ANNUAL REPORT – 2023

SUGARCANE RESEARCH INSTITUTE

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CONTENTS

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

BOARD OF GOVERNORS

Mr. Tissa Sunil Ratwatte - Appointed Member (Chairman)
From 01.12.2022

Mr. Sunil T. Ratwatte is a planter with decades of experience in the field. From 1977 to 1992, he has worked as an Estate Superintendent in the Janatha Estate Development Board (JEDB) and from 1992 to 2000, he has worked as an Estate Manager under Kelanivalley Plantation Company. Furthermore, Mr. Ratwatte has worked as a group manager of the JEDB during 2000-2012 and is currently the Chairman of the Board of Governors of the Sugarcane Research Institute.

Senior Prof WAJM De Costa - Appointed member
From 27.01.2023

Prof. Janendra De Costa is the Senior Professor and Chair of Crop Science in the Faculty of Agriculture of the University of Peradeniya. He holds of a PhD from the University of Reading in the United Kingdom and has over 30 years of research and teaching experience with a major focus on the Physiology of Crops and their tolerance to environmental stresses including climate change.

Dr WG Somarathna - Appointed Member
from 05.05.2021

Dr W.G.Somaratne has been graduated with BA (Hons) in Economics from Sri Jayeawardanepura University in 1980. He completed his Master in Agricultural Economics from Imperial College, University of London in 1987, and completed his PhD in Economics, from LaTrobe University, Melbourne, Australia in 1998. Then, he joined the premier Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) and worked there as a Senior Research Fellow and Head of the Agricultural and Environmental Resource Management Division for about 20 years. He has further worked as a Research Fellow in the SAARC - Human Resource Development Centre in Islamabad, Pakistan for 3 years.

Mr RC Watawala - Board Member
Director (Development), State Ministry of Development of Minor Crops and Export Promotion, from 01.02. 2021

Mr. Watawala is currently working as the Director Development of the Ministry of Plantations since 2018. He graduated with a Bachelor of Science in Biology from the University of Kelaniya in 2002 and completed his MPhil degree in Environmental Chemistry from the University of Jayawardenepura and the University of Adelaide In 2009. Further, he has a Diploma in Counselling and a Post Graduate Diploma in Writing and Communication. He is a researcher and has several research publications.

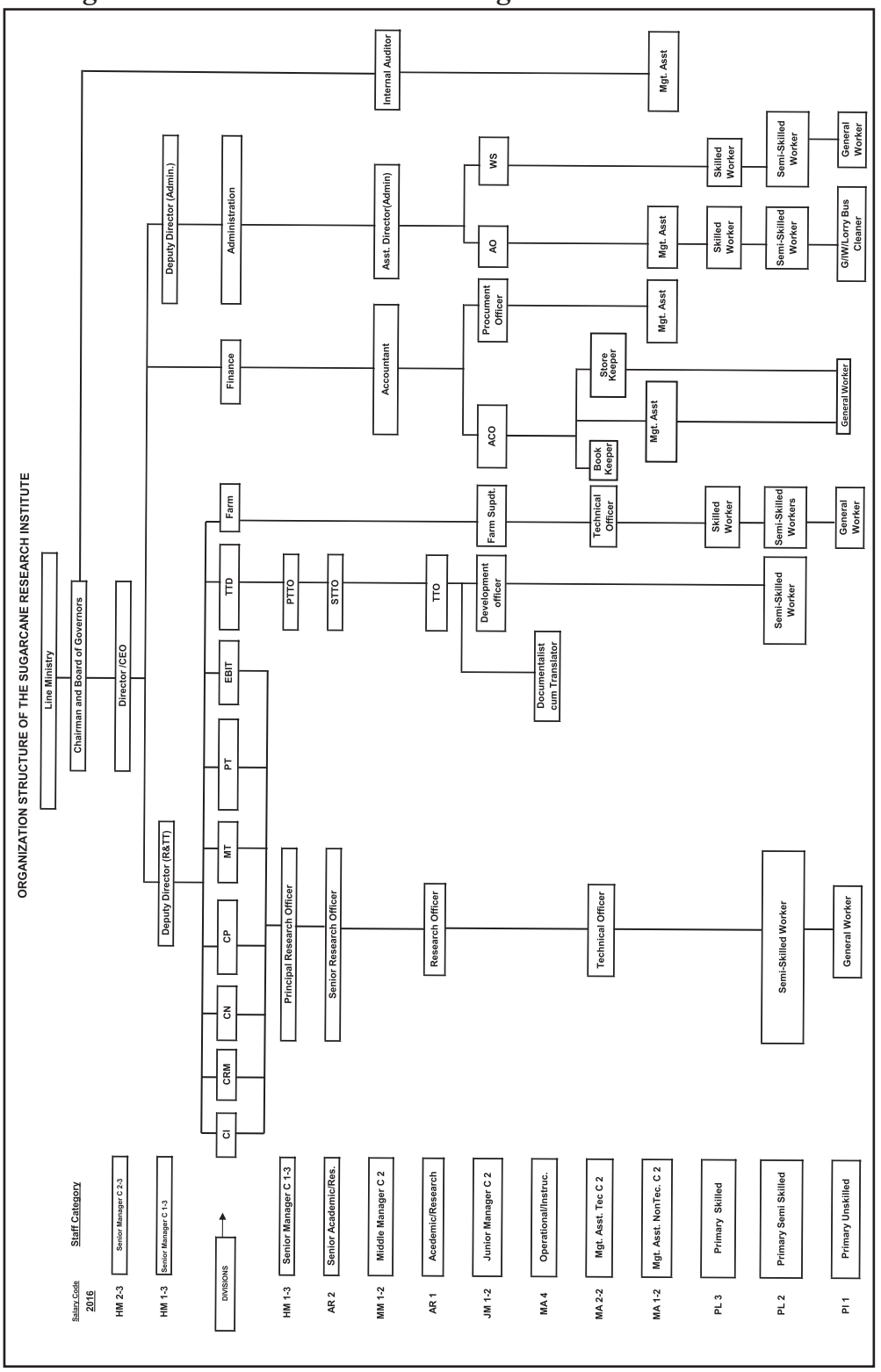
Ms. HGVKT Gunawardena - Nominated Member
Assistant Director - Department of National Planning, Ministry of Finance
From 02.03.2022

Ms. Vijini Gunawardane is currently working as a Assistant Director in the Department of National Planning (NPD), Ministry of Finance. She has graduated from University of Peradeniya with Bachelor degree in Agricultural Technology and Management in 2010. She completed her MSc in Environmental soil Science from Postgraduate institute of Agriculture, Peradeniya in 2012. In 2020, she completed an MSc in Public Policy from the Austarlian National University in Australia. She has worked as a Research Officer at Rubber Research Institute of Sri Lanka. She joined Sri lanka Planning servoice in 2103 and since then, working attached to the NPD of
Ministry of Finance.

Dr MS Perera - Ex-Officio member
Sugarcane Research Institute
from 01.09. 2021

Dr. MS Perera is the Director/ CEO of the institute. He has completed both his bachelor's degree and Doctor of Philosophy from the University of Peradeniya. Dr. MS Perera joined the SRI in 1993 as a Research Officer and he has held several positions including Senior Research Officer and Principal Research officer in the Technology Transfer and Development Division.

Organizational Structure of the Sugarcane Research Institute



Approved Cadre of the Sugarcane Research Institute
As at 31.12.2023

Designation	Salary Code	Service Level	Approved Cadre	Existing Cadre
			Permanent	Permanent
Director - CEO	HM 2 - 3	Senior	1	1
Dy. Director (Admin)	HM 1 - 3	Senior	1	1
Dy. Director (R & TT)	HM 1 - 3	Senior	1	0
Principal Technology Transfer Officer	HM 1 - 3	Senior	1	0
Principal Research Officer	HM 1 - 3	Senior	5	0
Senior Technology Transfer Officer	AR 2	Senior	1	0
Senior Research Officer	AR 2	Senior	4	4
Technology Transfer Officer	AR 1	Senior	1	1
Research Officer	AR 1	Senior	16	10
Internal Auditor	MM 1 - 2	Senior	1	1
Accountant	MM 1 - 2	Senior	1	1
Assistant Director (Administration)	MM 1 - 2	Senior	1	1
Development Officer	JM 1 - 2	Tertiary	5	4
Works Superintendent	JM 1 - 2	Tertiary	1	1
Accounting Officer	JM 1 - 2	Tertiary	1	1
Administrative officer	JM 1 - 2	Tertiary	1	1
Procurement Officer	JM 1 - 2	Tertiary	1	1
Farm Superintendent	JM 1 - 2	Tertiary	1	1
Documentarist cum Translator	MA 4	Tertiary	1	0
Book Keeper	MA 2 - 2	Secondary	1	0
Store Keeper	MA 2 - 2	Secondary	1	1
Technical Officer	MA 2 - 2	Secondary	20	15
Inspector of Works	MA 2 - 2	Secondary	-	1
MA (Typist, Clerical, Accounts Clerk, PA)	MA 1 - 2	Secondary	18	10
Tele. Operator/Receptionist	MA 1 - 2	Secondary	1	1
Work Supervisor	MA 1 - 2	Secondary	-	1
Mechanic	PL 3	Primary	1	1
Electrician	PL 3	Primary	2	1
Fitter	PL 3	Primary	1	1
Welder	PL 3	Primary	1	1
Carpenter	PL 3	Primary	2	1
Mason/Plumber	PL 3	Primary	1	0
Blacksmith	PL 3	Primary	1	1
Tractor Driver	PL 3	Primary	2	3
Driver	PL 3	Primary	12	8
Circuit Bungalow Keeper	PL 2	Primary	1	1
Lab/Field Attendant	PL 2	Primary	9	9
Water Pump Operator	PL 2	Primary	3	1
GW(Peon/Messenger, Sanitary Labour, Stores Labour, Office Labour, Farm Labour)	PL 1	Primary	70	48
Lorry/Bus Cleaner	PL 1	Primary	1	0
Worker	PL 1	Primary		30
Total			193	164

CHAIRMAN'S REVIEW

A total of Rs 292.151 million from the consolidated fund had been formally designated for the Sugarcane Research Institute (SRI) for the calendar year 2023. Out of this allocation, a total of Rs. 262.151 million is meant for recurrent expenses, and the remaining Rs. 30 million is for capital expenses. However, the institute only received Rs 286.096 million from the Treasury in 2023. It was made up of Rs. 28 million in capital expenditures and Rs. 258.096 million in recurrent expenses. As a result, the consolidated fund's assigned Rs 10.06 million was not received. Only 93.33% of the funds allotted for capital construction were received, even though 98.45% of the funding for recurrent expenses was obtained.

Several significant policy decisions have been implemented, such as the preparation of the corporate strategic plan for the next three years for the institute, the development of intellectual property rights and commercialization policy and the introduction of corporate business link IBL SRIBusines Link. The Sugarcane Research Institute Act and the Manual of Procedures (MOP) were being revised. According to the institute's mandate, the reviewed performance was at the following levels of satisfaction.

The report highlights various research and development activities conducted for the sugarcane industry in Sri Lanka. The activities can be categorized into the main areas: germplasm evaluation, variety selection and multiplication, crop management, pest and disease management, farm mechanization, and Technology Transfer.

In the past year, significant strides have been made in advancing sugarcane cultivation through the introduction of four new varieties from the esteemed 2003 series, namely SL 03 336, SL 03 983, SL 03 1025, and SL 03 1077, demonstrating promising prospects for heightened productivity and quality. Collaborative efforts with the Crop Protection division have ensured a vigilant quarantine process for 30 sugarcane varieties imported from China, mitigating potential risks to local crops. Our steadfast dedication to biodiversity conservation is evident through the ex-situ conservation of 1,659 sugarcane accessions and ongoing efforts at the Sugarcane Research Institute, Uda Walawe, and safeguarding genetic diversity essential for future breeding programs. Additionally, our focus on identifying and amplifying promising varieties has resulted in the selection of five varieties for large-scale multiplication and evaluation, while partnerships with Lanka Sugar Company – Sevanagala have facilitated the selection of 23 varieties for similar endeavours. It included six varieties earmarked for future observations under the foreign variety evaluation at Lanka Sugar Company – Sevanagala and the selection of nine sugarcane varieties from the SL 2002 series and eight varieties from the SL 2004 series for large-scale multiplication.

Additionally, the institute has conducted large mill test experiments for new sugarcane varieties and distributed seed cane to various sugar companies for large-scale cultivation. The SRI has also conducted a study to identify suitable sugarcane varieties for organic sugarcane cultivation. The activities are significant as they help to identify and introduce new and improved varieties to the sugarcane industry.

Crop management activities include Developing guidelines for site-specific fertilizer recommendations, optimizing fertilizer use efficiency and minimizing environmental impact. These activities can contribute to improving the yield and quality of sugarcane crops.

Pest and disease management activities include the development of a long-term strategic management programme on Sugarcane white leaf disease management by getting expertise from overseas and local.

Producing bagasse-based briquettes and pellets, offering sustainable alternatives for fuel, and reducing waste under the processing technology research programme. Produced 2650 kg of sugarcane jaggery and 398 L of sugarcane honey, diversifying product offerings and adding value to the sugarcane industry.

The SRI has also made progress in testing and developing agricultural machinery, such as conducting field testing of the SRI-TMX 401 sugarcane trash cutter and 4w tractor-operated organic granular fertilizer applicator, contributing to the development of efficient agricultural machinery. The institute continued developing an IoT-integrated machinery management system.
Three public-private partnerships research were completed; a) a research program to evaluate drip irrigation systems in sugarcane farming at Sevanagala b) the evaluation of the acceptability of Yara as a replacement fertilizer and c) the performance of a granular insecticide, Chlorantraniliprole 0.4%, for the management of borer pests proceeded throughout the year.

The services provided to the industries during the year 2023 included; assisting in upgrading the hot water treatment unit of Lanka Sugar Company in Palwatte, improving efficiency and quality control in processing

In addition, the SRI has conducted and coordinated 15 training/awareness programs on sugarcane cultivation and allied disciplines for 578 sugar industry personnel.. The institute has distributed advisory leaflets and information sheets on various aspects of sugarcane cultivation and established 42 field demonstration sites in sugar mill areas. The SRI has also implemented the SRI TTD eSMS service for researchers, extension officers, and farmers. Finally, the institute has published two volumes of the SRI newsletter. The programme includes the development and introduction of “Uk Saviya” an android-based smart mobile application to deliver updated sugarcane research information to stakeholders. Furthermore, we extend technical support to farmers, particularly those involved in the Kilinochchi project,

empowering them with knowledge and resources for successful sugarcane cultivation.

Among the other initiatives pursued in relation to the development of the sugar sector was the evaluation of technical proposals on integrated sugar development Projects. Research collaborations were maintained with the overseas organization; the Yunan Agricultural Science Academy in China by participating representatives of the institute at the sugarcane symposium organised by Yunaan Sugarcane Research Institute. Further, a fact-finding study on Technical Cooperation with Brazil in the Agricultural sector, particularly the sugarcane industry has been coordinated for the proposed first round of bilateral political consultations between Sri Lanka and Brazil and continued making an MOU with Thal Industries Sugar Crops Research Institute (TSCRI), Tehsil Lalian, District Chiniot of the Islamic Republic of Pakistan on the exchange of sugarcane breeding materials.

The necessary tools and equipment, such as those for preparing machinery as well as software, were given to the appropriate research divisions, increasing the possibility of developing novel technologies. During the year, work was done on improving the institute quarters' infrastructure facilities, chemistry laboratory building, greenhouse for Hanthana Quarantine station, SRI circuit guesthouse, and auditorium.

The relevant members of the staff received two long-term training to improve their skills. Four additional research officers maintained their postgraduate research programs while two research officers completed a Ph.D. degree programme.

The Institute's main research station at Uda Walawe, the Breeding station at Deniyaya, the Quarantine station at Hantane, and the Pathology farm at Siyambalanduwa all ran according to their working schedules under limited funds without interfering with the scheduled research and development activities. Lack of trained staff, particularly for scientific and upper managerial posts, and difficulty hiring staff in accordance with the recruitment rules in the current circumstances were the major impediments to the institute's performance.

Mr. T. Sunil Ratwatte
Chairman

DIRECTOR'S REVIEW

The Sugarcane Research Institute continued its functions in the year 2023 to contribute to developing the sugarcane industry of Sri Lanka by conducting research for generating new knowledge/technologies on sugarcane, disseminating the technical know-how to sugar companies, farmers, and other relevant stakeholders, producing and supplying foundation seed cane and expanding sugarcane cultivation for small-scale processing industries. 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 developing technical know-how to cater to the needs of the development of the sugarcane industry in the country. A technology transfer program was carried out to disseminate the knowledge/technologies generated by the research program to sugar companies, farmers, and other relevant stakeholders. A development program consisting of the production of foundation seed cane of the new sugarcane varieties recommended by the institute was also continued.

The major accomplishments related to the quarantine of imported sugarcane varieties, large-scale evaluation of sugarcane varieties, multiplication of promising varieties, evaluation of foreign varieties, and sugarcane mutation breeding are stated below;

In our pursuit of genetic improvement, we successfully released four new sugarcane varieties for commercial cultivation from the 2003 series, namely SL 03 336, SL 03 983, SL 03 1025, and SL 03 1077. These varieties were meticulously selected and developed to exhibit desirable traits such as high yields, disease resistance, and adaptability to local growing conditions. Furthermore, we undertook stringent quarantine measures for 30 sugarcane varieties imported from China, meticulously observing them under the Crop Protection division's supervision to ensure their safety and suitability for local cultivation.

Our research and development efforts extended beyond variety release to encompass comprehensive evaluations, breeding programs, and field operations. Ex-situ conservation of 1,659 sugarcane accessions in duplicate plots at Sugarcane Breeding Station at Enselwatte, Deniyaya, and maintaining the breeder's seed garden with 45 commercial and near-commercial varieties and conservation of 750 sugarcane accessions at the Sugarcane Research Institute, Uda Walawe. Notably, a remarkable 766 crosses were done using advanced techniques aimed at enhancing sugar and cane yields while fortifying resistance against prevalent diseases such as smut, leaf scald, and white leaf diseases during the 2023 crossing season. Processing of true seeds of these crosses is in progress. Moreover, we completed final step evaluations of various sugarcane series across different growing regions,

facilitating the selection of the most promising varieties for large-scale evaluation and testing. These evaluations are vital for identifying varieties that exhibit superior performance in terms of yield, disease resistance, and quality characteristics.

Before the large-scale evaluation, multiplication and maintenance of promising varieties from 2002, 2003, 2005, 2006, and 2007 series for large-scale evaluation and large mill test at Lanka Sugar Company (Private) Limited – Pelwatte, Gal oya plantations (Private) limited – Hingurana, Lanka Sugar Company (Private) Limited, Sevanagala and Ethimale Plantations (Private) Limited-Siyambalanduwa. Conducting final step evaluation of 22 from the 2006 series, 24 from the SL 2007 series, 22 from SL 2008 series, 22 from the 2009 series and 19 from the 2010/2011 series in different sugarcane growing areas at Lanka Sugar Company - Sevanagala, Lanka Sugar Company- Pelwatte, Galoya Plantations (Private) Limited, and Ethimale Plantation (Private) Ltd.. Nine sugarcane varieties from the SL 2002 series and eight varieties from SL 2004 series were selected for large-scale multiplication at Lanka Sugar Company – Sevanagala.

Five sugarcane varieties (SLI 20 07, SLI 20 09, SLI 20 14, SLI 20 20, SLI 20 23) were selected for large-scale multiplication and evaluation, and 6 varieties (SLI 20 06, SLI 20 12, SLI 20 18, SLI 20 26, SLI 20 30, SLI 20 33) were selected for future observations at Lanka Sugar Company – Sevanagala under foreign variety evaluation programme.

The institute also conducted a large mill test experiment for the newly introduced variety, SL 03 336 at Gal Oya Plantation (Pvt) Ltd, Hingurana. Further, a study to identify suitable sugarcane varieties for organic sugarcane cultivation was conducted.

Under the sugarcane crop and resource management, field operations and data collection remained a cornerstone of the main activities. It included the introduction of a deficit irrigation plan for rain-fed sugarcane in Sevanagala and optimizing the available mathematical models for characterizing the rainfall-runoff relationship for sugarcane land use in Sri Lanka. Daily weather data collection from various sugarcane growing regions continued enabling us to provide comprehensive monthly reports to the Meteorological Department. This data is invaluable for monitoring weather patterns, predicting seasonal trends, and informing agricultural practices.

Recommendations on soil fertility management are provided by the research conducted under the crop nutrition programme. The research trials were completed under rain-fed and irrigated conditions to identify the suitability of compound fertilisers for sugarcane cultivation and it identified that for irrigated sugarcane cultivation, a blend of 75% straight fertilizer and 25% compound fertilizer resulted in the highest net income and a benefit-cost ratio, while in rain-fed conditions, using 100% straight fertilizer proved optimal. The application of ZnSO4 at a rate of 7.5kg per hectare has been identified as beneficial, leading to improved cane and sugar yields and this practice not only enhances the quality parameters of cane but also

serves as an additional income source for both sugarcane farmers and millers, particularly benefiting the SL 96 128 variety. Further, the development of an expert system for sugarcane nutrient deficiency diagnosis was completed.

Under sugarcane crop protection, the highest priority was given to controlling white leaf disease (WLD) and sugarcane borers. A long-term strategic management programme on Sugarcane white leaf disease management was developed by getting expertise from overseas and locally. The institute also regularly monitored the disease and pest situations in commercial sugarcane plantations, and the relevant officials of the sugar companies were made aware of the prevailing situations to enable them to take timely action to contain the spread of diseases and pests. Furthermore, technical assistance was provided, including the supply of glyphosate for managing sugarcane white leaf disease, a persistent threat to sugarcane cultivation. The Sugarcane Research Institute continued its efforts to develop non-chemical strategies as well for pest management in sugarcane cultivation; developing repellent gel vaporizers for WLD vector management using marigold, mustard, citronella, and lemongrass extracts and for Chilo sachariphagus management using lemongrass and lantana extracts.

Under the processing technology research programme, bagasse-based briquettes and pellets was produced, offering sustainable alternatives for fuel, and reducing waste.

Under the Mechanisation technology programme, the existing hot water treatment (HWT) plant at Lanka Sugar Company Limited, Pelwatte was inspected and modified based on guidance. HWT is a critical step in preventing the spread of sugarcane diseases and ensuring the quality of sugarcane planting material.

Evaluation of a four-wheel tractor-mounted pellet fertilizer applicator (SRI-FX 401) was completed. The use of precision fertilizer application equipment can increase fertilizer use efficiency, reduce costs, and minimize environmental impact.

Construction activities of the trash-cutting machine were completed. Trash cutting is an essential step in sugarcane harvest and can contribute to improved crop yield and quality. The use of mechanized trash cutting can reduce labor costs and improve efficiency.

The institute introduced an android-based smart mobile application "Uk Saviya" to deliver updated sugarcane research information and expert knowledge to the sugarcane industry stakeholders in Sri Lanka. This innovative tool provides farmers, extension officers, and other stakeholders with easy access to a wealth of valuable information, including best practices for cultivation, pest and disease management strategies, and market trends. By leveraging digital technologies, we aim to enhance knowledge sharing, improve decision-making, and empower stakeholders to adopt innovative practices that enhance productivity and profitability.

The promotion of the application of the research findings was continued by conducting a technology transfer program. The emphasis was placed on the promotion of SRI-developed sugarcane varieties and intercropping with sugarcane.

Programmes were also conducted to improve the knowledge of the farmers and field officers of the sugar companies on soil fertility management and disease and pest management. The institute conducted and coordinated 15 training/awareness programs on sugarcane cultivation and related subject areas for 578 farmers and field officers of the sugar industry. At the request of various stakeholders of SRI, 18 trainings, awareness programs were conducted. A total of 877 personnel (students, entrepreneurs, etc.) have participated in them. The following activities were also carried out to improve the knowledge of field officers, farmers, and other stakeholders:

- Establishing and maintaining 11 field demonstration sites on varieties in sugar mill areas.
- Publishing three volumes of the SRI Newsletter (*Puwath Hasuna* of SRI).
- Publishing of Sugarcane Journal vol 4
- Continuing SRI TTD *eSMS* service for transfer extension messages between researchers, extension officers, and farmers in the sugarcane sector. Continuing the sharing of sugar industry information through the SRI FB page and updating the SRI website.
- Sugar-related products, which were produced by SRI, were kept at the information and promotion Centre for demonstration purposes and 460kg of cane jaggery out of the total production of 2402 kg of jaggery from the cane harvested at field trials and 18L of syrup were sold at the centre.

Furthermore, our commitment to providing technical support to sugarcane farmers was evident in our efforts in the Kilinochchi project, where we offered vital assistance and guidance to enhance productivity and sustainability.

Additionally, we distributed 68.5 tons seeds of newly recommended sugarcane varieties to sugar companies, facilitating the establishment of seed nurseries and ensuring the widespread adoption of superior cultivars. This initiative plays a crucial role in modernizing the sugarcane industry by introducing high-performing varieties that are resilient to diseases and environmental stresses.

During the year under review, vacancies could not be filled due to the restrictions imposed by the government, so the service of eight development officers' was obtained to strengthen the manpower requirements of the institute. Capacity building of staff was continued by providing long-term and short-term training opportunities. One Research Officer in Crop Improvement Programme was continued a Fellowship Research Programme by Yunan Sugarcane Research Institute, China to conduct joint research with YSRI on sugarcane variety development under the MOU between YSRI and SRI. Two officers completed their PhD programmes. The previously-released three Research Officers continued their postgraduate studies. One of the Development Officers was continued the

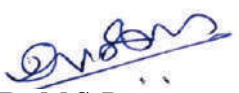
opportunity for long-term post-graduate training. Furthermore, research, technical, accounting, and administrative staff were provided with opportunities to attend short training courses relevant to their work.

To provide the infrastructure requirements for research and development activities and to provide a congenial working environment for the staff, the following activities were continued:

i. Renovation of the old office building for an auditorium, and rehabilitation of the perimeter fence.
ii. Procurement of important laboratory instruments, equipment, and software, and development of crop nutrition lab and facilities at the quarantine station.

The work on amendment of the Sugarcane Research Institute Act to broaden its scope and authority according to the current as well as future needs of the development of the sugarcane industry in the country was continued. Development of intellectual property rights, and commercialization policy and the introduction of corporate business link IBL SRIBusines Link for identifying opportunities for innovation, fostering collaboration with industry stakeholders, enhancing intellectual property protections, and developing commercialization strategies, that aimed aim at creating an enabling environment for innovation and investment in the sugarcane industry.
Further, a fact-finding investigation under Technical Cooperation with Brazil in the Agricultural sector, particularly in the sugarcane industry has been coordinated for the proposed first round of bilateral political consultations between Sri Lanka and Brazil. Simultaneously, efforts persist in drafting a memorandum of understanding (MOU) with Thal Industries Sugar Crops Research Institute (TSCRI), located in Tehsil Lalian, District Chiniot of the Islamic Republic of Pakistan, concerning the exchange of sugarcane breeding materials.

The main limiting factor for fulfilling the mandate of the institute was a shortage of trained and experienced manpower and the non-availability of finance in time. Recruiting and retaining staff at scientific, technical, and managerial grades has to be given high priority for the sustenance of the institute to fulfil its mandated functions.



Dr. M.S. Perera
Director/ Chief Executive Officer

PROGRESS AND PERFORMANCE REPORT

Progress and Performance Report of Sugarcane Research Institute by 31 December 2023

1. Sugarcane Research Institute Action Plan – 2023- Progress of Special Projects / Activities

One hundred and two (102) activities were carried out under eight major research and development projects in the Sugarcane Research Institute Action Plan 2023.

The physical and financial progress of the eight projects undertaken as of December 31, 2023, under the Action Plan of the Sugarcane Research Institute – 2023 has been mentioned ahead of the targets in Tables 01 and 02.

Table 1. Percentage of physical progress against the target for projects carried out as per Sugarcane Research Institute 2023 Action Plan as of 31 December 2023

Projects	Physical Progress (%)	
	Targeted	Achieved
1. Development of superior sugarcane varieties	100	90
2. Development of improved crop management practices	100	100
3. Development of soil fertility management practices for sugarcane cultivation	100	100
4. Development of pest and disease management practices	100	98
5. Development/introduction of suitable machinery for sugarcane cultivation	100	88
6. Development and streamlining of value-added production process in sugarcane cultivation	100	89
7. Analysis of Economic aspects related to the sugar sector	100	97
8. Dissemination of knowledge and technology on sugarcane cultivation	100	97

Table 2. Percentage of financial progress against target for projects undertaken as per the 2023 Action Plan of the Sugarcane Research Institute as at 31 December 2023

Projects	Financial Progress (Mn. Rs)		
	Target	Achieved	Progress (%)
1. Development of superior sugarcane varieties	31.88	29.64	93
2. Development of improved crop management practices	17.47	16.04	92
3. Development of soil fertility management practices for sugarcane cultivation	12.59	10.35	82
4. Development of pest and disease management practices	16.69	17.01	100
5. Development/introduction of suitable machinery for sugarcane cultivation	7.53	4.94	66
6. Development and streamlining of the value-added production process in sugarcane cultivation	9.00	6.84	76
7. Analysis of Economic aspects related to the sugar sector	5.83	6.20	100
8. Dissemination of knowledge and technology on sugarcane cultivation	21.17	20.71	98

2. Achievements in 2023

- Releasing 04 new sugarcane varieties for commercial cultivation from 2003 series (SL 03 336, SL 03 983, SL 03 1025, and SL 03 1077).
- Releasing of 09 sugarcane varieties and seedlings of bi-parental crosses after completion of quarantine process and establishment in research farm Uda Walawe for future evaluation.
- Quarantine of 30 sugarcane varieties imported from China, under observations of the Crop Protection division.
- *Ex-situ* conservation of 1,659 sugarcane accessions in duplicate plots at Sugarcane Breeding Station at Enselwatte, Deniyaya, and maintaining the breeder's seed garden with 45 commercial and near-commercial varieties and conservation of 750 sugarcane accessions at the Sugarcane Research Institute, Uda Walawe.
- Five sugarcane varieties (SLI 20 07, SLI 20 09, SLI 20 14, SLI 20 20, SLI 20 23) were selected for large-scale multiplication and evaluation, and 6 varieties (SLI 20 06, SLI 20 12, SLI 20 18, SLI 20 26, SLI 20 30, SLI 20 33) were selected for future observations to Lanka Sugar Company – Sevanagala under foreign variety evaluation project.
- Nine sugarcane varieties from SL 2002 series and eight varieties from SL 2004 series were selected for large scale multiplication at Lanka Sugar Company – Sevanagala.

- Performing 766 crosses using field lantern and solution crossing techniques. These crosses are directional for sugar and cane yield improvement and disease resistance (smut, leaf scald and white leaf diseases).
- Conducting final step evaluation in different sugarcane growing areas prior to the large-scale evaluation; 22 from 2006 series, 24 from SL 2007 series, 22 from SL 2008 series, 22 from 2009 series and 19 from 2010/2011 series.
- Multiplication and maintenance of promising varieties from 2002, 2003, 2005, 2006 and 2007 series for large scale evaluation and large mill test at Lanka Sugar Company (Pvt) Ltd – Pelwatte, Gal Oya plantations (Pvt) Ltd – Hingurana, Lanka Sugar Company (Pvt) Ltd, Sevanagala and Ethimale Plantations (Pvt) Ltd - Siyambalanduwa.
- Completed the evaluation of locally collected accessions in 2018 and 2019. Twenty accessions were identified as suitable parents for directional breeding for cane and sugar yield improvement and one was identified for improvement of pest and disease resistance and one was identified to develop energy cane.
- Establishment of sugarcane seed nurseries for research in Uda Walawe field, maintenance of research plantations and data acquisition.
- Establishment of a new research trial to test the maturity pattern of the new cultivars of the 2004 series.
- Daily weather data collection, tabulation and sending of monthly data reports to the Meteorological Department has been completed until December 2023.
- Providing the necessary technical support related to sugarcane cultivation to the farmers of the Kilinochchi project
- Providing seeds of new sugarcane varieties recommended in 2003 series (SL 03 336, SL 03 983, SL 03 1077) to sugar companies for establishing sugarcane seed nurseries.
- To identify relevant levels of direct soil application of bagasse boiler ash and to identify the effect of bagasse boiler ash on soil and primary plant growth.
- Development of digital soil maps and interactive maps for sugarcane nursery area of SRI.
- Develop guidelines for site-specific fertilizer recommendations.
- Conducting UAV-based multispectral image analysis to determine sugarcane leaf N content using machine learning methods.
- Preparing a study proposal to solve the soil problems related to Gal Oya plantations.
- Completion of field data collection for WLD detection using machine learning technology (drones)
- Improvement of repellent gel vaporizers using citrus, lemongrass, mustard and marigold to repel white leaf blight and sugarcane borer in small plantations
- Identification that the β 1,3 glucanase gene can be used for early identification of resistant varieties to smut disease in sugarcane.

- Identification of 3 parent varieties resistant to sugarcane stem borer
- Identification of 3 varieties of *Erianthus* to be used as trap crops
- Identification of parent varieties (*Erianthus*) resistant to white leaf disease
- Ginger extract and lime were identified as natural preservatives to increase the shelf life of sugarcane juice.
- Production of 2650 kg of sugarcane jaggery and 398 L of sugarcane honey were produced
- Producing bagasse-based briquettes and pellets
- Identifying the post-harvest damage of sugarcane in the premises of Lanka Sugar Company (Pvt) Ltd Pelwatte.
- Assisting in upgrading the hot water treatment unit of Lanka Sugar Company (Pvt) Ltd in Pelwatte
- Field testing of sugarcane trash cutter SRI-TMX 401 for further improvement.
- Completion of field testing of 4w tractor-operated organic granular fertilizer applicator.
- Developing a framework for implementing IoT for Machinery Management (System for Farm Machinery Management) and developing a platform for information sharing
- Estimating costs and benefits of sugarcane cultivation in various regions for the year 2022/23.
- Estimating the commercial value of one ton of sugarcane in different regions for the year 2022.
- Estimating the value of sugarcane industry and contribution to gross domestic product in comparison with other major crops for the year 2022
- Identifying the factors affecting sugar extraction percentage in Sevanagala sugarcane factory
- Conducting and coordinating 15 training/awareness programs on sugarcane cultivation and allied disciplines for 578 sugar industry personnel.
- Distribution of advisory leaflets and information sheets on various aspects of sugarcane cultivation and establishment and maintenance of 42 field demonstration sites in sugar mill areas.
- Continuous implementation of SRI TTD eSMS service among researchers, extension officers, and farmers.
- Publication of three volumes of the SRI newsletter (Puwath Hasuna of SRI).
- 78.5 tonnes of seed sugarcane of newly recommended sugarcane varieties were distributed to farmers to popularize the varieties recommended by the Sugarcane Research Institute.

3. Special programs/projects/activities undertaken for the development of the sugarcane sector.

- Introduction of an android-based smart mobile application to deliver updated sugarcane research information and expert knowledge for the sugarcane industry stakeholders in Sri Lanka.
- A program for introducing imported sugarcane varieties with high sugar content which are presently available in the breeder's seed stock of SRI for commercial cultivation was continued.
- Development of a long-term strategic management programme on Sugarcane white leaf disease management by getting expertise from overseas and local
- Maintenance of Vannerikulam seed cane nursery to provide seed cane for Skandhapuram farmers in 2023.
- Conducting a study to identify suitable sugarcane varieties for organic sugarcane cultivation.
- Development of intellectual property rights and commercialization policy and introduction of corporate business link IBL SRIBusines Link.
- Development of Information and Promotion Center at Colombo Office of Sugarcane Research Institute.
- Introduction of high productivity sugarcane varieties (SL03-336, SL03-983, SL03-1025, SL03-1077) to sugar industries for field level monitoring.
- Submitting a study report to the Ministry on making the sugarcane industry more efficient and effective with higher sugar recovery rates.
- Production and supply of primary sugarcane seeds of new improved sugarcane varieties for the sugarcane industry.
- Providing glyphosate for all industries to use to destroy the infected plants as an alternative to removing sugarcane plants infected with sugarcane white leaf disease (WLD).
- Expansion of sugarcane cultivation in Kilinochchi district with more emphasis on jaggery and honey production.
- Develop strategies for applying optimum agricultural technology to sugarcane cultivation.
- Upgrading the website of Sugarcane Research Institute for easy access to information about the sugar sector.
- Conducting 26 training programs to impart necessary technical knowledge on sugarcane crop management including fertilization with special emphasis on the use of organic fertilizers, pest and disease management, improving fertility of degraded soils etc.
- Carrying out crop protection services to prevent spread of pests and diseases in sugarcane plantations

4. Financial Progress (Capital / recurrent / approved amount / Imprests received / financial progress / bills in hand) (as of 31.12.2023)

Details of Expenditure	Approved amount (Rs. Million)	Imprest received (Rs. Million)	Financial Progress (Rs. Million)	Bills in hand (Rs. Million)
Capital	30	28.00	25.80	-
Recurrent	262.151	258.096	258.096	4.055
Total	292.151	286.096	283.896	4.055

5. Special projects/programs/activities to be carried out in the year 2024

In addition to the general research and development activities carried out by the Sugarcane Research Institute, the following special projects/programs/activities will be carried out in the year 2024.

- Continuation of the program of introduction of imported high-sugar sugarcane varieties currently available in the seed stock in the Sugarcane Research Institute for commercial cultivation.
- Continuation of the program to introduce high-productivity sugarcane varieties into the sugar industry for field-level monitoring.
- Production and supply of primary seed cane of new improved sugarcane varieties for the sugarcane industry for further multiplication.
- Conducting research to introduce sugar and ethanol value-enhancing products.
- Conducting economic analysis necessary for the development of strategies to increase the competitiveness of the sugar industry.
- Development of Strategies for the Application of precision agricultural technology to sugarcane cultivation
- Updating the Sugarcane Research Institute website so that information about sugar manufacturing is available.
- Providing necessary technical knowledge on sugarcane crop management including fertilization with special emphasis on the use of organic fertilizers, pest, and disease management, improving the fertility of degraded soils, etc.
- Contributing to efficient cultivation management by increasing the sugarcane farming community by updating and using the sugarcane software.
- Carrying out crop protection services to prevent the spread of pests and diseases in sugarcane plantations
- Improve the agreement with China to support the development of skills to increase the development of sugarcane varieties and the development of new sugarcane cultivation technologies and implement cooperation programs with Pakistan and Brazilian sugar industries.

DIVISIONAL REPORTS

CROP IMPROVEMENT DIVISION

CROP IMPROVEMENT DIVISION

Staff

Ms. AMMS Perera BSc, MSc	-	Senior Research Officer and Head
Mr. KP Wickramasinghe BSc (Agric.), M Phil	-	Research Officer (leave for Fellowship program, October 2022- October 2023)
Mr. D Weerasinghe	-	Senior Technical Officer
Mr. MKD Ubesena	-	Technical Officer
Miss. KP Harshani	-	Technical Officer (Since 23.01.2023)
Mr. SH Karunarathne	-	Lab/Field Attendant

Achievements
Research

- Releasing 04 new sugarcane varieties for commercial cultivation from the 2003 series (SL 03 336, SL 03 983, SL 03 1025, and SL 03 1077).
- Releasing of 09 sugarcane varieties and seedlings of bi-parental crosses after completion of quarantine process and establishment in research farm Uda Walawe for future evaluation.
- Quarantine of 30 sugarcane varieties imported from China, under observations of the Crop Protection division.
- *Ex-situ* conservation of 1,659 sugarcane accessions in duplicate plots at Sugarcane Breeding Station at Enselwatte, Deniyaya, and maintaining the breeder's seed garden with 45 commercial and near-commercial varieties and conservation of 750 sugarcane accessions at the Sugarcane Research Institute, Uda Walawe.
- Five sugarcane varieties (SLI 20 07, SLI 20 09, SLI 20 14, SLI 20 20, SLI 20 23) were selected for large-scale multiplication and evaluation, and 6 varieties (SLI 20 06, SLI 20 12, SLI 20 18, SLI 20 26, SLI 20 30, SLI 20 33) were selected for future observations to Lanka Sugar Company – Sevanagala under foreign variety evaluation project.
- Nine sugarcane varieties from the SL 2002 series and eight varieties from SL 2004 series were selected for large-scale multiplication at Lanka Sugar Company – Sevanagala.
- Performing 766 crosses using field lantern and solution crossing techniques. These crosses are directional for sugar and cane yields improvement and disease resistance (smut, leaf scald and white leaf diseases). Processing of true seeds was completed and stored in refrigerator condition in -20 °C.
- Selection of 1580 clones/varieties with desirable features from stage 1 –Replicated Yield Trial of SL 2019 series – SL 2013 series.
- Conducting final step evaluation in different sugarcane growing areas prior to the large-scale evaluation; 22 from the 2006 series, 24 from the SL 2007 series, 22 from SL 2008 series, 22 from the 2009 series and 19 from the 2010/2011 series.
- Multiplication and maintenance of promising varieties from 2002, 2003, 2005, 2006, and 2007 series for large-scale evaluation and large mill test at Lanka Sugar Company (Private) Limited – Pelwatte, Gal oya plantations (Private)

limited – Hingurana, Lanka Sugar Company (Private) Limited, Sevanagala and Ethimale Plantations (Private) Limited- Siyambalanduwa.

- Completed the evaluation of locally collected accessions in 2018 and 2019. Twenty accessions were identified as suitable parents for directional breeding for cane and sugar yield improvement and one was identified for improvement of pest and disease resistance and one was identified to develop energy cane.
- Few resistance lines were identified for smut resistance through gamma irradiated plant population and future evaluation is to be done for yield components.
- Identification of true hybrid progenies from the cross between *Saccharum* x *Erianthus*

Training of Trainees

- Trained 6 months and supervising the study titled, "Identification of true-hybrids of the *Saccharum officinarum* and *Erianthus arundinaceous* progenies" carried out by Ms. P. J. Chathurya an undergraduate student of the Faculty of Technology, University of Sabaragamuwa for her Bachelor of Biosystem Technology degree.
- Trained 6 months and supervised the study titled "Evaluation of mutated sugarcane (*Saccharum spp*. hybrid) plant population developed through callus culture technique" carried out by Ms. D. G. P. D. Gamage an undergraduate student of the Faculty of Technology, University of Sabaragamuwa for her Bachelor of Bio system Technology degree.
- Supervising the study titled "Assessment of the effectiveness of directional breeding to achieve cane and sugar yield traits" carried out by Ms. G. G. N. Mathishani an undergraduate student of the Department of Agro-technology, University of Colombo for her Bachelor of Agro technology.
- Trained undergraduate student Ms G.K.S.D.Nawaruwan from *CINEC campus*.
- Trained Ms H. M. M. Pathirana, undergraduate from Faculty of Technology, South Eastern University.
- Trained Ms S. A. J. Anumitha, undergraduate from Faculty of Technology, University of Rajarata.
- Trained Ms H. B. H. S. Udawaththa and Ms S. J. Hasanthika students from *National Apprentice and Industrial Training Authority* (*NAITA*) Rajagiriya.
- Trained Ms J. A. Sathsara students from *National Apprentice and Industrial Training Authority* (*NAITA*) Rathnapura.

Staff Training

- Mr K. P. Wickramasinghe, is on leave for the fellowship program in China.

Foreign Visits

- Ms. A.M.M.S. Perera attended to an International Symposium on Sugarcane Breeding at the Sugarcane Research Institute of Guangxi Academy of Agricultural Sciences, PR China

CROP AND RESOURCE MANAGEMENT DIVISION

CROP AND RESOURCE MANAGEMENT DIVISION

Staff

Dr. ALC De Silva BSc (Agric.), MPhil, PhD	-	Senior Research Officer
Mr. LMJR Wijayawardhana BSc (Agric.), MPhil	-	Research Officer-in-Charge
Mr. GAA Chaturanga BSc (Agric.), MSc	-	Research Officer
Mr. PRB Chandrasena BSc (Agric.), MSc	-	Farm Superintendent
Mr. WG Nimal	-	Senior Technical Officer
Mr. IP Manawadu HND (Electronic Engineering)	-	Technical Officer
Mr. DMGH Chathuranga Dip (Agric.)	-	Technical Officer

Achievements

Research

- Conducting large mill test experiment for the newly introduced variety, SL 03 336 at Gal Oya Plantation (Pvt) Ltd, Hingurana.
- Establishment of seedcane multiplication plots and large-scale cultivation for 2003 series newly released varieties at sugar industry sites.
- Identification of the inter-cropping in organic sugarcane fields does not affect the sugarcane yield.
- Initiation of research experiments for mechanical weeding techniques for organic sugarcane cultivation.
- Initiation of scientific investigation on the identification of water management problems in sugarcane plantations in Hingurana.
- Identification of a mathematical model to simulate effective rainfall under a sugarcane land–use system.
- Introduction of deficit irrigation plan for rain-fed sugarcane in Sevanagala,
- Optimising the available mathematical models for characterizing the rainfall-runoff relationship for sugarcane land use in Sri Lanka.

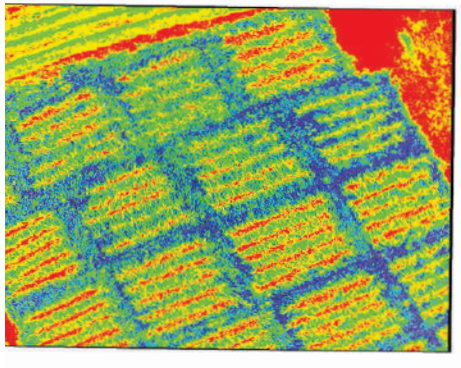
Development

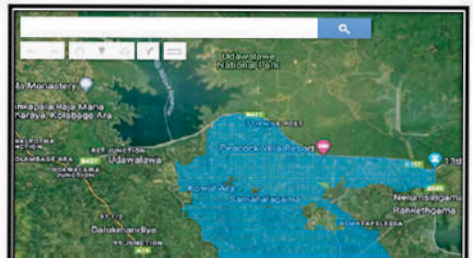
- Expansion of sugarcane cultivations with SL 04 624 variety to farmers' fields in Kilinochchi area.
- Providing technical support to expand sugarcane cultivation to Selvanagar, Konavill and Granthi gramam in Kilinochchi.
- Maintenance of Vannerikulam seedcane nursery.
- Providing technical support on sugarcane cultivation for the Civil Security Department in Viswamadu, Kilinochchi.

Services

- Land preparation of 15 acres for research activities and seed cane nursery in research farm.
- Production of 61 metric tons of compost fertilizer.
- Maintenance of seedcane nursery in research farm.

- Supplying 216 metric tons of factory cane to sugar factory.
- Weed management in the research trial area and along the electric fence and maintenance of the boundary fence around the research farm.
- Supplying other services to relevant divisions according to the requirement.





CROP NUTRITION DIVISION

CROP NUTRITION DIVISION

Staff

Mr. BR Kulasekera BSc (Agric.) MSc (Soil Science)	-	Research Officer-In-charge
Mr. UWLM Kumarasiri BSc (Agric.)	-	Research Officer
Mr. HAS Weerasinghe BSc, MPhil, MI Biol. PhD	-	Research Officer (Up to 17.08.2023)
Mr. GS Udawatte	-	Technical Officer
Ms. WAS Wijesuriya BSc (Agric.)	-	Technical Officer
Ms. MAT Tharika BSc (Agric.)	-	Technical Officer (up to 06.10.2023)
Mr. J Gunasiri	-	Lab/Field Attendant
Mr. PWD Kulatunga	-	Lab/Field Attendant

Achievements
Research

- Developing guidelines for site-specific fertilizer recommendation
- Identification of applicable levels and consequences of direct soil application of bagasse boiler ash on soil and initial plant growth and identified that 2-4 t/ha of boiler ash can be applicable as a soil amendment
- Maintained the ratoon 1 crop to identify suitable combinations of organic fertilizer for sugarcane cultivation.
- Development of digital soil maps and interactive maps for the Sugarcane nursery area of SRI research farm
- Completed the research trials under rain-fed and irrigated conditions to identify the suitability of compound fertilisers for sugarcane cultivation and its identified that for irrigated sugarcane cultivation, a blend of 75% straight fertilizer and 25% compound fertilizer resulted in the highest net income and a benefit-cost ratio, while in rain-fed conditions, using 100% straight fertilizer proved optimal.
- The application of $ZnSO_4$ at a rate of 7.5kg per hectare has been identified as beneficial, leading to improved cane and sugar yields and this practice not only enhances the quality parameters of cane but also serves as an additional income source for both sugarcane farmers and millers, particularly benefiting the SL 96 128 variety.
- Proposal development for addressing soil issues related to Galoya plantations and required interim recommendation for Ethimale plantation
- Identification of the suitability of incorporating UAV-based multispectral image analysis for the determination of sugarcane leaf N content using machine learning techniques
- Successfully launched the "Sugarcane App" Android mobile application
- Completed the development of an expert system for sugarcane nutrient deficiency diagnosis (Sugarcane NDDS)

Services

Cane sample analysis:

- Analysis of 2525 cane samples for brix, pol, fibre (2025 samples for Crop

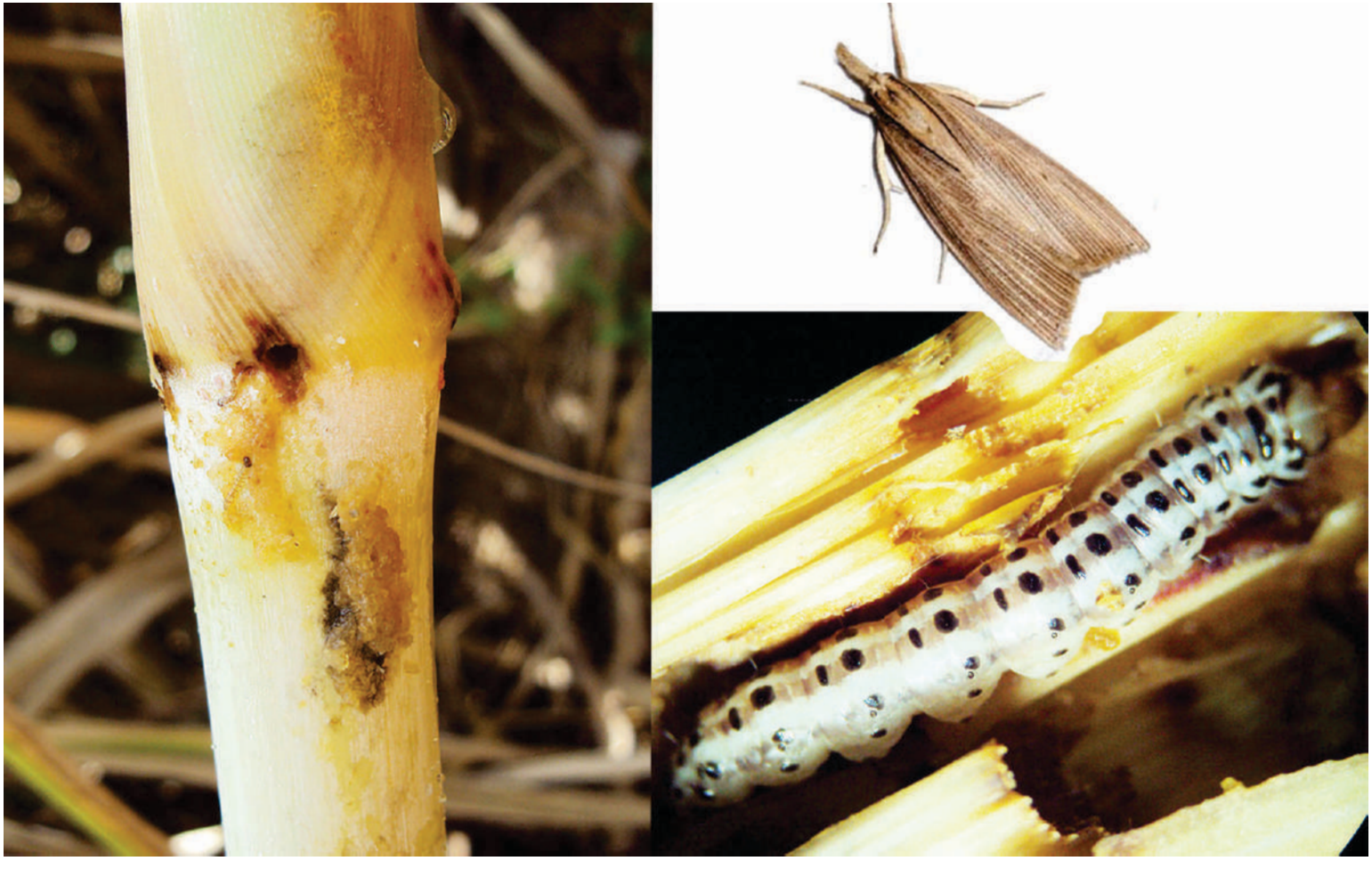
Improvement, 114 samples for Crop and Resource Management, 212 samples for Processing Technology, 173 samples for Crop Protection, 1 sample for Technology Transfer)

Soil/Leaf/fertiliser/other sample analysis

- Soil sample analysis (18) for N, P, K, pH, EC and OM (Crop and Resource Management division and Lanka sugar -Sevanagala)
- Sugar and jaggary sample analysis (for Ash, pH, EC, Colour, Purity - 326) for Processing Technology division
- Compost sample analysis for SLSI parameters (02 samples- For SRI research farm).
- Carried out training programs for Pelwatte, Gal-Oya and Ethimale on management of sugarcane-growing soils for better cane and sugar yields.

Training Trainees

- Two students from the Technical College, Embilipitiya were trained for 6 months at the division.
- One undergraduate student from the Sabaragamuwa University of Sri Lanka completed the final year of research and industrial training at the division.
- Two undergraduates completed their final year research projects from The University of Colombo Institute of Agro-Technology and Rural Sciences (UCIARS)
- One student from the Higher National Diploma in Technology - Agriculture Labuduwa, Galle was trained for 6 months at the division.
- Conducting lectures and training on sugarcane soil fertility management for NIPM/ Universities students as per the request timely.



CROP PROTECTION DIVISION

CROP PROTECTION DIVISION

Staff

Dr. KMG Chanchala BSc (Agric.), MSc, PhD	-	Research Officer -In-Charge
Ms. VKASM Wanasinghe BSc (Sp), MSc, PhD reading	-	Research Officer (Reported duty on November 1st, 2023 after completion of study leave)
Dr. ANWS Thushari BSc (Sp), PhD	-	Research Officer
Mr. ALC Kodagoda (Dip in Agric)	-	Technical Officer
Ms. KP Harshani (Dip in Agric)	-	Technical Officer (Transferred to CI from January 23rd, 2023)
Ms. RKP Jeewanthi Dip in food Sci.,BSc (Plantation Mgt)	-	Technical Officer
Mr. MR Premalal	-	Lab/Field Attendant
Mr. JKU Madushanka (Dip in Plantation Mgt)	-	Lab/Field Attendant
Mr. RGSL Premathilake	-	Lab/Field Attendant

Achievements

Research

- Identifying accessions of *Erianthus arundinaceus* (Retz.) Jeswiet (Poales: Poaceae) which can be used as parents to develop resistant/tolerant sugarcane varieties and as trap crop to develop push-pull strategy against sugarcane Internode Borer; (*Chilo sacchariphagus*, Lepidoptera: Crambidae) in Sri Lanka.

- Developing non-chemical strategies for sugarcane pest management i.e.
  - Incorporation of fresh leaf of Ipil- Ipil (*Leucenea leucocephala*) / Gandapana (*Lantana camara*) / Gliricidia (*Gliricidia sepium*) leaf to the furrows during the time of planting in the rate of 400g/m can effectively manage termite damage during germination and early growth stage.
  - Aques and ethanol extracts of Marigold (*T. erecta*) Linn. flower extract are effective in controlling SWA, WLD vector, and Mealy bug; sucking pests of sugarcane

- Developing repellent gel vaporizers for
  - WLD vector management; marigold, mustard, citronella and lemongrass extracts
  - *Chilo sachariphagus* management ; lemongrass and lantana extracts

- Identifying resistant varieties for termite damage during germination and early growth stage
  - Varieties SL 92 5588 and SL 04 624 are more resistant to termite damage during planting and the early germination stage
  - Varieties SL 96 128, SLI 121, SL 603, SL 89 1673, and SL 92 4918

moderately resistant to termite damage during planting and the early germination stage

- Identifying resistant few Erianthus accession including IK 76 78, as parents for breeding resistant varieties for WLD vector *D. menoni*
- First-time identification of 2 moth borer spp of sugarcane *Scirpophaga incertulas* (Yellow stem borer) and *Ostrinia nubilalis* (European maize borer) which can be a potential threat to sugarcane cultivation in Sri Lanka in future

- Four moth species identified which having miner damages on sugarcane plants instead acting as borers ie. *Chilo suppressalis* (Striped rice stem borer), *Calamotropha paludella* (Bulrush Veneer), *Euproctis similis* (Swan moth) and *Arna pseudoconspersa* (brown tail moth).

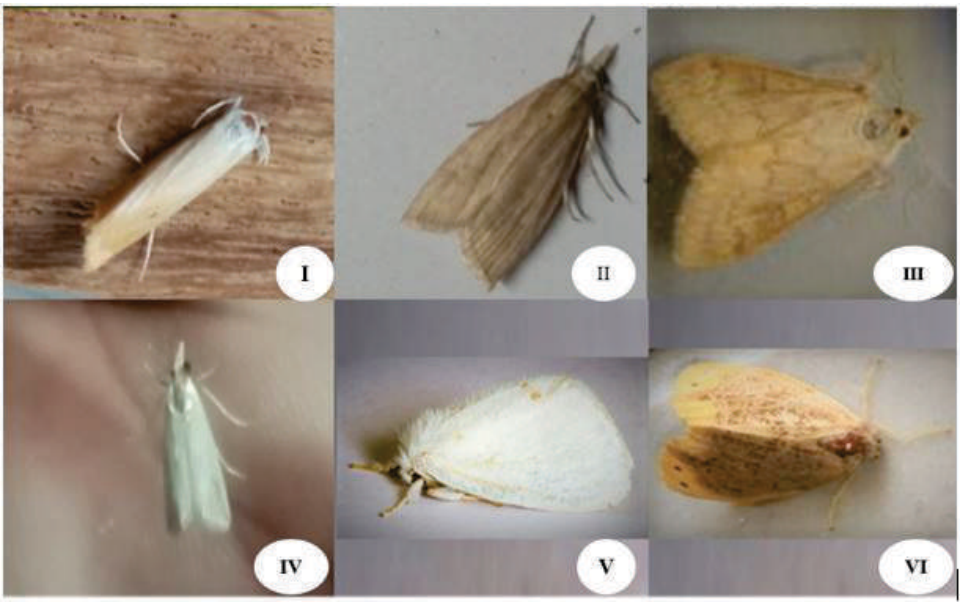


Figure 1: Identified Sugarcane moth borer species and moth species having miner damages on sugarcane plants with reference images; (I). *Scirpophaga incertulas,* (II). *Ostrinia nubilalis,* (III). *Chilo suppressalis,* (IV). *Calamotropha paludella,* (V). *Euproctis similis* and (VI). *Arna pseudoconspersa*

- Identification of 26 resistant sugarcane varieties for smut disease from SL 2014 series and recommending of those 26 varieties for further evaluation in the crop improvement program.
- qPCR results confirmed that SL 00 652 contains the highest phytoplasma titer compared to other tested commercial varieties namely, SL 96128, SL 98 2524, SL 00 354 and Co 775. Furthermore, results confirmed that its disease progression is also at a higher rate.

- A positive relationship was identified between temperature and phytoplasma abundance levels. increasement of 1 ^{0}C of the temperature can increase the phytoplasma level from 177.608 106 µM to 1153694.698 106 µM.

Services

- Twenty-nine varieties imported from PR China in 2020 are being quarantined and regular inspections are continuing.
- Observing the sudden pest and disease appearance in the industries at Sevanagala, Hingurana, Ethimale and Pelwatte.
- Successful completion of "International Workshop on Formulating of Strategies for Management of Sugarcane White Leaf Disease (WLD) in Sugarcane Plantations" in collaboration with Dr.G P Rao an Emeritus Scientist at the Indian Institute of Agricultural Research (ICAR). The funds for the workshop were granted by the Skills Development, Vocational Education, Research & Innovation section of the Ministry of Education in Sri Lanka under Indo – Sri Lanka Joint Research Program-2019, based on the proposal forwarded by A N W Sumedha Thushari, Research Officer in the division of Crop Protection.

Figure 2: During the conduct of the International Workshop on "Formulating of Strategies for Management of Sugarcane White Leaf Disease (WLD) in Sugarcane Plantations

Training Trainees

- Training Mr. R.N.H. Rajapaksha and Mr. G.I.S. Alwis, students of the Faculty of Agriculture, Sabaragamuwa University of Sri Lanka for two months from 9th January to 10th Mach 2023 on entomological and pathological research.
- Training R. H. M. Rubasinghe, students of the Faculty of Agriculture, Eastern University of Sri Lanka for two months from 30th January to 30th Mach 2023 on entomological and pathological research.
- Training Ms. B. H. P. Abhisheka and Ms. G. K. U. Perera, students of the Faculty of Technology, University of Colombo, for six months from 4th July 2023 on entomological and pathological research.
- Supervising Ms. H. C. K. W. Wimalasiri, a final year student of the Faculty of Agriculture, Aquinas College of Higher Studies for her final year project on "Effective plant extract as repellents for Sugarcane White Leaf Disease Vector *Deltocephalus menoni* (Hemiptera: Cicadalidae)".
- Supervising Ms. D. A. N. S. Dissanayaka, a final year student of Open University for her final year project on "Effective plant extract as repellents for moth borer *Chilo sacchariphagus*, (Lepidoptera: Pyralidae)"
- Supervising Ms.S.L.N.Pathirana final year student of Faculty of Technology, University of Colombo, for her final year project on "Variability of available phytoplasma titer in different white leaf disease severity levels in sugarcane varieties grown in selected locations in Sri Lanka".
- Supervising Ms. S. C. Nayomi, a final year student of the Sabaragamuwa University of Sri Lanka for her final year project on "Screening Resistance of

Erianthus accessions for White Leaf Disease (WLD) vector *Deltocephalus menoni* based on their rate of feeding".

- Supervising Ms. H. S. M. Jayalath, a final year student, at the Institute for Agro Technology and Rural Sciences, University of Colombo, for her final year project on "Potential of using *Tagetes erecta* Linn. Flower extract in repelling and controlling Hemipteran pest of sugarcane."
- Supervising Mr. G. P. K. Ramasinghe, a final year student, at the Institute for Agro technology and Rural Sciences, University of Colombo, for his final year project on "Potential of the commercial sugarcane varieties in Sri Lanka to resist termite infestation during the early growth stages."
- Supervising Mr. R. D.S. Keerthi, a final year student, at the Institute for agro-technology and Rural Sciences, University of Colombo, for his final year project on "Potential of using fresh leaves of Lantana, Ipil Ipil, and Gliricidia to manage termite damage in sugarcane during the planting and early growth stages."
- Supervising Mr. A. W. T. B. Yalegoda, a final year student, at the Institute for Agro technology and Rural Sciences, University of Colombo, for his final year project on "Survey on new sugarcane moth borer spices in Uda Walawe and Sevanagala area."

MECHANISATION TECHNOLOGY DIVISION

MECHANISATION TECHNOLOGY DIVISION

Staff

Mr. KHD Abeyratne BSc (Agric.), MPhil	-	Research Officer-In-Charge
Dr. KT Ariyawansha BSc (Agric.), MSc, PhD	-	Research Officer (Up to 17.07.2023)
Mr. ASMA Fernando NDT	-	Senior Technical Officer
Mr. V Abeygunawardane	-	Welder
Mr. G Ariyaratne	-	Fitter
Mr. WA Premachandra	-	Blacksmith
Mr. DML Weerasiri	-	Mechanic
Mr. DM Weerasiri	-	Lab/Field Attendant

Achievements

- Inspected and guided to modify the existing HWT plant at Lanka Sugar Company Limited, Pelwatte
- Completed evaluation of a four-wheel tractor-mounted pellet fertilizer applicator (SRI-FX 401)
- Completed Construction of a four-wheel tractor-mounted Trash cutting machine (Prototype) SRI-TX 401
- Completed evaluation of a four-wheel tractor-mounted drip pipe laying machine (SRI- IRX 401)
- Collected 6,500 spatial data points using UAV
- Continued development of IoT-integrated machinery management system

Services

- Maintaining optimum voltage level of electric fences located at the farm and sugarcane nursery at SRI
- Provision of machinery services required for research
- Maintenance and repair of vehicles and farm equipment of SRI

PROCESSING TECHNOLOGY DIVISION

PROCESSING TECHNOLOGY DIVISION

Staff

Ms. SMTA Maralanda BSc (Agric), MSc	-	Research Officer-In-Charge
Ms. MGGN Sewwandi BSc (Eng.)	-	Research Officer (up to 12.06.2023)
Ms. MARI Perera Dip. (Agric).BSc (Agric)	-	Technical Officer
Mr. WKDS Karunarathna Dip. (Agric)	-	Technical Officer

Achievements

Research

- Development of a formulation for coffee-flavored sugar production
- Development of a formulation for mint-flavored sugar production
- Identified the potential of aloe Vera gel and sago starch as edible coating materials, in combination with LDPE and vacuum packaging, for enhancing the quality of sugarcane jaggery
- Conducting preliminary studies to develop sugarcane bagasse incorporate substrate to quality mushroom production
- Identified ginger extract and lime as natural preservatives for enhancing the shelf life of sugarcane juice.
- Isolated and biochemical characterization of nitrogen-fixing and phosphorus solubilizing bacteria from the soil and root sample collected from Sevanagala sugarcane cultivated fields.
- Development of bagasse incorporated briquettes and pellets as firewood for small-scale jaggery production

Services

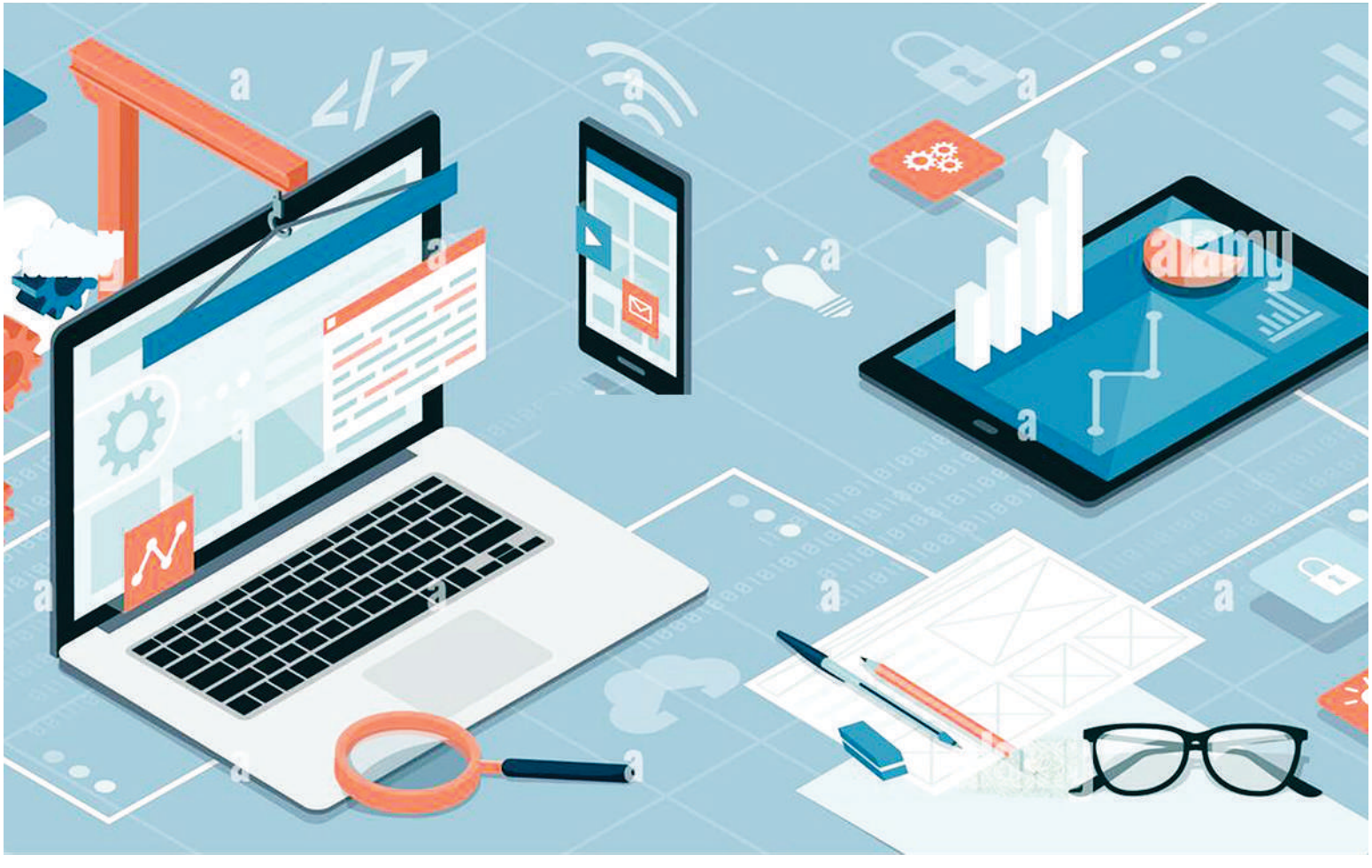
- Conducting a training programme on sugarcane processing and by-products for students of Ruhuna, Sri Jayawardenapura, Sabargamuwa, and Wayamba Universities, and the National Institute of Plantation Management.
- Conducting a training programme on the jaggery manufacturing process for jaggery producers and investors
- Producing 2650 kg of jaggery from the cane harvested at field trials.
- Producing different shapes of jaggery, different flavoured jaggery, sugarcane juice beverage, and sugarcane syrup for exhibition purposes

Training Trainees

- Training Ms. W.S.W Sewwandhi and R.A.D.D Chandula , students of the University of Ruhuna_ for six months from 07th July 2022 on Sugarcane by-product processing research
- Training Ms.,,P.W.M.P Somasiri ,H.W.S.M Rathnasiri,A.K.S.A Thilakarathna student of the Faculty of Technology, Rajarata University, Anuradhapura, for six months from 04th October 2023 on Sugarcane by-product processing research
- Supervising Ms. T. Krishanthini, a final year student of the faculty of

Technology, University of Jaffna for her final year project on "Evaluation Of Natural Preservatives For Enhancing The Shelf Life Of Sugarcane Juice"

- Supervising Mr. S.Sudharshan, a final year student of the faculty of Technology, University of Jaffna for his final year project on" Evaluate the effect of edible coating to improve the shelf life of Sugarcane jaggery"
- Supervising Ms. S. Mirunadharani, a final year student of the faculty of Technology, University of Jaffna for her final year project on "Evaluation of the effect of the post-harvest deterioration of sugarcane for the quality jaggery production"
- Supervising Ms. J.K.R. Gunathilaka, a final year student of the Institute of Agro-Technology and Rural Sciences for her final year project on "Development Of Sugarcane- based coffee flavoured sugar"
- Supervising Ms. H.M.C.N Herath, a final year student of the Department of Agriculture and Food Technology, University of Vocational Technology for her final year project on "Evaluation of the effect of the post-harvest deterioration of sugarcane for the quality jaggery production".
- Supervising Ms S.P Jayawardhana, a final year student of the faculty of Technology, University of Jaffna for her final year project on "Development of mint flavour added value-added sugar
- Supervising Ms S.Ajith Kumar, a final year student of the faculty of Technology, University of Jaffna for his final year project on "Development of bagasse incorporated briquettes and pellets as firewood for small-scale jaggery production"
- Supervising Ms. D.M.N Piumli, a final year student of the Department of Agriculture and Food Technology, University of Vocational Technology for her final year project on "Identifying the post-harvest deterioration of sugarcane in Pelwatte sugar factory premises".



ECONOMICS BIOMETRY AND INFORMATION TECHNOLOGY DIVISION

ECONOMICS BIOMETRY AND INFORMATION TECHNOLOGY DIVISION

Staff

Mr. KAD Kodituwakku BSc (Agric.), MAGR	-	Senior Research Officer and Head
Ms. BDSK Ariyawansha BSc (Agric.), MPhil	-	Senior Research Officer
Mr. KGSUR Bandara BSc, HNDIT, CCNA	-	Technical Officer

Achievements

Research

- Updating the costs and returns of sugarcane cultivation based on the prices of the year 2023. The average cost per hectare of cane cultivated was Rs. 753,953, Rs. 602,982, Rs. 438,085, Rs. 582,000 and Rs. 431,350 for Sevanagala irrigated and rain-fed sectors, Pelwatte, Hingurana and Ethimale respectively. The average net income from one hectare of sugarcane per year at Sevanagala was Rs253,547 and 104,518 under irrigation and rain-fed respectively. At Pelwatte under rain-fed and Hingurana under irrigation, the net income was Rs91,915/ha/year and 158,000/ha/year respectively, and that at Ethimale under rain-fed was Rs. 68,650/ha/year.
- Estimating the commercial value of a tonne of sugarcane at Sevanagala, Pelwatte, Gal-Oya and Ethimalae sugar industries during the year 2022 as Rs. 57,875, Rs. 56,702, Rs.65,389, and Rs. 69,569 respectively. Accordingly, the commercial value of sugarcane produced from one hectare of land in the irrigated sector Sevanagala, rain-fed sector Pelwatte, Gal-Oya and Ethimalae 2022 were Rs. million 5.8, 3.0million, 4.8 million and 3.5 million respectively, and it was much higher than the income of competitive crops.
- Estimating the quantity and the value of sugar imports during the year 2022 were 460,000 tonne and Rs. 83 billion respectively.
- Estimating the total value of the sugarcane industry as Rs.47 billion and it was nearly 0.14% of the GDP.

Services

- Re-designing the website of SRI hosted under the URL of www.sugarres.lk/ and updating it as and when required.
- Publishing the 4th issue of the "Sugarcane Sri Lanka" journal.

- Providing the following biometry-related services to other divisions of SRI:
    I. Comprehensive evaluation of SL 2003 series varieties based on factory performance, maturity, adaptability & grower preference and give recommendations for releasing four new sugarcane varieties.
    II. Evaluation of performance of stage i, stage ii, PYT, RYT, and adaptability trials of SL 2004 series varieties for releasing them to

Sevanagala sugar industry for further evaluation

III. Analysis of RYT and PYT data of the crop improvement program
IV. Data tabulation of Stage iii, RYT and PYT data of the crop improvement program, and analysis of data received from crop protection, crop nutrition and processing technology division
V. Design of research trials conducted during 2023

- Provide necessary guidance and support for designing conducting, data analysis and report writing of the following projects
    I. Evaluation of the suitability of compound fertilizers for sugarcane cultivation in Sri Lanka
    II. Study on post-harvest deterioration of variety SL 96 128 at Pelwatte sugar industry
    III. Study on optimum temperature for juice clarification process at Pelwatte sugar factory

- Implementation of IT activities within the institute
- Preparing the INFORM database of SRI for the year 2022 for the Sri Lanka Council for Agricultural Research Policy.
- Prepare the database for the National Review of the Status of Science and Technology in Sri Lanka for years 2021 and 2022- NASTEC
- Training five students from the National Apprentice and Industrial Training Authority (NAITA) on the use of computer software packages for a period of six months.

TECHNOLOGY TRANSFER AND DEVELOPMENT DIVISION

TECHNOLOGY TRANSFER AND DEVELOPMENT DIVISION

Staff

Mr. DPW Pottawela BSc (Agric.), PG. Dip. (BA)	-	Technology Transfer Officer-In-Charge
Mr. WGMS Weragoda BSc (Agric.), MSc	-	Development Officer
Mr. MKPC Gunawardene BSc (Agric.), MSc	-	Development Officer
Mr. AP Karunathilaka BSc (Agric.)	-	Development Officer
Mr. ANMBR Prabath BSc (Agric.)	-	Development Officer
Mr. BPGS Sandanayake Dip. (Agric.)	-	Senior Technical Officer
Mr. G Somaweera	-	Management Assistant

Achievements

Technology Transfer / Development Activities

- In the year 2023, the TTD division conducted/coordinated 15 training/awareness program on sugarcane cultivation and related subject areas for the sugar industry personnel. A total of 578 persons have participated for these. In addition, on the request of various stakeholders of SRI, the division conducted 18 trainings, awareness programs. A total of 877 personnel (students, entrepreneurs etc..) have participated for them **(In conducting these training/awareness programs, the assistance of the relevant research divisions were obtained where necessary)**

- An observational field was established on planting methods to observe the effect of the method of planting for an even plantation without yield loss.

- Continuing SRI TTD *eSMS* service for transfer extension messages between researchers, extension officers and farmers in the sugarcane sector. Continuing the sharing of sugar industry information though the SRI FB page and updating SRI website. In addition, the reprinting of two advisory pamphlets (WLD and Jaggery Production), publishing two volumes of the SRI Newsletter (*Puwath Hasuna* of SRI), publishing of Sugarcane Journal vol 4, and two annual reports for the years 2021, and 2022 were completed. In addition, the TTD division produced a 10 min video clip of the Sugarcane Variety Development Program.
- Formed a WhatsApp group with all agricultural staff members of LSC (Pelwatte/Sevanagala), and Ethimale Plantations (Pvt) Ltd. to make communication/extension easier

In the training programs/demonstrations for farmers, field officers and students, and in the development programs, the prioritized technological aspects/subject areas and activities covered were;

Promotion of technologies on sugarcane farming systems, processing, and by-product utilization

- Establishment and maintenance of approximately 1ha of demonstration/multiplication plots of recommended sugarcane varieties at SRI's Research Farm. These fields were used for demonstration purposes. Harvest of these plots were provided to sugar companies for further multiplication.
- Established and are being maintained a multiplication plot of 0.5 ha with the variety of Co 775.
- Carried out 142 farmers/fields visits (24 – Pelwatte/Monaragala, 64 at Siyambalanduwa / Ethimale, 32 at Hingurana, and 20 at Sevanagala)

The observational-field-trial on Planting Techniques (methods)

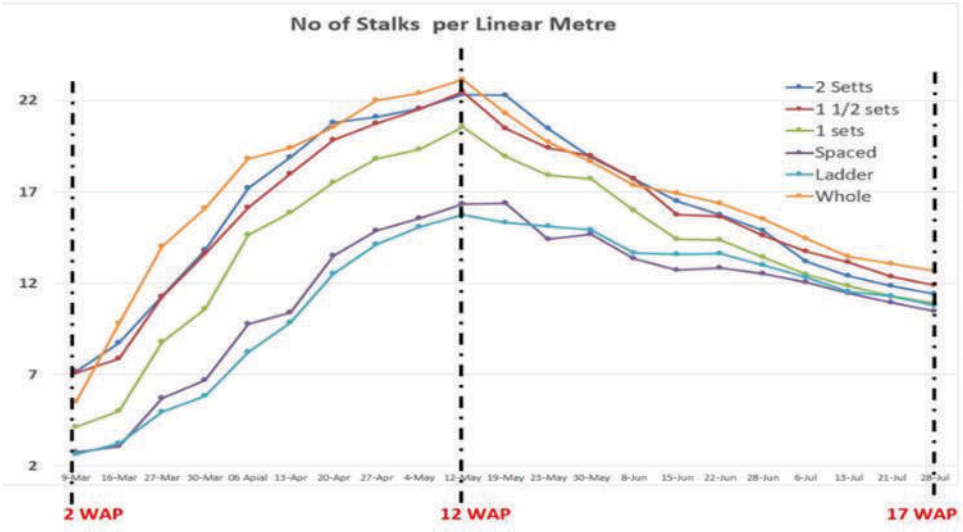
In local sugarcane plantations, the growers practice different methods of planting. At the same time, it has been observed that the amount of seedcane being used is very much high against the recommended levels. This may be due to many such reasons as:

- Quality of seedcane
- Time availability
- High cost of labour
- Negligence, etc.

In this context, it is important to understand the pattern of tillering of each method of planting and to reduce the amount of seedcane used without significant yield loses. With this background, the TTD division established an observational field trial to observe the effect of the method of planting on an even plantation and yield.

Results:

The pattern of tillering (explained by no. of stalks in a linear meter) is shown in



Required seedcane amount for each planting method, no. of stalks per linear meter at 2 WAP, 12 WAP, and 17 WAP, and the yield (at 10 months) per ha are mentioned in the table below.

Method of Planting (Variety – SL 00 652, Location – SRI's Research Farm)	The required amount of Seedcane (t/ha)	No. of Stalks per Linear metre			Yield at 10 Months (t/ha)
		2 WAP	12 WAP	17WAP	
1. Double-Setts planting	14	7	20	12	97
2. 50% overlapped	11	7	19	12	99
3. End-To-End method	7	4	18	11	98
4. Spaced planting (3 setts/m)	4	2	14	11	96
5. Ladder system (3 setts/m)	4	2	15	11	94
6. Planting of Whole-Stalks	14	5	19	13	98

WAP – Weeks After Planting

It was observed that there is no effect of planting technique on the yield. Though, some plots showed a high density of plants at the initial stages, in the end, all plots look like an even plantation.

Based on the above observational trial, it can be recommended that the End-to-end method, Spaced planting and Ladder systems are the methods of planting that are most suitable **(Note: These results should be researched further)**

Training/Awareness Program Conducted/Coordinated by TTD Division

Training/Awareness Pr ogram Conducted/Coordinated by TTD Division

Date	Program/Subject Areas Covered	To whom	No. of Participants	Venue
31.01.23	Sugarcane varieties, Agronomic Practices, P&D Management, Soil nutrition, Cane quality management, Sugarcane mechanisation	Newly recruited agricultural staff members of LSC (Pelwatte)	32	SRI
01.02.23	Varietal evaluation – 2004 series	Officers and famers	29	Ethimale
02.02.23	All aspects of sugarcane cultivation	Leading farmers from Galoya Plantations (Pvt) Ltd.	70	SRI
07.02.23	All aspects of sugarcane cultivation	Leading farmers from Galoya Plantations (Pvt) Ltd.	65	SRI

08.02.23	Pest and Disease management in sugarcane cultivation	Agric. Staff of LSC (Sevanagala)	35	SRI
10.02.23	Variety evaluation – 2004 series	Agric. Staff of LSC (Sevanagala)	25	Sevanagala
16.02.23	Variety evaluation – 2004 series	Agric. Staff of Galoya Plantations (Pvt) ltd	25	Hingurana
23.03.23	Adult education and communication	Field staff of Ethimale Plantations (Pvt) ltd – Siyambalanduwa OG division	35	Siyambalanduwa
28.03.23	Variety evaluation – 2002, 2003, 2004 series	Agric. Staff members and farmers of LSC (Pelwatte)	25	Pelwatte
31.03.23	Establishment of demonstration on planting methods	Officers and farmers	33	Siyambalanduwa
07.06.23	All aspects of sugarcane cultivation	SDs/ASDs of LSC (Pelwatte) and Officers from JEDB	25	SRI
14.08.23	All aspects of sugarcane cultivation	Students from Technical College, Moneragala	35	TEC - Moneragala
04/05.10.23	All aspects of sugarcane cultivation	Agric. Staff members of Ethimale Plantations (Pvt) Ltd.	55	Ethimale
Total	**15**		**578**	

Note: In conducting these training/awareness/demonstrations and SRI visits, the assistance of the relevant division was obtained whenever necessary.

Development of cottage-level sugar industry (Badulla district)

- Conducted 8 field visits at Baduula district and provided necessary instructions for the improvement of cottage-level sugar industries in the area.
- Conducted 3 one-day training programs of sugarcane jaggery/syrup production at the request of 14 entrepreneurs from different areas.

Sugarcane Nursery Development (Kantale)

- Maintained about 6 ac of previously established multiplication nurseries (Continued)
- 108 t of harvested cane was sold to Watawala Plantations (Pvt) ltd, for use as animal feed.

Sugarcane Nursery Development (Sevanagala, Pelwatte, Ethimale, and Hingurana)

- Established and maintained 1.2ha of cane land with the variety of SL 00 652 at SRI farm.
- Maintained previously established varietal demonstration plots with all recommended sugarcane varieties at the SRI research farm.

- With the aim of popularising SRI-recommended varieties in commercial cultivation and increasing the varietal spectrum in the local sugarcane plantations, the division distributed newly/old recommended sugarcane varieties to the farmers as well as to sugar companies as detailed in the table below.

Date	Variety	Amount (t)	To whom	Remarks
06.10.23	SL 00 652 SL 00 354	7.5 1.5	Ethimale Sugar Company	
20.10.23	SL 00 652	5.5	Siyambalanduwa	
25.10.23	SL 00 652	5.5	Lanka Sugar Company (Pelwatte) VP Dharmadasa – BT 2/143	
31.10.23	SL 00 652	4.5	Lanka Sugar Company (Sevanagala)	
07.11.23	SL 00 652	6.0	Lanka Sugar Company (Pelwatte) WMHG Kumara – BT 3/297	
15.11.23	SL 00 652	6.0	Ethimale	
17.11.23	SL 00 652	6.0	Hingurana	
23.11.23	SL 88 116	6.0	Siyambalanduwa	
29.11.23	SL 03 1025	7.2	Kodayana	
30.11.23	SL 03 1025	5.6	Siyambalanduwa	
06.12.23	SL 00 652	7.2	Ethimale	

Information and Promotion Centre (I&PC) – Colombo

- Sugar-related products, which were produced by SRI, were kept at the centre for demonstration purposes.
- 460kg of cane jaggery and 18L of syrup were sold at the centre

Requested Programs by the Stakeholders, and Other Programs

In addition to the training conducted and detailed in the table below, the following activities were done.

- Printed/Published SRI Newsletter 12 – 1
- Printed/Published SRI Newsletter 12 – 2
- Re-printed the advisory leaflet – Production of Jaggery and Syrup
- Re-printed the advisory leaflet – White Leaf Disease
- Printed/published SRI Annual Report – 2021
- Printed/published SRI Annual Report – 2022
- Printed/published Sugarcane Sri Lanka Journal (Vol. 04)
- Regular updates of SRI Web, YouTube Channel, FB Page
- Made a 10 min video clip on Sugarcane Variety Development Program
- Formed a WhatsApp group with all agricultural staff members of LSC (Pelwatte/Sevanagala), and Ethimale Plantations (Pvt) Ltd. to make communication/extension easier

Demanded Programs by Stakeholders

Date	Program/Subject Areas Covered	To whom	No. of Participants	Venue
10.01.23	Jaggery and syrup production	A team of entrepreneurs, Embilipitiya	04	SRI
09.02.23	All aspects of sugarcane cultivation	Students from F/AG - UoR	150	SRI
08/09.03.23	All aspects of sugarcane cultivation and processing	Students from NIPM	20	SRI
23/24.05.23	All aspects of sugarcane cultivation and processing	Students from NIPM	10	SRI
24.05.23	Jaggery and syrup production	Entrepreneurs from Hanguranketha	3	SRI
25.05.23	All aspects of sugarcane cultivation and processing	Students of University College, Ratmalana	30	SRI
13.06.23	All aspects of sugarcane cultivation and processing	Students of Agriculture Faculty of UoC - Weligatte	25	SRI
16.06.23	All aspects of sugarcane cultivation and processing	Students of Agriculture Faculty of UoS - Belihuloya	23	SRI
01.09.23	All aspects of sugarcane cultivation and processing	Students of Agriculture School - Karapincha	28	SRI
04.09.23	All aspects of sugarcane cultivation and processing	Students of the faculty of Technology of UoSJ	45	SRI
11/12/13.09.23	All aspects of sugarcane cultivation and processing	Students of Agriculture Faculty of UoC - Weligatte	175 – 3 batches	SRI
27.09.23	All aspects of sugarcane cultivation and processing	Students of the Faculty of Technology of UoSJ	50	SRI
17.10.23	All aspects of sugarcane cultivation and processing	Students of F/AG – UoP	35	SRI
23.10.23	All aspects of sugarcane cultivation and processing	Students of NIPM	25	SRI
09.11.23	All aspects of sugarcane cultivation and processing	Students of the Faculty of Food Science of UoW	19	SRI
08/09.11.23	Mechanisation of sugarcane cultivation	Students of NIPM	16	SRI
08/09.11.23	All aspects of sugarcane cultivation	Students of NIPM	23	SRI
20.12.23	All aspects of sugarcane cultivation and processing	A group of students from F/AG - UoR	196	SRI
Total	**18**		**877**	

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ADMINISTRATION AND FINANCE DIVISION

ADMINISTRATION AND FINANCE DIVISION

Staff

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Ms. JKH Jayasekara	-	Development Officer
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Ms. MMIMK Manikkadawara	-	Management Assistant (Clerical & Typing)
Ms. OU Subasinghe	-	Management Assistant (Clerical & Typing)
Mr. WA Sameera Madhushanka	-	Management Assistant (Clerical & Typing)
Ms. AK Rathnayake	-	Telephone Operator/Receptionist
Mr. JPSP Karunathilaka	-	Driver
Mr. TPK Jayarathna	-	Driver
Mr. HSA Susantha Kumara	-	Driver
Mr. GWMPS Manawadu	-	Driver
Mr. AM Wijayarathna Banda	-	Driver
Mr. WMAK Priyashantha	-	Driver
Mr. KD Manjula Abeysiri	-	Driver
Mr. HMASK Herath	-	Driver

Administration - Colombo

Ms. MAR Samarasekara	-	Senior Management Assistant (Clerical & Typing)

Maintenance Unit

Mr. GSK Dahanayake BSc	-	Works Superintendent
Ms. DHS Wijesinghe	-	Inspector of Works
Mr G Gamage	-	Electrician
Mr. RP Kulathunga	-	Carpenter
Mr. KH Weerarathne	-	Water Pump Operator

Accounts Section

Ms. DMJN Dissanayake BCom, MBS	-	Accountant
Mr. IB Kodagoda BSc	-	Accounting Officer
Mr. WCJ Wanigarathna	-	Development Officer
Ms. PAR Chathurani	-	Development Officer
Ms. THGDM Dayarathna	-	Development Officer
Ms. KANM Kuruppu	-	Development Officer
Ms. AK Amarakoon	-	Senior Management Assistant (Accounts)
Mr. T Ranjith Peiris	-	Management Assistant (Accounts)

Procurement Unit

Mr. AGUS De Silva HNDA	-	Procurement Officer

Mr. BBAR Beruwala	-	Development Officer
Ms. Sanoja Damayanthi	-	Development Officer
Ms. TS Weerasinghe	-	Management Assistant (Accounts)

Store

Mr. RGS Niroshana	-	Store Keeper

Internal Audit Unit

Mr. IJ Paranagamage HNDA	-	Internal Auditor
Mr. DMP Nickson	-	Senior Management Assistant (Accounts)

Summary of the activities carried out during the year 2023

- Preparation of budget, annual accounts and progress reports.
- Carrying out day-to-day administration, personnel management, maintenance and welfare activities and staff training according to the requirements of the research and development activities of the Institute.

Staff strengthening and motivation

Staff turnover during the year 2023

Retirements

Mr. K Dayawansha	-	General Worker	02.02.2023
Mr. HP Chandrawansha	-	Water Pump Operator	14.02.2023
Mr. DH Dharmadasa	-	Water Pump Operator	13.03.2023
Mr. MAG Ranasinghe	-	General Worker	21.09.2023

Resignations

Ms. WMPLK Karunathilake	-	General Worker	03.02.2023
Mr. DRP Bandara	-	General Worker	29.04.2023
Mr. KG Nimal Aththanayake	-	General Worker	22.05.2023
Ms. MGGN Sewwandi	-	Research Officer	12.06.2023
Ms. MAT Tharika	-	Technical Officer	06.10.2023

Vacation of Post

Dr. KT Ariyawansha	-	Research Officer	12.07.2023
Mr. BGS Chinthaka	-	Lorry/Bus Cleaner	28.07.2023
Dr. HAS Weerasinghe	-	Research Officer	17.08.2023

Staff Training

Training Programs/Workshops/Seminars Attended (Local)

- Conducted a training programme to all staff on Fire Prevention and Fire Extension conducted by Safeguard Training and Consultancy Services on 23rd March 2023

- Ms. O.N.S. Weerarathna, Development Officer participated the workshop on Telephone Skills and Etiquette Training for 21st and 22nd June 2023.
- Mr. K.A.D. Kodituwakku, Senior Research Officer participated the workshop on Preparation of Two day workshop on Performance Appraisal & Setting KPI's at Skill Development Fund on 20th and 21st July 2023.
- Ms. A.N.W. Sumedha Thushari, Research Officer participated the one day certificate course in Phytosanitory certificate programme at Sri Lanka Institute of Agriculture, Peradeniya on 22nd July 2023.
- Mr. M.K.P.C. Gunawardene, Development Officer participated the workshop on Project Management at Skill Development Fund on 7th and 8th November 2023.
- Mr. P.G. Indika, General Worker participated the 21/2 month Training programme on Photography at Image Art Academy (Pvt) Ltd from 20th November.

Staff Training

Long-Term Training (Foreign)

1. Mr. K.P. Wickramasinghe (Research Officer) participated an one year training programme of Study on flowering controllable of sugarcane breeding parents at Yunnan Agriculture Science Academy from 25.10.2022 to 24.10.2023.

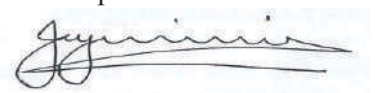
Long-Term Training (Local)

1. Mr. A.P. Karunathilaka (Development Officer) continued his MSc Degree in Development Communication and Extension at the Post Graduate Institute of Agriculture, University of Peradeniya.
2. Mr. L.M.J.R. Wijayawardena (Research Officer) continued his PhD in Water Management at University of Ruhuna.
3. Mrs. A.N.W. Sumedha Thushari (Research Officer) continued her PhD in Molecular and Applied Microbiology at the University of Peradeniya.
4. Mrs. V.K.A.S.M. Wanasinghe (Research Officer) continued her PhD in Plant Protection at University of Peradeniya.

AUDIT AND MANAGEMENT COMMITTEE REPORT 2023

The audit activities of the year 2023 have been carried out according to the internal audit plan and 02 audit and management committee meetings have been held during this year, one per quarter. In those audit and management committee meetings, the deficiencies pointed out by the National Audit Office in the form of audit queries, as well as the audit queries by the internal audit department, the deficiencies pointed out in the reports and the necessary guidance to correct the relevant deficiencies and the expected goals of the institution. Moving towards, performing and giving guidance, forwarding the reports of the audit and management committee meetings to the governing body, where by further discussing the matters, obtaining the necessary advice for the formal maintenance of the administrative, accounting and other departments of the organization. By giving, it has been possible to carry out the work of the institution in a formal manner.

In addition to this, in accordance with the established internal control system of the institution, the financial regulations, the institution code and the circulars issued by the government from time to time, to maintain the activities of the institution and to provide the necessary information for the board of governors to make decisions and fulfill the tasks of the corporate audit and management committee during the relevant period.



Indike Paranagamage
Internal Auditor
Sugarcane Research Institute
Udawalawa

AUDITED FINANCIAL STATEMENTS

SUGARCANE RESEARCH INSTITUTE
STATEMENT OF FINANCIAL POSITION

As at 31st December 2023 (Rs.)

	Note	2023	2022-Re-Stated	2022
ASSETS				
Current assets				
Cash and cash equivalents	1	65,759,469.85	49,333,614.84	49,333,614.84
Trade and other receivables	2	46,134,519.16	54,249,416.37	54,249,416.37
Consumables stock		31,004,735.02	34,805,111.35	34,805,111.35
Prepayments & other deposits	3	764,475.00	764,475.00	764,475.00
Fixed Assets Stock		170,938.76	11,371,142.05	11,371,142.05
		143,834,137.79	**150,523,759.61**	**150,523,759.61**
Non-current assets				
Investment	4	70,656,486.89	69,276,486.89	69,276,486.89
Property, plant and equipment	5	91,248,486.88	134,331,198.57	134,331,198.57
Lands & buildings	5	417,512,204.04	440,577,081.54	440,577,081.54
		579,417,177.81	**644,184,767.00**	**644,184,767.00**
Total assets		**723,251,315.60**	**794,708,526.61**	**794,708,526.61**
LIABILITIES				
Current Liabilities				
Payable	6	782,253.58	13,854,595.35	13,854,595.35
Accrued expenses	7	8,883,445.30	22,776,079.06	22,776,079.06
		9,665,698.88	**36,630,674.41**	**36,630,674.41**
Non-current liabilities				
Provision for medical (Schedule 08)		4,143,309.34	9,095,070.19	9,095,070.19
Provision for audit fee		800,000.00	1,000,000.00	1,000,000.00
Provision for gratuity	8	93,580,672.50	76,734,415.00	76,734,415.00
Provision for doubtful debts		805,969.28	803,980.24	803,980.24
Advance Receipts	8.1	819,839.00	1,894,000.00	1,894,000.00
		100,149,790.12	**89,527,465.43**	**89,527,465.43**
		109,815,489.00	**126,158,139.84**	**126,158,139.84**
Total Net Assets		**613,435,826.60**	**668,550,386.77**	**668,550,386.77**
NET ASSETS/EQUITY				
Reserve-Retain Earnings(Accumulated fund)		127,600,304.52	201,984,955.14	193,156,497.18
Surplus/(Deficit) for the Period		(49,180,085.96)	(68,450,176.41)	(11,259,995.95)
Revaluation Reserve		535,015,608.04	535,015,608.04	486,653,885.54
Total Net Assets/Equity		**613,435,826.60**	**668,550,386.77**	**668,550,386.77**

SUGARCANE RESEARCH INSTITUTE
STATEMENT OF FINANCIAL PERFORMANCE

For the Year Ended 31st December 2023 (Rs.)

	Budget	Note	2023	2022-Re-Stated	2022
OPERATING REVENUE					
Treasury fund					
-Capital	30,000,000		28,000,000.00	11,500,000.00	11,500,000.00
-Recurrent	262,151,400		258,096,000.00	251,030,000.00	251,030,000.00
Treasury Grant for Ministry Project			-	5,111,880.18	-
Cess on local sugar production (Additional Note 1.2)	8,000,000		6,609,400.00	7,886,941.00	8,978,686.00
Other income	17,000,000	9	23,346,272.15	15,295,185.52	22,707,144.48
Total operating revenue	**317,151,400**		**316,051,672.15**	**290,824,006.70**	**294,215,830.48**
OPERATING EXPENSES					
Personnel emoluments	196,351,400	10	206,714,753.45	198,278,050.64	198,278,050.64
Travelling & subsistence	1,936,400		1,083,038.54	995,616.31	995,616.31
Foreign visits	470,000		206,729.63	-	-
Supplies and consumables	3,980,665	11	4,486,927.40	5,942,484.54	5,942,484.54
Maintenance	28,876,735	12	27,734,208.84	22,026,228.97	21,701,474.97
Contractual services	27,118,000	13	39,757,300.87	34,614,155.02	34,614,155.02
Research & development	17,986,900	14	11,818,559.81	7,415,298.39	2,303,418.21
Depreciation and amortization expenses			71,771,797.80	88,153,729.65	39,792,007.15
Other operating expenses	3,431,300	15	1,606,699.95	1,611,384.65	1,611,384.65
Doubtful Debts			1,989.04	189,077.26	189,077.26
Total operating expenses	**280,151,400**		**365,182,005.33**	**359,226,025.43**	**305,427,668.75**
Surplus/(Deficit) from operating activities			(49,130,333.18)	(68,402,018.73)	(11,211,838.27)
Finance cost			49,752.78	48,157.68	48,157.68
Total non-operating revenue (expenses)			(49,180,085.96)	(68,450,176.41)	(11,259,995.95)
Net surplus / (Deficit)before extraordinary items					
Net surplus / (Deficit) for the period			**(49,180,085.96)**	**(68,450,176.41)**	**(11,259,995.95)**

The governing body of the 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 7 to 11 and notes on the pages 12 to 17 from an integral part of these financial statements. The Board of Governors is responsible for preparation and presentation of these financial statements. These financial statements were approved by the Board of Governors and signed on their behalf:

Dr. M. S. Perera
Director/ Chief Executive Officer

Ms. D.M.J.N. Dissanayake
Accountant

On behalf of the Board of Governors of Sugarcane Research Institute:

Mr. Tissa Sunil Ratwatte
Chairman of the Board

Mrs. Anoja Herath
Member of the Board

Ms. H.G.V.K.T. Gunawardena
Member of the Board

SUGARCANE RESEARCH INSTITUTE
STATEMENT OF CHANGES IN EQIUTY

For the Year Ended 31st December 2023 (Rs.)

Description	Revaluation Reserve	Retained Earnings/(Translation Reserve)	Total Asset/Capital
Balance as at 1st January 2023	**486,653,885.54**	**181,896,501.23**	**668,550,386.77**
Adjustment of Re-stated (J-88-2022.12.31)	48,361,722.50	(48,361,722.50)	-
Re-Stated Balance as at 1st January 2023	**535,015,608.04**	**133,534,778.73**	**668,550,386.77**
Changes in Accounting Policies	-	-	-
Prior-Year adjustment (Additional Note 1.1)		(5,934,474.21)	(5,934,474.21)
Re-Stated Balance	**535,015,608.04**	**127,600,304.52**	**662,615,912.56**
Revaluation Surplus/(Deficit) for the Period	**-**	**-**	**-**
Surplus/(Deficit) for the Period		(49,180,085.96)	(49,180085.96)
Balance as at 31st December 2023	**535,015,608.04**	**78,420,218.56**	**613,435,826.60**

SUGARCANE RESEARCH INSTITUTE
STATEMENT OF CASH FLOW

For the Year Ended 31st December 2023

(Rs.)

	2023	2022-Re-stated	2022
Surplus/(deficit) from ordinary activities	**(49,180,085.96)**	**68,450,176.41**	**(12,021,379.95)**
Non-Cash movements			
Depreciation	71,771,797.80	88,153,729.65	39,792,007.15
Provision for Gratuity	16,846,257.50	(3,403,480.00)	(3,403,480.00)
Provision for Medicals	(4,951,760.85)	(5,320,902.60)	(5,320,902.60)
Provision for Audit fees	(200,000.00)	189,077.26	189,077.26
Provision for Doubtful debts	1,989.04	-	
Prior - Year adjustment	(5,934,474.21)	1,327,940.70	(1,327,940.70)
Writing off value of assets (note)**	7,820,061.00	3,290,414.77	
Operating profit/(Loss)before working capital Changes	**36,173,784.32**	**15,786,603.37**	**17,907,381.16**
Increase / Decrease in Payables	(13,072,342.29)	(7,945,437.37)	(7,945,437.37)
Increase / Decrease in stock	3,800,376.33	(3,805,226.62)	(2,882,161.70)
Increase / Decrease in Accrued expenses	(13,892,633.72)	5,944,659.06	5,944,658.97
Increase / Decrease in fixed assets stock assets	11,200,203.77	(6,992,943.91)	(10,798,170.53)
Increase / Decrease in trade and other receivable	8,114,897.21	(9,928,172.00)	(9,928,172.00)
Increase / Decrease in advance receipts	(1,074,161.00)	1,894,000.00	1,894,000.00
Increase / Decrease in prepayments and other deposits		99,500.00	99,500.00
Net cash flow from / (used) in operating activities	**(4,923,659.70)**	**(20,733,620.84)**	**(23,615,782.63)**
Cash flows from / (used) in investing activities			
Purchase of Treasury bills	(1,380,000.00)	(1,211,455.04)	(1,211,455.04)
Purchase of property plant and equipment's	(13,444,269.61)	-	
Net cash flow from / (used) in investing activities	**(14,824,269.61)**	**(1,211,455.04)**	**(1,211,455.04)**
Cash flows from / (used) in financing activities			
	-		-
Net cash flow from / (used) in financing activities	-		-
Net increase / decrease in cash and cash equivalents	**16,425,855.01**	**(6,158,472.51)**	**(6,157,694.81)**
Cash and cash equivalents at the beginning of the year	49,333,614.84	55,492,087.35	55,492,087.35
Cash and cash equivalents at the end of the year	**65,759,469.85**	**49,333,614.84**	**49,334,392.54**
Analysis of the balance cash & cash equivalents shown			
Bank balance	**65,759,469.85**	**49,333,614.84**	**49,333,614.84**
Treasury bill deposit	**6,220,300.00**	**4,840,300.00**	**4,840,300.00**
Fixed deposits (Gratuity Investment)	**64,436,186.89**	**64,436,186.89**	**64,436,186.89**
Total	**136,415,956.74**	**118,610,101,73**	**118,610,101.73**

Note to the 2023 F/A**

Written off assets value	**(1,540,661)**
Opening value correction	**(6,279,400)**
Correction of the asset value	**(7,820,061)**

SUGARCANE RESEARCH INSTITUTE
NOTES TO THE FINANCIAL STATEMENTS

1.1 Prior-year adjustment – 2023

The previous year adjustment consists of following	Rs.
Arrears Distress Loan Interest Adjustment (731-K.M.A.Chaminda)	5,108.40
Correction of the creditor entries 2022	(1,540,661.00)
Correction of the Additional/Removal of assets Value 2022	(6,279,400.00)
Cheques Cancellation (010490/011907/013160)	3,350.00
Revers Journal-Cheques Cancellation (010490/011907/013160)	(3,350.00)
Accrued A/C Adjustment	1,618.68
Accrued A/C Adjustment	1,255,827.23
Adjustment of Creditor A/C -2618 - Chandra Stores	100,850.00
Adjustment of 2560,2566,2568 Deposit A/C	(6,500.00)
Adjustment of 2638-1 Stamp Duty A/C (Cheque Cancel)	(25.00)
Revers Journal l- Adjustment of 2560,2566,2568 Deposit A/C	6,500.00
Adjustment of Medical Balance (Removal of balance of Retired Employees)	121,489.66
Adjustment of Medical Balance (Withdrawal of payment made from the medical balance)	397,367.82
Adjustment of 2654-Cheques Cancellation A/C	3,350.00
Total	**(5,934,474.21)**

1.2. Cess on local sugar production

Cess on local sugar production has been added to 2023 final accounts on accrual basis. The receivable amounts of the local cess amount from the local sugar production as at 31.12.2023 indicated in the below table.

Description	Sugar Companies				
	Total	**Pelwatte**	**Sevanagala**	**Gal Oya**	**Ethimale**
Balance as at 01.01.2023	9,733,941.00	4,258,025.00	1,262,800.00	2,856,710.00	1,356,406.00
Amount to be received on the production in 2023	6,609,400.00	2,807,665.00	1,370,410.00	1,458,135.00	973,190.00
	16,343,341.00	7,065,690.00	2,633,210.00	4,314,845.00	2,329,596.00
Cash received in 2023	7,886,941.00	2,411,025.00	1,262,800.00	2,856,710.00	1,356,406.00
Balance as at 31.12.2023	**8,456,400.00**	**4,654,665.00**	**1,370,410.00**	**1,458,135.00**	**973,190.00**

1.3 Cess on Lanka Sugar Company -Pelwatte unit

The expenses associated with vehicle repairs amounting Rs. 1,847,000/= conducted by Lanka Sugar Company (Pvt) Ltd – Pelwatte unit have been offset against the cess amount owed to the Sugarcane Research Institute. Discussions have been initiated with the relevant ministries to recover this sum in the year 2023.

1.4. Loan to Kantale Sugar Industry

The receipt of a loan amounting to Rs. 1,000,000.00 by Kantale Sugar Industry Ltd is doubtful. This concern has been communicated to the line ministry for further action

1.5 Income analysis from General Treasury

Source	**Approved**	**Received**	**To be received**
Recurrent	262.151	258.09	4.061
Capital	30.00	28.00	2.00
Total	292.151	286.09	6.061

1.6 Pending Legal Cases

Case no	**Court**	**Parties**	**Case**	**Claim Amount**
A/26//2018	Labor Dep	Technical association of SRI and SRI	Arbitration case on the evasion to the higher Posts SRI has appealed against the case	Rs.723, 480.00

SUGARCANE RESEARCH INSTITUTE
NOTES TO THE FINANCIAL STATEMENTS (Cont.)

(Rs.)

		2023	2022-Re-Stated	2022
01	**Cash and cash equivalents**			
2503	Peoples Bank-Savings A/C - Udawalawe	14,611,282.69	13,419,143.16	13,419,143.16
2507	Petty Cash Control A/C - Hanthana	-	5,000.00	5,000.00
2511	Bank Of Ceylon - Battaramulla	13,254,258.32	2,967,342.79	2,967,342.79
2514	Peoples Bank - Battaramulla	3,782,147.97	3,298,043.51	3,298,043.51
2515	Peoples Bank - Udawalawe	32,931,746.03	28,705,813.63	28,705,813.63
2516	People's Bank-Loan A/C - Udawalawe	1,180,034.84	888,271.75	888,271.75
2517	Petty Cash Control A/C-Procurement (Udawalawa)	-	25,000.00	25,000.00
2518	Petty Cash Control A/C - Kantale	-	25,000.00	25,000.00
	Cash and cash equivalents	**65,759,469.85**	**49,333,614.84**	**49,333,614.84**
02	**Trade and other receivables**			
2540	Staff Loan: Book Loan (Schedule 05)	-	1,750.00	1,750.00
2542	Advance: Local Purchase Advance	2,968,668.02	2,487,371.89	2,487,371.89
2544	Advance: Special Advance	377,483.33	296,383.33	296,383.33
2572	Receivable: Amendment Charges	38,929.00	191,961.00	191,961.00
2573	Receivable :Fixed Deposit Interest	3,050,567.97	6,355,349.94	6,355,349.94
2575	Receivable: Treasury Bill Interest Recei	84,393.41	534,123.84	534,123.84
2576	Sundry Debtors : Lanka Sugar company (Pvt)	5,253,861.15	5,735,219.90	5,735,219.90
2578	Staff Loan: Distress Loan (Schedule 03)	20,979,386.77	23,494,864.64	23,494,864.64
2579	Staff Loan: Festival Advance (Schedule 04)	1,250.00	3,750.00	3,750.00
2580	Staff Loan: Housing Loan (Schedule 02)	4,271,069.44	3,972,570.14	3,972,570.14
2581	Staff Loan: Motor Cycle Loan (Schedule 06)	542,033.97	621,294.53	621,294.53
2584	Sundry Debtors: Ethimale Plantation (Pvt) Ltd	973,190.00	1,356,406.00	1,356,406.00
2585	Sundry Debtors: Galoya Plantation (Pvt) Ltd	1,458,135.00	2,856,710.00	2,856,710.00
2586	Sundry Debtors: Kantale Sugar Industry (Pvt)	1,000,000.00	1,000,000.00	1,000,000.00
2587	Sundry Debtors : Lanka Sugar company (Pvt)	4,654,665.00	4,258,025.00	4,258,025.00
2592	Receivable-Bond (Mr.L.P.Wirthamulla	129,820.34	209,820.34	209,820.34
2593	Receivable-Fuel Advance (Ceylon Petroleum Co.)	-	571.82	571.82
2594	Sundry Debtors: Watawala Diary (Pvt)Ltd	-	873,244.00	873,244.00
2588-1	Sundry Debtors: Uva Mahajana production (Pvt)Ltd	177,607.50	-	
2588-2	Sundry Debtors: GSK Sugarcane Products	173,458.26	-	
	Trade and other receivables	**46,134,519.16**	**54,249,416.37**	**54,249,416.37**
03	**Prepayments and Other Deposits**			
2560	Deposit: C.B.Ellepola	2,500.00	2,500.00	2,500.00
2562	Deposit: Electricity Board	394,600.00	394,600.00	394,600.00
2563	Deposit: Embilipitiya M.P.C.S.Ltd	155,000.00	155,000.00	155,000.00
2564	Deposit: For Gas Cylinder	118,375.00	118,375.00	118,375.00
2565	Deposit: Kanthale Multi-Purpose Co-Operation	90,000.00	90,000.00	90,000.00
2566	Deposit: M.T.N.Net Work	2,500.00	2,500.00	2,500.00
2568	Deposit: Softlogic Information	1,500.00	1,500.00	1,500.00
	Prepayments and Other Deposits	**764,475.00**	**764,475.00**	**764,475.00**
04	**Investment**			
2401	Gratuity Investment A/C	64,436,186.89	64,436,186.89	64,436,186.89
2521	Treasury Bill Deposit A/C	6,220,300.00	4,840,300.00	4,840,300.00
	Investment	**70,656,486.89**	**69,276,486.89**	**69,276,486.89**

SUGARCANE RESEARCH INSTITUTE
NOTES TO THE FINANCIAL STATEMENTS (Cont.)

06	**Payable**			
2651	Bid Bond	-	91,900.00	91,900.00
2652	Tender Deposit (refundable	20,000.00	-	-
2653	Contractual Bond	25,000.00	25,000.00	25,000.00
2600-24	Creditor: Microtech Biological (Pvt) Ltd	-	1,043,180.00	1,043,180.00
2600-33	Creditor: Metropolitan Technologies (PVT)Ltd	-	1,635,000.00	1,635,000.00
2600-37	Creditor: Royal Ceramics Lanka PLC	-	565,093.80	565,093.80
2600-38	Creditor: S & D Associate	-	414,480.00	414,480.00
2600-39	Creditor: Scientific Instruments (PVT)Ltd	-	1,000,500.00	1,000,500.00
2600-48	Creditor: Abans PLC	-	649,990.00	649,990.00
2600-49	Creditor: Pointe scientific Instrumentation	-	1,301,140.00	1,301,140.00
2600-50	Creditor: Techno Instrument (PVT)Ltd	-	146,500.00	146,500.00
2600-67	Creditor: P.W. Lal Pemakumara	92,800.00	-	
2600-69	Creditor: Organic Trading (PVT) Ltd	27,225.00	-	
2600-70	Creditor: Hayleys Agriculture Holdings Ltd	263,500.00	-	
2602	Creditor: Analytical Instrument (Pvt) Ltd	-	4,501,595.16	4,501,595.16
2605	Creditor: Avon Pharmo Chem (Pvt)Ltd	35,326.85	701,700.15	701,700.15
2607	Creditor: Brown & Company PLC	-	196,650.00	196,650.00
2614	Creditor: Libra Agency		200,882.00	200,882.00
2618	Creditor: Chandra Stores	-	100,850.00	100,850.00
2619	Retention (Schedule 07)	318,401.73	773,997.71	773,997.71
2623	Creditor: State Timber Ceylon	-	506,136.53	506,136.53
	Payable	**782,253.58**	**13,854,595.35**	**13,854,595.35**
07	**Accrued Expenses**			
2632	Accrued Account (Schedule 10)	8,883,570.30	22,776,554.06	22,776,554.06
2638-1	Stamp Duty A/C	(125.00)	(475.00)	(475.00)
	Accrued Expenses	**8,883,445.30**	**22,776,079.06**	**22,776,079.06**
08	**Provision for Gratuity**			
2634	Provision for Gratuity (Schedule 09)	93,580,672.50	76,734,415.00	76,734,415.00
	Provision for Gratuity	**93,580,672.50**	**76,734,415.00**	**76,734,415.00**
08.1	**Advance Receipts**			
2902	CIC Agri Businesses (Project YARA) Fund	300,000.00	972,000.00	972,000.00
2905	Indo-Sri Lanka joint research Programme	519,839.00	922,000.00	922,000.00
	Advance Receipts	**819,839.00**	**1,894,000.00**	**1,894,000.00**

(Rs.)

		2023	2022- Re-Stated	2022
09	**Other income**			
0101	Fixed Deposit Interest Income	11,998,812.44	7,752,807.00	7,752,807.00
0102	Treasury Bill Interest Income	930,402.31	694,403.58	694,403.58
0103	Saving Account Interest Income	344,284.07	401,579.73	401,579.73
0104	Staff Loans Interest Income	1,168,011.37	1,102,366.32	1,102,366.32
0106	Fine Income	46,636.49	137,219.05	137,219.05
0107	Transport Income	228,248.04	107,009.84	107,009.84
0121	Sale of Jaggery Income	520,850.00	548,380.00	548,380.00
0122	Sale of seed cane & factory cane Income	1,921,588.00	3,433,578.75	3,433,578.75
0123	Sale of Sugarcane Income	522,065.76	95,525.00	95,525.00
0108	Sundry Income	1,167,989.39	1,022,316.25	697,562.25
0112	Gratuity Over Provision Income	-	-	3,403,480.00
0113	Medical Over Provision Income	4,345,917.43	-	4,333,232.96
0114	Insurance Income	151,466.85	-	-
	Total other income	**23,346,272.15**	**15,295,185.52**	**22,707,144.48**
10	**Personnel emoluments**			
1001	Salaries ,Wages and Holiday Payments EPF/ETF	130,133,029.70	138,212,526.56	138,212,526.56
1002	Staff Overtime Expenses	10,102,660.61	10,895,034.43	10,895,034.43
1004	Other Allowances (Personnel) Expenses	855,750.00	628,000.00	628,000.00
1005	Retirement benefits-Gratuity expenses	24,500,025.00	5,294,790.00	5,294,790.00
1006	Contribution to Employees Provident fund	30,546,010.24	34,945,430.10	34,945,430.10
1501	Welfare Programs Expenses	10,577,277.90	8,302,269.55	8,302,269.55
	Total Personnel emoluments	**206,714,753.45**	**198,278,050.64**	**198,278,050.64**
11	**Supplies and consumables**			
1201	Stationery and Office Requisites Expenses	1,920,736.35	1,430,655.93	1,430,655.93
1204	Medical Supplies Expenses	26,579.60	-	-
1207	Other Expenses (Supplies)	881,471.45	3,128,888.21	3,128,888.21
1703	Printing, Translation & Media publicity	1,658,140.00	1,382,940.40	1,382,940.40
	Total Supplies and consumables	**4,486,927.40**	**5,942,484.54**	**5,942,484.54**
12	**Maintenance**			
1301	Vehicles Maintenances Expenses	5,493,130.16	7,121,565.77	6,796,811.77
1302	Plant, Machinery & Equipment (Maintenance)	3,152,245.62	3,197,422.84	3,197,422.84
1303	Buildings and Structures Expenses	4,378,746.60	166,041.63	166,041.63
1202	Fuel and Lubricants Expenses	13,666,214.09	10,749,431.27	10,749,431.27
1504	License, Fitness and Insurance Expenses	1,043,872.37	791,767.46	791,767.46
	Total Maintenance	**27,734,208.84**	**22,026,228.97**	**21,701,474.97**

13	**Contractual services**			
1402	Postal & Communication Expenses	2,753,251.77	2,544,166.61	2,544,166.61
1403	Electricity & Water Expenses	12,551,889.43	6,946,823.14	6,946,823.14
1404	Rents and Local Taxes Expenses	354,488.40	344,118.96	344,118.96
1405	Security Charges (Expenses)	22,156,032.54	23,316,287.77	23,316,287.77
1407	Legal Fee and Charges (Expenses)	12,141.00	40,964.00	40,964.00
1410	Other Expenses (Services)	173,309.38	938,579.48	938,579.48
1411	Contractual services expenses	-	28,929.41	28,929.41
1203	Diets & Uniforms (Accommodation food)	1,632,454.68	119,480.00	119,480.00
1505	Workman and Death Compensation	123,733.67	117,374.33	117,374.33
1509	Other Expenses (Transfers)		217,431.32	217,431.32
	Total Contractual services	**39,757,300.87**	**34,614,155.02**	**34,614,155.02**
14	**Research & development**			
1205	Research Materials Expenses	6,865,716.27	5,875,937.88	764,057.70
1702	Irrigation and Land preparation Expenses	418,706.00	-	-
1704	Harvesting Expenses	482,677.30	680,211.25	680,211.25
1705	Research review Expenses	265,673.56	198,517.00	198,517.00
1706	Other Expenses (Miscellaneous Expenses)	2,505.68	183,541.51	183,541.51
1503	Sugar Sector Development Activities Expenses	449,446.10	477,090.75	477,090.75
1205-1	Glyphosate Expenses(RM)	3,333,834.90	-	-
	Total Research & development	**11,818,559.81**	**7,415,298.39**	**2,303,418.21**
15	**Other operating expenses**			
1401	Transport Expenses	4,000.00	168,267.65	168,267.65
1701	Scholarships Expenses	-	22,000.00	22,000.00
1406	Accounts, Audit and board of survey Expenses	811,250.00	868,307.00	868,307.00
1408	Board of Governor's Expenses	388,415.95	377,110.00	377,110.00
1506	Staff Training and Development & Resource Expenses	402,434.00	175,300.00	175,300.00
1510	Stamp Duty Expenses	600.00	400.00	400.00
	Total Other operating expenses	**1,606,699.95**	**1,611,384.65**	**1,611,384.65**

NOTE NO-05 AND SCHEDULE-01
SUGARCANE RESEARCH INSTITUTE
PROPERTY PLANT AND EQUIPMENT

Assets	Cost (Rs.)					Depreciation (Rs.)					
	Balance / Revaluation as at 01.01.2023	Addition / Removal-2023	Balance As at 31.12.2023 with additions	Addition / Removal of Assets Value-2022	Balance As at 31.12.2023	Balance as at 01.01.2023	Depreciation before 2022 assets	Depreciation for additional Items -2023	Depreciation -2023	Balance as at 31.12.2023	N.D.V */Carrying value (Rs.) 31.12.2023
Office equipment	25,518,135.61	623,142.70	26,141,278.31	-	26,141,278.31	17,130,127.06	2,356,591.61	29,505.52	2,386,097.13	19,516,224.19	6,625,054.12
Furniture fittings	22,048,453.45	71,012.50	22,119,465.95	-	22,119,465.95	17,732,837.22	2,438,827.73	963.05	2,439,790.78	20,172,628.00	1,946,837.95
Computer equipment	16,390,552.80	98,250.00	16,488,802.80	-	16,488,802.80	13,689,032.85	1,353,653.98	589.18	1,354,243.16	15,043,276.01	1,445,526.79
Laboratory equipment	115,214,348.15	10,890,895.41	126,105,243.56	-	126,105,243.56	101,390,645.01	7,529,451.16	819,084.64	8,348,535.80	109,739,180.81	16,366,062.75
Agricultural equipment	32,901,476.71	11,500.00	32,912,976.71	(11,735,000.00)	21,177,976.71	18,263,198.22	2,331,660.55	789.25	2,332,449.80	20,595,648.02	582,328.69
Field equipment	17,664,627.46	581,135.00	18,245,762.46	(422,000.00)	17,823,762.46	14,215,035.24	1,316,199.68	62,245.51	1,378,445.19	15,593,480.43	2,230,282.03
Workshop equipment	18,423,631.60	558,934.00	18,982,565.60	(330,000.00)	18,652,565.60	15,395,837.11	1,325,442.89	47,527.09	1,372,969.97	16,768,807.10	1,883,758.51
Other equipment **	6,829,121.70	412,750.00	7,241,871.70	-	7,241,871.70	6,829,121.70		-	-	6,829,121.70	412,750.00
Bicycle	96,700.00	-	96,700.00	-	96,700.00	96,700.00	-	-	-	96,700.00	-
Motor vehicles	109,167,400.00	196,650.00	109,364,050.00	6,207,600.00	115,571,650.00	27,900,976.30	28,843,750.00	-	28,843,750.00	56,744,726.30	58,826,923.70
Computer software	2,377,763.92	-	2,377,763.92	-	2,377,763.92	1,227,102.76	237,776.39	-	237,776.39	1,464,879.15	912,884.77
Lands - Hantana	6,400,000.00	-	6,400,000.00	-	6,400,000.00	-	-	-	-	-	6,400,000.00
Buildings	461,297,550.00	-	461,297,550.00	-	461,297,550.00	27,120,468.46	23,064,877.50	-	23,064,877.50	50,185,345.96	411,112,204.04
Library books	128,620.66	-	128,620.66	-	128,620.66	99,681.02	12,862.07	-	12,862.07	112,543.09	16,077.57
TOTAL	**834,458,382.06**	**13,444,269.61**	**847,902,651.67**	**(6,279,400.00)**	**841,623,251.67**	**261,090,762.95**	**70,811,093.57**	**960,704.24**	**71,771,797.80**	**332,862,560.76**	**508,760,690.92**

AUDITOR GENERAL'S REPORT

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தேசிய கணக்காய்வு அலுவலகம்
NATIONAL AUDIT OFFICE

National Audit Office

MY No: SPCG/HM/C/FA/SRI/2023/01 Your No.: Date: 31.06.2021

Chairman
Sugar Cane Research Institute

Auditors report as per section 12 of the National Audit Act No. 19 of 2018 regarding the Financial Statements, Other statuary and regulation requirements for the year ended 31 December 2023 of Sugar Cane Institute.

1. Financial Statements

1.1 Basis for the qualified opinion

The audit of the financial statements of the Sugarcane Research Institute for the year ended 31 December 2023 comprising the statement of financial position as at 31 December 2023 and the statement of financial performance, statement of changes in net assets and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies 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 provisions of the National Audit Act No.19 of 2018 and the Finance Act, No 38 of 1971. My comments and observations which I consider should be report to Parliament in terms of 154(6) of the Constitution appear in this report.

In my opinion, due to importance the of matters described in basis for qualified opinion of this report, by the financial statements of Sugarcane Research Institute, the statement of financial performance as at 31 December 2023, and of its financial performance and its cash flows for the year then ended in accordance with Si Lanka Public Sector Accounting Standards.

1.2 Basis for Qualified Opinion

(a) The error of accounting for 03 purchase orders of Rs. 170,939 sent to suppliers in the previous year as fixed asset loans had not been corrected in the year under review and the goods related to those purchase orders had not been purchased by the end of the year under review. Accordingly, current assets and current liabilities had been overstated by that amount.

(b) Since the Employees' Provident Fund payable of Rs. 1,409,325 in respect of December of the year under review had not been accounted for, the expenses and current liabilities for the year were stated in the financial statements at a lower amount.

(c) Since 02 fixed deposit balances of Rs. 64,436,187 and treasury bills of Rs. 6,220,300, which were due to mature within the next 12 months, were shown under non-current assets, non-current assets were shown to be overstated by Rs. 70,656,487 and current assets were shown to be understated by the same amount.

(d) 3815 liters of glyphosate worth Rs. 2,118,652 as per the stock register at the end of the year under review were not reconciled by Rs. 340,607 as per the ledger accounts as 3200 liters of glyphosate worth Rs. 1,778,045.

(e) Since capital expenditure of Rs. 168,830, which should have been recognized under property, plant and equipment, had been accounted for as capital expenditure, non-current assets had been overstated by half of that amount and expenses for the year had been overstated by the same amount.

(f) Since the depreciation expense of property, plant and equipment for the year under review was understated by Rs. 840,223, non-current assets were overstated by that amount and expenses for the year were understated by that amount.

(g) Non-current assets were understated as the value of 03 plots of land, totaling 207.363 hectares, used by the institution had not been assessed and accounted for.
(h) An acquisition cost of Rs. 38,349,500 was incurred for the 11.4 perches of land and building purchased in the Colombo area in the year 2019. While accounting for this property, the total acquisition cost was accounted for under buildings and annual depreciation was calculated without accounting for the land and building separately.
(i) Field equipment and agricultural implements costing Rs. 6,207,600 had been identified as motor vehicles in the year under review and transferred between the relevant cost accounts, but the accumulated depreciation value relating to those assets had not been transferred between the accounts.
(j) 2295 items of property, plant and equipment with a cost of Rs. 148,248.756 were fully depreciated and stated as assets, and since the estimated useful lives of those assets had not been reviewed and re-accounted for, non-current assets were understated.
(k) Since the research allowance of Rs. 892,801 for the year 2020 was accounted for as an expense in the year under review, the expenses were overstated by that amount.
(l) 03 asset balances amounting to Rs 33,547,255 could not be satisfactorily verified as evidence was not submitted.

I conducted my audit in accordance with Sri Lanka Auditing Standards (SLAS). My responsibilities under those auditing standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of this report. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

1.3 Other information included in the 2022 Annual Report of the Sugarcane Research Institute

Other information means information included in the 2022 Annual Report of the Sugarcane Research Institute, which is expected to be provided to me after the date of this audit report, but not included in the financial statements and my audit report thereon. Management is responsible for this other information.

My opinion on the financial statements does not cover the other information and I do not express any assurance or opinion thereon.

In connection with my audit of the financial statements, my responsibility is to read the 2023 Annual Report of Sugarcane Research Institute when other information identified above is available, and if I conclude that it contains material misstatements, to communicate those matters to the controlling parties for correction. If there are any further uncorrected misstatements, they will be included in the report that I will table in Parliament in due course in accordance with Article 154(6) of the Constitution.

1.4 Responsibilities of the management and governing parties regarding the financial statement.

Preparing and presenting this financial Statement according to the accounting standards of the Sri Lankan government sector and make a decision for an internal control system enabling to prepare a financial statement without presenting sufficient false statements and fraudulent manner presenting in the fair manner are the responsibilities of the management.

When preparing financial Statements, ability to make decisions to continue the Institution is one of the responsibility of the management and unless if the management intends to close the firm or if the management works out to stop the firm when an alternative is not available, keeping accounts based on long continuation of the firm and disclosing the relevant factors for continue the firm are responsibilities of the management.

Governing body of the Institution is responsibility regarding the financial reporting of the Institution.

As per sub section 16 (1) of National Audit act no. 19 of 2018, proper books and accounts on the income, expenses, assets and liabilities should be maintained enabling to prepare annual and periodical financial report of Sugarcane Research Institute.

1.5. Responsibility of Auditor regarding the audit of the financial statement

In a whole, providing a fair certification without sufficient error presentation arise due to fraud and errors and issuing an audit report including my opinion are my objectives. Although the fair certification is considered a higher certification, but, when performing audit as per audit standards, that is always, will not reflect a fair certification. Due to the effect of fraud and errors alone and collectively may create sufficient error statements, it

will depend on the influence over the economic decision made by the reviewers in it's nature of inadequateness.

I performed the audit with justification and professional way when doing the audit as a part of the audit as per Sri Lanka auditing standards. Furthermore;

Proper audit procedure were planned and implemented for identifying and estimating the error reporting when providing a base for disclosed audit opinion. Effect occurring due to fraudulent reporting is worse than effect occurring due to sufficient error statement due erroneously reporting which arise due to poor cooperation, preparing forged documents, avoiding with intension, disclosing erroneously or missing from internal control.

Although without an intension to disclosure opinion regarding the efficiency of the internal control, an understanding arrived regarding the internal control in order to prepare a proper audit procedure suitable for the circumstance.

Appropriateness of the accounting policies used and fairness of the accounting estimates and relevant discloses made by management were verified.

Appropriateness had been decided regarding the usage of a base regarding the continuity of the firm based on the audit evidence obtained in order to ensure whether any sufficient doubtfulness are there of the continuation of sugarcane research in due events and status. If I decide that there are sufficient uncertainty, attention be paid in my report on the disclosure of financial statement and if such disclosures are not sufficient, my decision has to be amended. Hence, based on the future events and conditions, continuation of the operation of the firm may halt.

Presentation of financial statement, which consists disclosures, structure and contents, were assessed, transactions, and events for such activities taken as bases had been assessed as those were included in the financial statement.

Important findings, main internal control discrepancies and other factors identified through my audit had been conveyed to the director's body.

2. Report on other legal and regulatory requirements

2.1 Special provisions are included regarding the requirements of the National Audit Act No. 19 of 2018.

2.1.1 In accordance with the requirements of Section 12(a) of the National Audit Act, No. 19 of 2018, I have obtained all the information and explanations necessary for the audit, except for the matters mentioned in paragraph 1.2, and from my examination, it appears that the institution has not maintained proper financial records.

2.1.2 The financial statements of the institution are consistent with the previous year as required by Section 6(i) (d) (iii) of the National Audit Act, No. 19 of 2018.

2.1.3 In accordance with the requirements of Section 6(i) (d) (iv) of the National Audit Act, No. 19 of 2018, the recommendations made by me in the previous year, except for the observations made in paragraphs 1.2(a)(i) and (x) of this report, are included in the financial statements presented.

2.2 In confining the proceedings followed and the evidence taken to factual and material facts, nothing came to my attention to the extent of making the following statements.

2.2.1 According to the requirement mentioned in Section 12(d) of the National Audit Act No. 19 of 2018, any member of the governing body of the institution has any relationship, directly or otherwise, out of the ordinary course of business in relation to any agreement related to the institution.

2.2.2 According to the requirement mentioned in Section 12(e) of the National Audit Act No. 19 of 2018, apart from the following observations, it has acted non-compliant with any relevant written law or other general or special directives issued by the governing body of the institution.

Reference to Laws, Rules and Regulations etc.	**Observation**
Code of Financial Regulations of the Democratic Socialist People's Republic of Sri Lanka	
(i) F.R 107, 108, 371 (2)	(a) Since 02 fixed deposits of Rs.64,436,187 and treasury bills of Rs.6,220,300 due in the next 12 months were shown under non-current assets, non-current assets had been overstated by Rs.70,656,487 and current assets had been understated by the same amount.
(ii) Financial Regulation 757(2) and (4)	The board of survey reports had not been submitted to the Auditor General
(iii) Financial Regulation 1646	Daily running charts had not been submitted to the Auditor General.

2.2.3 That the institution has acted in a manner inconsistent with the powers, functions and duties of the institution as required by Section 12(g) of the National Audit Act, No. 19 of 2018

2.2.4 In accordance with the requirements of Section 12(h) of the National Audit Act No. 19 of 2018, the resources of the institution have not been procured and utilized economically, efficiently and effectively within the time limits in accordance with the relevant laws, except for the following observations:

(a) Management inefficiencies

(a) Management Inefficiencies

i. Although the advance of Rs.217,383 has been paid to Sri Lanka Institute of Development Administration (SLIDA) in the year 2019 for the preparation of Manual

of Procedures (MOP), the Manual of Procedures had not been prepared by the end of the year under review.

ii. Rs.17,527,351 had been paid since the year 2003 to 06 officer for the study the degree program and other professional examinations. Although the course periods had been ended at the end of the year under review, it had not been confirmed to audit that the officers had completed the relevant qualifications.

iii. In 2017, the Director General of National Budget had informed that the institution had implemented a medical insurance scheme using the funds issued by the Treasury for recurring expenses and instead the insurance should be obtained from the National Insurance Trust Fund. Without paying attention to this, medical aid allowances of Rs. 10,364,935 were paid using Treasury funds in the year under review.

iv. A housing loan scheme had been implemented for employees using the funds of the institution and by the end of the year under review, housing loans of Rs. 4,271,069 were to be collected from 07 employees. Furthermore, information regarding the approval obtained for the implementation of the relevant housing loan scheme was not submitted to the audit.

v. Rs. 151,250 due for the disaster loan and festival advance of an employee who left the service had not been recovered by the end of the year under review.

vi. Action had not been taken to recover the old loan balance of Rs. 4,890,951 due from 03 sugar manufacturing institutions for a period of 02 to 05 years.

(b) Operational inefficiencies

i. The Large-Mill Test for the release of the sugarcane varieties SL03 983, SL03 1025 and SL03 1077, the development of which was completed in the year 2019, had not been conducted until the end of the year under review.

ii. The sugarcane variety SL 96128, which was introduced by the Institute in 2012, is widely cultivated by sugarcane growers in Sri Lanka and its sugar extraction rate was stated to be 8.2 percent at the time of introduction. By the year under review, the sugar extraction rate of this variety had gradually decreased to 6.5 percent and sugar production and ethanol production had decreased by 16 percent and 38 percent respectively, but the Institute had not identified and taken steps to correct these problems.

iii. The institution had not taken steps to obtain patents for 03 fertilizer, plant nutrient products and pesticide products whose production activities had been completed during the year under review.

iv. With the aim of starting the Kantale Sugar Factory, 400 acres of land and 13 buildings were acquired from the land owned by the Kantale Sugar Factory in 2011 with the aim of providing the necessary sugarcane, selecting sugarcane varieties suitable for the area and providing facilities for research activities. Although a staff of 27 was attached and Rs. 139 million was spent on recurrent

and capital expenditure for a period of 12 years up to 2023, the cost incurred had been wasted due to the failure to start the Kantale Sugar Factory.

v. On 05 occasions, 860 liters of glyphosate worth Rs. 456,373 in the warehouse had been deducted from the stock records, indicating that the barrels had leaked. No steps had been taken to recover the loss from the responsible parties in accordance with Financial Regulations 103 and 104.

vi. The average balance of the two current accounts maintained by the institution at the People's Bank and the National Savings Bank for the past 4 years was Rs. 5,454,758 and attention had not been paid to investing that excess money in ways that could generate income.

(c) Contract Administration

i. **Preparing estimates**

From the year 2019, estimates of Rs 68,636,070 were prepared by 03 external persons and an organization for 30 construction industries and the following points are observed in this regard.

1. Estimates of Rs. 34,931,153 had been prepared for 10 construction industries and an amount of Rs. 1,471,122 as contract administration fees for preparing estimates had been paid to a personal account of a Deputy Residential Business Manager (Engineer) of the Mahaweli Authority.

2. The Deputy Residential Business Manager (Engineer) of Walawa had paid Rs. 976,425 as estimate preparation fees to the personal account of that officer, although the work related to the estimates of Rs. 24,411,265 prepared in 2021 for 02 construction industries using the letterheads of the Mahaweli Authority had not yet commenced on the audit date of 13 March 2024.

3. The Regional Procurement Committee had approved on 15 October 2021 the payment of an estimate preparation fee of Rs. 976,425 in respect of the two industries mentioned in 1 and 2 above, for which work had not yet commenced as of the audit date of 13 March 2024. Accordingly, it is observed that the Regional Procurement Committee had approved the payment of Rs. 976,425 to an external person as estimate preparation fees for these construction industries for which procurement activities had not yet been carried out as of the audit date of 13 March 2024, it is observed that the Committee has acted in excess of its powers.
4. Estimates of Rs. 33,704,917 were prepared by two external individuals and an institution for 20 construction industries and Rs. 621,456 was paid as estimate preparation fees, but the basis for payment of those fees and the approval for payment of the fees were not submitted to the audit.
5. The accuracy of the estimates prepared by 03 external individuals and an institution for 20 industries was not confirmed by the audit as the required quantity sheets had not been prepared. In preparing estimates of Rs 33,371,917 by 03 external persons and an organization for 20 industries, as the required quantity sheets were not prepared, the accuracy of the estimates prepared was not confirmed by the audit.

ii. Construction of the entrance road, retaining wall and gate of the Deniyaya Sugarcane Seed Breeding Center

An estimate of Rs. 1,285,930 had been prepared including 15 work items and Rs. 19,289 had been paid to an external person as estimate preparation fees. The following matters were observed in this regard.

1. 09 work items that were not included in the approved estimate had been completed and Rs. 1,041,165 had been paid to the contractor without obtaining approval for the same.
2. The reason for the payment being more than the actual amount of work performed was that Rs. 163,598 was overpaid on three occasions.
3. An excess of Rs. 263,603 had been paid due to payments being made for two work items without using the prescribed standard prices.
4. When paying for the industry related to the construction of the entrance road, gate and retaining wall of the Sugarcane Breeding Center, 03 work subjects related to another industry were included in the payment bills of this industry, indicating them as additional work, and Rs. 51,000 was paid on 31 December 2023 through payment voucher No. 284/12.
5. Although the contract agreement required the construction work to be completed before 10 December 2019, the actual completion date was 10 April 2020, resulting in an unapproved delay of 122 days. The contract agreement did not include provisions for charging late fees for the additional contract period.
6. The performance bond of Rs. 60,048 relating to the construction had expired on February 01, 2020, but no steps had been taken to extend the period of the performance bond in line with the additional time taken to complete the construction.

2.3 Other observations

(a) The institution had spent Rs. 2,034,663 on electricity charges during the year under review for the official residences provided to 48 officers without charging monthly rent.

(b) The institution had spent Rs. 312,674 on the public charges of the office and official residences during the year under review. Since water meters were not installed for official residences, information on water consumption units in official residences was not submitted for audit.

(c) The post of Deputy Director (Research and Technology Transfer), which is essential for the research activities of the Sugarcane Research Institute established for the development of superior commercial sugarcane varieties in local sugarcane cultivation and conducting research for that purpose, has been vacant since the year 2020, and the post of Chief Technology Transfer Officer and 05 posts of Chief Research Officer have been vacant since the date of creation of those posts. Furthermore, 06 posts of Senior Technology Transfer Officer and Research Officer have been vacant since the year 2013 as on 31st December of the year under review.

W.P.C. Wickramarathna
Auditor General

SUGARCANE RESEARCH INSTITUTE

ANALYSIS OF FINANCIAL TRENDS

Rs.

FINANCIAL POSITION

DESCRIPTION	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ASSETS	**310,195,099.91**	**486,400,124.78**	**568,403,182.03**	**511,556,304.02**	**467,380,271.12**	**428,937,695.76**	**459,331,930.31**	**461,957,889.37**	**794,708,526.61**	**723,251,315.60**
Non current assets	99,626,631.89	263,576,057.92	255,143,450.98	267,629,949.92	259,789,157.15	258,116,964.06	322,767,425.04	325,902,499.78	644,184,767.00	579,417,177.81
Current assets	210,568,468.02	222,824,066.86	313,259,731.05	243,926,354.10	207,591,113.97	170,820,731.70	136,564,505.27	136,055,389.59	150,523,759.61	143,834,137.79
LIABILITIES AND EQUITY	**310,195,099.91**	**486,400,124.78**	**568,403,182.03**	**511,556,304.02**	**467,380,271.12**	**428,937,695.76**	**459,331,930.31**	**461,957,889.37**	**794,708,526.61**	**723,251,315.60**
Liabilities	65,938,532.17	75,918,537.61	65,810,532.38	88,652,259.16	91,161,402.48	101,901,304.88	157,726,071.05	134,800,223.58	126,158,139.84	109,815,489.00
Current liabilities	15,941,012.87	9,019,359.99	11,031,001.23	24,369,380.45	13,990,091.86	17,045,732.61	60,550,620.94	38,631,452.81	36,630,674.41	9,665,698.88
Non-current liabilities	49,997,519.30	66,899,177.62	54,779,531.15	64,282,878.71	77,171,310.62	84,855,572.27	97,175,450.11	96,168,770.77	89,527,465.43	100,149,790.12
Net Assets / Net Equity	**244,256,567.74**	**410,481,587.17**	**502,592,644.03**	**422,904,044.86**	**376,218,859.51**	**327,036,390.88**	**301,605,859.26**	**327,157,665.79**	**668,550,386.77**	**613,435,826.60**

FINANCIAL PEROFRMANCE

DESCRIPTION	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
OPERATING REVENUE	**234,193,878.46**	**355,768,941.80**	**389,475,697.14**	**259,992,891.63**	**326,780,551.75**	**306,757,905.88**	**290,081,644.98**	**346,220,716.48**	**294,215,830.48**	**316,051,672.15**
Treasury income	122,800,000.00	339,084,240.74	365,000,000.00	232,830,000.00	295,394,000.00	268,257,000.00	272,970,043.27	325,700,000.00	262,530,000.00	286,096,000.00
Cess income	91,820,414.50	3,238,130.00	1,437,670.00	4,484,550.00	3,418,795.00	20,232,185.00	5,488,080.00	8,672,280.00	8,978,686.00	6,609,400.00
Other institutional income	19,573,463.96	13,446,571.06	23,038,027.14	22,678,341.63	27,967,756.75	18,268,720.88	11,623,521.71	11,848,436.48	22,707,144.48	23,346,272.15
OPERATING EXPENSES	**227,363,256.95**	**299,278,835.49**	**301,161,414.14**	**339,395,302.99**	**401,937,149.08**	**348,342,003.92**	**327,974,704.93**	**320,774,323.69**	**305,475,826.43**	**365,231,758.11**
Personal emoluments	116,445,339.86	159,202,581.59	179,594,282.69	179,771,941.65	203,866,397.85	195,808,529.77	196,877,133.74	199,768,677.59	198,278,050.64	206,714,753.45
Other operating expenses	110,917,917.09	140,076,253.90	121,567,131.45	159,516,997.22	198,006,749.23	152,533,474.15	131,097,571.19	121,005,646.10	107,149,618.11	158,467,251.88
Fiance cost	49,785.33	51,832.49	115,492.84	106,364.12	64,002.00	46,767.06	43,010.00	46,110.00	48,157.68	49,752.78
Net surplus/deficit	**6,780,836.18**	**56,438,273.82**	**88,198,790.16**	**(79,402,411.36)**	**(75,156,597.33)**	**(41,630,865.10)**	**(37,936,069.95)**	**25,400,282.79**	**(11,259,995.95)**	**(49,180,085.96)**