# SUGAR INDUSTRY AUTHORITY

## Annual Report 2009

## INTRODUCTION

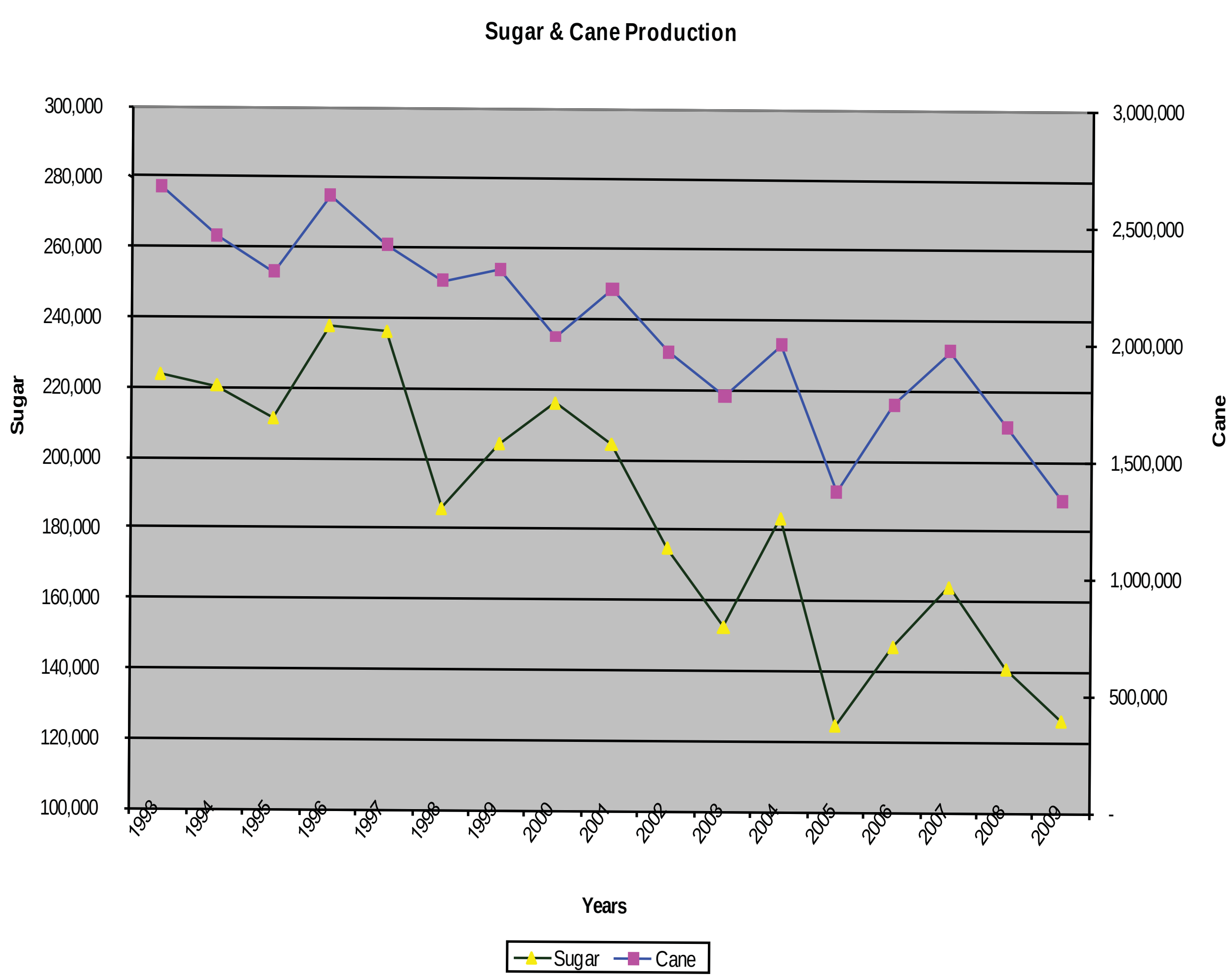
The 2008/2009 crop commenced at Appleton Sugar Factory on December 30, 2008 and ended at Long Pond Sugar Factory on July 27, 2009. The duration of the crop was 210 days compared with 219 days for the previous crop, a decrease of 9 days. The crop experienced several challenges which had a negative impact on production. The scheduled divestment of the Government factories created severe uncertainly and as result funding for out- of- crop repairs was delayed. Several factories did not complete their out - of - crop repairs on time which affected their scheduled start date.

The Bernard Lodge factory did not reopen for the 2008/2009 crop and canes formerly sent to that factory were diverted to other factories.

## PRODUCTION

Sugar production for the 2008/09 crop was 125,818 tonnes of 96° sugar, 10.68 per cent below the comparative figure of 140,872 tonnes produced in the previous year. The volume of cane crushed, excluding cane to distilleries, was 1,334,579 tonnes, 19 per cent below the 1,652,047 tonnes produced in the previous year. (Table 1)

**Chart 1**

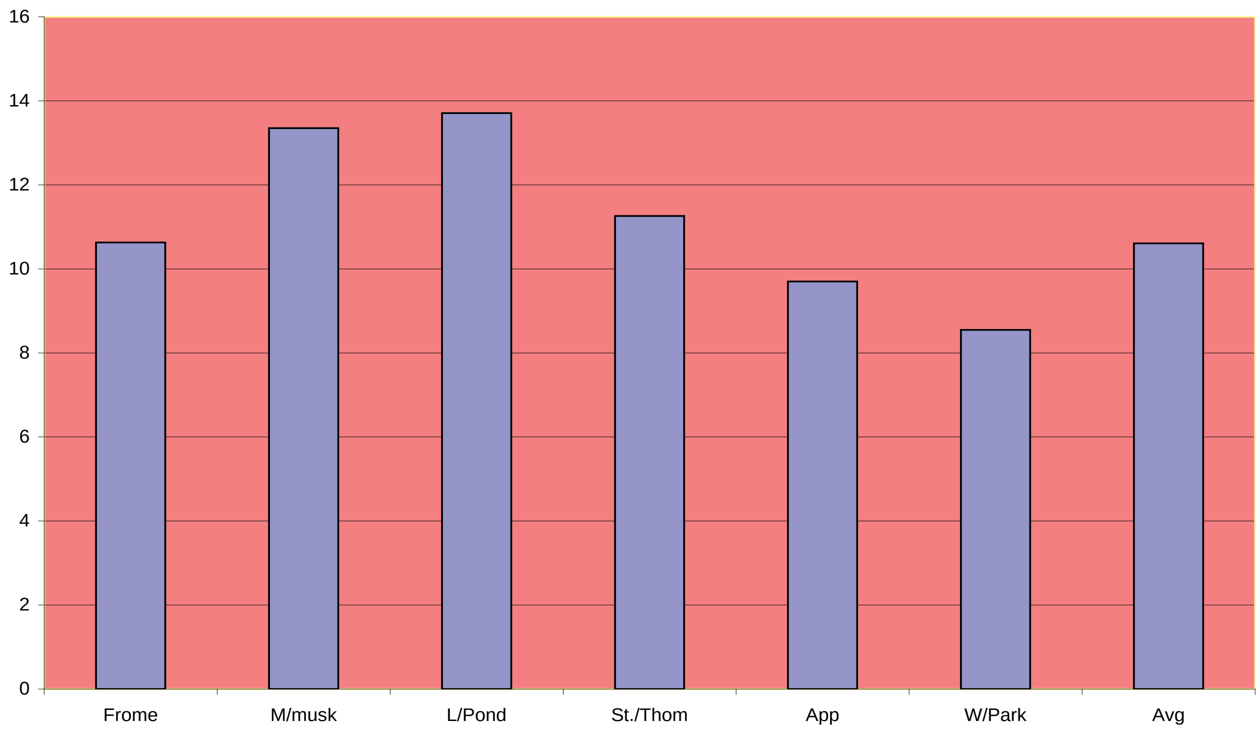


| SELECTED PRODUCTION STATISTICS FOR THE 2008 & 2009 CROPS | | |
|---|---|---|
| | **2008** | **2009** |
| Cane Milled ('000 tonnes) | 1,652 | 1,335 |
| Farmers | 644 | 515 |
| Estates | 1,008 | 820 |
| 96º Sugar Production ('000 tonnes) | 140.9 | 125.8 |
| Hectares Reaped ('000) | 29.89 | 26.30 |
| Tonnes cane/hectare | 55.27 | 50.75 |
| Tonnes cane /tonne sugar | 11.73 | 10.61 |
| Tonnes sugar/hectare | 4.71 | 4.78 |

The tonnes cane per tonne sugar (TC/TS) ratio of 10.61, was the best recorded in recent years and represents a significant improvement when compared with previous year's ratio of 11.73. The period December to March was relatively dry and good for reaping, thus positively affecting the TC/TS ratio. The TC/TS ratio was also positively affected by the marginal increase in the Factory Recovery Index (FRI).

**Chart 2**

**TC/TS**




## CANE QUALITY

Both the Factory Recovery Index (FRI) and the Jamaica Recoverable Cane Sugar (JRCS), recorded increases in 2008/09 crop with the FRI increasing from 88.21 in 2007/08 to 88.82 in 2008/09. The JRCS increased from 9.97 in 2007/08 to 11.09 in 2008/09. Three factories, Worthy Park, Appleton and Frome, surpassed the standard FRI of 91.00 units.

Long Pond recorded the lowest with a FRI of 67.71 (Table 4). All factories with the exception of Long Pond, which saw a marginal decline, recorded an increase in the JRCS. Frome recorded the largest increase with a JRCS of 11.34. (Table 3)

## PRICES

Despite the reduction in the price of sugar sold to the EU, the price paid to growers and millers continued on its upward trend. They were paid $46,424 per tonne sugar, an increase of 7% over the $43,344 paid in 2007/08. This increase was made possible mainly as a result of the continued strengthening of the euro in which sales of our sugar are denominated. As was the case in 2007/08 the industry received its highest price paid to date. 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:

| | | 2007/08 | 2008/09 |
|---|---|---|---|
| Cane Growers | (62%) | $26,873 | $28,783 |
| Sugar Manufacturers | (38%) | $16,471 | $17,641 |
| | | $43,344 | $46,424 |

## TIME LOSS

The actual grinding time for all factories was 57.14 per cent of total available time. This was an improvement compared to the previous years figure of 48.73.The improvement was due mainly to better weather conditions during the reaping season. This resulted in a reduction in Non-factory stoppages, which decreased from 31.77 percent in 2007/08 to 22.53 percent in 2008/09. Mechanical stoppage of 10.71 per cent was the main factor responsible for factory stoppages of 20.33 percent. All the factories found it difficult to achieve the industry standard operating time of 85 percent. Appleton was the best performing factory with an operating time of 74.06 percent. (Table 5)

## MARKETING

The total (gross) value of sugar exports in 2008/09 was US$75,659,227 which represented a 28 % reduction when compared to the previous year's figure of US$104,662,366. The volume of sugar exported was 120,210 tonnes of which 120,180 tonnes of protocol sugar went to the United Kingdom at a value of US$75,631,177. A total of 30 tonnes was shipped to the Cayman Island. No sugar was shipped under the Complementary Quota arrangement or to the United States.

The reduction in exports earning was mainly due to the lower than normal exports which was a result of the low production for the current crop. Export earning was also affected by the accumulated 14.3 % reduction in the price of sugar received from the European Union. The price reduction is consistent with the new EU sugar regime which stipulates a 36 % reduction over four years in the price of sugar exported under the sugar protocol. The price per tonne sugar received from exports decreased from US$769 in 2007/2008 to US$629 in 2008/2009.

Chart 3(a)

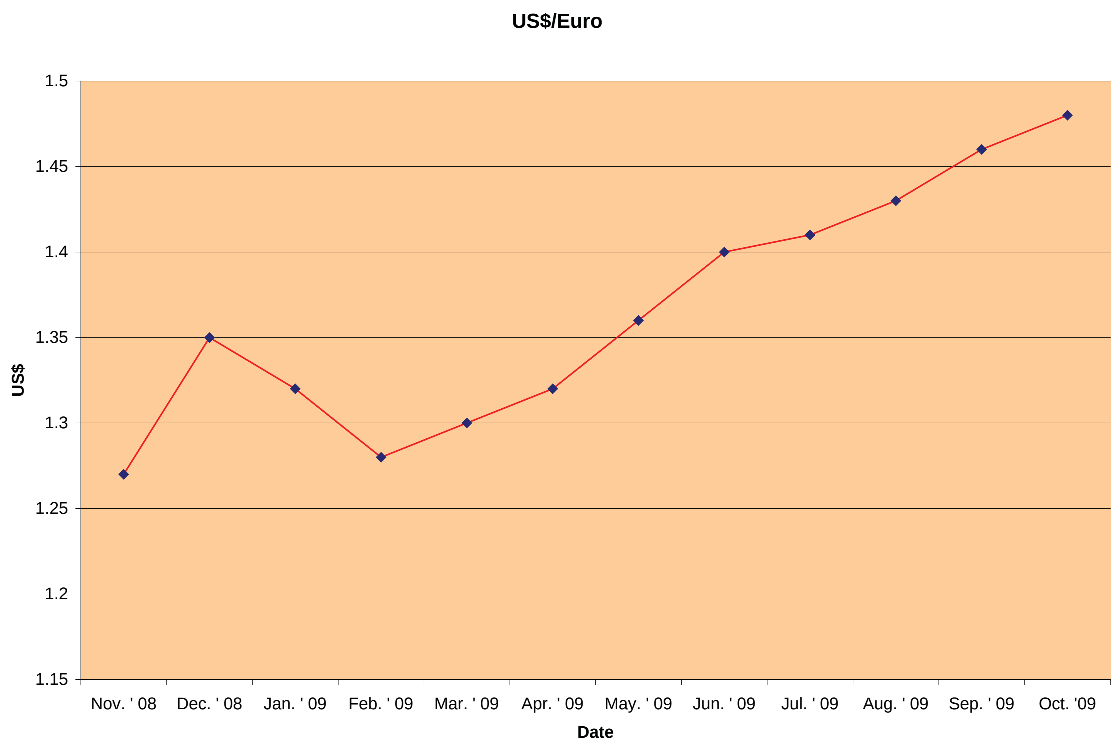
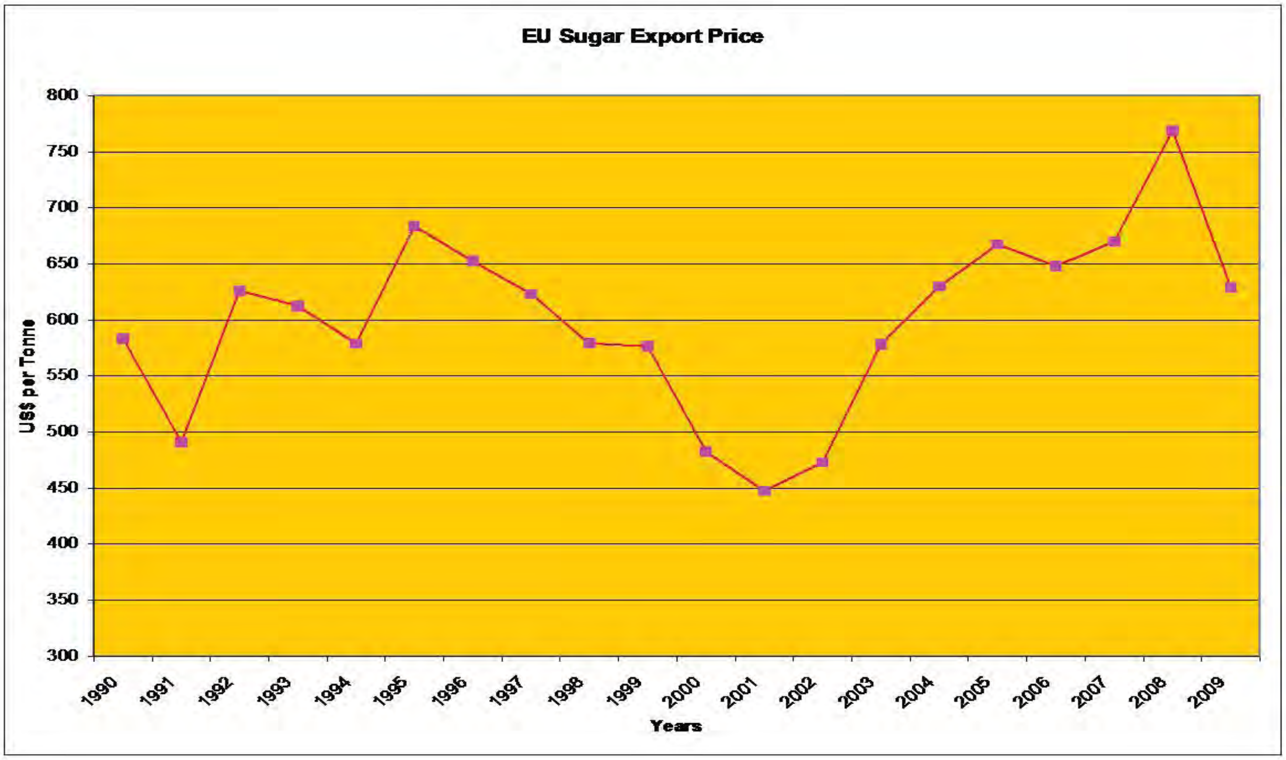



**Chart 3(b)**



## LOCAL SALES OF RAW SUGAR

The amount of locally produced raw sugar sold on the domestic market during the 2008/2009 crop was 86 tonnes compared with 189 tonnes for 2007/08 crop. When the sale of imported brown sugar was added to the above, the comparative figures were 46,877 and 52,941 tonnes respectively. The volume of locally produced raw sugar consumed within a crop year is usually dependent on the level of domestic production because the first objective of the industry is to supply sugar to the preferential markets. The logically inverse relationship between these two variables will change with the dismantling of the sugar protocol.

## SUGAR CANE PROCESSING COURSE AT UWI

Sugar Cane Processing has for several years been one of the industrial processes selected for detailed study by the Department of Chemistry at the University of the West Indies. The course, which is held in the second semester in collaboration with SIA/SIRI, consists of lectures, tutorials, work study and a field trip. Mr. Ludlow Brown of the SIA conducted the lectures and tutorials.

During the period under review two students participated in the work-study component of the programme. They were engaged in projects which involved investigating the effectiveness of the enzyme alpha-amylase in removing the adverse effect of starch during sugar processing, in addition to the comparative evaluation of methods for hydrolyzing the cellulose and hemicelluloses components of bagasse to fermentable sugars.

The projects were planned by Dr. Maureen Wilson and carried out at the Department of Chemistry , UWI under the supervision of Messrs. Leighton Campbell and Sydney Roman of SIRI and Dr. Ian Thompson of the UWI.

The project on the alpha amylase treatment of factory process streams formed the basis of a paper which was presented at the seventy second annual conference of the Jamaica Association of Sugar Technologists.

## SUGAR INDUSTRY RESEARCH INSTITUTE

The Sugar Industry Research Institute (SIRI), as the technical and advisory arm of the Authority, continues to provide advice on technical issues which may be contained in policy directives from the Ministry of Agriculture to which the SIA as a statutory body reports. It also provides technical support to the SIA in respect of the latter's regulatory responsibility to ensure that the industry adheres to prescribed standards governing its operations. These standards, particularly those relating to the accuracy of operational and process measurements, are of critical importance since these have a direct bearing on the payments cane growers and raw sugar manufacturers receive.

The Institute is the principal research, development and extension organization serving the sugar cane industry and delivers these functions through its three main departments: Agricultural Services, comprising Cane Agronomy, Agricultural Engineering, Variety Development, Extension Services; Factory Services which include Instrumentation, Mechanical Engineering, Sugar Technology and Environmental Monitoring; Central Services which include Information Systems, Economics & Statistics, Central Analytical Services and Administrative Services.

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## AGRICULTURAL SERVICES DIVISION

Sugar Cane Pathology: With fresh outbreaks of smut and rust affecting the industry, the Institute focused much effort on assessing the impact, containing the spread and effecting control of disease throughout the industry during 2009. Smut continued to have its biggest impact on varieties J9501, BJ8532 and BJ8534 while the orange rust began to affect BJ82156 in addition to the earlier identified susceptible varieties, BJ9186 and BJ7230. Even as orange rust remained largely confined to the Worthy Park area, smut could be seen throughout the industry with the heaviest infected fields observed in the southern Clarendon and St Catherine areas.

At Worthy Park, approximately 17% of area was under smut and rust susceptible varieties in 2008 when observations began. Over a period of a year when resistant varieties maintained relatively steady yields of 77.87 and 76.25 tonnes cane per hectare (tc/ha) in 2008 and 2009, respectively, orange rust was estimated to cause over 17% drop in yield of susceptible varieties. Highest drop in a single field was 61%, (from 96.10 to 37 .38 tc/ha) recorded from a field on the Bog Walk farm. On 146 ha occupied by BJ9186 and BJ7230 at Worthy Park, orange rust was estimated to have cost approximately J$8.5 million in sugar losses.

Smut prone varieties BJ8532 and J9501 were estimated to have lost 47% of tc/ha between 2007 and 2009 at Worthy Park. Between 2008 and 2009, highest yield loss to smut in a single field was also recorded at the Bog Walk farm where a field in BJ8532 fell from 89.89 to 46.90 tc/ha (47.93%). On 42 ha continuously in smut infected BJ8532 and J9501 between 2007 and 2009 sugar loss was estimated at 98.87t for a value of some J$3.95 million.

In acting to counter the smut and orange rust outbreaks, the Institute launched an Emergency Certified Seed Cane programme under which over 50 ha of new resistant varieties were established by September in each of the major ecological cane growing areas. These were designed to provide the nucleus for a major nursery expansion programme during 2010. Varieties so established included BJ8783, BJ82105, BJ7938, CR892023, BT80311 and BJ8841.

Instances of clones infected by orange rust were encountered in variety trials at various locations across the industry. Such infected clones were immediately discarded. The disease thus affected not only commercial production but also impacted SIRI's variety development programme.

There was also continuing work on ratoon stunting disease (RSD) involving the sterilisation by hot water treatment of varieties BJ9087 and BT80311 and potting for eventual field establishment of nurseries. This procedure is to ensure that seed cane distributed to growers by SIRI is delivered in a disease free state. The RSD survey that was started at Worthy Park in 2008 was completed in 2009. Data analysis showed no conclusive impact on yield but the study was complicated by the appearance of orange rust in some of the fields evaluated.

Entomology: The Institute continued the programme of rearing and releasing Cotesia flavipes, the imported parasite of the sugar cane stalk borer in an effort to contain the level of stalk damage inflicted by the borer. The focal point of releases was New Yarmouth estate on the irrigated plains which traditionally sustain the highest levels of damage. Although New Yarmouth was the original site of field establishment in the 1980s, in recent years SIRI's monitoring revealed that the parasite had dwindled to almost negligible levels. During 2009, field collection of the borer and rearing under observation in the laboratory showed a resurgence of the parasite's population levels to above 5% of borers sampled. However, the annual stalk damage survey continued to show internode damage levels well above the acceptable threshold of 5% thus indicating a need for further work in borer control.

Variety Development: In its continuing programme of search for higher yielding disease resistant varieties, the Institute established a Stage I nursery containing approximately 42,000 seedlings (each a potential new variety) on a private farmer's holding in Clarendon. This placement on a private holding was a precautionary step taken in light of uncertainties surrounding operations on the Sugar Company of Jamaica estates which were slated for divestment. One Stage II trial (BJ2010 series) was however fielded at Bernard Lodge. Establishment and growth were satisfactory.

Two holding-nurseries for yield trials were established, one at Everglades Farms (BJ2001 series) the other on a private farmer's holding and comprised 50 varieties from the BJ2003 series and 35 foreign varieties. Emergent varieties BJ9310, BJ9221, BJ9250, and BJ9252 showed good promise in the final phase of testing and were undergoing pre-commercial extension in plots in Clarendon and Westmoreland.

Nine trials, including varieties from seven series were established on five estates. Five trials were harvested and the data analysed. Better performing varieties were moved to the next stage of evaluation.

New elite varieties, BJ8783 and BJ8841 were widely propagated in nurseries during the year. Pending observations on their reactions to the new orange rust disease, these are earmarked for major expansion thrust in the immediate future.

Physiology: The Institute began testing a photosynthesis measuring device which may be used as an indicator for the effectiveness of herbicides or ripeners (in the absence of physical evidence which could be influenced by environmental conditions). The equipment measures the ratio of gases such as carbon dioxide and oxygen within the leaf as a measure of photosynthetic activity. This device will be further tested as a tool in field experimentation.

A number of common herbicides were demonstrated under diverse environmental conditions and management practices on farms such as Fred M Jones Estate, Holland, Handal's farm, Bajoo's farm, Springvale farms etc. This exercise was designed primarily to validate SIRI's weed control recommendations to the satisfaction of growers.

In collaboration with the Extension Department, a number of training seminars were held across the industry emphasising proper weed management practices. There was also a programme of calibration and outfitting knapsack and boom sprayers on farms and estates in the ongoing drive to promote effective weed control.

The use of chemical ripeners was recommended to various growers across the industry. There was no application of this technology within the SCJ group of factories but where the practice was carried out at Holland, the Institute participated in monitoring application and the subsequent sampling and evaluation processes.

Extension: SIRI's Extension Services were heavily engaged in the Cane Expansion Programme (funded by the Min. of Agriculture and Fisheries through the Sugar Industry Authority) carrying out screening of loan applications, evaluation of farm business plans, assessing work quality all the way to harvesting. Much of the 3119 ha planted (2244 ha by estates and 875 by farmers) in 2009 was facilitated by this programme. Productivity of fields planted during 2008 and harvested in 2009 was variable:

| | |
|---|---|
| Westmoreland | 60-85 tc/ha |
| Clarendon | 71-71 |
| Trelawny | 45- 89 |
| St Catherine Plains | 63- 86 |
| St Catherine Hills | 63- 66 |
| St Thomas | 77- 130 |

In addition, the Extension Department was involved in identifying reliable farmers to participate in the Emergency Certified Seed Cane programme set up to combat diseases associated with sugar cane cultivation.. This project involved inspection of potential seed sources and the linking of supplier and purchaser, often requiring transportation and delivery of seed cane across the island. This was then followed by monitoring to ensure adequate land preparation, planting and husbandry followed by inspection and roguing to ensure purity of stands.

The McNie nursery at Mason River was replanted with two new varieties to provide the base for cane expansion for farmers in the Upper Clarendon area.

Extension Services further promoted the use of reduced tillage technology both for cost saving and soil conservation purposes to growers in Westmoreland, Trelawny, St Elizabeth and Clarendon. Plots earlier established by this method gave yields of 61-68 tc/ha during 2009 although they may not have received desired levels of husbandry.

Extension Services also organized and conducted pre-crop training seminars which focused on efficient harvesting and delivery of canes by both estate and associated private farms in each factory area. Against the background of the emergence of smut and orange rust, another series of seminars was conducted across the industry in the second half of the year to alert growers to the threat posed by these diseases and to advise of recommended approaches to combating them. With the aid of personnel in the Variety Department, much emphasis was placed on attempting to get growers to identify differences in varieties and to appreciate which ones must be discarded at this time and which may be planted.

In collaboration with New Yarmouth and along with the Jamaica Association of Sugar Technologists, the Extension Services organized a major Field Day at that estate looking at "Best Practices in Cane Establishment" under drip and centre pivot irrigation systems.

Agricultural Engineering: Irrigation and drainage plans were developed for farmers in Clarendon and St Catherine benefiting from the SIA administered EU grant funds. SIRI's engineer supervised installation of the drip irrigation systems. GPS mapping was provided for a major drip irrigation project at New Yarmouth and to redefine field boundaries at Everglades.

With the use of a recently acquired Ultrasonic Flow Meter, SIRI determined drainage flow rates at Holland to guide the estate's land reclamation project. Also, GPS technology was explored as a means of developing an early warning flood alarm system for flood prone sections of the estate. In the event of a developing flood, the estate would, in a timely manner, activate its pumping station and relieve water buildup before the area becomes totally inundated.

The new "cane thumper" cane harvester was also demonstrated at Everglades and data collected on machine performance. There was also continued collaborative work with the Ministry of Mining and Energy in developing an Energy Demand model within the sugar cane industry.

SIRI collaborated with the Petroleum Cooperation of Jamaica in designing an irrigation system for an experimental 15 ha bio-diesel project based on the use of the Jatropha plant.

Nutrition: Apart from the routine testing and evaluation of soil and leaf samples for making fertilizer recommendations, at the request of growers, the Institute also conducted laboratory tests on fertilizers containing bio-solids as well as on the more common inorganic fertilizer mixtures. Also, trials involving use of bio-solids were laid down at Advance Farm Limited in Trelawny and Rhoden's farm in Westmoreland.

Yield data was collected from ongoing experiments at Holland involving use of various combinations of boiler ash and inorganic fertilizer. There was also experimentation with application of nutrients by fertigation (nutrients applied via irrigation water), utilizing centre pivot irrigation systems superimposed on plots prepared by conventional tillage and plots prepared by reduced tillage techniques.

## FACTORY SERVICES DIVISION

### Mechanical Engineering

### 1 . Core Samplers

Out- of - crop maintenance on core samplers was carried out just before the start of the crop at all factories. Maintenance included repair or replacement of damaged and malfunctioning components, setting the press gaps, adjusting the sequence cycles and pressure switches.

The core sampler structure at Frome was repaired and repainted as were the core laboratories at Frome, Worthy Park and Monymusk.

An overall sampling and testing of 91.98 percent of cane deliveries at the cores was achieved during the 2008-2009 cropping period compared to 85.68 percent for the previous crop.

During the crop, the problems indicated below were experienced at the various core samplers and corrective action taken.

#### Frome

The Number1 press cylinder cartridge broke and the complete hydraulic cylinder had to be replaced. The Number 2 press cylinder was observed to leak oil and had to be repaired. A burnt out contactor on the Number 1 core sampler had to be replaced as a result of overloading.. Oil leaks were observed at the shredder and borer motors at the Number 2 core sampler, requiring repairs to both motors. The frequency of burst hydraulic hoses requiring replacement was significantly lower than that occurring during the previous crop. Routine building up of all three shredder hammers was carried out to maintain the required preparation index.

A crop average of 82.66 percent testing was achieved compared to 80.22 percent for the previous crop.

#### Appleton

This system had a very good run achieving a crop average of 98.83 percent testing, up from 97.37 percent in the previous crop. The ejector cylinder showed a tendency to leak oil and repairs were effected to remedy this defect.

#### Monymusk

Both units performed well, resulting in an overall crop average of 99.64 percent testing, a slight improvement from 99.28 percent in the previous crop.

#### Bernard Lodge

No major problems were experienced with this unit.

### Worthy Park

The borer motor developed an oil leak and had to be repaired. This unit had a crop average of 88.82 % testing, showing an improvement from 83.65 % in the previous crop.

### St. Thomas Sugar Company

The ejector cylinder tended to leak oil but repairs to the unit corrected this defect. The main pump signal solenoid valve coil burnt and had to be replaced. The pressure switches were re-adjusted for the setting of the automatic cycle. This unit had a crop average of 92.72 % testing, up from 72.39 % in the previous crop.

### Long Pond

This unit had a good year, finishing with a crop average of 95.06 % testing, essentially the same, 95.03 %, as in the previous crop.

## 2. Preventative Maintenance

### Laser Alignment

Laser alignment of steam turbines and powerhouse alternators was carried out at Appleton, Frome and St. Thomas Sugar Company. A total of twenty machines were checked and the alignment corrected on those which were misaligned.

### Dynamic Balancing

Dynamic Balancing of boiler fans and centrifugal baskets was carried out at Frome, Appleton, St. Thomas Sugar Company, Worthy Park, Long Pond and Monymusk. A total of sixty five pieces of equipment were examined and dynamic balancing was carried out on those that were found to show excessive vibration.

### Ultrasonic Thickness Testing

This service was utilized mainly by Worthy Park, Appleton and St. Thomas Sugar Company.

### Ultrasonic Flaw Detection

This was carried out on shafts at St. Thomas Sugar Company.

### Vibration Measurements

Vibration measurements were carried out on various pieces of equipment at Worthy Park, Frome, St. Thomas Sugar Company, Monymusk, Long Pond and Appleton.

### Project

Fabrication of eight high pressure filtration units which were requested by the Sugar Technology Unit was successfully completed. These units were required as components of a high pressure filtration system to be used in conjunction with NIR polarimeters for determining polarmetric values for juice samples, a technique which is to be introduced in all core laboratories starting with the next crop.

## Sugar Technology

### Characterisation of Polysaccharides in Sugarcane

This project is a continuation of ongoing work to identify and quantify polysaccharides in sugarcane. The study involves the testing of varieties currently under investigation in the variety development program. Cane samples collected through the Variety Unit are analyzed for pol, brix, total sugars, total polysaccharides, and starch. Previous work has indicated the presence, in addition to starch and dextran, of another polysaccharide, sarkaran in some cane varieties. Since difficulties in processing juices have been attributed to sarkaran, varieties containing the latter should not be considered for further propagation in variety trials unless other highly favourable characteristics outweigh the disadvantages associated with sarkaran

## Analysis of Mannitol as a Tracer for Bacterial Infection in Sugar Cane

Work on the above project is at a preliminary stage. Mannitol, an alcoholic compound derived from mannose, a sugar related to glucose, has been shown to be a major degradation product of sugar cane deterioration produced by Leuconostoc bacteria, the same bacteria responsible for dextran formation in deteriorated sugar cane.The objective of this project is to develop technical proficiency in the analytic reported by Eggleston et al in the USA for the quantitation of mannitol and its use as a tracer for bacterial infection in sugar cane. The aim is to develop correlation between levels of mannitol and dextran and to use this relationship as an index of deterioration in cane delivered to the mills.

## Reducing Sugar Levels in clarified Juice and Syrup at St. Thomas Sugar Factory

At the request of factory personnel, samples of clarified juice and syrup were collected and analyzed to investigate the levels of inversion occurring across the clarified juice and syrup stages of the process.

## Investigation into Excessive Scaling in Evaporators

The chemical analysis of scale deposits taken from evaporators at the Worthy Park factory was undertaken by SIRI Central Laboratory.

## Investigation into Polysaccharide levels in process streams

Samples were collected across all process streams at a factory and quantitative analysis of total polysaccharide, starch and dextran was carried out.. Recommendations were made on chemical dosage to be applied.

## Hydrolysis studies on starch and bagasse

Supervision of the above studies were provided for two summer students in the BSc degree programme in Applied Chemistry of the University of the West Indies, Mona (see page 5)

# Factory Extension Services

## Collaborative Sugar Tests

Two collaborative sugar tests were conducted over the cropping period. The general objectives of the tests were to:

- conduct a comprehensive evaluation of the performance of all factory laboratories with respect to analyses of pol and moisture in sugar;
- standardize the methods of analysis and equipment used in polarization and moisture determinations;
- provide technical support to laboratories to ensure the highest level of accuracy and precision in results reported;
- establish acceptability limits for data produced using statistical techniques.

The results showed that pol values determined at the SIRI Central Laboratory were higher than the overall average in the first test but slightly lower than the overall industry average in the second. Most of the laboratories produced accurate results with reasonable precision, the highest reproducibility in terms of precision for pol values being obtained by the SIRI Central and Appleton Factory Control Laboratories.

The results for moisture were more precise than those obtained for pol. A few laboratories produced results which deviated considerably from the average but the majority of the results obtained showed good precision and accuracy.

An additional test using Octapol as clarifier was carried out at Frome where the control laboratory at the start of the crop was using Octapol as a clarifier to measure pol in commercial sugar. Laboratory personnel were instructed to revert to the use of lead subacetate as the use of Octapol resulted in an underestimation of the pol in sugar. It was agreed that Octapol should not be used for this determination unless an acceptable correlation factor between Octapol and lead subacetate could be established.

Since the factory reported that it was experiencing difficulty in sourcing lead subacetate, the Institute made available one of the NIR units it was using in trials in pol determinations in juice to the control laboratory. This was to facilitate pol analysis during the second half of the crop since the use of NIR polarimetry for determining pol values in raw sugar does not require the use of lead subacetate.

An investigation into unexpected results obtained in the control laboratories at both St. Thomas and Trelawny Sugar Factories was undertaken. Calibration of the polarimeter and the balances was checked to determine the accuracy of the equipment. In addition, the analysts at both laboratories were re-trained in the analytical techniques involved in polarimetric determinations of raw sugar.

## Collaborative Cane Tests

Two collaborative cane tests were carried out over the duration of the crop. The objective of the test was to ensure that all core labs were operating within guidelines set out by the Sugar Industry Act. Emphasis was placed on juice analysis for determining JRCS values, moisture levels, fiber percentages and the level of cane preparation (PI).

The JRCS values for the two tests resulted in small standard deviation, 0.38 for an average JRCS of 13.30 for the first test (four cores reported) but, with ten cores reporting in the second test, the deviation increased to 0.85 for an average JRCS of 14.78.

Fibre analyses varied from 11.3 to 12.9% (average 12.3%) in the first test to 12.1 to 16.3% (average 14.0%) in the second test.

The efficiencies of shredders in cane preparation, open cell (preparation index) analyses, showed that all the shredders at the core laboratories operated above the minimum standard preparation index of 80 % established for the shredders installed at core laboratories. PI values ranged from 81 to 96% in the first test (average PI, 91.7%) and from 86.8 to 98.4% in the second test (average PI, 92.7%). These results represent an improvement over former years (e.g. 89.1 to 93.1% in 2007).

## Automatic Sugar Samplers

All the sugar samplers except for those installed at Worthy Park Estate were re-evaluated and retrofitted to ensure a more representative sampling of the sugar produced.

## Core Laboratory Training Seminars

The 2009 training seminars were conducted at six of the seven factories. All seminars were very successful and saw full participation from the Core Laboratory staff. Topics covered in the seminar included:

- ☞ A review of core laboratory performance in 2007/2008
- ☞ Occupational Health and Safety at the Core
- ☞ Overview of core laboratory repairs and preventative maintenance
- ☞ Interactive session on analytic techniques, instrument use and core operations.

## Best Performing Core Laboratory and Best Kept Factory

The award for the best performing Core Laboratory was won by Monymusk while, the award for the best performing Factory was won by Appleton Estate.

## Instrumentation Department

The Instrumentation Section successfully carried out the following routine duties:

1. Servicing and reinstalling all sugar samplers.
2. Servicing and calibrating all Bagging scales.
3. General maintenance of the Servo Balans scale at OchoRios.
4. General repairs to all truck scales excluding those at Frome.
5. Calibrating all truck scales for certification.
6. Assisting in the certification of all truck scales.
7. General maintenance of Servo Balans sugar and juice scales.

8. General Service of all central, core and factory laboratory instruments.
9. Checking and installing all new instruments on arrival.
10. Maintaining a parts and spares inventory for the department.
11. Providing technical support to factory personnel.
12. Assisting in the delivery of training programmes and seminars.
13. Designing and building control circuits for high pressure filtration units.
14. Modifying run-off valves on high pressure filtration units.
15. Modifying sugar samplers at Frome, Monymusk and Long Pond.

## Environmental Monitoring and Management

The main activities of the Section included monitoring of factory waste water from sugar factories, seminars and meetings with Environmental Committees at factories.

## Pollution Control Programme

For a number of years the sugar industry has been making efforts to become compliant with the relevant environmental legislations. The Institute has been instrumental in facilitating the efforts of the industry to achieve this objective but considerably more effort is needed in this area.

There are a number of environmental legislations governing the sugar industry, chief of which are:

The NRCA Air Quality Regulations (2006)

The Water Resources Authority Act

The NRCA Act of 1991 (Section 17)

The National Solid Waste Management Authority Act

The Clean Air Act and the Public Health Act.

In addition to these environmental legislations, the industry developed and adopted a set of practical guidelines in 2004. This document, the Environmental Code of Practice for the Sugarcane Industry, is a voluntary instrument consisting of a set of non-legislative requirements by which an entity or group of entities agrees to adhere. To date many of the guidelines contained in this document such as the implementation of proper waste disposal practices, management of leaks and spills, air emission control, noise control, green procurement, environmental education and communication especially as it relates to communities, have still to be implemented.

Over the last year (2008) there was increasing need for compliance to be achieved by the government- owned factories before divestment as well as to implement the recently enacted air regulations.

The Institute participated in discussions between the Sugar Company of Jamaica (SCJ), the holding company for the government owned estates and the National Environmental Planning Agency (NEPA) for the company to develop an Environmental Action Plan to be implemented over the period March 2009 to December 2011 which would allow the organization to become fully compliant.

## Compliance with Trade Effluent Standards

Compliance with the Trade effluent standards for all factories has still not been achieved. Progress has, however, been made at the Appleton Factory where a series of treatment ponds have been put in place to treat ash slurry from the boiler operation and also to treat factory wastewater. Two additional ponds are being constructed to be commissioned at the start of the 2009/2010 crop. These are expected to further control these pollutants and ultimately allow the factory to achieve compliance.

The Monymusk factory has also made efforts to reduce the level of pollutants in their factory wastewater. This was done by installing a mud conveyor system to remove filter mud and transport it to the fields. However, damage to the conveyor belt resulted in the factory resorting to the less favourable practice of disposing the filter mud slurry with the factory effluent pending completion of repairs to the belt.

## Cane burning

The practice of cane burning before harvesting still remains an issue within the industry. The National Environment and Planning Agency (NEPA) has requested information on the status of the sector in meeting the 2010 deadline to stem the release of dioxins, furans, particulates and greenhouse gases associated with the burning of cane.

It must be noted, however, that cane burning is not regulated under the NRCA Air Quality Regulations but is subject to other legislations such as the Country Fires Act (1942) and the Public Health Nuisance Regulations.

In order to respond to the above concerns, the industry is encouraging stakeholders to return, where possible, to the practice of green cane harvesting.

## Wastewater Monitoring

The monitoring of the trade effluent from sugar factories was carried out in accordance with Section 17 of the NRCA Act 1991. The Act requires that all facilities that discharge effluent to a river, stream, sinkholes or land should report to the NRCA on both the qualitative and quantitative aspects of their effluent. The Institute continued the program of collecting and analyzing wastewater from sugarcane processing on behalf of all sugar factories. The wastewater quality for all factories continues to be in violation of the NRCA standards for trade effluent. In general, factory effluents continue to be out of compliance with NRCA standards with respect to Biochemical Oxygen Demand(BOD) and Chemical Oxygen Demand (COD).

## Special Project

OXYDOLTrials on Sugar Factory Wastewater

The Sugar Industry Research Institute (SIRI) acquired a sample of the product OXYDOL from its manufacturer, Agranco, for the purpose of establishing its applicability to the treatment of wastewater resulting from the processing of sugarcane. OXYDOL is a blend of enzymes, probiotics and organic catalysts designed to break down organic and inorganic contaminating substances present in contaminated waters. OXYDOL acts on these contaminating substances, digesting them down into more basic components that are more easily absorbed into the environment. Other OXYDOL ingredients accelerate this digestive process, also eliminating and preventing the formation of algae, other micro-organisms and other undesirable substances. The aim of the study was to establish its applicability to sugar industry, specifically, its use to treat sugar factory wastewater for the reduction of Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Nitrates, Phosphates, Sulphates, Total Suspended Solids (TSS), Fecal and Total Coliform.

Preliminary results were not encouraging. Based on the long retention time that is needed for effluents treated with the product to achieve the required standards especially for BOD and COD, it appears not to be applicable to the sugar industry except in cases where large land space is available for the lagooning of the waste water.

## Seminars

The Institute, at the request by the National Environment and Planning Agency (NEPA) conducted a training seminar on June 17, 2008 at the NEPA office in Kingston. The Agency was promoting pollution prevention in the sugar industry and as such wanted its staff to be more knowledgeable about the various processes within the sugar industry including both field and factory operations. Members from the Pollution Prevention and Control Branch along with members from the Applications Branch participated. A presentation entitled “Pollution Sources at Sugar Factories - Prevention and Control Measures,” was presented by Mrs. Elaine Manning. An overview of the sugar process was given by Mr. Niconor Reece while Mr. Trevor Falloon spoke in detail on sugarcane agriculture including sugarcane harvesting.

A presentation on the use of pesticides and their impact on the environment was done at the Claude Mackay High School in Clarendon on November 12, 2008. Mr. Edmond Lewis of the Agronomy Department also gave a presentation to a group of science students.

A presentation on the “Safe Handling of Laboratory Chemicals” was presented at all Core laboratories except for that at Worthy Park which did not participate in the annual Core laboratory training seminars put on by the Institute. Participants were exposed to information on;

- Physical and chemical properties of Laboratory chemicals used.
- Hazards associated with the chemicals used in the Core Laboratories.

- Proper storage and handling of the chemicals used.
- The importance of the Material Safety Data Sheet (MSDS) and how to use the information given in the MSDS.

## Meetings

In conformance with NRCA Air Quality Regulations which came into effect on July 2006, sugar factory owners/operators were required to apply for their licences before December 31, 2008. Environmental Committee Meetings were held at some factories to discuss the criteria for the licence application. Factories were encouraged to start the application process in order to meet the year end deadline.

## CENTRAL SERVICES

### Economics & Management Information

SIRI provided administrative and technical support for a $100 million loan facility for replanting provided through the SIA by the Sugar Transformation Unit of the Ministry of Agriculture and Fisheries. Apart from facilitating routine replanting, under this programme two farms in the Bernard Lodge area were outfitted with drip irrigation systems. A loan recovery of up 100% was achieved in some factory areas though the overall recovery rate was approximately 71%. Frome registered lower than expected recovery as cane fires wreaked havoc with growers' ability to manage the harvest.

SIRI's assessment of the profitability of cane growing took note of the sustained high price for Jamaica's sugar, despite price cuts associated with the ending of the previous marketing agreement with the EU. When viewed against increases in production cost, it was estimated that growers still needed to produce at approximately 75 and 85 tc/ha (or 7.5 & 8.5 ts/ha) in rain-fed and irrigated areas, respectively, to obtain reasonable returns on investments. However the annual Cane Yield Survey showed that relatively few farmers attained these levels of productivity.

### Central Analytical Laboratory

The Laboratory continued routine analysis on wastewater samples, water for irrigation purposes, soils, plant tissue, fertilizers, cane juice, sugars and molasses samples from the sugar factories over the period under review. Analytical support was given to activities and projects from both the Agricultural and Factory Services Divisions. A total of 13 417 analyses were done on routine samples.

## Sugar Quality 2009

The average pol for the industry was 98.42 showing an increase of 0.26 over last crop. The safety factor of 0.22 was well within the specification of not more than 0.30. The industry wide average for dextran was 265, still above the maximum value of 250 but showing a great improvement over the value of 378 mau for the last crop. The average reducing sugars, 0.36, was within the specification of less than 0.70% and both raw (2782 IU) and affined (1183 IU) colour values were within the specification of 3000 and 1500 IU respectively.

## Molasses Quality 2009

The results obtained for the analyses of molasses showed improvement in the exhaustion of final molasses at all the factories. However, there is room for improvement.

## Wastewater Analyses 2009

The routine analysis of wastewater was conducted in the normal fashion. The results for the samples analysed, showed that biochemical oxygen demand (BOD) and chemical oxygen demand (COD) were always much higher than the standard of 30 and 100 ppm respectively, even values for the out-of-crop period; whereas the other parameters only sometimes exceeded the specification as set out by the National Environmental Planning Agency (NEPA) for wastewater from factories. Nitrates and sulphates were usually within the specifications of 5 and 250 ppm respectively. However, those for phosphates generally exceeded the standard of 5 ppm. Oils were found to be absent.

## ISO 17025

The laboratory continued to maintain the procedures and systems required for accreditation. These have assisted the laboratory in meeting its performance targets. Internal audits were conducted and a few non-conformances detected. These must be addressed before accreditation is sought.

## HPLC

Research into using the High Performance Liquid Chromatography (HPLC) as a tool for variety improvement and selection was started. Preliminary investigations showed that there is some correlation between HPLC results and wet chemistry methods for total sugars present and should allow us to identify markers appropriate to choosing varieties best suited to meet the needs of the industry.

## Information Systems

Reinitialization and preparation of the Core Program for the 2008/2009 crop were done at five factories between January and March and for the 2009/2010 crop at Frome, in December. A similar procedure was carried out at Worthy Park, Ocho Rios and Marcus Garvey Drive – sites where the Scale Program is in operation. The Factory Lab program was also reinitialised at two locations and the Data Capture program at one location.

The following publications were completed during the year:

- Sugar Cane Magazine
- SIRI 2008 Annual Report
- JAST conference presentations

Factory reports were generated, disseminated via email and also made available on the website.

General system support was provided to all users, including those at the Core Labs, Ocho Rios and Marcus Garvey scale units, SIA, SPF, and the SIRI offices at Bernard Lodge and Frome. Additionally, maintenance, repairs, and rebuilding of computers and printers and also network maintenance were effected across the institute and also at the SIA. Maintenance and updating of in-house programs such as the Lab and Loan programs were also undertaken.

Other aspects of the Institute's work are reflected in various papers presented at the Annual Conference of the Jamaica Association of Sugar Technologists:

*Review of the 2008-09 Sugar Crop* by D. Little & E. Roberts

*Application of model for Analysis of Energy Demand (MAED) for the Jamaican Sugar Cane Industry* by L. White & O. Alcock

*A synopsis: The role of Sulphur in Plant Nutrition in Jamaica 1949-2008* by C. Fearon

*Rising input and operational costs and implications for viability of small farms* by C. Woolery

*Profitability of growing cane by subsistence farmers in the Uplands of Clarendon and St Catherine* by E. Henry

*New use for old Herbicides* by E Lewis

*The impact of sugar cane smut and orange rust on yield* at Worthy Park by T. Falloon

*Meeting the variety needs of a changing sugar industry* by U. Green and K. McPherson

*Comparison of the VSI Starch Method to the Modified Starch Method* by M Wilson and S Hyman.

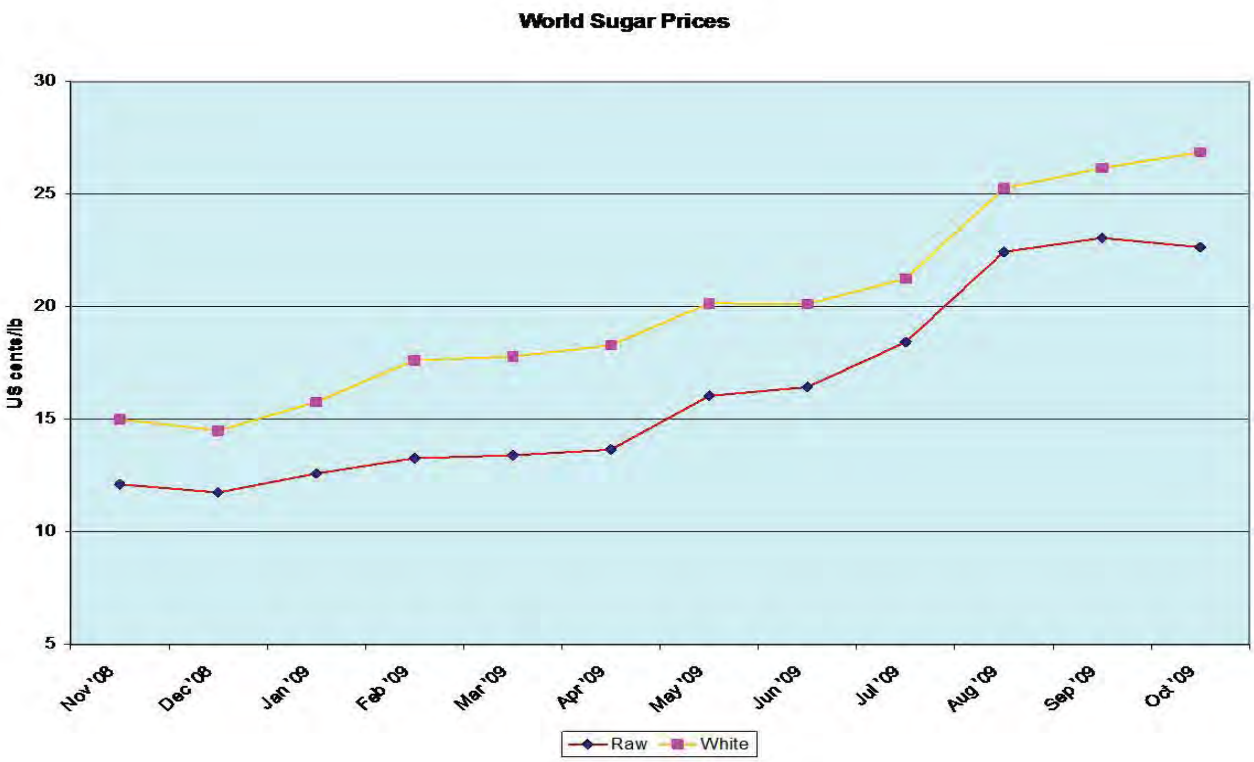
*Factors affecting the Activity of Alpha-Amylase application in Raw Sugar Manufacturing* by L Campbell.

## WORLD SUGAR SITUATION

World sugar production in 2008/09 declined by a massive 13.4 million tonnes, or 8%. This follows the marginal reduction of 0.5% in the previous year. Asia was hit the hardest, mainly as a result of failed sugar policies, the low prices from 2007 to 2008 and adverse weather conditions. It was India which caused the greatest turbulence on the international sugar market in 2009. The two main reasons for India's widely fluctuating production figures are weather and a tightly government controlled sugar market. While nothing could be done to influence the weather, market interference could be achieved in a more sensible manner. The country's sugar policy is heavy handed and characterised by a conflict of aims. On the one hand the government tries to keep domestic prices at reasonable levels to rein in inflation and please consumers while on the other hand it mandates cane prices often detached from supply and demand. The mill sector therefore is often stuck between a rock and a hard place suffering enormous losses. This policy frequently leads to wrong or belated price signals.

In 2009 sugar prices more than doubled making the sweetener the second best performing commodity next to copper. Tightening supplies were the main driver behind the spectacular rise in sugar prices. After a weak performance at the end of 2007/08 sugar prices started to increase at the beginning of 2008/09. This increase stemmed from a number of sources, the most important being that the market was expected to shift from surplus to deficit in 2008/09 with the shortfall expected to persist for several years. The price rise accelerated as India was suspected to become a major importer following a sharp drop in production. Also other countries such as the US and Pakistan were likely to increase their imports. Prices continued on its upward trend and in August reached a 28 -year high after news broke of the lack of rain in India and too much in Brazil. Production forecast was slashed, deepening concerns about global shortages.

Prices ended the year on a high as the market came to the conclusion that prices would remain high for at least the next 12 months as the possibility of another larger global deficit appears to be on the horizon.




## THE EUROPEAN UNION

The new EU sugar regime is now fully implemented. The reference price has now been reduced by the full 36%. The EU has turned full circle from being a large net importer at the time when the sugar regime first commenced in 1968 to a large net exporter over the years to 2005/06, followed by a return to being a large net importer after the end of the reform process. Since 2006 production in the EU has been reduced by nearly 6 million tonnes to attain the reform objective of some 13.3 million tonnes of sugar production compares with 18.3 millions tonnes before the reform. The number of beet sugar producing countries fell from 23 to 18 with Bulgaria, Ireland, Latvia, Portugal and Slovenia now out of production. Among the 18 member states producing beet sugar approximately 75 % of production is now concentrated in France, Germany, Poland the UK, Netherlands and Belgium. They are supposed to be the countries with the most efficient sugar industries and the highest yields.

Most EU countries are now in deficit, a few balanced and France remains in surplus. To meet internal consumption the EU must import approximately 3.5 million tonnes compared with 2.6 million tonnes previously. While the EU commission regards the reform a complete success, industrial users are less happy. They complain that now only 6 companies cover 75% of internal EU consumption which opens the door to price manipulation. They also lament that the sugar market is still heavily regulated, that producers' quotas prevent efficient suppliers from increasing production to benefit from economies of scale and that the export of goods containing sugar remains bureaucratic.

While EU producers are eager to restrict the inflow of sugar to maintain domestic prices, sugar users worry that tighter supplies will lead to further price rises. What is clear is that reform of the regime has exposed consumers to supply volatility. The sharp reduction in internal production and the sharp rise in global prices have made the EU a much less attractive marketplace for its traditional suppliers which could lead to supply side problems. Under the new import rules the EPA and EBA supply arrangement and the tariff rate quotas do not result in any obligation to supply in contrast to the expired Sugar Protocol under which the beneficiaries had an obligation to supply the guaranteed quantities amounting to 1.295 million tonnes. In case of a further rise in global prices, EPAs and LDCs may find it more attractive to send their sugar to the regional or the global market. In that case the EU would have to turn to the world market to cover its needs

## OUTLOOK FOR 2009/10

In 2009 sugar prices more than doubled making the sweetener the second-best performing commodity next to copper. The market was in deficit for the first time in four years, a situation that is expected to continue in 2009/10. It is believed that raw sugar prices could increase to as much as 30-40 cents/lb in the next 18-24 months given tight supplies and the danger of a build up of inflation in response to the huge liquidity that has been pumped into the global economy to tackle the financial crisis. While those prices still seem far away, the market clearly has the potential to rise further. Sugar production has a tendency to respond strongly to high prices, however most analysts agree that the supply response to high prices seen in 2009 will be weak due to adverse weather in India and Brazil. Moreover, the price rise in 2009 came to late to influence 2009/10 production.

Production is forecast to remain below global demand with stocks expected to fall by another 6 million tonnes. This would lead to a perilously low level of stock. While there was no physical shortage of sugar in 2008/09 due to surplus stocks from past years that could change in 2009/10 due to stock depletion in top consumers such as India.

While the estimates for 2009/10 cannot stand on firm ground, the market has already begun to speculate what could happen in 2010/11. It is expected that consumption growth will accelerate due to the anticipated recovery of the global economy which means that the world economy could face a considerable deficit if world production remains stable.

Although much depend on weather it is almost certain that production will rebound in 2010/11 with the only question unanswered being to what extent. It is believed that there could be a small surplus of around 0.5 million tonnes meaning that production and demand would be roughly balanced.

| **WORLD SUGAR PRODUCTION 2009/10** | |
|---|---|
| Production Area | Tonnes (mln) |
| Europe | 25.47 |
| Africa | 10.86 |
| North & Central America | 19.06 |
| South America | 47.48 |
| Asia | 51.55 |
| Oceana | 5.27 |
| TOTAL | 159.69 |

# APPENDIX TABLES

## TABLE 1: CANE MILLED (TONNES) 2008 & 2009

| | 2008 | | | 2009 | | |
|---|---|---|---|---|---|---|
| FACTORIES | Estates | Farmers | Total | Estates | Farmers | Total |
| Frome | 311,845 | 298,497 | 610,343 | 204,772 | 197,570 | 402,342 |
| Monymusk | 131,153 | 48,687 | 179,840 | 191,632 | 66,570 | 258,202 |
| Bernard Lodge | 154,130 | 41,099 | 195,229 | | | |
| Long Pond | 42,811 | 39,404 | 82,216 | 28,038 | 24,515 | 52,553 |
| St. Thomas | 88,556 | 79,115 | 167,670 | 65,486 | 63,889 | 129,375 |
| Appleton | 189,159 | 52,501 | 241,660 | 185,718 | 120,941 | 306,659 |
| Worthy Park | 90,389 | 84,701 | 175,090 | 82,050 | 103,399 | 185,449 |
| TOTAL | 1,008,043 | 644,004 | 1,652,047 | 757,696 | 576,882 | 1,334,579 |

## TABLE 2: TONNES 96$^{o}$ SUGAR PRODUCED: 2004-2009

| FACTORIES | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| Frome | 56,978 | 42,515 | 46,524 | 53,729 | 49,828 | 37,847 |
| Monymusk | 27,091 | 9,322 | 18,400 | 16,957 | 15,421 | 19,342 |
| Bernard Lodge | 21,869 | 14,053 | 15,124 | 16,114 | 15,017 | |
| Long Pond | 10,410 | 4,654 | 8,761 | 9,884 | 6,399 | 3,833 |
| St. Thomas | 13,492 | 10,426 | 10,928 | 14,151 | 12,886 | 11,486 |
| Appleton | 29,267 | 21,404 | 26,196 | 31,332 | 22,310 | 31,625 |
| Worthy Park | 24,566 | 21,833 | 20,949 | 22,220 | 19,011 | 21,685 |
| TOTAL | 183,672 | 124,206 | 146,882 | 164,387 | 140,872 | 125,818 |

## TABLE 3: CANE QUALITY- JAMAICA RECOVERABLE CANE SUGAR (JRCS) 2004-2009

| FACTORIES | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| Frome | 10.50 | 10.42 | 9.34 | 9.47 | 9.58 | 11.34 |
| Monymusk | 11.11 | 9.90 | 10.26 | 9.92 | 10.20 | 10.62 |
| Bernard Lodge | 10.60 | 9.51 | 9.62 | 9.42 | 9.58 | |
| Long Pond | 10.37 | 9.75 | 9.80 | 9.88 | 10.89 | 10.87 |
| St. Thomas | 9.60 | 10.24 | 10.24 | 9.12 | 9.74 | 10.87 |
| Appleton | 10.03 | 10.45 | 10.15 | 9.67 | 9.88 | 10.69 |
| Worthy Park | 12.35 | 12.22 | 11.24 | 10.89 | 11.33 | 12.06 |
| AVERAGE | 10.63 | 10.46 | 9.92 | 9.69 | 9.97 | 11.09 |

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) 2004-2009

| FACTORIES | (Rating) 2009 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Frome | 3 | 84.25 | 85.07 | 82.51 | 88.32 | 90.68 | 91.16 |
| Monymusk | 5 | 83.80 | 79.79 | 91.10 | 90.29 | 86.42 | 74.66 |
| Bernard Lodge | | 88.48 | 84.70 | 73.97 | 80.73 | 81.19 | |
| Long Pond | 6 | 81.32 | 76.74 | 83.70 | 79.49 | 71.73 | 67.71 |
| St. Thomas | 4 | 83.06 | 89.93 | 80.40 | 81.80 | 82.43 | 86.11 |
| Appleton | 2 | 93.13 | 91.55 | 93.27 | 92.49 | 93.35 | 96.59 |
| Worthy Park | 1 | 96.08 | 95.74 | 96.52 | 96.47 | 95.88 | 96.95 |
| AVERAGE | | 87.31 | 87.39 | 85.97 | 88.26 | 88.21 | 88.82 |

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 2008 & 2009
## (TIME LOSS AS A % OF TOTAL AVAILABLE TIME)

| | Total Time Loss | | STOPPAGES | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Factory | | Non-Factory | | Cleaning | |
| FACTORIES | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| Frome | 40.66 | 36.41 | 12.54 | 17.11 | 28.12 | 19.30 | 4.90 | 5.67 |
| Monymusk | 58.73 | 48.27 | 22.79 | 37.96 | 35.94 | 10.31 | 3.58 | 4.98 |
| Bernard Lodge | 62.27 | | 30.62 | | 31.65 | | 2.52 | |
| Long Pond | 66.65 | 67.80 | 40.00 | 43.82 | 26.65 | 23.98 | 3.93 | 3.51 |
| St. Thomas | 51.73 | 51.73 | 29.05 | 18.79 | 22.79 | 32.93 | 6.76 | 5.12 |
| Appleton | 51.43 | 25.94 | 7.26 | 5.31 | 44.17 | 20.63 | 4.95 | 4.32 |
| Worthy Park | 40.31 | 30.74 | 1.63 | 2.52 | 38.68 | 28.22 | 5.84 | 5.99 |
| TOTAL | 51.27 | 42.86 | 20.33 | 19.40 | 31.77 | 22.53 | 4.75 | 5.01 |

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 6: SUGAR EXPORTS BY DESTINATION 2005-2009

| | 2005 | | 2006 | | 2007 | | 2008 | | 2009 | |
|---|---|---|---|---|---|---|---|---|---|---|
| DESTINATION | QUANTITY (TONNES) | VALUE (US$'000) | QUANTITY (TONNES) | VALUE (US$'000) | QUANTITY (TONNES) | VALUE (US$'000) | QUANTITY (TONNES) | VALUE (US$'000) | QUANTITY (TONNES) | VALUE (US$'000) |
| European Union | 110,064 | 73,465 | 135,426 | 87,769 | 147,035 | 98,582 | 136,048 | 104,662 | 120,180 | 75,631 |
| USA | 2,823 | 1,248 | 5,007 | 2,507 | 5,987 | 2,637 | 0 | 0 | 0 | 0 |
| Other | 41 | 28 | 12 | 10 | 31 | 27 | 22 | 21 | 30 | 28 |
| TOTAL | 112,928 | 74,741 | 140,445 | 90,286 | 153,053 | 101,246 | 136,070 | 104,683 | 120,210 | 75,659 |

PricewaterhouseCoopers

# SUGAR INDUSTRY AUTHORITY

## Financial Statements
## 31 October 2009

# Sugar Industry Authority
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**31 October 2009**


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PRICEWATERHOUSECOOPERS

**PricewaterhouseCoopers**
Scotiabank Centre
Duke Street
Box 372
Kingston Jamaica
Telephone (876) 922 6230
Facsimile (876) 922 7581

# Independent Auditor's Report

To the Members of
Sugar Industry Authority

## Report on the Financial Statements

We have audited the accompanying financial statements of Sugar Industry Authority standing alone, set out on pages 1 to 55, which comprise the balance sheet as of 31 October 2009 and the income and expenditure account, statement of operation – imported raw sugar and statement of cash flows for the year then ended and a summary of significant accounting policies and other explanatory notes.

### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

PRICEWATERHOUSECOOPERS



### *Opinion*

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Authority standing alone as of 31 October 2009 and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards and the requirements of the Jamaican Companies Act.

### Report on Other Legal and Regulatory Requirements

As required by the Jamaican Companies Act, we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

In our opinion, proper accounting records have been kept, so far as appears from our examination of those records, and the accompanying financial statements are in agreement therewith and give the information required by the Jamaican Companies Act, in the manner so required.

PricewaterhouseCoopers

Chartered Accountants
24 November 2010
Kingston, Jamaica

# Sugar Industry Authority

Balance Sheet

**31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

| | Note | 2009 | 2008 |
|---|---|---|---|
| | | $ | $ |
| **Non-current Assets** | | | |
| Intangible assets | 5 | 1 | 1 |
| Property, plant and equipment | 6 | 179,291,072 | 200,186,816 |
| Retirement benefit asset | 7 | 70,700,000 | 75,033,000 |
| Long-term receivables | 8 | 84,828,699 | 81,733,426 |
| | | 334,819,772 | 356,953,243 |
| **Current Assets** | | | |
| Inventories | 9 | 2,093,451 | 2,073,545 |
| Loans to farmers, estates and factories | 8 | 105,448,249 | 109,698,469 |
| Mortgage and home improvement loans | 8 | 2,716,520 | 3,298,095 |
| Accounts receivable and sundry assets | 10 | 233,468,273 | 289,637,009 |
| Cash and short term deposits | 11 | 305,077,810 | 257,544,485 |
| | | 648,804,303 | 662,251,603 |
| **Current Liabilities** | | | |
| Bank overdraft | 11 | - | 3,930,925 |
| Accounts payable and accrued expenses | 12 | 101,862,432 | 350,728,933 |
| | | 101,862,432 | 354,659,858 |
| **Net Current Assets** | | 546,941,871 | 307,591,745 |
| | | 881,761,643 | 664,544,988 |
| **Equity** | | | |
| Fund balances at end of year | 13 | 373,091,346 | 259,814,919 |
| Accumulated surplus on imported raw sugar | 14 | 88,506,955 | 68,134,231 |
| | | 461,598,301 | 327,949,150 |
| Capital reserves | 15 | 126,607,308 | 129,632,310 |
| ECU reserve fund | 16 | 28,288,783 | 38,625,422 |
| Certified seed cane reserve fund | 17 | 30,850,000 | 30,850,000 |
| Training programme fund | 18 | 1,321,251 | 2,605,106 |
| European Union fund | 19 | 201,000,000 | 110,000,000 |
| | | 849,665,643 | 639,661,988 |
| **Non-current Liabilities** | | | |
| Retirement benefit obligations | 7 | 32,096,000 | 24,883,000 |
| | | 881,761,643 | 664,544,988 |

**Approved for issue by the Board of Directors on 24 November 2010 and signed on its behalf by:**

| | |
|---|---|
| ........................................ | ........................................ |
| Derick Heaven — Executive Chairman | Peter Haley — Director, Finance & Administration |

# Sugar Industry Authority

Income and Expenditure Account

**Year ended 31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

| | Note | 2009 | 2008 |
|---|---|---|---|
| | | $ | $ |
| **Income** | | | |
| Cess | | 330,883,999 | 301,633,000 |
| Other income | 21 | 149,974,972 | 43,873,702 |
| | | 480,858,971 | 345,506,702 |
| **Expenses** | | | |
| Administrative expenses | 22 | (371,884,401) | (361,220,563) |
| Cane replanting grant | | (9,000,000) | - |
| Subsidies for cane transportation | | (10,336,639) | - |
| Interest expense | | - | (686,369) |
| Natural Cane Products Limited expenses | | (7,000) | (106,295) |
| | | (391,228,040) | (362,013,227) |
| **Surplus/(Deficit) of Income over Expenditure** | | 89,630,931 | (16,506,525) |
| Fund balances at beginning of year | | 259,814,919 | 274,678,462 |
| | | 349,445,850 | 258,171,937 |
| Release from Capital Reserve | 15 | 3,025,002 | - |
| Transfer to ECU Reserve Fund | 16 | (2,930,132) | (2,606,935) |
| Release from ECU Reserve Fund | 16 | 10,336,639 | - |
| Release from Training Programme Fund | 18 | 4,213,987 | 4,249,917 |
| Release from European Union Fund | 19 | 9,000,000 | - |
| **Fund Balances at End of Year** | | 373,091,346 | 259,814,919 |

# Sugar Industry Authority

Statement of Operation - Imported Raw Sugar

**Year ended 31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

| | Note | 2009 | 2008 |
|---|---|---|---|
| | | $ | $ |
| **Turnover** | | 88,772,724 | 68,248,306 |
| **Accumulated Surplus on Imported Raw Sugar at End of Year** | 14 | 88,506,955 | 68,134,231 |

# Sugar Industry Authority

## Statement of Cash Flows

**Year ended 31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

| | Note | 2009<br>$ | 2008<br>$ |
|---|---|---|---|
| **Cash Flows from Operating Activities** | | | |
| Cash (used in)/provided by operating activities | 24 | (182,451,612) | 186,622,382 |
| **Cash Flows from Investing Activities** | | | |
| Interest received | | 60,880,314 | 17,580,088 |
| Proceeds from sale of property, plant and equipment | | 85,128,230 | 4,486,889 |
| Purchase of property, plant and equipment | 6 | (12,188,367) | (36,847,044) |
| Disbursement of long term loans receivable | | (110,534,520) | (114,023,190) |
| Receipts on long term loans receivable | | 109,788,876 | 4,072,164 |
| Cash provided by/(used in) investing activities | | 133,074,533 | (124,731,093) |
| **Cash Flows from Financing Activities** | | | |
| Interest paid | | - | (818,056) |
| Grants received | 19 | 100,000,000 | 110,000,000 |
| Repayment of borrowings | | - | (19,815,323) |
| Cash provided by financing activities | | 100,000,000 | 89,366,621 |
| Net increase in cash and short term deposits | | 50,622,921 | 151,257,910 |
| Effect of exchange rate changes on cash and short term deposits | | 841,329 | 338,379 |
| Cash and cash equivalents at beginning of year | | 253,613,560 | 102,017,271 |
| **CASH AND CASH EQUIVALENTS AT END OF YEAR** | 11 | 305,077,810 | 253,613,560 |

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 1. Identification and Activity

The Sugar Industry Authority (SIA) is a Jamaican Government statutory body, incorporated under the Sugar Industry Control Act. The registered office is at 5 Trevennion Park Road, Kingston 5, Jamaica. Its main activity comprises industry regulation, arbitration, research and the provision of technical assistance.

These financial statements include the combined financial position and results of the following funds, division and trading accounts administered by the Authority.

Funds
- General Fund
- Sugar Industry Capital Rehabilitation Fund
- ECU Reserve Fund
- Certified Seed Cane Reserve Fund
- Training Programme Fund

Division
- Sugar Industry Research Institute (S.I.R.I.)

Trading Accounts
- Imported Refined Sugar
- Imported Raw Sugar

The financial statements do not include the results of the subsidiaries and associated companies, as explained in significant accounting policy Note 2(b).

Based on a decision by the Cabinet, Sugar Industry Housing Limited (SIHL), a subsidiary of the Authority, is to be wound up. The process commenced during the year ended 31 October 2002 with the transfer of assets and liabilities of SIHL to the Authority. The investment in SIHL has been fully provided for in the accounts.

## 2. Significant Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

### (a) Basis of preparation

These financial statements have been prepared in accordance with and comply with International Financial Reporting Standards (IFRS), and have been prepared under the historical cost convention, as modified by the revaluation of property, plant and equipment.

The Authority has exercised the option not to present consolidated financial statements, having met the preconditions for exemption outlined in IAS 28 'Accounting for Investments in Associates'.

**2. Significant Accounting Policies (Continued)**

**(a) Basis of preparation (continued)**

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Authority's accounting policies. Although these estimates are based on management's best knowledge of current events and action, actual results could differ from those estimates. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 4.

***Interpretations of published standards effective during the year***

Certain new interpretations of existing standards have been published that became effective during the current financial year. The Authority has assessed the relevance of all such new interpretations and has put into effect the following IFRS, which are immediately relevant to its operations.

- **IFRIC 14, IAS 19, The Limitation on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction** (effective for annual periods beginning on or after 1 January 2008). IFRIC 14 provides guidance on assessing the limit in IAS 19 on the amount of the surplus that can be recognised as an asset. It also explains how the pension asset or liability may be affected by a statutory or contractual minimum funding requirement. The adoption of this interpretation did not have an impact on the Authority's financial statements.

***Standards, interpretations and amendments to published standards that are not yet effective***

At the date of authorisation of these financial statements, certain new standards, amendments and interpretations to existing standards have been issued which are mandatory for the Authority's accounting period beginning on or after 1 November 2009 or later periods, but were not effective at the date of the statement of financial position, and which the Authority has not early adopted. The Authority has assessed the relevance of all such new standards, interpretations and amendments and has determined that the following may be relevant to its operations, and has concluded as follows:

- **IAS 1 (Revised) – 'Presentation of financial statements' and IAS 1 (Amendment) – 'Presentation of financial statements'** (effective for annual periods beginning on or after 1 January 2009). Under this revised standard, recognised income and expenses are to be presented in a single statement (a statement of comprehensive income) or in two statements (an income statement and a statement of comprehensive income), separately from owner changes in equity. Components of other comprehensive income may not be presented in the statement of changes in equity. Both the statement of comprehensive income and the statement of changes in equity are to be included as primary statements. The balance sheet is to be referred to as the 'statement of financial position' and the cash flow statement is to be referred to as the 'statement of cash flows'. The Authority will be required to disclose the income tax related to each component of other comprehensive income either in the statement of comprehensive income or in the notes to the financial statements. The Authority should also present a statement of financial position as at the beginning of the earliest comparative period when it applies an accounting policy retrospectively or makes a retrospective restatement or reclassifies items in the financial statements. The Authority will apply IAS 1(Revised) and IAS 1(Amendment) from 1 November 2009.

**2. Significant Accounting Policies (Continued)**

**(a) Basis of preparation (continued)**

***Standards, interpretations and amendments to published standards that are not yet effective (continued)***

- **IAS 19 (Amendment), 'Employee benefits'** (effective for annual periods beginning on or after 1 July 2009). The amendment clarifies that a plan amendment that results in a change in the extent to which benefit promises are affected by future salary increases is a curtailment, while an amendment that changes benefits attributable to past service gives rise to a negative past service cost, if it results in a reduction in the present value of the defined benefit obligation.

  The return on plan assets has been amended to state that plan administration costs are deducted in the calculation of return on plan assets only to the extent that such costs have been excluded from the measurement of the defined benefit obligation.

  The distinction between short term and long term employee benefits will be based on whether benefits are due to be settled within or after 12 months of employee service being rendered.

  The amended standard has also deleted guidance stating that IAS 37, 'Provisions, Contingent Liabilities and Contingent Assets' requires contingent liabilities to be recognised.

  The Authority will apply IAS 19 (Amendment) from 1 November 2009.

- **IFRS 7 (Amendment), 'Financial instruments: Disclosures'** (effective for accounting periods beginning on or after 1 January 2009). The amendment requires enhanced disclosures about fair value measurement and liquidity risk. In particular, the amendment requires disclosures of fair value measurement by level of fair value measurement hierarchy. The Authority will adopt the Amendment to IFRS 7 effective 1 November 2009. The adoption of the amendment will result in additional disclosures.

- **IFRS 9, 'Financial instruments'** (effective for annual periods beginning on or after 1 January 2013). IFRS 9 addresses classification and measurement of financial assets and is available for early adoption immediately. IFRS 9 replaces the multiple classification and measurement models in IAS 39 'Financial instruments: Recognition and Measurement' with a single model that has only two classification categories: amortised cost and fair value. IFRS 9 represents the first milestone in the IASB's planned replacement of IAS 39. Management is currently considering the implications of the standard, the impact on the Authority and the timing of its adoption by the Authority.

- **IAS 7 (Amendment), 'Classification of expenditures on unrecognised assets'** (effective for annual periods beginning on or after 1 January 2010). This amendment requires that only expenditures that result in a recognised asset in the statement of financial position can be classified as investing activities. The Authority will apply the amendment to IAS 7 effective November 1, 2010.

- **IAS 24 (Amendment), 'Related party transactions and balances'** (effective for annual periods beginning on or after 1 January 2011). The revised standard removes the requirement for government-related entities to disclose details of all transactions with the government and other government-related entities, and clarifies and simplifies the definition of a related party. The Authority will apply the revision to IAS 24 effective November 1, 2011.

# Sugar Industry Authority



## 2. Significant Accounting Policies (Continued)

### (b) C onsolidation

Subsidiaries are those entities in which the Authority has an interest of more than one half of the voting rights or otherwise has power to govern the financial and operating policies.

Associates are those entities over which the Authority has the power to participate in the financial and operating policy decisions but is not in control or joint control.

These financial statements present the results of the operations of the Authority standing alone and therefore do not include consolidated results for its subsidiaries and associates. Consolidated results are not presented as:

- The assets and liabilities of its subsidiary, Sugar Industry Housing Limited were transferred to the Authority as explained in Note 1 in 2002. The company is to be wound up as it is no longer operational.
- Natural Cane Products Limited is inactive, and therefore the investment has been written off.
- The associated companies, National Sugar Company Limited and Jamaica Sugar Holdings Limited, have not been accounted for under the equity method of accounting as the entities are dormant. The investments in these entities have been written off.

### (c) Foreign currency translation

Foreign currency transactions are accounted for at the exchange rates prevailing at the dates of the transactions. At the balance sheet date, monetary assets and liabilities denominated in foreign currency, are translated using the closing exchange rate.

Exchange differences arising from the settlement of transactions at rates different from those at the dates of the transactions and unrealised foreign exchange difference on unsettled foreign currency monetary assets and liabilities are recognised in the income and expenditure account.

### (d) Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of services in the ordinary course of the Authority's activities. Revenue is recognised as follows:

***Cess***

The Authority's primary income is from a cess levied on the manufacturers of sugar and is recognised on an accrual basis.

***Interest income***

Interest income is recognised on an accrual basis, taking account of the principal outstanding and the effective rate over the period to maturity, when it is determined that such income will accrue to the Authority.

### (e) Intangible assets

Costs associated with developing or maintaining computer software programs are recognised as an expense as incurred. Costs that are directly associated with acquiring identifiable and unique software products which are expected to generate economic benefits exceeding costs beyond one year, are recognised as intangible assets. These costs are amortised over the estimated useful life of the software (three years).

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**2. Significant Accounting Policies (Continued)**

**(f) Property, plant and equipment**

Buildings comprise mainly warehouses, factories and offices and are shown at deemed cost less accumulated depreciation. All other property, plant and equipment are stated at cost less accumulated depreciation.

Depreciation of property, plant and equipment is calculated on the straight-line basis at annual rates estimated to amortise the cost or valuation of each asset over the term of its expected useful life. The expected useful lives are as follows:

| | |
|---|---|
| Buildings | 25 years |
| Pilot plant and office accommodation | 25 years |
| Plant, equipment and furniture | 4 – 10 years |
| Motor vehicles | 4 years |
| Assets on loan to Jamaica Cane Products Sales Limited | 10 years |

Land which is carried at deemed cost is not depreciated as it is deemed to have an indefinite life.

Property, plant and equipment are reviewed periodically for impairment. Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with carrying amount and are included in surplus of income over expenditure.

The cost of major renovations is included in the carrying amount of the asset when it is probable that future economic benefits in excess of the originally assessed standard of performance of the existing asset will flow to the Authority. Major renovations are depreciated over the remaining useful lives of the related assets. Repairs and maintenance are charged to the income and expenditure account during the financial period in which they are incurred.

**(g) Impairment of non-financial assets**

Property, plant and equipment and other non-current assets are reviewed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount of the asset exceeds its recoverable amount which is the higher of an asset's net selling price and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows.

**(h) Employee benefits**

(i) Pension obligations

The Authority operates a defined benefit plan, which is generally funded through payments to a trustee-administered fund as determined by periodic actuarial calculations. The employees contribute 5% or 10% of salary and the Authority, such amount as is necessary to provide the stipulated benefits. However, the employer must also be an ordinary annual contributor to the plan and such contributions must not exceed 10% of members' earnings.

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 2. Significant Accounting Policies (Continued)

### (h) Employee benefits (continued)

(i) Pension obligations (continued)

A defined benefit plan is a pension plan that defines an amount of pension benefit to be provided, usually as a function of one or more factors such as age, years of service or compensation. The Authority's pension benefits are based on the average earnings of members over the last two years of pensionable service.

The asset or liability in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date minus the fair value of plan assets, together with adjustments for actuarial gains/losses and past-service costs. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. Under this method the cost of providing pensions is charged to the income and expenditure account so as to spread the regular cost over the service lives of the employees in accordance with the advice of the actuaries. The present value of the defined benefit obligation is determined by the estimated future cash outflows using estimated discount rates based on market yields on government securities which have terms to maturity approximating the terms of the related pension liability.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions in excess of the greater of 10% of the value of plan assets or 10% of the defined benefit obligation are charged or credited to the income and expenditure account over the average remaining service lives of the related employees.

Past-service costs are recognised immediately in income, unless the changes to the pension plan are conditional on the employees remaining in service for a specified period of time (the vesting period). In this case, the past-service costs are amortised on a straight-line basis over the vesting period.

(ii) Other retirement obligations

The Authority provides retirement healthcare benefits to its retirees. The entitlement to these benefits is usually based on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment, using an accounting methodology similar to that for defined benefit pension plan. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions in excess of the greater of 10% of the value of plan assets or 10% of the defined benefit obligation are charged or credited to the income and expenditure account over the average remaining service lives of the related employees. These obligations are valued annually by independent qualified actuaries.

(iii) Termination benefits

Termination benefits are payable when employment is terminated by the Authority before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Authority recognises termination benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than twelve months after the balance sheet date are discounted to present value.

# Sugar Industry Authority



**2. Significant Accounting Policies (Continued)**

**(i) Long-term receivables**

When assets are leased out under finance leases, the present value of the lease payments is recognised as a receivable. Lease income is recognised over the term of the lease using the net investment method, which reflects a constant periodic rate of return.

Long-term receivables are stated at the principal amount remaining to be repaid over the period of the loans, less provision made for impairment. See Note 2(k).

**(j) Inventories**

Inventories are stated at the lower of cost and net realisable value. Cost is determined on the first-in, first-out basis. These items are stated less provision for write down to net realisable value, where necessary. Net realisable value is the estimated selling price in the ordinary course of business, less the costs of completion and selling expenses.

**(k) Receivables**

Receivables are carried at original invoice amount less provision made for impairment of these receivables. A provision for impairment of receivables and loans is established when there is objective evidence that the Authority will not be able to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the carrying amount and the recoverable amount, being the present value of expected cash flows, discounted at the market rate of interest for similar borrowers.

**(l) Payables**

Payables are stated at cost.

**(m) Provisions**

Provisions are recognised when the Authority has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. Where the Authority expects a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain.

**(n) Cash and cash equivalents**

Cash and cash equivalents are carried in the balance sheet at cost. For the purposes of the cash flow statement, cash and cash equivalents comprise cash on hand, and short-term highly liquid investments with original maturities of three months or less, less bank overdraft.

**(o) Borrowings**

Borrowings are recognised initially at the proceeds received, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost using the effective yield method. Any difference between proceeds, net of transaction costs, and the redemption value is recognised in the income and expenditure account over the period of the borrowings.

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**2. Significant Accounting Policies (Continued)**

**(p) Capital reserve**

The matching value of property, plant and equipment received as gift or grant is included in a capital reserve fund, and released to revenue over the estimated useful life of the assets, in line with the relevant depreciation charge.

Unrealised surpluses arising on previous revaluation of land and buildings are also included in capital reserves.

**(q) Financial instruments**

A financial instrument is any contract that gives rise to both a financial asset in one entity and a financial liability or equity of another entity.

**Financial assets**

The Authority classifies its financial assets in the following categories: loans and receivables and available-for-sale. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition and re-evaluates this designation at every reporting date.

***Loans and receivables***

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the balance sheet date. These are classified as non-current assets. Loans and receivables are classified as 'long-term receivables', 'loans to farmers, estates and factories', 'mortgage and home improvement loans' and 'receivables' and are included in non-current assets and current assets in the balance sheet.

***Available-for-sale financial assets***

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless management intends to dispose of the investment within twelve months of the balance sheet date. These assets are classified as 'cash and short term deposits' and are included in current assets on the balance sheet.

The Authority assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired. In the case of equity securities classified as available for sale, a significant or prolonged decline in the fair value of the security below its cost is considered an indicator that the securities are impaired. If any such evidence exists for available-for-sale financial assets, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised in profit or loss – is removed from equity and recognised in the income statement. Impairment losses recognised in the income statement on equity instruments are not reversed through the income and expenditure account. Impairment provisioning of receivables is described in Note 2(k).

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**2. Significant Accounting Policies (Continued)**

**(q) Financial instruments (continued)**

**Financial liabilities**
The Authority's financial liabilities are initially measured at fair value, and are subsequently measured at amortised cost using the effective interest method. These liabilities are classified as 'borrowings', 'bank overdraft' and 'payables' and are included in non-current liabilities and current liabilities on the balance sheet.

**(r) Grants received**
Grants received are recognised at their fair value when there is a reasonable assurance that the grant will be received and the Authority will comply with any attached conditions.

Grants relating to the purchase of property, plant and equipment are included in capital reserves and credited to the income and expenditure account on a straight line basis over the expected lives of the related assets.

**3. Financial Risk Management**

The Authority's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The Authority's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Authority's financial performance.

The Authority's risk management policies are designed to identify and analyse these risks, to set appropriate risk limits and controls, and to monitor the risks and adherence to limits by means of reliable and up-to-date information systems. The Authority regularly reviews its risk management policies and systems to reflect changes in markets, products and emerging best practice.

The Board of Directors is ultimately responsible for the establishment and oversight of the Authority's risk management framework. As a government-run entity, written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity, are provided in government policy. Compliance with these policies is monitored by the Auditor General's Department, through periodic reviews. The Board has established the following committee for managing and monitoring risks:

***Finance Committee***
It is responsible for managing the Authority's assets and liabilities and the overall financial structure. It is also primarily responsible for the funding and liquidity risks of the Authority. This is carried out through the Authority's Finance department, which identifies, evaluates and hedges financial risks and reports to the Finance Committee.

**3. Financial Risk Management (Continued)**

**(a) Credit risk**

The Authority takes on exposure to credit risk, which is the risk that its debtors or counterparties will cause a financial loss for the Authority by failing to discharge their contractual obligations. Credit risk is the most important risk for the Authority's business; management therefore carefully manages its exposure to credit risk. Credit exposures arise principally from the Authority's receivables and loans due from farmers, estates and factories and investment activities.

***Credit review process***

The Authority has established a Finance Committee whose responsibility involves regular analysis of the ability of borrowers and other counterparties to meet repayment obligations.

(i) Long-term and other receivables

Long-term receivables relate to loans to farmers, estates and factories, motor vehicle lease receivables and mortgage and home improvement loans. The Authority makes these loans to the sugar industry, primarily from grant funds received or from the proceeds of loans received for on-lending. Other receivables relate to current amounts due from parties within the industry.

The Authority's credit exposure is limited as repayments under the loans are deducted from crop proceeds due to the farmers, estates and factories, prior to the remittance of these proceeds to the farmers, estates and factories.

The Authority establishes an allowance for impairment that represents its estimate of incurred losses in respect of long-term and other receivables. The Authority's average credit period on other receivables normally spans one cane harvesting period while long-term receivables are normally due over several harvesting periods. Receivables are provided for based on an estimate of amounts that would be irrecoverable, determined by taking into consideration past default experience, current economic conditions and expected receipts and recoveries once impaired.

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**3. Financial Risk Management (Continued)**

**(a) Credit risk (continued)**

***Credit review process (continued)***

(ii) Cash and deposits
The Authority limits its exposure to credit risk by investing mainly in liquid deposits with financial institutions of a high credit quality. Accordingly, management does not expect any counterparty to fail to meet its obligations.

**Maximum exposure to credit risk**

| | Maximum exposure | |
|---|---|---|
| | **2009** | **2008** |
| | **$** | **$** |
| Credit risk exposures are as follows: | | |
| Long-term receivables | 84,828,699 | 81,733,426 |
| Loans to farmers, estates and factories | 105,448,249 | 109,698,469 |
| Mortgage and home improvement loans | 2,716,520 | 3,298,095 |
| Accounts receivable and sundry assets | 233,468,273 | 289,637,009 |
| Cash and short term deposits | 305,077,810 | 257,544,485 |
| | 731,539,551 | 741,911,484 |

The above table represents a worst case scenario of credit risk exposure to the Authority at 31 October 2009 and 2008.

(expressed in Jamaican dollars unless otherwise indicated)

## 3. Financial Risk Management (Continued)

### (a) Credit risk (continued)

(iii) Aging analysis of long-term and other receivables

Receivables that are less than one year past due are not considered impaired. As of 31 October 2009, receivables of $36,162,928 (2008 - $82,768,891) were past due but not impaired. The prior year amount relates to a number of debtors who were granted a moratorium on repayment of certain loans for the year ended 31 October 2008 and as such no provision was made for these amounts (Note 8). The ageing analysis of these receivables is as follows:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Over 365 days | 36,162,928 | 82,768,891 |

As of 31 October 2009, receivables of $47,132,673 (2008 - $50,604,622) were impaired. The amount of the provision was $47,132,673 (2008 – $50,604,622). The individually impaired receivables mainly relate to farmers, estates and factories who are in unexpected difficult economic situations.

The aging of these receivables is as follows:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Over 365 days | 47,132,673 | 50,604,622 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

3. **Financial Risk Management (Continued)**

**(a) Credit risk (continued)**

(iii) Aging analysis of long-term and other receivables (continued)

Movements on the provision for impairment of receivables are as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| At 1 November | 50,604,622 | 50,816,115 |
| Receivables written off during the year as uncollectible | (4,015,839) | - |
| Unused amounts reversed | (36,884,631) | (211,493) |
| Receivables provided for during the year | 37,428,521 | - |
| At 31 October | 47,132,673 | 50,604,622 |

The creation and release of provision for impaired receivables have been included in expenses in the income and expenditure account. Amounts charged to the allowance account are generally written off when there is no expectation of recovering additional cash.

There are no financial assets other than those listed above that were individually impaired.

# Sugar Industry Authority

Notes to the Financial Statements

**31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

**3. Financial Risk Management (Continued)**

**(a) Credit risk (continued)**

(iv) Long-term and other receivables

The following table summarises the Authority's credit exposure for receivables at their carrying amounts, as categorised by the customer sector:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Accounts receivable and other sundry assets | 236,567,424 | 323,458,817 |
| Loans to farmers, estates and factories | 228,372,589 | 201,150,504 |
| Mortgage and home improvement loans | 6,916,770 | 7,931,604 |
| Motor vehicle lease | 1,737,631 | 2,430,696 |
| | 473,594,414 | 534,971,621 |
| Less: Provision for credit losses | (47,132,673) | (50,604,622) |
| | 426,461,741 | 484,366,999 |

All long-term and other receivables are due from debtors in Jamaica.

**(b) Liquidity risk**

Liquidity risk is the risk that the Authority is unable to meet its payment obligations associated with its financial liabilities when they fall due. Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities.

***Liquidity risk management process***

The Authority's liquidity management process, as carried out within the Authority and monitored by the Finance Committee, includes:

(i) Monitoring future cash flows and liquidity on a weekly basis. This incorporates an assessment of expected cash flows and the availability of funding if required.

(ii) Maintaining a portfolio of liquid assets that can easily be liquidated as protection against any unforeseen interruption to cash flow;

(iii) Optimising cash returns on investment;

(iv) Managing the concentration and profile of debt maturities.

(expressed in Jamaican dollars unless otherwise indicated)

**3. Financial Risk Management (Continued)**

**(b) Liquidity risk (continued)**

The maturities of assets and liabilities and the ability to replace, at an acceptable cost, interest-bearing liabilities as they mature, are important factors in assessing the liquidity of the Authority and its exposure to changes in interest rates and exchange rates.

***Financial liabilities cash flows***

The tables below summarises the maturity profile of the Authority's financial liabilities at 31 October based on contractual undiscounted payments.

| | Within 1 Month | 1 to 3 Months | 3 to 12 Months | Total |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **As at 31 October 2009:** | | | | |
| Accounts payable and accrued expenses | 2,768,276 | 26,599,765 | 72,494,391 | 101,862,432 |
| **Total financial liabilities (contractual maturity dates)** | 2,768,276 | 26,599,765 | 72,494,391 | 101,862,432 |

| | Within 1 Month | 1 to 3 Months | 3 to 12 Months | Total |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **As at 31 October 2008:** | | | | |
| Bank overdraft | 3,930,925 | - | - | 3,930,925 |
| Accounts payable and accrued expenses | 639,781 | 69,383,643 | 280,705,509 | 350,728,933 |
| **Total financial liabilities (contractual maturity dates)** | 4,570,706 | 69,383,643 | 280,705,509 | 354,659,858 |

Assets available to meet all of the liabilities and to cover financial liabilities include cash and short-term investments and loans receivable from farmers, estates and factories.

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**3. Financial Risk Management (Continued)**

**(c) Market risk**

The Authority takes on exposure to market risks, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks mainly arise from changes in foreign currency exchange rates and interest rates. Market risk is monitored by the Finance Committee which carries out reviews and monitors the price movement of financial assets on the local markets. Market risk exposures are measured using sensitivity analysis.

There has been no change to the Authority's exposure to market risks or the manner in which it manages and measures the risk.

***(i) Currency risk***

Currency risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

The Authority is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar and the Pound Sterling. Foreign exchange risk arises from recognised assets and liabilities.

The Authority manages its foreign exchange risk by ensuring that the net exposure in foreign assets and liabilities is kept to an acceptable level by monitoring currency positions.

**Concentrations of currency risk**

The table below summarises the Authority's exposure to foreign currency exchange rate risk at 31 October.

| | Jamaican J$ | US$ J$ | GBP J$ | Total J$ |
|---|---|---|---|---|
| **At 31 October 2009:** | | | | |
| **Financial Assets** | | | | |
| Long-term receivables | 84,828,699 | - | - | 84,828,699 |
| Loans to farmers, estates and factories | 105,448,249 | - | - | 105,448,249 |
| Mortgage and home improvement loans | 2,716,520 | - | - | 2,716,520 |
| Accounts receivable and sundry assets | 233,468,273 | - | - | 233,468,273 |
| Cash and short term deposits | 298,907,738 | 6,091,341 | 78,731 | 305,077,810 |
| Total financial assets | 725,369,479 | 6,091,341 | 78,731 | 731,539,551 |
| **Financial Liabilities** | | | | |
| Accounts payable and accrued expenses | 101,862,432 | - | - | 101,862,432 |
| Total financial liabilities | 101,862,432 | - | - | 101,862,432 |
| **Net financial position** | 623,507,047 | 6,091,341 | 78,731 | 629,677,119 |

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

3. **Financial Risk Management (Continued)**

(c) **Market risk (continued)**

*(i) Currency risk (continued)*

**Concentrations of currency risk (continued)**

| | Jamaican J$ | US J$ | GBP J$ | Total J$ |
|---|---|---|---|---|
| **At 31 October 2008:** | | | | |
| **Financial Assets** | | | | |
| Long-term receivables | 81,733,426 | - | - | 81,733,426 |
| Loans to farmers, estates and factories | 109,698,469 | - | - | 109,698,469 |
| Mortgage and home improvement loans | 3,298,095 | - | - | 3,298,095 |
| Accounts receivable and sundry assets | 289,637,009 | - | - | 289,637,009 |
| Cash and short term deposits | 252,098,076 | 5,368,007 | 78,402 | 257,544,485 |
| Total financial assets | 736,465,075 | 5,368,007 | 78,402 | 741,911,484 |
| **Financial Liabilities** | | | | |
| Accounts payable and accrued expenses | 3,930,925 | - | - | 3,930,925 |
| Borrowings | 350,728,933 | - | - | 350,728,933 |
| Total financial liabilities | 354,659,858 | - | - | 354,659,858 |
| **Net financial position** | 381,805,217 | 5,368,007 | 78,402 | 387,251,626 |

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**3. Financial Risk Management (Continued)**

**(c) Market risk (continued)**

***(i) Currency risk (continued)***

***Foreign currency sensitivity***

The following tables indicate the currencies to which the Authority had significant exposure on its monetary assets and liabilities and its forecast cash flows. The change in currency rate below represents management's assessment of the possible change in foreign exchange rates. The sensitivity analysis represents outstanding foreign currency denominated monetary items and adjusts their translation at the year end for a 5% revaluation and a 10% devaluation in foreign currency rates. The percentage change in the currency rate will impact each financial asset/liability included in the sensitivity analysis differently. Consequently, individual sensitivity analyses were performed. The effect on the deficit of income over expenditure shown below is the total of the individual sensitivities done for each of the assets/liabilities.

| | % Change in Currency Rate 2009 | Effect on Surplus 2009 $ | Effect on Equity 2009 $ |
|---|---|---|---|
| **Currency:** | | | |
| USD – Revaluation | 5% | (304,567) | (304,567) |
| USD – Devaluation | 10% | 609,134 | 609,134 |
| GBP – Revaluation | 5% | (3,937) | (3,937) |
| GBP – Devaluation | 10% | 7,873 | 7,873 |

| | % Change in Currency Rate 2008 | Effect on Deficit 2008 $ | Effect on Equity 2008 $ |
|---|---|---|---|
| **Currency:** | | | |
| USD – Revaluation | 5% | 448,066 | (448,066) |
| USD – Devaluation | 10% | (379,598) | 379,598 |
| GBP – Revaluation | 5% | 3,000 | (3,000) |
| GBP – Devaluation | 10% | (6,000) | 6,000 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 3. Financial Risk Management (Continued)

### (c) Market risk (continued)

#### *(ii) Interest rate risk*

Interest rate risk is the risk that the value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

Floating rate instruments expose the Authority to cash flow interest risk, whereas fixed interest rate instruments expose the Authority to fair value interest risk.

The following tables summarises the Authority's exposure to interest rate risk. It includes the Authority's financial instruments at carrying amounts, categorised by the earlier of contractual repricing or maturity dates.

| | Within 1 Month | 1 to 3 Months | 3 to 12 Months | 1 to 5 Years | Non-Interest Bearing | Total |
|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ |
| **At 31 October 2009:** | | | | | | |
| **Assets** | | | | | | |
| Long-term receivables | - | - | - | 84,828,699 | - | 84,828,699 |
| Loans to farmers, estates and factories | - | - | 105,448,249 | - | - | 105,448,249 |
| Mortgage and home improvement loans | - | - | 2,716,520 | - | - | 2,716,520 |
| Accounts receivable and sundry assets | 100,000,000 | - | 552,856 | - | 132,915,417 | 233,468,273 |
| Cash and bank | 169,720,949 | 135,356,861 | - | - | - | 305,077,810 |
| Total financial assets | 269,720,949 | 135,356,861 | 108,717,625 | 84,828,699 | 132,915,417 | 731,539,551 |
| **Liabilities** | | | | | | |
| Accounts payable and accrued expenses | - | - | - | - | 101,862,432 | 101,862,432 |
| Total financial liabilities | - | - | - | - | 101,862,432 | 101,862,432 |
| **Total interest repricing gap** | 269,720,949 | 135,356,861 | 108,717,625 | 84,828,699 | 31,052,985 | 629,677,119 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 3. Financial Risk Management (Continued)

### (c) Market risk (continued)

#### *(ii) Interest rate risk (continued)*

| | Within 1 Month $ | 1 to 3 Months $ | 3 to 12 Months $ | 1 to 5 Years $ | Non-Interest Bearing $ | Total $ |
|---|---|---|---|---|---|---|
| **At 31 October 2008:** | | | | | | |
| **Assets** | | | | | | |
| Long-term receivables | - | - | - | 81,733,426 | - | 81,733,426 |
| Loans to farmers, estates and factories | - | - | 109,698,469 | - | - | 109,698,469 |
| Mortgage and home improvement loans | - | - | 3,298,095 | - | - | 3,298,095 |
| Accounts receivable and sundry assets | 100,000,000 | - | 728,215 | - | 188,908,794 | 289,637,009 |
| Cash and bank | 49,055,684 | 208,488,801 | - | - | - | 257,544,485 |
| Total financial assets | 149,055,684 | 208,488,801 | 113,724,779 | 81,733,426 | 188,908,794 | 741,911,484 |
| **Liabilities** | | | | | | |
| Accounts payable and accrued expenses | 3,930,925 | - | - | - | - | 3,930,925 |
| Borrowings | - | - | - | - | 350,728,933 | 350,728,933 |
| Total financial liabilities | 3,930,925 | 208,488,801 | - | - | 350,728,933 | 354,659,858 |
| **Total interest repricing gap** | 145,124,759 | 208,488,801 | 113,724,779 | 81,733,426 | (161,820,139) | 387,251,626 |

***Interest rate sensitivity***

Interest rate risk is the risk that the value or future cash flows of a financial asset will fluctuate because of changes in market interest rates. Interest is earned on short-term deposits and loans to farmers, factories and estates. All the company's financial liabilities are non-interest bearing. Due to the nature of these items, there is no significant interest rate risk to which the Authority is exposed.

# Sugar Industry Authority



## 4. Critical Accounting Estimates and Judgements in Applying Accounting Policies

The Authority makes estimates and assumptions that affect the reported amounts of assets and liabilities within the next financial year. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

***Pension plan assets and retirement benefit obligations***

The cost of these benefits and the present value of the pension and the other retirement liabilities depend on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumption used in determining the net periodic cost (income) for pension and retirement benefits include the expected long-term rate of return on the relevant plan assets, the discount rate and, in the case of post-employment medical benefits, the expected rate of increase in medical costs. Any changes in these assumptions will impact the net periodic cost (income) recorded for pension and retirement benefits and may affect planned funding of the pension plans. The expected return on plan assets assumption is determined on a uniform basis, considering long-term historical returns, asset allocation and future estimates of long-term investments returns. The Authority determines the appropriate discount rate at the end of each year, which represents the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension and retirement benefit obligations. In determining the appropriate discount rate, the Authority considered interest rate of high-quality corporate bonds that are denominated in the currency in which the benefit will be paid, and that have terms to maturity approximating the terms of the related pension liability. The expected rate of increase of medical costs has been determined by comparing the historical relationship of the actual medical cost increases with the rate of inflation in the respective economy. Past experience has shown that the actual medical costs have increased on average by one time the rate of inflation. Other key assumptions for the pension and post retirement benefits costs and credits are based in part on current market conditions.

If the expected return on plan assets was to change by 1%, the net expense would change as follows:

| | Impact on net expense | |
|---|---|---|
| | General Fund | SIRI |
| | $ | $ |
| 1% increase in return on plan assets | (1,698,000) | (2,888,000) |
| 1% decrease in return on plan assets | 1,673,000 | 2,889,000 |

If the discount rate was to change by 1%, the net expense would change as follows:

| | Impact on net expense | |
|---|---|---|
| | General Fund | SIRI |
| | $ | $ |
| 1% increase in discount rate | (476,000) | (2,394,000) |
| 1% decrease in discount rate | 659,000 | 2,614,000 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 5. Intangible Assets

| | Computer Software |
|---|---|
| | $ |
| Cost - | |
| 31 October 2009 and 2008 | 1,053,899 |
| Accumulated Amortisation - | |
| 31 October 2009 and 2008 | 1,053,898 |
| Net Book Value - | |
| 31 October 2009 and 2008 | 1 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 6. Property, Plant and Equipment

Property, plant and equipment comprise:

| | Land | Buildings | Plant, Equipment & Furniture | Motor Vehicles | Assets on Loan to Jamaica Cane Products Sales Limited | Pilot Plant & Office Accommod-ation | Total |
|---|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ | $ |
| Cost or Valuation - | | | | | | | |
| At 31 October 2007 | 62,596,431 | 89,125,235 | 90,924,565 | 71,582,062 | 13,529,515 | 2,748,400 | 330,506,208 |
| Additions | - | 270,182 | 11,932,186 | 24,644,676 | - | - | 36,847,044 |
| Disposals | - | - | (1,219,452) | (17,210,043) | - | - | (18,429,495) |
| 31 October 2008 | 62,596,431 | 89,395,417 | 101,637,299 | 79,016,695 | 13,529,515 | 2,748,400 | 348,923,757 |
| Additions | - | - | 9,493,367 | 2,695,000 | - | - | 12,188,367 |
| Disposals | (9,300,000) | - | (1,342,068) | (1,206,308) | - | - | (11,848,376) |
| 31 October 2009 | 53,296,431 | 89,395,417 | 109,788,598 | 80,505,387 | 13,529,515 | 2,748,400 | 349,263,748 |
| Accumulated Depreciation - | | | | | | | |
| At 31 October 2007 | - | 22,809,852 | 53,332,783 | 53,000,080 | 12,602,197 | 1,663,549 | 143,408,461 |
| Charge for the year | - | 3,314,144 | 7,668,118 | 12,022,724 | 162,537 | 102,323 | 23,269,846 |
| Relieved on disposals | - | - | (760,357) | (17,181,009) | - | - | (17,941,366) |
| 31 October 2008 | - | 26,123,996 | 60,240,544 | 47,841,795 | 12,764,734 | 1,765,872 | 148,736,941 |
| Charge for the year | - | 3,076,632 | 8,727,729 | 11,714,889 | 162,537 | 102,324 | 23,784,111 |
| Relieved on disposals | - | - | (1,342,068) | (1,206,308) | - | - | (2,548,376) |
| 31 October 2009 | - | 29,200,628 | 67,626,205 | 58,350,376 | 12,927,271 | 1,868,196 | 169,972,676 |
| Net Book Value - | | | | | | | |
| At 31 October 2009 | 53,296,431 | 60,194,789 | 42,162,393 | 22,155,011 | 602,244 | 880,204 | 179,291,072 |
| At 31 October 2008 | 62,596,431 | 63,271,421 | 41,396,755 | 31,174,900 | 764,781 | 982,528 | 200,186,816 |

# Sugar Industry Authority

Notes to the Financial Statements

**31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

## 6. Property, Plant and Equipment (Continued)

(a) General Fund:-

| | Land | Buildings | Plant, Equipment & Furniture | Motor Vehicles | Assets on Loan to Jamaica Cane Products Sales Limited | Total |
|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ |
| Cost or Valuation - | | | | | | |
| At 31 October 2007 | 31,104,233 | 12,078,520 | 20,229,659 | 13,252,022 | 13,529,515 | 90,193,949 |
| Additions | - | - | 405,822 | 9,612,751 | - | 10,018,573 |
| Disposals | - | - | (358,702) | (1,532,337) | - | (1,891,039) |
| 31 October 2008 | 31,104,233 | 12,078,520 | 20,276,779 | 21,332,436 | 13,529,515 | 98,321,483 |
| Additions | - | - | 4,108,448 | - | - | 4,108,448 |
| Disposals | (9,300,000) | - | - | (1,206,308) | - | (10,506,308) |
| 31 October 2009 | 21,804,233 | 12,078,520 | 24,385,227 | 20,126,128 | 13,529,515 | 91,923,623 |
| Accumulated Depreciation - | | | | | | |
| At 31 October 2007 | - | 8,016,112 | 18,618,828 | 10,493,013 | 12,602,197 | 49,730,150 |
| Charge for the year | - | 483,141 | 518,776 | 3,668,188 | 162,537 | 4,832,642 |
| Relieved on disposals | - | - | (295,066) | (1,532,337) | - | (1,827,403) |
| 31 October 2008 | - | 8,499,253 | 18,842,538 | 12,628,864 | 12,764,734 | 52,735,389 |
| Charge for the year | - | 483,141 | 621,945 | 3,150,688 | 162,537 | 4,418,311 |
| Relieved on disposals | - | - | - | (1,206,308) | - | (1,206,308) |
| 31 October 2009 | - | 8,982,394 | 19,464,483 | 14,573,244 | 12,927,271 | 55,947,392 |
| Net Book Value - | | | | | | |
| At 31 October 2009 | 21,804,233 | 3,096,126 | 4,920,744 | 5,552,884 | 602,244 | 35,976,231 |
| At 31 October 2008 | 31,104,233 | 3,579,267 | 1,434,241 | 8,703,572 | 764,781 | 45,586,094 |

(i) Land and buildings with a fair value of $5,840,000 (2008 - $15,140,000) have been included in the table above, where the fair value has been used as the deemed cost of those assets under the provision of IFRS 1. The properties were previously held by the SIHL, and were transferred to the Authority during the year ended 31 October 2002 (Note 1).

The open market value of these properties as determined by professionally qualified independent valuators, as at February 2000 and May 2000, except as stated in Note 6(a)(ii) below, revealed a revaluation surplus of $5,840,000 (2008 - $8,865,001), which has been included in capital reserves. During the year, some properties were sold and a portion of the revaluation surplus was realised (Note 15).

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 6. Property, Plant and Equipment (Continued)

(a) General Fund (continued):-

(ii) The fair value of $5,840,000 (2008 - $5,840,000), attributed to certain parcels of land acquired from SIHL, was estimated by the Authority for inclusion in the table above. An independent valuation was not carried out for these 73 parcels of land at the time of acquisition. A deemed value of $80,000 was attributed to each.

(b) S.I.R.I:-

| | Land | Buildings | Plant, Equipment & Furniture | Motor Vehicles | Pilot Plant & Office Accommod-ation | Total |
|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ |
| Cost or Valuation - | | | | | | |
| At 31 October 2007 | 31,492,198 | 77,046,715 | 70,694,906 | 58,330,040 | 2,748,400 | 240,312,259 |
| Additions | - | 270,182 | 11,526,364 | 15,031,925 | - | 26,828,471 |
| Disposals | - | - | (860,750) | (15,677,706) | - | (16,538,456) |
| At 31 October 2008 | 31,492,198 | 77,316,897 | 81,360,520 | 57,684,259 | 2,748,400 | 250,602,274 |
| Additions | - | - | 5,384,919 | 2,695,000 | - | 8,079,919 |
| Write offs | - | - | (1,342,068) | - | - | (1,342,068) |
| At 31 October 2009 | 31,492,198 | 77,316,897 | 85,403,371 | 60,379,259 | 2,748,400 | 257,340,125 |
| Accumulated Depreciation - | | | | | | |
| At 31 October 2007 | - | 14,793,740 | 34,713,955 | 42,507,067 | 1,663,549 | 93,678,311 |
| Charge for the year | - | 2,831,003 | 7,149,342 | 8,354,536 | 102,323 | 18,437,204 |
| Disposal | - | - | (465,291) | (15,648,672) | - | (16,113,963) |
| At 31 October 2008 | - | 17,624,743 | 41,398,006 | 35,212,931 | 1,765,872 | 96,001,552 |
| Charge for the year | - | 2,593,491 | 8,105,784 | 8,564,201 | 102,324 | 19,365,800 |
| Write offs | - | - | (1,342,068) | - | - | (1,342,068) |
| At 31 October 2009 | - | 20,218,234 | 48,161,722 | 43,777,132 | 1,868,196 | 114,025,284 |
| Net Book Value - | | | | | | |
| At 31 October 2009 | 31,492,198 | 57,098,663 | 37,241,649 | 16,602,127 | 880,204 | 143,314,841 |
| At 31 October 2008 | 31,492,198 | 59,692,154 | 39,962,514 | 22,471,328 | 982,528 | 154,600,722 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 6. Property, Plant and Equipment (Continued)

(b) S.I.R.I. (continued):-

Land and buildings with a fair value of $95,000,000 have been included in the tables above, where the fair value has been used as the deemed cost of these assets under the provision of IFRS 1. The properties, transferred by the Government of Jamaica, were valued at open market value as determined by professionally qualified independent valuators. The fair value, net of applicable transaction costs, has been taken to capital reserves.

## 7. Post-employment Benefits

| | General Fund<br>$ | S.I.R.I.<br>$ | Total<br>2009<br>$ | Total<br>2008<br>$ |
|---|---|---|---|---|
| Assets/(liabilities) recognised in the balance sheet – | | | | |
| Pension scheme | 4,008,000 | 66,692,000 | 70,700,000 | 75,033,000 |
| Medical benefits | (10,042,000) | (22,054,000) | (32,096,000) | (24,883,000) |
| Amounts recognised in the income and expenditure account (Note 23) – | | | | |
| Pension scheme | 9,037,000 | 6,262,000 | 15,299,000 | 9,664,000 |
| Medical benefits | 2,388,000 | 5,513,000 | 7,901,000 | 4,580,000 |

### (a) Pension scheme benefits

The Authority and its division participate in defined benefit pension schemes, which are open to all permanent employees and administered by independent trustees. Two separate plans are in place for pension benefits. The majority of the employees of the division, are covered under a separate plan and the remaining employees are covered under the same plan as the employees of the Authority. Both plans provide benefits to members based on average earnings for the two years prior to retirement. Employees contribute 5% or 10% of pensionable salaries and the employer contributes a matching amount, as necessary. The schemes are valued by independent actuaries annually using the projected unit credit method; the latest such valuation being as at 31 October 2009. Additionally, the plans are valued by independent actuaries triennially to determine that the plan assets are adequate to meet the liabilities of the scheme. The latest such valuation for the Authority was as at 31 October 2009 and revealed that the scheme was adequately funded as at that date. The latest valuation of the scheme covering the majority of the employees of S.I.R.I. was as at 31 October 2007 and revealed that the scheme had a surplus of plan assets over liabilities as at that date.

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (a) Pension scheme benefits (continued)

(i) General Fund:-

The defined benefit asset recognised in the balance sheet was determined as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| Fair value of plan assets | 109,069,000 | 95,090,000 |
| Present value of funded obligations | (105,061,000) | (78,763,000) |
| | 4,008,000 | 16,327,000 |
| Unrecognised actuarial losses | 36,858,000 | 20,128,000 |
| Limitation due to asset restriction | (36,858,000) | (25,961,000) |
| | 4,008,000 | 10,494,000 |

Movement in the surplus recognised in the balance sheet:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of the period | 10,494,000 | 11,602,000 |
| Total charge – as shown below | (9,037,000) | (3,592,000) |
| Contributions paid | 2,551,000 | 2,484,000 |
| At end of the period | 4,008,000 | 10,494,000 |

The movement in the fair value of plan assets during the year was as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 95,090,000 | 119,682,000 |
| Expected return on plan assets | 15,014,000 | 13,376,000 |
| Actuarial losses on plan assets | (4,721,000) | (3,324,000) |
| Employer contributions | 2,551,000 | 2,484,000 |
| Employee contributions | 2,244,000 | 2,175,000 |
| Benefits paid | (1,109,000) | (39,303,000) |
| At end of year | 109,069,000 | 95,090,000 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

**7. Post-employment Benefits (Continued)**

**(a) Pension scheme benefits (continued)**

(i) General Fund (continued):-

The movement in the present value of the defined benefit obligation during the year was as follows:

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| At beginning of year | 78,763,000 | 70,871,000 |
| Current service cost | 1,052,000 | 1,308,000 |
| Interest cost | 11,343,000 | 6,213,000 |
| Employee contributions | 2,244,000 | 2,175,000 |
| Actuarial losses on obligations | 12,768,000 | 37,499,000 |
| Benefits paid | (1,109,000) | (39,303,000) |
| At end of year | 105,061,000 | 78,763,000 |

The amounts recognised in the income and expenditure account are as follows:

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| Current service cost, net of employee contributions | 1,052,000 | 1,308,000 |
| Interest cost | 11,343,000 | 6,213,000 |
| Expected return on plan assets | (15,014,000) | (13,376,000) |
| Net actuarial losses/(gains) recognised during the year | 759,000 | (893,000) |
| Change in asset limitation | 10,897,000 | 10,340,000 |
| Total included in staff costs (Note 23) | 9,037,000 | 3,592,000 |

The total charge was included in staff costs in administration expenses.

The actual return on plan assets was $12,053,000 (2008 - $11,582,000).

Expected contributions to the plan for the year ending 31 October 2010 amount to $2,858,000.

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (a) Pension scheme benefits (continued)

(i) General Fund (continued):-

The distribution of plan assets was as follows:

| | 2009 | | 2008 | |
|---|---|---|---|---|
| | $ | % | $ | % |
| Equity Fund | 23,908,000 | 22 | 20,847,000 | 22 |
| Mortgage and Real Estate Fund | 27,169,000 | 25 | 23,689,000 | 25 |
| Fixed Income Fund | 46,730,000 | 43 | 40,746,000 | 43 |
| Other | 11,262,000 | 10 | 9,808,000 | 10 |
| | 109,069,000 | | 95,090,000 | |

The expected return on plan assets was determined by considering the expected returns available on the assets underlying the current investment policy. Expected yields on fixed interest investments are based on gross redemption yields as at the balance sheet date. Expected returns on equity and property investments reflect long-term real rates of return experienced in the respective markets.

The five-year trend for the fair value of plan assets, the defined benefit obligation, the surplus in the plan, and experience adjustments for plan assets and liabilities is as follows:

| | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ |
| As at 31 October - | | | | | |
| Fair value of plan assets | 109,069,000 | 95,090,000 | 119,682,000 | 103,782,000 | 94,343,000 |
| Present value of defined benefit obligation | (105,061,000) | (78,763,000) | (70,871,000) | (62,803,000) | (56,866,000) |
| Surplus | 4,008,000 | 16,327,000 | 48,811,000 | 40,979,000 | 37,477,000 |
| Experience adjustments – | | | | | |
| Fair value of plan assets | 4,721,000 | 3,324,000 | 696,000 | 1,940,000 | (1,977,000) |
| Defined benefit obligation | (12,768,000) | 37,499,000 | (2,192,000) | (680,000) | 8,251,000 |

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (a) Pension scheme benefits (continued)

(ii) S.I.R.I.:-

The defined benefit asset recognised in the balance sheet was determined as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| Fair value of plan assets | 353,998,000 | 306,736,000 |
| Present value of funded obligations | (220,700,000) | (217,912,000) |
| | 133,298,000 | 88,824,000 |
| Unrecognised actuarial gains | (77,390,000) | (41,823,000) |
| Unrecognised past service cost | 17,107,000 | 21,383,000 |
| Unrecognised asset due to Section 58 | (6,323,000) | (3,845,000) |
| | 66,692,000 | 64,539,000 |

Movement in the surplus recognised in the balance sheet:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of the period | 64,539,000 | 62,939,000 |
| Total charge – as shown below | (6,262,000) | (6,072,000) |
| Contributions paid | 8,415,000 | 7,672,000 |
| At end of the period | 66,692,000 | 64,539,000 |

The movement in the fair value of plan assets during the year was as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 306,736,000 | 282,946,000 |
| Expected return on plan assets | 32,512,000 | 29,042,000 |
| Actuarial gains/(losses) on plan assets | 3,696,000 | (2,685,000) |
| Employer contributions | 8,415,000 | 7,672,000 |
| Employee contributions | 7,572,000 | 6,926,000 |
| Benefits paid | (4,933,000) | (17,165,000) |
| At end of year | 353,998,000 | 306,736,000 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (a) Pension scheme benefits (continued)

(ii) S.I.R.I. (continued):-

The movement in the present value of the defined benefit obligation during the year was as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 217,912,000 | 196,880,000 |
| Current service cost | 10,372,000 | 9,216,000 |
| Interest cost | 29,619,000 | 24,570,000 |
| Employee contributions | 261,000 | 386,000 |
| Actuarial (gains)/losses on obligations | (32,531,000) | 4,025,000 |
| Benefits paid | (4,933,000) | (17,165,000) |
| At end of year | 220,700,000 | 217,912,000 |

The amounts recognised in the income and expenditure account are as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| Current service cost, net of employee contributions | 3,060,000 | 2,677,000 |
| Interest cost | 29,619,000 | 24,570,000 |
| Expected return on plan assets | (32,512,000) | (29,042,000) |
| Past service cost – vested benefits | 4,277,000 | 5,345,000 |
| Net actuarial gains recognised during the year | (660,000) | (1,323,000) |
| Change in unrecognised asset | 2,478,000 | 3,845,000 |
| Total included in staff costs (Note 23) | 6,262,000 | 6,072,000 |

The total charge/(credit) was included in staff costs in administration expenses.

The actual return on plan assets was $36,601,000 (2008 - $26,775,000).

Expected contributions to the plan for the year ending 31 October 2010 amount to $8,927,000.

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (a) Pension scheme benefits (continued)

(ii) S.I.R.I. (continued):-

The distribution of plan assets was as follows:

The plan forms a part of the Guardian Life Limited Deposit Administration Fund, as such there are no assets that are explicitly allocated.

The five-year trend for the fair value of plan assets, the defined benefit obligation, the surplus in the plan, and experience adjustments for plan assets and liabilities is as follows:

| | 2009 $ | 2008 $ | 2007 $ | 2006 $ | 2005 $ |
|---|---|---|---|---|---|
| Fair value of plan assets | 353,998,000 | 306,736,000 | 282,946,000 | 248,772,000 | 213,074,000 |
| Present value of defined benefit obligation | (220,700,000) | (217,912,000) | (196,880,000) | (195,410,000) | (122,473,000) |
| Surplus | 133,298,000 | 88,824,000 | 86,066,000 | 53,362,000 | 90,601,000 |
| Experience adjustments – | | | | | |
| Fair value of plan assets | 3,696,000 | (2,685,000) | 2,092,000 | 6,318,000 | 10,140,000 |
| Defined benefit obligation | (11,190,000) | (2,137,000) | (18,724,000) | (4,316,000) | 6,347,000 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (b) Medical benefits

The Authority and its division operate a post-employment medical benefit scheme. Funds are not built up to cover the obligations under the medical benefit scheme. The method of accounting and the frequency of valuations is similar to those used for defined benefit pension schemes.

(i) General Fund:-

The liability recognised in the balance sheet was determined as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| Present value of unfunded obligations | 12,308,000 | 11,447,000 |
| Unrecognised actuarial gains | (2,266,000) | (3,464,000) |
| | 10,042,000 | 7,983,000 |

Movement in the liability recognised in the balance sheet:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 7,983,000 | 6,890,000 |
| Total charge – as shown below | 2,388,000 | 1,362,000 |
| Contributions paid | (329,000) | (269,000) |
| At end of year | 10,042,000 | 7,983,000 |

The movement in the present value of the defined benefit obligation during the year was as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 11,447,000 | 7,955,000 |
| Current service cost | 472,000 | 320,000 |
| Interest cost | 1,750,000 | 1,017,000 |
| Actuarial (gains)/losses on obligations | (1,032,000) | 2,424,000 |
| Benefits paid | (329,000) | (269,000) |
| At end of year | 12,308,000 | 11,447,000 |

# Sugar Industry Authority

Notes to the Financial Statements

**31 October 2009**

(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (b) Medical benefits (continued)

(i) General Fund (continued)-

The amounts recognised in the income and expenditure account are as follows:

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| Current service cost, net of employee contributions | 472,000 | 320,000 |
| Interest cost | 1,750,000 | 1,017,000 |
| Net actuarial losses recognised during the year | 166,000 | 25,000 |
| Total included in staff costs (Note 23) | 2,388,000 | 1,362,000 |

The total charge was included in staff costs in administration expenses.

The effects of a 1% movement in the assumed medical cost trend rate were as follows:

| | Increase<br>$ | Decrease<br>$ |
|---|---|---|
| Effect on the aggregate of the current service cost and interest cost | 2,624,000 | 1,946,000 |
| Effect on the defined benefit obligation | 13,959,000 | 9,807,000 |

The five-year trend for the defined benefit obligation and experience adjustments is as follows:

| | 2009<br>$ | 2008<br>$ | 2007<br>$ | 2006<br>$ | 2005<br>$ |
|---|---|---|---|---|---|
| Defined benefit obligation | 12,308,000 | 11,447,000 | 7,955,000 | 4,953,000 | 4,375,000 |
| Experience adjustments | 588,000 | 4,848,000 | 4,598,000 | (80,000) | 293,000 |

(ii) S.I.R.I.-

The liability recognised in the balance sheet was determined as follows:

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| Present value of unfunded obligations | 25,127,000 | 25,327,000 |
| Unrecognised actuarial gains | (3,073,000) | (8,427,000) |
| | 22,054,000 | 16,900,000 |

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (b) Medical benefits (continued)

(ii) S.I.R.I. (continued)-

Movement in the liability recognised in the balance sheet:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 16,900,000 | 13,951,000 |
| Total charge – as shown below | 5,513,000 | 3,218,000 |
| Contributions paid | (359,000) | (269,000) |
| At end of year | 22,054,000 | 16,900,000 |

The movement in the present value of the defined benefit obligation during the year was as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| At beginning of year | 25,327,000 | 17,207,000 |
| Current service cost | 1,319,000 | 913,000 |
| Interest cost | 3,899,000 | 2,220,000 |
| Actuarial (gains)/losses on obligations | (5,059,000) | 5,256,000 |
| Benefits paid | (359,000) | (269,000) |
| At end of year | 25,127,000 | 25,327,000 |

The amounts recognised in the income and expenditure account are as follows:

| | 2009 $ | 2008 $ |
|---|---|---|
| Current service cost, net of employee contributions | 1,319,000 | 913,000 |
| Interest cost | 3,899,000 | 2,220,000 |
| Recognised actuarial loss | 295,000 | 85,000 |
| Total included in staff costs (Note 23) | 5,513,000 | 3,218,000 |

The total charge was included in staff costs in administration expenses.

# Sugar Industry Authority

Notes to the Financial Statements
**31 October 2009**
(expressed in Jamaican dollars unless otherwise indicated)

## 7. Post-employment Benefits (Continued)

### (b) Medical benefits (continued)

(ii) S.I.R.I (continued)

The effects of a 1% movement in the assumed medical cost trend rate were as follows:

| | Increase $ | Decrease $ |
|---|---|---|
| Effect on the aggregate of the current service cost and interest cost | 6,421,000 | 4,343,000 |
| Effect on the defined benefit obligation | 29,829,000 | 18,389,000 |

The five-year trend for the defined benefit obligation and experience adjustments is as follows:

| | 2009 $ | 2008 $ | 2007 $ | 2006 $ | 2005 $ |
|---|---|---|---|---|---|
| Defined benefit obligation | 25,127,000 | 25,327,000 | 17,207,000 | 11,811,000 | 10,546,000 |
| Experience adjustments | (10,118,000) | 10,512,000 | 7,134,000 | (404,000) | 1,361,000 |

### (c) Principal actuarial assumptions used in valuing post-employment benefits

The principal actuarial assumptions used in valuing post-employment benefits for employees under the Authority's plan were as follows:

| | 2009 | 2008 |
|---|---|---|
| Discount rate | 18.0% | 15.5% |
| Expected return on plan assets | 15.0% | 15.5% |
| Future salary increases | 12.0% | 10.5% |
| Future pension increases | 8.0% | 3.5% |
| Medical cost trend rate | 16.0% | 14.0% |

The average expected remaining service life of the employees is 12 years (2008 – 9 years) for the General Fund and 17 years (2008 – 16 years) for S.I.R.I.

Post-employment mortality for active members and mortality for pensioners and deferred pensioners is based on the American 1994 Group Annuitant Mortality (GAM94) table.

# Sugar Industry Authority
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**7. Post-employment Benefits (Continued)**

**(c) Principal actuarial assumptions used in valuing post-employment benefits (continued)**

The in-service specimen rates (number of occurrences per 1,000 members) are as follows:

| Age | Males | Females |
|---|---|---|
| 20 - 30 | 0.507 – 0.801 | 0.284 – 0.351 |
| 30 - 40 | 0.507 – 1.072 | 0.284 – 0.709 |
| 40 - 50 | 1.072 – 2.579 | 0.709 – 1.428 |
| 50 - 60 | 2.579 – 7.976 | 1.428 – 4.439 |
| 60 - 70 | 7.976 – 23.73 | 4.439 – 13.73 |

No assumption was made for termination and death prior to retirement.

The principal actuarial assumptions used in valuing pension benefits for the plan covering the majority of the S.I.R.I. employees were as follows:

| | 2009 | 2008 |
|---|---|---|
| Discount rate | 18.0% | 13.0% |
| Expected return on plan assets | 12.0% | 10.0% |
| Future salary increases | 12.0% | 9.0% |
| Future pension increases | 2.5% | 2.5% |

The average expected remaining service life of the employees is 21.1 years (2008 – 16.2 years).

Post-employment mortality for active members is based on the A67/70 Ultimate Mortality Table for Assured Lives and mortality for pensioners is based on the PA(90) Ultimate Mortality Table for Annuitants, with no age setback.

The in-service specimen rates (number of occurrences per 1,000 members) are as follows:

| | Deaths in service | |
|---|---|---|
| Age | Males | Females |
| 20 | 0.507 | 0.284 |
| 25 | 0.661 | 0.291 |
| 30 | 0.801 | 0.351 |
| 35 | 0.851 | 0.478 |
| 40 | 1.072 | 0.709 |
| 45 | 1.578 | 0.973 |
| 50 | 2.579 | 1.428 |
| 55 | 4.425 | 2.294 |
| 60 | 7.976 | 4.439 |

# Sugar Industry Authority
Notes to the Financial Statements
**31 October 2009**
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## 8. Long-term Receivables

Long-term receivables comprise:

| | Total Recoverable | Current Portion | Long-term Portion |
|---|---|---|---|
| | $ | $ | $ |
| | | 2009 | |
| Loans to farmers, estates and factories - | | | |
| (a) Certified Seed Cane Programme | - | - | - |
| (b) Cane Replanting Loans #1 | 18,405,724 | 18,405,724 | - |
| (c) Cane Replanting Loans #2 | 137,752,786 | 72,878,023 | 64,874,763 |
| (d) Ratoon Loan Programme | 24,405,993 | 24,405,993 | - |
| (e) Equipment Loan | 8,233,602 | 3,237,343 | 4,996,259 |
| (f) Cane Replanting Loans #3 | 31,205,914 | 22,139,141 | 9,066,773 |
| (g) Seed Cane Loans | 6,786,077 | 3,393,039 | 3,393,038 |
| | 226,790,096 | 144,459,263 | 82,330,833 |
| Less provision for bad debts | (39,011,014) | (39,011,014) | - |
| | 187,779,082 | 105,448,249 | 82,330,833 |
| Other long-term loans - | | | |
| (a) Mortgage and Home Improvement Loans | 4,029,611 | 2,716,520 | 1,313,091 |
| (b) Motor Vehicle Lease (Note 10) | 1,737,631 | 552,856 | 1,184,775 |
| | 193,546,324 | 108,717,625 | 84,828,699 |

(expressed in Jamaican dollars unless otherwise indicated)

## 8. Long-term Receivables (Continued)

Long-term receivables comprise:

| | Total Recoverable | Current Portion | Long-term Portion |
|---|---|---|---|
| | $ | $ | $ |
| | | 2008 | |
| Loans to farmers, estates and factories - | | | |
| (a) Certified Seed Cane Programme | 13,143,793 | 13,143,793 | - |
| (b) Cane Replanting Loans #1 | 22,180,376 | 22,180,376 | - |
| (c) Cane Replanting Loans #2 | 70,876,979 | 30,087,419 | 40,789,560 |
| (d) Ratoon Loan Programme | 36,962,481 | 36,962,481 | - |
| (e) Equipment Loan | 2,876,518 | 1,015,122 | 1,861,396 |
| (f) Cane Replanting Loans #3 | 55,110,357 | 19,453,071 | 35,657,286 |
| | 201,150,504 | 122,842,262 | 78,308,242 |
| Less provision for bad debts | 13,143,793) | (13,143,793) | - |
| | 188,006,711 | 109,698,469 | 78,308,242 |
| Other long-term loans - | | | |
| (a) Mortgage and Home Improvement Loans | 5,020,798 | 3,298,095 | 1,722,703 |
| (b) Motor Vehicle Lease (Note 10) | 2,430,696 | 728,215 | 1,702,481 |
| | 195,458,205 | 113,724,779 | 81,733,426 |

Loans to farmers, estates and factories relate to:

a) Loans disbursed by the Authority to sugar estates for establishing and maintaining certified seed cane nurseries. Interest was charged at the rate of 5% per annum and the balances were recoverable over a two-year period. These loans were disbursed from grant funds set aside for this purpose (Note 17). These loans were fully repaid during the year.

b) Loans disbursed by the Authority to sugar estates and farmers for establishing and maintaining certified seed cane nurseries. Interest is charged at the rate of 9% per annum and the balances are recoverable over a four-year period, a moratorium being granted in the first year on principal and interest. The loans were disbursed from a loan facility granted to the Authority from the Development Bank of Jamaica (DBJ) for this purpose.

c) Loans disbursed by the Authority to sugar estates and farmers for establishing and maintaining certified seed cane nurseries. Interest is charged at the rate of 5% per annum and the balances are recoverable over a three-year period. These loans were partly funded by the Authority and from a grant received from the European Union (Note 19).

**8. Long-term Receivables (Continued)**

d) Loans disbursed by the Authority to sugar estates and farmers for establishing and maintaining certified seed cane nurseries. Interest is charged at the rate of 5% per annum and the balances are recoverable over a one-year period. These loans were partly funded by the Authority and from a grant received from the European Union (Note 19).

e) Loans disbursed by the Authority to sugar estates and farmers to assist with the purchase of equipment. Interest is charged at the rate of 5% per annum and the balances are recoverable over a three-year period. These loans were disbursed from a grant received from the European Union (Note 19).

f) Loans disbursed by the Authority to sugar estates and farmers for establishing and maintaining certified seed cane nurseries. Interest is charged at the rate of 5% per annum and the balances are recoverable over a three-year period. These loans were disbursed from a grant received from the European Union (Note 19).

g) Loans disbursed by the Authority to sugar estates for establishing and maintaining certified seed cane nurseries. Interest is charged at the rate of 5% per annum and the balances are recoverable over a two-year period. These loans were disbursed from the Authority's own funds.

Loans to farmers, estates and factories include interest receivable of $11,391,629 (2008 - $13,973,989).

In the prior year, a moratorium was granted to the farmers, estates and factories on loan repayments as a result of the difficult economic circumstances facing the industry. This was done based on instructions received from the Ministry of Agriculture and was for the year ended 31 October 2008. As a result, no provision was made for loans which would have been impaired, had the reprieve on repayment not been granted. Other loans assessed to be impaired for reasons other than the reprieve were appropriately provided for. During the current year, a provision of $39,011,014 has been established for loans which are considered to be impaired.

Other long-term loans relate to:

a) Mortgage and home improvement loans taken over from SIHL (See Note 1). Mortgage and home improvement loans are stated net of provision for doubtful debts of $2,887,159 (2008 - $2,910,806). The current portion includes interest receivable of $1,099,526 (2008 - $999,332).

b) Motor vehicles purchased by the Authority and leased to factory inspectors.

**9. Inventories**

Inventories comprise mainly chemical, apparatus and consumables.

# Sugar Industry Authority
Notes to the Financial Statements
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## 10. Accounts Receivable and Sundry Assets

| | 2009 $ | 2008 $ |
|---|---|---|
| Accounts receivable | 12,354,137 | 44,633,319 |
| Due from related party (Note 20(e)) | 213,995,780 | 157,356,770 |
| Current portion of long-term receivables (Note 8) | 552,856 | 728,215 |
| Receivable from Jamalco (Note 26) | 11,800,000 | - |
| Other receivables (Note 26) | - | 121,468,728 |
| | 238,702,773 | 324,187,032 |
| Less: Provision for doubtful debts | (5,234,500) | (34,550,023) |
| | 233,468,273 | 289,637,009 |

## 11. Cash and Cash Equivalents

For the purposes of the cash flow statement, cash and cash equivalents comprise the following:

| | 2009 $ | 2008 $ |
|---|---|---|
| Cash at bank and in hand | 49,537,516 | 49,055,684 |
| Short-term deposits | 255,540,294 | 208,488,801 |
| | 305,077,810 | 257,544,485 |
| Bank overdraft | - | (3,930,925) |
| | 305,077,810 | 253,613,560 |

The short-term deposits have an average maturity of 90 days (2008 – 61 days) and the weighted average effective interest rate was 14.50% (2008 – 10.56%). Short-term deposits include interest receivable of $2,761,090 (2008 - $1,073,863).

The Authority does not have an overdraft facility. The prior year bank overdraft balance was due to unpresented cheques.

## 12. Accounts Payable and Accrued Expenses

| | 2009 $ | 2008 $ |
|---|---|---|
| Accounts payable | 55,970,190 | 55,636,466 |
| Accrued expenses | 15,024,881 | 14,386,958 |
| Other payables (Note 26) | 27,446,250 | 280,705,509 |
| Unexpended public awareness campaign grant | 3,421,111 | - |
| | 101,862,432 | 350,728,933 |

During the year, a grant of $9,000,000 was received from the Ministry of Agriculture to be used to fund public awareness campaigns. An amount of $5,578,889 was expended during the year (Note 22), leaving a balance of $3,421,111.

# Sugar Industry Authority
Notes to the Financial Statements
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## 13. Fund Balances

Fund balances are represented by the following:

| | General Fund | Sugar Industry Research Institute | Capital Rehabilitation Fund | Total |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| Balance at 31 October 2007 | 163,612,564 | 103,121,544 | 7,944,354 | 274,678,462 |
| Deficit of Income over Expenditure | (11,960,659) | (4,545,866) | - | (16,506,525) |
| Release from Training Programme Fund (Note 18) | 4,249,917 | - | - | 4,249,917 |
| Transfer to ECU Reserve Fund (Note 16) | (2,606,935) | - | - | (2,606,935) |
| **Balance at 31 October 2008** | 153,294,887 | 98,575,678 | 7,944,354 | 259,814,919 |
| Surplus/(Deficit) of Income over Expenditure | 96,762,657 | (7,131,726) | - | 89,630,931 |
| Release from Capital Reserve (Note 15) | 3,025,002 | - | - | 3,025,002 |
| Transfer to ECU Reserve Fund (Note 16) | (2,930,132) | - | - | (2,930,132) |
| Release from ECU Reserve Fund (Note 16) | 10,336,639 | - | - | 10,336,639 |
| Release from Training Programme Fund (Note 18) | 4,213,987 | - | - | 4,213,987 |
| Release from European Union Fund (Note 19) | 9,000,000 | - | - | 9,000,000 |
| **Balance at 31 October 2009** | 273,703,040 | 91,443,952 | 7,944,354 | 373,091,346 |

## 14. Accumulated Surplus on Imported Raw Sugar

This represents the surplus on imported raw sugar sold on behalf of the Government of Jamaica (GOJ), less costs incurred also on its behalf.

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Balance at beginning of year | 68,134,231 | 69,935,924 |
| Movements during the year - | | |
| Add: Commission income | 88,772,724 | 68,248,306 |
| Less: Road repair expenses | (68,100,000) | (69,749,999) |
| Other operating expenses | (300,000) | (300,000) |
| Balance at end of year | 88,506,955 | 68,134,231 |

# Sugar Industry Authority

Notes to the Financial Statements
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**15. Capital Reserve**

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| (a) General Fund - | | |
| Balance brought forward - | | |
| Assets transferred from SIHL | 39,508,973 | 39,508,973 |
| Realised on sale of land | (3,025,002) | - |
| Balance carried forward | 36,483,971 | 39,508,973 |
| (b) S.I.R.I. - | | |
| Balance brought forward - | | |
| Transfer of asset - | | |
| Land and Buildings | 90,123,337 | 90,123,337 |
| Balance carried forward | 90,123,337 | 90,123,337 |
| Total balance carried forward | 126,607,308 | 129,632,310 |

(a) This balance represents assets transferred to the Authority during the year ended 31 October 2002 from its subsidiary, Sugar Industry Housing Limited (Notes 1 and 6(a)). During the year, some of the assets were sold and the revaluation surplus realised.

(b) This balance represents the fair value of land and buildings transferred to S.I.R.I from the Government of Jamaica in 2003 (Note 6(b)).

**16. ECU Reserve Fund**

This consists of amounts received from European Economic Community (EEC) countries under a Lome Convention arrangement whereby sugar-exporting countries are compensated for short-falls experienced in the price of their sugar exports in a particular year.

The proceeds received under this arrangement must be used for the development of the industry.

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Balance at beginning of year | 38,625,422 | 38,625,422 |
| Movements during the year - | | |
| Subsidies for transportation of cane | (10,336,639) | - |
| Interest earned | 2,930,132 | 2,606,935 |
| Transfer to Training Programme Fund (Note 18) | (2,930,132) | (2,606,935) |
| Balance at end of year | 28,288,783 | 38,625,422 |

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## 17. Certified Seed Cane Reserve Fund

This fund is financed from amount transferred from the ECU Reserve Fund and is used for the disbursement of loans to farmers, which are to be used for the establishment and management of certified cane nurseries.

The amount represents:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Balance held in the fund at end of year | 30,850,000 | 22,617,190 |
| Loan principal receivable at beginning of year | 8,232,810 | 8,232,810 |
| Loan repayments during the year | (8,232,810) | - |
| Loan principal receivable at end of year | - | 8,232,810 |
| Accumulated drawdown from ECU Reserve Fund | 30,850,000 | 30,850,000 |

## 18. Training Programme Fund

This represents funds set aside to finance training programs within the sugar industry broken down as follows:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Balance at beginning of year | 2,605,106 | 4,248,088 |
| Transfer from ECU Reserve Fund (Note 16) | 2,930,132 | 2,606,935 |
| | 5,535,238 | 6,855,023 |
| Amounts utilised during the year | (4,213,987) | (4,249,917) |
| Balance at end of year | 1,321,251 | 2,605,106 |

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## 19. European Union Fund

During the prior year, a grant of $110,000,000 was received from the European Union through the Ministry of Agriculture. The purpose of the grant is to finance loans to farmers, which are to be used for cane replanting activities. An additional grant of $100,000,000 was received in the current year to bring the total fund balance to $210,000,000. The fund balance was subsequently reduced to $201,000,000 by the issuance of a grant of $9,000,000 to fund cane-replanting activities.

The amount represents:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Available balance in the fund at end of year | 56,322,853 | 21,974,010 |
| Loan principal receivable at the beginning of the year | 88,025,990 | - |
| Loan principal disbursed during the year | 96,782,922 | 88,025,990 |
| Loan repayments during the year | (40,131,765) | - |
| Loan principal receivable at end of year (Note 8) | 144,677,147 | 88,025,990 |
| Total fund balance at end of year | 201,000,000 | 110,000,000 |
| Fund balance at the beginning of the year | 110,000,000 | - |
| Grants received during the year | 100,000,000 | 110,000,000 |
| Release to Income and Expenditure Account | (9,000,000) | - |
| Total fund balance at end of year | 201,000,000 | 110,000,000 |

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## 20. Related Party Transactions and Balances

Parties are considered to be related if one party has the ability to control the other party or exercise significant influence over the other party in making financial and operating decisions. Related party transactions and balances are recognised and disclosed for the following:

### (a) Sales of services

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| Jamaica Cane Products Sales Limited - | | |
| Rent | 1,360,881 | 1,360,881 |
| Lease of assets | 9,500,004 | 9,500,004 |

### (b) Purchases of services

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| The Sugar Producers Federation of Jamaica - | | |
| Consultancy fees | 690,287 | 690,287 |

### (c) Other transactions

| | 2009<br>$ | 2008<br>$ |
|---|---|---|
| Interest income - | | |
| Jamaica Cane Products Sales Limited | 7,000,000 | 7,000,000 |
| Interest expense - | | |
| Development Bank of Jamaica Limited | - | 686,369 |

(expressed in Jamaican dollars unless otherwise indicated)

# Sugar Industry Authority



## 20. Related Party Transactions and Balances (Continued)

### (d) Key management compensation:

| | 2009 $ | 2008 $ |
|---|---|---|
| Salaries and other short-term employee benefits | 42,856,135 | 41,899,559 |
| Statutory contributions | 5,631,626 | 2,045,232 |
| Pension costs | 4,560,872 | 4,968,729 |
| Other retirement benefits | 213,760 | 82,000 |
| | 53,262,393 | 48,995,520 |
| Directors' emoluments - | | |
| Management remuneration (included above) | 6,888,266 | 5,145,000 |

### (e) Year-end balances arising from sales/purchases of services:

| | 2009 $ | 2008 $ |
|---|---|---|
| Receivable from related parties - | | |
| Jamaica Cane Products Sales Limited | 213,995,780 | 157,356,770 |

The amount receivable from Jamaica Cane Products Sales Limited is included in accounts receivable and sundry assets in the balance sheet (Note 10). The amount includes a revolving loan of $100,000,000 on which interest is earned at a rate of 7% as shown in Note 20(c) above.

### (f) Loans to related parties:

| | 2009 $ | 2008 $ |
|---|---|---|
| Sugar Company of Jamaica Limited | - | 13,143,793 |

The loan above represents disbursements under the Certified Seed Cane Loan Programme and attracted interest at a rate of 5%. Included in the balance at 31 October 2008, was accrued interest of $4,910,983. The loan principal and accrued interest were fully provided for at 31 October 2008. The loan was included in loans to farmers, estates and factories in the balance sheet and was unsecured. The loan was repaid during the year.

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## 21. Other Income

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Lease and rental | 11,903,220 | 11,903,220 |
| Interest income | 58,398,148 | 24,040,810 |
| Profit on disposal of property, plant and equipment (Note 26) | 75,828,230 | 3,998,760 |
| Miscellaneous | 3,845,374 | 3,930,912 |
| | 149,974,972 | 43,873,702 |

## 22. Expenses by Nature

Total administration expenses:

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Advertising and public relations | 2,477,809 | 6,696,072 |
| Auditors' remuneration | 2,500,000 | 3,155,000 |
| Field operations | 6,732,562 | 6,409,343 |
| Depreciation and amortisation | 23,784,111 | 23,269,846 |
| Public awareness campaign expenses (Note 12) | 5,578,889 | - |
| Insurance | 4,487,424 | 3,624,212 |
| Legal claims | 4,000,000 | - |
| Postage and communication expenses | 4,876,236 | 4,751,467 |
| Legal and professional fees | 4,745,200 | 6,112,879 |
| Bad debt expense | 4,576,695 | 414,657 |
| Travelling expenses | 27,378,519 | 27,664,282 |
| Motor vehicle expenses | 17,760,662 | 15,803,273 |
| Other | 19,340,202 | 23,858,927 |
| Repairs and maintenance | 8,011,164 | 7,195,911 |
| Security costs | 8,926,996 | 8,932,850 |
| Staff costs (Note 23) | 179,421,107 | 167,997,195 |
| Utilities | 9,780,957 | 10,890,982 |
| Core sampler operations | 37,505,868 | 44,443,667 |
| | 371,884,401 | 361,220,563 |

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## 23. Staff Costs

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Wages and salaries | 126,724,430 | 125,616,791 |
| Statutory contributions | 10,877,217 | 10,398,144 |
| Pension costs (Note 7) | 15,299,000 | 9,664,000 |
| Other retirement benefit costs (Note 7) | 7,901,000 | 4,580,000 |
| Other | 18,619,460 | 17,738,260 |
| | 179,421,107 | 167,997,195 |

Average number of persons employed by the Authority during the year:

| | 2009 | 2008 |
|---|---|---|
| | No. | No. |
| General Fund:- | | |
| Full - time | 24 | 25 |
| S.I.R.I.:- | | |
| Full – time | 65 | 68 |
| Part – time | - | 1 |
| | 89 | 94 |

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**24. Cash Flows from Operating Activities**

| | 2009 | 2008 |
|---|---|---|
| | $ | $ |
| Surplus/(Deficit) on local sugar | 89,630,931 | (16,506,525) |
| Surplus on imported raw sugar | 88,506,955 | 68,134,231 |
| | 178,137,886 | 51,627,706 |
| Adjustments to reconcile surplus to net cash provided by operating activities: | | |
| Depreciation | 23,784,111 | 23,269,846 |
| Exchange gains on foreign balances | (841,329) | (338,379) |
| Interest expense | - | 686,369 |
| Interest income | (58,398,148) | (24,040,810) |
| Profit on disposal of property, plant and equipment | (75,828,230) | (3,998,760) |
| Transferred to imported raw sugar | (68,134,231) | (69,935,924) |
| | (1,279,941) | (22,729,952) |
| Changes in operating assets and liabilities: | | |
| Inventories | (19,906) | (132,736) |
| Accounts receivable and sundry assets | 56,168,736 | (80,708,866) |
| Accounts payable and accrued expenses | (248,866,501) | 286,643,936 |
| Retirement benefit asset | 4,333,000 | (492,000) |
| Retirement benefit obligations | 7,213,000 | 4,042,000 |
| Cash (used in)/provided by operating activities | (182,451,612) | 186,622,382 |

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## 25. Contingent Liability

(a) In 1984, a suit was filed by General Truckers Limited against the Authority relating to a contract terminated in the same year. General Truckers Limited is claiming damages in the amount of $2,275,000. Other third party claims also arose as a result of the termination of the contract. There is uncertainty about the status of other third party claims relating to the above proceedings. The management does not believe that this claim has legal merit and pursuant to new Civil Procedure Rules, the cases would stand dismissed on 31 December 2003 if no step is taken in the actions. To date, no legal verification has been received from the Registrar of the Supreme Court advising whether these matters have been struck out.

(b) In 2003, a claim was filed by Duel Thames against the Sugar Industry Housing Limited (SIHL) in the amount of $6,094,272 with interest at 24% per annum. In the year ended 31 October 2008, a judgement was entered in favour of the claimant in the amounts of $2,885,160 and $168,150 with interest thereon at 12% per annum from 2 September 1997 to 27 March 2007 and from 5 January 1998 to 27 March 2007 respectively. As it is the dormant legal entity, SIHL, which was liable in this matter and not the Authority, the Authority made an offer to the claimant of $4,000,000 in full and final settlement. This was accepted and the amount paid during the current year.

(c) In 2010, a claim was filed against the Sugar Industry Authority by Joshua Jaddoo, a former employee, relating to the termination of his employment contract. Mr. Jaddoo is claiming for redundancy payment and unpaid gratuities. No estimate of the approximate amounts for which settlement may be expected could be made in respect of these proceedings.

## 26. Joint Venture Arrangement

In 2007, the Authority, along with two other parties, entered into a joint venture agreement to sell sugar lands located in Clarendon to Alcoa Minerals of Jamaica Incorporated (Jamalco). A deposit of $270,000,000 was received in the prior year and was held in custody by the Authority on behalf of the other parties. The deposit along with interest earned of $10,705,509 was included in other accounts payable (Note 12) in the prior year. The Authority had also paid expenses from the proceeds, which was included in the other receivables (Note 10) in the prior year pending finalisation of the sale. During the current year, the agreement was finalised and the sale of the land recognised (Note 6(a)). The Authority made a gain of $75,828,230 on its portion of the land (Note 21). At the year-end, an amount of $11,800,000 representing the Authority's portion of the final payment due from Jamalco has been included in accounts receivable (Note 10). An amount of $27,446,250 is still being held by the Authority on behalf of one of the parties and is included in accounts payable (Note 12).