

வார्षிக வர்காவ  
ஆண்ட றிக்கை  
ANNUAL REPORT

# 2014



ஈன் கர்லேஷன் ஂயததைய  
கரும்பு ஆராய்ச்சி றிறுவனம்  
SUGARCANE RESEARCH INSTITUTE

# **SUGARCANE RESEARCH INSTITUTE**

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Hon. Minister of Sugar Industry Development,  
Ministry of Sugar Industry Development,  
Cwing, 11th Floor, Sethsiripaya 2nd Stage,  
Battaramulla.

Hon. Minister,

**Annual Report of the Sugarcane Research Institute for the Period from 01.01.2014 to 31.12.2014**

I am submitting herewith the Annual Report for the year 2014 of the institute including its progress, financial statements and Auditor General's report.

Yours faithfully,

**SUGARCANE RESEARCH INSTITUTE**



.....  
S. K. Cyril  
Chairman  
Board of Governors

31<sup>st</sup> December 2013

## Contents

|   | Page |
|---|------|
| Vision  | 1    |
| Mission   | 1    |
| Board of Governors                                      | 2    |
| Chairman's Review                                       | 3    |
| Director's Review                                       | 5    |
| Divisional Reports                                      | 8    |
| Crop Improvement Division                               | 10   |
| Crop and Resource Management Division                   | 14   |
| Crop Nutrition Division                                 | 18   |
| Crop Protection Division                                | 22   |
| Mechanisation Technology Division                       | 28   |
| Processing Technology Division                          | 32   |
| Economics, Biometry and Information Technology Division | 36   |
| Technology Transfer and Development Division            | 40   |
| Publications  | 46   |
| Awards  | 49   |
| Administration and Finance Division                     | 50   |
| Report of the Audit and Management Committee            | 58   |
| Audited Financial Statements                            | 59   |
| Statement of Financial Position                         |      |
| Statement of Financial Performance                      |      |
| Cash Flow Statement                                     |      |
| Notes to the Statement of Financial Position            |      |
| Notes to the Statement of Financial Performance         |      |
| Schedule 1: Property, Plant and Equipment               |      |
| Auditor General's Report                                | 71   |
| Financial Highlights from 2010 to 2014                  | 79   |



## **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**

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

## **Chairman's Review**

During the year 2014, research, technology transfer and development activities were carried to contribute to development of the sugar industry to achieve the government target of reaching 40% self sufficiency in sugar by providing necessary technical inputs, and man power and infrastructure development activities of the institute to provide necessary human resources and physical infrastructure to support the same.

In order to provide technical know-how for sugar industry development, a long-term research program and a technology transfer program were continued. The most significant achievements during the year 2014 were recommendation of the herbicide, Glufosinate Ammonium, as an alternative to the banned herbicide, paraquat, irrigation schedules to Hingurana sugarcane plantations for efficient utilisation of irrigation water, revising fertiliser recommendation given to Sevanagala, Pelwatte, Siyambalanduwa, Hingurana, Badulla, Kantale and Killinochchi sugarcane-growing areas and recommendation of Thiamethoxam 20% + Chlorantraniliprole 20% (w/w) WG and Imidacloprid 700g/Kg WG to control termites. The technology transfer program mainly focused on the promotion of adoption of the new sugarcane varieties, SRI-developed sugarcane machinery, intercropping short-duration crops with sugarcane, new low-cost planting methods, soil fertility improvement and management of pests and diseases. A development program consisting of production of foundation seedcane of the newly-introduced sugarcane varieties to supply genetically pure healthy seedcane to sugar industries for further multiplication, production of tissue-cultured plants to produce disease-eliminated plant stocks for further multiplication and expansion of sugarcane cultivation in Badulla and Killinochchi districts for small-scale sugarcane-based industries to improve livelihood of farmers were continued.

Since the availability of finance was not sufficient to meet the expenses of the expanded activities, action was taken to get increased the cess imposed on imported sugar. However, from August 2014, the treasury agreed to provide necessary finances to the institute, and hence, the collection of cess by the institute was discontinued. The staff strength was increased to 191 by filling 31 vacancies, including four Research Officers, an Accountant, a Farm Superintendent, a Development Officer, a Works Superintendent, a Book Keeper, a Management Assistant, a Driver, four Technical Officers and 16 Workers. Action was also initiated to increase the cadre to meet the staff requirements of the expanded activities. Training of Research Officers at postgraduate level and providing short-term training opportunities for staff to acquire necessary skills to improve the work standards were also continued.

Actions were taken to draw up plans to develop infrastructure, namely, sugarcane hybridisation facilities at Enselwatte, quarantine facilities at Hantane in addition to the laboratory complex, technology transfer and development centre, accommodation facilities for staff and other necessary infrastructure at Uda Walawe main station. In addition, action was initiated to acquire an additional land of 10 ha for the sugarcane hybridisation station at Enselwatte, Deniyaya, and 12 ha for a sugarcane nursery and a sub-

station in Kilinochchi. Expansion of the foundation seedcane nurseries at Uda Walawe and Kantale was also continued.

The Institute also strengthened international collaboration by continuing links with the International Sugar Organisation, the Indian Institute of Sugarcane Research, the Shakarganj Sugar Research Institute and the Punjab Agriculture Research Board (PARB) in Pakistan for scientific collaboration for research and man power training. In addition, a scientific collaboration program was initiated with the Sugar Research Australia to exchange of sugarcane varieties for breeding purposes and to undertake collaborative research in sugarcane.

The Sugarcane Research Institute (SRI) successfully organised the fifth Plantation Crop Research Symposium with the support of the other three plantation crop research institutes; Tea Research Institute, Rubber Research Institute and Coconut Research Institute, under the theme “Towards a Green Plantation Economy” with the participation of His Excellency the President, Hon. Minister of Sugar Industry Development, Hon. Deputy Ministers of the Ministries of Plantation Industries and Coconut Industry Development and Janatha Estate Development and the scientists, technologists and policy makers of the four plantation crop sectors.

The efficient and proper policy guidance and direction of the newly-established Ministry of Sugar Industry Development made it possible for the institute to carry out its mandated : efficiently during the year under review.

  
.....

S K 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 2014, for the 30th consecutive year. 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 outputs of the crop improvement program, in addition to testing of the eight new superior sugarcane varieties to be released for commercial cultivation, was identification of 10 promising sugarcane varieties; five from each SL 1999 and 2000 series, based on their performance at Uda Walawe, Pelwatte and Hingurana. These sugarcane varieties are superior to the existing ones, and therefore, after commercial cultivation, they could make a significant contribution to increase cane yield and sugar recovery rates, and hence, the sugar production and incomes of farmers and sugar companies.

The propagation and spreading behavior of the problematic weed "kiriwel" reported in Sevanagala sugarcane fields were identified and recommend control measures. In addition, the herbicide, Glufosinate Ammonium (Basta), was recommended as an alternative to the restricted herbicide, Paraquat, and to be applied mixing with Diuron to control weeds in sugarcane. Furthermore, location specific irrigation schedules based on rainfall, evaporation, soil properties and crop requirement were recommended for Hingurana sugarcane plantations to increase irrigation efficiency. Recommendations were also made on the best time of planting sugarcane at Sevanagala in terms of utilisation of rainwater.

The revised fertiliser recommendations were given for sugarcane cultivation at Sevanagala, Pelwatte, Siyambalanduwa, Hingurana, Badulla, Kantale and Kilinochchi areas. 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.

Control of white leaf disease (WLD) and smut disease and sugarcane woolly aphid (SWA) was given the highest priority in crop protection. Studies on the control of WLD vector confirmed that weed and other crop species associated with sugarcane do not act as alternative host plants for *D. menoni*, the insect vector of sugarcane WLD. But *Sorghum bicolor* was identified as a potential alternative host plant for *D. Menoni*. Two soil microorganisms, i.e. *Bacillus subtilis* and *Aspergillus flavus* were also identified as having bio-control ability of smut pathogen.

It was also identified that a mixture of tobacco water and liquid dish wash as an eco-friendly

alternative easily available to farmers to control SWA. In addition, five termite species were identified, and the following two insecticides were recommended for treatment of seed setts to prevent infestation of termites:

- i. Thiamethoxam 20% + Chlorantraniliprole 20% (w/w) WG: 4g/16L water
- ii. Imidacloprid 700g/Kg WG: 2.5g/16L water

A Crop Protection Committee (CPC), representing SRI and sugar industries was established to work on all aspects of crop protection of sugarcane plantations in Sri Lanka, and regular pest and disease surveys were conducted to prevent crop damages due to pests and diseases. Moreover, necessary advises were give to farmers and sugar industry officers to contain spread of pests and diseases.

For sugarcane farm mechanisation, the work on two-wheel tractor-mounted disc moulder was successfully completed, and designing of a sugarcane trash-cutting machine was continued. However, the work on the development of a small-scale sugarcane harvester suitable for local conditions was not possible to be continued due to failure of obtaining the technical support from the Indian Institute of Sugarcane Research.

In addition to laboratory-level production of fodder yeast, with the 13 yeast strains isolated for the production of a superior yeast strain for molasses fermentation, total yeast germplasm was increased to 63. In addition, seven phosphate-solubilising bacteria strains and two nitrogen-fixing bacteria strains were identified for the production of bio fertiliser using filter-mud and vinasse as the carrier medium. The total collection of phosphate-solubilising bacteria was increased to 120.

In order to improve the production of jaggery as a cottage industry, identification of suitable sugarcane varieties for jaggery production and studies on the using different clarificants and different flavours were continued. Four superior varieties of 2000 series, namely, SL 00 511, SL 00 601, SL 00 655 and SL 00 992 have been identified for producing high-quality jaggery.

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

In addition to contribution to sugar industry development by development and dissemination of sugarcane technologies, the institute contributed further to develop the sugar industry in the following ways:

- i. Production of foundation seedcane of new sugarcane varieties
- ii. Production and supply of disease-free planting material by mericlone
- iii. Providing genetically pure disease-free planting material to establish nurseries to replace the existing disease-infected sugarcane nurseries at Sevanagala and Pelwatte
- iv. Expansion of sugarcane cultivation in Badulla and Kilinochchi districts to improve livelihood of the farmers.

To provide the manpower requirements, the institute was able to fill 31 vacancies including four Research Officers, an Accountant, a Farm Superintendent, a Development Officer, a Works Superintendent, a Book Keeper, a Management Assistant, a Driver, four Technical Officers and 16 Workers. In addition, action was initiated to increase the cadre to meet the manpower requirements of the institute. Staff training was continued and two officers were provided with opportunities to obtain their doctoral qualifications in addition to providing opportunities for the staff for acquiring skills in the subject relevant to them by attending training programmes, workshops, seminars, conferences, etc.

SRI could successfully organise the fifth plantation crop research symposium, a bi-annual event for the dissemination of research findings in the plantation crop sector, under the theme "Towards a Green Plantation Economy". The scientists of SRI presented 12 scientific papers at this symposium.

From August 2014, the institute received funds from the Treasury, since the Institute was directed to do away with the hitherto practised collection of import cess which was the main source of finance for research and development activities.

Action was taken to draw up a master plan for the development of infrastructure in Uda Walawe, Enselwatte and Hantane. However, it was not possible to start the construction of the hybridisation facility building at Enselwatte and laboratory at Hantane. It was possible to expand the foundation nursery at Uda Walawe by developing 6.5 ha and its irrigation infrastructure, and a foundation nursery of about 15 ha and renovation of a building at Kantale for SRI staff. Action was continued to alienate a 10-ha block in Enselwatte for the expansion of sugarcane hybridisation station and a 12-ha block in Kilinochchi to establish a foundation nursery and research plots.

A scientific collaborative program was initiated with the Sugar Research Australia, and action was taken for sugarcane varietal exchange and undertaking research project on studying sugarcane diseases for safe exchange of sugarcane seeds.

The main limiting factor for the activities of the institute was limitation of trained manpower and timely availability finances. It is hoped that, if the approval is granted for the revision of the cadre, the problem of manpower could be solved to a certain extent. However, action has to be taken to retain staff in order to carry out and continue research activities without interruption. With increasing the funds for research and development and improvement of staff position, the institute would be in a better position to make its contributions to develop the sugarcane industry of Sri Lanka.



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 (study leave from 30.07.2012) |
| Mr W H Jayasinghe BSc (Agric.), MSc      | - | Research Officer                               |
| Mr R A Premachandra                      | - | Senior Technical Officer                       |
| Mr D Weerasinghe                         | - | Senior Technical Officer                       |
| Ms A L C Kumari                          | - | Senior Technical Officer                       |
| Ms Mr B P G S Sadanayake Dip. (Agric.)   | - | Senior Technical Officer (from 01.04.2014)     |
| 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**

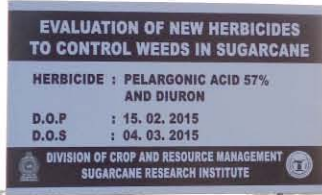
- Final assessment of eight new improved sugarcane varieties in commercial fields before releasing them for commercial cultivation (SL 97 1118, SL 97 1442, SL 98 2087, SL 98 2524, SL 98 2118, SL 98 2549, SL 98 2535 and SLT 4920).
- Identification of superior and promising sugarcane varieties (five from each SL 1999 series and 2000 series; SL 99 3384, SL 99 3301, SL 99 3356, SL 99 4042, SL 99 3035, SL 00 354, SL 00 401, SL 00 589, SL 00 619 and SL 00 652) based on their performance at Uda Walawe, Pelwatte and Hingurana.
- Establishment and maintenance of field trials of different clonal selection stages of SL 2000, SL 2001, SL 2002, SL 2003, SL 2004, SL 2005, SL 2006, SL 2007, SL 2008, SL 2009, SL 2010 and SL 2011 series to indentify improved varieties.
- Ex-situ conservation of Saccharum germplasm consisting of 1473 accessions at the sugarcane breeding sub-station at Enselwatte.
- Maintenance of arrowing plots of core-collection of parental lines for directional breeding of sugarcane at Enselwatte.
- Making 1770 crosses using field lantern and solution crossing techniques.
- Conducting collaborative research projects with Sugar Research Australia (SRA) and Panjab Agriculture Research Board (PARB), Pakistan.

- Providing true seeds generated from 800 commercial crosses and seed setts of 55 varieties to Pakistan.
- Incorporation of 50 varieties imported from Pakistan into sugarcane germplasm.
- Evaluation of the adaptability of commercial and near-commercial sugarcane varieties at Aranthalawa, Degawapiya and Kantale to identify the varieties suitable for Bibile, Hingurana and Kantale respectively.
- Seed sowing and seedling nursery establishment of 1463 crosses of SL 2012 series.
- Extracting DNA from wild cane and sugarcane accessions collected in 2008 local expeditions for molecular-level characterisation.
- Testing 25 varieties of SL 2000 series for jaggery production and selection of four better varieties (SL 00 511, SL 00 601, SL 00 655 and SL 00 992) for producing high-quality jaggery.

#### **Development**

- Establishment and maintenance of breeder's seed nursery at Uda Walawe and foundation seedcane nurseries at Uda Walawe and Kantale.
- Producing 50,000 disease-free plants through tissue culture for commercial seedcane nurseries at Pelwatte.





CROP AND RESOURCE MANAGEMENT DIVISION



## Crop and Resource Management Division

### Staff

|  |  |
|--|--|
| Mr L M J R Wijayawardhana BSc (Agric.) MPhil | - Research Officer-In-Charge                               |
| Mr A L C De Silva BSc (Agric.), MPhil        | - Senior Research Officer (on study leave from 01.01.2014) |
| Mr G A A Chaturanga BSc (Agric.)             | - Research Officer   |
| Mr P R B Chandrasena                         | - Farm Superintendent (from 20.10.2014)                    |
| Mr W G Nimal                                 | - Technical Officer  |
| Mr S M D N D Seneviratne Dip (Agric.)        | - Technical Officer  |

### Achievements

#### Research

- Identifying troublesome creeping weed “kiriwel” reported in Sevanagala sugarcane plantations as *Ichnocarpus frutescens* (L.) R. Br. in the family Apocynaceae and its propagation and spreading behaviour in Sevanagala sugarcane fields.
- Recommending the herbicide, Glufosinate Ammonium 150 g/l (Basta), at the rate of 0.75 - 1.5 l/ha as an alternative to the restricted herbicide, Paraquat, and to be applied mixing with Diuron to control weeds in sugarcane.
- Finding out that;
  - i. Sugarcane tops left behind after harvesting cane fields is a widely available and potential roughage that could be fed to cattle.
  - ii. None of the farmers in Hingurana area used this valuable by product in a useful manner; it is either burnt in-situ or left as a soil mulch.
  - iii. Preservation of cane tops as silage is a highly palatable feeding method for dairy cattle.
  - iv. Nutritional value of sugarcane top silage is comparable with that of silage made with guinea grass.
- Developing management techniques to use cattle-shed waste as manure to sugarcane fields and integrating management practices of dairy cattle husbandry with sugarcane.
- Developing location specific irrigation schedules based on rainfall, evaporation, soil properties and crop requirement to increase irrigation efficiency at Hingurana sugar project by increasing field application efficiency. Two zones (A and B) were demarcated based on irrigation interval values, and the zone A requires irrigation



at 6-8-day intervals and zone B requires irrigation 8 10-day intervals. The depths of irrigation required for zone A and B in one irrigation were 49mm and 39mm respectively.

- Confirming that the alternate-row furrow irrigation method saves 35-42 % of irrigation water and irrigation labour cost while maintaining yield as in every-furrow irrigation.
- Identifying the genetic potential of sugarcane (*Saccharum spp.* Hybrid) and its wild relatives (*Saccharum spontaneum* and *Erianthus arundinaceus*) for improvement of shoot and root growth and stomatal resistance.

### **Development**

- Expanding sugarcane plantations by 3.4 ha belonging to 18 farmers in Anaivilundan, Vennarikulum, Maniyakulum and Kannagipurum areas in Kilinochchi district.
- Developing proposed sugarcane nursery areas in Vennarikulum and preparing 4 ha for planting 2015.

### **Services for Research**

- Preparing 27 ha for field research trials and 6.5 ha for new seedcane nursery.
- Rehabilitating field roads and irrigation canal of the experimental areas of the research farm.
- Expanding the electric fence in the D3 area.
- Harvesting and sending 218 tonnes of sugarcane to Sevanagala sugar factory.
- Supplying 05 and 10 tonnes of seedcane to Sevanagala and Pelwatte sugar industries respectively and 57 tonnes to Badulla district.



**CROP NUTRITION DIVISION**



## **Crop Nutrition Division**

### **Staff**

|  |   |
|--|---|
| Mr H A S Weerasinghe BSc, MSc (NRM), MPhil, MI Biol. | - Research Officer-In-Charge                              |
| Ms R A Sudarshani BSc (Agric.)                       | - Research Officer  |
| Mr B R Kulasekera BSc (Agric.)                       | - Officer (from 05.02. 2014)                              |
| Mr G S Udawatte                                      | - Technical Officer                                       |
| Ms P R Inoka Subashini                               | - Technical Officer<br>(from 01.01.2014<br>to 29.09.2014) |
| Mr A B K Tharindu Kanchan Dilhan                     | - Technical Officer<br>(from 01.03.2014 to<br>05.05.2014) |
| Mr J Gunasiri  | - Lab/Field Attendant                                     |
| Mr P W D Kulatunga                                   | - Lab/Field Attendant                                     |

### **Achievements**

#### **Research**

- Revising the fertiliser recommendations given for sugarcane-growing soils in Sevanagala, Pelwatte, Siyambalanduwa, Hingurana, Badulla, Kantale and Killinochchi.
- Identifying the succession patterns of composting filter-mud, vinasse and trash. Degradation was highest during the initial two weeks and declined thereafter. The compost prepared using filter-mud, vinasse and trash had good storing ability.

#### **Analytical services**

- Analysing 1726 cane, jaggery and syrup samples for brix, pol and fibre contents for the divisional and other programs of the institute (1342 for Crop Improvement, 122 for Crop and Resource Management 164 for Crop Nutrition Divisions and 80 samples for Processing Technology).
- Analysing soil for other divisions of the institute (50 samples for soil moisture and texture, 200 samples for soil K).
- Analysing suitability of soil for growing sugarcane in the land alienated to establish sugarcane nurseries in Vennarikulum in Kilinochchi district.





**CROP PROTECTION DIVISION**





## Crop Protection Division

### Staff

|                                       |   |   |
|---------------------------------------|---|---|
| Ms V K A S M Wanasinghe BSc (Sp), MSc | - | Research Officer-In-Charge              |
| Ms A N W S Thushari BSc (Sp)          | - | Research Officer/ Pathology             |
| Ms K M G Chanchala BSc (Agric.), MSc  | - | Research Officer/ Entomology            |
| Mr M K D Ubesena                      | - | Technical Officer                       |
| Mr M R Premalal                       | - | Lab/Field Attendant                     |
| Mr D M T Piyaratne                    | - | Lab/ Field Attendant (up to 29.09.2014) |

### Achievements

#### Research

- Identifying non-availability of suitable alternative hosts, apart from sugarcane borer pests, as a major constraint for mass culturing *Cotesia flavipes* in laboratories.
- Confirmation that fifty four (54) weed and other crop species associated with sugarcane do not act as alternative host plants for *D. menoni*, the insect vector of sugarcane WLD. But *Sorghum bicolor* was identified as a potential alternative host plant for *D. Menoni*.
- Confirming that *Deltocephalus menoni* prefers
  - o laying egg in loamy and sandy soils and in soil near WLD-infected plants than healthy sugarcane plants.
  - o feeding on WLD-infected sugarcane plants than on healthy sugarcane plants.
- Identifying application of a mixture of tobacco water and liquid dish wash as an eco-friendly and alternative easily available method to control SWA.
- In-vitro identification of two soil microorganisms, i.e., *Bacillus subtilis* and *Aspergillus flavus*, with bio-control ability on smut pathogen.
- Confirming that the new variety SL 98 2118 is highly susceptible to both smut and WLD, based on the screening experiments conducted at Uda Walawe and observations in large-block trials conducted at Uda Walawe, Sevanagala, Pelwatte.
- Identifying that the existing SL 83 06 variety in commercial plantations is susceptible to smut disease based on the results of re-evaluation in varietal screening trials and observations made in commercial plantation during disease surveys.



- Confirming that the variety SLI 121 does not have high affinity to termite attack as compared to the variety SL 96 328.
- Confirming that sugarcane seed setts planted are more prone to termite infestations than the plants in other growth stages, viz. young plants, mature plants and stubbles of the ratoon crops and giving advice to pay more attention to control termite attack in planted seed setts than other growth stages of sugarcane.
- Morphological identification of five termite species attacking sugarcane at Uda Walawe (Figure 1).

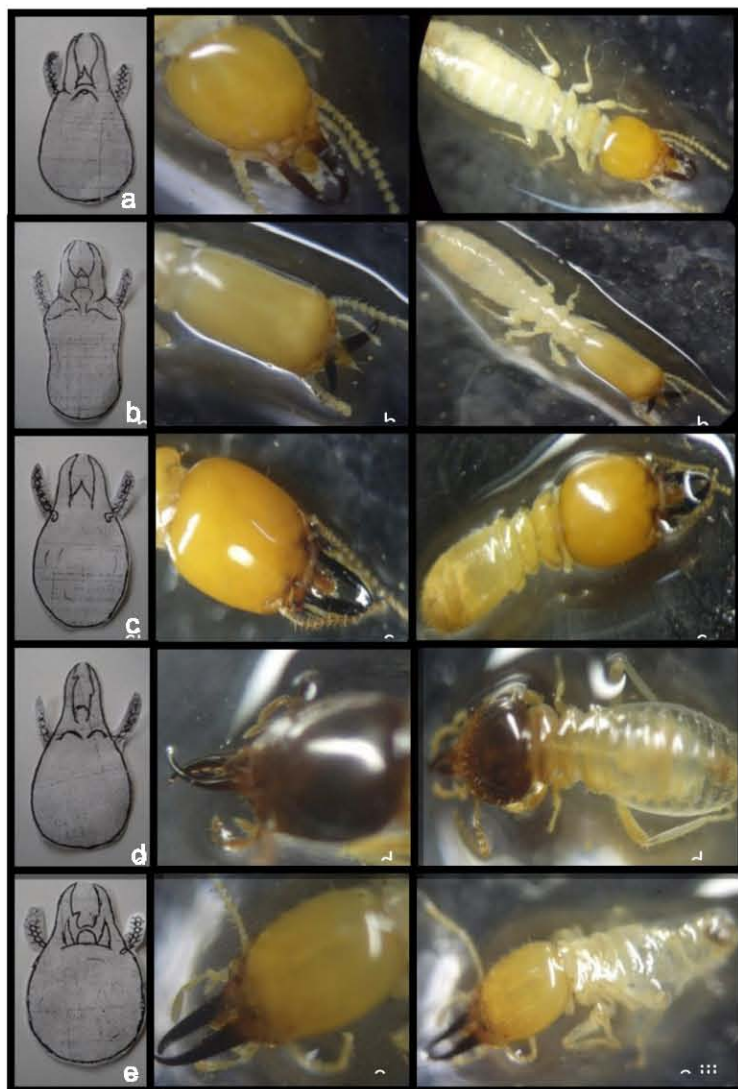


Figure 1: Termite species which damage sugarcane in Uda Walawe

(a i) Structure of Head and protrusions on jaws of soldier of *Coptotermes ceylonicus* (a ii) Head and mandibles of soldier of *Coptotermes ceylonicus* (a iii) Body of the soldier of *Coptotermes ceylonicus* (b i) Structure of Head and protrusions on jaws of soldier of *Heterotermes ceylonicus* (b ii) Head and mandibles of soldier of *Heterotermes ceylonicus* (b iii) Body of the soldier of *Heterotermes ceylonicus* (c i) Structure of Head and protrusions on jaws of soldier of *Odontotermes ceylonicus* (c ii) Head and mandibles of soldier of *Odontotermes ceylonicus* (c iii) Body of the soldier of *Odontotermes ceylonicus* (d i) Structure of Head and protrusions on jaws of soldier of *Odontotermes redimani* (d ii) Head and mandibles of soldier of *Odontotermes redimani* (d iii) Body of the soldier of *Odontotermes redimani* (e i) Structure of Head and protrusions on jaws of soldier of the *Odontotermes horni* (e ii) Head and mandibles of soldier of *Odontotermes horni* (e iii) Body of the soldier of *Odontotermes horni*

- Recommending the following two insecticides for seed sett treatment to prevent termite infestation in seed setts (for dipping and drenching setts):
  - o Thiamethoxam 20% + Chlorantraniliprole 20% (w/w) WG : 4g/16L water
  - o Imidacloprid 700g/Kg WG : 2.5g/16L water
- Identifying the variety SL 97 1442 as having low incidence of smut in both plant and ratoon crops and high WLD incidence only in ratoon crops.
- Confirming that 34 sugarcane varieties imported from Pakistan are free of alien pests or diseases.

### **Services**

- Establishment of a Crop Protection Committee (CPC), representing SRI and sugar companies to work on all aspects of crop protection of sugarcane plantations in Sri Lanka.
- Conducting regular meetings of CPC and reviewing the existing plant protection status of the sugarcane plantations by conducting surveys.
- Regular monitoring of pests and diseases in sugarcane plantations in Sri Lanka. High termite infestations were recorded in some rain-fed plantations during severe dry periods of the year. It was observed that sugarcane smut and WLD levels have increased to an alarming level in Sevanagala and Pelwatte plantations.
- Advising farmers and relevant officers of sugar companies on controlling sugarcane pests and diseases and conducting lectures on integrated pest and disease management.





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)           | - | Senior 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**

- Completing designing of separate fertiliser bin for the modified fertiliser applicator.
- Estimating power requirement for sugarcane harvesting under local conditions using the force- measuring device fabricated at SRI, based on the estimated energy requirement for sugarcane base cutting.
- Fabricating a force-measuring device and estimating trash-cutting force requirement and completion of designing of trash-cutting machine.
- Completing the construction and field testing of the modified two-wheel tractor-mounted disc moulder.

#### **Services**

- Completing the construction and installation of 4'x150' movable shade structures and 10'x50' poly structures in seedling nurseries.
- Completing the construction of D4 canal bridge using concrete towers to supply irrigation water to foundation seedcane nursery.
- Establishing solar charging electric fence for the newly-developed D4 foundation seedcane farm
- Developing natural drain systems of the in newly-developed D4 land area to minimise soil erosion.

- Designing and drawing container for Kilinochchi site.
- Attending to regular maintenance and repair of vehicles and farm equipment of the institute.



**PROCESSING TECHNOLOGY DIVISION**





## **Processing Technology Division**

### **Staff**

|                                   |   |                  |
|-----------------------------------|---|------------------|
| Ms S M T A Maralanda BSc (Agric.) | - | Research Officer |
| Mr W G H Ruwanpura BSc (Agric.)   | - | Research Officer |

### **Achievements**

#### **Research**

- Increasing yeast germplasm to 63 by isolating thirteen new yeast strains from the sugar-containing materials collected from Sevanagala and Uda Walawe area, and evaluating their ethanol production abilities in molasses medium.
- Producing fodder yeast from yeast sludge.
- Increasing phosphate-solubilising bacteria strains to 120 by isolating seven new bacteria strains from different soil types, plant and root samples, and producing three biofertiliser mixtures using five of them with filter-mud and vinasse as the carrier medium.
- Isolating two nitrogen-fixing bacteria strains from the collected sugarcane samples and producing a carrier medium using sugar factory and distillery waste (bagasse, filter-mud and vinasse) for isolated nitrogen-fixing bacteria and their survival ability in the carrier media.
- Producing jaggery from different sugarcane varieties, testing the quality of jaggery produced by using “Daul Kurundu” as a clarificant and adding flavour with chocolate powder and rice puff.

#### **Services**

- Producing 2378 kg of jaggery for using cane harvested from field trials.
- Production of 580 kg of jaggery and 1100 litres (1041 kg) of syrup by reprocessing jaggery purchased from Passara area.
- Production of 4100 litres (3930kg) of syrup from sugarcane harvested in Kantale.





**ECONOMICS BIOMETRY AND INFORMATION TECHNOLOGY DIVISION**



## **Economics Biometry and Information Technology Division**

### **Staff**

|  |   |                                  |
|--|---|----------------------------------|
| Ms B D S K Ariyawansha BSc (Agric.), MPhil | - | Senior Research Officer and Head |
| Mr K A D Kodituwakku BSc (Agric.), MAg     | - | Research Officer                 |

### **Achievements**

#### **Research**

- Updating costs and returns of sugarcane cultivation based on the prices of the year 2014. The average cost per hectare of cane cultivated was Rs. 182,602, Rs.141,378, Rs.137,613 and Rs.206,620 for Sevanagala irrigated and rain-fed sectors, Pelwatte and Hingurana respectively. The average net income from one hectare per year at Sevanagala was Rs 168,197 and 132,264 under irrigation and rain-fed respectively. At Pelwatte under rain-fed, the net income was Rs 61,386/ha/year and that at Hingurana under irrigation Rs127,530/ha/year. The cost of jaggery production was Rs 66.25/kg. The net profit, based on the current jaggery price of sugarcane cultivation for jaggery production in Badulla was Rs. 164,717/ha/yr.
- Estimation of cost of meristem-cultured sugarcane plants (Rs. 87/ plant), heat treatment (Rs 1,347/t) and hot-water treated seedcane (Rs. 4,226/t).
- Identifying trash burning as a significant contributory factor for reducing ratoon yields in both irrigated and rain-fed sugarcane cultivation at Sevanagala.

#### **Services**

- Updating the web site of SRI hosted under URL of [www.sugarres.lk/](http://www.sugarres.lk/) as and when required.
- Providing the following services to other divisions of SRI:
  - o Designing experimental layouts for the experiments conducted by the Divisions of Crop Improvement, Crop Nutrition, Crop Protection, Mechanisation Technology and Procession Technology.
  - o Analysis of the agronomic and yield data of the preliminary and replicated yield trials harvested during the year 2014 and the data received from Crop Nutrition, Crop Protection, Mechanisation Technology Divisions.
  - o Implementation of IT activities within the institute.
- Providing the following services to other organisations:
  - o Preparation of the INFORM database of SRI for the year 2013 and submitting the same to the Council for Agricultural Research Policy (CARP) to be included in the national database.
  - o Training 02 students from Vocational Training Authority (VTA) on the use of computer software packages for a period of nine months and 02 students from Technical College, Embilipitiya on the use of computer software packages for a period of 04 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. M. K. P. C. Gunawardene BSc (Agric.)       | - | Development Officer (from 04.11.2014) |
| Mr R A Premachandra                            | - | Technical Officer                     |

### Highlights

- **Promotion of new sugarcane varieties: SL 83 06, SL 121, SL 92 4918, SL 92 4997, SL 92 5588, SL 95 4033, SL 95 4430, SL 96 328, SL 90 6237, SL 95 4443 and SL 96 128 among cane growers**
  - o Establishing six demonstration/multiplication fields (4ha) with SL 96 328, SL 92 5588 in Pelwatte area.
  - o Conducting two demonstration programs for 48 farmers and 15 field officers of the sugar companies.
  - o Conducting ten training sessions for 235 farmers and 60 field officers of the sugar companies.
  - o Providing 15 tonnes of seedcane of the varieties SL 96 328 and SL 92 5588 from SRI farm to farmers/sugar companies for multiplication.
  - o Preparing information sheets on the varieties, SL 90 6237, SL 95 4443 and SL 96 128.
- **Promotion of tyne cultivator, furrow opener and disc ratooner for sugarcane cultivation**
  - o Conducting four demonstration programs on tyne cultivator and furrow opener for 45 farmers and 10 field officers at Sevanagala, Pelwatte and Hingurana.
  - o Providing a tyne cultivator for a farmer organisation at Pelwatte.
- **Promotion of intercropping cucumber, ground nut, cowpea, water melon and chillies with sugarcane**
  - o Maintaining 18 demonstration sites established in 2013 at Pelwatte and Siyambalanduwa and demonstrating their results to farmers.
  - o Conducting sixteen training sessions on intercropping for 188 farmers and 50 field officers of the sugar companies.
  - o Conducting 13 demonstrations on intercropping, ground nut and cowpea for 90 farmers at Siyambalanduwa and Hingurana.
  - o Establishing and monitoring twelve demonstration fields (intercropped with ground nut, and cowpea) at Syambalanduwa and Hingurana.

- **Promotion of soil fertility management among farmers**
  - o Conducting a demonstration session on supplementary irrigation for 16 farmers and 10 officers at Siyambalanduwa.
  - o Conducting 06 training sessions on soil fertility management for 167 farmers at Hingurana and Buttala.
  - o Visiting thirty farmer fields at Hingurana and advising the farmers on fertiliser application and soil fertility management.
  - o Conducting two training programmes for 40 farmers on fertiliser application and soil fertility management at Sevanagala.
  - o Maintaining 02 demonstration sites established on the improvement of soil fertility at Buttala.
- **Promotion of spaced planting technique**  
Conducting ten training sessions on spaced planting technique for 378 farmers and 36 field officers of the sugar companies.
- **Improvement of cane quality by increasing farmer knowledge and adoption of best management practices**
  - o Conducting two training programs for 92 farmers at Pelwatte.
  - o Conducting 15 training sessions for 473 farmers at Pelwatte, Siyambalanduwa and Hingurana.
  - o Conducting 2 training sessions for 45 field officers at Lanka Sugar Company Ltd.-Pelwatte.
- **Improvement of adoption of agronomic practices of sugarcane**
  - o Conducting three training programmes on best management practices for 105 farmers from Siyambalanduwa area.
  - o Conducting six training programmes in collaboration with NIPM for 236 farmers at Sevanagala, Pelwatte and Siyambalanduwa.
  - o Conducting twenty one training sessions on best management practices for 727 farmers and 49 officers at Sevanagala, Pelwatte, Hingurana and Aluthwela.
  - o Conducting one-day training programme on nursery management for 26 farmers from Pelwatte.
  - o Conducting a training programme on sugarcane cultivation for 53 students from Siyambalanduwa.
  - o Conducting a training programme on SRI recommendations for 21 field officers of Lanka Sugar Company Ltd.-Pelwatte at SRI.
  - o Revising the folder on ratoon management and printing 2000 copies of it.
  - o Printing 1000 copies of the advisory pamphlet on sugarcane growing (Mid country) in Tamil language.
- **Improvement of knowledge and adoption of pest and disease management**
  - o Conducting twenty three training programs for 641 farmers and 34 field officers from Sevanagala, Siyambalanduwa, Hingurana and Passara,
  - o Conducting 22 demonstration programmes for 113 farmers from Sevanagala, Siyambalanduwa, Hingurana and Passara

- o Conducting two training sessions for 45 field officers of Lanka Sugar Company Ltd.-Pelwatte.
  - o Making one hundred thirty two field visits on WLD-, smut-, woolly aphid- and rust-infested fields at Hingurana, Nagahamada, Wila Oya, G-block at Siyambalanduwa and Katugahagalle.
  - o Conducting an awareness programme on the control of WLD and smut disease by displaying posters in Siyambalanduwa area.
  - o Printing 3000 copies of each leaflet on woolly aphid control and leaf scald disease in Sinhala and Tamil languages.
- **Providing training/services at the requests of the sugar companies/other institutions and conducting exhibitions**
- o Conducting a two-day training programme at SRI, Uda Walawe on sugarcane cultivation for 34 farmers and 05 officers in Kilinochchi.
  - o Running SRI exhibition stalls at *Deyata Kirula 2014* at Kuliypitiya and National agricultural exhibition at Theliggawila.
  - o Conducting a three-day training programme at SRI, Uda Walawe, for 14 students following the diploma course in plantation management at NIPM.
  - o Conducting a five-day training programme on extension activities for 12 students following the NIPM diploma course in extension management.
  - o Printing SRI Annual Report 2012.
  - o Coordinating a one-day training programme for the officers of the Ministry of Sugar Industry Development.
  - o Conducting a one-day training programme on sugarcane cultivation for 64 officers of the Lanka sugar company Ltd.-Pelwatte at Pelwatte.
  - o Conducting a training programme on sugarcane cultivation for 08 officers of the Sri Lanka Army at Maligavila.
  - o Coordinating a training programme on sugarcane cultivation for 187 students from Sabaragamuwa, Ruhuna, Wayamba and Peradeniya universities.
  - o Coordinating a one-day training programme on sugarcane cultivation for 20 students of the School of Agriculture at Karapincha.
  - o Conducting a lecture session for induction course for planter trainees-2014 at NIPM, Athurugiriya.
  - o Assessment of cattle damage of farmer fields in Sevanagala Sugar Industry area.
- **Sugarcane Industry Development Programme, Badulla District**
- o Monitoring 08 primary nurseries and 143 small-scale farmer nurseries in total of 30 ha established in 2013 and expanding the total extent of nurseries by the end of 2014 to nearly 50 ha.
  - o Establishing 30ha secondary nurseries/multiplication fields at Kandaketiya, Haliela, Rideemaliyadda, Mahiyanganaya, Meegahakiula and Aluthwela by providing 252 tonnes of seedcane harvested from primary nurseries in Badulla district, 13 tonnes from SRI farm and 13 tonnes purchasing from Gal Oya Plantations Ltd. along with fertiliser.



- o Making arrangements to provide 58 tonnes of seedcane produced by small-scale nurseries to Lanka Sugar Company Ltd.
- o Conducting a two-day training on sugarcane cultivation for 09 Field Officers at SRI, UdaWalawe.
- o Conducting nine training programs on sugarcane cultivation for 231 farmers at Kandeketiya, Meegahakiula, Rideemaliyadda, Mahiyanganaya, Soranathota and Hali Ela.
- o Conducting farmer meetings to form farmer organisations under Agrarian Services Department in each Divisional Secretariat division.
- o Revising and printing 3,000 copies of the leaflet on Jaggery production in each Sinhala and Tamil language.

## **Publications**

- 1 Abeyrathna, K.H.D., Ariyawansha, K.T. and Ariyawansha, B.D.S.K. (2014). Design and Fabrication of a Two-Wheel Tractor-mounted Fertiliser Applicator for Sugarcane Smallholders in Sri Lanka. Proceedings of the International Conclave on Sugar Crops: Sweeteners and Green Energy from Sugar Crops: Emerging Technologies. February 15-17, held at the Indian Institute of Sugarcane Research, Lucknow, India. pp183.
- 2 Ariyawansha, B.D.S.K. (2014). Adaptability of some sugarcane varieties in different environments in Sri Lanka. In: A.P.Keerthipala (ed) Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute (70190), Sri Lanka. pp 39-52.
- 3 Ariyawansha, K.T. and Abeyrathna, K.H.D. (2014) An Analysis of Ridge and Furrow Profile Conversion Efficiency of the Two-Wheel Tractor-Mounted Furrow-Opener in Sri Lankan Sugarcane Fields. Proceedings of the International Conclave on Sugar Crops: Sweeteners and Green Energy from Sugar Crops: Emerging Technologies. February 15-17, held at the Indian Institute of Sugarcane Research, Lucknow, India.
- 4 Ariyawansha, K.T. and Abeyrathna, K.H.D. (2014) Energy Requirements for Base Cutting of Selected Sugarcane Varieties in Sri Lanka. In: A.P. Keerthipala (ed) Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka.
- 5 Ariyawansha, B.D.S.K. and Perera, A.L.T. (2014). Assessment of Varietal Stability of Sugarcane in Sri Lanka: Proceedings of International Conclave on Sugar Crops: Sweeteners and Green Energy from Sugar Crops: Emerging Technologies. February 15-17, 2014, held at the Indian Institute of Sugarcane Research, Lucknow, India. pp.110.
- 6 Chanchala K.M.G., Wanasinghe, V.K.A.S.M., Ariyawansha, B.D.S.K. and Hemachandra, K.S. (2014). Relationship between the incidences of Sugarcane White Leaf Disease and the Population Dynamics of Its Vector, *Deltocephalus menoni* (Homoptera: Cicadellidae), in Sri Lanka. In: A.P. Keerthipala (ed) Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka, pp 143-149.
- 7 De Silva, A.L.C., Wijesuriya, A., and Wijayawardhana, L.M.J.R. (2014). Genetic Potential of Sugarcane (*Saccharum* spp. Hybrid) and its Wild Relatives (*Saccharum spontaneum* and *Erianthus arundinaceus*) for Improvement of Shoot and Root Growth and Stomatal Resistance. In: A.P. Keerthipala (ed)



- Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka, pp 53-61.
- 8 Kanatiwela-de Silva, C., Thushari, S, Dickinson, M. and Udagama, P. (2014). Phylogenetic evaluation of Sugarcane White Leaf Disease and Sugarcane Grassy Shoot Diseases in Sri Lanka. Proceedings of the 70th Annual sessions of the Sri Lanka Association for the Advancement of Science. Colombo, Sri Lanka.
  - 9 Kodituwakku, K.A.D. and Keerthipala, A.P. (2014). Indian and Thai Production-Promoting Sugar Policies and their Applicability to Sri Lanka. In: A.P. Keerthipala (ed). Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute (70190), Sri Lanka. pp 381-392.
  - 10 Maralanda, S.M.T.A., Chandrasena, G. and Priyadarshani, G.V.G. (2014). Isolation and evaluation of Indigenous Yeast Strains for Improving Sugarcane Molasses Fermentation Efficiency in Sri Lankan Alcohol Distilleries. In: A.P. Keerthipala (ed) Proceedings of the Fifth Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka, 307-315.
  - 11 Perera, A.M.M.S., Wijesuriya, A., Jayasekara, G.A.U. and Ariyawansha, B.D.S.K. and Jayasinghe, W.H. (2014). An Assessment of the Size of Meristem Ex-plant for Elimination of Sugarcane Bacilliform Virus. In: A.P.Keerthipala (ed). Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute (70190), Sri Lanka, pp 63-70.
  - 12 Priyadarshani, G.V.G., Chandrasena, G. and Maralanda, S.M.T.A. (2014). Isolation and Characterisation of Phosphate-solubilising Bacteria for the Production of Bio-fertiliser. In: A.P. Keerthipala (ed) Proceedings of the Fifth Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka, pp 253-262.
  - 13 Thushari, A.N.W.S. and Ariyawansha, B.D.S.K. (2014). Identification of Different Sugarcane Smut (*Ustilago scitaminea*). Strains in Sri Lanka, Proceedings of International Conclave on Sugar Crops: Sweeteners and Green Energy from Sugar Crops: Emerging Technologies. February 15 - 17, 2014 held at the Indian Institute of Sugarcane Research, Lucknow, India, pp 138 139.
  - 14 Thushari, A.N.W.S. and Ariyawansha, B.D.S.K. (2014). Evaluation of some Brazilian sugarcane varieties for resistance to Leaf Scaled disease pathogen in Sri Lanka In: A.P.Keerthipala (ed). Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute (70190), Sri Lanka, pp 187-191.
  - 15 Thushari, A.N.W.S., Piyatunga, A.L.I. and Chandrasena, G. (2014). Efficacy of Soil Bacteria in Controlling Sugarcane Smut Disease Fungi *Ustilago scitaminea* pp 321-325. Proceedings of the 5th IAPSIT Conference IS 2014, 25th - 28th November,

Nanning, P.R. China.

- 16 Wanasinghe, V.K.A.S.M., Chanchala, K.M.G. and Kumarasinghe, N.C. (2014). An Assessment of Major Pests of Sugarcane in Sri Lanka. In: A.P. Keerthipala (ed) Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka, pp 135- 141.
- 17 Wanasinghe, V.K.A.S.M., Chanchala, K.M.G., Witharama, W.R.G and Kumarasinghe, N.C. (2014). The Effects of Intercropping Cowpea, Ground nut, Gingili and Sweet Melon on Termite Damage on Sugarcane in Sri Lanka. Souvenir de Presentation IS-2014, International Conference IS 2014 on 25-28 November 2014 in Nanning, P.R. China, p 132.
- 18 Weerasinghe, H.A.S., Chandana, H.L.N. and Gunaratne, G.P. (2014). pH Buffering Capacities of Sugarcane-growing soils at Sevanagala, Sri Lanka. Proceedings of the 5th Plantation Crop Research Symposium, 15th-17th October 2014, Colombo, Sri Lanka.
- 19 Weerasinghe, H.A.S., Seneviratne, G. and Chandrasiri, K.P.N.K. (2014). Fungal-bacterial biofilms for sugarcane trash decomposition. Proceedings of the International Conclave on Sugar Crops, Sweeteners and Green Energy from Sugar Crops: Emerging Technologies, 15-17 February 2014, Indian Institute of Sugarcane Research, Lucknow, India.
- 20 Wijayawardhana, L.M.J.R., De Silva, A.L.C., and Witharama, W.R.G. (2014). Optimising Planting Schedules of Sugarcane for Saving Irrigation water in Sevanagala and Uda Walawe, Sri Lanka. In: A.P. Keerthipala (ed) Proceedings of the 5th Symposium on Plantation Crop Research "Towards a Green Plantation Economy". Sugarcane Research Institute, Uda Walawe, 70190, Sri Lanka, pp 105-110.
- 21 Wijesuriya, A., Ariyawansa, B.D.S.K. and Perera, A.L.T. (2014). Estimation of Heritability of Sugarcane (*Saccharum* spp. Hybrid) Yield Components through Analysis of Poly-Cross Families. Proceedings of International Conclave on Sugar Crops: Sweeteners and Green Energy from Sugar Crops: Emerging Technologies. February 15-17, 2014, held at Indian Institute of Sugarcane Research, Lucknow, India. p 107.

## **Awards**

- 1** Mr. H.A.S. Weerasinghe (Research Officer In-Charge) won the Award for the Best Research Paper (Sugar Sector - 2014) at the 5th Plantation Crop Research Symposium, Colombo, Sri Lanka Title: pH Buffering Capacities of Sugarcane-growing soils at Sevanagala, Sri Lanka (15th-17th Oct. 2014).
- 2** Mr. H.A.S. Weerasinghe (Research Officer In-Charge) won the first place (Certificate of Merit) as the best poster at the technical session II under the theme Agriculture, Mechanisation, Processing, Value addition, Energy and Socio-economic initiatives at the International Conclave on Sugar Crops and Sugar Fest 2014, 15 -17 Feb. 2014, Indian Institute of Sugarcane Research, Lucknow, India.
- 3** Mr. H.A.S. Weerasinghe (Research Officer In-Charge) was awarded an International Travel Grant by National Science Foundation, Sri Lanka (20.01.2014) to cover registration fee and airfare (Rs. 172,810.00) to participate at the International Conclave on Sugar Crops and Sugar Fest 2014, 15 -17 Feb. 2014, Indian Institute of Sugarcane Research, Lucknow, India.
- 4** Ms V.K.A.S.M Wanasinghe, Research Officer-In-Charge) won an award for the poster on the Effects of Intercropping Cowpea, Ground nut, Gingili and Sweet Melon on Termite Damage on Sugarcane in Sri Lanka at the IS-2014 International Conference 25-28 November 2014 in Nanning, P.R. China.



# ADMINISTRATION AND FINANCE DIVISION



## **Administration and Finance Division**

### **Staff**

|  |   |
|--|---|
| Dr A P Keerthipala BSc (Agriculture), MPhil, PhD | Director/Chief Executive Officer                    |
| Dr W R G Witharama BSc (Agriculture), MPhil, PhD | Deputy Director<br>(Research & Technology Transfer) |
| Mr D G Manamudali BA (Economics) sp., LICA       | Deputy Director (Administration & Finance)          |

### **Administration Section**

|                            |                             |
|----------------------------|-----------------------------|
| Dr C Eritawala PhD         | Administrative Officer      |
| Ms T A D M G Jayathilaka   | Senior Management Assistant |
| Ms J K Chandralatha        | Senior Management Assistant |
| Ms T M K Senadeera         | Management Assistant        |
| Ms M M I M K Manikkadawara | Management Assistant        |
| Mr G Somaweera             | Management Assistant        |
| Ms M A R Samarasekara      | Management Assistant        |
| Ms O U Subasinghe          | Management Assistant        |
| Mr W A Sameera Madhushanka | Management Assistant        |
| Mr Austin Perera           | Driver                      |
| Mr S L Peiris              | Driver                      |
| Mr H A U S Pamarathna      | Driver                      |
| Mr J P S P Karunathilaka   | Driver                      |
| Mr T P K Jayarathna        | Driver                      |
| Mr S Ekanayake             | Driver                      |
| Mr H N A Prasanna          | Driver                      |
| Mr H S A Susantha Kumara   | Driver                      |
| Mr G W M Prabhath Sanjeewa | Driver                      |
| Mr A M Wijayarathna        | Driver (from 05.11.2014)    |

### **Accounts Section**

|                             |  |
|-----------------------------|--|
| Ms D M J N Dissanayake BCom | Accountant (from 22.09.2014)           |
| Mr I B Kodagoda BCom        | Accounting Officer                     |
| Mr T M L S Thennakoon       | Book keeper                            |
| Ms A K Amarakoon            | Senior Management Assistant (Accounts) |
| Mr L S Dayananda            | Senior Management Assistant (Accounts) |
| Mr D M P Nickson            | Senior Management Assistant (Accounts) |
| Mr T Ranjith Peiris         | Management Assistant (Accounts)        |
| Ms T S Weerasinghe          | Management Assistant (Accounts)        |
| Ms G D N Anuruddhika        | Management Assistant (Accounts)        |
| Mr A G Udesh Srima De Silva | Management Assistant (Accounts)        |
| Mr B B Abeysekara           | Management Assistant (Accounts) (from  |

05.11.2014)

**Store**

Mr R G Niroshana

Store Keeper

**Internal Audit Unit**

Mr S P Y Muneendra ICA (intermediate) MAAT Internal Auditor

**Procurement Unit**

Mr H P R Kumara BBMgt

Procurement Officer

Mr G M S Nandadeva

Senior Management Assistant (Accounts)

Ms S Surangika Chaturani

Management Assistant (Accounts)

**Maintenance Unit**

Mr G S K Dahanayake BSc

Works Superintendent (01.10.2014)

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 Chandrawansa

Water Pump Operator

Mr K H Weeraratne

Water Pump Operator

**Summary of the Activities Carried out during the Year**

Thirty one vacancies were filled, and routine administrative, personnel management, maintenance activities and welfare measures of the staff were carried out. Preparation of budget and financial statements, verification of assets and provision of management information were also carried out.

**Review of the Financial Activities**

The total income of the institute during the period under review was Rs. 224.19 million as compared to Rs. 164.23 million in the year 2013. Thus, there was an increase in income of Rs. 59.96 million.

The net surplus was Rs. 6.3 million as against a deficit of Rs. 28.87 million in the previous year. The main cause for this surplus is receiving treasury grant instead of cess income from August 2014. The capital investment during the year was Rs. 13.62 million.



## **Staff Strengthening and Motivation**

### **Staff Recruitments**

|     |                          |                                 |            |
|-----|--------------------------|---------------------------------|------------|
| 01. | Mr.T.M.L.S.Thennakoon    | Book Keeper                     | 01.01.2014 |
| 02. | Ms.S.M.T.Maralanda       | Research Officer                | 01.01.2014 |
| 03. | Mr.W.G.M.Ruwanpura       | Research Officer                | 01.01.2014 |
| 04. | Mrs.R.A.Sudarshanie      | Research Officer                | 01.01.2014 |
| 05. | Mr.G.A.Amila Chathuranga | Research Officer                | 01.01.2014 |
| 06. | Ms.P.R.Inoka Subhashinie | Technical Officer               | 01.01.2014 |
| 07. | Mr.B.R.Kulasekara        | Research Officer                | 05.02.2014 |
| 08. | Mr.A.B.K.T.Dilhan        | Technical Officer               | 03.03.2014 |
| 09. | Ms.R.P.N.D.Kumari        | Technical Officer               | 03.03.2014 |
| 10. | Ms.D.M.J.N.Dissanayake   | Accountant                      | 22.09.2014 |
| 11. | Mr.B.B.Abeysekara        | Management Assistant (Accounts) | 01.10.2014 |
| 12. | Mr.G.S.K.Dahanayake      | Works Superintendent            | 01.10.2014 |
| 13. | Mr.P.R.B.Chandrasena     | Farm Superintendent             | 20.10.2014 |
| 14. | Mr.M.K.P.C.Gunawardene   | Development Officer             | 04.11.2014 |
| 15. | Mr.A.M.Wijayarathna      | Driver                          | 05.11.2014 |
| 16. | Mr.W.Nandisena           | Labour                          | 17.02.2014 |
| 17. | Mr.R.P.Dayananda         | Labour                          | 17.02.2014 |
| 18. | Mr.W.M.Namawardhana      | Labour                          | 17.02.2014 |
| 19. | Mr.W.M.Siripala          | Labour                          | 17.02.2014 |
| 20. | Mr.D.D.C.S.Kumara        | Labour                          | 17.02.2014 |
| 21. | Mr.W.Sumanarathna        | Labour                          | 17.02.2014 |
| 22. | Mr.W.Sirisena            | Labour                          | 17.02.2014 |
| 23. | Mr.P.R.Nimal             | Labour                          | 17.02.2014 |
| 24. | Mr.I.Pathmasiri          | Labour                          | 17.02.2014 |
| 25. | Mr.L.M.Premachandra      | Labour                          | 17.02.2014 |
| 26. | Mr.E.M.Rathnayake        | Labour                          | 17.02.2014 |
| 27. | Mr.A.V.Sumanadasa        | Labour                          | 17.02.2014 |
| 28. | Mr.M.H.Gamini            | Labour                          | 17.02.2014 |
| 29. | Mr.D.M.P.Kumara          | Labour                          | 17.02.2014 |
| 30. | Mr.W.Podimahaththaya     | Labour                          | 17.02.2014 |
| 31. | Mr.M.L.S.Jayantha        | Labour                          | 17.02.2014 |

### **Staff Turnover during the year 2014**

#### **Resignations**

|                            |                    |            |
|----------------------------|--------------------|------------|
| Mr.K.A.Ariyaratne          | FarmSuperintendent | 17.01.2014 |
| Mr.A.B.T.K.Dilhan          | Technical Officer  | 07.05.2014 |
| Ms.R.P.N.Dilrukshi Kuamari | Technical Officer  | 13.05.2014 |
| Ms.P.R.Inoka Subhashinie   | Technical Officer  | 29.09.2014 |
| Mr.D.Ekanayake             | Driver             | 03.10.2014 |

**Vacation of post**

|                       |                   |            |
|-----------------------|-------------------|------------|
| Mr.W.A.Upul Priyantha | Technical Officer | 03.11.2014 |
|-----------------------|-------------------|------------|

**Retirement**

|                           |   |            |
|---------------------------|---|------------|
| Mr.D.M.Siripala           | Accountant                              | 09.06.2014 |
| Mr.S.B.N.U.S.Wimalasuriya | Driver                                  | 31.08.2014 |
| Mr.D.M.T.Piyarathna       | Lab/Field Attendant<br>(Siyambalanduwa) | 26.09.2014 |

**Staff Training/Visits (Foreign)**

01. Dr.A.P.Keerthipala (Director), Dr.A.Wijesuriya (Principal Research Officer), Mr.K.H.D.Abeyrathna, Ms.A.N.W.S.Thushari and Mr.H.A.S.Weerasinghe (Research Officer) visited the Indian Institute of Sugarcane Research to make presentations on Sri Lankan Sugar industry and posters at the International Conclave on Sugar Crops and Sugar Fest 2014 on 15th to 17th February 2014.
02. Ms.S.M.T.A. Maralanda (Research Officer) attended the conference of Sugar & Ethanol Asia 2014 on 24th to 26th February 2014 in Thailand.
03. Mr.A.P.J.Mohotti (Technical Officer) attended the 6th International Exhibition and conference on Sugar/Ethanol/Distilleries/Co-Gen/Cane 2014 from 26.02.2014 to 01.03.2014 in India.
04. Mr.S.K.Cyril (Chairman) attended the International Sugar Conference from 24th May to 12th June 2014 in Jamaica/Cuba/UK.
05. Dr.A.P.Keerthipala (Director), Ms.V.K.A.S.M.Wanasinghe and Ms.A.N.W.S.Thushari attended the International Sugar Conference in China held from 25th November 2014 to 28th November 2014 to make presentations on Sri Lankan Sugar industry and research papers/posters.
06. Dr.A. Wijesuriya attended the Agricultural Research Management course at the National Academy for Agricultural Research Management in India from 21.12.2014 to 01.01.2015.

**Staff Training (Local)****Long-term**

01. Mr.A.L.C.De Silva (Senior Research Officer) commenced his postgraduate studies leading to PhD in Crop Science at the Postgraduate Institute of Agriculture (PGIA), Peradeniya, University of Peradeniya from 28th April 2014.
02. Mr.H.A.S.Weerasinghe (Research Officer) commenced his postgraduate studies leading to PhD in Soil Science at PGIA, University of Peradeniya from 1st

December 2014.

**Short-term**

01. Mr.G.S.Udawatte (Technical Officer) attended the certificate course in soil, plant, water and fertiliser analysis at PGIA, Peradeniya on 20th January 2014 to 24th January 2014.
02. Research Officers, Ms.A.N.W.S. Thuhari, Ms.K.M.G. Chanchala and Mr.W.H. Jayasinghe participated in a Workshop of DNA Barcoding at the Institute of Biotechnology and Department of Botany, University of Kelaniya on 6th February 2014.
03. Ms.B.D.S.K.Ariyawansha (Senior Research Officer) and Mr. K.A.D.Kodithuwakku (Research Officer) attended a short course on Multivariate Data Analysis at PGIA, University of Peradeniya from 24th to 26th February 2014.
04. Research Officers, Messrs. L.M.J.R.Wijayawardhana and H.A.S.Weerasinghe participated in a workshop on Haritha Lanka Programme on 25th March 2014.
05. Research Officers, Messrs L.M.J.R.Wijayawardhana and H.A.S. Weerasinghe participated in a workshop on greening the industries of the Haritha Lanka Programme at Laya Leisure at Kukuleganga from 24th to 25th April 2014.
06. Ms.K.M.G.Chanchala (Research Officer) attended a short course on Design and Analysis of experiments at PGIA, University of Peradeniya from 24th to 30th April 2014.
07. Research Officers, Messrs G.A.A.Chathuranga and W.G.H.Ruwanpura and Ms. S.M.T.A.Maralanda participated in a one-day workshop on target-oriented research proposal preparation in the discipline of post-harvest technology and human nutrition conducted by the Sri Lanka Council for Agricultural Research Policy (SLCARP) on 10th July 2014.
08. Mr.W.S.Madushanka (Management Assistant) participated in a workshop on Transport Management at the Skills Development Fund Ltd. on 15th July 2014.
09. Research Officers Mr. L.M.J.R. Wijayawardhana, Ms. A.N.W.S.Thushari, Mr. H.A.S.Weerasinghe, Ms.K.M.G. Chanchala, Mr. K.T. Ariyawansha, Ms. S.M.T.A.Maralanda, Mr. W.G.H.Ruwanpura and Mr. G.G.A.Chathuranga participated in a workshop on experimental designs conducted by Science and Technology Commission at PGIA, University of Peradeniya on 11th September 2014.
10. Mrs. B.D.S.K. Ariyawansha (Senior Research Officer) and Ms. K.M.G. Chanchala (Research Officer) attended a four-day short course on analysis of count and rank data, at PGIA, University of Peradeniya, from 23rd to 26th September 2014.

11. Mr.D.M.P.Nickshon (Management Assistant) participated in a training programme on Duties and Responsibilities of the Shroff/Cashier on 26th September 2014 at the Skills Development Fund Ltd.
12. Mr.D.P.W.Pottawela (Technology Transfer Officer) and Mr.K.A.D.Kodithuwakku (Research Officer) participated in a two-day workshop on Practical Aspects of Bid Evaluation on 3rd and 4th October 2014.
13. Ms. M.M.I.M.K. Menikkadawara (Management Assistant) participated in a training programme on Employees' Leave and Statutory Benefits held on 23rd October 2014 at the Skills Development Fund Ltd.
14. Ms.D.M.J.N. Dissanayake (Accountant) and Mr. T.M.L.S.Thennakoon (Book Keeper) participated in a workshop on Financial Reporting in compliance with the Sri Lanka Public Sector Accounting Standards on 28th October 2014 and 4th November 2014 at the Skills Development Fund Ltd.
15. Research Officers, Ms.S.M.T.Maralanda and Mr.B.R.Kulasekara participated in a workshop on "Safety in chemical microbiological laboratories" from 29th to 30th October 2014 at the Industrial Technology Institute.
16. Ms.T.S.Weerasinghe (Management Assistant) participated in a training programme on Office Management and Financial Regulations held on 11th and 12th November 2014 at the Skills Development Fund Ltd.
17. General Workers Mr.A.K.S.Rathnayake and Mr.K.A.V. Kumarasiri participated in a one-day training programme held on 28th November 2014 at the Skills Development Fund Ltd.
18. Ms.S.M.T.A.Maralanda (Research Officer) participated in a training programme on Food Analysis, Antioxidant Bioassays and current trends in food technology held from 9th to 12th of December 2014 at the Industrial Technology Institute.
19. Ms.B.D.S.K.Ariyawansa (Senior Research Officer) participated in IASSL International Statistics Conference 2014 organised by Applied Statistical Association of Sri Lanka a jointly with the Department of Bioinformatics and Biostatistics of University of Louisville held on 28th December 2014 in Colombo.

## **Report of the Audit and Management Committee 2014**

The Audit and Management Committee played its role in the year 2014 successfully.

Though, a minimum of four meetings have to be summoned within a calendar year, the committee met five occasions during the year 2014, according to the necessity. The matters in respect of progress of the research projects planned and activities of the Administration and Finance Division and the problems of the institute were discussed at the meetings.

The minutes and reports prepared based the decisions taken at the Audit and Management Committee meetings were submitted for further discussion at the Board of Governors' meetings to ensure carrying out the activities of the Administration and Finance Division smoothly. In addition, the audit quarries raised by the government auditors and the explanations given by the institute were discussed, and this made possible taking precautionary measures to avoid faults and deficiencies in the management of the institute. This helped to minimise the quarries raised by government auditors.

In addition, the Audit and Management Committee accomplished its entrusted task by providing necessary information to the Board of Governors of the institute about internal control systems and administration procedures to perform its activities according the government procedures and circulars issued from time to time.



S. P. Y. Muneendra  
Secretary/Convenor  
Audit and Management Committee  
Sugarcane Research Institute

17 February 2014

# Audited Financial Statement

## SUGARCANE RESEARCH INSTITUTE STATEMENT OF FINANCIAL POSITION AS AT 31<sup>ST</sup> DECEMBER 2014

| ASSETS  | NOTES | 2014<br>Rs.   | 2014<br>Rs.    | 2013<br>Rs.    | 2013<br>Rs.    |
|---|-------|---------------|----------------|----------------|----------------|
| <b>Non-current assets</b>                     |       |               |                |                |                |
| Property, plant and equipment                 | 1     | 59,909,036.19 |                | 67,285,376.19  |                |
| Investment                                    | 2     | 39,717,595.70 | 99,626,631.89  | 37,100,383.25  | 104,385,759.44 |
| <b>Current assets</b>                         |       |               |                |                |                |
| Consumables stock                             | 3     | 11,120,879.99 |                | 8,500,164.73   |                |
| Livestock                                     |       | 519,375.00    |                |                |                |
| Advance payment for Letters of Credit         |       | 22,623,343.00 |                |                |                |
| Work in progress                              |       | 5,597,552.00  |                | 250,000.00     |                |
| Trade and other receivables                   | 4     | 49,831,114.00 |                | 51,714,449.94  |                |
| Investment ( S / T )                          | 5     | 81,671,067.54 |                | 113,581,583.06 |                |
| Prepayments and other deposits                | 6     | 419,900.74    |                | 508,300.74     |                |
| Cash and cash equivalents                     | 7     | 38,785,235.75 | 210,568,468.02 | 32,239,360.50  | 206,793,858.97 |
| <b>Total assets</b>                           |       |               | 310,195,099.91 |                | 311,179,618.41 |
| <b>LIABILITIES</b>                            |       |               |                |                |                |
| <b>Current liabilities</b>                    |       |               |                |                |                |
| Payable                                       | 8     | 9,675,078.99  |                | 15,938,721.77  |                |
| Accrued expenses                              | 9     | 6,265,933.88  | 15,941,012.87  | 7,828,867.01   | 23,767,588.78  |
| <b>Non-current liabilities</b>                |       |               |                |                |                |
| Differed income                               |       | (0.50)        |                | 4.38           |                |
| Provisions for medical payments (Schedule 10) |       | 2,890,822.30  |                |                |                |
| Provision for gratuity payments               | 10    | 47,106,697.50 | 49,997,519.30  | 39,717,595.70  | 39,717,600.08  |
| <b>Total liabilities</b>                      |       |               | 65,938,532.17  |                | 63,485,188.86  |
| <b>Total Net Assets</b>                       |       |               | 244,256,567.74 |                | 247,694,429.55 |
| <b>Net Assets / Equity</b>                    |       |               |                |                |                |
| Accumulated fund                              | 11    |               | 145,285,139.00 | 145,285,139.00 |                |
| Reserves                                      | 12    |               | 78,031,428.74  | 102,409,290.55 |                |
| Revaluated reserves                           |       |               | 20,940,000.00  | 0.00           |                |
| <b>Total Net Assets/Equity</b>                |       |               | 244,256,567.74 |                | 247,694,429.55 |

The governing body of an entity is responsible for the preparation and presentation of its financial statements and which should also contain a statement of responsibility.

The accounting policies on pages..... to ... and Notes on pages .. to... from and integral part of these financial statements.

The Board of Governors is responsible for the preparation and presentation of these financial statements.

These financial statements were approved by the Board of Governors and signed on their behalf.

S.K.Cyrl  
Chairman

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

D.M.J.Nirosha Dissanayake  
Accountant

**SUGARCANE RESEARCH INSTITUTE**  
**STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER 2014**

|  | Notes | Year 2014<br>Rs.      | Year 2013<br>Rs.       |
|--|-------|-----------------------|------------------------|
| <b>Operating Revenue</b>                         |       |                       |                        |
| Cess on sugar imports (Additional Note 1.2)      |       | 86,242,649.50         | 132,827,452.50         |
| Treasury funds                                   |       |                       | 0.00                   |
| Capital  |       | 51,000,000.00         |                        |
| Recurrent  |       | 61,800,000.00         |                        |
| Treasury grants for the Ministry Projects        |       | 10,000,000.00         | 0.00                   |
| Cess on local sugar production                   |       | 5,577,765.00          | 5,468,000.00           |
| Other incomes                                    | 13    | 19,573,463.96         | 25,938,739.06          |
|  |       | <b>234,193,878.46</b> | <b>164,234,191.56</b>  |
| <b>Operating Expenses</b>                        |       |                       |                        |
| Personnel emoluments                             | 14    | 116,445,339.86        | 102,919,673.65         |
| Travelling & subsistence                         |       | 2,885,309.09          | 2,686,104.41           |
| Foreign visits                                   |       | 6,111,933.65          | 5,302,862.87           |
| Supplies and consumables                         | 15    | 3,268,660.71          | 2,524,385.56           |
| Maintenance                                      | 16    | 23,993,977.36         | 21,998,897.80          |
| Contractual services                             | 17    | 26,098,731.91         | 21,853,590.48          |
| Research and development                         | 18    | 26,809,503.53         | 9,317,341.19           |
| Depreciation and amortisation expenses           |       | 18,244,310.49         | 21,752,748.00          |
| Other operating expenses                         | 19    | 3,505,490.35          | 2,806,144.75           |
| Bad debts written off                            |       | -                     | 1,745,300.00           |
| Total operating expenses                         |       | <b>227,363,256.95</b> | <b>192,907,048.71</b>  |
| Surplus/(Deficit ) from operating activities     |       | 6,830,621.51          | (28,672,857.15)        |
| Finance cost                                     |       | 49,785.33             | 202,276.48             |
| Total non-operating revenue (expenses )          |       | <b>6,780,836.18</b>   | <b>202,276.48</b>      |
| Net surplus/(Deficit )before extraordinary items |       | 6,780,836.18          | (28,875,133.63)        |
| Net surplus/(Deficit ) for the period            |       | <b>6,780,836.18</b>   | <b>(28,875,133.63)</b> |


The governing body of an entity is responsible for the preparation and presentation of its financial statements and which should also contain a statement of responsibility.


The accounting policies on pages..... to ... and Notes on pages .. to... from and integral part of these financial statements.

The Board of Governors is responsible for the preparation and presentation of these financial statements.

These financial statements were approved by the Board of Governors and signed on their behalf.

  
.....  
S.K.Cyril  
Chairman

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

  
.....  
D.M.J.Nirosha Dissanayake  
Accountant



**SUGARCANE RESEARCH INSTITUTE**  
**CASH FLOW STATEMENT**  
**FOR THE YEAR ENDED 31 ST DECEMBER 2014**

|   | <b>2014</b>         | <b>2013</b>        |
|---|---------------------|--------------------|
| <b>Cash flows from operating activities</b>   | <b>(Rs)</b>         | <b>(Rs)</b>        |
| Surplus /( deficit ) from ordinary activities   | 6,780,836           | -28,875,134        |
| <b>Non cash movements</b>   |                     |                    |
| Depreciation  | 18,244,310          | 21,752,748         |
| Provision for gratuity  | 8,686,619           | 5,188,914          |
| Provision for Medicals  | 2,890,822           | 0                  |
| Prior year adjustment   | (10,218,698)        | 0                  |
| Write off revaluation reserve   | -                   | 0                  |
| Differed income   | -                   | 4                  |
| <b>Operating profit / ( Loss ) before working capital changes</b>                     | <b>26,383,890</b>   | <b>-1,933,467</b>  |
| Increase / Decrease in sundry debtors   | (17,845,973)        | -4,606,334         |
| Increase / Decrease in sundry stock   | (3,140,090)         | -3,401,988         |
| Increase / Decrease in Working progress   | (5,347,552)         | 0                  |
| Increase / Decrease in advance & prepayments  | 88,400              | 166,407            |
| Increase / Decrease in staff loan   | (2,894,039)         | 749,927            |
| Increase / Decrease in creditors & other payables                                     | (7,826,576)         | 8,489,397          |
| Payment fro gratuity  | (1,297,517)         | -2,571,702         |
| <b>Cash generated from operating activities before income tax</b>                     | <b>(38,263,347)</b> | <b>-1,174,293</b>  |
| <b>Cash flows from / ( used ) in investing activities</b>                             |                     |                    |
| Purchase of property , plant & equipment  | (10,867,971)        | -28,512,310        |
| Net cash flow from / ( used ) in investing activities                                 | <b>(10,867,971)</b> | <b>-28,512,310</b> |
| <b>Cash flows used in financing activities</b>  |                     |                    |
| Net cash flows used in financing activities   | -                   | <b>0</b>           |
| Net increase / Decrease in cash and cash equivalents                                  | (22,747,428)        | -31,620,070        |
| Cash and cash equivalents at the beginning of the year                                | 182,921,326         | 214,541,396        |
| Cash and cash equivalents at the end of the year                                      | <b>160,173,898</b>  | <b>182,921,326</b> |
| <b>Analysis of the balance cash &amp; cash equivalents shown in the balance sheet</b> |                     |                    |
| Bank balance  | 38,785,236          | 32,239,360         |
| Treasury bill deposit   | 81,171,067          | 113,081,583        |
| Fixed deposits  | 40,217,596          | 37,600,383         |
| <b>Total</b>  | <b>160,173,898</b>  | <b>182,921,326</b> |

**SUGARCANE RESEARCH INSTITUTE**  
**NOTES TO THE STATEMENT OF FINANCIAL POSITION AS AT 31<sup>ST</sup> DECEMBER 2014**

**1 Property, Plant and Equipment**

Please see schedule 01

|  | <b>2014</b> | <b>2013</b> |
|--|-------------|-------------|
|  | <b>Rs</b>   | <b>Rs</b>   |

**2 Investment ( L/T )**

Fixed deposit ( Gratuity Fund ) - N.S.B. 39,717,595.70 37,100,383.25

|  | <b>2014</b> | <b>2013</b> |
|--|-------------|-------------|
|  | <b>Rs</b>   | <b>Rs</b>   |

**3 Consumable Stock**

|  |                      |                     |
|--|----------------------|---------------------|
| Stationery                                 | 603,281.72           | 538,666.74          |
| Repair and maintenance of vehicles         | 1,517,125.73         | 1,353,917.70        |
| Repair and maintenance of buildings        | 5,308,603.66         | 2,785,766.78        |
| Repair and maintenance of office equipment | -                    | 160,780.88          |
| Repair and maintenance of machinery        | 883,950.50           | 294,205.00          |
| Fuel                                       | 436,493.20           | 169,450.00          |
| Staff welfare                              | 160,502.48           | -                   |
| Irrigation and land preparation            | -                    | 1,141,350.00        |
| Sugar sector development                   | -                    | 555,898.00          |
| Research materials                         |                      |                     |
| Chemicals                                  | 2,050,902.80         | 1,221,425.38        |
| Fertiliser                                 | -                    | 136,800.00          |
| Other research materials                   | 160,019.90           | -                   |
| Miscellaneous                              | -                    | 141,904.25          |
| <b>Total consumable stock</b>              | <b>11,120,879.99</b> | <b>8,500,164.73</b> |

|  | <b>2014</b> | <b>2013</b> |
|--|-------------|-------------|
|  | <b>Rs</b>   | <b>Rs</b>   |

**4 Trade and Other Receivables**

|   |  |                      |                      |
|---|--|----------------------|----------------------|
| Advances:                               | Local purchases  | 418,163.85           | 240,613.85           |
|   | Travelling   | 131,797.70           | 129,545.00           |
|   | Fuel   | 130,226.05           | 253,135.05           |
|   | Advance payments for suppliers and other institutes    | 7,504,512.46         | 2,551,586.36         |
|   | Research   | 563,056.01           | -                    |
|   | Sundry   | 237,947.42           | 217,087.42           |
| Interest receivables :                  | F.D. - N.S.B.  | 1,339,481.01         | 1,753,692.61         |
|   | Treasury bill - P.B.                                   | 2,095,634.44         | 2,095,634.44         |
| Staff loans :                           | Housing loan (Schedule 02)                             | 5,020,930.11         | 5,779,334.98         |
|   | Distress loan (Schedule 03)                            | 22,577,404.39        | 22,978,758.16        |
|   | Festival advance (Schedule 04)                         | 181,000.00           | 165,000.00           |
|   | Push cycle loan (Schedule 05)                          | 15,700.00            | 28,900.00            |
|   | Motor cycle loan / Car (Schedule 06)                   | 4,993,728.47         | 1,132,202.61         |
|   | Book loan (Schedule 07)                                | 203,500.00           | 8,000.00             |
|   | Computer loan  | -                    | 6,027.74             |
|   | Loan to the Ministry of Sugar Industry Development     | -                    | 512,751.98           |
| Other Loans :                           | Kantale Sugar Industries Ltd.( Additional Note 1.3 )   | 1,000,000.00         | 1,000,000.00         |
| Debtors :                               | Kantale Sugar Industries Ltd.( Additional Note 1.3 )   | 385,333.00           | 385,333.00           |
| Sundry debtors :                        | Janatha Fertiliser                                     | 250.00               | 250.00               |
|   | Inland Revenue Department                              | 9,222.74             | 9,222.74             |
|   | Lanka Sugar Co.(Pvt) Ltd. - Pelwatte                   | -                    | 6,569,700.00         |
|   | - Sevanagala   | -                    | 2,345,334.00         |
|   | Lanka Sugar Co.(Pvt) Ltd- Sevanagala Sale of Sugarcane | 2,443,500.00         | 2,076,140.00         |
|   | Gal Oya Plantations (Pvt) Ltd - local cess             | -                    | 1,213,200.00         |
|   | Funds from Pakistan                                    | 372,024.50           | 263,000.00           |
|   | Lanka Sugar Company (Pvt) Ltd                          | 172,833.73           | -                    |
|   | Nanda Tractor Motors (Pvt)Ltd                          | 34,868.12            | -                    |
| <b>Total trade and other receivable</b> |  | <b>49,831,114.00</b> | <b>51,714,449.94</b> |

| <b>5 Investment ( S/T ) :</b> |                                     | <b>2014</b>          | <b>2013</b>           |
|-------------------------------|-------------------------------------|----------------------|-----------------------|
|                               |                                     | <b>Rs</b>            | <b>Rs</b>             |
|                               | Treasury bill - P.B                 | 81,171,067.54        | 113,081,583.18        |
|                               | Fixed deposit (Scholarship)- N.S.B. | 500,000.00           | 500,000.00            |
|                               | Treasury bill - B.O.C               | 0                    | (0.12)                |
| <b>Total Investment (S/T)</b> |                                     | <b>81,671,067.54</b> | <b>113,581,583.06</b> |

| <b>6 Prepayments and Other Deposits</b>    |  | <b>2014</b>       | <b>2013</b>       |
|--|--|-------------------|-------------------|
|  |  | <b>Rs</b>         | <b>Rs</b>         |
| Prepayments -                              | Repair & maintenance of office equipment | 6,160.00          | 6,160.00          |
|  | Withholding Tax                          | (26,234.26)       | (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.T.N Net Work                           | 2,500.00          | 2,500.00          |
|  | Rubber Research Institute                | -                 | 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          |
| <b>Total prepayment and other deposits</b> |  | <b>419,900.74</b> | <b>508,300.74</b> |

| <b>7 Cash and Cash Equivalents</b>     |  | <b>2014</b>          | <b>2013</b>          |
|--|--|----------------------|----------------------|
|  |  | <b>Rs</b>            | <b>Rs</b>            |
| People's Bank                          | - Uda Walawe A/C No. 295 1001 - 0000000 - 5          | 4,104,591.73         | 1,322,199.07         |
| People's Bank                          | - Ratmalana A/C No. 080 - 1 -001-5-1334359           | 3,955,266.90         | 3,438,208.65         |
| Bank of Ceylon                         | - Ratmalana A/C No. 272977 - 5                       | 21,885,990.28        | 221,598.70           |
| People's Bank                          | - Uda Walawe A/C No.295-100-8-0000186                | 277,236.78           | 1,417,387.47         |
| Bank Savings                           | - People's Bank-Ratmalana-A/C No.080-2-001-3-1334359 | 428,121.98           | 1,354,023.29         |
|  | - People's Bank-Udawalawe-A/C No.295-2-001-7-0020749 | 8,107,958.08         | 24,454,936.32        |
| Petty cash-Siyambalanduwa              |  |                      | 5,000.00             |
| Petty cash-Hantane                     |  | 3,865.00             | -                    |
| Petty cash -Deniyaya                   |  |                      | 2,000.00             |
| Petty cash -Buttala                    |  | 5,000.00             | 5,000.00             |
| Petty cash- Hingurana                  |  | 5,000.00             | 5,000.00             |
| Petty cash-Colombo                     |  | 12,205.00            | 14,007.00            |
| <b>Total cash and cash equivalents</b> |  | <b>38,785,235.75</b> | <b>32,239,360.50</b> |

| <b>8 Payables</b>                |  | <b>2014</b>  | <b>2013</b> |
|----------------------------------|--|--------------|-------------|
|                                  |  | <b>Rs</b>    | <b>Rs</b>   |
| A.S.Jayalath                     |  | 600.00       | 600.00      |
| Analytical Instruments (pvt)Ltd. |  | 2,011,496.90 | 707,452.80  |
| 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        |  | 235,750.00   | 181,250.00  |
| Retention                        |  | 150,917.68   | 106,684.80  |
| Sarath Motor Engineering         |  | 102,655.00   | 144,910.00  |
| U.G. Stores                      |  | 204,637.00   | 130,787.50  |
| United Motors Lanka              |  | 71,784.40    | 32.40       |
| 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    | 95,620.00   |
| Sumanagiri Trade Centre          |  | 470.00       | 470.00      |
| Varuna Motors                    |  | 204,725.00   | 181,250.00  |

|                                     |            |              |
|-------------------------------------|------------|--------------|
| Wickrama Hard Ware                  | 117,408.00 | 1,048,750.00 |
| Lab Masters (Pvt) Ltd.              | 200,936.72 | (0.19)       |
| Waruna Suppliers                    | 20,960.00  | -            |
| Libra Agency                        | 336,896.79 | 456,568.00   |
| Leader Stationery                   | -          | 11,601.20    |
| Popular Stationery                  | 4,900.00   | 4,900.00     |
| Sri Lanka State Trading             | 124,295.00 | 463,200.00   |
| Royal Stationeries                  | 20,000.00  | 51,645.00    |
| Upali Auto Electricals              | 55,000.00  | 55,000.00    |
| Mount House                         | -          | 1,600.00     |
| A.C. Paul & Co Ltd                  | 322,963.00 | 368,795.00   |
| Nippon Paint Lanka (Pvt) Ltd        | -          | 459,879.83   |
| Vino Enterprises                    | 156,688.00 | 14,884.80    |
| Power Steel                         | -          | 20,608.00    |
| Synergy Tech                        | -          | 3,840.00     |
| United Stationery                   | 66,600.00  | 12,500.00    |
| Ceylon Business Appliances          | -          | 20,944.00    |
| Amila Associates                    | 77,280.00  | 55,216.00    |
| Avon Pharmo Chem                    | 111,294.40 | 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         | 15,746.88  | 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                  | 695,553.20 | 624,556.82   |
| Hemsons International               | 86,184.00  | 760,872.00   |
| Organic Trading (Pvt) Ltd           | 32,760.00  | 16,800.00    |
| Waruna Suppliers                    | -          | 20,960.00    |
| Lakbima News Papers (Pvt)Ltd        | 52,012.80  | -            |
|                                     |            |              |
| Singer Sri Lanka PLC                | 199,080.00 | -            |
| Titan Steels                        | 65,688.00  | -            |
| Cambridge Traders                   | 48,655.00  | -            |
| Pathirana Hardware                  | 8,900.00   | -            |
| Agva Metale                         | 585,182.00 | -            |
| Office Network (Pvt) Ltd            | 74,592.00  | -            |
| Metropolitan Office Network(Pvt)Ltd | 78,400.00  | -            |
| New Wasantha Motors                 | 170,125.00 | -            |
| N S Safety Equipment                | 83,605.00  | -            |
| Mahanama Brothers                   | 14,496.00  | -            |
| Damro Industries (Pvt) Ltd          | 255,750.00 | -            |
| Monara Steel Center                 | 174,635.55 | -            |
| Logiventures (Pvt) Ltd              | 281,680.00 | -            |
| Science Land Information Technology | 100,000.00 | -            |
| Sumbeam Trading                     | 10,640.00  | -            |
| Thilina Motors                      | 19,995.00  | -            |
| Kumara Motor Dealers                | 255,250.00 | -            |
| Kottawaththa Tyre                   | 4,500.00   | -            |
| The Tyre Team                       | 241,252.18 | -            |
| Smaart Stationery                   | 42,129.00  | -            |
| Rainbow Stationery                  | 34,538.00  | -            |

|                               |              |               |
|-------------------------------|--------------|---------------|
| Balawinna Concrete Yard       | 22,400.00    | -             |
| Technical Suppliers           | 643,250.00   | -             |
| Sigma Cemical (Pvt)Ltd        | 91,840.00    | -             |
| Auditor General Department    | 250,979.00   | -             |
| Ceyco Metal Merchant(Pvt) Ltd | 307,530.00   | -             |
| Sarathchandra Home Center     | 28,225.00    | -             |
| Total payables                | 9,675,078.99 | 15,938,721.77 |

|  | 2014                | 2013                |
|--|---------------------|---------------------|
|  | Rs                  | Rs                  |
| <b>9 Accrued Expenses</b>                  |                     |                     |
| Electricity                                | 549,133.04          | 352,232.01          |
| Fuel                                       | 329,142.50          | 549,363.32          |
| Overtime                                   | 998,113.27          | 708,973.76          |
| Postage                                    | 15,884.00           | 18,115.00           |
| Repair & maintenance of vehicles           | 11,670.00           | 8,245.00            |
| Resource personnel                         | 106,806.15          | 29,786.50           |
| Rent                                       | 24,000.00           | -                   |
| Research meterials                         | 9,711.25            | 391.65              |
| Stationery                                 | -                   | 1,500.00            |
| Sugar sector development                   | 443,963.62          | 64,940.00           |
| Telephone                                  | 170,567.45          | 86,782.52           |
| Travelling and subsistance                 | 95,811.50           | 38,919.50           |
| Water                                      | 1,994.64            | 5,762.10            |
| News papers/ periodicals                   | 2,610.00            | 1,750.00            |
| Wages                                      | 983,621.35          | 1,341,949.16        |
| Welfare                                    | 164.00              | 954.00              |
| Workmen compensation                       | -                   | 62,749.50           |
| Translation                                | 31,560.00           | -                   |
| Scholarships                               | -                   | 11,250.00           |
| Harvesting and land preparation            | 27,000.00           | 13,000.00           |
| Consultency                                | -                   | 4,000.00            |
| Staff medical                              | 6,995.75            | 76,879.90           |
| Licence and insurance                      | -                   | 121,592.80          |
| PAYE Tax                                   | 9,768.54            | 31,096.91           |
| Repair and maintenance of office equipment | 42,000.00           | -                   |
| Repair and maintenance of buildings        | 140,800.00          | -                   |
| News paper notification                    | 49,140.00           | -                   |
| Symposium                                  | 1,500.00            | -                   |
| Gratuity                                   | 49,079.29           | -                   |
| Land and land development                  | 150,000.00          | -                   |
| Employees' Provident Fund                  | 1,786,008.23        | 1,470,101.38        |
| Employees' Trust Fund                      | 214,320.99          | 177,822.16          |
| Provisions for staff medical payments      | -                   | 2,609,866.53        |
| Salary and wage deductions                 | 14,543.31           | 25,343.31           |
| Others                                     | 25.00               | 15,500.00           |
| <b>Total accrued expenses</b>              | <b>6,265,933.88</b> | <b>7,828,867.01</b> |

#### 10 Provisions for Gratuity Payments

Please see the shedule 11

|   | 2014                  | 2013                  |
|---|-----------------------|-----------------------|
|   | Rs                    | Rs                    |
| <b>11 Accumulated Funds</b>             |                       |                       |
| 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            |
| <b>Total accumulated fund</b>           | <b>145,285,139.00</b> | <b>145,285,139.00</b> |

**SUGARCANE RESEARCH INSTITUTE**  
**STATEMENT OF CHANGES IN NET ASSETS FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER 2014**

| <b>Description</b>                 | <b>Accumulated<br/>Fund<br/>Rs.</b> | <b>Translation<br/>Reserve<br/>Rs.</b> | <b>Total<br/>Rs.</b>  |
|------------------------------------|-------------------------------------|--|-----------------------|
| Balance as at 31 December 2013     | 145,285,139.00                      | 81,469,290.55                          | 226,754,429.55        |
| Revaluation Reserve                | -                                   | 20,940,000.00                          | 20,940,000.00         |
| Prior-year adjustment (Note 20)    | -                                   | (10,218,697.99)                        | (10,218,697.99)       |
| Surplus/( deficit ) for the period | -                                   | 6,780,836.18                           | 6,780,836.18          |
| Balance as at 31st December 2014   | <b>145,285,139.00</b>               | <b>98,971,428.74</b>                   | <b>244,256,567.74</b> |

**SUGARCANE RESEARCH INSTITUTE**  
**NOTES TO THE STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER 2014**

| <b>13 Other Incomes</b>           | <b>2014</b>          | <b>2013</b>          |
|-----------------------------------|----------------------|----------------------|
|                                   | <b>Rs.</b>           | <b>Rs.</b>           |
| Interest Income on staff loans    | 1,308,767.21         | 1,220,557.38         |
| Interest Income on treasury bills | 5,815,850.84         | 15,318,330.29        |
| Interest Income on fixed deposits | 2,923,972.78         | 3,590,321.89         |
| Interest on savings accounts      | 748,120.46           | 1,535,948.98         |
| Sale of seedcane/factory cane     | 65,855.00            | 1,851,145.00         |
| Foreign funds                     | -                    | 263,000.00           |
| Symposium                         | 4,912,500.00         | 0.00                 |
| Sundry income                     | 3,798,397.67         | 2,159,435.52         |
| <b>Total other income</b>         | <b>19,573,463.96</b> | <b>25,938,739.06</b> |

| <b>14 Personnel Emoluments</b>            | <b>2014</b>           | <b>2013</b>           |
|---|-----------------------|-----------------------|
|   | <b>Rs.</b>            | <b>Rs.</b>            |
| Salaries and allowances                   | 68,372,797.92         | 56,737,547.96         |
| Contribution to Employees' Provident Fund | 11,854,958.08         | 10,106,385.76         |
| Contribution to Employees' Trust Fund     | 2,373,443.43          | 1,998,492.65          |
| Overtime                                  | 9,517,213.33          | 9,016,579.61          |
| Wages                                     | 13,655,541.94         | 16,017,546.47         |
| Staff medical                             | 10,023,744.91         | 8,800,184.70          |
| Resource personnel                        | 647,640.25            | 242,936.50            |
| <b>Total personnel emoluments</b>         | <b>116,445,339.86</b> | <b>102,919,673.65</b> |

| <b>15 Supplies and Consumables</b>          | <b>2014</b>         | <b>2013</b>         |
|---|---------------------|---------------------|
|   | <b>Rs.</b>          | <b>Rs.</b>          |
| Printing and stationery                     | 2,542,635.62        | 2,082,443.66        |
| News papers and periodicals                 | 88,662.00           | 82,162.00           |
| Food and Lodging                            | 535,588.59          | 19,348.00           |
| Spares of farm implements ,tractors & pumps | 59,200.00           | 277,502.40          |
| Translation                                 | 42,574.50           | 62,929.50           |
| <b>Total supplies and consumable</b>        | <b>3,268,660.71</b> | <b>2,524,385.56</b> |

| <b>16 Maintenance</b>                               | <b>2014</b>          | <b>2013</b>          |
|---|----------------------|----------------------|
|   | <b>Rs.</b>           | <b>Rs.</b>           |
| Licence, insurance and fitness certificates         | 1,869,890.42         | 450,707.32           |
| Repair and maintenance of vehicles                  | 5,764,612.62         | 5,706,627.44         |
| Repair and maintenance of buildings                 | 5,714,042.71         | 4,632,343.06         |
| Repair and maintenance of office equipment          | 1,094,256.01         | 547,802.74           |
| Repair and maintenance of machinery & lab equipment | 400,347.21           | 1,856,648.48         |
| Fuel and lubricants                                 | 9,131,128.39         | 8,790,128.76         |
| Web maintainance                                    | 19,700.00            | 14,640.00            |
| <b>Total maintenance</b>                            | <b>23,993,977.36</b> | <b>21,998,897.80</b> |



|                                       | 2014                 | 2013                 |
|---------------------------------------|----------------------|----------------------|
|                                       | Rs.                  | Rs                   |
| <b>17 Contractual Services</b>        |                      |                      |
| News paper notification               | 483,901.60           | 568,637.60           |
| Postage                               | 139,828.00           | 132,985.00           |
| Rent rates and taxes                  | 1,119,058.83         | 914,174.27           |
| Telephone, faxes & Internet           | 1,160,417.66         | 973,114.62           |
| Legal charges                         | 177,610.00           | 80,331.00            |
| Audit fees                            | 295,979.00           | 282,249.00           |
| Electricity                           | 5,604,414.23         | 5,372,398.75         |
| Water                                 | 47,846.37            | 50,125.33            |
| Security charges                      | 8,237,401.05         | 7,943,740.00         |
| Gratuity                              | 8,686,618.59         | 5,188,914.12         |
| Workmen compensation                  | -                    | 130,369.62           |
| PAYE Tax                              | 95,920.58            | 58,741.17            |
| Staff recruitment expenses            | 49,736.00            | 139,310.00           |
| Exhibition expenses                   | -                    | 18,500.00            |
| <b>Total contractual services</b>     | <b>26,098,731.91</b> | <b>21,853,590.48</b> |
|                                       |                      |                      |
|                                       | 2014                 | 2013                 |
|                                       | Rs.                  | Rs                   |
| <b>18 Research and Development</b>    |                      |                      |
| Research materials                    | 8,027,590.74         | 5,191,045.81         |
| Media, publicity and journals         | 93,676.80            | 54,320.00            |
| Consultancy fees                      | 20,000.00            | 87,056.56            |
| Chemicals                             | 346,307.16           | 632,361.29           |
| Fertiliser                            | 141,400.00           | 148,100.00           |
| Harvesting and land preparation       | 4,263,359.60         | 507,572.00           |
| Sugar sector development              | 6,163,182.23         | 1,599,625.54         |
| Symposium                             | 7,403,987.00         | 125,240.00           |
| Infrastructure development activities | -                    | 77,680.00            |
| Reward of scientists                  | 350,000.00           | -                    |
| Research review expenses              | -                    | 545,044.98           |
| <b>Total research and development</b> | <b>26,809,503.53</b> | <b>8,968,046.18</b>  |
|                                       |                      |                      |
|                                       | 2014                 | 2013                 |
|                                       | Rs.                  | Rs                   |
| <b>19 Other Operating Expenses</b>    |                      |                      |
| Entertainment                         | 695,352.28           | 462,624.64           |
| Staff welfare                         | 156,808.73           | 157,980.40           |
| Membership fee                        | 6,348.60             | 10,500.00            |
| Scholarship                           | 144,000.00           | 162,500.00           |
| Board of Governor's payments          | 931,227.83           | 805,200.00           |
| Chairman's remuneration               | 373,188.00           | 460,124.63           |
| Payment to other members              | 307,892.50           | 59,133.00            |
| Audit and Management meeting expenses | 347,455.25           | 688,082.08           |
| Miscellaneous                         | 543,217.16           | 349,295.01           |
| Staff training                        | 3,505,490.35         | 3,155,439.76         |

## 20 Prior-year adjustment

In previous years, the cess on local sugar production was calculated on accrued basis, but it should have been on cash basis.

Due to changes made to the accounting policy, the prior-year adjustment has been made accordingly. The adjusted amounts of cess are as follows:

|                                |                             |
|--------------------------------|-----------------------------|
| Lanka Sugar Company (Pvt) Ltd. | <b>Rs.</b>                  |
| Pelwatte                       | 6,569,700.00                |
| Sevanagala                     | 2,345,334.00                |
| Gal Oya Plantations (Pvt) Ltd. | 1,213,200.00                |
|                                | <b><u>10,128,234.00</u></b> |

The balance taken to the reserves in the previous year was also incorrect.

The amount Rs 90463.99 has been corrected in the year 2014.

Total prior-year corrected value is Rs10,218,697.99.

### Additional Notes

- 1.1 Cess on local sugar production has been added to 2014 final accounts on cash basis.

The receivable amounts from the local sugar production as at 31/12/2014 are as follows:

|   | <b>Rs.</b>          |                     |                     |
|---|---------------------|---------------------|---------------------|
| <b>Description</b>                              | <b>Pelwatte</b>     | <b>Sevanagala</b>   | <b>Gal Oya</b>      |
| balance as at 1/1/14                            | 6,569,700.00        | 2,345,334.00        | 1,213,200.00        |
| Amount to be received on the production in 2014 | 1,764,590.00        | 1,451,320.00        | 389,947.00          |
|   | <b>8,334,290.00</b> | <b>3,796,654.00</b> | <b>1,603,147.00</b> |
| Cash received in 2014                           | 3,260,055.00        | 1,985,080.00        | 332,630.00          |
| Balance as at 31/12/14                          | <b>5,074,235.00</b> | <b>1,811,574.00</b> | <b>1,270,517.00</b> |

Production details were requested from respective companies to calculate cess on local sugar production for the year 2014 and full details were not received.

(The receivable amounts were calculated based on the production details received)

- 1.2 Cess on sugar imports has been collected from January to July 2014.
- 1.3 The receipt of the loan to Kantale sugar industries Ltd. Rs 1,000,000/= and the interest there on is doubtful.
- 1.4 Service of Mr. Lalith Wirthamulla has been terminated, and he has filed a case in labour tribunal against the institute.
- 1.5 Mr. S.D.N.U.S. Wimalasooriya has been sent on retirement, and he has filed a case in Labour tribunal against the institute.

## Schedule : 1

## Property, Plant &amp; Equipment

| Discription                    | Cost (Rs.)                  |                      | Depreciation (Rs.)          |                      | N.D.V * (Rs.)<br>31.12.2014 |
|--------------------------------|-----------------------------|----------------------|-----------------------------|----------------------|-----------------------------|
|                                | Balance as at<br>01.01.2014 | Addition             | Balance as at<br>31.12.2014 | Current year         | Balance as at<br>31.12.2014 |
| Agricultural equipment         | 15,177,334.00               | 1,024,000.25         | 16,201,334.25               | 178,741.00           | 10,155,779.00               |
| Bicycle                        | 134,190.00                  | -                    | 134,190.00                  | -                    | 134,190.00                  |
| Building                       | 62,152,021.00               | -                    | 62,152,021.00               | 2,091,863.00         | 47,288,004.00               |
| Crockery and cutlery           | 997,397.00                  | 381,694.60           | 1,379,091.60                | 15,647.33            | 844,794.33                  |
| Extension and traing equipment | 4,493,180.00                | 83,000.00            | 4,576,180.00                | 50,176.50            | 4,479,016.50                |
| Field equipment                | 5,933,839.00                | 1,073,614.76         | 7,007,453.66                | 427,641.11           | 4,218,324.11                |
| Furniture and fittings         | 7,600,881.19                | -                    | 7,600,881.19                | 165,922.00           | 5,898,316.00                |
| Laboratory equipment           | 71,966,452.00               | 2,918,372.41         | 74,884,824.41               | 1,957,280.12         | 68,569,870.12               |
| Land and land development      | 10,497,220.00               | 864,000.07           | 11,361,220.07               | 327,039.00           | 9,611,763.00                |
| Library books                  | 2,919,490.00                | 2,000.00             | 2,921,488.66                | 200.00               | 2,792,868.00                |
| Motor vehicles                 | 77,511,152.00               | -                    | 77,511,152.43               | 11,564,549.36        | 61,806,507.34               |
| Office equipment               | 23,295,283.00               | 2,000,802.38         | 25,296,085.38               | 1,109,419.89         | 19,943,327.89               |
| Telecommunication facilities   | 1,696,857.00                | -                    | 1,696,857.22                | 11,151.00            | 1,622,113.00                |
| Workshop equipment             | 19,809,658.00               | 2,520,486.04         | 22,330,144.04               | 344,680.20           | 17,779,015.20               |
| <b>Total</b>                   | <b>304,184,954.19</b>       | <b>10,867,970.51</b> | <b>315,052,923.91</b>       | <b>18,244,310.51</b> | <b>255,143,888.49</b>       |
|                                |                             |                      |                             |                      | <b>59,909,035.42</b>        |



2015 නොවැම්බර් 09 දින

උක් පර්යේෂණ ආයතනය.

උක් පර්යේෂණ ආයතනයේ 2014 දෙසැම්බර් 31 දිනෙන් අවසන් වර්ෂය සඳහා වූ මූල්‍ය ප්‍රකාශන පිළිබඳව 1971 අංක 38 දරන මුදල් පනතේ 14(2)(සී) වගන්තිය ප්‍රකාර විගණකාධිපති වාර්තාව

මාගේ සමාංක හා 2015 ජූලි 30 දිනැති ලිපියට යොමුවේ.

02. ඉහත සඳහන් ලිපිය සමඟ එවන ලද මාගේ වාර්තාවේ ඉංග්‍රීසි අනුවාදය මේ සමඟ එවා ඇත.

  
 ඩබ්ලිව්.පී.සී. වික්‍රමරත්න

විගණකාධිපති (වැඩබලන)

පිටපත් :- 01. ලේකම් - වැවිලි කර්මාන්ත අමාත්‍යාංශය

02. ලේකම් - මුදල් අමාත්‍යාංශය



## විගණකාධිපති දෙපාර්තමේන්තුව

கணக்காய்வாளர் தலைமை அபிவிதி திணைக்களம்

**AUDITOR GENERAL'S DEPARTMENT**



මගේ අංකය  
எனது இல.  
My No.

LP/K/SRI/1/4/03

ඔබේ අංකය  
உமது இல.  
Your No.

දිනය  
திகதி  
Date

30 July 2015

The Chairman

Sugarcane Research Institute

### Report of the Auditor General on the Financial Statements of the Sugarcane Research Institute for the year ended 31 December 2014 in terms of Section 14(2) (c) of the Finance Act, No.38 of 1971

The audit of financial statements of the Sugarcane Research Institute for the year ended 31 December 2014 comprising the statement of financial position as at 31 December 2014 and the statement of financial performance, statement of changes in net assets 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 Sugarcane 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 will be issued to the Chairman of the Institute in due course.

#### 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 Sugarcane Research Institute as at 31 December 2014 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) Sri Lanka Public Sector Accounting Standard 01**

- (i) Provisions for Gratuity had not been classified as Current and Non-current Liabilities in the statement of financial position.
- (ii) Instead of being accounted the capital grants amounting to Rs.51,000,000 received from the Treasury as a grant, it had been accounted for as the income of the year and no action had been taken to identify the amortization relating to the assets purchased utilizing those grants and brought to account.

##### **(b) Sri Lanka Public Sector Accounting Standard 02**

A sum of Rs.2,617,212 invested in fixed deposits and money received from maturity of Treasury Bills amounting to Rs.31,910,516 had been indicated under cash and cash equivalents without being identified as investment activities.





### 2.2.2 Accounting Deficiencies

Due to the computation errors receivable from the interest on Treasury Bills and the interest on fixed deposits as at the end of the year had been overstated by Rs.1,232,585 and understated by Rs.588,883 in the accounts respectively.

### 2.2.3 Unexplained Differences

The Revaluation Reserve amounting to Rs.20,940,000 shown in the financial statements had been shown under the Translation Reserve in the year under review without being separately identified.

### 2.3 Non –compliance with Laws, Rules Regulations and Management Decisions

Non-compliances with the following laws, rules and regulations were observed.

| Reference to Laws, Rules Regulations etc.                               | Non – compliance   |
|---|--|
| Financial Regulations of the Democratic Socialist Republic of Sri Lanka |  |
| (i) Financial Regulation 1646   | Daily running charts and monthly summary reports relating to motor vehicles had not been presented to the Auditor General. |
| (ii) Financial Regulation 757   | The annual boards of survey had not been carried out and the report had not been presented to the Auditor General.         |

### 2.4 Accounts Receivable and Payable

The following observations are made.

- (a) Even though a sum of Rs.1,385,333 recoverable from a Sugar Company had remained recoverable for over a period of 04 years, it had not been included to the debtors age analysis. Except those debtors, a sum of Rs.2,076,140 for over a period of 03 years and a sum of Rs.381,247 for over a period of 01 year respectively was recoverable from the remaining debtors. Adequate action had not been taken to recover those loan amounts.



- (b) Out of the balances of creditors, a sum of Rs.7,895 for over a period of 03 years and a sum of Rs.1,092,469 for over a period of 01 year existed without being settled.

### 3. Financial Review

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#### 3.1 Financial Results

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According to the financial statements presented, the financial result of the Institute for the year under review had been a surplus of Rs.6,780,836 as against the deficit of Rs.28,875,134 for the preceding year. As compared with the increase in the operating expenses by Rs.34,456,208 the receipt of Treasury Grants amounting to Rs.112,800,000 and the receipt of Rs.10,000,000 from the Line Ministry for projects had mainly attributed to the improvement in the financial result by Rs.35,655,970 for the year under review as compared with the preceding year.

#### 3.2 Analytical Financial Review

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Expenditure on supplies and consumable goods, research and development had increased by 29 per cent and 188 per cent respectively as compared with the preceding year.

#### 3.3 Legal Actions instituted against the Institute

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Cases had been filed in the Courts against the Institute by two employees of the Institute who had been dismissed and retired from the service.



#### 4. Operating Review

##### 4.1 Performance

Even though provisions amounting to Rs.38,800,000 had been made in the year under review for 06 projects for infrastructure facilities and development activities, 02 projects amounting to Rs.35,400,000 had not been implemented during the year.

##### 4.2 Management Inefficiencies

The following observations are made.

- (a) Even though the Institute had included 02 research projects in the Action Plan for introduction of at least two new varieties of sugarcane annually, it had failed to introduce any variety of sugarcane whatsoever in the year 2013 and in the year under review. Provisions amounting to Rs. 25.69 million and Rs. 35.6 million respectively had been made for those projects in the Action Plan. The expenditure incurred for the research activities of introducing varieties of sugarcane in the year 2013 had not been brought to account so as to enable to identify them separately and a sum of Rs.24.84 million had been spent for the research activities in the year under review.
- (b) Provisions amounting to Rs.1.43 million and Rs.0.38 million had been made respectively in the Action Plan for invention of an Applicator used for manuring under the Programme No.MT/01/14 and introduction of a Mini Harvesting Machine for harvesting local sugarcane under the Programme No.MT/03/14 by the Mechanization Technology Division, no action whatsoever had been taken in the year under review in that connection.
- (c) According to the orders made, 10 cents of Cess should be charged per every kilogram of sugar manufactured by the local sugar manufacturers. As such, a Cess amounting to Rs.3,678,955 was receivable for the year under review according to the computation made in audit, based on the information received relating to several months in respect of quantities manufactured in three local sugar manufacturing institutions. However, the Research Institute had not taken action to compute the Cess by obtaining information in respect of sugar manufactured by those institutions.



- (d) Even though 25 cents Cess should be charged per every kilogram of sugar from the importers of sugar, a Cess amounting to Rs.628,380 receivable for 2,513,520 kg of sugar imported by 08 institutions had not been recovered.

#### 4.3 Transactions of Contentious Nature

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Four motor vehicles owned by the Institute had been sold for Rs.3,050,000 on 20 November 2014 by entering into an agreement with a State Company and according to the agreement, it had been agreed to transfer the ownership of the motor vehicles after obtaining a sum of Rs.1 million and to recover the remaining amount of Rs.2,050,000 within a year. Even though all the vehicles had been handed over to the Company after obtaining a sum of Rs.100,000 on 14 November 2014 contrary to the agreement, out of them only 03 motor vehicles had been taken back.

#### 4.4 Personnel Administration

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The approved cadre and the actual cadre of the Institute amounted to 193 and 173 respectively. Vacancies existed in 07, 01 and 09 posts in the senior, tertiary and secondary levels required for operating activities respectively and 03 at primary level posts.

### 5. Systems and Controls

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Deficiencies in systems and controls observed during the course of audit were brought to the notice 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) Utilization of Motor Vehicles

W.P.C.Wickramaratne  
Acting Auditor General

## Financial Highlights from 2010 to 2014

### Income

| Item                              | Rs Million |        |        |        |        |
|-----------------------------------|------------|--------|--------|--------|--------|
|                                   | 2010       | 2011   | 2012   | 2013   | 2014   |
| Treasury grant                    | -          | -      | -      | -      | 112.8  |
| Cess on sugar imports/production  | 142.88     | 144.12 | 139.32 | 132.82 | 91.81  |
| Interest income and sundry income | 20.48      | 17.00  | 24.04  | 29.55  | 18.93  |
| Sale of sugarcane                 | -          | 0.90   | 1.65   | 1.85   | 0.65   |
| Total                             | 163.36     | 162.02 | 165.01 | 164.23 | 224.19 |

### Expenditure

| Item                       | Rs Million |        |        |        |        |
|----------------------------|------------|--------|--------|--------|--------|
|                            | 2010       | 2011   | 2012   | 2013   | 2014   |
| <b>Recurrent:</b>          |            |        |        |        |        |
| Personnel emoluments       | 78.78      | 81.67  | 92.10  | 102.91 | 116.45 |
| Travelling and subsistence | 1.70       | 1.75   | 2.63   | 2.54   | 2.89   |
| Research and development   | 5.62       | 5.91   | 9.88   | 9.31   | 27.00  |
| Supplies and consumables   | 1.83       | 1.17   | 1.52   | 2.52   | 3.27   |
| Contractual services       | 17.80      | 21.57  | 20.97  | 21.85  | 26.09  |
| Maintenance                | 12.14      | 13.22  | 17.11  | 21.99  | 24.00  |
| Other operating expenses   | 1.19       | 2.03   | 27.21  | 31.60  | 9.41   |
| Finance cost               | 0.15       | 0.14   | 0.03   | 0.20   | -      |
| Total                      | 119.22     | 127.47 | 171.45 | 192.96 | 209.11 |
|                            |            |        |        |        |        |
| <b>Capital:</b>            |            |        |        |        |        |
| Buildings                  | 8.82       | 0.36   | 0.12   | -      | -      |
| Office/Lab/Field equipment | 3.78       | 2.32   | 3.21   | 5.50   | 3.76   |
| Vehicles                   | 13.22      | -      | 6.50   | 21.05  | -      |
| Land development           | 0.68       | 1.20   | -      | -      | 0.38   |
| Library books              | -          | 0.05   | -      | 0.06   | 0.02   |
| Furniture                  | 0.69       | 0.48   | 0.72   | 0.48   | -      |
| Other facilities           | 0.02       | 0.08   | 0.05   | 1.39   | 9.46   |
| Total                      | 27.20      | 4.49   | 10.60  | 28.51  | 13.62  |
| <b>Total</b>               | 146.42     | 131.96 | 182.05 | 221.47 | 222.73 |