

SUGARCANE RESEARCH INSTITUTE

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Chairman

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Hon. Minister of Sugar Industry Development,
Ministry of Sugar Industry Development,
C Wing, 11th Floor, *Sethisiripaya* 2nd Stage,
Battaramulla.

Hon. Minsiter,

Annual Report of the Sugarcane Research Institute for the Period of 01.01.2013 to 31.12.2013

I am submitting herewith the Annual Report for the year 2013 of the institute including its progress, financial statements, Auditor General's Report and replies to it.

Yours faithfully,

SUGARCANE RESEARCH INSTITUTE



S. K. Cyril
Chairman
Board of Governors
31stDecember 2013

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Vision

To be the centre of excellence in sugarcane technologies and the leader in sugarcane industry development in Sri Lanka

Mission

Development and transfer of appropriate sugarcane technologies to enhance competitiveness of, and to contribute to expand and develop the local sugarcane industry in a sustainable manner

Board of Governors

Mr S K Cyril	Chairman	Appointed member
Dr H K Sunil	Member	Appointed member
Mr D H V Perera	Member	Appointed member
Ms T Y L Munasinghe	Member	Nominated member of the Ministry of Finance
Mr S Senanayake	Member	Nominated member of the Ministry of Sugar Industry Development
Dr A P Keerthipala	Member	Director (<i>Ex-Officio</i> Member)

Chairman's Review

During the year 2013, research and development and man power and infrastructure development activities of the institute were carried out according to the Corporate Plan 2013-2017.

With the establishment of the Ministry of Sugar Industry Development in January 2013, in addition to continuation of the long-term research program consisting of sugarcane crop improvement, crop and resource management, crop nutrition, crop protection, farm mechanisation and processing and product development and a technology transfer and development program, the activities of the institute were expanded to contribute to expansion of the sugarcane cultivation in new areas to achieve the government target of sugar development, i.e, achieving 40% self sufficiency in sugar by the 2020. Accordingly, the Sugarcane Research Institute contributed to identify lands suitable for sugarcane cultivation in the districts of Vaunia, Kilinochchi and Baticaloa. In addition, the institute accelerated the sugarcane industry-based livelihood development in rural areas in Badulla and Kilinochchi districts and expansion of sugarcane nurseries in Kantale to cater to seedcane needs for sugarcane cultivation in Kantale.

Since the availability of finance was barely sufficient to meet the expenses of the expanded activities, action was initiated to increase the cess imposed on imported sugar. In addition, action was initiated to acquire an additional land for the sugarcane hybridisation station at Enselwatte, Deniyaya and for a sugarcane nursery and a sub-station in Kilinochchi. The institute was also able to increase the General Worker cadre by 16, and to purchase two double cabs to be used in field activities.

The institute also continued its man power development by filling twelve vacancies in different categories, and providing training both overseas and local.

The Institute also strengthened international collaboration by building links with the International Sugar Organisation, Sugar Research Australia, Indian Institute of Sugarcane Research, in addition to the links already developed with the Shakarganj Sugar Research Institute and the Punjab Agriculture Research Board (PARB) in Pakistan, enabling the institute to obtain support for scientific collaboration for research and man power training.

The most remarkable achievements in research and development included the identification of eight new sugarcane varieties for commercial release, hopefully in the year 2014, 15 suitable varieties for Kantale area, and four new varieties for jaggery production, revising fertiliser recommendations for Sevanagala, Pelwatte, Hingurana, Siyambalanduwa, Badulla, Kantale and Kilinochchi areas, an effective herbicide in place of paraquat in diuron-paraquat mixture for control of weeds in sugarcane, control of sugarcane leaf hopper, pyrilla in sugarcane plantations in Kantale biologically and development of a fertiliser applicator to apply fertiliser uniformly in cane fields.

The technical know-how developed by the institute was transferred to sugarcane growers by conducting various educational and technology promotion programs. The technology promotion was witnessed by increasing the area under sugarcane with new varieties and adoption of new knowledge and the resulting increase in sugarcane yields and sugar production in the country. Thus, the Sugarcane Research Institute has been able to fulfil its mandate of providing technical support for the development of the sugarcane industry of Sri Lanka.



SK Cyril
Chairman

Director's Review

The Sugarcane Research Institute continued its services of development of sugarcane technologies and dissemination of knowledge and technical know-how for the development of the sugarcane industry of Sri Lanka during 2013, for the 29th consecutive year. As planned in the Corporate Plan 2013-2017, a long-term research program consisting of sugarcane crop improvement, crop and resource management, crop nutrition, crop protection, farm mechanisation and processing and product development was continued aiming at development of technical know-how to cater to the requirements of both the existing and new areas of sugar development. The technology dissemination and development program was also geared to the needs of the sugarcane industry development program in the country.

One of the most significant achievements of the research program was the identification of eight new superior sugarcane varieties to be released for commercial cultivation soon. These varieties are under large-scale evaluation and have shown encouraging results in large-scale cultivations, and hence, they will make a significant contribution to increase cane and sugar yields in the country, and hence the sugar production and incomes of farmers and sugar-producing companies. Furthermore, 15 commercial and near-commercial varieties were identified to be recommended for cultivation at Kantale. Four sugarcane varieties of the 2000 series were also identified to be used in jaggery production.

The Institute was also able to identify an alternative herbicide to paraquat which has been banned, to be used mixing with diuron for control of weeds in sugarcane. It was also possible to identify irrigation schedules for Hingurana area for efficient utilisation of irrigation water. The best planting method for transplanting settlings in the field was also identified.

The fertiliser recommendations for sugarcane cultivation at Sevanagala, Pelwatte, Siyambalanduwa, Hingurana, Badulla, Kantale and Kilinochchi areas were revised based on the availability of nutrition in the soils and their removal by the crop. The application of these revised fertiliser levels will increase cane and sugar yields while maintaining the soil fertility levels, which in turn, will contribute to raise incomes of farmers and sugar production in the country.

Regular monitoring of pest and disease conditions in sugarcane plantations was continued, and necessary advice was given to relevant officials of the sugar industries to prevent spread of pests and diseases. Investigations on the natural enemies of the pests were continued to control pests in an eco-friendly manner. It was observed that although sugarcane pests were under control, the levels of sugarcane smut and white leaf/grassy shoot disease have been increasing rapidly. It was also possible to successfully contain the spread of sugarcane leaf hopper pyrilla in sugarcane plantations in Kantale by biological means.

The design and development of a fertiliser applicator to apply fertiliser uniformly on the field, irrespective of the speed of the tractor, was successfully completed. This fertiliser applicator makes possible application of fertiliser at a lesser cost. In addition, the preliminary work on the design and development of an in-situ trash-cutting machine has been successfully carried out.

It was also possible to find bacteria species capable of solubilising phosphorus fertiliser, and these bacteria could survive in sugar industry waste products, such as, filter-mud, bagasse and distillery effluent for more than two months. These findings have been used to produce a bio-fertiliser at laboratory level for increasing the solubility of phosphorus fertiliser. It was also possible to find a yeast strain from natural environment which is capable of fermenting molasses efficiently.

Promotion of application of the research findings was continued. The emphasis was placed on the promotion of newly-introduced sugarcane varieties, SRI-developed tyne cultivator, furrow opener and disc ratoon, spaced planting method and intercropping with sugarcane. Programs were also conducted to increase the knowledge on pest and disease management and soil fertility management.

The development jaggery production in Passara area was expanded in the entire Badulla district targeting at expansion of the cane area up to 1,000 ha and production of 6000 tonnes of jaggery per year by the year 2018. Supply of seedcane for multiplication and training farmers on sugarcane cultivation and jaggery production have been undertaken. This program will provide a sustainable livelihood for the rural people in Badulla district, making a significant contribution to raise their incomes.

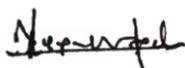
To provide the man power requirements, the institute was able to fill twelve vacancies including the Director, Deputy Director (Research and Technology Transfer), Senior Research Officer, and Accounting Officer. Staff training was continued providing three Research Officers to acquire skills in their subject of specialisation abroad, in addition to providing many opportunities in local institutions.

Two double cabs were also purchased for field research, and the preliminary arrangements have been made to obtain a block of land to expand hybridisation farm at Enselwatte and for seedcane production farm at Kilinochchi. To find a solution to the shortage of funds for research and development work, action was initiated to increase cess on imported sugar.

The institute could also strengthen its links with the Indian Institute of Sugarcane Research and the Sugar Research Australia and the International Sugar Organisation. These links would provide opportunities for scientific collaboration for exchange of germplasm and scientists and other necessary areas of research. In addition, since the institute is lacking experienced scientists, services were obtained from scientists in other national institutes, particularly in the areas of crop nutrition, crop protection and processing and product development.

The institute was involved in the development of the sugar industry by establishing sugarcane nurseries at Uda Walawe, Kantale and Kilinochchi, starting replacement of the nurseries in Sevanagala and Pelwatte with genetically pure new sugarcane varieties and undertaking development sugarcane-based livelihood development programmes in Kilinochchi and Badulla districts. The foundation seedcane nursery at Uda Walawe was expanded by developing additional 6.5 ha, and the nursery at Kantale was expanded by 10 ha. Furthermore, 15,000 tissue culture plants were provided to Lanka Sugar Company Ltd. - Pelwatte for multiplication in nurseries.

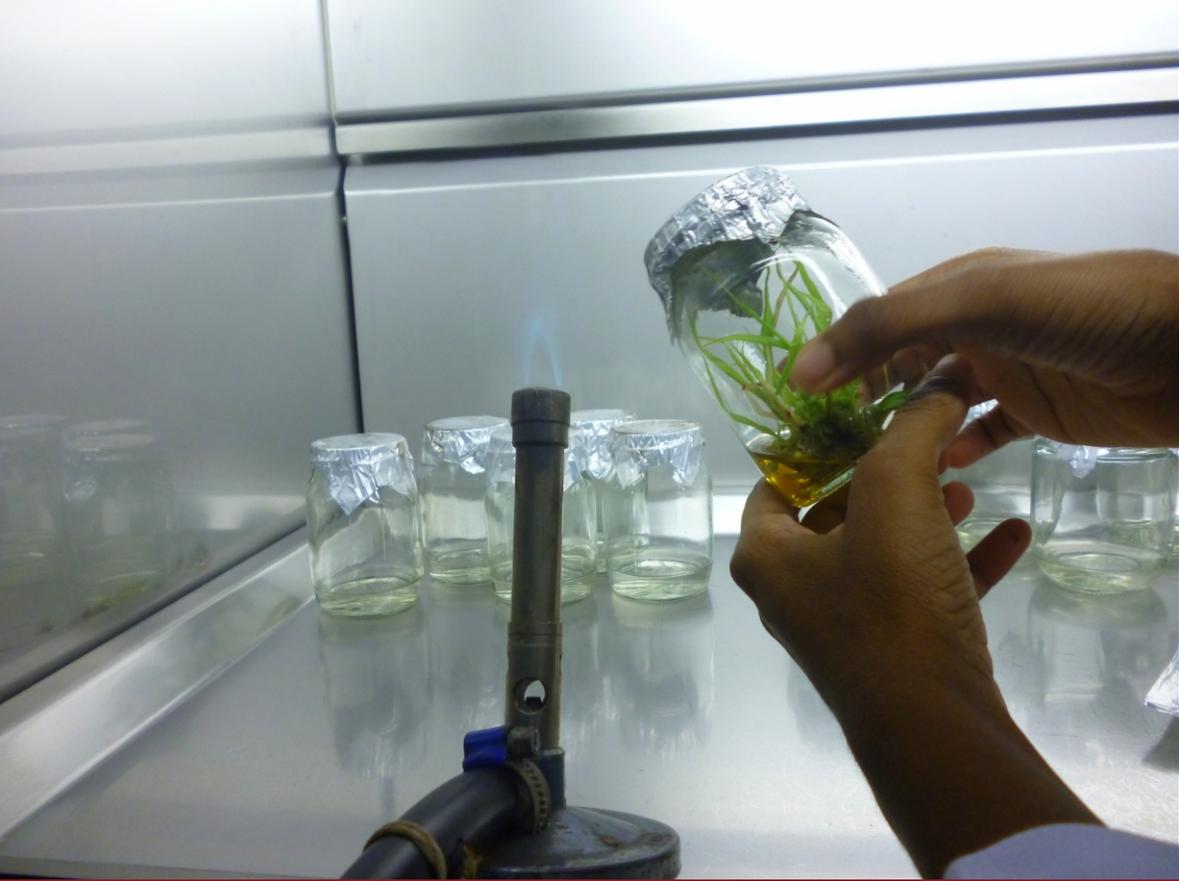
In addition to already introduced new knowledge and technologies, the above-mentioned technologies will be made available soon, and it is confident that they will contribute significantly to the development of the sugarcane industry of Sri Lanka to achieve the target of 40% self-sufficiency in sugar and also to contribute to improve the livelihoods of the rural people in sugarcane-growing areas of the country.



Dr A P Keerthipala

Director/CEO

Divisional Reports



Crop Improvement Division

Crop Improvement Division

Staff

Dr A Wijesuriya BSc (Agric.), MPhil, PhD	Principal Research Officer and Head
Ms A M M S Perera BSc, MSc	Research Officer
Ms D Manel BSc (Agric.), MSc	Research Officer (on study leave from 30.07.2012)
Mr W H Jayasinghe BSc (Agric.)	Research Officer
Ms A L C Kumari	Technical Officer
Mr D Weerasinghe	Technical Officer
Mr. R A Premachandra	Technical Officer
Ms L D D P Gunaratne Dip.(Agric.)	Technical Officer
Mr W G M J Perera	Lab/Field Attendant
Mr S H Karunaratne	Lab/Field Attendant

Achievements

Research

- Identification of eight new improved sugarcane varieties, namely, SL 97 1118, SL 97 1442, SL 98 2087, SL 98 2118, SL 98 2524, SL 98 2549, SL 98 2535 and SLT 4920 for commercial release in 2014 and their large-scale evaluation.
- Multiplication of planting materials of fifty nine commercial and near-commercial varieties imported from Pakistan for establishing adaptability experiments in different sugarcane-growing areas for testing their suitability under Sri Lankan conditions.
- Establishment of a 02-ha breeder's seed garden with genetically pure 72 sugarcane varieties to obtain seed material for multiplication to be issued to sugar industries.
- Testing one hundred and thirty eight promising varieties of SL 2000, 2001, 2003 and 2004 series in Replicated Yield Trials (RYTs) in sugar mill areas and multiplication of thirty eight promising varieties of 2002 series for establishing RYTs.
- Establishment of Preliminary Yield Trials (PYTs) of SL 2005 series with 136 varieties at Uda Walawe.
- Establishment of Stage 3 experiments with 364 genotypes of SL 2006 and 186 genotypes of 2007 series and stage 2 experiments with 1,652 genotypes of 2008 series, 4,385 genotypes of 2009 series and 439 genotypes of 2010 series at Uda Walawe.
- Establishment of a seedling nursery (stage 1) with 40,000 seedlings of SL 2011 and 2010 series at Uda Walawe.
- Sowing true seeds from 1,100 crosses of 2012 series and generation of seedlings of 631 crosses and potting nearly, 60,000 seedlings from those crosses in polythene pots.
- Performing a total of 1,770 crosses using field-lantern and solution crossing techniques at the sugarcane breeding substation, Enselwatte and at the sugarcane quarantine station, Hantane.
- Processing and storing 1,770 true seed samples of 2013-series crosses.

- Collection of seventy five *Saccharum* cultivars by germplasm expeditions undertaken in Matara, Galle and Kalutara districts.
- Enrichment of the germplasm collection with 59 Pakistan varieties and 75 locally-collected accessions.
- Conservation and utilisation of the germplasm with 1,456 accessions for producing improved sugarcane varieties.
- Identification of parents and crosses by evaluating 217 accessions for directional breeding of sugarcane crop for high cane yield, high sugar content and optimum fibre content through determination of their breeding values.
- Perfecting mericlone protocol for the newly-released sugarcane variety, SL 96 328 for in-vitro propagation.
- Selection of four superior sugarcane varieties, namely, SL 00 511, SL 00 601, SL 00 655 and SL 00 992 for jaggery production.
- Identification of fifteen sugarcane varieties, Co 775, SL 71 30, SL 83 06, SL 88 116, SL 89 1673, SL 90 6237, SL 92 4918, SL 92 5588, SL 94 3325, SL 95 4443, SL 96 128, SL 96 328, SL 98 1442, SL 97 2087, and SL 98 2527 for commercial cultivation in Kantale area.

Development

- Expansion of the foundation seedcane nursery by 10 ha and production of 225 tonnes of seedcane of the newly-released varieties SL 92 4918, SL 92 5588, SL 95 4033, SL 95 4430, SL 95 4443, SL 96 128 and SL 96 328, and development of additional 6.5 ha of new lands, expanding the total nursery area up to 16.5 ha.
- Production and supply of fifteen thousand disease-free plants through tissue culture for nurseries at Lanka Sugar Company Ltd - Pelwatte .
- Supply of genetically pure seed stocks to Lanka Sugar Company Ltd - Sevanagala (3 tonnes of Co 775, 18 tonnes of SL 92 4918, 4 tonnes of SL 96 128 and 4.5 tonnes of SL 96 328) and Lanka Sugar Company Ltd - Pelwatte (6.7 tonnes of SL 92 4918, 20.2 tonnes of SL 95 4443, 4 tonnes of SL 96 128, and 6 tonnes of SL 96 328) to initiate replacement of the existing nurseries.
- Multiplication of planting materials of new improved varieties by establishing 05 ha of SL 90 6237, 1.5 ha of SL 95 4443 and 2.0 ha SL 96 128 released for commercial cultivation in 2012 to be used as the planting material for foundation seedcane production.
- Expansion of the seedcane nursery in Kantale by 10 ha, increasing the total nursery area up to 15 ha.



Crop and Resource Management Division

Crop and Resource Management Division

Staff

Dr W R G Witharama BSc (Agric.), MPhil, PhD	Principal Research Officer/Head (up to 01.11.2013)
Mr A L C De Silva BSc (Agric.), MPhil	Senior Research Officer
Mr L M J R Wijayawardhana BSc (Agric.) MPhil	Research Officer-In-Charge (from 03.06.2013)
Ms W K M T Kumari BSc (Agric.)	Research Officer (up to 20.05.2013)
Mr K A Ariyaratne	Farm Superintendent
Mr W G Nimal	Technical Officer
Mr P B G S Sandanayake Dip. (Agric.)	Technical Officer
Mr S M D N D Seneviratne Dip. (Agric.)	Technical Officer
Mr W A U Priyantha	Technical Officer
Mr G Thilakarathne	Tractor Driver
Mr W M A K Priyashantha	Tractor Driver
Mr M S N Wijesiri	Lab/Field Attendant

Achievements

Research

- Confirmation of mulching with Gliricidia leaves for increasing sugarcane yields by rehabilitating degraded sugarcane lands.
- Confirmation of the use of excessive amounts of seedcane by farmers at Hingurana for planting sugarcane fields due to their ignorance and attitudes towards seedcane requirement and sugarcane crop establishment, which ultimately caused reduction of income.
- Identification of transplanting of settlings in half-filled furrows after irrigation or without irrigation as the best transplanting method for spaced transplanting technique for irrigated and rain-fed cultivation.
- Identification of the herbicide Glufosinate ammonium “Basta” as a suitable alternative to banned herbicide, Paraquat for application with diuron at the rate of 0.75-1.5 l/ha mixed with 200-300 litres of water.
- Identification of alternate-row furrow irrigation as a method of saving irrigation water by 35-42% without yield loss, and hence as an efficient and effective irrigation method for sugarcane cultivation in Reddish Brown Earths soils in DLI agro climetic zone.
- Identification of two different irrigation zones at Hingurana, based on agro-climatic parameters and soil properties and development irrigation schedules for each zone.
- Identification of the following sugarcane top-based rations to dairy cattle as highly palatable:
 - i. Five kg of chopped sugarcane tops mixed with 200g of molasses
 - ii. Three kg of chopped sugarcane tops mixed with 1.93 kg of rice bran, 20 g of urea and 50 g of minerals
 - iii. Three kg of chopped sugarcane tops mixed with 1.93 kg of coconut poonac, 20 g of urea and 50 g of mineralsThe cane tops preserved as silage was found to be preferred by dairy cattle.

Development

Harvesting 130 tonnes of sugarcane from 08 ha planted in 2012, and planting additional 3.6 ha of new lands belonging to 18 farmers using 30 tonnes and making 6.5 tonnes of jaggery by crushing remaining 100 tonnes in Kilinochchi. The total extent of sugarcane lands was increased to 8.7 ha (3.6 ha plant crop, 4.9 ha ratoon 1 crop and 0.2 ha ratoon 2 crop) belonging to 38 farmers.

Services for Research and Development

- Preparation of 23 ha lands for field trials and 6.5 ha for the foundation seedcane nursery at Uda Walawe.
- Rehabilitation of the field road network in the research farm.
- Expansion of the electric fence in the newly-developed 6.5 ha foundation seedcane nursery area.
- Harvesting and supplying 80 tonnes of cane to Sevanagala sugar factory.
- Harvesting nearly 225 tonnes of seedcane from the foundation seedcane nursery and supplying to Lanka Sugar Company Ltd - Sevanagala and Pelwatte and to Badulla district for establishing nurseries for the sugarcane industry development project.



Crop Nutrition Division

Staff

Mr H A S Weerasinghe BSc, MPhil, MSc (NRM), MI Biol.	Research Officer-In-Charge
Ms H Sivasegaram BSc (Agric.)	Research Officer (up to May 2013)
Mr A P J Mohotti	Technical Officer
Mr G S Udawatte	Technical Officer
Mr J Gunasiri	Lab/Field Attendant
Mr P W D Kulatunga	Lab/Field Attendant

Achievements

Research

- Revision of the fertiliser recommendations for Sevanagala, Pelwatte, Siyambalanduwa, Hingurana, Badulla, Kantale and Killinochchi sugarcane-growing lands.
- Determination of pH-buffering capacities of the sugarcane-growing soils at Sevanagala. The Divisions 4 and 5 have high-pH-buffering soils and the Divisions 1 and 3 have low-pH- buffering soils.
- Identification of the succession pattern of degradation of sugarcane trash. Sugarcane trash degradation was highest during the initial two weeks and declined thereafter.
- Development of three new fungal-bacterial biofilms using the fungi and bacteria isolated from sugarcane trash to accelerate sugarcane trash decomposition. The fungi identified were *Mucor* spp. and *Aspergillus* spp.

Analytical Services

- Analysis of 1224 cane samples for brix, pol and fibre contents for the divisional and other programs of the institute (834 for crop Improvement, 208 for Crop and Resource Management and 182 for Crop Nutrition Divisions).
- Analysis of 40 soil samples obtained from Vavunia and Batticaloa districts for soil texture, pH, conductivity, organic carbon, and N, P and K contents to evaluate suitability for cultivation of sugarcane for the Ministry of Sugar Industry Development and the Lanka Sugar Company (Pvt) Ltd. The soils in Vavunia were suitable for sugarcane, but the sandy soils in Batticaloa were not.
- Analysis of two samples of sugar for colour, polarisation, invert sugar, loss on drying and copper content for the Lanka Sugar Company (Pvt) Ltd. – Pelwatte.
- Analysis of two samples of bagasse for sucrose content for the Lanka Sugar Company (Pvt) Ltd. – Sevanagala and Pelwatte.



Crop Protection Division

Crop Protection Division

Staff

Ms V K A S M Wanasinghe BSc (Sp), MSc
Ms A N W S Thushari BSc (Sp)
Ms K M G Chanchala BSc (Agric.), MSc
Mr M K D Ubesena
Mr M R Premalal
Mr D M T Piyaratne

Research Officer-In-Charge
Research Officer
Research Officer
Technical Officer
Lab/Field Attendant
Lab/Field Attendant

Achievements

Research

- Identification of six varieties, namely, SL 00 589, SL 00 601, SL 00 603, SL 619, SL 00 652 and SL 00 922 as varieties with no incidence of sugarcane woolly aphid and SL 00 165, SL 00 354 and SL 00 401 as the varieties with low incidence of woolly aphid infestation.
- Identification of 56 varieties tolerant to smut disease and 7 varieties tolerant to leaf scald disease in 107 varieties of 2005 series.
- Observation of the highest level of the natural predators of sugarcane woolly aphid; *Dipha aphidivora* larvae, in the second week of January, *Micromus spp.* in the first week of August and Syrphids spp. in the first week of January.
- Identification of the highest population level of *Deltocephalus menoni*, the vector of the sugarcane white leaf disease at Uda Walawe during the third week of November.
- Observation of no alternate host plants for *Deltocephalus menoni* among the abundant weeds and crops species in and around local sugarcane plantations in Sri Lanka.
- Identification of two ground beetle species, *Harpalus pensylvenicus* and *Bembidionqua drimaculatum* (Family : Carabidae), as potential egg predators of the *Deltocephalus menoni*.
- Identification of five leaf hopper species as potential vectors of sugarcane white leaf disease (Plate 1).

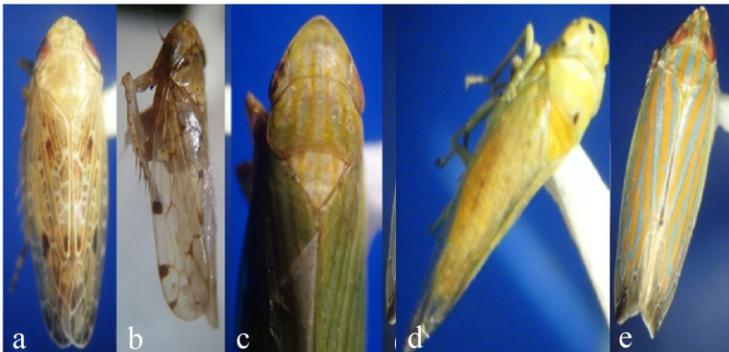


Plate 1: (a) *Maiestas menoni* (Rao & Ramacrishnan); (b) *Monobazus dissimilis* (Distant); (c) *Hecalus porrectus* (Walker); (d) *Kolla ceylonica* (Melichar); (e) *Varta rubrofasciata* (Distant)

- Identification of fenpyroximate 5% EC (at 14 ai g/ ha) as an effective miticide against sugarcane spider mite.
- Differentiation of male and female of *Cotesia* sp (Larval parasitoid of borer pests) using their antenna (Plate 2).

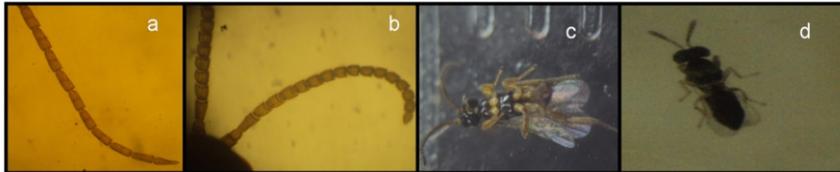


Plate 2: *Cotesia* sp. a. Antenna (Male); b. Antenna (Female); c. Adult insect (Male); d. Adult insect (Female)

- Identification of six major groups of pathogen strains causing sugarcane smut disease.
- Confirmation by ELISA test and electron microscope pictures that the virus which causes mosaic-like symptoms in sugarcane belongs to the Family Geminividae.
- Identification of five plant extracts (*Lantana camera*, *Tagetes erecta*, *Cinnamomum spp.*, *Kaempferia spp.*, and *Zinger officinale* Roscoe) having potential substances and one fungal species and three bacteria species as potential agents for controlling smut disease in sugarcane.

Services

- Control of *Pyrilla perpusilla* leaf hopper in Kantale plantations successfully by introducing *Epiricania melanoleuca*, a larval parasite.
- Regular monitoring of pests and diseases in sugarcane plantations in Sri Lanka. All major pests of sugarcane were under control, but sugarcane smut and WLD have increased to alarming levels.



Mechanisation Technology Division

Mechanisation Technology Division

Staff

Mr K H D Abeyratne BSc (Agric.)	Research Officer-In-Charge
Mr K T Ariyawansa BSc (Agric.), MSc	Research Officer
Mr A S M A Fernando (NDT)	Technical Officer
Mr W M Anurapala	Technical Officer
Mr V Abeygunawardane	Welder
Mr G Ariyaratne	Fitter
Mr W A Premachandra	Blacksmith
Mr D M L Weerasiri	Mechanic
Mr M B Rohan	Lab/Field Attendant
Mr D M Weerasiri	Lab/Field Attendant

Achievements

Research

- Completion of design and construction of trash-cutting force-measuring device required to develop an in-situ trash-cutting machine and determination of force required for cutting trash.
- Evaluation of field performance of "Case Austoft 4000 and 8000" combine sugarcane harvester at Sevanagala, and identification of time loss of 50% for turning and cane loss of 12-16 t/ha by harvesting with 8000 combine harvester.
- Identification of the following faults in the two-wheel tractor-mounted disc ratooner developed by the institute:
 - i. Improper centre of gravity
 - ii. Inconvenient operation height
 - iii. Difficulty in adjusting disc spacing and their angle

Services

- Completion of construction of 06 no. of cane juice extracting tools for crop improvement program.
- Providing advisory services for land preparation for sugarcane cultivation at Sevanagala and for adaptability trial at Arantalawa.
- Provision of machinery services for research jaggery production unit and distillery plant.
- Development of about 6.5 ha for the foundation seedcane farm under D4 canal.
- Excavation of about 500 m of the D4-canal to irrigate the newly-developed foundation seedcane farm and installation of an electric fence for the same area.
- Construction of 2880 sq.ft steel-structured vehicle-parking shed for SRI.
- Construction of 800 sq.ft steel-structured tractor-parking shed for SRI farm.
- Regular clearing and maintenance of land area around office complex and housing area.
- Carrying out nearly 250 repair and maintenance jobs of vehicles and farm implements of SRI.



Processing Technology Division

Processing Technology Division

Staff

Ms H.M.G.P. Herath BSc (Agric.)

Research Officer (up to 31.03.2013)

Achievements

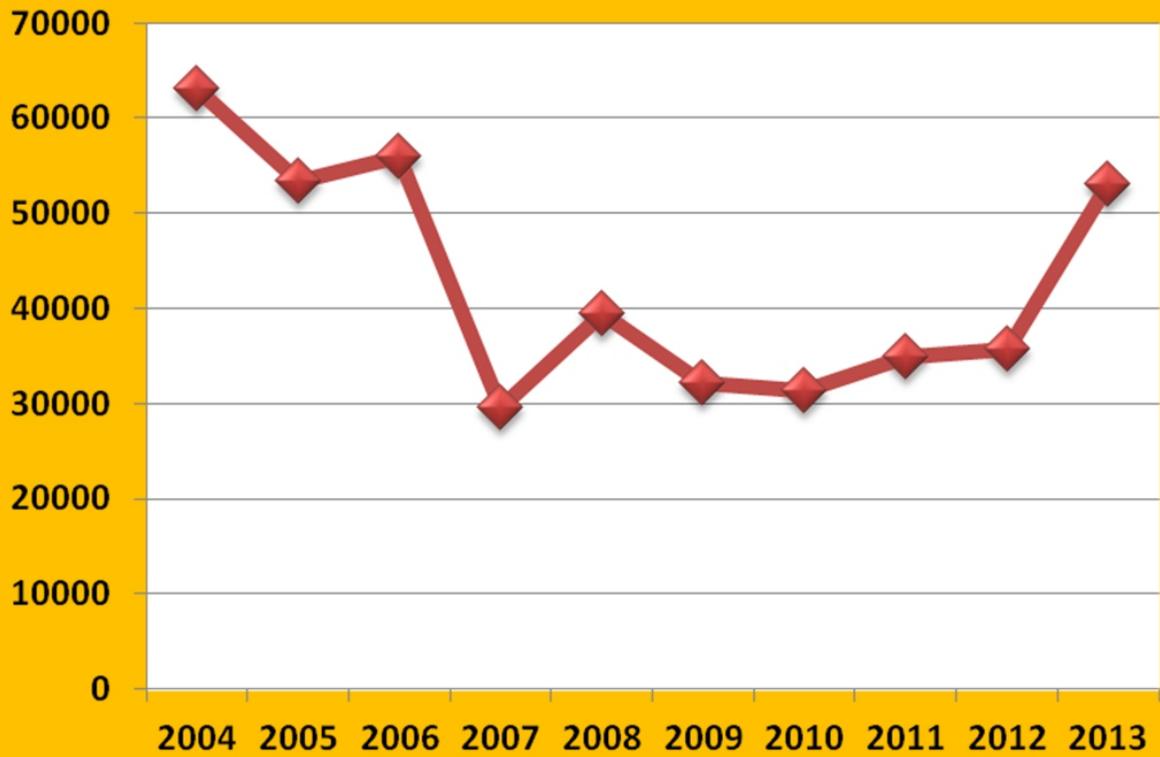
Research

- Identification of one superior yeast strain from fifty yeast strains isolated from natural sugar-containing materials collected from different parts of Sri Lanka.
- Isolation and evaluation of 113 phosphate-solubilising bacteria species and one fungi collected from natural environments for the production of bio-fertiliser.
- Identification of six superior bacteria isolates capable of solubilising phosphate fertiliser.
- Preparation of a carrier media for the production of bio-fertiliser using distillery spent-wash, filter-mud and bagasse.
- Confirmation that the survival ability of the superior bacteria species in spent-wash, filter-mud and bagasse was more than 2 months.
- Laboratory-level production of bio-fertiliser by incorporating the identified naturally occurring superior bacteria species and sugar industry by-products in increasing solubility of phosphate fertiliser.

Other

- Production of 2,720 kg of jaggery by crushing 51.4 tonnes of different sugarcane varieties harvested from field trials.
- Production of 35 litres 20% v/v alcohol fermenting 450 kg of waste cashew apple juice using baker's yeast for Sri Lanka Cashew Corporation.

Sugar production in Sri Lanka (Tonnes)



Economics, Biometry and Information Technology Division

Staff

Ms B D S K Ariyawansha BSc(Agric.), MPhil
Mr K A D Kodituwakku BSc(Agric.)

Senior Research Officer and Head
Research Officer (on study leave from February 2012)

Achievements

Research

- Estimation of costs and returns of sugarcane cultivation in Sevanagala, Pelwatte and Higurana for the year 2013. The costs per hectare were Rs. 182,602, Rs.151,078, Rs.137,613 and Rs.206,620 for Sevanagala irrigated and rain-fed sectors, Pelwatte and Hingurana respectively. Average net incomes per hectare for the same areas were Rs. 168,197, Rs. 132,264, Rs. 61,386 and Rs.127,530 respectively.
- Evaluation of sugarcane varieties SL 96 128 and SL 96 328 for yield performance and stability based on plant and ratoon crop cane yields. The performance of the variety SL 96 128 was better than that of SL 96 328. These two locally-bred varieties were superior to the variety Co 775 for their mean yields in different environments. The stability of cane yield of the variety SL 96 328 was higher than that of SL 96 128.

Services

- Updating the web site of SRI hosted under URL of www.sugarres.lk/ as and when required.
- Providing the following services to other divisions of SRI:
 - Designing experimental layouts for the experiments conducted by the Divisions of Crop Improvement, Crop Nutrition and Crop Protection.
 - Analysis of the agronomic and yield data of the preliminary and replicated yield trials harvested during the year 2013 and the data received from Crop Nutrition, Crop Protection, Mechanisation Technology, and Technology Transfer and Development Divisions.
 - Implementation of IT activities within the institute.
- Providing the following services to other organisations:
 - Preparation of the INFORM database of SRI for the year 2012 and submitting the same to the Council for Agricultural Research Policy (CARP) to be included in the national database.
 - Training 02 students from Vocational Training Authority (VTA) on the use of computer software packages for a period of six months and 02 students from Technical College, Embilipitiya on the use of computer software packages for a period of 03 months.



Technology Transfer and Development Division

Technology Transfer and Development Division

Staff

Mr M S Perera BSc (Agric.), MPhil	Principal Research Officer and Head
Mr D P W Pottawela BSc (Agric.), PG. Dip. (BA)	Technology Transfer Officer
Mr R A P A Ranatunga Dip. (Agric.)	Development Officer
Mr K P Wickremasinghe BSc (Agric.)	Development Officer
Mr S N Wickremasinghe BSc (Agric.), MSc	Development Officer
Mr W G M S Weragoda BSc (Agric.)	Development Officer
Mr R A Premachandra	Technical Officer

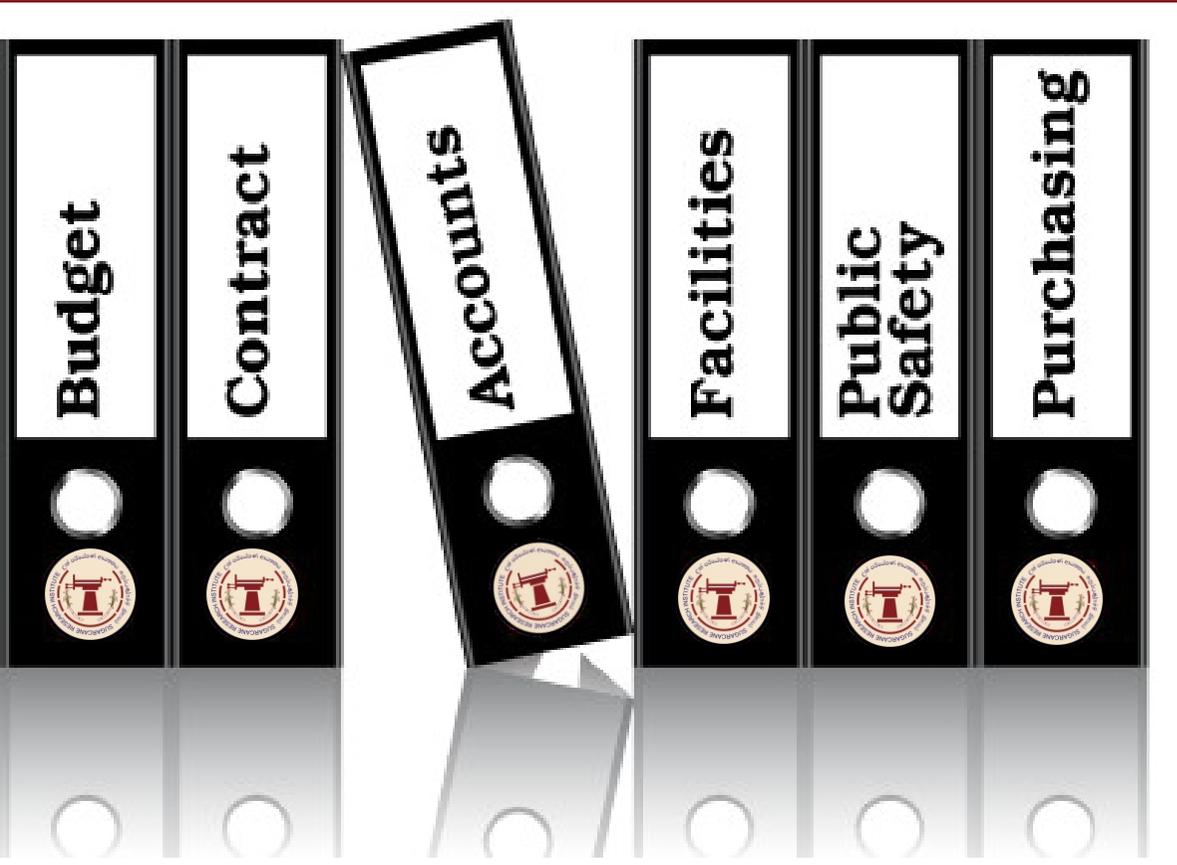
Achievements

- **Promotion of new sugarcane varieties; SL 83 06, SLI 121, SL 90 6237, SL 92 4918, SL 92 4997, SL 92 5588, SL 95 4033, SL 95 4430, SL 95 4443 SL 96 128 and SL 96 328 among cane growers**
 - Establishment of sixteen demonstration/multiplication fields of the varieties SL 83 06, SL 88 116, SL 92 5588, SL 95 4033, SL 96 128 and SL 96 328 at Sevanagala, Siyambalanduwa and Hingurana.
 - Conducting twenty demonstrations programs on new varieties for 219 farmers and 15 field officers of sugar industries.
 - Conducting ten training sessions on new sugarcane varieties for 168 farmers and 43 field officers of sugar industries.
 - Providing 114 tonnes of seedcane of the varieties SLI 121, SL 92 5588, SL 95 4033, SL 96 128, and SL 96 328 (22 tonnes from SRI seedcane farm and 92 tonnes from multiplication plots established in farmer fields) to farmers/sugar industries for multiplication.
 - Maintenance of ten demonstration and multiplication plots of SL 83 06, SL 88 116 and SL 96 328 at Sevanagala, Pelwatte, Siyambalanduwa, Hingurana and Passara.
 - Preparing three information sheets on new sugarcane varieties, SL 90 6237, SL 95 4443, and SL 96 128.
- **Promotion of tyne cultivator, furrow opener and disc ratooner for sugarcane cultivation**
 - Conducting nine demonstration programs on tyne cultivator and furrow opener for 96 farmers and 30 field officers at Sevanagala, Pelwatte and Hingurana.
 - Providing 07 tyne cultivators to farmers/farmer organisations at Pelwatte and Siyambalanduwa.
- **Promotion of intercropping cucumber, ground nut, cowpea, water melon and chillies with sugarcane**
 - Maintaining fourty six demonstration fields intercropped with ground nut, cucumber and cowpea at Pelwatte, Syambalanduwa and Hingurana, which were established in 2012.
 - Conducting nine demonstrations on intercropping, ground nut, cucumber, water melon and cowpea for 170 farmers at Pelwatte, Siyambalanduwa and Hingurana .

- Establishing and maintaining thirty demonstration fields (intercropped with ground nut, cucumber and cowpea) at Pelwatte, Syambalanduwa and Hingurana.
- Conducting three field trips for 102 farmers to observe intercropping demonstration fields at Pelwatte and Hingurana.
- **Promotion of soil fertility management by farmers**
 - Conducting ten method demonstration sessions on fertiliser application and soil fertility management for 193 farmers and 10 officers at Hingurana.
 - Visiting thirty farmer fields for advising on fertiliser application and soil fertility management at Hingurana.
 - Conducting two field trips for 78 farmers on fertiliser application and soil fertility management at Hingurana
- **Promotion of spaced planting technique**
 - Conducting fifteen demonstrations on spaced planting technique for 160 farmers at Sevanagala, Siyambalanduwa and Hingurana.
 - Conducting ten training sessions on spaced planting technique for 168 farmers and 12 field officers of sugar industries.
- **Improvement of adoption of agronomic practices of sugarcane**
 - Conducting seventeen farmer training programs on agronomic practices and pest and disease management for 470 farmers at Pelwatte, Siyambalanduwa, Hingurana, and Passara.
 - Conducting three farmer training programs on nursery management for 82 farmers at Pelwatte, Siyambalanduwa, Hingurana, and Passara.
 - Conducting seven farmer training programs on ratoon management for 106 farmers at Hingurana.
 - Conducting 60 field visits on the adoption of recommended practices at Hingurana.
 - Conducting six farmer field tours for 162 farmers at Pelwatte and Hingurana.
 - Conducting four training programs for 160 children of farmers at Pelwatte, Siyambalanduwa and Hingurana.
 - Conducting a workshop on sugarcane cultivation for 21 school agriculture teachers in Siyambalanduwa educational division at SRI, Uda Walawe.
 - Conducting two training programs on sugarcane cultivation for 47 Agriculture Research and Production Assistants of Moneragala District.
- **Improvement of knowledge and adoption of pest and disease management**
 - Conducting Seventeen training programs on pest and disease management for 380 farmers and 26 field officers at Sevenagala, Siyambalanduwa, Passara and Hingurana.
 - Making three hundred and twenty farmer field visits at Pelwatte, Siyambalanduwa and Hingurana to observe disease situation and to advise farmers on smut and white leaf decease control measures.
 - Conducting poster campaign on white leaf disease/grassy shoot disease and smut control by displaying posters in Sevanagala, Pelwatte, Siyambalanduwa, Passara and Hingurana areas.

- Conducting three field tours for 102 farmers on disease control.
- Preparation of advisory pamphlets and display boards on the control of sugarcane smut disease, white leaf disease and woolly aphid and integrated pest management in Tamil language.
- Production of 3000 copies of leaflets on smut disease control in Sinhala and Tamil languages.
- **Improvement of jaggery production**
 - Monitoring maintenance of 120 sugarcane fields of farmers in Passara area.
 - Conducting three farmer meetings on the expansion program with 120 farmers and one farmer training program.
 - Conducting four awareness programs for 168 farmers.
 - Conducting four training programs for 74 Agriculture Research and Production Assistants.
 - Establishment of 10 farmer nurseries of about 0.5 ha each covering 4.5ha, and 147small-scale farmer nurseries covering 20.4 ha by providing 143.5 tonnes of seedcane, in Haldummulla, Kandeketiya, Meegahakiula, Rideemaliyadda, Mahiyanganaya, Bandarawela and Haliela Divisional Secretariat divisions of Badulla District to expand sugarcane cultivation and processing industries and conducting the following extension activities:
 - Distribution of leaflets and display banners on the program among farmers.
 - Conducting a 05-day training program for the field officers and the project coordinator on sugarcane growing, jaggery production, extension communication activities and financial and administration regulations related to the project at SRI, UdaWalawe.
 - Conducting 02 training programs on sugarcane growing and jaggery production for 37 Agriculture Research and Production Assistants from Madolcima and Passara at SRI, Uda Walawe.
 - Conducting a 01-day training program for the field officers and the project coordinator and selected farmers on sugarcane nursery management sugarcane growing and jaggery production at SRI, Uda Walawe.
 - Conducting 02 training programs for 120 farmers from Kandeketiya, Megahakiula, Rideemaliyadda and Mahiyanganaya, on sugarcane growing and jaggery production at Megahakiula and Mahiyanganaya.
- **Providing training/services at the requests of the sugar companies/other institutions and conducting exhibitions**
 - Conducting six training programs for 230 farmers from Sevanagala, Pelwatte, Siyambanduwa and Higurana sugarcane cultivation in collaboration with National Institute of Plantation Management (NIPM).
 - Coordinating a 5-day training program on agricultural extension for Field Officers of Lanka Sugar Company (Pvt) Ltd. - Sevanagala and Development Officers of SRI at Gannoruwa.

- Running SRI exhibition stalls at *Deyata Kirula* 2013 in Ampara and National Agricultural exhibition at Wariyapola.
- Conducting a training program on sugarcane cultivation for 60 members of Wellawaya Army camp.
- Conducting two training programs for 40 Field Assistants of Lanka Sugar Company (Pvt) Ltd. -Pelwatte on SRI technical recommendations.
- Conducting one-day training programs on sugarcane growing for 92 students from Agriculture School (Karapincha), Universities of Sabaragamuwa and Wayamba at SRI, Uda Walawe.
- Conducting a training program for 38 farmers at Wayamba Human Resource Development Authority, Kurunegala.
- Conducting sugarcane module for diploma program of NIPM.
- Arranging an educational visit for a local media reporters to SRI.
- Preparation of an exhibition float on sugar industry.
- Publishing SRI newsletter “*Puwath Hasuna*” Vol. 5-2, November 2013.



Administration and Finance Division

Administration and Finance Division

Staff

Dr A P Keerthipala BSc (Agriculture), MPhil, PhD
Dr W R G Witharama BSc (Agriculture), MPhil, PhD

Director/Chief Executive Officer
Deputy Director (Research & Technology
Transfer - from 01.11.2013)
Deputy Director (Administration &

Mr D G Manamudali BA (Economics) sp., LICA
Finance)

Administration Section

Dr C Eritawala PhD (Moscow)
Ms T A D M G Jayathilaka
Ms J K Chandralatha
Ms T M K Senadeera
Ms M M I M K Manikkadawara
Mr G Somaweera
Ms M A R Samarasekera
Ms O U Subasinghe
Mr W A S Madhushanka
Mr S B N U S Wimalasooriya
Mr Austin Perera
Mr A W K Hettiarachchi
Mr S L Peiris
Mr H A U S Pamarathna
Mr J P S P Karunathilaka
Mr T P K Jayarathna
Mr R G D Ekanayaka
Mr S Ekanayake
Mr H N A Prasanna
Mr H S A Susantha Kumara
Mr G W M P S Manawadu

Administrative Officer
Management Assistant (Clerical & Typing)
Driver
Driver

Accounts Section

Mr D M Siripala BCom
Mr I B Kodagoda BCom
Mr G M S Nandadeva
Ms A K Amarakoon
Mr L K S Dayananda
Mr D M P Nickson
Mr T Ranjith Peiris
Ms T S Weerasinghe
Ms G D N Anuruddhika
Mr A G Udesh Srimal De Silva

Accountant
Accounting Officer
Management Assistant (Accounts)
Management Assistant (Accounts)
Management Assistant (Accounts)
Management Assistant (Accounts)
Management Assistant (Clerical & Typing)
Management Assistant (Accounts)
Management Assistant (Accounts)
Management Assistant (Accounts)

Procurement Unit

Mr H P R Kumara BBA
Ms S Surangika Chaturani

Procurement Officer
Management Assistant (Accounts)

Stores

Mr R G Niroshana

Store Keeper

Internal Audit Unit

Mr S P Y Muneendra ICA (intermediate) MAAT

Internal Auditor

Maintenance Unit

Ms D H S Wijesinghe	Inspector of Works
Mr B Witharana	Work Supervisor
Mr G Gamage	Electrician
Mr R Palamure	Electrician
Mr J Wickramarachchi	Mason/Plumber
Mr D W S Chinthaka	Carpenter
Mr R P Kulathunga	Carpenter
Mr D H Dharmadasa	Water Pump Operator
Mr H P Chandrawansha	Water Pump Operator
Mr K H Weeraratne	Water Pump Operator

Summary of the Activities Carried out during the Year

- Relocation of the cess collection office from Ratmalana to Battaramulla to satisfy the requirement of cess payers.
- Collection of cess from sugar importers and local sugar producers and management of the finances for research and development activities.
- Filling twelve (12) vacancies; Director, Deputy Director (Research and Technology Transfer), Senior Research Officer, Accounting Officer, Five Management Assistants and three General Workers).
- Obtaining approval of the Department of Management Services to increase the cadre to 209 by adding 16 General Worker positions.
- Procuring four vehicles, two double cabs and two single cabs, on replacement basis.
- Preparation of budgets, Annual accounts, etc.
- Carrying out day-to-day administration, personnel management, maintenance and welfare activities and training staff for the requirements of research and development activities of the institute.

Review of Financial Activities

- The main revenue of the Institute, cess income, for the year was Rs.138.2 million. This was a 0.7% reduction compared to the previous year.
- The expenditure over income for the year was Rs.28.7 million.
- The total capital expenditure for the year was Rs. 28.5 million.

Staff Strengthening and Motivation

Staff Recruitments

Ms B D S K Ariyawansa	Senior Research Officer	14.01.2013
Mr K A Vipul Kumarssiri	General Worker	01.02.2013
Dr A P Keerthipala	Director	16.04.2013
Mr I B Kodagoda	Accounting Officer	02.05.2013
Mr D A T D Dassanayake	General Worker	02.05.2013
Mr P Wimalarathne	General Worker	02.05.2013
Ms S Surangika Chaturani	Management Assistant (Accounts)	04.10.2013
Ms T S Weerasinghe	Management Assistant (Accounts)	04.10.2013
Ms G D N Anuruddhika	Management Assistant (Accounts)	04.10.2013

Mr W A S Madushanka	Management Assistant (Clerical and Typing)	04.10.2013
Mr A G U Simal De Silva	Management Assistant (Accounts)	29.10.2013
Dr W R G Witharama	Deputy Director (R & TT)	01.11.2013

Staff Turnover during the year 2013

Retirements

Dr N C Kumarasinghe	Director	17.03.2013
Mr A W K Hettiarachchi	Driver	11.07.2013

Resignations

Mr S A Senarathna	Stores Labourer	09.01.2013
Ms M P Shiromi	Technical Officer	15.02.2013
Mr M A Rupasinghe	General Worker	15.03.2013
Ms H M G P Herath	Research Officer	31.03.2013
Ms W K M T Kumari	Research Officer	21.05.2013
Ms S Heerthiha	Research Officer	27.05.2013

Vacation of post

Mr P Wimalasiri	General Worker	01.03.2013
Mr T H R P Kumara	General Worker	24.04.2013

Staff Training

Long-term training (Foreign)

- Mr K A D Kodituwakku, Research Officer in Economics, Biometry and Information Technology Division continued his postgraduate studies at the University of South Pacific, in Alafua Campus, Samoa.
- Ms D Manel, Research Officer in Crop Improvement Division continued her studies leading to PhD (Molecular Biology/Biotechnology) at the University of Agriculture Science, Dharwad-05, Karnatage, India.

Long-term training (Local)

- Dr C Epitawala, Administrative Officer commenced a one-year Diploma Course in Human Resource Management conducted by the Skills Development Fund from 17th March 2013.

Short-term training (Foreign)

- Mr K H D Abeyrathna, Research Officer, underwent a training in sugarcane mechanisation at the Agriculture Mechanisation Research Institute, Multan/Faisalabad, Pakistan from 11th January to 5th February 2013.
- Ms A M M S Perera, Research Officer, was trained in sugarcane biotechnology at the Agricultural Biotechnology Research Institute, Ayub Agriculture Research Institute, Faisalabad, Pakistan from 11th January to 5th February 2013.
- Ms B D S K Ariyawansa, Senior Research Officer, attended a Multiple Crop Model Training on Decision Support system for Agrotechnology Transfer software (DSSAT) at the International Crop Research Institute for semi Arid Crops (ICRISAT), Patancheru, Andhra Pradesh, India from 25th to 29th March 2013.

Foreign tours

- Mr S K Cyril, Chairman, and Mr K A Ariyarathna, Farm Superintendent attended the 5th Asia Sugar Conference in Bangkok, Thailand from 28th to 31st May 2013.

- Dr A P Keerthipala, Director and Dr A Wijesuriya, Principal Research Officer visited Indian Institute of Sugarcane Research, Lucknow, India to accompany the Hon. Minister of Sugar Industry Development from 14th to 19th June 2013.
- Mr S K Cyril, Chairman, and Dr A P Keerthipala, Director, attended a Mid-term Review Workshop of the South Asia Regional Research and Coordination Team of the AGMIP, Kathmandu, Nepal from 22nd to 26th July 2013.
- Dr A P Keerthipala, Director visited Sugar Research Australia to accompany the Minister of Sugar Industry Development to obtain cooperation for sugarcane research and development in Sri Lanka from 15th to 21st October 2013.

Staff Training (Local)

- Dr A Wijesuriya, Principal Research Officer, attended the Young Scientist Forum at HARTI on 18th January 2013.
- Dr A P Keerthipala, Director, and Mr D G Manamudali, Deputy Director (A & F), attended a workshop on Employee Performance Review (Appraisal) at Skills Development Fund Ltd. on 18th March 2013.
- Ms B D S K Ariyawansha, Senior Research Officer, participated in a training workshop on DSSAT and CROPWAT computer packages for field-level decision making at the Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya from 7th to 9th May 2013.
- Senior Research Officers Mr A L C De Silva and Ms B D S K Ariyawansha participated in a training programme on STICS Crop Model from 13th to 16th May 2013 at the Faculty of Agriculture, University of Peradeniya.
- Mr W H Jayasinghe, Research Officer, attended a Certificate Course in Techniques in Molecular Biology from 13th to 17th March, 2013 at the Agricultural Biotechnology Centre, University of Peradeniya, Peradeniya.
- Mr D P W Pottawela, Technology Transfer Officer, Ms B D S K Ariyawansha, Senior Research Officer and Ms A N W S Thushari, Research Officer, participated in a workshop on Presenting Research Work at a Scientific Forum on 27th June 2013 at PGIA, University of Peradeniya.
- Senior Research Officers Mr A L C De Silva and Ms B D S K Ariyawansha, attended a short course on Carbon Market Sri Lanka at Hotel Galadhari, Colombo. from 18th to 19th July 2013.
- Ms B D S K Ariyawansha, Senior Research Officer, attended an International Conference on climate change impacts and adaptations for food and environment security - Sustaining Agriculture under Changing Climate in Hotel Renuka, Colombo 03 from 30th to 31st July 2013.
- Mr A L C De Silva, Senior Research Officer, Mr L M J R Wijayawardhana, Research Officer and Technical Officers Mr W.G Nimal Gamage and Mr B P G S Sandanayake, attended a training on Transport of Radio Active Materials conducted by Atomic Energy Authority from 30th to 31st July, 2013.

- Mr L M J R Wijayawardhana, Research Officer, attended a workshop on Updated Mahaweli Water Resources Development Plan and National Water Use Master Plan conducted by the Ministry of Irrigation and Water Resource Management, Battaramulla on 16th August, 2013.
- Mr D M L Weerasiri, Mechanic, attended a training on Maintenance of Hydraulic Systems at Construction Equipment Training Centre (CETRAC) at Battaramulla from 26th August to 06th September 2013.
- Dr A P Keerthipala, Director, and Ms B D S K Ariyawansa, Senior Research Officer, participated in a workshop on Future Earth-Developing Research Agenda for Sri Lanka, organised by COSTI, from 17th to 18th September 2013 in Hotel Galadhari, Colombo.
- Research Officers, Mr H A S Weerasinghe and Ms S. Thushari, attended a two-day training seminar on Safety in Chemical and Microbiological Laboratories, Fostering Industries towards the New Millennium from 26th to 27th September 2013 at the Industrial Technology Institute, Colombo 07.
- Mr H A S Weerasinghe, Research Officer, attended one-week training on Determination of Potassium Buffering Capacity of Soils from 7th to 11th October 2013 at the Soil and Plant Nutrition Division of the Tea Research Institute of Sri Lanka.
- Ms K M G Chanchala, Research Officer, and Mr M K D Ubesena, Technical Officer attended a two-day training on “Laboratory Mass Multiplication of Parasitoids using Rice Grain Moth; *Corcyra cephalonica* as an Alternative Host” at the Coconut Research Institute, Lunuwila from 8th to 9th October 2013.
- Mr L M J R Wijayawardhana, Research Officer, attended training on Forecast Translation conducted by Department of Meteorology, Colombo from 9th to 11th October, 2013.
- Mr L M J R Wijayawardhana, Research Officer, attended a training on Preparation of Greenhouse Gas Inventory conducted by the Ministry of Environmental and Renewable Energy at SLIDA, Colombo from 1st to 10th November, 2013.
- Mr W H Jayasinghe, Research Officer, participated in a seminar on the Benefits of Plant Variety Protection System in line with the UPOV Convention, hosted by the Department of Agriculture, Sri Lanka from 25th to 26th November 2013 at the Plant Genetic Resource Centre, Gannoruwa, Peradeniya.
- Mr L M J R Wijayawardhana, Research Officer, attended a training on Mitigation Assessment and Application of Modelling Tool of UNFCCC conducted by the Ministry of Environmental and Renewable Energy at SLIDA, Colombo from 27th to 29th November 2013.

Publications

- i. Kodithuwakku, K.A.D. (2013). An economic study of potential production promoting sugarcane and sugar policies in Sri Lanka: some recommendations in the light of India and Thai policy lesions. A thesis submitted for MAgr. Fiji, University of South Pacific.
- ii. Piyathunga, A.L.I., Chandrassena, G. and Thushari, A.N.W.S. (2013). Study on the Effects of Selected Plant Extracts on Sugarcane Smut Pathogen (*Ustilago scitaminea*), Proceedings of the 04th Research Symposium held from 12th to 13th December 2013 at the Uva Wellassa University. pp 44–46.
- iii. Rathnayaka, R. M. B. S., Wijesuriya, A., and Alwis, L. M. H. R. (2013). Determination of Optimal Auxin and Cytokinin Levels for Meristem Culture of Sugarcane (*Saccharum* Hybrid Spp.): Variety SL 96 328. Proceedings of the 04th Research Symposium held from 12th to 13th December 2013 at the Uva Wellassa University.
- iv. Supuni, L. B. S., Wijesuriya, A., and Alwis, L. M. H. R., (2013). Evaluation of Sugarcane Germplasm for Development of Core-collections for Directional Breeding of Sugarcane (*Saccharum* hybrid spp.). Proceedings of the 04th Research Symposium held from 12th to 13th December 2013 at the Uva Wellassa University.
- v. Wijayawardhana, L.M.J.R., De Silva A. L. C. and Witharama, W.R.G. (2013). Assessment of Water Requirements of Sugarcane, Banana and Paddy in Sevanagala. A paper presented at the 69th Annual Session, Sri Lanka Association for the Advancement of Science, Colombo 07.

Report of the Audit and Management Committee-2013

Four Audit and Management Committee meetings were held during the year 2013.

Compared to the year 2012, though the number of meeting were reduced by two, the required number of minimum meetings have been held. Because of the contribution of a former Director of the institute, it has been able to discuss the progress of research and expansion of the sugarcane industry at the meetings, and thereby, enabled paying more attention to review the progress of research in relation to the development of the sugar industry in the country.

In addition, because of the contribution of the Audit and Management meetings, the institute has been able to minimise the number of audit queries by avoiding deficiencies in administrative and financial affairs of the institute. The recruitment of Management Assistant in the year 2013, after lapse of nearly two years, can be considered as a significant contribution of the committee since it constantly drew the attention of the relevant officials on the need for expediting the process.

Furthermore, the Audit and Management Committee has been able to contribute to management of the institute according to the systems of control and government circulars and by facilitating decision making by the Board of Governors on relevant issues.



SPY Muneedra
Secretary/Convenor
Sugarcane Research Institute

17 February 2014

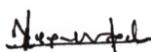
Audited Financial Statements

SUGARCANE RESEARCH INSTITUTE STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER 2013

ASSETS	NOTES	2013 Rs.	2013 Rs.	2012 Rs.	2012 Rs.
Non-current assets					
Property, Plant and Equipment	1	67,285,376.19		60,525,814.23	
Investment	2	<u>37,100,383.25</u>	104,385,759.44	<u>33,789,530.26</u>	94,315,344.49
Current assets					
Consumable stock	3	8,500,164.73		5,098,177.61	
Work in progress		250,000.00		250,000.00	
Trade and other receivables	4	51,714,449.94		47,928,215.84	
Investment (S / T)	5	113,581,583.06		123,182,035.11	
Prepayments and other deposits	6	508,300.74		604,535.00	
Cash and cash equivalents	7	<u>32,239,360.50</u>	206,793,858.97	<u>57,569,830.39</u>	234,632,793.95
Total assets			<u>311,179,618.41</u>		<u>328,948,138.44</u>
LIABILITIES					
Current liabilities					
Payable	8	15,938,721.77		8,735,518.34	
Accrued expenses	9	<u>7,828,867.01</u>	23,767,588.78	<u>6,542,673.59</u>	15,278,191.93
Non-current liabilities					
Differed income		4.38		0.08	
Provision for gratuity	10	39,717,595.70	<u>39,717,600.08</u>	37,100,383.25	<u>37,100,383.33</u>
Total liabilities			<u>63,485,188.86</u>		<u>52,378,575.26</u>
Total Net Assets			<u>247,694,429.55</u>		<u>276,569,563.18</u>
Net Assets / Equity					
Accumulated fund	11	145,285,139.00		145,285,139.00	
Reserves	12	102,409,290.55		110,344,424.18	255,629,563.18
Revalued reserves		-		20,940,000.00	20,940,000.00
Total Net Assets/Equity			<u>247,694,429.55</u>		<u>276,569,563.18</u>



S.K.Cyril
Chairman



Dr. A.P.Keerthipala
Director /Chief Executive Officer



D.G. Manamudali
Deputy Director (A & F)

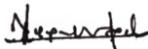
SUGARCANE RESEARCH INSTITUTE

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31ST DECEMBER 2013

	Notes	Year 2013 Rs.	Year 2012 Rs.
Operating Revenue			
Cess on sugar imports		132,827,452.50	139,328,373.55
Cess on local sugar production		5,468,000.00	5,057,250.00
Other income	13	25,938,739.06	21,292,121.78
		<u>164,234,191.56</u>	<u>165,677,745.33</u>
Operating Expenses			
Personnel emoluments	14	102,919,673.65	92,096,869.77
Travelling and subsistence		2,541,888.38	2,631,413.51
Foreign visits		5,302,862.87	4,842,629.49
Supplies and consumables	15	2,524,385.56	1,528,646.30
Maintenance	16	21,998,897.80	17,114,951.42
Contractual services	17	21,853,590.48	20,960,337.53
Research and development	18	9,317,341.19	9,886,235.18
Depreciation and amortisation expenses		21,752,748.00	21,766,636.00
Other operating expenses	19	2,806,144.75	2,721,310.70
Bad debts written off	20	1,745,300.00	-
Total operating expenses		<u>192,762,832.68</u>	<u>173,549,029.90</u>
Surplus / (Deficit) from operating activities		(28,528,641.12)	(7,871,284.57)
Finance cost		202,276.48	29,131.70
Gain on sales of property plant and equipment			
Total non-operating revenue (expenses)		<u>202,276.48</u>	<u>29,131.70</u>
Net surplus / (Deficit) before extraordinary items		(28,730,917.60)	(7,900,416.27)
Net surplus / (Deficit) for the period		<u>(28,730,917.60)</u>	<u>(7,900,416.27)</u>



S.K.Cyril
Chairman



Dr. A.P.Keerthipala
Director /Chief Executive Officer



D.G. Manamudali
Deputy Director (A & F)

SUGARCANE RESEARCH INSTITUTE
CASH FLOW STATEMENT FOR THE YEAR ENDED 31ST DECEMBER 2013

	2013	2012
	(Rs)	(Rs)
Cash flows of operating activities		
Surplus / (deficit) from ordinary activities	(28,730,917.60)	(7,900,416.27)
Non-cash movements		
Depreciation	21,752,748.00	21,766,636.00
Provision for gratuity	5,188,914.12	4,749,486.36
Previous-year adjustment	-	-
Differed income	4.38	0.08
Operating profit / (Loss) before working capital changes	(1,789,251.10)	18,615,706.17
Increase / Decrease in sundry debtors	(723,316.00)	(6,108,389.74)
Increase / Decrease in sundry stock	(3,401,987.12)	(587,344.61)
Increase / Decrease in work in progress	(150,000.00)	(150,000.00)
Increase / Decrease in advance and prepayments	(2,693,843.92)	(3,150,691.86)
Increase / Decrease in staff loan	749,929.32	226,215.33
Increase / Decrease in credit and other payables	7,363,653.43	4,547,536.93
Cash generated from operating activities before income tax	1,144,435.71	(5,222,673.95)
Cash flows from / (used) in investing activities		
Purchase of property, plant & equipment	(28,710,259.96)	(10,601,554.23)
Net cash flow from / (used) in investment activities	<u>(28,710,259.96)</u>	<u>(10,601,554.23)</u>
Cash flows used in financing activities		
Payment of gratuity	(2,571,701.67)	(1,438,633.11)
Investment in fixed deposit		
Net cash flows used in financing activities	<u>(2,571,701.67)</u>	<u>(1,438,633.11)</u>
Net increase / Decrease in cash and cash equivalents	(31,926,777.02)	1,352,844.88
Cash and cash equivalents at the beginning of the year	214,541,395.88	213,188,551.00
Cash and cash equivalents at the end of the year	182,614,618.86	214,541,395.88
Analysis of the balance cash and cash equivalents shown in the balance sheet		
Bank balance	32,239,360.50	57,569,830.39
Treasury bill deposit	113,081,583.18	122,682,035.23
Fixed deposits	37,293,675.18	34,289,530.26
Total	<u>182,614,618.86</u>	<u>214,541,395.88</u>

SUGARCANE RESEARCH INSTITUTE
STATEMENT OF CHANGES IN NET ASSETS FOR THE YEAR ENDED 31ST DECEMBER 2013

	Accumulated Fund Rs.	Transferred to Reserve Rs.	Total Rs.
Balance as at December 2012	145,285,139.00	131,140,208.15	276,425,347.15
Surplus due to adjustment	-	-	-
Net gains and loses not recognised in the statement of financial performance	-	-	-
Surplus / (deficit) for the period		(28,730,917.60)	(28,730,917.60)
Balance as at 31st December 2013	<u>145,285,139.00</u>	<u>102,409,290.55</u>	<u>247,694,429.55</u>

SUGARCANE RESEARCH INSTITUTE
NOTES TO THE STATEMENT OF FINANCIAL POSITION AS AT 31 ST DECEMBER 2013

1 Property, Plant and Equipment

Please see schedule 01

2 Investment (L/T)	Rs	Rs
Fixed deposit (Gratuity Fund) - N.S.B.	37,100,383.25	33,789,530.26

3 Consumable stock	2013	2012
	Rs	Rs
Stationery	538,666.74	401,337.00
Repair and maintenance of vehicles	1,353,917.70	759,818.06
Repair and maintenance of buildings	2,785,766.78	2,069,032.32
Repair and maintenance of office equipment	160,780.88	143,705.30
Repair and maintenance of machinery	294,205.00	285,909.00
Fuel	169,450.00	82,494.00
Chemicals	1,221,425.38	683,789.18
Staff welfare	-	5,440.15
Fertiliser	136,800.00	284,900.00
Miscellaneous	141,904.25	381,752.20
Irrigation and land preparation	1,141,350.00	-
Sugar sector development	555,898.00	-
Total consumable stock	8,500,164.73	5,098,177.61

4 Trade and other receivables	2013	2012
	Rs	Rs
Advance :		
Local purchase	240,613.85	10,400.00
Sundry	217,087.42	355,334.50
Travelling	129,545.00	102,995.00
Fuel	253,135.05	215,480.00
Other Special advance	2,551,586.36	-
Interest		
F.D. - N.S.B.	1,753,692.61	1,694,490.50
Bank savings P.B.	-	-
Treasury bill - P.B.	2,095,634.44	4,932,767.43
Staff loans :		
Housing loan (Schedule 02)	5,779,334.98	6,639,675.37
Distress loan (Schedule 3)	22,978,758.16	22,832,758.75
Festival advance (Schedule 4)	165,000.00	190,800.00
Push cycle loan (Schedule 5)	28,900.00	44,299.92
Motor cycle loan (Schedule 6)	1,132,202.61	1,542,507.56
Book loan (Schedule 7)	8,000.00	12,000.00
Computer loan (Schedule 8)	6,027.74	98,861.07
Loan for the Ministry of Sugar Industry Development	512,751.98	-
Special loan :		
Kantale Sugar Industries Ltd.	1,000,000.00	1,000,000.00

Sundry debtors : Janatha Fertiliser	250.00	250.00
Kantale Sugar Industries Ltd.	385,333.00	385,333.00
Ministry of Supplementary Plantation Crop Development	-	1,745,300.00
T.K. Tenison	-	4,850.00
Inland Revenue Department	9,222.74	9,222.74
Lanka Sugar Co.(Pvt) Ltd. - Pelwatte	6,569,700.00	3,733,900.00
- Sevanagala	2,345,334.00	1,323,350.00
Lanka Sugar Co.(Pvt) Ltd- Sevanagala Sale of Sugarcane	2,076,140.00	1,053,640.00
Gal Oya Plantations (Pvt) Ltd - local cess	1,213,200.00	
AARI Pakistan	263,000.00	
Total Trade and other receivable	51,714,449.94	47,928,215.84

	2013	2012
	Rs	Rs
5 Investment (S/T) :		
Treasury bill - P.B	113,081,583.18	122,682,035.23
Fixed deposit (Scholarship)- N.S.B.	500,000.00	500,000.00
Treasury bill - B.C	(0.12)	(0.12)
Total Investment (S/T)	113,581,583.06	123,182,035.11

	2013	2012
	Rs	Rs
6 Prepayments & other deposits		
Prepayments - Licence & insurance		-
Repair & maintenance of office equipment	6,160.00	6,160.00
Withholding Tax receivable	(26,234.26)	-
Other deposits C.B. Ellepola	2,500.00	2,500.00
Electricity Board	150,100.00	150,100.00
Embilipitiya M.P.C.S. Ltd.	155,000.00	155,000.00
Gas cylinder	118,375.00	118,375.00
M.N.W. & R.L. Fernando	-	70,000.00
M.T.N Net Work	2,500.00	2,500.00
Rubber Research Institute	86,400.00	86,400.00
Softlogic Information	1,500.00	1,500.00
Sri Lanka Customs	10,000.00	10,000.00
Thusitha News Papers	2,000.00	2,000.00
Total prepayment and other deposits	508,300.74	604,535.00

	2013	2012
	Rs	Rs
7 Cash and cash equivalents		
People's Bank - Uda Walawe A/C No. 295 1001 - 0000000 - 5	1,322,199.07	154,670.36
People's Bank - Ratmalana A/C No. 080 - 1 -001-5-1334359	3,438,208.65	4,134,188.48
Bank of Ceylon - Ratmalana A/C No. 272977 - 5	221,598.70	700,913.00
People's Bank - Uda Walawe A/C No.295-100-8-0000186	1,417,387.47	1,143,291.41
Bank Savings - People's Bank-Rathmalana A/C No-080-2-001	1,354,023.29	29,973,938.89
- People's Bank - Uda Walawe A/C No. 295-2-001-7-0020749	24,454,936.32	21,455,828.25
Petty cash-Siyambalanduwa	5,000.00	5,000.00
Petty cash-Hantane	-	2,000.00
Petty cash -Deniyaya	2,000.00	-
Petty cash -Buttala	5,000.00	-
Petty cash- Hingurana	5,000.00	-
Petty cash-Colombo	14,007.00	-
Total cash and cash equivalents	32,239,360.50	57,569,830.39

8 Payables	2013 Rs	2012 Rs
A.S.Jayalath	600.00	600.00
Analytical Instruments (pvt)Ltd.	707,452.80	448,292.00
D.M.N.Weerasinghe	250.00	250.00
K.K.I.S.Sarathchandra	4,965.00	4,965.00
K.Mahindapala	1,187.50	1,187.50
Prasad	891.66	891.66
Refundable tender deposit (Schedule 09)	181,250.00	126,750.00
Retention	106,684.80	106,684.80
Sarath Motor Engineering	144,910.00	23,650.00
Singer company	-	197,950.00
U.G. Stores	130,787.50	-
United Motors Lanka	32.40	59,530.40
Venura Auto Electricals	1,500.00	-
W.G. Nimal	(616.67)	(616.67)
Wasantha Auto Electrician	(1,050.00)	(1,050.00)
Kolonnakorale	6,985.00	-
Lukshan Diesel Pump Services	95,620.00	150,405.00
Wasana Book Shop	-	1,210.00
Sumanagiri Trade Centre	470.00	8,545.00
Varuna Motors	181,250.00	181,250.00
Wickrama Hard Ware	1,048,750.00	13,750.00
Lab Masters (Pvt) Ltd.	(0.19)	(0.19)
Waruna Suppliers	-	11,935.00
Crown Tyres (Pvt) Ltd	-	102,600.00
S.Creditors:Libra Agency	456,568.00	275,615.80
Softlogic Information Technology	-	262,000.00
Leader Stationery	11,601.20	22,919.00
Print & Print Grapics	-	5,255.04
Popular Stationery	4,900.00	4,900.00
Augustine Motors Ltd	-	37,948.00
E.W. Information Systems(PVT) Ltd	-	9,356.00
Arunas	-	116,180.00
Sri Lanka State Trading	463,200.00	3,940.00
Royal Stationeries	51,645.00	3,625.00
Upali Auto Electericals	55,000.00	55,000.00
Toyota Lanka (Pvt) Ltd	-	6,500,000.00
Mount House	1,600.00	-
A.C. Paul & Co Ltd	368,795.00	-
Nippon Paint Lanka (Pvt) Ltd	459,879.83	-
Vino Enterprises	14,884.80	-
Power Steel	20,608.00	-
Synergy Tech	3,840.00	-
United Stationery	12,500.00	-
Ceylon Business Appliances	20,944.00	-
Amila Associates	55,216.00	-
Avon Pharmo Chem	462,386.40	-
New Sampath Fashion	5,070.00	-
Industrial Safety	382,591.07	-
Ceylon Oxygen	848,338.97	-
The Associated News Papers	53,760.00	-
U.K.Electricals	40,980.00	-
Shakthi Enterprises	29,970.00	-
Sharpe Eye Network Solution	49,306.88	-
Gunawardana Cusion Work	31,000.00	-
Niluka Motors	56,900.00	-
Photo Technica (Pvt) Ltd	56,000.00	-
Harishchandra Show room	4,900.00	-
Agro Trac. Lanka (pvt)Ltd	7,800,000.00	-

Your Home Furniture	31,500.00	–
Sperrys Commercial Equipment	49,728.00	–
D.G.Lanka Security	624,556.82	–
Hemsons International	760,872.00	–
Organic Trading (Pvt) Ltd	16,800.00	–
Waruna Suppliers	20,960.00	–
Total payables	15,938,721.77	8,735,518.34

	2013	2012
	Rs	Rs
9 Accrued expenses		
Electricity	352,232.01	200,174.50
Fuel	549,363.32	327,705.52
Over time	708,973.76	669,318.53
Postage	18,115.00	14,875.00
Repair and maintenance of vehicles	8,245.00	2,854.30
Resource Personnel	29,786.50	–
Rent	–	17,450.00
Research expenses	391.65	–
Security	–	724,847.32
Stationery	1,500.00	21,600.00
Sugar sector development	64,940.00	–
Telephone	86,782.52	44,205.96
Travelling and subsistence	38,919.50	14,861.00
Water	5,762.10	1,064.32
Staff training	–	8,100.00
News papers/ periodicals	1,750.00	33,264.00
Wages	1,341,949.16	623,938.85
Welfare	954.00	22,304.05
Workmen compensation	62,749.50	–
Entertainment	–	23,387.00
Scholarships	11,250.00	6,500.00
Harvesting and land preparation	13,000.00	200,000.00
Consultancy	4,000.00	4,000.00
Staff medical	76,879.90	–
Licence, Insuarance	121,592.80	–
PAYE Tax	31,096.91	11,899.54
Others	15,500.00	–
	3,545,733.63	2,972,349.89
Employees' Provident Fund	1,470,101.38	1,253,022.22
Employees' Trust Fund	177,822.16	150,362.67
Provision for staff medical (Schedule 10)	2,609,866.53	2,154,694.99
Salary and wage deductions	25,343.31	12,243.82
Total Accrued Expenses	7,828,867.01	6,542,673.59

10 Provision for Gratuity 2012 2013

Please see schedule 11

	2013	2012
	Rs	Rs
11 Accumulated Fund		
Government grant for capital	44,360,000.00	44,360,000.00
UNDP/FAO aid	474,116.00	474,116.00
World Bank aid	16,598,429.00	16,598,429.00
Japanese aid	82,064,952.00	82,064,952.00

Australian aid	1,287,642.00	1,287,642.00
Grant from Sugar Importers' Association	500,000.00	500,000.00
Total accumulated fund	145,285,139.00	145,285,139.00

SUGARCANE RESEARCH INSTITUTE

NOTES TO THE STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31ST DECEMBER 2013

	2013	2012
	Rs.	Rs.
13 Other Incomes		
Sundry income	2,159,435.52	3,215,748.26
Interest Income on staff loans	1,220,557.38	—
Interest Income on treasury bills	15,318,330.29	11,106,554.76
Interest Income on fixed deposits	3,590,321.89	2,790,406.24
Interest on savings	1,535,948.98	1,873,263.23
Sale of seedcane	1,851,145.00	1,654,520.48
Funds from Pakistan	263,000.00	—
Total other income	25,938,739.06	26,349,371.78

	2013	2012
	Rs.	Rs.
14 Personnel Emoluments		
Salaries and allowances	56,737,547.96	52,645,403.65
Contribution to Employees' Provident Fund	10,106,385.76	9,234,039.26
Contribution to Employees' Trust Fund	1,998,492.65	1,846,807.87
Overtime	9,016,579.61	5,826,802.42
Wages	16,017,546.47	14,342,983.18
Staff medical	8,800,184.70	8,200,833.39
Resource personnel	242,936.50	—
Total personnel emoluments	102,919,673.65	92,096,869.77

	2013	2012
	Rs.	Rs.
15 Supplies and consumables used		
Printing and stationery	2,082,443.66	1,255,903.90
News papers and periodicals	82,162.00	272,742.40
Food and Lodging	19,348.00	—
Spares of farm implements ,tractors and pumps	277,502.40	—
Translation	62,929.50	—
Total supplies and consumables used	2,524,385.56	1,528,646.30

	2013	2012
	Rs	Rs
16 Maintenance		
Licence insurance and fitness certificates	450,707.32	733,408.50
Repair and maintenance of vehicles	5,706,627.44	4,629,766.24
Repair and maintenance of buildings	4,632,343.06	3,503,680.60
Repair and maintenance of office equipment	547,802.74	804,081.87
Repair and maintenance of machinery and lab equipment	1,856,648.48	512,024.29
Fuel and lubricants	8,790,128.76	6,918,129.92
Web maintainance	14,640.00	13,860.00
Total maintenance	21,998,897.80	17,114,951.42

	2013	2012
	Rs	Rs
17 Contractual services		
News paper notification	568,637.60	576,310.40
Postage	132,985.00	145,014.50
Rent rates and taxes	914,174.27	1,366,520.80
Telephone, cables, faxes & Internet	973,114.62	1,050,327.95
Legal charges	80,331.00	164,532.00
Audit fees	282,249.00	-
Electricity	5,372,398.75	4,114,021.06
Water	50,125.33	64,830.57
Security services	7,943,740.00	8,497,481.65
Gratuity	5,188,914.12	4,749,486.36
Transport	-	224,746.00
Workmen's compensation	130,369.62	7,066.24
PAYE Tax	58,741.17	-
Staff requirement	139,310.00	-
Exhibitions	18,500.00	-
Total contractual services	21,853,590.48	20,960,337.53

	2013	2012
	Rs	Rs
18 Research and Development		
Research materials	5,191,045.81	5,825,683.81
Media, publicity and journals	54,320.00	20,000.00
Staff training	349,295.01	690,806.00
Consultancy fees	87,056.56	146,475.00
Adaptive research	-	-
Chemicals	632,361.29	350,844.34
Fertiliser	148,100.00	299,500.00
Fencing materials	-	88,000.00
Harvesting and land preparation	507,572.00	1,027,161.80
Sugar sector development	1,599,625.54	646,264.23
Symposium	125,240.00	791,500.00
Infrastructure development	77,680.00	-
Research reviews	545,044.98	-
Total research and development	9,317,341.19	9,886,235.18

	2013	2012
	Rs	Rs
19 Other operating expenses		
Entertainment	462,624.64	790,201.67
Staff welfare	157,980.40	161,848.50
Membership fee	10,500.00	9,626.89
Scholarship	162,500.00	84,500.00
Clearing charges	-	458,549.08
Annual subscription fees	-	107,557.43
Board of Governor's Chairman's remuneration	805,200.00	529,225.00
Payment to other members	460,124.63	347,479.70
Audit and Management meeting expenses	59,133.00	198,352.00
Miscellaneous	688,082.08	33,970.43
	2,806,144.75	2,721,310.70

20 A loan of Rs. 1,745,300 given to the Ministry of Supplementaty Plantation Crop Development under which the Sugarcane Research Institute functioned in the year 2010 has been written off with due approval of the Treasury due to the inability of recovering it as that Ministry does not exist.

- The current value of 11 cattle has been estimated of Rs.367,875(of the rate of Rs.125 per Kg)
- Ms.M.E.J.Fernando who left the Institute, has to pay Rs.2,974,960 to the Institute as per the agreement signed by her (Legal action to be taken).
- Mr.Lalith Wirthamulla's service was terminated and he has filed a case in LT against the institute.

**Schedule: 01
Property, Plant & Equipment**

Description	Cost (Rs.)			Depreciation (Rs.)			N.D.V (Rs.) 31.12.2013
	Balance as at 01.01.2013	Addition	Balance as at 31.12.2013	Balance as at 01.01.2013	Current year	Balance as at 31.12.2013	
Agricultural equipment	15,177,334.00	-	15,177,334.00	8,470,789.00	1,506,249.00	9,977,038.00	5,200,296.00
Bicycle	134,190.00	-	134,190.00	134,190.00	-	134,190.00	-
Building	62,152,021.00	-	62,152,021.00	42,788,430.00	2,407,711.00	45,196,141.00	16,955,880.00
Crockery and cutlery	800,318.00	197,079.00	997,397.00	795,337.00	33,810.00	829,147.00	168,250.00
Extension and training equipment	4,493,180.00	-	4,493,180.00	4,398,218.00	30,622.00	4,428,840.00	64,340.00
Field equipment	4,360,875.00	1,572,964.00	5,933,839.00	3,574,177.00	216,506.00	3,790,683.00	2,143,156.00
Furniture and fittings	7,111,270.00	489,611.19	7,600,881.19	5,304,935.00	427,459.00	5,732,394.00	1,868,487.19
Laboratory equipment	69,198,679.00	2,767,773.00	71,966,452.00	64,754,587.00	1,858,003.00	66,612,590.00	5,353,862.00
Land and land development	10,497,220.00	-	10,497,220.00	8,964,667.00	320,057.00	9,284,724.00	1,212,496.00
Library books	2,852,264.17	67,225.83	2,919,490.00	2,722,200.00	70,468.00	2,792,668.00	126,822.00
Motor vehicles	56,455,375.00	21,055,777.00	77,511,152.00	37,220,264.00	13,021,694.00	50,241,958.00	27,269,194.00
Office equipment	22,133,693.06	1,161,589.94	23,295,283.00	17,388,113.00	1,445,795.00	18,833,908.00	4,461,375.00
Telecommunication facilities	1,687,357.00	9,500.00	1,696,857.00	1,585,389.00	25,573.00	1,610,962.00	85,895.00
Workshop equipment	18,618,868.00	1,190,790.00	19,809,658.00	17,045,534.00	388,801.00	17,434,335.00	2,375,323.00
	275,672,644.23	28,512,309.96	304,184,954.19	215,146,830.00	21,752,748.00	236,899,578.00	67,285,376.19



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கணக்காய்வாளர் தலைமை அபிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය } LP/K/SRI/1/13/03
 எனது இல. }
 My No. }

ඔබේ අංකය }
 உமது இல. }
 Your No. }

දිනය }
 திகதி }
 Date }

31 December 2014

The Chairman,
 Sugar Cane Research Institute

Report of the Auditor General on the Financial Statements of the Sugar Cane Research Institute for the year ended 31 December 2013 in terms of Section 14(2)(c) of the Finance Act, No. 38 of 1971

The audit of financial statements of the Sugar Cane Research Institute for the year ended 31 December 2013 comprising the statement of financial position as at 31 December 2013 and the Statement of Financial Performance, Statement of Changes in Equity and Cash Flow Statement for the year then ended and a summary of significant accounting policies and other explanatory information, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971 and Section 19(3) of the Sugar Cane Research Act No.75 of 1981. My comments and observations which I consider should be published with the Annual Report of the Institute in terms of Section 14(2)(c) of the Finance Act appear in this report. A detailed report in terms of Section 13(7)(a) of the Finance Act was issued to the Chairman of the Institute on 24 October 2014.

1.2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Public Sector Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements, whether due to fraud or error.

1.3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards consistent with International Standards of Supreme Audit Institutions (ISSAI 1000-1810). Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.



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 assessments, the auditor considers internal control relevant to the Institute'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 Institute'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. Sub-sections (3) and (4) of Section 13 of the Finance Act, No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the Audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

1.4 **Basis for Qualified Opinion**

My opinion is qualified based on the matters described in paragraph 2.2 of this report.

2. **Financial Statements**

2.1 **Qualified Opinion**

In my opinion, except for the effects of the matters described in paragraph 2.2 of this report, the financial statements give a true and fair view of the financial position of the Sugar Cane Research Institute as at 31 December 2013 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

2.2 **Comments on financial statements**

2.2.1 **Sri Lanka Public Sector Accounting Standards**

The following observations are made.

(a) **Standard No. 02**

- (i) Even though only the short term liquid assets of a short maturity of 3 months or less, can be stated as cash equivalents fixed deposits of Rs.37,600,383 had been shown in the cash flow statement as cash and cash equivalents.



- (ii) Even though a sum of Rs.2,571,702 paid as gratuities should be shown in the cash flow statements separately under operating activities, it had been shown as cash flows from financing activities.

(b) **Standard No. 03**

Even though the accounting policy on cess income of the Institute had been the cash basis up to the year under review, it had been changed to cash basis on imported sugar and to accrual basis on locally manufactured sugar. This had not been disclosed in the accounts. If an accounting policy is changed that change should be accounted in accordance with retrospective application but the financial statements had not been prepared accordingly.

2.2.2 Accounting Deficiencies

The following observations are made.

- (a) Biological assets valued at Rs.367,875 belonging to the Institute had been disclosed under notes to the accounts without disclosing in the financial statements.
- (b) Even though the total interest income relating to the year under review amounted to Rs.18,511,906 it had been shown in the final accounts as Rs.20,444,601 and as such an interest income of Rs.1,932,695 had been overstated in the accounts.

2.2.3 Unexplained Differences

The following observations are made.

- (a) The Revaluation Reserve of Rs.2,940,000 shown in the financial statements for the year 2012 had been shown under General Reserve in the year under review without being separately identified.
- (b) Even though a sum of Rs.1,022,500 had been shown in the accounts as receivable in respect of the supply of sugar cane to a sugar company, according to the information made available for audit the value of receivable amounted to Rs.361,845 thus indicating a difference of Rs.660,665. Action had not been taken to identify the reasons for the difference and to rectify the difference.



2.3 Accounts Receivable and Payable

(a) Accounts Receivable

The following observations are made.

- (i) According to the debtors age analysis presented along with the financial statements for the year under review, the total debtors balance amounted to Rs.11,576,680 whereas according to the financial statements the balance was Rs.14,374,932 thus showing a difference of Rs.2,798,252.
- (ii) Even though a sum of Rs.1,000,000 receivable from a sugar company remained recoverable for more than 3 years, it had not been included in the debtors age analysis. Further, sums of Rs.6,765,668 and Rs.1,012,094 of total debtors had remained outstanding for more than 3 years and 4 years respectively. Sufficient action had not been taken to recover these debts.

(b) Accounts Payable

The following observations are made.

- (i) A balance of creditors amounting to Rs.683,271 had remained without being settled for more than 2 years.
- (ii) Even though the balance of refundable tender deposits amounted to Rs.181,250 it was shown as Rs.126,750 in the age analysis.

3. Financial Review

3.1 Financial Results

According to the financial statements presented, the operation of the Institute for the year under review had resulted in a deficit of Rs.28,875,134 as compared with the deficit of Rs.7,900,416 for the preceding year. Decrease in ccess income by Rs.6,500,921 and increase of operating expenses by Rs.17,452,051 in the year under review had been the main reasons for the increase of deficit for the year under review as compared with the preceding year, by a sum of Rs.20,974,718.



3.2 Analytical Financial Review

The following observations are made.

- (a) Supplies and consumable expenses, financial expenses and maintenance expenses had increased by 65 per cent, 594 per cent and 29 per cent respectively as compared with that of the preceding year.
- (b) Accounts payable had increased by 82 per cents as compared with that of the previous year. A sum of Rs.7,800,000 included therein payable to a private firm for the purchase of tractors had been the reason for this increase.

3.3 Legal Cases initiated against the Institute

A case had been filed in the Courts against the Institute by an employee of the Institute who had been dismissed from service.

4. Operating Review

4.1 Management Inefficiencies

The following observations are made.

- (a) According to the order made, 10 cents cess should be recovered per every kilogram of sugar manufactured by the Local sugar manufacturers. Accordingly, a cess amounting to Rs.3,382,668 was due from three local sugar manufacturing institutions relating to the year 2012. Action had not been taken to compute and recover the cess relating to the year under review, by obtaining information about the sugar manufactured by those institutions.
- (b) Despite there were 112 labourers on permanent, contract and casual basis as at 31 December of the year under review, 7,681 Labour units had been obtained from a farmer's organization for the 12 months period from January to December for the seed sugar project, and paid a sum of Rs.5,952,775 thereon.



4.2 Personnel Administration

The approved cadre and the actual cadre of the Institute amounted to 209 and 168 respectively. Vacancies existed in 04, 09 and 10 posts in the senior, tertiary and secondary levels required for operating activities respectively and 18 at primary level posts.

5. Systems and Controls

Weaknesses in systems and control observed during the course of audit were brought to the attention of the Chairman of the Institute from time to time. Special attention is needed in respect of the following areas of control.

- (a) Accounting
- (b) Collection of Cess Income
- (c) Storage

W.P.C. Wickramaratne
Acting Auditor General



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எனது இல
My Ref.
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உமது இல
Your Ref.

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கரும்பு ஆராய்ச்சி நிறுவனம்

SUGARCANE RESEARCH INSTITUTE



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දිනය / திகதி / Date

Replies to Auditor General's Report on the Financial Statements of the Sugarcane Research Institute for the year ended 31st December 2013 in terms of Section 14(2) (c) of the Finance Act No. 38 of 1971

Ref. No. SRI/9/1

20th January 2015

The Auditor General
Auditor General's Department
Colombo.

Auditor General's Report on the Financial Statements of the Sugarcane Research Institute for the year ended 31st December 2013 in terms of Section 14(2) (c) of the Finance Act No. 38 of 1971

This refers to the report LP/K/SRI/1/13/03 dated 31 December 2014 on the above subject. The clarifications on the issues highlighted in the report are given below:

2.2 Comments on Financial Statements

2.2.1 Sri Lanka Government Accounting Standards

- (a) Accounting Standard No. 2
- Action has been taken to indentify the liquidity assets correctly in the preparation of financial statements for the year 2014.
 - Action has been taken to show the gratuity payment separately under operational activities in preparing the cash flow statement for the year 2014.
- (b) Accounting Standard No. 3
Action has been taken to account cess income on cash basis from the year 2014.

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2.2.2 Accounting Deficiencies

- (a) Action will be taken to include the biological assets in the final accounts from 2014.
- (b) Action has been taken make necessary correction to the interest income of Rs 1,932,695 for the year 2013.

2.2.3 Lack of Documentary Evidence for Audit

- (a) The re-valued reserves will be shown separately from 2014.
- (b) Necessary corrections will be made in 2014 to the receivable income on sugarcane supplied to Sevanagala sugar company.

2.3 Accounts Receivable and Payable

- (a) Accounts receivable
 - i. Action has been taken to present the debtors' balances and their age analysis correctly.
 - ii. The advance receivable from Kantale Sugar Industries, Rs 1,000,000 will be shown in the age analysis of debtors. Furthermore, action has been taken in 2014 to recover the dues to the institute.
- (b) Accounts payable
 - i. Action has been taken to make payments to creditors.
 - ii. Action has been taken to make corrections to refundable tender deposits and their age analysis

3.0 Financial Review

3.3 Legal actions against the institute

Action has been taken to reveal the court cases against the institute due to termination of service in 2014 accounts.

4.0 Operating Review

4.1 Management Inefficiencies

- (a) Action has been taken to collect cess on local sugar production.
- (b) Labour requirement has increased due to expansion of the extent of the seedcane nursery and research and development activities.

4.3 Cadre management

Action has been taken to fill the cadre vacancies. However, it was not possible to find suitable qualified candidates for the positions in senior and higher management categories.


S K Cyril
Chairman
Sugarcane Research Institute

Financial Highlights from 2009 to 2013

Income

Item	Rs Million				
	2009	2010	2011	2012	2013
Cess on sugar imports/production	129.85	142.88	144.12	139.32	132.82
Interest income and sundry income	28.14	20.48	17.00	24.04	29.55
Sale of sugarcane	0.78	-	0.90	1.65	1.85
Total	158.77	163.36	162.02	165.01	164.23

Expenditure

Item	Rs Million				
	2009	2010	2011	2012	2013
Recurrent:					
Personnel emoluments	78.19	78.78	81.67	92.10	102.91
Travelling and subsistence	1.57	1.70	1.75	2.63	2.54
Research and development	7.81	5.62	5.91	9.88	9.31
Supplies and consumables	1.30	1.83	1.17	1.52	2.52
Contractual services	17.43	17.80	21.57	20.97	21.85
Maintenance	14.11	12.14	13.22	17.11	21.99
Other operating expenses	2.32	1.19	2.03	27.21	31.60
Finance cost	0.19	0.15	0.14	0.03	0.20
Total	122.93	119.22	127.47	171.45	192.96
Capital:					
Buildings	-	8.82	0.36	0.12	-
Office/Lab/Field equipment	2.68	3.78	2.32	3.21	5.50
Vehicles	1.09	13.22	-	6.50	21.05
Land development	0.13	0.68	1.20	-	-
Library books	-	-	0.05	-	0.06
Furniture	0.36	0.69	0.48	0.72	0.48
Other facilities	0.03	0.02	0.08	0.05	1.39
Total	4.28	27.20	4.49	10.60	28.51
Total	127.21	146.42	131.96	182.05	221.47