably high levels, particularly in the irrigated plains. The programme of augmenting field supplies of the parasite remains ongoing until satisfactory levels of field parasitism are re-established.

The Institute also embarked on a programme of collaborative testing of sugar cane for the presence of Ratoon Stunting Disease (RSD). Through an agreement between the Cane Breeding Station and the French Research Station known as CIRAD in Guadeloupe, a project was launched to reassess Jamaica's status with regard to this disease. CIRAD provided training for an officer of the Institute in techniques of sampling. An industry-wide survey was started in December at Frome and Appleton; other areas will be sampled in the New Year. Samples collected and prepared in the approved manner were being sent for analysis at CIRAD. Previous surveys had failed to establish the presence of RSD in Jamaica, although this is a disease long affecting nearly every sugar cane industry in the world. Results should be obtained in 2004.

**CFC Project**

Discussion between SIRI and the Common Fund for Commodities (CFC), begun in 1999, culminated with the signing in April 2003 of an agreement to undertake a project entitled, "Enhancing the Viability and Competitiveness of Caribbean Sugar Industries." The project involves the participation of Trinidad and Tobago, the only other member of the CFC in the Caribbean. SIRI

will be the Project Executing Agency, with Caroni Ltd of Trinidad being a Collaborating Agency, while the International Sugar Organisation (ISO) is the Supervisory Body (representing the commodity).

The three-year Project is valued at US\$2.5 million with the CFC providing \$1.5 million in the form of a grant, the balance being counterpart funding, which will mainly be in the form of contributions in kind.

**Project Objective and Components:** The objective of the project is to increase productivity among farmers on small holdings. It has the following components:

- 1) establishment of seed cane nurseries serving small farming districts
- 2) getting farmers to join in evaluating newer varieties
- 3) Establishing seed cane nurseries
- 4) Farmer participatory evaluation of varieties
- 5) Farmer training in improved agronomic and management practices
- 6) Setting up and operation of a pilot centre pivot irrigation scheme among contiguous small cane farming holdings
- 7) Adaptive research on factors affecting yield decline
- 8) Evaluation of farm modules to establish requirements for viability
- 9) Dissemination of project results

Much of the Institute's efforts will be geared at successfully implementing this project starting in 2004.

### **Entomology Workshop**

The Institute successfully staged the 5<sup>th</sup> Entomology Workshop of the International Society of Sugar Cane Technologists at the Holiday Inn, Montego Bay, during the week of November 23-29, 2003. Held under the theme, "New Techniques in Pest Management," the event drew delegates from Australia, Thailand, Mauritius, South Africa, Argentina, Chile, Ecuador, Venezuela, Guyana, Dominican Republic, USA and Jamaica. The Natural Products Institute of the University of the West Indies were co-hosts. Major sponsorship was provided by Syngenta, Bayer Crop Science and J Wray & Nephew Ltd.

Following three days of in-house discussion, the group was taken on a two-day field tour which included visits to Appleton Estate and the Sugar Industry Research Institute.

### **Quality-Based Cane Harvesting**

The Institute continued to push for the adoption of a system of payment that encourages delivery of better quality canes during harvesting. A decision was taken to launch a pilot scheme at St Thomas Sugar Co in the 2003/04 crop. Preparatory work to that end was done towards the end of the year.

## **Other Activities**

Other aspects of the Institutes work are reflected in the following papers presented at the Annual Conference of the Jamaica Association of Sugar Technologists:

- Laboratory methods for the analysis of soil phosphate - *Dr. M Wilson and C Fearon*
- Cane Quality at Frome 2001-2003 - *P Wright, W Fray and N Gordon*
- Inserting quality considerations into payment for cane harvesting - *T Falloon*
- Improving cane estimation within SCJ farms - *V Wright, A McKenzie and M Bennett-Easy*
- Site specific fertilizer management at Bernard Lodge - *C Fearon*
- Highlighting credit needs of the cane growing sector - *C Woolery*
- Optimising the application efficiencies of centre pivots - *L White and P Gavin*
- Reduced tillage: Double row machine - *L Agra and K Chandon*
- The discriminating effect of the environment on clonal selection and productivity - *M Bennett-Easy*
- Aspects of ratoon productivity: A case study - *D Stone, M Bennett-Easy and H Brown*
- Pictorials - Preliminary results of new herbicides in sugar cane agriculture - *P Wright*
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## **Factory Services Division**

### **1.0 Engineering**

#### **1.1 Preventative Maintenance**

This programme was designed and developed to assist factories to increase their time utilisation. Since the equipment involved is relatively expensive it was decided to centralise the service at SIRI and make it available to factories as required. The services made available were:

##### **1.1.0 Laser Alignment**

Laser alignment of steam turbines was carried out at St. Thomas Sugar Company, Worthy Park, Trelawny Sugar Company (Long Pond) and Frome.

In order to cope with the workload resulting from requests for assistance several factory personnel were trained to use the laser alignment instrument.

The programme was considered to be successful overall, as there were major reductions in the vibration levels at all factories where this service was offered.

##### **1.1.1 Dynamic Balancing - Boiler Fans**

Dynamic balancing of all boiler fans was carried out at St. Thomas Sugar Company, Bernard Lodge, Trelawny Sugar Company, Monymusk, Worthy Park and Frome.

##### **1.1.2 Dynamic Balancing - Centrifugals**

This was done at Frome, Worthy Park, and Appleton, due to the excessive vibration and imbalances which had been observed for this equipment.

### **1.1.3 Vibration Measurements**

A number of vibration measurement surveys was carried out and analysed at Worthy Park and Appleton on engines and alternators.

### **1.1.4 Ultrasonic Thickness Testing**

This service was utilised by Monymusk, Worthy Park and Bernard Lodge on boiler tubes and drums.

### **1.1.5 Ultrasonic Flaw Detection**

This was carried out at St. Thomas Sugar Company on cane yard, milling and boiler equipment shafts. This procedure, which was done for the first time by SIRI, had excellent results.

### **1.1.6 Core Samplers**

With the units into their thirteenth year of operation the need for major repairs and replacement of parts increased significantly.

The main items replaced were valve coils, pressure hoses, seals, shredder motor and gate cylinders, carriage wheels and axles, core tubes and transformers.

## **1.2 Engineering – Instrumentation**

### **1.2.1 Core Laboratory**

The Department faced many problems because of the age of equipment in the core laboratories. Staff members had to repair and service the ovens at Frome, Bernard Lodge, Trelawny Sugar Company and Worthy Park. All other equipment was serviced, repaired and calibrated.

### **1.2.2 Scales**

A newly acquired clamp-on flow meter was used to check the juice scale at Appleton.

The bagging scale at St. Thomas Sugar Company was repaired and calibrated. This involved replacement of the load cell.

Installment of the servo balans was completed but it could not be commissioned due to excessive vibration from the sugar elevator. As soon as this condition is corrected, final commissioning will be undertaken.

Both cane scales at Appleton were damaged by lightening during the out of crop period. These units were repaired, serviced, calibrated and returned to operation.

All three scales at St. Thomas Sugar Company were serviced, calibrated and certified by the Bureau of Standards. The scale at Monymusk was calibrated, commissioned and also certified by the Bureau.

Repairs were also done on both scales at the Ocho Rios pier. The truck scale was re-calibrated and the servo balans scale piston and air supply regulator were serviced.

The Trelawny Sugar Company's truck scale was re-calibrated and certified by the Bureau of Standards. The servo balans and air-compressor were taken out of service for the replacement of new copper-tube fittings.

### **1.2.3 Boilers**

The level controller and transmitter were re-programmed and calibrated at the Trelawny Sugar Company's factory. The original level transmitter was damaged and had to be replaced. Steam flow recorder and drum pressure controllers were also serviced.

Gauges were sent in from Worthy Park and St. Thomas Sugar Company for repairs and calibration.

## **2.0 Sugar Technology**

### **2.1 Central Laboratories**

Routine analytical work was carried out on wastewater, sugar, juice and molasses samples. Research into the use of several methods for the analysis of starch in raw sugars was undertaken and the 'modified starch method' from Domino Sugars was chosen as it gave best reproducibility. This method is now used routinely.

#### **2.1.1 Evaluation of Laboratory Methods**

The laboratory participated in the collaborative testing of raw sugar for pol and moisture organised by the Sugar Association of London. Statistical analysis showed that the results obtained by SIRI - pol 99.11 and moisture 0.17% - were not significantly different from those obtained by the other participants viz., 99.1% and 0.19% respectively.

#### **2.1.2 Replacement of Lead Subacetate in Polarimetry Experiments**

Investigation into the use of Octapol to clarify sugar and molasses solutions for polarimetry experiments continued. The results showed that Octapol was suitable for clarifying sugar solutions and the results were not statistically different from those obtained using lead subacetate. Studies indicate that Octapol can also be used to clarify molasses solutions for pol determination. However, the correlation with results obtained for lead subacetate was

not as good as that obtained for pol determinations on sugar.

Investigations into the use of NIR for pol determination are continuing. This method is suitable for determining pol in juices. However, the biggest drawback is the length of time that is needed to filter the samples. If this process could be speeded up then this method could be used to determine the pol of cane juice routinely. The use of NIR to determine sugar pol was studied extensively and a report made at JAST. This method is being used presently for analysis of daily raw sugar samples.

### **2.1.3 Experiments are continuing into the usefulness of NIR in determining molasses pol.**

#### **2.1.4 Ash Determination**

Conductivity measurements instead of gravimetric determinations now used routinely to determine levels of ash in raw sugars.

#### **2.1.5 Analysis of Dextran in Cane Juice Molasses and Raw Sugar**

A method validation study of the DASA method was carried out and a report made to JAST. The laboratory participated in a collaborative study organized by Midland Chemicals to determine dextran values in raw sugars and molasses samples using their test method. A report will be made at the ICUMSA meeting in Atlanta in April 2004.

#### **2.1.6 The laboratory is in the process of seeking ISO certification for its sugar analyses.**

This process should be completed by June 2004.

## **3.0 Industry Training**

### **3.1 Core Laboratory**

Personnel from the Factory services Department conducted training sessions for all core laboratory staff and several factory employees.

Training Seminars were conducted at the following factories on the dates given:

St. Thomas	37 623
Worthy Park	37 626
Long Pond	37 634
Bernard Lodge	37 641
Monymusk	37 647
Hampden	37 714

The team also participated in the delivery of courses on pan boiling and reduction of dextran formation in raw sugar factories.

### **3.2 Boiler Plant Performance and Flue Gas Analysis Training Seminar**

A two-day training seminar was presented in which personnel from the Sugar Industry Research Institute and Frome Sugar Factory participated. The instructor was Mr. Noel Osbourne. The topics covered included:

- Factors affecting boiler plant performance
- Combustion of bagasse
- Flue gas composition
- Flue gas analysis Practical exercise

### **3.3 SIA/SIRI Summer Training Programme Year 2003**

The SIA/SIRI summer training programme for factory personnel commenced on July 21, 2003 and was completed on August 4, 2003 - Four (4) courses were held.

Breakdown of the courses with participants is as follows:

<b>Factory Courses</b>	<b>No. of Participants</b>
Electronic Instrumentation	14
Preventative Maintenance	21
Cane Preparation & Milling	17
Steam Generation	18
<b>Total</b>	<b>70</b>

All courses were well attended. All the estates except Trelawny Sugar Company participated.

### **3.4 Evaluation**

The majority of participants found the courses to be very helpful and felt that the training programme would enhance their performance on the job. The subject areas covered were thought to be adequate and at the correct level with a good balance between theory and practice.

### **3.5 Pan Boiling Course at Frome**

A Pan Boiling course was held at Frome in January at the start of the 2002/2003 sugar crop and was conducted by Mr. Barry Mobbs. The course had pan boilers from Trelawny Sugar Company, St. Thomas and the host factory, Frome. The course was well received and brought new techniques of sugar boiling to the attendees. The most important of these techniques was the use of a microscope to identify “false grains” during boiling. The second course was held at Bernard Lodge. Pan boilers from Monymusk attended.

### **3.6 C34M UWI Summer Work Programme**

The C34M work study programme is a joint effort undertaken by SIA/SIRI and the University of the West Indies on an annual basis. The programme seeks to expose young chemists to chemical industry processes. For the 2002/2003 crop one student was taken to study at Bernard Lodge sugar factory to investigate Octapol as a replacement for lead subacetate as a clarifying agent. The study was done by Ms. Tavia Riggon with assistance from the central laboratory staff.

### **3.7 Appleton Factory Audit**

An audit of the Appleton sugar factory was conducted upon request and the findings revealed numerous cane-yard losses being experienced. Various parameters were measured including pol and dextran levels of sugar, final molasses and core juices.

## **4.0 Environmental Monitoring and Management**

### **4.1 Pollution Control Programme**

The sampling and analyses of wastewater from factories were done twice for the crop year 2002/2003. The results from the analyses showed that most of the parameters tested were still out of compliance with the standards set by NEPA. However, it must be pointed out that work has been done at some factories to reduce the levels of pollutants in their effluents.

### **4.2 Emergency Response Plans**

The drafting of an Emergency Response Plan (ERP) for Trelawny Sugar Company is now seventy percent (70%) complete. Trelawny Sugar Company and St. Thomas Sugar Company are the only factories that are yet to complete an ERP.

### **4.3 Pollution Release and Transfer Register**

The second phase in the development of a Pollutant and Transfer Register (PTR) started in May 2003. A Committee comprising NEPA, SIRI, National Solid Waste Management Authority, Pesticides Control Authority, and other private sector companies, was established to continue the process of development.

### **4.4 Environmental Codes of Practice for the Sugar Industry**

The Sugar Industry Research Institute (SIRI), in collaboration with the National Environment and Planning Agency (NEPA), has embarked on a project to develop a Code of Practice (COP) for the industry. This COP will address both factory and field operations and is the first step toward the development of an Environmental Management System (MS) for the sugar industry.

The project is being funded by the Environmental Action Programme (ENACT)/NEPA under the “private sector clean technology project” and the SIA. The estimated time for the development of the project is seven (7) to eight (8) months.

### **4.5 Coliform Bacteria in Wastewater**

The investigation of high levels of coliform bacteria in the wastewater at Appleton Estate continued. Sampling and analyses of the river water, cane wash-water and process house waste-water were carried out.

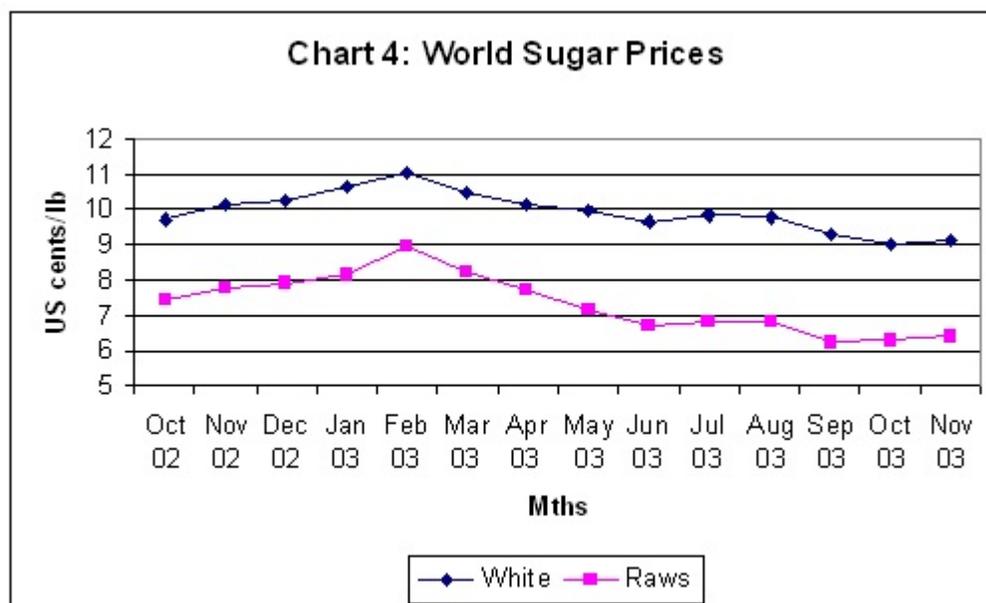
## OUTLOOK FOR 2003/04

Given that the performance of the 2002/03 crop was quite poor, significant improvement is expected for the 2003/04 crop. Sugar production for the upcoming crop is projected to increase by some 24 per cent over last year's crop. The preliminary crop estimate is based on the assumption that good quality cane will be available in reasonable quantities; that factories will operate efficiently; that there will be adequate finances to carry out operations smoothly; that there will be stable industrial relations climate and favourable weather conditions during the reaping period

### WORLD SUGAR SITUATION

World sugar production in 2002/03 is estimated at 148.8M tonnes raw value, far above initial expectations and significantly higher than the 138.5M tonnes produced in the previous season. The main factor behind the sharp increase was the unexpectedly high sugar production in South America and Asia.

In western Europe sugar production reached 21.3M tonnes in 2003, up on the previous year's production of 18.6M tonnes. The largest producer in that region was the European Union where output recovered to 18.2M tonnes from 16.1M tonnes in 2001/02. Brazilian production and exports determine the state of the world sugar market and nothing happens without Brazil. Given the high returns in the previous two years there is little hope of a fall in cane production.



## **THE EUROPEAN UNION**

Under the EU's sugar regime production is categorized into three segments:

- A-quota sugar for domestic consumption,
- B-quota sugar for traditional export markets, and
- C-sugar which has to be exported outside the EU without the help of subsidies.

The aim of the current sugar regime is to maintain a certain price level for EU producers and beet growers by:

- tight quotas on EU production;
- export surplus output under a subsidy;
- import quotas on ACP preferential imports;
- high protective tariffs, excluding non-preferential imports;
- provide marginal aid to refiners so that they can full EU guaranteed price for ACP imports;
- fixed price support for white sugar.

Since the establishment of the WTO increased pressures have been brought on the EU to reform the sugar regime. In 2002 Australia, Brazil and Thailand lodged a complaint at the WTO against the support measures aimed at refiners, claiming that the EU is dumping subsidized sugar on the world market, unfairly displacing exports from other countries and depressing world sugar prices.

The pressure continued in 2003 when, on September 23, EU Farm Commissioner, Franz Fischler, tabled three key options for change to the sugar regime.

The first option, referred to as the "status quo" scenario, consists of keeping intact the current common organization, based on flexible quotas and price intervention.

The second option involves significant reduction in EU internal price along with the phased abolition of national production quotas.

The third option for reform represents a complete liberalization of the EU sugar market. This means that the domestic EU price support system would be abolished and production quotas would be abandoned.

The preferred option of the LDCs is the retention of the EU sugar regime, which provides them with duty-free access and guaranteed prices. For the ACP countries, which are heavily dependent on sugar, options 1 and 2 are bad news. They argue that it is vital for the EU to continue its declared plan of allowing increasing amounts of sugar imports under its Everything But Arms (EBA) initiative. They further argue that liberalization of the EU sugar regime would remove the preferential aspect of the EBA access and would make the EU just another destination for sugar at world market prices.

Little progress is likely on choosing the preferred option for several months as most EU states have not yet decided which option they prefer. Farm Commissioner Fischer indicates that he hopes to present a formal proposal, which would be discussed by ministers sometime in 2004. The EU sugar regime is not due to expire until June 2006.

### **The EBA Initiative**

The EU is attempting to modify some aspects of its trading relations with the ACP countries. Towards his end Trade Commissioner Pascal Lamy initiated the Everything But Arms (EBA) plan in 2000 to provide unrestricted duty-free access to the world's Least Developed Countries (LDCs) into the EU markets for all goods except arms. The LDCs have asked for increased and accelerated access at remunerative prices. They point out that the EBA initiative would only be of value to them if price preferences are maintained.

### **Enlargement of the EU and Implications for the ACP**

In May 2004 membership in the EU will increase from 15 to 25. The expansion involves mainly Eastern European countries of which eight were part of the USSR. They are the Czech Republic, Poland, Hungary, Slovakia, Slovenia, Malta, Cyprus, Estonia, Lithuania and Latvia.

Of the ten countries, six are producers of sugar with Poland and Slovakia being very large producers. Some analysts believe that the impact of the enlargement may be marginal given last year's trade balance amongst EU countries, those countries joining and the non-EU countries. They believe that the enlargement will not affect the volume of imports from the ACP but rather from outside the ACP/EU grouping.

Issues that will have to be addressed include quotas for the new members and the intervention price to be paid for beet sugar which will in turn affect the price paid for raw sugar imported into the EU.

At the end of June heads of state and government of the EU member states will select a new Commission president who will have until November to create a new Commission which would likely include the 10 Commissioners from the new member states who have already been selected.

It is difficult to predict the nature of the decisions that might be taken in the immediate pre and post election periods.

## APPENDIX TABLES

**TABLE 1: CANE MILLED (TONNES) 2002 & 2003**

FACTORIES	2002			2003		
	Estates	Farmers	Total	Estates	Farmers	Total
Frome	321,850	346,451	668,301	316,409	333,311	649,721
Monymusk	144,901	110,597	255,498	143,588	85,117	228,705
Bernard Lodge	183,490	48,036	231,526	162,834	33,602	196,436
Long Pond	70,109	41,700	111,809	76,159	63,917	140,076
St. Thomas	66,591	69,921	136,512	62,790	58,868	121,659
Appleton	225,515	76,140	301,655	177,104	53,201	230,305
Worthy Park	78,489	120,222	198,711	88,370	120,453	208,823
Hampden	22,666	38,791	61,457	-	-	-
TOTAL	1,113,612	851,858	1,965,470	1,027,255	748,470	1,775,725

**TABLE 2: TONNES 96° SUGAR PRODUCED: 1998-2003**

FACTORIES	1998	1999	2000	2001	2002	2003
Frome	61,449	59,420	59,108	64,078	56,534	53,117
Monymusk	37,680	40,780	42,247	32,559	22,666	19,028
Bernard Lodge	29,503	31,237	29,325	28,193	19,672	16,798
Long Pond	12,173	12,345	15,600	8,967	9,873	10,475
St. Thomas	8,096	9,342	13,389	10,615	10,968	9,685
Appleton	5,630	20,369	23,291	30,706	26,707	20,882
Worthy Park	24,772	23,162	25,188	22,339	23,066	22,552
Hampden	6,830	7,533	8,239	7,021	5,154	-
TOTAL	186,133	204,188	216,387	204,478	174,640	152,536

**TABLE 3: CANE QUALITY-JAMAICA RECOVERABLE CANE SUGAR (JRCS) 1998-2003**

FACTORIES	1998	1999	2000	2001	2002	2003
Frome	9.24	9.27	10.72	9.45	9.90	8.96
Monymusk	8.85	9.39	11.81	10.95	9.86	9.71
Bernard Lodge	9.03	9.49	10.93	10.27	9.42	9.55
Long Pond	10.14	9.77	10.93	9.51	10.54	9.24
St. Thomas	8.73	10.24	11.49	9.84	9.66	9.66
Appleton	8.38	8.55	10.62	10.07	9.73	9.94
Worthy Park	10.85	11.17	10.81	12.24	11.84	9.26
Hampden	9.49	9.71	12.85	10.59	10.48	-
TOTAL	9.30	9.52	11.21	10.10	10.05	9.57

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) 1998-2003**

FACTORIES	(Rating) (2003)	1998	1999	2000	2001	2002	2003
Frome	3	90.25	95.31	95.62	90.73	85.23	91.14
Monymusk	5	94.83	96.64	95.71	91.83	90.58	87.55
Bernard Lodge	4	92.58	96.56	95.94	87.51	90.13	89.54
Long Pond	6	88.41	90.38	93.93	87.54	86.67	84.90
St. Thomas	7	84.95	82.39	88.70	84.73	83.06	83.14
Appleton	2	81.34	93.18	97.03	95.24	91.19	92.55
Worthy Park	1	101.47	99.90	99.51	100.03	98.02	98.12
Hampden		79.01	82.53	87.25	80.64	79.23	-
TOTAL		91.46	94.53	95.32	91.11	88.44	90.49

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 5: TIME ACCOUNT 2002 & 2003  
(TIME LOSS AS A % OF TOTAL AVAILABLE TIME)**

FACTORIES	Total Time Loss		STOPPAGES					
			Factory		Non-Factory		Cleaning	
	2002	2003	2002	2003	2002	2003	2002	2003
Frome	37.41	46.89	19.45	11.46	13.48	29.60	4.48	5.83
Monymusk	52.84	58.72	8.69	12.16	39.77	43.27	4.38	3.29
Bernard Lodge	56.57	62.24	14.18	7.63	39.48	52.03	2.91	2.58
Long Pond	50.88	57.22	20.85	30.48	25.38	22.85	4.65	3.89
St. Thomas	55.58	54.79	29.66	18.42	21.13	30.37	4.79	6.00
Appleton	45.31	43.52	11.76	12.48	32.22	28.72	1.33	2.32
Worthy Park	26.49	31.80	3.28	3.43	17.19	21.63	6.02	6.74
Hampden	60.17	-	34.13	-	21.08	-	4.96	-
TOTAL	46.49	50.31	17.53	13.95	24.81	31.70	4.15	4.66

Total time loss (time not available for milling) are 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 6: SUGAR EXPORTS BY DESTINATION 1999-2003**

DESTINATION	1999		2000		2001		2002		2003	
	QUANTITY (TONNES)	VALUE (US\$'000)								
European Union	166,153	90,262	168,857	81,474	156,861	70,174	138,089	65,326	128,485	74,348
USA	11,345	5,518		2,259		1,251		1,448	-	-
Other	24	14	40	25	46	29	56	35	52	32
TOTAL	177,522	95,794	168,897	83,758	156,907	71,454	138,145	66,809	128,537	74,380