2022

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ஆண்டறிக்கை
ANNUAL REPORT






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கொழும்புப் பல்கலைக்கழக கமத்தொழில் தொழில்நுட்பவியல் மற்றும் கிராமிய விஞ்ஞானங்களுக்கான நிறுவனம்

University of Colombo Institute for Agro-Technology and Rural Sciences

ANNUAL REPORT
2022

OUR VISION

To become the most sought-after and most outstanding educational institution dedicated to entrepreneurial agriculture and sustainable natural resource management in Sri Lanka

OUR MISSION

To establish a widely acclaimed and accessible outcome-based educational system dedicated to academic excellence, high impact research, creative enterprise, strategic industry partnerships and constructive community engagement to produce well-rounded and well-grounded graduates with global perspectives for globally competitive agriculture and sustainable natural resource management in Sri Lanka

Director's Review:

The Institute was first established as the Magampura Agro-Technology and Community Services Center in Weligatta, Hambantota affiliated to the University of Colombo in 2000 by the University Grants Commission. The Centre's history dates back to 1998 through which the University researchers were able to build over the years close collaborative links with the community in order to transfer technology/knowledge and know-how directly to the end-users and improve efficiency in agriculture and agro-industry in the region.

The center has upgraded as an institute naming University of Colombo Institute for Agro-Technology and Rural Sciences (UCIARS) in 2008 as a pioneering institute of Sri Lanka for awarding agriculture based Bachelor's degree (Bachelor of Agro-Technology) for students who are involving in agriculture and agro-based industries as well as for A/L passed students. All lesson contents are in the online Learning Management system and therefore student contribution for practical and field visit components has increased considerably by applying Blended Learning approaches for lectures. Our academic programs are designed to train students in problem solving, analytical skills as well as to improve writing and communication skills. Therefore, our students have better practical knowledge and skills compared to agricultural graduates produced by the other state universities in Sri Lanka.

With a view of enhancing farm productivity, the UCIARS provides modern agro-technology by producing high-quality planting materials (i.e. high quality tissue cultured banana plants, Hybrid Thumba Kariwila plants etc.) to the farming community. Another important milestone of the UCIARS is its technical input in the promotion of banana, mango and mushroom cultivation to strengthen the Government's drive for poverty eradication by improving the income of the farming community. The institute has 40 acres farm land with several crop and livestock models allowing field practicals and research for students and staff.

As the Director of the UCIARS, it is with profound gratitude that I recall the excellent support and guidance extended to us by our Vice Chancellor/University of Colombo, Board of Management and dedicated and committed staff of the Institute particularly and all others those who have contributed towards achieving the objectives of the UCIARS in our journey keeping the motto 'quality first'.

Prof. Asanga D. Ampitiyawatta
Director
University of Colombo Institute for Agro-Technology and Rural Sciences (UCIARS)

Contents

Goals and Objectives of the University of Colombo Institute for Agro-Technology and Rural Sciences

Goals		Objectives	Strategy
GOAL 1	Enhanced production of graduates with the requisites attributes	• Increase intake to exiting degree and new degree courses by 10% annually	• Introduce dual mode of entry to existing degree
		• Restructure and develop curricula with more space (10%) for development of IT, English and soft skills	• Improve curriculum with subjects which are supported to improve soft skills
		• Strengthen student-centered learning and outcome-based education and assessment.	• Improve curriculum and lecture delivery mode through technology
		• Increase Agri-business established by students and alumni	• Improve knowledge of students in entrepreneurship and agri-business development
		• Improve the study resources and training facilities	• Improve the student skills and practical knowledge
GOAL 2	Increased industry partnerships and international cooperation	• Establish mutually reinforcing links with industry for training and research collaboration	• Enhancement of the linkages among different institutions
		• Appoint the "movers and shakers" of industry and promising entrepreneurs as Visiting Staff	• Obtaining novel technologies and knowledge on innovations
		• Establishment of Public Private Partnerships (PPP)	• Providing of facilities and opportunities for the purpose
GOAL 3	Enhanced academic profile and impact of research and outreach programs	• Provide postgraduate training for 80% the staff by 2024	• Enhance facilities and create interest for postgraduate studies
		• Recruit senior staff up to 50% to the new academic cadre by 2024	• Increase the percentage of Recruitment and promotion of senior staff
		• Conduct high impact research with regional focus and publish findings in indexed journals	• Expand facilities and build networks for high caliber research culture
		• Commercialize research findings and facilitate technology transfer	• Commence collaborations and link programs with local and international organizations to enhance specialized knowledge on new technology
		• Provide new technology and information services through ICT to the community	• Improve technology to have sound communication with community

GOAL 4	Improved infrastructure facilities and amenities	• To upgrade and expand academic infrastructure by 20% annually	• Improve academic facilities through novel technology • Improve infrastructure facilities for staff and students
		• To upgrade and expand research facilities by 20% annually	• Enhance facilities and create interest for research activities
		• Increase accommodation facilities of students and staff by 50% by 2024	• Expand accommodation facilities
		• Green space/Green technology	• Improve green environment
GOAL 5	Improved governance and financial management and discipline	• Capacity building of academic, administrative and technical staff	• Strengthen the competencies of academic and non-academic staff and effective management system • Providing opportunities for service promotions
		• Introduce a fully computerized integrated MIS by 2025	• Linking all the sections with fully computerized integrated MIS
		• Reduce audit queries and improve accountability by 10% annually	• Acknowledging all the staff on Administration regulations, Financial regulations, procurement guidelines and Capital works
		• Improve economy, efficiency and effectiveness (3Es)	• Outsourcing, rationalization and sharing of resources (Physical, human and financial)
		• Increase net income through (training, advice, consultancy, information services, patents, licenses, sale of elite planting material and farm)	• Increase Net income through income generating activities

1. OVERVIEW

1.1 Introduction

The Institute was first established as the Magampura Agro-Technology and Community Services Center in Weligatta, Hambantota affiliated to the University of Colombo in 2000 by the University Grants Commission. The Centre's history dates back to 1998 through which the University researchers were able to build close collaborative links with the community over the years to transfer technology/knowledge and know-how directly to the end-users and improve efficiency in agriculture and agro-industry in the region. The founder of this institute was the former Vice-Chancellor of the University of Colombo and the former Chairperson of the University Grants Commission, Professor Kshanika Hirimburegama.

The University of Colombo Institute for Agro-Technology and Rural Sciences (UCIARS) was established as a Higher Educational Institute affiliated to the University of Colombo, under Section 24A of the Universities Act No.16 of 1978 and the University of Colombo Institute for Agro-Technology and Rural Sciences Ordinance No.02 of 2008 (published in The Order came into operation with effect from 25th August 2008.

UCIARS conducts a Bachelor of Agro-Technology Degree programme. Course conducted by the UCIARS is blended with distance mode of teaching to provide opportunities of higher education to farming community across barriers of age, space, time and academic background. The Institute has a mandate to provide, promote and develop among persons presently engaged in Agriculture and Agro-Technology, higher education in the discipline of Agro-Technology and Rural Sciences. It will cater to the changing individual and social needs by taking education through a blended learning mode to the doorsteps of the farming community who never dream of entering the portals of higher education. They have aspirations and potential to pursue higher education but could not utilize the opportunities due to their personal, family or economic backgrounds. With the flexibility in the entry requirements and choice of courses, the Institute demonstrates that it is possible to impart quality higher education using modern Information Communication Technologies to learners of the farming communities of poor rural sectors to pursue education at a pace and place convenient to them and realize their academic, professional and social aspirations.

In addition to the Academic Programme, the Institute produces tissue cultured banana to the local farming community with very reasonable rates and has generated income for the Institute as well. The Institute is conducting workshops, seminars to transfer the tissue cultured banana technology to the rural farmers scattered in island wide. Institute participates at various national level exhibitions using its resources to make aware the people about the new technology affixed to rural sciences.

1.2 The Board of Management

The Board of Management of the Institute is constituted in terms of Section 05 of the University of Colombo Institute for Agro-Technology and Rural Sciences Ordinance No. 02 of 2008. According to Section 10 of the above Ordinance which is repealed by the amendment to the Ordinance (published in Gazette Extraordinary dated 27.05.2022) the Board of Management shall be the academic and executive body of the Institute and shall consist of:

Table 01: The composition of the Board of Management in 2022

Ex-officio members (as specified in the Ordinance)		
1	Director – Chairman/UCIARS	Prof.A.D.Ampitiyawatta Director/UCIARS (from 02.03.2022) Dr. (Mrs.) N.P.Vidanapathirana Acting Director/UCIARS (up to 01.03.2022)
2	The Deputy Director	No cadre provision for Deputy Director
3	The Secretary to the Ministry of the Minister in charge of the subject of Higher Education or the Secretary to such other Ministry to which the subject of Higher Education may be assigned or his nominee	Ms.T.K.W.T.P.Premarathne Assistant Director (Student loan scheme), Ministry of Education
4	The Secretary to the Ministry of the Minister in charge of the subject of Agriculture or his nominee	Dr.W.L.G.Samarasinghe Additional Secretary (Agri-Technology), Ministry of Agriculture
5	The Secretary to the Ministry of the Minister in charge of the subject of Finance or his nominee	-
6	The Dean of the Faculty of Science of the University	Prof. D.U.J. Sonnadara
7	The Dean of the Faculty of Technology of the University	Prof.J.K.D.S.Jayanetti
8	The Heads of the Departments of Study of the Institute	Dr. (Mrs.) N.P.Vidanapathirana, Department of Agro-Technology/UCIARS
9	The Head of the Department of Plant Sciences of the Faculty of Science of the University or his nominee with the concurrence of the Vice Chancellor	Dr (Mrs).H.S.Kathriarachchi
Other members (as specified in the Ordinance)		
1	Two members appointed by the University Grants Commission to represent the Agro-Technology and Agri-business industries	Prof.M.P.S.Magamage, Dean/Faculty of Agriculture, Sabaragamuwa University of Sri Lanka, Chairman/National Livestock Development Board
		Mr.Niranjan Kolitha de Silva Senior Lawyer
2	Two members appointed by the Council from	Prof.S. Karunaratne

	among its members	Mr.Mahinda Madihahewa
3	The District Secretary of the Hambantota District or his nominee	Mr.H.P.Sumanasekara
4	One member appointed by the Academic Syndicate from among its members	Ms.S.A.P.Nelka Course Coordinator/UCIARS
5	Two Agricultural Experts appointed by the Council, on the recommendation of the Vice Chancellor	-
Secretary to the Board of Management		
	Senior Assistant Registrar/UCIARS	Ms.S.A.S.Priyadarshani

The Board of Management of the institute met regularly during the year to review the academic and administration matters. The Board of Management has met twelve (12) times during the year 2022.

1.3 Academic Syndicate of the Institute

Academic syndicate was formed for the institute in 2021 to look into the academic matters of the institute and recommended to the Board of Management. As per section 13 (1) of the UCIARS Ordinance no.02 of 2008, member composition for academic syndicate is as follows;

Table 02: The composition of the Academic Syndicate in 2022

1	Director – Chairman/UCIARS	Prof.A.D.Ampitiyawatta Director/UCIARS (from 02.03.2022) Dr. (Mrs.) N.P.Vidanapathirana Acting Director/UCIARS (up to 01.03.2022)
2	Head of each Department of Study	Dr. (Mrs.) N.P.Vidanapathirana Head of the Department of Agro-Technology
3	Two officers to represent Ministries of Agriculture and Irrigation respectively, nominated by the respective Secretaries of such Ministries	Dr.W.L.G.Samarasinghe Additional Secretary (Agri-Technology), Ministry of Agriculture No representative from Ministry of Irrigation
4	A member nominated by each Department of Study	Dr.S.S.Weerasinghe, Senior Lecturer I (up to 01.08.2022) Dr.D.M.C.C.Gunathilake, Senior Lecturer I (from 02.08.2022)
5	The Coordinators of each Course of Study	Ms.S.A.P.Nelka, Course Coordinator/ UCIARS Ms.S.L.Nawarathne, Course Coordinator/ UCIARS
6	The Senior Professors , Professors and Associate Professors from each Department of Study	-

7	Two members elected from amongst the permanent staff of the institute engaged in teaching, who are not members falling within (6) above	Mr.L.M.Rifnas -Lecturer (Probationary) Ms.K.G.Ketipearachchi - Lecturer (Probationary)
Secretary to the Academic Syndicate		
	Senior Assistant Registrar/UCIARS	Ms.S.A.S.Priyadarshani

The Academic Syndicate of the institute met regularly during the year after establishment to review the academic matters. The Academic Syndicate has met twelve (12) times during the year 2022.

1.4 Audit Committee

The Audit committee of the institute is a sub-committee which assists the Board of Management of the institute in relation to the matters of the internal audit reports and external (government) audit reports to make decisions. Audit committee is chaired by a nominated member of the Board of Management. The Director, Head of the Department of Agro-Technology, Assistant Bursar and the Senior Assistant Registrar are the invitees to the committee while the convener to the meeting is Senior Assistant Internal Auditor of Internal audit branch, University of Colombo. Representatives of Auditor General's Department and the Internal Auditor of University Grants Commission are invited to the meetings of the Audit committee.

The Audit Committee of the institute met quarterly during a year. The Audit Committee has met four (04) times during the year 2022.

The composition of the Audit Committee in 2022 is as follows:

Table 03: The composition of the Audit Committee in 2022

1	Chairman (Nominated member of the Board of Management)	Mr. N.K.De Silva Lawyer
2	Two other members nominated by the Board of Management	Dr.W.L.G.Samarasinghe Additional Secretary (Agri-Technology), Ministry of Agriculture Prof. D.U.J. Sonnadara Dean of the Faculty of Science/University of Colombo
3	Treasury Representative	Mr.W.G.N.Abeywickrama Chief Accountant, District Secretariat/Hambantota
4	Representative from Auditor General's Department	Mr.W.A.A. Anuruddha Superintendent of Audit, Government Audit Division, District Secretariat, Hambanthota
5	Representative from University Grants Commission	Mr.Janaka Bogamuwa Internal Auditor/UGC

6	Representatives from UCIARS	Prof.A.D.Ampitiyawatta Director/UCIARS (from 02.03.2022) Dr. (Mrs.) N.P.Vidanapathirana Acting Director/UCIARS (up to 01.03.2022) Ms.A.D.P.De Zoya Assistant Bursar/UCIARS S.A.S.Priyyadarshnai Senior Assistant Registrar/UCIARS
7	Secretary to the Audit Committee	Mr.K.E.W.Jayasiri/Mr.S.P.G.Nihal Senior Asst. Internal Auditor, University of Colombo

1.5 Finance committee

Finance committee is an advisory body and a subcommittee to make recommendations to the Board of Management to streamline the financial activities of the institute. Since the provisions are not available in the UCIARS Ordinance No.02 of 2008 for the establishment of Finance committee for the institute, the Board of Management at its 96th meeting held on 27.05.2022 recommended to set up a Finance committee for UCIARS with the member composition below (hold office as a member for a period of three years from the date of nomination/appointment) as a subcommittee to the Board of Management as per the UGC Internal Audit Circular Letter No.01/2021 of 06.10.2021. The Council at its 597th meeting held on 20.07.2022 further recommended the decision of the Board of Management to establish a Finance Committee and the University Grants Commission has granted its approval at its 1087th meeting held on 06.10.2022.

Table 04: The composition of the Finance Committee in 2022

1	Director of the institute (Chairman)	Prof. A.D.Ampitiyawatta
2	Minimum of two (02) members of the Board of Management (BOM) [nominated by the BOM out of appointed members (one with financial expertise if available)]	1.Mr.M.Madihahewa 2.Ms.T.K.W.T.P.Premarathne, Ministry of Education
3	All Heads of the Departments of the institute - Members	Dr.N.P.Vidanapathirana, Head of the Department of Agro-Technology
4	Deputy Registrar/Senior Assistant Registrar/Assistant Registrar of the institute (as applicable) – Member	Ms.S.A.S. Priyadarshani, Senior Assistant Registrar
5	Deputy Bursar/Senior Assistant Bursar/Assistant Bursar of the institute (as applicable) – Member and the convener	Ms.A.D.P.De Zoysa, Assistant Bursar

6	Deputy Internal Auditor/Senior Assistant Internal Auditor/Assistant Internal Auditor (as applicable) of the main University of which institute is attached – Observer	Mr.K.E.W.Jayasiri/Mr.S.P.G.Nihal Senior Asst. Internal Auditor, University of Colombo
8	A representative of the Bursar, University of Colombo as the Observer	Ms.K.S.T.S.Jayasooriya, Bursar/UOC

The 1st meeting of the Finance Committee of the institute was held on 13.09.2022. The Finance Committee has met two (02) times during the year 2022.

1.6 Investment Committee

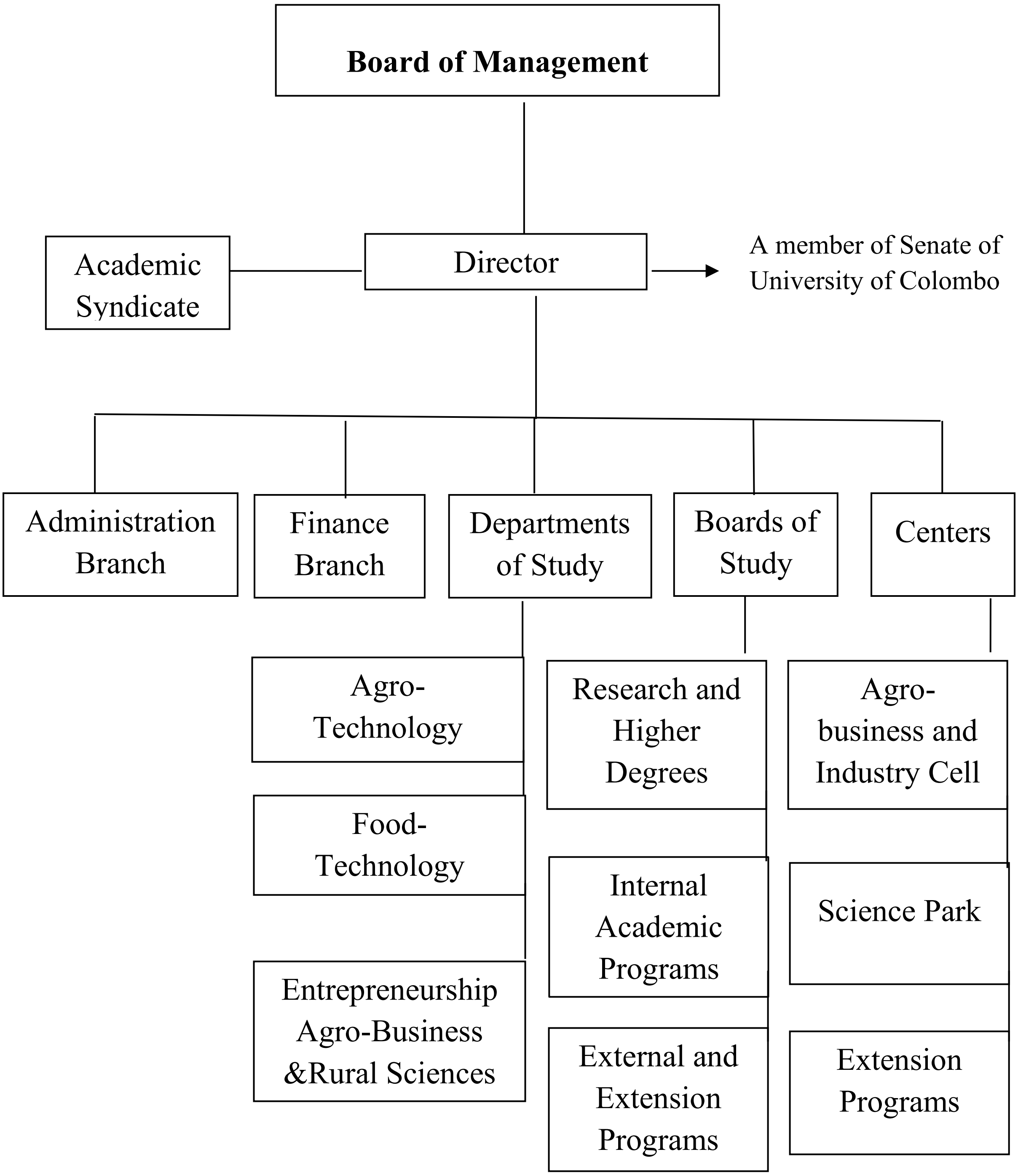
The Board of Management has approved the establishment of investment committee for UCIARS with the following member composition to get the maximum benefits from investments of the institute.

Table 05: The composition of the Investment Committee in 2022

1	Director of the institute (Chairman)	Prof.A.D.Ampitiyawatta
2	A member nominated by the Board of Management	Mr.M.Madihahewa, Council nominee to the BOM
3	A representative from Registrar/University of Colombo	Ms.T.D.D.Pathiranage, Deputy Registrar, Faculty of Science, University of Colombo
4	A representative from Bursar/University of Colombo	Mr.G.H.Gamini, Deputy Bursar, Finance Branch, University of Colombo
5	Deputy Bursar/Senior Assistant Bursar/Assistant Bursar of the institute (as applicable) – Member and the convener	Ms.A.D.P.De Zoysa, Assistant Bursar

The 1st meeting of the Investment Committee of the institute was held on 28.09.2022. The Investment Committee has met one (01) time during the year 2022.

1.7 Organizational Structure



Flow Chart 1 – Organizational Structure

2 OVERALL PERFORMANCE

The Institute is mainly involved with offering Bachelor of Agro-technology Honours degree program, Tissue Cultured Banana, Aloe Vera, Turmeric plant production and producing other farm products.

In the year 2022, Institute continued its academic activities through Department of Agro-Technology and produced Tissue cultured plants using laboratories and the nurseries.

The Institute worked towards its goals with the assistance of 67 Staff members comprising 3% Administrative, 13.4% Academic/Academic support (Permanent), 13.4% Academic (Assignment/Temporary) and 70.1% Non-academic (Permanent/Assignment) staff (Table 04 and Figure-01). Table 05 describes the approved cadre and the existing cadre of UCIARS as at 31.12.2022.

Table 06: Staff of the UCIARS in 2022

Staff Category	No.of Employees
Administrative	03
Academic/ Academic support (Permanent)	08
Academic (Assignment/Temporary)	09
Non-Academic Staff	47
Total Staff	**67**

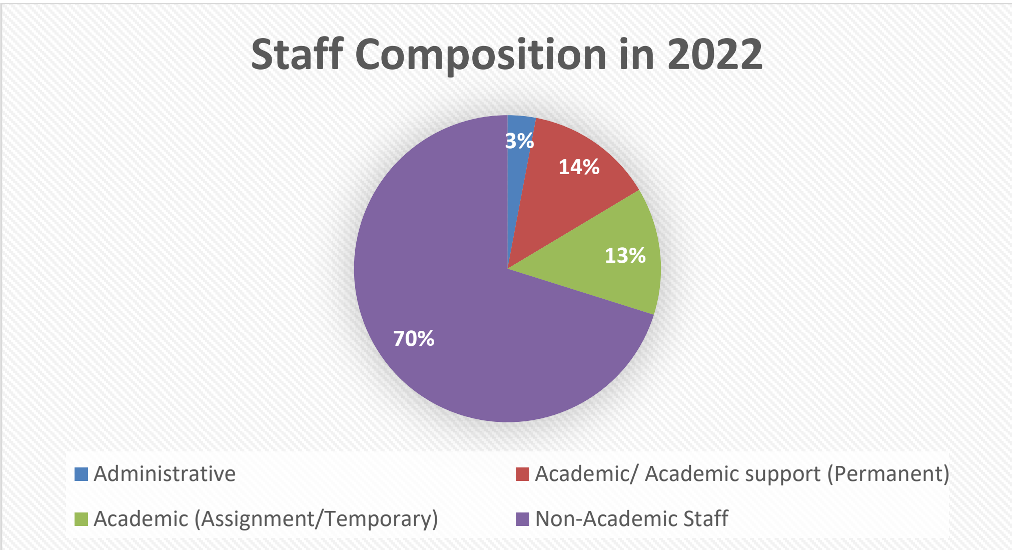


Figure-01: Staff of the UCIARS in 2022

Table 07 : Approved cadre & existing cadre of UCIARS as at 31.12.2022

Designation		Service	Grade	Salary code	Service Level	DMS Approved Cadre			Existing Cadre			
						Permanent	Contract	Casual	Permanent	Contract	Casual	Assignment
1	Director	Academic		U-AC 5	Senior Level	1			0			
2	Professor	Academic		U-AC 5	Senior Level	8			0			
3	Associate Professor	Academic		U-AC 4	Senior Level				0			
4	Senior Lecturer/ Lecturer/ Lecturer (Probationary)	Academic		U-AC 3	Senior Level				8			
5	Scientific Assistant	Academic Support		U-AS 1	Tertiary Level	1			1			
6	Temporary Demonstrator	Contract		U-AC 1 (Fixed)	-		4			4		
7	Senior Assistant Registrar	UA & FS	II/I	U-EX 2	Senior Level	1			1			
8	Assistant Bursar	UA & FS	II/I	U-EX 1	Tertiary Level	1			1			
9	Farm Manager	Dept.	II/I	U-EX 1	Tertiary Level	1			0			
10	Sub Warden	Dept.	III/II/I	U-MN 3	Secondary Level	1			1			
11	Technical Officer (ICT)	UTS	III/II/I	U-MT 1	Secondary Level	1			0			
12	Technical Officer	UTS	III/II/I	U-MT 1	Secondary Level	2			0			
13	Field Supervisor		III/II/I	U-MT 1	Secondary Level	1			1			
14	Management Assistant	UMAS	III/II/I	U-MN 1	Secondary Level	8			5			
15	Management Assistant (Store Keeping)	UMAS	III/II/I	U-MN 1	Secondary Level	2			1			
16	Management Assistant (Book Keeping)	UMAS	III/II/I	U-MN 1	Secondary Level	1			0			
18	Driver	UDS	III/II/I/Spl	U-PL 3	Primary Level	2			2			
19	Electrician	Dept.	III/II/I/Spl	U-PL 3	Primary Level	1			0			
20	Lab Attendant	Dept.	III/II/I/Spl	U-PL 2	Primary Level	26			21			
21	Tractor Operator	Dept.	III/II/I/Spl	U-PL 2	Primary Level	1			0			
22	Nurseryman	Dept.	III/II/I/Spl	U-PL 1	Primary Level	2			0			
23	Works Aide	UWAS	III/II/I/Spl	U-PL 1	Primary Level	19			15			

**	**Existing employees without cadre on Assignment basis**											
	Course Coordinator											5
	Computer Operator cum IT Lab Technician											1
Total						**80**	**4**	**0**	**57**	**4**	**0**	**6**

Table 08: Administrative Staff of the Institute as at 31.12.2022

S/n	Name	Designation
1	Prof.A.D.Ampitiyawatta Dr (Mrs). N.P Vidanapathirana	Director/UCIARS (from 02.03.2022) Acting Director/UCIARS (up to 01.03.2022)
2.	Mrs.S.A.S.Priyadarshani	Senior Assistant Registrar
3.	Mrs.A.D.P.De Zoysa	Assistant Bursar

Table 09: Non-Academic Non Administrative Staff of the Administrative/Finance divisions as at 31.12.2022

S/n	Name	Designation
1	Ms.K.G.M. Samarawickrama	Sub Warden (Full Time)
2	Ms.W.K.K.R. Nilangani	Management Assistant Grade III
3	Mr.R.V.P.N.P.Kumara	Management Assistant Grade III
4	Ms.R.A.M.Dilhari	Laboratory Attendant
5	Ms.U.M.A.A.M. De Silva	Management Assistant Grade III
6	Mr.J.A.U.S. Jayawardhana	Management Assistant (Store Keeping) Grade III
7	Mr.M.G.J.P.S. Sandaruwan	Works Aide Grade III
8	Ms.K.D.C.Ariyasena	Computer Applications Assistant Grade III
9	Ms.N.A.I.Dilhara	Management Assistant (Book Keeping) Grade III
10	Ms.W.H.U.Kaushalya	Laboratory Attendant
11	Mr.P.B.Darshana	Works Aide III
12	Mr. K.S.R.Sampath	Works Aide III
13	Mr. W.M.Chaminda	Works Aide III
14	Mr. B.G.S. Kumara	Laboratory Attendant
15	Mr.S.V.Upali	Driver Grade II
16	Mr.W.W.K.C.Priyankara	Driver Grade I

Special Events of the University of Colombo Institute for Agro-Technology and Rural Sciences in 2022

1. The fourth (4th) Director (full time) of UCIARS assumed duties

   Dr. Asanga D. Ampitiyawatta assumed duties as the fourth Director (full time) of UCIARS from 2nd March 2022 after completion of the term of office of Professor Suthansan Somasundaram as the former Director. Dr. Asanga D. Ampitiyawatta was the Dean, Faculty of Technology, University of Sabaragamuwa, Sri Lanka.

2. Social events

   - *Celebration of Ramazan festival*

     Ensuring the social harmony and the cultural unity among the IARS community the Ramazan festival was celebrated with the participation of Director, all staff members, and students on 28th Aril 2022.

   - *Cultural programme - ADEPT 2022*

     Annual cultural programme ADEPT 2022 was held at UCIARS on 3rd June 2022. The programme was organized by the 12th batch full time students with the objective of showcasing the talents of students and to motivate them for extracurricular activities.

   - *Fire night*

     A fire night was organized by the 11th batch full time students on 24th June 2022. The theme of the event was "Friendship". The programme was embellished with aesthetic events and was really an enjoyable night.

   - *Cricket tournament*

     A friendly cricket tournament was organized by students of UCIARS on 18th June 2022 and the competition was held in between players in the 11th and 12th batches.

   - *'Poson Poya Dansal' day*

     The all students of UCIARS organized a 'Poson Dansal' on 14th June 2022 at the Weligatta Junction, Hambantota – Wellawaya main road.

   - *Navarathri Festival 2022*

     Navarathri festival was celebrated at the UCIARS on 06th October 2022. The Tamil students of UCIARS in collaboration with other students have organized the event. Worship (Pooja) has been arranged which is followed by a small stage performance colorfully to memorize the day and its importance.

3. Community based programme

   A training programme for farmers on organic farming was conducted at UCIARS on 31st March 2022. The entire programme possessed with 20 hours theory and 30 hours practical sessions to teach the principles and to give hands on experience on organic manure production for the participants. This was the second batch of trainees completed the programme successfully.

4. Installation of Water Purification (RO) System (500LTR/H)

   Water purification (RO) System with the capacity of 500 Liter per hour was installed at UCIARS with the aim of providing purified water for drinking purposes of the students and the staff of UCIARS by expending Rs.1,579,600.00.

5. Opening of Automated Teller Machine of Peoples Bank

   Newly installed Automated Teller Machine of Peoples Bank was opened up ceremonially at UCIARS premises on 28.07.2022 for the use of community with the participation of Area Manager and the Manager of Peoples bank-Hambanthota and the Director of UCIARS with the staff and the students of the institute.

2.1 Academic Programme Performance

The University of Colombo Institute for Agro-Technology and Rural Sciences, established in 2008 as a pioneering institute of Sri Lanka for awarding agriculture based **Bachelor of Agro-Technology** degree approved by the University Grants Commission (UGC) for the students who are involving in agriculture and agro-based industries as well as A/L passed students. All lesson contents are in online Learning Management System (LMS) and therefore student contribution for practical and field visit component has increased considerably by applying Blended Learning approaches for lectures. There are seven batches of students who have been completed the Degree and they are providing remarkable contribution for agricultural development in Sri Lanka providing direct inputs for national economy. At present there are about 1000 students following the degree programme.

Bachelor of Agro-Technology Course Outline

The duration of the Bachelor of Agro-Technology Honors Degree is 04 years.

An ‘Academic Year’ consists of 02 Semesters of 15 weeks each and academic program is based on ‘Course Credit System’, where the students will be assessed continuously throughout the semester (i.e. formative) and end-semester evaluation (i.e. summative) will be held at the end of the semester for the designated courses. The students will be informed about the type and schedule of continuous assessment at the beginning of each course unit.

In order to qualify for the award of Bachelor of Agro-Technology Honours degree, the prospective student is required to earn a total of 120 Credits, which contributes to the final grade (GPA course units) and successful completion of all the courses which are not contributed to final grade (i.e. 12 Non-GPA course units).

The yearly breakdown of course units is summarized below:

(Year 1) – Thirty (30) credits of GPA (Grade Point Average) course units and four (4) credits of Non-GPA course units.

(Year 2) – Thirty (30) credits of GPA course units and three (3) credits of Non-GPA course units (Cumulative Sixty (60) credits of GPA course units and seven (7) credits of Non-GPA course units)

(Year 3) – Thirty-two (32) credits of GPA course units and three (3) credits of Non-GPA course units. (Cumulative Ninety two (92) credits of GPA course units and ten (10) credits of Non-GPA course units)

(Year 4) – Twenty eight (28) credits of GPA course units and two (2) credits of Non-GPA course units. (Cumulative one hundred and twenty (120) credits of GPA course units and twelve (12) credits of Non-GPA course units)

An alpha numeric code is used to identity a course unit. The code consists of four digits prefixed by the two letters, namely AT, to denote ‘Agro-Technology’.

The first digit denotes the ‘Year’ at which the course unit is offered and the second digit denotes the ‘Semester’ in which the course unit is offered. The third digit denotes the ‘Serial number’ assigned for the course unit (Table 10).

Curriculum - Bachelor of Agro-Technology Honours

The Curriculum was revised and recommended by the 426th meeting of the Senate held on 30.01.2018.

Table 10 : Course Outline

T: Theory, P: Practical, IL: Individual Learning through LMS

Subject code	Subject Name	GPA credits	NGPA credits	Total contact hours T:P:IL
Level 3 (Year 1) - Semester I				
AT1101	Principles of Agronomy and Horticulture	3	-	15:60:90
AT1102	Principles of crop biology	2	-	15:30:60
AT1103	Irrigation and water resource engineering	3	-	15:60:60
AT1104	Anatomy and Physiology of Farm Animals	2	-	15:30:60
AT1105	Principles of Agricultural Economics and Extension	2	-	15:30:60
AT1106	Principles of Soil Science	2	-	15:30:60
AT1107	Agricultural meteorology	1	-	00: 30:60
AT1108	English	0	2	15:30:90
Total Credits		**15**	**2**	**105:300:540**
Level 3 (Year 1) - Semester II				
AT1201	Production and Management of Vegetables &Field crops	2	-	15:30:60
AT1202	Pest and disease management	2	-	15:30:90
AT1203	Management of Farm Animals	3	-	15:60:60
AT1204	Farm power and Mechanization	2	-	15:30:60

AT1205	Commercial Floriculture	2	-	15:30:60
AT1206	Soil and plant nutrient Management	2	-	15:30:90
AT1207	Introduction to Food and Nutrition	2	-	15:30:90
AT1208	Information Communication Technology	0	2	00:30:30
Total Credits		**15**	**2**	**105:270:540**
	Total Credits at Level 3	**30**	**4**	**210:570:1080**
Level 4 (Year 2) - Semester I				
AT2101	Production and Management of Plantation crops	3	-	15:60:90
AT2102	Crop improvement and Biotechnology	2	-	15:60:90
AT2103	Production and Management of Fruit crops	2	-	15:30:60
AT2104	Post-Harvest Handling and Food technology	2	-	15:30:90
AT2105	Agrostology and Grassland management	2	-	15:30:60
AT2106	Agribusiness Management	2	-	15:30:60
AT2107	Basic statistics	2	-	15:30:60
AT2108	Computer Assisted Language Learning (CALL)	0	2	15:30:90
Total Credits		**15**	**2**	**120:270:600**
Level 4 (Year 2) - Semester II				
AT2201	Production and Management of Export Agricultural Crops	2	-	15:30:90
AT2202	Protected Agriculture	2	-	15:30:60
AT2203	Animal Breeding & Stock Management	3	-	15:60:60
AT2204	Farm planning and designing	2	-	15:45:90
AT2205	Agricultural extension and communication Technology	2	-	15:30:90
AT2206	Aquaculture production technology	2	-	15:30:60
AT2207	Plant tissue culture technology	2	-	15:30:60
AT2208	Life-Skills Development	0	1	00:30:30
Total Credits		**15**	**1**	**105:285:540**
	Total Credits at Level 4	**30**	**3**	**225:555:1140**
Level 5 (Year 3) - Semester I				
AT3101	Landscape horticulture	3	-	30:60:90
AT3102	Agro-ecology	2	-	15:30:60
AT3103	Animal Product Processing Technology	2	-	15:30:60
AT3104	Food Processing & Value Addition	2	-	15:30:90
AT3105	Applications of crop improvements and Bio-technology	2	-	15:30:90
AT3106	Production and Management of Medicinal plants	2	-	15:30:60
AT3107	Agro forestry and silviculture	2	-	15:30:60
AT3108	Principles of Humanities and Social Sciences	0	2	15:30:60
Total Credits		**15**	**2**	**135:270:570**

Level 5 (Year 3) - Semester II				
AT3201	Crop Production Practices	4	-	00:120:90
AT3202	Livestock production practices	3	-	00:90:90
AT3203	Agriculture Engineering practices	2	-	00:60:90
AT3204	E-Commerce for Agriculture	2	-	30:30:60
AT3205	Precision Agriculture	2	-	30:30:60
AT3206	Entrepreneurship & Business Planning	2	-	30:60:90
AT3207	Case study	2	-	30:30:60
AT3208	Presentation Skills	0	1	
Total Credits		**17**	**1**	**120:420:540**
	Total Credits at Level 5	**32**	**3**	**255:690:1110**

Level 6 (Year 4) - Semester I				
AT4101	Research Methodology & Proposal Development	2	-	15:30:90
AT4102	Agricultural experimentation and data analysis	3	-	15:60:90
AT4103	Agricultural Project Analysis & Management	2	-	15:30:90
AT4104	Agricultural Waste Management	2	-	15:30:90
AT4105	Renewable Energy Systems	2	-	15:30:60
AT4106	Crop modeling	2	-	15:30:60
AT4107	Applications of e-agriculture	2	-	30:30:60
AT4108	Bio-ethics	1	-	15:00:60
AT4109	English	0	2	15:30:60
Total Credits		**16**	**2**	**150:270:660**
Level 6 (Year 4) - Semester II				
AT4201	Agro-Technology Research Project	12	0	0
Total Credits		**12**	**0**	0
	Total Credits at Level 6	**28**	**2**	**150:270:660**

Optional courses

Table 11 : T: Theory, P: Practical, IL: Individual Learning through LMS

Subject code	Subject Name	GPA credit	NGPA credit	Total contact hours T:P:IL
AT1109	Career Guidance and Development	2	-	15:30:60
AT1209	Agro-tourism	2	-	15:30:60
AT2109	Electronics and Instrumentation	2	-	15:30:60
AT2209	Disaster Management	2	-	15:30:60

AT1109	Career Guidance and Development	2	-	15:30:60
AT1209	Agro-tourism	2	-	15:30:60
AT2109	Electronics and Instrumentation	2	-	15:30:60
AT2209	Disaster Management	2	-	15:30:60
AT3109	Industrial training	2	-	00:60:60
AT3209	Animal welfare and ethics	2	-	15:30:60
AT4209	Wild life management	2	-	15:30:60

All the components of this programme such as, practical, assignments, theoretical contribution as well as the learner support services have highly been contributed towards the personal and professional development of rural farming community to develop as agricultural entrepreneurs.

Further this Degree programme is providing motivational opportunity to the young generation to remain in agriculture having gained social recognition in the society.

Admission Requirement to the Academic Programme

Admission is done by calling applications from interested parties through newspaper advertisements published in the national newspapers in Sri Lanka.

1. Three passes in G.C.E (A/L) in Agricultural Science or Bio- system Technology or Bio Science or Mathematic subjects

   Or
2. Three years experience in the field of Agriculture (Certified by Agriculture Instructor and Development Officer in Agrarian Center in relevant area of residence) and 03 passes in GCE (A/L) in other subjects other than subjects mentioned in the section 1.

   Or
3. Five years experience in the field of Agriculture (Certified by Agriculture Instructor and Development Officer in Agrarian Center in relevant area of residence) and pass in the GCE (O/L) including Science and Mathematics subjects

   Or
4. Any other equivalent qualifications acceptable to the Senate of the University of Colombo

   Or
5. Applicants who complete a Diploma (NVQ Level 05) or Higher Diploma (NVQ Level 06) in Agriculture from recognized institutes can enter to the second year or third year correspondingly after completing 30 credits Bridging course.

Eligible applicants will be summoned for an aptitude test for selection. According to the results of the aptitude test, registration will be done after having an interview.

Table 12 : Total Number of Students in the year 2022 for Bachelor of Agro-Technology Degree program

Year of Study (Batch/Year)	Year of Intake	No. of Students		
		Male	Female	Total
1st Year (12th/13th Batches)	2020/2021- 2021/2022	122	151	273

2nd Year (11th/12th/13th Batches)	2019/2020-2020/2021-2021/2022	94	124	218
3rd Year (8th /9th /10th /11th /12th /13th Batches)	2016/2017-2017/2018-2018/2019-2019/2020 2020/2021-2021/2022	179	166	345
4th Year (/7th /8th /9th /10th Batches)	2015/2016-2016/2017-2017/2018-2018/2019	60	31	91

Table 13 : Student Enrollment and Passed out students during last 4 years

Year	Student enrollment (each year) for new intakes	No. of students passed out (each year)
2022	246	75**
2021	323	-
2020	343	-
2019	267	32*

*Passed out students of the 2012/2013 and 2013/2014 intakes (4th & 5th batches)
**Passed out students of the 2014/2015 and 2015/2016 intake (6th & 7th batches)

Department of Agro-Technology

This is the only functioning department at UCIARS even though there are provisions in the UCIARS Ordinance No.02 of 2008 to establish three departments due to the lack of staff. Department of Agro-Technology is conducting the Bachelor of Honours degree program.

Staff of the Department of Agro-Technology as at 31.12.2022 is given below.

Table 14: Academic (Permanent) staff description

S/n	Name	Designation
1	Dr.(Mrs.)N.P.Vidanapathirana	Senior Lecturer Grade II, Head/Department of Agro-Technology
2	Dr.(Mrs.) Sujatha Weerasinghe	Senior Lecturer Grade I (up to 01.08.2022)
3	Dr. D.M.C.C.Gunathilake	Senior Lecturer Grade I (on probation)
4	Mr. L.M.Rifnas	Lecturer (Probationary)
5	Mr. K.G. Ketipearachchi	Lecturer (Probationary)
6	Mr. A.J.M.C.M.Siriwardana	Lecturer (Probationary)
7	Mr. U.R. Chandimala	Lecturer (Probationary)
8	Mr. B.S. Bandusekara	Lecturer (Probationary)

Table 15: Academic (Assignment Basis)/Academic (Temporary)/Academic support (Permanent) staff description

S/n	Name	Designation
1	Ms. S.A.P. Nelka	Course Coordinator
2	Ms. S.L. Navarathna	Course Coordinator
3	Mr. H.K.R.S. Kumara	Course Coordinator

4	Mr. T.G.B. Dhanushka	Course Coordinator
5	Mr. B.P. Siriwardena	Course Coordinator
6	Mr. H. Rohanadeera	Scientific Assistant II
7	Ms. B.P. Dilini Hemali	Temporary Demonstrator (up to 17.07.2022)
8	Ms. M.U.N. Gunawardana	Temporary Demonstrator (up to 04.07.2022)
9	Ms. T.V.R.C. Perera	Temporary Demonstrator (up to 08.06.2022)
10	Mr.P.S.Sandamal	Temporary Demonstrator (up to 06.11.2022)
11	Mr.W.C.M.S.Madushanka	Temporary Demonstrator (from 15.08.2022)
12	Ms.M.R.Prathibhani	Temporary Demonstrator (from 07.11.2022)
13	Ms. A.O.T.Thathsarani	Temporary Demonstrator (from 15.12.2022)

Table 16: Non-Academic staff description

S/n	Name	Designation
1	Ms.A.G.U.Wasanthi	Management Assistant III
2	Mr.S.A.R.Lakmal	Computer Operator cum IT Lab Technician
3	Ms. W.I.Chathumali	Works Aide III

- Mr. H. R. Chamara, Government Teacher and former Assistant Course Coordinator of UCIARS served as IT Officer of UCIARS on part-time assignment basis during the year 2022.

- Subject Experts (Visiting Lecturers) were appointed by the Senate of University of Colombo with the recommendation of Board of Management/UCIARS for some courses of the academic program to get the expertise knowledge in each subject area as well to maintain the standard of each course.

Conductance of the Farm Practice Course

There is a requirement for undergraduates to conduct a Farm Practice Course for the third-year students to fulfil their practical component specifically in relation to crop husbandry, animal husbandry and agriculture engineering. Farm practice course for 2018/2019 Group A students was started on 27th June 2022 as a fulfilment of their academic programme.

Special Events in the Department of Agro-Technology (2022)

1. Enrollment of a new batch of students

   A new batch of students (13th Intake) was warmly welcomed to UCIARS on 22nd April 2022. The staff headed by the Director and the senior students organized a colorful ceremony with attractive cultural events.

2. Farm machinery training programme

   A training on Farm machinery was conducted for 3rd year farm practice course by the Brown & Company PLC on 25th and 26th August 2022 to provide practical knowledge under the "Sisu Nana Pahana" educational program launched by the Browns company. The objective of this special training was to nurture the children who will win tomorrow with new knowledge. The programme aimed at improving the knowledge on handling and maintenance of agricultural equipment with modern technologies.

3. Research Symposium

The 3rd National Symposium of the UCIARS, NSATRS-2022 was held on 28th June 2022 as a Virtual symposium on the theme of "Exploring Path for Sustainable Agriculture through Integrative Research". The Senior Professor H. D. Karunarathna, Vice Chancellor of University of Colombo graced the symposium as the Chief Guest. Prof. Paul Iji, Fiji National University and Prof. Upali Samarajeewa, University of Peradeniya joined as keynote speakers. Thirty-one research articles were published in the proceedings of NSATRS-2022. The symposium provided a platform to share the knowledge, experience and modern technologies in relation to the Agro-Technology among researchers, students and the farming community.

4. Farm practice course for the full time students in the 10th batch

Farm practice course for 3rd year 2nd semester students was started on 27th June 2022 as a fulfilment of their academic programme.

5. Convocation of 6th and 7th batch students

About 42 students of the 6th batch (old syllabus) have completed their Bachelor of Agro Technology degree programme and graduated at the general convocation held on 23rd July 2022 at BMICH.

About 33 students of the 7th batch (old syllabus) have completed their Bachelor of Agro Technology degree programme and graduated at the general convocation held on 14th December 2022 at BMICH.

6. Infrastructure developments Farmland development

A) Climate smart adaptations

Micro irrigation systems have been established with fixing rain guns across the cultivations. This modern technique helps to utilize a limited amount of water efficiently and site specifically. This system is ideal for obtaining better performance of the crops established in the field. This is an effort of Mr. T.G.B, Dhanushka, the Acting Farm Manager and his team.

B) Rehabilitation of the pastureland

The existing pastureland has been rehabilitated for ensuring the feed requirement of the Cattle and Goats in the livestock unit. This activity was performed by Mr. T.G.B, Dhanushka, the Acting Farm Manager and Mr.H.K.R.S.Kumara, Academic staff member of the Institute.

7. First place in the University Startup competition

Mr. Kelum Prasad Samarasinghe, a student of UCIARS has won first place in the University student Startup competition organized by AHEAD operations together with ICTA to celebrate Global Entrepreneurship Week 2022, Sri Lanka. He has faced competition with the name 'Walawe Agro Products'. The competition held on 15.11.2022 via online. UCIARS got the opportunity to represent the University of Colombo at national level and presented a unique invention named as bio coins. It was a great milestone in the history of UCIARS regarding a student startup.

2.2 Plant Nursery/Laboratories Performance

Even though the Institute for Agro-Technology and Rural Sciences was established in 2008 according to the Ordinance, the Tissue Culture Unit was started in 1998 as a project of the University of Colombo by aiming poor and rural farming community to encourage developing their socioeconomic status. In 2001, Department of Plant Sciences, Faculty of Science/UOC introduced Tissue Cultured banana and yam plantlets at the Institute as demonstration. Since 2003, the Institute was able to carry out its own production under the guidance and supervision of the University of Colombo. Table 15 shows the staff contributed for the smooth functioning of plant laboratory and nursery during 2022.

Table 17: Staff of the Plant Nursery and Laboratory as at 31.12.2022

S/n	Name	Designation
1	Mr. H. Rohanadheera	Scientific Assistant (Production In-charge)
2	Mr. H.K.S. Ishara	Field Supervisor (Nursery In-charge)
3	Mrs. A.N. Abeygunawardhana	Laboratory Attendant
4	Mrs. H.K.S.N. Kumari	Laboratory Attendant
5	Mrs. M.G.C. Sudarshani	Laboratory Attendant
6	Mrs. A. P. Sudarshi	Laboratory Attendant
7	Mrs. U. A. Ruwani	Laboratory Attendant
8	Mrs. W.H. D. Sandamali	Laboratory Attendant
9	Mrs. O.P. N. Subashini	Laboratory Attendant
10	Mrs. D. I. Nimalga	Laboratory Attendant
11	Mrs. K.P.U. Nisansala	Laboratory Attendant
12	Mrs. N.S.Perera	Laboratory Attendant
13	Mrs. H.R.A. Madumali	Laboratory Attendant
14	Mrs. S.M.Weerasuriya	Laboratory Attendant
15	Mrs. P.M. T. Piumali	Laboratory Attendant
16	Mrs.W.H.V.Kalpani	Laboratory Attendant
17	Mrs.K.L.A.A.Thathsarani	Laboratory Attendant
18	Miss.I.C.Dodampe	Laboratory Attendant
19	Mrs.I.G.D.N.Kumari	Laboratory Attendant
20	Mrs.W.K.M.S.Sewwandi	Laboratory Attendant
21	Mr. N.S. Pradeep	Works Aide Grade III
22	Mr. T.A.K.Y. Indunil	Work Aide Grade III

Performance in year 2022

Performance during the year 2022 of the tissue cultured plant production and sales are indicated in below tables and figures.

Table 18: Plant Production Records from Tissue Culture Laboratory (Nos.)

Month	Banana plants
January	15,027
February	15,129
March	15,013
April	2,513
May	13,447
June	2,659
July	0
August	20,011
September	17,655
October	23,566
November	13,464
December	11,422
Total	**149,906**

Table 19: Comparison of Banana plant production for last seven years (Nos.)

Month	2016	2017	2018	2019*	2020*	2021	2022*
January	20,594	20,386	18,826	25,628	7,861	5,609	15,027
February	20,476	21,527	24,882	19,025	16,360	5,185	15,129
March	16,918	25,150	24,680	8,949	10,751	5,465	15,013
April	10,815	19,703	18,873	5,429	5,166	5,678	2,513
May	19,079	24,351	27,514	24,023	10,097	8,257	13,447
June	19,359	23,260	23,504	19,425	18,384	8,182	2,659
July	19,750	25,184	8,673	20,005	10,437	8,250	0
August	20,875	22,151	11,318	6,669	5,538	11,237	20,011
September	24,180	25,420	22,770	6,774	5,750	11,412	17,655
October	23,481	21,732	27,810	24,243	5,854	12,100	23,566
November	18,807	24,481	8,993	18,891	5,126	12,528	13,464
December	18,100	18,180	7,822	14,374	5,211	15,246	11,422
Total	**232,434**	**271,525**	**225,665**	**193,435**	**106,535**	**109,149**	**149,906**

*Due to a banana plants mutation issue aroused in 2019, plant production was dropped in a considerable amount and sub culturing stages were reduced from 11 to 6. It was affected to the production in year 2020 and 2021 too and as well as COVID 19 pandemic situation of the country. However, in 2021 there was a little progress due to work with targets even though Lab staff worked on roster basis during pandemic period. In 2022, production unit had to face an issue in plant sale due to fuel crisis and strategically reduced the production accordingly for few months.

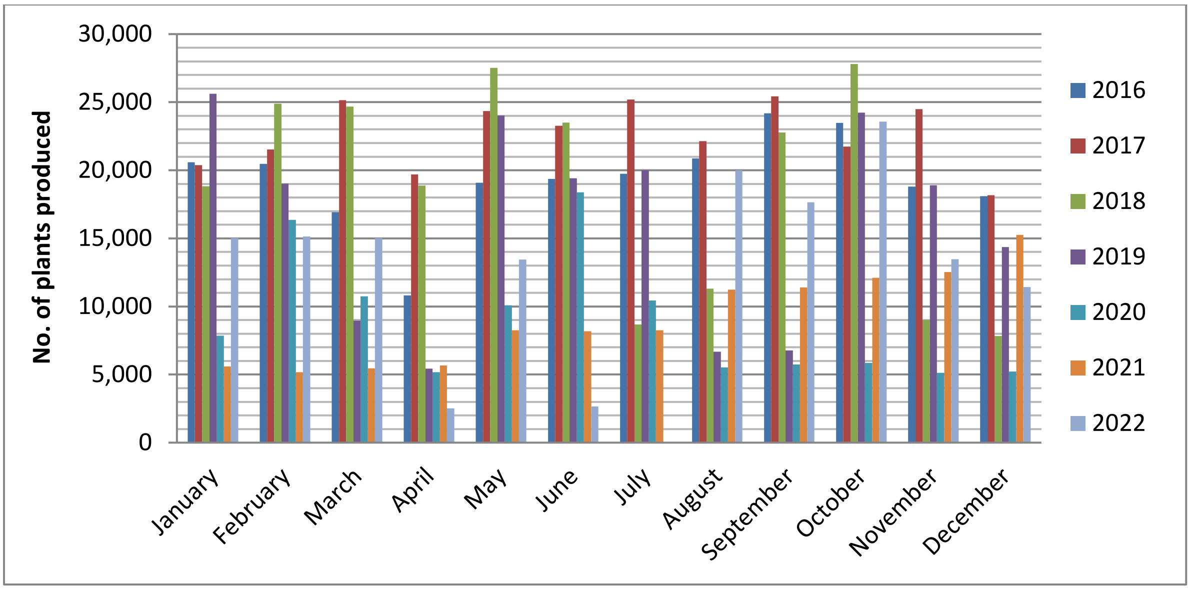


Figure 02: Plant Production Comparisons 2016 - 2022

The data collected during the period of last seven years, it showed the pattern of high demanding period during the month of January to April and September to December. However, in 2021 and 2022, COVID 19 pandemic situation and fuel crisis in 2022 adversely affected on plant production respectively.

Banana Production Comparison in the year 2022

87 % of the total production accounts for Embul Banana and 10 % and 3% represents by Kolikuttu banana and Draft Cavendish banana varieties respectively.

Plant Sale Comparison

Typically, demand for the Tissue Cultured banana is highly depend on the climatic conditions while highest demand is recorded in the rainy season (September to April) and low demand in the dry season (May to August). Raining pattern directly influence on cultivation; farmers cultivate bulk quantity of Tissue Cultured banana plants on rainy season. High demand for banana bunches occurs in this season especially targeting December and April festivals. Therefore, farmers purchase more tissue cultured banana plants considering these favorable climatic conditions and demand in the market. However, in 2022, fuel crisis was adversely affected on considerable reduction of plants sales.

Table 20: Comparison of plant sale for last seven years (Nos.)

Month	2016	2017	2018	2019	2020	2021	2022
January	21,738	17,980	17,759	3,851	27,222	5,551	16,392
February	17,950	22,141	12,738	9,704	526	2,712	8,312
March	14,924	22,536	26,232	2,344	4,292	5,048	7,916

April	13,721	21,467	15,259	11,524	19,668	5,617	7,967
May	12,830	19,652	18,968	4,923	7,434	5,785	14,800
June	13,527	20,780	6,489	6,211	10,956	6,222	1,149
July	11,490	20,576	11,049	7,008	14,276	6,348	2,100
August	19,465	21,097	13,454	15,425	9,106	6,820	8,712
September	18,837	20,877	7,697	21,701	5,791	7,384	6,062
October	22,040	22,302	19,692	5,988	5,169	8,514	8,326
November	17,327	21,137	19,349	12,744	2,810	5,759	20,996
December	20,884	20,530	14,405	8,027	4,658	7,212	11,285
Total	**2,04,733**	**2,51,075**	**1,83,091**	**109,450**	**111,908**	**72,972**	**114,017**

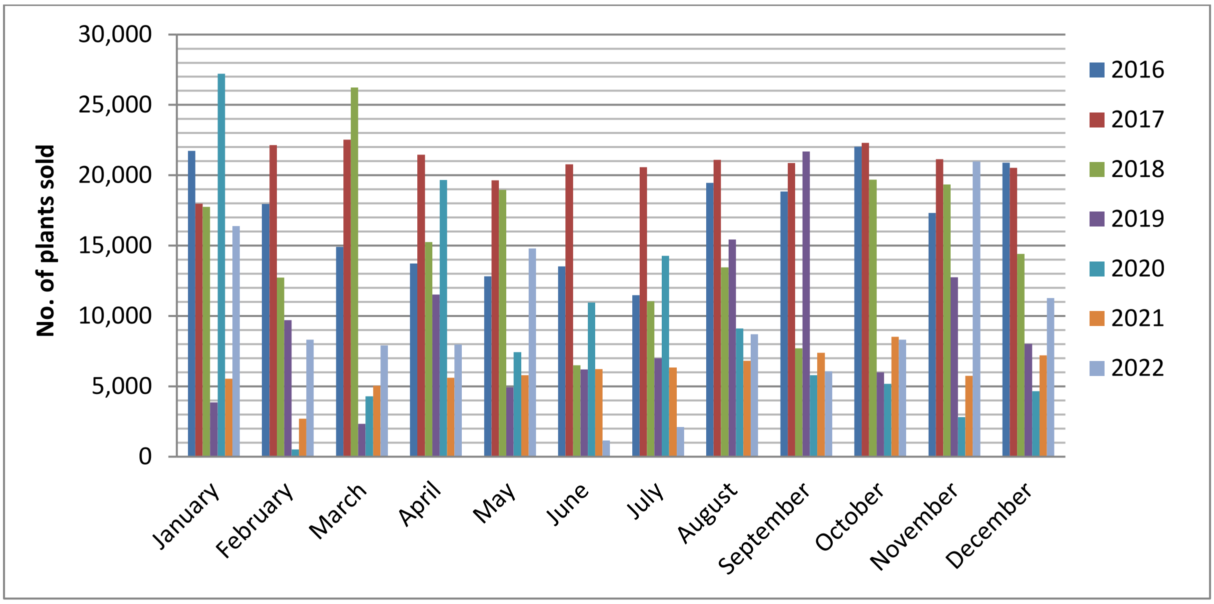


Figure 03 : Plant Sale Comparison 2016 - 2022

Table 21: Plant sale comparison in no. of plants sale basis – 2022

Description	**No. of Plants**
Plant sale >100 plants	7,579
Plant sale <100 plants	106,800

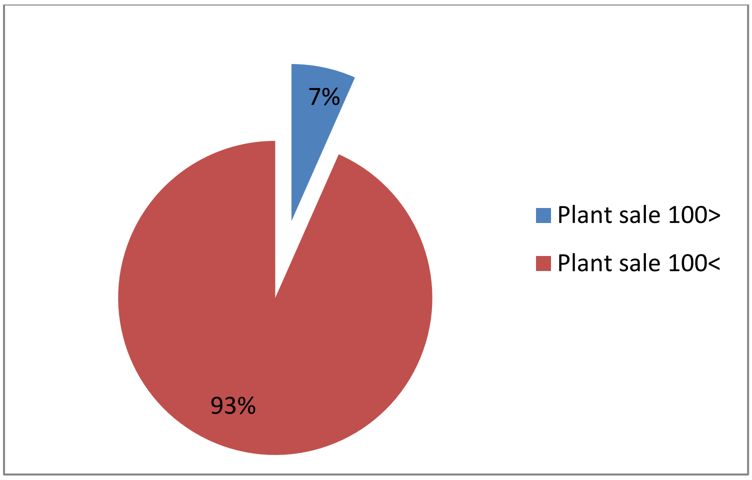


Figure 04: Plants sale - 2022

Table 22: Plant Sale in Variety Basis – 2022

Variety	No. of Plants
Embul banana	100,552
Kolikuttu banana	11,497
Draft Cavendish banana	1,968

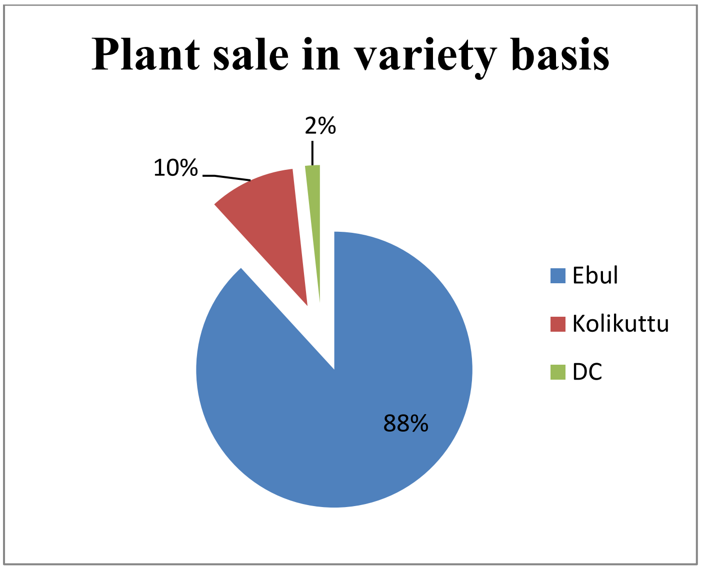


Figure 05 : Plant sale in variety basis

Income generation through Tissue cultured banana sale was 10.1 Mn (Banana sale prices were increased since November 2022). in 2022. Embul banana (Sour banana) is the highest demanded variety due to low disease incidence in the field level and continues high yielding capacity up to five years. Farmers cultivate Kolikuttu banana in single plant management system due to severe *Fusarium* wilt disease conditions in second generation. Draft Cavendish banana has recommended only for wet zone shows low demands with limited number of wet zone farmers facilitate by the Institute.

Demand for the tissue cultured banana is higher than conventional plant productions and farmer's major requirement was Embul banana (Sour Banana) due to higher long term profitability and less disease susceptibility. Majority of farmers engaged with the Institute were low purchasing power farmers (64%) while engaged low percentage of high purchasing power farmers (36%).

Table 23: Purchasing power of the farmers - 2022

Purchasing power of the farmers	No. of farmers
No. of farmers purchased more than 100 plants	114
No. of farmers purchased less than 100 plants	204

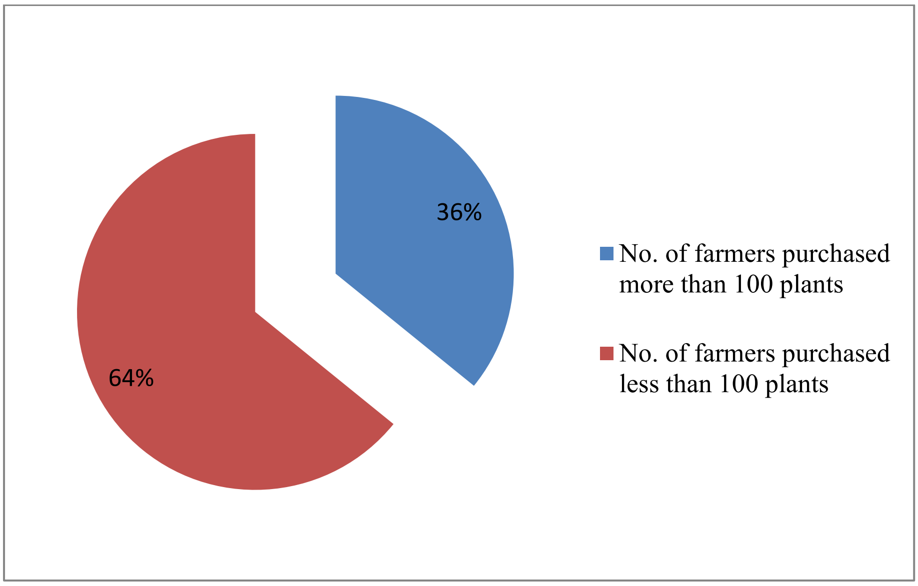


Figure 06: Purchasing power of the farmers - 2022

The Institute provides banana plants to the local farmers with low cost and farmers are engaged with the institution representing remote areas in Sri Lanka. Field staffs regularly monitor their cultivations and provide necessary instructions and guidance they need. Field officers attached to the institute have arranged regular field visits to expand Tissue Culture banana farming community in the country.

Production Process of the Tissue Culture Banana plants

Plant Tissue culture technology is production of virus free samplings using artificial medium under aseptic conditions. So, the technology is specific, and it is needed competent and skilled staff for handle all activities from ex-plant establishment to hardening initiation. In generally, Tissue culture plant production process divides in to five stages as Selection of healthy and vigorous mother plant, establish the ex-plant in artificial medium, Multiplication/proliferation stage, Regeneration/rooting stage and Acclimatization stage. The Institute produces of Tissue cultured banana samplings through meristem culture and utilizes strategies to keep quality of the products and reduce mutations. Highly recognized standards are followed in sterilization process, in handle propagation stage (8 subculture stages) and maintain all records to trace back if necessary. Staff of the unit has recruited in every stage of the process according to their suitability and capacity.

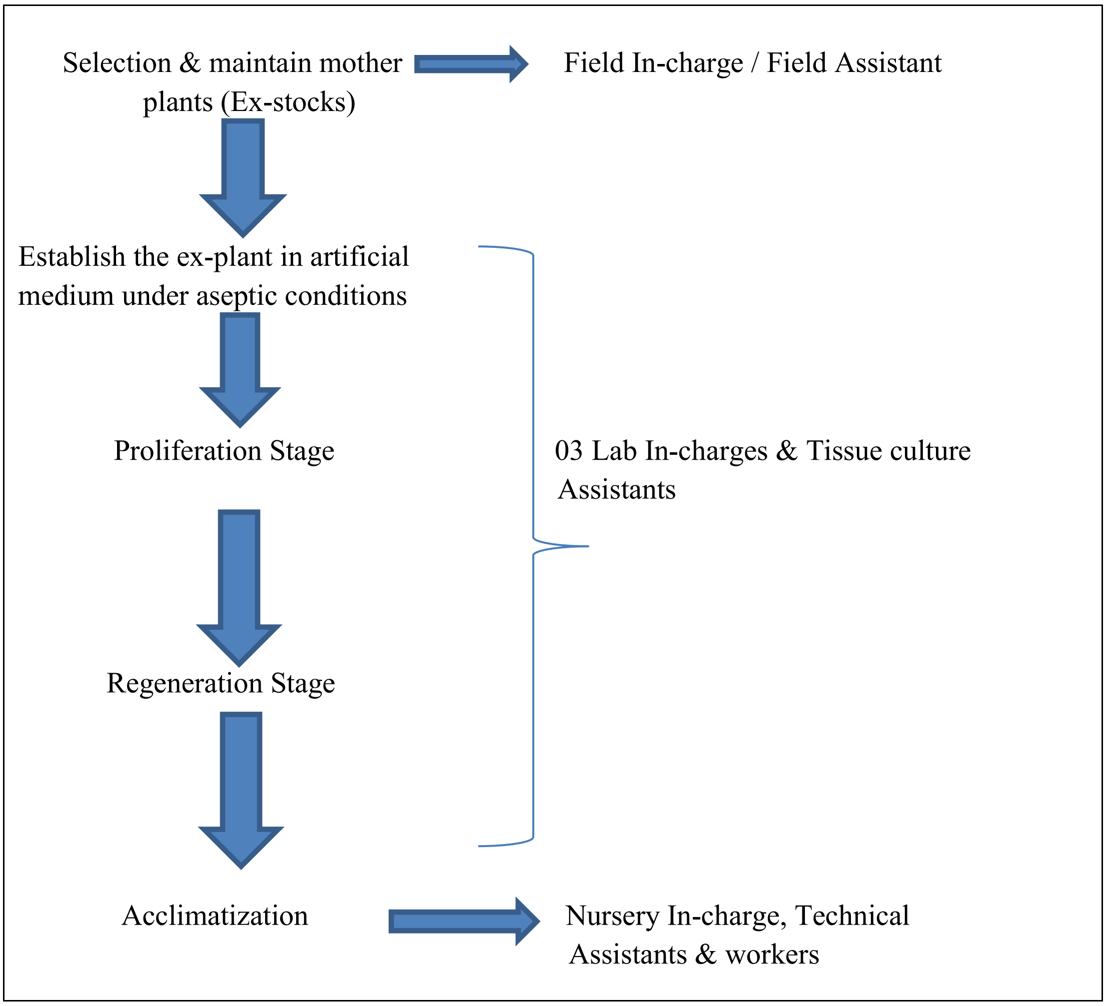


Figure 07 : Production Process of Tissue Culture Banana Plants

3.RESEARCH AND INNOVATIONS

Publications in 2022

<u>**Journal Full Papers**</u>

Gunathilake DMCC and Senadeera W, (2022) Effect of Commercial Level Modified Atmospheric Storage for Paddy (Oryza sativa). Journal of COJRR COJ Reviews and Research, 4(1), 1-5
DOI: 10.31031/COJRR.2022.04.000578

Jeyavaran, A., **Bandusekra, B. S**., Sivakumar, K., & Gunathilake, C. (2022). Vermicompost – a Better Organic Manure in Integrated Plant Nutrient System for *Vigna radiata* (Mung Bean). *Journal of Agro-technology and Rural Sciences*, *2*(2), 23–29. DOI: http://doi.org/10.4038/atrsj.v2i2.44

Chandimala U.R., Gunathilake D.M.C.C., Vidanapathirana N.P., Rifnas L.M. (2022). Perception of Cultured Meat among Sri Lankan Community. Journal of Agro-technology & Rural Sciences; 1(2), pp.21-26 https://uciars.cmb.ac.lk/wp-content/uploads/2017/06/ATRS-Vol-1-Issue-2- January-2022-with-DOI.pdf

Chandimala U.R., Rajawardhana D.U., Lakshman P.L.N. and Hewajulige, I.G.N. (2022). Isolation and Characterization of Yeasts from Locally Available Foods. Journal of Agro-technology & Rural Sciences; 2(2), pp.17-22 http://doi.org/10.4038/atrsj.v2i2.43

Rifnas, L. M. Vidanapathirana, N. P., Silva, T. D., Dahanayake, N., Subasinghe, S., Weerasinghe, S., Nelka, S. A. P., Rohanadeera, H. and Madushani, W. G. C. (2022). Effect of gamma radiation on morphological changes and vegetative growth in Sunflower (*Helianthus annuus* L.). *Journal of Agricultural Sciences, 16(2), pp.25–34. DOI: http://doi.org/10.4038/agrieast.v16i2.114*

Najah, M.F.A., Sutharsan, S. and **Rifnas, L.M.** 2022. Effects of different fertilizers on growth and yield of okra (*Abelmoschus esculentus*) cv. Haritha in Ampara district of Sri Lanka. *International Journal of Biology, Pharmacy and Allied Sciences.* 10 (12): 563-576.

Manasar, A. L., Sutharsan, S., **Rifnas, L. M.** and Iqbal, S. L. (2022). Effects of mulching on growth and yield of Okra (*Abelmoschus esculentus*) cv. Haritha. *International Journal of Advance and Innovative Research*. 9(3):119-125.

Nelka, S.A.P., Vidanapathirana, N.P., Dahanayake, N., Subasinghe, S., Silva, T.D., Weerasinghe,S., Rifnas, L.M., Rohanadeera, H., Madushanka, W.C.M.S., & Dhushane, S. (2022). Effect of gamma irradiation on seed germination, survivability and growth performances of *Calotropis gigantia* (Vara). International Journal of Minor Fruits, Medicinal and Aromatic Plants, Vol 8 (1), 40-46

N P Vidanapathirana. Study on antagonistic effect of spent *Pleurotus* mushroom substrate. International Journal of Botany Studies, Volume 7, Issue 9, 2022, Pages 25-28

N P Vidanapathirana. Evaluation of *Glycosmis pentaphylla* (Dodampana) plant extract as a source of insect repellent in radish (*Raphanus sativus*). International Journal of Agriculture and Plant Science, Volume 4, Issue 2, 2022, Pages 80-83

N.P. Vidanapathirana, S. Subasinghe, K. Sunil, K.G. Ketipearachchi, A.J.M.C.M. Siriwardana, B.S. Bandusekara (2022). Growth and yield performances of turmeric (curcuma longa) grown in dry zone of Sri Lanka as affected by planting space, growing media and shade, *Journal of Agro-technology and Rural Sciences 1 (2), 27-31*

Vidanapathirana, N. P. (2022). Effects of Different Organic Applications on Growth and Yield of *Raphanus sativus* (Raddish). *Journal of Agro-technology and Rural Sciences*, *2*(2), 11–16. DOI: http://doi.org/10.4038/atrsj.v2i2.42

Vidanapathirana, N.P., Tharanga, S. J. and Siriwardana, A. J. M. C. M. (2022), Effects of Cinnamon (Cinnamomum zeylanicum) powder extract against the pest of Radish (*Raphanus raphanistrum* Subsp. Sativus) International Journal of Minor Fruits, Medicinal and Aromatic Plants. Vol. 8 (1): 61-64.

Dodampe, I. C., **Rifnas, L. M.,** Madushani, W. G. C. and Weerasinghe, S. S. (2022). Development of Eco-friendly Smart Bio-food Wrapper using Undersized *Heliconia bihai* leaves. *International Journal of Minor Fruits, Medicinal and Aromatic Plants.* 8(2): 86-90. (Short communication)

Conference full papers

Ketipearachchi, K.G., Vidanapathirana, N.P., Subasinghe, S.& Silva, T.D.(2022) Geographical Distribution and Morphological Characterization of Tropical Almond (*Terminalia catappa L.*) in Southern Province, Sri Lanka. SLIIT International Conference on Advancement of Science & Humanities (SICASH), pP261-265

Siriwardena B. P., Vidanapathirana N. P., Ketipearachchi K. G., Rajasekara L. R. W. D. M., (2022). Social and Economic Effects of the Cultivation of *Solanum Virginianum*; A Case Study in Anamaduwa DS Division, Sri Lanka. Proceedings of SLIIT International Conference on Advancements in Sciences and Humanities, (11) October, Colombo, 256 - 260.

Abstract Publications

Gunathilake D. M. C. C. 2022 Manufacturing of turmeric powder using the turmeric grown in semi-arid zone of Sri Lanka, Proceedings of the 3rd National Symposium on Agro- Technology and Rural Sciences, The University of Colombo Institute for Agro-Technology and Rural Sciences, Hambantota, Sri Lanka.

Chandimala U.R., Jayamanne V.S., Dhushane S. (2022). Impact of Covid-19 Pandemic on Access to Foods, Dietary Habits and Nutrient Intake of Adults in Sri Lanka. Proceedings of 3rd National Symposium on Agro-technology & Rural Sciences, University of Colombo Institute for Agro-Technology & Rural Sciences, Sri Lanka, pp.18
https://uciars.cmb.ac.lk/wpcontent/uploads/2017/06/Proceeding-NSATRS-2022.pdf

LM Rifnas, NP Vidanapathirana, TD Silva, N Dahanayake, S Subasinghe, SS Weerasinghe, WGC Madushani and SAP Nelka. (2022). Effects of gamma irradiation on the performances of Acalypha hispida (Cat's tail plant*). Proceedings of National Symposium on Floriculture Research (NaSFloR).* Pp. 02.

Gallage K.Y., **Weerasinghe S**., **Chandimala U.R.**, Weerathunga H. (2022). Extraction of Yellow Colorant from the Peel of Banana (Musa spp.) and Determination of Carotenoids. Proceedings of 3rd National Symposium on Agro-technology & Rural Sciences, University of Colombo Institute for Agro-Technology & Rural Sciences, Sri Lanka,
pp.24 https://uciars.cmb.ac.lk/wpcontent/uploads/2017/06/Proceeding-NSATRS-2022.pdf

PG Samarawickrama, SL Nawarathna, S Subasinghe and NP Vidanapathirana (2022), Growth and yield performances of evolvulus alsinoides. linn (visnukkranthi) as affected by different methods of irrigation and weed management, 3rd National Symposium on Agro-Technology and Rural Sciences – 2022, University of Colombo Institute for Agro-Technology and Rural Sciences – Sri Lanka, 10.

Samarasinghe S.P.A.K, **Chandimala U.R**. and **Gunathilake D.M.C.C.** (2022). Development of a Plant-based Milk Using Tropical Almond (Terminalia catappa L.) Nuts. Proceedings of 1st Annual Research Session, Faculty of Technology, Eastern University, Sri Lanka. http://www.esn.ac.lk/fte/porcee2022

Siriwardena, B. P., Warnasooriya, R. W. M. R. L., Senarathne, S. M. A. C. U., Vidanapathirana, N. P., Ketipearachchi, K. G., (2022) Development of Nutritious Curry Cubes by Using Mung Bean (Vigna radiata) and Cowpea (Vigna unguiculata), Proceedings of the 3rd National Symposium on Agro-Technology and Rural Sciences (NSATRS). 28th June 2022. University of Colombo Institute for Agro Technology and Rural Sciences, Sri Lanka, Pp 19.

B. P. Siriwardena., K. G. Ketipearachchi., L. R. W. D. M. Rajasekara., (2022) Farmer issues on *Solanum Virginianum* (Katuwelbatu) Cultivation, Proceedings of the 1st Annual Research Session - 2022, Faculty of Technology, EUSL. 06th October 2022. Faculty of Technology Eastern University, Sri Lanka, Pp 43.

Siriwardena B. P., Abeywickrama L. M., Sandika A. L., Vidanapathirana N. P., (2022) Freshmen's perceptions of blended learning in higher education; A case of University of Colombo Institute for Agro-Technology and Rural Sciences, Proceedings of the 22nd Conference Postgraduate Research(IPRC), Faculty of Graduate Studies, University of Kelaniya, Sri Lanka,, Pp 07.

K. G. Ketipearachchi, S. Subasinghe, N. P. Vidanapathirana, T. D. Silva (2022) Geographical Distribution and Morphological Characterization of Tropical Almond (*Terminalia catappa* L.) in Hambantota District, Sri Lanka, Annual Research Session - 2022, Faculty of Technology, EUSL (ARSFOT-2022) Pp 41

Book Chapters

Hemathilaka, D.M.K.S. and Gunathilake D.M.C.C. 2021 "Agricultural productivity and food supply to meet increased demands" In Future Foods – Global Trends, Opportunities, and Sustainability Challenges (pp 539 -551) Academic Press publications by Elsevier
(ISBN: 978-0-323-91001-9) https://doi.org/10.1016/B978-0-323-91001-9.00016-5

Hemathilaka, D.M.K.S. and Gunathilake D.M.C.C. 2021 "High-productive agricultural technologies to fulfill future food demands: Hydroponics, aquaponics, and precision/smart agriculture" In Future Foods – Global Trends, Opportunities, and Sustainability Challenges (pp 555-567) Academic Press publications by Elsevier (ISBN: 978-0-323-91001-9) https://doi.org/10.1016/B978-0-323-91001-9.00018-9

INVENTIONS/INNOVATIONS

1. Fish refugee pond for inland fisheries in "Integrated rice-fish farming systems"

In a modern technique of integrated rice – fish farming system is entirely new for the dry zone of Sri Lanka. One of the major constraints in this endeavor is the difficulty of maintaining fish in the field during the dry periods or after harvesting the rice crop where the land is dry. During this period fish can be maintained in these refugee ponds ensure their survival until get rain or start the crop of rice under integrated rice fish farming systems. This was invented by Mr. H.K.R.S.Kumara, Academic staff member and a student Research Assistant of the Institute.

2. Extraction of natural yellow colourant from ripe banana peel

The yellow colourant has been extracted to be used in food items in place of compounds containing artificial colours. Ambul banana peel is a highly potential source of natural industrial yellow colorant. Also, this can be identified as a sound method of using banana peel rather than just dumping as an agriculture waste. This was invented by Ms. K.Y. Gallage a research student with the guidance of Academic staff members; Ms. U. R. Chandimala and Dr. Sujatha Weerasinghe.

3. **Development of a tool for applying chemical fertilizer to pineapple plants**

Being pineapple plants posses with spiny and sharply pointed leaves it is rather difficult to place fertilizer without getting hurt. Therefore, efficiency of fertilizing is low, and wastage of fertilizer is high owing to this difficulty. To overcome this barrier a tool has been developed to a place fertilizer conveniently, effectively and efficiently. This tool is user friendly, low cost and hand operated one that can easily be used by pineapple growers. This was invented by Mr. N. Ahamad Risni a research student with the guidance of Academic staff members; Mr. L.M.Rifnas and Dr. Sujatha Weerasinghe.

4. **"Smart bunch manager" for Banana growers**

To improve the bunch quality of Banana it needs to practice three essential operations; de-belling, de-handing and bunch covering. These three operations can be performed at once in one go using this instrument. That is the reason for referring it as "Smart bunch manager". It helps for convenient handling, minimizing labour requirement, reducing cost involvement, and finally improving the bunch quality. This was invented by Mr. Dhaminda Kumara, research student with the guidance of Academic staff members; Mr. B.S. Bandusakera and Dr. Sujatha Weerasinghe.

5. **Latex coagulation mini tank**

In rubber industry to coagulate latex it needs containers. For that small aluminum trays are commonly used especially by small holders. However, it is costly, labour consuming, space requiring technique having a less efficiency. As a solution a latex coagulation mini tank has been invented by UCIARS especially aiming small scale industries. This technique has been introduced by Mr. S.V.P.T Dilshan, a research student with the guidance of Academic staff members; Ms. K.G.Ketipearachchi and Dr. N.P.Vidanapathirana


6. **Fruit covers for Guava from Banana stem fiber to protect from Fruit fly attack**

Generally, guava fruits are badly attacked by the fruit fly, and it should be prevented by covering fruits with covers. The commonly used material for covering is polyethene however, it is not biodegradable. Therefore, it is important to introduce fruit covers derived from natural fiber. Accordingly, this reusable fruit covers have been fabricated with natural fiber by Ms. Sameera Dilshani, research student with the guidance of Academic staff members; Ms. K.G.Ketipearachchi and Dr. Sujatha Weerasinghe.

7. **Production of body soap with Papaya and Aloe vera extracts.**

Postharvest losses of papaya are nearly about 40% especially of well ripen fruits. Therefore, it is worth to use the over ripen fruits in useful manner beyond the consumption. Also, aloe vera is a naturally grown freely available herb having anti-aging compounds and vitamin A derivatives. Accordingly, the excess amount of papaya and aloe vera can be utilized as raw materials for production of body soap. Generally, the soap available in the market are mainly derived from chemical compounds and synthetic antimicrobial agents integrating in cosmetic formulas. They can cause health problems especially the frequent skin irritations. This body soap produced with papaya and aloe vera is smooth and soft for the skin. This soap can be produced with minimum inputs and can be practiced as a cottage level industry too. This was invented by M.J.M. Jasly, research student with the guidance of Academic staff members Mr. A.J.M.C.M. Siriwardana and Dr. D.M.C.C. Gunathilake.

8. **Bunch covers to improve the bunch quality of Banana from Banana leaf petioles**

Banana bunches are covered with porous materials such as poly-sac bags, paper bags and mostly with nonporous polyethylene bags to enhance the bunch quality. However, the waste material of Banana leaf petioles can easily be utilized in profitable manner by fabricating bags as a natural, biodegradable and reusable green cover. These bags have been developed by Ms. W.D.Wiganagamage, research student with the guidance of Academic staff members Ms. K.G.Ketipearachchi and Dr. Sujatha Weerasinghe.

4. TRAINING, WORKSHOPS AND STAFF DEVELOPMENT

During the year 2022, Academic and Non-Academic staff members have participated few training programmes.

Table 24 : Staff attended programmes

S.N.	Name of the Employee	Designation	Date of the training program	Programs attended
1	Ms. S.A.P.Nelka	Course Coordinator	2022.11.01-2022.11.03	UNESCAP-United Nations Economic and social commision for Asia and Facific training for women Entrepreneurs.
2	Ms. S.L.Navarathna	Course Coordinator		
3	Ms. H. K. S. N. Kumari	Laboratory Attendant Grade III		
4	Ms. A.D.P.De Zoysa	Assistant Bursar	2022.09.14-2022.09.16	Bid Evaluation in public procurement
5	Ms. A.D.P.De Zoysa	Assistant Bursar	2022.07.28	SLFRS 15 – Revenue from contact with customers

5. RENOVATIONS AND CONSTRUCTION PROJECTS

Below table 25 depicts the physical and financial progress of already commenced projects of the institute.

Table 25: Progress of Renovation and construction projects

No.	Project Name	Remarks
Projects commenced in 2019		
01	Construction of Engineering Workshop	Project Cost Rs.7.89 Million (with VAT) Contractor : Wijesinghe Construction Physical Progress : 100% Financial Progress : 100%
02	Supply, installation and commissioning of outdoor lighting system	Project Cost Rs.9.99 Million (with VAT) Contractor : Sun Power Engineering (Pvt) Ltd. Physical Progress : 100% Financial Progress : 100%
03	Construction of Goat shed	Project Cost Rs.5.45 Million (with VAT) Contractor : Chandana Enterprises Physical Progress : 100% Financial Progress : 100%
Projects commenced in 2022		
01	Construction of Layer House	Project Cost Rs.7.9 Million (without VAT) Contractor : through direct labour Physical Progress : 50% Financial Progress : 28%
02	Proposed Room Partition work in Tissue Culture Laboratory	Project Cost Rs.10.8 Million (with VAT) Contractor : V.K.Construction Physical Progress : 75% Financial Progress : 56%
03	Water Purification (RO) System (500LTR/H)	Project Cost Rs.5.45 Million (with VAT) Contractor : Aqua + Solution Physical Progress : 95% Financial Progress : 0%

6. FINANCE

6.1 Financial Progress

Table 26 : Details of Recurrent Expenditure

Subject	2022 (Rs)	2021 (Rs)
Personal emoluments	86,921,328.68	75,582,791.25
Travelling	56,895.00	86,466.12
Supplies	6,777,743.89	3,818,709.02
Maintenance	1,287,087.96	1,353,142.92
Contractual Services	26,663,639.91	18,677,394.67
Other	24,028,430.94	8,911,868.15
Total	**145,735,126.38**	**108,430,372.13**

Table 27 : Details of Capital Expenditure

Subject	2022 (Rs.)	2021 (Rs.)
Acquisition and Improvements of Buildings & Structures	-	38,563,126.37
Rehabilitation of Building & Structures	9,313,712.05	46,136,943.00
Vehicles	-	4,899,999.00
Lab and Teaching	488,888.00	120,670.00
Plant Machinery & Equipment	943,544.95	1,011,270.00
House Hold Equipment's	31,499.00	595,578.00
Office Equipment's	6,972,953.40	803,520.00
Furniture & Fittings	1,908,219.62	236,115.00
Software	-	695,000.00
Total	**19,658,817.02**	**93,062,221.37**

Table 28: Details of Construction Projects Expenditure (Local/~~Foreign~~ Funded)

Name	TCE Rs.	Exp in 2022 Rs.	Cumulative Exp. as at 31.12.2022	% of Physical Progress (2022)
Projects commenced in 2019				
Construction of Engineering Workshop	7,891,359.00	1,051,331.55	8,535,264.70	100%
Supply, installation and commissioning of outdoor lighting system	9,995,800.00	3,714,607.16	8,550,057.16	100%
Construction of Goat shed	5,454,840.51	910,673.60	3,817,906.20	100%

Projects commenced in 2022				
Construction of Layer House	7,938,036.75	2,163,996.00	2,163,996.00	50%
Proposed Room Partition work in Tissue Culture Laboratory	10,790,080.90	6,025,022.50	6,025,022.50	75%
Sub Total	23,341,999.51	13,865,630.81	29,092,246.56	
Grand Total		**13,865,630.81**	**29,092,246.56**	

Table 29 : Details of Financial Progress (Generated Income)

	Provision in 2022 Rs.	Collecting in 2022 Rs.	(Deficit)/Surplus Rs.
Certificate Courses-IARS	36,646,000.00	27,829,632.50	(8,816,367.50)
Sales in Tissue Culture Banana Plants & Other Plants	16,000,000.00	20,287,104.00	4,287,104.00
Other Income	1,135,000.00	6,601,653.13	5,466,653.13
Total	**53,781,000.00**	**54,718,389.63**	**937,389.63**

Table 30 : Financial Performance Analysis

Subject	Formula	Exp.per Student(Rs) 2022	Exp.per Student(Rs) 2021	Exp.per Student(Rs) 2020	Exp.per Student(Rs) 2019
Recurrent Expenditure per Student (RE)	RE/No of Student strength	109,407.77	115,474.30	156,174.10	125,517.26
Capital Expenditure per Student (CE)	CE/No of Student strength	13,484.36	99,107.79	233,948.07	214,065.48
Total		**122,892.13**	**214,582.09**	**390,122.17**	**339,582.74**

6.2 World Bank Funded Projects

Project Name : World Bank Funded Innovation Commercialization Enhancement (ICE) Project

Project Title : Improvement of aesthetic values of indigenous ornamental plants through bio-technology

Brief description about the project:

The project is aiming to develop attractive mutants from selected ornamental plant species to introduce for commercial cultivations. Hence, the research team intended to produce improved and attractive types from some selected unattended ornamental plants through mutational breeding. The considered plants species were ; *Jasminum officinale, Catharanthus roseus, Allamanda cathartica, Murraya paniculata, Dendrobium maccarthiae, Calotrophis gigantea, Acalypha hispida, Helianthus annuss, Osbeckia octandra.*

Moreover, the project additionally focused on;

1. Bio pots for raising nursery plants with fresh Banana pseudo stems.
2. A hand operated machine to mold bio pots
3. Smart food wrappers with Banana leaves.
4. Bio plates with Banana leaves
5. Machine to fabricate plates with Banana leaves

The above five inventions are not directly related to the proposed project activities. They invented as additional products using the waste materials of the Banana plant beyond the pseudo stems which was used to produce ecofriendly pots for raising plantlets resulted from the considered ornamental plants in the project.

Goals and Objectives

Goal: Improved and attractive ornamental plant types based on unattended indigenous ornamental plant species.
Objectives:

1. To develop attractive accessions of unattended ornamental plant species through selection, and mutational breeding.
2. To popularize and commercialize the developed accessions in collaboration the commercial partners.

Duration of the project : 3 Years

Project value (Mn) -year wise/other way: 40 Million

Progress of the Project as at 31.12.2022

Table 31 : List of KPIs of the project, and details of the KPIs already achieved as of 01st December 2022

No	KPI	Total Promised	Total achieved
1	Number of working papers published	-	-
2	Number of communications (abstract) accepted	8	8
3	Number of papers presented in national conferences/symposia	4	1
4	Number of papers presented in international conferences/symposia	0	0
5	Number of research publications published in peer reviewed national journals	4	2
6	Number of research publications published in peer reviewed internationally indexed journals	3	3
7	Number of research publications as books or monographs published by reputed national publishers	2	1
8	Number of research publications as books or monographs published by reputed international publishers	-	-

9	Number of national patents accepted	4	2
10	Number of international patents accepted	-	-
11	Number of industrial designs accepted	-	-
12	Number of national copyrights applications accepted (e.g. software)	2	2
13	Number of international copyright applications accepted (e.g. software)	-	-
14	Number of national trademarks accepted	-	-
15	Number of international trademarks accepted	-	-
16	Number of Patent Cooperation Treaty (PCT) accepted	-	-
17	Number of license agreements signed	-	-
18	Number of assignments of IP signed	-	-
19	Number of products in the market	5	7
20	Number of industry-university linkages (MOU or agreements) for research commercialization	5	3
	Total	**16**	**14**

Table 32 : Number of products in the market

Number of products in the market	1. *Allamanda cathartica* and *Jasminum officinale* plants with a propagation technique and a specific potting media. (Charles Roses plant nursery and Canal corner flower gardens) sales- average 200 plants per month in each nursery 2. Bio pots in terms of "Bio coins" derived from Banana pseudo stems to raise nursery plants . (Walawa Agro-Products) sales average 7000 per month 3. *Acalypha hispida* mutants with multi coloured inflorescence and *Acalypha hispida* plants as dwarf potted indoor plants. average 200 plants per month (Priyankara Gardens Plant Nursery) 4. *Jasminum officinale* mutant as a dwarf bush (Mithuru Sri Plant Nursery) sales average 100 plants per month 5. *Catheranthus roseus* muted plant with flowers having twisted petal and bicolor. (Mithuru Sri Plant Nursery) sales average 100 plants per month 6. A best accession of *Murraya paniculata* identified through existing germplasm. (Floriaade Agro Products) sales average 100 plants per month 7. Other products- Banana food wrappers- (Mr Suneth Damsiri) sales 50,000 wrappers per week

Table 33 : Number of national patents accepted

Number of national patents accepted	Patents submitted on 2022 1. A technique to induce mutation in Acalypha hispida (Cat's tail) plants – 22164 2. Rapid propagation technique for ornamental plant Allamanda cathartica (Rukkathana) – 22165

Number of national copyrights applications accepted (e.g. software)	1. A database on morphological variations and other information of *Murraya paniculata* germplasm in Sri Lanka. http://www.murraya.uciars.com/ 2. A database on morphological variations and other information of *Allamanda cathartica* germplasm in Sri Lanka. http://www.allamanda.uciars.com/

Table 34 : Number of industry-university linkages (MOU or agreements) for research commercialization

Number of industry-university linkages (MOU or agreements) for research commercialization	1. Improvement of aesthetic values of indigenous ornamental plants through bio-technology - with Canal Corner Flower Gardens 2. Improvement of aesthetic values of indigenous ornamental plants through bio-technology - with Charles Roses Plant Nursery 3. Bio plate making machine – Indurusiri Furniture /Walpola Gamage Chandrasena.

Findings and Recommendations

Findings

1. **Mutants** in cats tail plant – Plants having Pink, White, blossoms having no blooms ,
2. **Mutants** in Vinka rosea – With streaked petals
3. **Calotropis gigantea with mottled** leaves.
4. Correct **maturity stage** of Rukkattana plantlets for subjecting radiation treatment to achieve successful mutants or LD 50 survival?
5. The appropriate **radiation dosage** for maximum % of survival of Rukattana plants after subjecting for irradiation treatments.
6. **Shoot tips** as the best planting material for propagation of Rukkatthana and Saman pichcha
7. **Development of Tissue culture protocols** for Vinka Rosea, Rukkathana, Etteriya and Saman pichcha
8. Best **potting media** of coir dust : sand 1:1 for propagation of Rukathana shoot tips.
9. **Hardwood cuttings** as the best planting material for propagation of Cat’s tail plant.
10. **Morphological variations** in Rukattana, and Atteria based on phenotypic plasticity
11. **Better accessions producing attractive flowers** of Rukatthana and Atteria
12. **Bio pots** for raising nursery plants with fresh banana pseudo- stems.
13. Assembled **a manually operated machine** for fabricating bio pots with Banana pseudo stems.

“Banana coins” a smart eco friendly container with dried banana stems to raise nursery plants.
Outcomes

1. Establishment of;
   a. A field gene bank of germplasm in Etteriya, Jasminum, Vinka rosea
   b. A mother plant stocks for tissue culture purpose
   c. A well equipped biotechnology laboratory
   d. Two net houses
2. Availability of a potted plant of cat’s tail.
3. MOUs for commercialization.
4. Submission of patents

a. Muted accession of Cat’s tail plant
b. Shoot tips and potting media in relation to propagation of Rukatthana
c. Eco friendly containers as Bio coins for raising nursery plants.

5. Development of plant descriptors for Rukatthana and Etteriya which were not available as documented information so far.
6. Availability of monographs on Etteriya and Rukattana as documented information for future researchers.
7. Opportunities for three postgraduate studies.
8. Availability of a database software including geographic distribution, morphological variation and agronomic information on selected plants- Leads to copyrights application
9. Student startup – Bio coins production. This startup won 1st price in the University student startup competition organized by AHEAD operation together with ICATA to celebrate Global Entrepreneurship week 2022, Sri Lanka.

Constraints and issues that have arisen and can impact the project.

1. The challenging situations occurred due to :
   a. Covid pandemic situation (disturbed the functions of institutions, travel restrictions, laboratory activities and field work)
   b. Fuel crisis prevailed in the country
2. Difficulties in purchasing goods
3. Frequent power cuts disturbed the laboratory activities

7. A FUTURE PROJECTION REPORT BASED ON SUSTAINABLE DEVELOPMENT

University of Colombo Institute for Agro-Technology and Rural Sciences has taken steps to develop the Strategic Management Plan to meet up the Sustainable Development Goals. Accordingly, the following objectives of the Strategic Management Plan of the year 2021-2025 and the Action plan 2022 are set out in a way that it has minimal negative impact on the environment and to protect the environment.

Goal 01: Enhanced production of graduates with the requisites attributes
Goal 02: Increased industry partnerships and international cooperation
Goal 03: Enhanced academic profile and impact of research and outreach
Goal 04: Improved infrastructure facilities and amenities
Goal 05: Improved governance and financial management/discipline and reduced financial dependence

UCIARS is an agriculture-based organization which focuses on protecting the environment in its agriculture practices and modeling agriculture for the community.

Accordingly, the steps taken by the Institute for the protection of the environment and sustainable development during the year 2022 can be summarized as follows.

1. Offering Agro-Technology degree for the farming community without age barriers as well for the Advanced level passed out students those who missed the opportunity to enter national Universities under the very reasonable and affordable course fee to all.

2. Since institute is conducting fee laving courses, institute is providing accommodation for students at UCIARS hostel into very low day fee/monthly fee so that all the students can bear the cost.

3. Since no age barriers to follow the degree, it assures the lifelong learning concept.

4. Use of Solar Energy (Solar panels have been installed at the elephant fence and outdoor lighting system to save electricity).

5. Reduce paper usage in office work (by making more frequent use of email) and reuse one-sided paper and having most of the meetings via online.

6. Offer nutritional foods for the students and staff into reasonable price through welfare society canteen of the institute.

7. The LMS administrators of the institute restructured the existed files in the LMS and updated to release the congestion of files within the system of the University of Colombo so that easy access.

8. Introduced a Management Information System (MIS) to support students and staff by providing quick access to get required information about individuals and the institute. This introduction is an immense support for performing prompt and accurate administrative work presently shouldered by an extremely limited number of staff members.

9. UCIARS farm is a multipurpose productive unit provides practical opportunities for undergraduates, gives research opportunities for academics, act as a demonstration unit of modern technologies for the farmers and entrepreneurs and it generates an income to the Institute.

10. Established a Technology Transfer Center attached to the UCIARS with the objective of having two-way communication mechanism in between the institute and the farming community. The dissemination of agriculture related information, direct transformation of technologies generated by the institute, addressing the technical problems faced by the farmers and sharing agriculture related novel experiences with farmers, entrepreneurs, private sector, and students were the mandates of this specific unit.

11. Installed a water purification (RO) system to provide purified water for drinking purpose of students and the staff.

The steps to be taken by the institute in the future to protect the environment and sustainable development can be summarized as below.

1. Improving health and nutrition through the sale of organic food to the community through the commercial development of organic farming and crop cultivation after the entire development of the institute's 40 acre farm.

2. Introduction of new technologies in Agro-Entrepreneurship through Agro-technical Research.

3. It is planning to save energy by introducing solar power to the entire organization. As the first step, it is being planned to set up Solar PV system for New Tissue Culture Laboratory.

4. It is planning to introduce water treatment technology for the entire organization. This will reduce the cost of obtaining drinking water outside and conserve water.

5. Increasing the introduction of soil conservation plantations that can protect terrestrial ecosystems.

6. Provide Internet access to all essential areas within the premises (including farmland) of the institute and to provide access for the latest technology to students and employees of the institute.

7. To avoid as much as possible the pollution of the environment during the administrative and ceremonial activities of the institution.

8. Directing students to plant trees in agro-practical activities within the institution as much as possible to create a greener environment.

9. Using energy and water resources economically and use all the food waste for feeding pigs.

10. Proving adequate accommodation facilities for the staff and the students.

11. Introduce bio-gas unit to convert into energy to save monthly electricity bill

Financial Statements
2022

University of Colombo Institute for Agro Technology & Rural Sciences

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கொழும்புப் பல்கலைக்கழக கமத்தொழில் தொழிநுட்பவியல் மற்றும் கிராமிய விஞ்ஞானங்களுக்கான நிறுவனம்
University of Colombo Institute for Agro-Technology and Rural Sciences

වෙබ් අඩවිය / இணையத்தளம் / Web Site: http://uciars.cmb.ac.lk
වැලිගත්ත නව නගරය, හම්බන්තොට / வெலிகத்த புதிய நகரம், ஹம்பாந்தோட்டை / Weligatta New Town, Hambantota
ෆැක්ස් / தொலைநகல் / Fax: +94-47-2034261

මගේ අංකය / எனது இலக்கம் / My Ref.

ඔබේ අංකය / உமது இலக்கம் / Your Ref.

දිනය / திகதி / Date: 27th February 2023

Deputy Auditor General,
Auditor General's Department,
No: 306/72, Polduwa Rd,
Baththaramulla.

Dear Sir,

Financial Statements – 2022

I hereby submit financial statements for University of Colombo, Institute for Agro Technology and Rural Sciences for the year 2022, with following statements.

01. Statement of Financial Position as at 31-12-2022
02. Statement of Production and Trade for the year ended 31-12-2022
03. Statement of Financial Performance for the year ended 31-12-2022
04. Statement of Changes in Equity for the year ended 31-12-2022
05. Cash flow statement for the year ended 31-12-2022
06. Statement of Responsibility
07. Notes to Financial Statements

Thanking you,

Prof. M.A.A.D. Ampitiyawatta
Director
University of Colombo, Institute for Agro Technology and Rural Sciences

Prof. Asanga D. Ampitiyawatta
Director
Institute for Agro-Technology & Rural Sciences
University of Colombo
Weligatta - Hambantota.

Director
Direct line:+94-47-2034201
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INSTITUTE OF FOR AGRO - TECHNOLOGY AND RURAL SCIENCES

UNIVERSITY OF COLOMBO

STATEMENT OF RESPONSIBILITY

FOR THE YEAR ENDED 31ST DECEMBER 2022

The Accounting policies on pages 01 To 05 and notes on pages 06 to 20 Form and integral part of these Financial Statements. The Board of Directors is responsible for the preparation and presentation of these Financial Statements. These Financial Statements were approved by the Board of Directors and signed on their behalf.

Prof. Asanga D. Ampitiyawatta
Director
Institute for Agro-Technology & Rural Sciences
University of Colombo
Weligatta - Hambantota.

Prof M A A D Ampitiyawatta
Director
University Of Colombo
Institute for Agro Technology and Rural Sciences

Members of Board of Management

Name		Signature
Mr. H.P. Sumanasekara	District Secretary, District Secretariat, Hambantota	
Dr. N. P. Vidanapathirana	Senior Lecturer / UCIARS.	
	Head of Department Agro Technology / UCIARS	

CONTENTS

Introduction

The establishment of the Institute for Agro-technology and Rural Sciences heralded an era of affirmative action on the part of the Government of Sri Lanka to "uplift agro industry in Sri Lanka as a prestigious occupation through arming the rural community with modern knowledge on agro-technology with information technology" [1].

The University of Colombo Institute of Agro-Technology and Rural Sciences (UCIARS) (here-in-referred to as the Institute) was established as an Institute with blended distance mode of teaching to provide opportunities of higher education to agricultural/farming community across barriers of age, space, time and academic background, under Section 24 A and Section 18 of the Universities Act no 16 of 1978 and the University of Colombo Institute of Agro technology and Rural Sciences Ordinance No. 02 of 2008[2]. The Order under Section 24 A came into operation with effect from 23rd August 2008.

The Institute incorporated within its system the Magampura Agro-Technology and Community Services Center in Weligatta, Hambantota affiliated to the University of Colombo in 2000 by the UGC. The Institute is located 250 km away from Colombo very close to the Colombo-Kataragama main road. The Centre's history dates back to 1998 through which the university and researchers were able to build over the years close collaborative links with the community in order to transfer technology / knowledge and know-how directly to the end-users and thereby improve efficiency in agriculture and agro-industry in the region.

The Institute has a mandate to "providing, promoting and developing among persons presently engaged in Agriculture and Agro-Technology, higher education in the discipline of Agro-Technology and Rural Sciences"[2]. It will cater to the changing individual and social needs by taking higher education through a blended learning mode to the doorsteps of the rural agricultural community who never dreamt of entering the portals of higher education. However they have aspiration and potential to pursue higher education but could not utilize the opportunities for personal, family or economic reasons. With the flexibility in the entry requirements and choice of courses the Institute demonstrates that it is possible to impart quality higher education using modern information communication technologies to learners of the agricultural communities of poor rural sectors to pursue education at a pace and place convenient to them and realize their academic, professional and social aspirations.

The will and commitment of the Institute to engage with society is evidenced by clear statements in institutional objectives, strategic planning and, teaching and learning processes.

Organization and management

As the education system moves from elite to mass systems and from emphasis on teaching to a focus on learning, students become more important actors – as primary clients, consumers, and learners. This shift will require the establishment of appropriate organizational and management mechanisms to handle those new roles and the new challenges that they represent. The Organogram illustrates the organizational structure of the Institute.

Administrative Organization

The Institute is headed by the Director who is the Principal Executive Officer and the principal academic officer and accounting officer of the Institute. The Director is also an ex-officio member of the Board of Management, the Academic Syndicate and all Boards of Study of the Institute, and presides at all meetings of the Board. The Director is also a member of the Senate and brief the Senate on the academic performance of the Institute. The Board of Management is the academic and executive body of the Institute. The Institution has the financial autonomy from the University and the Board of Management is responsible for finances. Under the Director is the Deputy Director.Director and Deputy Director are officers of the Institute.

It is the duty of the Director on behalf of the Board of Management to ensure that provisions of the Act, the ordinance or any other instrument, are duly observed. It is also the duty of the Director to give effect to the decisions of the Board and responsible for the maintenance of discipline within the institute.

Academic Organization

The Academic Syndicate chaired by the Director has the control and general direction over instruction, training, research and examinations of the Institute.

There are three Boards of Study chaired by the Director in respect of Research Higher Degrees; Internal Academic Programs; External and Extension Programs. The Boards of Study have control and general direction over instruction, training, research and examinations of the Institute.

There are three Departments of Study in respect of the disciplines of (i) Agro-Technology; (ii) Food Technology; and (iii) Entrepreneurship, Agro-business and Rural Sciences. Each Department of study is led by a Head.

The three Centers, Agribusiness and industry cell; the Science Park; Extension programs, are led by a Coordinator.

Faculty and support staff of the Institute and from collaborating partner institutions and universities assists the development of learning material, delivering and support of academic courses / program.

University of Colombo Institute for Agro Technology and Rural Sciences

Statement Of Financial Position
As at December 31, 2022

		2022 Rs.	2021 Rs.
ASSETS			
CURRENT ASSETS			
Bank Balances	**Note 01**	3,436,393	1,973,732
Inventory	**Note 02**	11,670,374	7,247,711
Interest Receivable	**Note 03**	775,820	281,494
Receivable - Loans	**Note 04**	3,039,316	1,987,271
Prepayment Ac	**Note 05**	417,781	159,822
Advance A/C		-	-
Live stock		456,600	265,600
Other current assets	**Note 06**	8,008,983	1,724,229
Short term investments	**Note 07**	17,699,800	20,999,950
		45,505,068	**34,639,808**
NON CURRENT ASSETS			
Property Plant And Equipment	**Note 08**	506,010,480	522,546,165
Live stock		4,957,650	4,421,000
Deferred Expenditure	**Note 09**	830,131	1,356,784
Deposit for Transformer		500,000	500,000
Work in Progress		2,261,496	-
Investments		-	300,000
		514,559,757	**529,123,949**
TOTAL ASSETS		**560,064,825**	**563,763,757**
LIABILITIES			
CURRENT LIABILITIES			
Accrued Expeses	**Note 10**	13,428,170	14,872,354
Other Current Liabilities	**Note 11**	10,536,731	69,921
		23,964,901	**14,942,276**
NON CURRENT LIABILITIES			
Non Current Liabilities	**Note 12**	15,309,517	18,868,082
		15,309,517	**18,868,082**
TOTAL LIABILITIES		**39,274,418**	**33,810,358**
NET ASSETS/EQUITY		**520,790,407**	**529,953,399**
Accumulated Funds			
Capital Grant Spent		225,627,200	234,705,740
Capital Grant Unspent		-	-
Other Grant Spent		94,229,424	94,259,424
Other Grant Unspent		4,148,980	685,468
Accumulated Reserves		31,171,572	23,568,389
Other Reserves		7,942,779	7,942,779
Special Grant Spent		157,670,452	168,791,599
TOTAL NET ASSETS/ EQUITY		**520,790,407**	**529,953,399**

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Certified by
A D P De Zoysa
Assistant Bursar (UCIARS)

Prof. M A A D Ampitiyawatta
Director(UCIARS)
For and on behalf of the Board of Management

University of Colombo Institute for Agro Technology and Rural Sciences

Statement Of Financial Performance and Other comprehensive income

For the period ended December 31, 2022

		2022 Rs.	2021 Rs.
Revenue from plant sale		10,158,258	5,892,590
Cost of sales	**Note 13**	(21,642,848)	(16,925,243)
Gross Profit		(11,484,590)	(11,032,653)
Government Grant - Recurrent		101,421,000	78,170,000
Other Generated Income	**Note 14**	42,739,822	46,987,798
Interest Income	**Note 15**	1,820,310	388,461
Amortization		33,957,285	37,333,360
Gain on revaluation of Live stock		1,788,279	2,885,800
		170,242,106	**154,003,866**
EXPENDITURE			
Personal Emoluments	**Note 16**	(69,361,300)	(63,666,739)
Travelling	**Note 17**	(56,895)	(86,466)
Supplies	**Note 18**	(6,777,744)	(3,818,709)
Maintenance Expenditure	**Note 19**	(1,287,088)	(1,353,143)
Contractual Services	**Note 20**	(26,663,640)	(18,677,395)
Other Recurrent Expenses	**Note 21**	(24,028,431)	(8,911,868)
Gratuity		(3,279,285)	(2,624,621)
Write Off Amount Of Defferd Expenditure		(526,653)	(526,653)
Depreciation		(35,458,571)	(38,908,920)
Amortization - Software		(139,000)	(84,500)
		(167,578,607)	**(138,534,472)**
Surplus/ (Deficit)for the year		**2,663,499**	**15,469,394**
Other Comprehensive income			
Gain/loss on Acturial Valuation		6,028,845	1,915,792
Revaluation of PPE		-	3,364,054
Total comprehensive income		8,692,344	20,749,240

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Certified by
A D P De Zoysa
Assistant Bursar (UCIARS)

………………………………………….

Prof. M A A D Ampitiyawatta
Director(UCIARS)
For and on behalf of the Board of Management

Plants production unit

For the period ended December 31

Manufacturing cost Account 2022

Rs.	Notes	Rs. **Total** 2022	2021		Rs. **Banana** 2022	2021		Rs. **Aloe Vera** 2022	2021		Rs. **Turmeric** 2022
For the period ended December 31											
Cost of Raw materials		1,758,014	1,447,106		1,647,497	1,387,090		-	60,016		110,517
Other Direct cost - Direct labour		17,543,686	11,916,052		16,440,804	11,728,552		-	187,500		1,102,883
Prime Cost		19,301,701	13,363,157		18,088,300	13,115,642		-	247,516		1,213,400
Closing Work In Progress		170,949	103,016	21,722	170,949	68,970		-	34,045		-
Closing Work In Progress		(130,405)	(170,949)	3,869	(124,834)	(170,949)		-	-	147	(5,571)
Total Prime Cost		19,342,245	13,295,224		18,134,416	13,013,663		-	281,561		1,207,829
Indirect / Overhead cost		3,200,371	3,498,601		2,999,180	3,260,282		-	238,319		201,191
Total Cost of Production		**22,542,616**	**16,793,824**		**21,133,595**	**16,273,944**		**-**	**519,880**		**1,409,020**
SALES		10,158,258	5,892,590		10,063,550	5,867,240		550	25,350		94,158
<u>Cost of Sales</u>											
Plants as at 01.01.2022		1,429,135	1,560,553	15,729	1,262,260	254,902	6,675	166,875	1,305,651	-	-
Add: Cost Of Production		22,542,616	16,793,824	149,906	21,133,595	16,273,944		-	519,880	10,056	1,409,020
		23,971,751	18,354,378		22,395,855	16,528,846			1,825,531		1,409,020
Plants as at 31.12.2022		(1,579,450)	(1,429,135)	10,572	(1,579,449.68)	(1,262,260)		-	(166,875)	-	-
Transfers to Farm		749,452.37						166,284.96			583,167
Total cost of sales		21,642,849	16,925,243		20,816,406	15,266,586		590	1,658,656		825,853
Profit / Loss		**(11,484,591)**	**(11,032,653)**		**(10,752,856)**	**(9,399,346)**		**(40)**	**(1,633,306)**		**(731,695)**

Yoghurt production unit
For the 04 months period ended December 31
Manufacturing cost Account 2022

		Rs.
Rs.	Notes	**Total**
For the period ended December 31		
Cost of Direct materials		
Purchases		
Sugar	12,141	
Milk	35,130	
Youghurt cup	40,831	
Discarded cost - yoghurt cups	(5,738)	
End stock		
Sugar	(5,603)	
Youghurt cup	(4,771)	71,990
Direct labour		16,342
Prime cost		88,332
Cost of Indirect materials (Culture yoghurts,Jelly and other materials)		30,908
Total prime cost		119,240
Other cost including overhead cost		
Small tool items	8,305	
Consumables	1,155	
Stickers	5,930	
Fuel (Gas)	6,780	
Electricity - 0.1%	5,923	
Other cost born	1,300	29,393
Total Production cost		148,633
Sales Income		138,970
Cost of production		148,633
Discarded cost - yoghurt production		(3,634)
End stock as at 31.12.2023 - 11		(660)
Cost of Sales		144,339
Gross profit		(5,369)
Selling cost		5,510
Surplus/Deficit		**(10,879)**

University of Colombo Institute for Agro Technology and Rural Sciences
Statement of Changes In Equity
As at December 31, 2022

Rs. For the year ended December 31, 2021	Capital grant spent	Other grant spent	Other grant Unspent	Accumulated Surplus	Special grant	Other Reserves	Total
Balance as at 01.01.2022	234,705,740	95,145,445	685,468	22,542,960	168,791,599	9,858,571	531,729,782
Change Acturia valuation reserve to Accumilated surplus				1,915,792		(1,915,792)	-
Gold medal endowment fund		(30,000)	30,000				
Opening adjustments	1,047,354	(886,021)	(49,354)	(1,979,523.69)			(1,867,545)
Restated Balance	235,753,095	94,229,424	666,113	22,479,228	168,791,599	7,942,779	529,862,238
Changes in Equity for Year 2022							
Deficit/Surplus For the period							-
Capital grant received during the year			3,702,111	2,663,499			18,865,609
Capital expenditure during the year	12,500,000						-
Gratuity Acturia gain / loss				6,028,845			6,028,845
Amortization	(22,625,895)		(210,243)		(11,121,146)		(33,957,285)
Recurrent expenditure born			(9,000)				
Live stock revaluation							-
PPE revaluation							-
31.12.2022 Balance carried forward	**225,627,200**	**94,229,424**	**4,148,980**	**31,171,572**	**157,670,452**	**7,942,779**	**520,799,407**

University of Colombo Institute for Agro Technology and Rural Sciences
Statement of Cash Flows
For the year ended December 31, 2022

	2022 Rs.	2021 Rs.
Surplus/(Deficit) for the year	2,663,499	15,469,394
Adjustments for items not involving movement of Funds		
Depreciation for the year	36,006,293	39,717,793
Write Off Amount of Deffered expenditure	526,653	526,653
Amortization	(33,957,285)	(37,333,360)
Interest Income	(1,820,310)	(388,461)
Loss on disposal	107,571	
Provision for Gratuity	3,279,285	2,624,621
Live stock valuation	(1,788,279)	(2,885,800)
Donation	55,800	
Net Operating cash flow before working capital changes	**5,073,227**	**17,730,839**
Working capital payments		
Increase/Decrease in Inventories	(4,422,663)	(2,104,732)
Increase/Decrease in Interest Receivables	0	13,960
Increase/Decrease in Loan Receivable	(1,052,046)	(524,190)
Increase/Decrease in Prepayment	(257,960)	484,030
Increase/Decrease in Advance Account	-	26,000
Increase/Decrease in Other current assets	(6,284,754)	-
Increase/Decrease in Other Live stock assets	(191,000)	
Increase/Decrease in Accrued expenses	(1,444,185)	3,399,990
Increase/Decrease in Other current Liabilities	10,466,810	41,878
Net operating cash flow after working capital changes	**1,887,430**	**19,067,775**
Net operating cash flows	**1,887,430**	**19,067,775**
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of Fixed Assets	(14,431,657)	(36,336,989)
Increase/Decrease of Live stocks	(382,782)	(1,364,500)
Disposal receipts of fixed assets	5,230	
Increase/Decrease of Deffered Expenditure	-	-
Increase/Decrease Working Progress	(2,261,496)	-
Increase/Decrease investments	3,600,150	(20,999,950)
Interest Income For The Year	1,335,667	175,367
Net cash flow from Investing activities	**(12,134,888)**	**(58,526,071)**
CASH FLOWS FROM FINANCING ACTIVITIES		
Gratuity Payments	(809,004.90)	-
Increase of Borrowings	-	-
Decrease of borrowings		(116,666)
Government Grants and other funds for Capital Expenditure	12,519,125	25,000,000
Net cash flow from Financing activities	**11,710,120**	**24,883,334**
NET INCREASE IN CASH EQUIVALENTS	**1,462,662**	**(14,574,962)**
Cash & cash equivalents at the beginning of the period	**1,973,732**	**16,548,694**
Cash & cash equivalents at the end of the period	**3,436,393**	**1,973,731**

Notes to the Financial Statement

Institute for Agro- Technology and Rural Sciences (IARS)

University Of Colombo

1. **Significant Accounting Policies**

1.1 Reporting Entity

IARS has been incorporated under the Ordinance No: 02 of 2008 and gazette on 16th October 2008. The main administration is at Weligaththa New Town, Hambanthota. The Financial Statement of the IARS is prepared for the year ending 31/12/2022.

1.2 Basis of Preparation

The Financial Statements are prepared on the historical basis of accounting. Whereby the transactions are recorded at values prevailing at the dated when the assets were acquired, the liabilities were incurred and funds obtained in accordance with **Sri Lanka Public Sector Accounting Standards** laid down by the Institute of Charted Accountants of Sri Lanka.

The financial statements are prepared in Sri Lanka Rupees, which is the functional and presentation currency. Figures and phrases relating to the previous year have been restated where necessary, for comparison with the current year presentation.

1.3 Assets and the bases of their valuation

1.3.1 Property Plant and Equipment (PPE)

Land is occupied to The Divisional Secretariat, Lunugamwehera. It is rented out by the Institute since 1998, for 30 years lease basis. Value of Buildings and Structures are shown based on the valuation is given by Department of Valuation.

Property Plant and Equipment and Lab & Teaching Equipment's include the items purchased out of government grant, research grants and internally generated funds.

Property Plant and Equipment are recorded at cost of purchase together with any incidental expenses thereon. The assets are shown at cost less accumulated depreciation.

1.3.2 Subsequent Cost.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the items will flow to the institute and the cost of items can be measured reliably. All other repairs and maintenance are charged to income statement during the financial period in which they are incurred.

1.3.3 Revaluation of Property Plant and Equipment

When an asset records zero net value, full class of asset being revalued and stated on revalued amount as per SLSPAS 07 – Property Plant and Equipment.

1.3.4 Seperating Depreciable assets and Non depreciable assets

Reclassifications between Land and Building were identified and it made asset recognition policy was changed accordingly. Born cost for Development to the land for preparation and initialization the land for cultivation were recognized under Land.

And where buildings, structure or infrastructure can be found as depreciable were classified under Building structure and rehabilitation from Land. ie Boundry Fence and Irrigation systems. Further where it is directly cannot be identified as buildings structure and rehabilitation but depreciable were classified under Infrastructure assets.

1.3.5 Depreciation

Depreciation has been charged to the Statement of Financial performance on all Property Plant & Equipment and Lab & Teaching Equipment's on the straight line basis over their estimated useful lives.

Description		Estimated useful Life
• Building & Structures and Rehabilitation/ Infrastructure	-	20 Years
• Hostel Projects	-	20 Years
• Fixtures & Fittings	-	10 years
• Vehicles	-	5 Years
• Laboratory & Teaching Equipment's	-	5 years
• Electrical Equipment's	-	5 Years
• House Hold Equipment's	-	10 Years
• Computer /Office Equipment's	-	10 Years
• Software	-	05 Years
• Furniture & Fittings	-	10 Years
• Plant Machinery And Equipment's	-	10 Years
• Books	-	10 years
• Sports Goods/Musical Instruments	-	10 Years

Depreciation is provided from the year of purchased and up to the year of sale based on the period used, with full depreciation being provided in the from the date of purchase.

1.3.6 Amortization

Amortization has being provided for Depreciation for Capital Assets which purchased by using government capital grants.

1.3.7 Deferred Expenditure

Expenditure incurred for plant Transformer from Ceylon Electricity Board has being identified as Deferred Expenditure, Which will be written off to Statement of Financial Performance equally.

1.3.8 Stocks

Stock of Raw Materials and consumables, Stock of Work in Progress, Stock of Tissue Culture Banana Plats as at 31.12.2022 are measured at the lower of cost and Net Realizable value. Net Realizable value is the estimated cost of completion and selling expenses. Stock Valuation method is First in First out (FIFO) method.

1.3.9 Receivables

Receivables are stated at the amounts that they are estimated to realize.

1.3.10 Live stock and Harvest

Operations and principal activities

UCIARS is engaging in Livestock activities and entity itself is doing the management of biological transformation. UCIARS is engaging with milk production with cows, breeding of pig lets, egg production, broiler production and goat milk production. Bearer animals used for more than one year is mentioned as Non current assets.

Livestock are measured at fair value less cost to sell. The fair value of the livestock is determined based on the market prices live stock.

Harvest is recognized based on the fair value less cost to sell as at 31.12.2022

Quantity verified by Farm Manager / UCIARS Farm

Category	Opening	Born	Purchased	Sold	Slaughtered	Dead	Closing
Swine	14	39		-33	-3	-4	13
Cattle	9	2		-1			10
Goat	25	8				-3	30
Layers	415			-300		-53	62
Broilers			300	-100			200
Total	**463**	**49**		**-334**	**-3**	**-60**	**115**

Category	Opening	Born	Purchased	Sold	Slaughtered	Dead	Closing	Valuation to market price	Fair value changes to P/L
Swine	1,440,000	31,200		(26,400)	(577,800)	(3,200)	863,800	1,126,250	262,450
Cattle	2,315,000	39,600		(39,600)			2,315,000	3,025,000	710,000
Goat	666,000	14,400				(5,400)	675,000	806,400	131,400
Layers	265,600			(192,000)		(33,920)	39,680	55,800	16,120
Broilers			57000	(19,000)			38000	400,800	362,800
Total	**4,686,600**	**85,200**	**57,000**	**(277,000)**	**(577,800)**	**(42,520)**	**3,931,480**	**5,414,250**	**1,482,770**

1.3.11 Cash and Cash Equivalents

Cash and Cash equivalents comprise bank balances.

1.3.12 Current Assets

Current Assets classified in the balance sheet are those which will be recovered within one year after the Balance Sheet date.

1.4 **Liabilities and their valuations**

1.4.1 Gratuity

a) Provision is made in the accounts for retirement of gratuities at rates applicable under the payment of gratuity act No 12 of 1983 although employees should complete a minimum period 05 years of continued employment to qualify for Gratuity payment under the act. Provision is made at the complete one year of employment on the assumption that all employees indent to continue in employment to act last 05 years.

b) Gratuity calculation results are based on LKAS 19 Employee Benefits.

c) And from the year 2021 onwards Actuarial valuation is done by a professional actuarial organization. Disclosures for the year 2022 is as follows.

		Rs.
Change in the Present Value of The Difined Benefit Obligation (PV-DBO)		
Provision for PV-DBO as at 01 January 2022	=	13,783,079
Interest Cost for the period	=	1,585,054
Past Service Cost	=	379,519
Current Service Cost for the period	=	1,314,712
Gratuity paid/payable for those who left during the period	=	(809,005)
Actuarial (Gain)/Loss on PV-DBO	=	(6,028,845)
Provision for PV-DBO as at 31 December 2022	=	10,224,514

AMOUNTS RECOGNIZED IN THE BALANCE SHEET AND INCOME STATEMENT

Liability recognised in the balance sheet		
Provision for Gratuity as at 31 December 2022	=	10,224,514
Unrecognized actuarial Gains/(Losses) as at 31 December 2022	=	-
Liability recognized in the balance sheet as at 31 December 2022	=	10,224,514
Expenses recognised in the income statement		
Past Service Cost	=	379,519
Interest Cost	=	1,585,054
Current Service Cost	=	1,314,712
Net Actuarial (Gain)/Loss recognized immediately	=	(6,028,845)
Expences recognized in the Income Statement	=	(2,749,560)
Movements in the Net Liability Recognised in the balance sheet		
Opening Net Liability as at 01 January 2022	=	13,783,079
Expences recognized in the Income Statement	=	(2,749,560)
Gratuity paid/payable for those who left during the period	=	(809,005)
Closing Net Liability as at 31 December 2022	=	10,224,514

1.4.2 Current Liabilities

Liabilities classified as current liabilities in the balance sheet are those that fall due for payment within one year from the Balance Sheet date. All known liabilities have been accounted for in preparing the final statements.

1.5 Income and Expenditure

1.5.1 Government Grant and other grants

The total capital grant received for the year was Rs.12.5 Mn. The Recurrent Grants that have been used for the operational activities for the year was 101.42.Mn and have been recognized as revenue in the Income Statement.

Other Grants received during the year from AHEAD Project values to Rs. Rs. 3.6 Mn.

1.5.2 Revenue Recognition

(a) Government Grants (Recurrent)

The Government Recurrent grants are recognized in the period in which they are received.

(b) Course Fees

Up to 2021 Course fees are recognized over the period of instruction. Where adequate information is not available to make such allocation to different financial periods, fees are recognized as income on a cash basis.

With the concern of Government auditor and the audit committee course fee income recognition policy was changed to Accrual basis and will be applied from 2022 onwards considering the enhancement of Financial statements.

The revenue recognition principle, a feature of accrual accounting, requires that revenues are recognized on the income statement in the period when realized and earned—not necessarily when cash is received. Realizable means that goods or services have been received by the customer, but payment for the good or service is expected later. Earned revenue accounts for goods or services that have been provided or performed, respectively.

During the year 2021 we were not able to identify the billed / earned revenue due to lack of proper information to cover revenue recognition principles. Contract with customer / student and the performance obligation were not able identify to timely recognize the actual revenue earned.

1. Semester registration was not conducted and started 2022 onwards. The information was only available for initial stage registration.
2. Drop out rate was closer to 50%.
3. Also institute had no proper online payment gateway system and paid receipts which were not handed over to the institute were also depicted a outstanding balances. Now we are running a payment gateway system and reduced the unidentified income drastically.

And above weaknesses were solved during 2022 and will continue the accrual basis for future financial years. Since revenue recognition principles are not fulfilled due above practical circumstances policy change will be applied prospectively.

(c **) Hostel fee income**

Hotel fee income was recognized cash basis up to 2021. Since hostel records were updated with the relevant responsible staff was hired, billed/earned revenue was identified and revenue will be recognized on accrual basis retrospectively.

(d) Investment Income

Interest income received out of Investment is accounted on accrued basis.

1.6 Cash Flow Statement

The Cash flow statements have been prepared using the “Indirect Method” for the purpose of the statement of Cash flow. Cash & Cash equivalents are comprised bank balances.

Notes to the Financial Statements - 2022

Note - 01 **Bank Balances**	**2022** **Rs.**	**2021** **Rs.**
Current Accounts		
BOC Bank - (Plant Sale Collection)/87319817	123,729	632,796
Peoples Bank - (Plant Sale Collection)/007100146432005	-	-
Peoples Bank - (Cetificate Course Collection)/007100130005888	1,736,754	282,320
Peoples Bank - (Government Grant (Capital) Collection and Disbursement)/007100120005006	210,371	881,141
Peoples Bank - (Farmers Trust Fund Collection)/007100130012515	52,495	12,495
Peoples Bank - (Personal Emolument Remmitance)/007100326432005	-	-
Peoples Bank - (Disburesement Account (Recurrent)/007100236432005	1,313,045	164,980
	3,436,393	**1,973,732**

Note - 02 **Inventory**	**2022** **Rs.**	**2021** **Rs.**
Stock - Coir Pellets	112,712	3,283
Work In Progress - Banana plants	130,405	136,904
Finished Goods - Banana Plants	1,579,450	1,262,260
Aloevera	-	166,875
Stocks at Farm and Yoghurt production	272,796	6,550
Stationery	3,201,755	1,186,291
Chemical	693,223	924,315
Electrical & Hardware	1,604,940	1,110,603
Consumables & Glassware	3,955,293	2,450,631
Fuel stock	119,800	-
	11,670,374	**7,247,711**

Note - 03 **Interest Receivable**	**2022** **Rs.**	**2021** **Rs.**
Interest receivable - Repo	-	1,753
Farmers Trust Fund	67,900	68,400
3 months investment interest	-	192,231
Fixed deposit interest	707,920	19,110
	775,820	**281,494**

Note - 04 **Receivable - Loans**	**2022** **Rs.**	**2021** **Rs.**
Farmers Trust Fund Loan	617,890	634,820
Distress Loan	2,421,426	1,352,451
	3,039,316	**1,987,271**

Note - 05 **Prepayments**	**2022** **Rs.**	**2021** **Rs.**
Insurance	103,690	40,338
Other Contractual services	314,091	119,484
	417,781	**159,822**

Note - 06

Other current assets

	2022 Rs.	2021 Rs.
Refundable Deposit	200,000	75,000
Receivable Revenue	102,900	-
UPF/Pension/ETF Receivable	914,679	914,679
Other receiverble	394,725	-
Receiverble course Income	3,495,534	-
Receiverble Hostel Fee	2,901,145	734,550
	8,008,983	**1,724,229**

Note - 07

Short term investments

	2022 Rs.	2021 Rs.
Opening Balance	21,299,950	300,000
Withdrawn : Fixed deposits	(7,300,000)	-
Withdrawn : Treasury bills	(4,999,950)	-
Withdrawn : Repo	(689,200,000)	-
Add : Treasury Bill investments	-	4,999,950
Add : Repo investments	673,200,000	16,000,000
Add : Fixed deposits	24,699,800	-
	-	-
Closing balance	**17,699,800**	**21,299,950**

Note - 08
Property Plant & Equipment

Table I

Rs.	Electrical Equipments	Hostel Project	Buliding & Structures	Buliding & Structures Rehabilitation	Other Infrastructure assets	Vehicles	Lab and Teaching Equipment	Plant Machinery & Equipment	Musical Instruments	Total
Cost / Valuation										
Balance as at January 01, 2022	311,816	222,422,928	300,568,554	56,488,183		11,076,270	4,728,249	6,500,892	373,925	602,470,817
Adjusted Opening Balance - Transfer to infrastructure assets			(2,000,000)		11,503,457					9,503,457
Adjusted Opening Balance - Classification changes			12,315,851	(19,231,886)						(6,916,035)
Accounting for over provision			(32,334)	(89,964)						(122,298)
	311,816	222,422,928	310,852,071	37,166,333	11,503,457	11,076,270	4,728,249	6,500,892	373,925	604,935,941
Additions/Improvements				9,313,712			488,888	943,545		10,746,145
Revaluation										-
Capital Grant										-
Other Grant										-
Remove										-
As at December 31, 2022	311,816	222,422,928	310,852,071	46,480,045	11,503,457	11,076,270	5,217,137	7,444,437	373,925	615,682,086
										-
Accumulated Depreciation										-
Rate of Depreciation	20%	5%	5%	5%	5%	20%	20%	10%	10%	90%
Balance as at January 01, 2022	211,110	78,144,597	44,916,180	4,174,928	-	3,994,651	-	-	120,677	131,562,142.60
Adjusted Opening Balance			1,709,853	(445,409)						1,264,444.03
Changing within the categories			(200,000)	(197,837)	397,837					-
Removal of depreciation for over provision			(1,617)	(4,498.19)						(6,114.90)
	211,110	78,144,597	46,424,417	3,527,184	397,837	3,994,651	-	-	120,677	132,820,472
										-
Remove										-
Depreciation for the Year	37,400	11,121,146	15,542,604	1,858,317	575,173	1,711,530	1,011,779	711,961	37,393	32,607,301.64
As at December 31, 2022	248,510	89,265,743	61,967,020	5,385,500	973,010	5,706,181	1,011,779	711,961	158,069	165,427,773
										-
Net book value As at December 31, 2022	**63,306**	**133,157,185**	**248,885,051**	**41,094,545**	**10,530,447**	**5,370,089**	**4,205,358**	**6,732,476**	**215,856**	**450,254,313**

Note - 08 **Table II**

Property Plant and Equipment

Rs.	House Hold Equipments	Office /Computer Equipment	Furnitures And Fittings	Sport Goods	Books	Pack Software	Land Initial Cost	Total from Table II	Total from Table I	Total
Cost / Valuation										
Balance as at January 01, 2022	1,172,238	8,133,976	20,161,628	222,000	643,498	695,000	22,394,006	53,422,346	602,470,817	53,422,346
Adjusted Opening Balance	(4)							(4)	9,503,457	(4)
Adjusted Opening Balance							(2,490,842)		(6,916,035)	(6,916,035)
Adjusted Opening Balance									(122,298)	(122,298)
	1,172,234	8,133,976	20,161,628	222,000	643,498	695,000	19,903,164	50,931,500	604,935,941	50,931,500
								-	-	-
Additions/Improvements	31,499	6,972,953	1,908,220					8,912,672	10,746,145	19,658,817
Revaluation								-	-	-
Capital Grant								-	-	-
Other Grant								-	-	-
Remove		(56,760)	(111,841)					(168,601)	-	(168,601)
As at December 31, 2022	1,203,733	15,050,169	21,958,007	222,000	643,498	695,000	19,903,164	59,675,571	615,682,086	675,357,657
										-
Accumulated Depreciation										-
Rate of Depreciation	10%	10%	10%	10%	10%	20%				
Balance as at January 01, 2022	-	-	-	88,982.47	346,928.57	84,500.00		520,411.04	131,562,142.60	132,082,554
Adjusted Opening Balance								-	1,264,444.03	1,264,444
									-	-
									(6,114.90)	(6,115)
	-	-	-	88,982.47	346,928.57	84,500.00		520,411.04	132,820,471.73	133,340,882.77
								-	-	-
Remove								-	-	-
Depreciation for the Year	120,071	1,025,848	2,027,525	22,200	64,350	139,000		3,398,993.61	32,607,301.64	36,006,295.25
As at December 31, 2022	120,071	1,025,848	2,027,525	111,182	411,278	223,500	-	3,919,404.65	165,427,773	169,347,178.02
								-	-	-
Net book value As at December 31, 2022	**1,083,662**	**14,024,321**	**19,930,482**	**110,818**	**232,220**	**471,500**	**19,903,164**	**55,756,166.11**	**450,254,313**	**506,010,479**

Note - 09 **Deffered Expenditure**	**2022** **Rs.**	**2021** **Rs.**
Transformer - Ceylon Electricity Board	259,860	519,720
Electrical Equipments	570,271	837,064
	830,131	**1,356,784**

Note - 10 **Accrued Expences**	**2022** **Rs.**	**2021** **Rs.**
Electricity	618,026	281,468
Water	24,846	47,822
Internet Service	737,278	592,185
EPF	-	74,709
Holiday Payments	24,098	-
Domestic Travelling	25,610	6,250
Fuel Allocation	-	17,175
Telephone	27,829	27,979
UPF	-	799,011
Over Time	102,857	72,319
Hiring/Transport	-	62,890
Plant & Machinery (Main)	-	73,441
Examination fee	195,334	273,270
Consultancy fee	515,363	123,551
Other Contractual Services	-	102,831
Visiting Lectures Fee	193,500	111,000
Workshop & Seminars	-	-
Janitorial Service	1,510,932	844,483
Printing & Advertising	124,890	-
Security Service	460,350	371,963
Trainess Allowance VTA	9,500	19,500
Expenditure on Degree progarm	3,806	69,530
Consumable Stock Stationery	-	22,500
Consumable Stock Consumable & Glassware	-	209,832
Translation	62,580	6,063
Consumable Stock Electric & Hardware Items	-	114,317
Animal Husbudry	152,450	285,696
Farm Development-Banana	-	53,825
Farm Development-Pomegranate	166,400	
Farm & Irrigation expenses	130,000	145,825
Other RE	-	34,150
Functions Inaguration	-	8,400
Special Services	131,500	73,000
Vehicle (Maintenance)	21,050	131,630
License & Insurance Charges	114,893	847
Field Visit	1,750	2,000
Photocopies, Air Conditioners & Lift	10,010	7,000
Auditor fee	336,000	672,000
Postage	2,197	1,830
Consumable & Glassware expenses	-	6,445
EX on plant sale	3,825	1,488
Building & Structure (Maintenance)	227,500	-
Mushroom Project	-	1,400
Maintain lab	-	680
Pension	-	242,598
EDCS	-	910
Fuel Allowance - Other	-	1,886
Network Materials	4,500	-
Cost of Uniforms	99,710	-
Railway Warrant	5,075	-
WIP - Pig Shed	97,500	-
Improvement of Infrastructure	-	4,090,596
Building & Structure	552,546	2,571,290
Software	-	59,250
Water Purification System	1,641,027	-
Rehabilitation & Extension	1,647,663	-
Irrigation System	286,025	-
Accrued salary expenses	3,159,753	2,155,519
	13,428,170	**14,872,354**

Notes to the Financial Statements - 2022 (Contd.)

Note - 11 **Other Current Liabilities**	**2022** **Rs.**	**2021** **Rs.**
Tax payable	8,880	49,858
Loan-Employee	7,389	7,389
Other Liability	33,081	7,025
Bid -Security(Payable)	106,580	-
Advance paid - Course fee	10,099,191	-
Advance paid - Hostel fee	28,300	5,650
Non-Reganized Income	253,310	-
	10,536,731	**69,921**

Note - 12 **Non Current Liabilities**	**2022** **Rs.**	**2021** **Rs.**	
Farmers Trust fund	75,003	75,003	-
Provision for gratuity	10,224,514	13,783,079	
Refundable Deposit	10,000	10,000	
Repayable - Grant from UOC	5,000,000	5,000,000	
	15,309,517	18,868,082	

Note - 13

Notes to the Cost calculation

Direct cost

Cost of Raw materials	**1,758,014**		**1,447,106**	
	2022		**2021**	
Description	**Chemicals**	**Coir pellets**	**Chemicals**	**Coir pellets**
Opening stock	125,836.82	3,282.50	210,671.24	157,846.00
Issues to Lab and Nursery	669,577.26	1,237,500.00	549,907.80	657,800.00
Closing stock	(165,470.36)	(112,712.00)	(125,836.82)	(3,282.50)
Cost of raw materials for production	**629,943.72**	**1,128,070.50**	**634,742.22**	**812,363.50**

Production Personnel Emoluments

	2022	**2021**
Salary	15,294,841	10,261,454
UPF	922,553	712,665
Pension	951,484	666,166
ETF	374,808	275,766
	17,543,686	**11,916,052**

Indirect expenses / Other overhead

Description	**2022**	**2021**
Telephone - 5%	15,734	14,222
Water - 20%	403,057	469,487
Electricity - 20%	1,184,538	1,067,599
Maintaince Expenses	90,570	87,754
Hardware and consumable items	1,070,676	936,351
Depreciation for Lab equipment	408,722	848,914
Other indirect expenses	27,075	74,274
	3,200,371	**3,498,601**

Note - 14

Generated Income	**2022 Rs.**	**2021 Rs.**
Certificate Course - IARS	27,829,633	41,077,942
Other Income	684,053	811,119
Plant sale other	10,128,846	3,337,294
Yoghurt income	138,970	-
Hostel Fee	3,958,320	1,761,443
	42,739,822	**46,258,898**

*Significant changes in course income and the hostel fee income is due to the policy changes applied from cash basis to accrual basis.

Note - 15

Interest Income	**2022 Rs.**	**2021 Rs.**
Distress Loan Interest	86,829	69,137
Interest in REPO	155,827	108,344
Interest income - other	1,577,653	210,981
	1,820,310	**388,461**

Note - 16

Personal Emoluments	**2022 Rs.**	**2021 Rs.**
Salaries & Wages	61,204,981	55,629,177
E.P.F	504,756	778,690
UPF	3,432,985	3,440,584
Pension	2,001,478	1,998,899
E.T.F.	1,347,640	1,214,086
Extra Working Day Payments	56,498	37,314
Over Time	812,963	567,989
	69,361,300	**63,666,739**

Note - 17

Travelling	**2022 Rs.**	**2021 Rs.**
Foriegn	-	-
Domestic	56,895	86,466
	56,895	**86,466**

Note - 18

Supplies	**2022 Rs.**	**2021 Rs.**
Mechanical and Electrical Goods	940,434	261,390
Stationery & Office Requisites	2,041,251	1,130,166
Uniform	752,570	480,296
Fuel and Lubricant	2,424,172	1,202,685
Consumable and Glassware	204,128	416,421
Other	351,562	305,575
Chemical	63,627	22,175
	6,777,744	**3,818,709**

Note - 19

Maintenance Expenditure	**2022 Rs.**	**2021 Rs.**
Plant, Machinery Equipment	406,793	520,304
Vehicles	324,246	565,956
Buildings & Structures	488,605	139,510
Other	67,444	127,373
	1,287,088	**1,353,143**

Note - 20

Contractual Services	**2022 Rs.**	**2021 Rs.**
Transport	2,020,546	1,110,845
Postal & Telecommunication	4,481,232	3,801,121
Electicity	4,732,227	2,491,063
Water	1,612,229	704,230
Security Service	4,863,594	3,768,350
Cleaning Service	6,411,016	5,051,523
Other Contractual Services	1,135,230	737,541
Printing, Advertising etc.	1,407,567	1,012,722
	26,663,640	**18,677,395**

Note - 21

Other Recurrent Expenditure	**2022 Rs.**	**2021 Rs.**
Visiting Lecturers Fee	284,700	790,500
Special Services - Board Meeting & Committees	803,482	845,400
Workshops and Seminars	67,660	25,000
Bank Charges	267,609	166,700
Expenditure on Certifictre Courses UCIARS	568,518	444,269
Entertainment Expenditure	80,568	53,088
Staff Development	203,625	-
Farm & Irrigation Expenses	8,516,659	1,813,835
Examination Expenditure	2,461,877	526,586
Animal Husbandry	7,179,571	1,852,687
Licence and Insurance Charges	342,667	847
Loss on Disposal	107,571	3,826
Research of Termaric Finger	-	42,550
Sympossium Expenditure	109,950	87,954
Trainee Allowance	1,044,150	170,000
Audit fee	336,000	336,000
Consultancy fee	861,373	123,551
Donation	55,800	398,230
Other	586,804	689,906
Yoghurt cost of production	149,848	-
	24,028,431	**8,370,929**

My. No: SPCG/HM/C/FA/IARS/05/2022/01 25th of May 2023

Chairman
Institute for Agro – Technology and Rural Sciences

Report of the Auditor General on the Financial Statements and other legal and regulatory requirements of the Institute for Agro – Technology and Rural Sciences Affiliated to the University of Colombo for the year ended 31st of December 2022 in terms of Section 12 of the National Audit Act, No. 19 of 2018.

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1. Financial Statements

1.1 Qualified Opinion

The audit of the financial statements of the Institute for Agro – Technology and Rural Sciences Affiliated to the University of Colombo for the year ended 31st December 2022 comprising the statement of financial position as at 31st December 2022 and the Financial Performance Statement, statement of changes in equity 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 the National Audit Act No. 19 of 2018 and Finance Act No. 3 of 1971 o be read in conjunction with Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka . My report to Parliament in pursuance of provisions in Article 154 (6) of the Constitution will be tabled in due course.

The opinion will be decided having considered the comments of the Chairman of the institute on the observations of this draft report.

In my opinion, except for the effects of the matters described in the section of basis for qualified opinion of this report, a true and fair view of the financial performance and cash flow for the year ended as at 31st of December 2022 in accordance with Public Sector Accounting Standards.

1.2 Basis for the Qualified Opinion

(a) Due course fee of Rs. 7,790,020 as at 31st of December of the preceding year had not been accounted and since it had not been corrected in the year under review receivables and the accumulated fund had been understated by the said amount in the financial statements.

(b) Capital grants and the grants of Rs. 16,202,111 received from the AHEAD project had not been identified and calculated under Public Sector Accounting Standards of Sri Lanka .
(c) Even though purchasing of fixed assets and stocks during the year under review was Rs.12,871,027, it had been stated as Rs.14,814,439 under cash flows of the investment activities in the cash flow statement and consequently cash flows of the investment activities in the cash flow statement had been overstated by Rs. 1,943,411.
(d) Not depreciating the assets which were transferred from Building . & Structures Account to the Building Account and Other Infrastructure Account and not following the proper depreciating rate , depreciation of Rs. 750,694 of the year under review had been understated.

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

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

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Other information means, financial statements and information which are not included in my audit report even though included in the Annual Report 2022 of the Institute for which was submitted me before the date of this audit report. The management is responsible for this other information.

Other information is not included in my opinion on financial statements and I do not express any certification or opinion in whatever way in this regard.

With respect to my audit on financial statements, my responsibility is to read above mentioned other identified information when received and to take into account whether other information materially mismatch with financial statements or knowledge I have gained in the audit or other way.

Based on the other information I obtained before the date of this audit report and the tasks I have performed, if I determine that material misstatements are found such misstatements should be communicated to the parties which control them for rectification.
No information is to be communicated on this report.

1.4 Responsibilities of Management and Those Charged with Governance for the Financial Statements

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

When preparing financial statements, it is a responsibility of the management to determine the ability of going concern of the Institute and in case the management determines to liquidate the Institute or unless take action to cease the operations in the absence of other alternative, the management is responsible for accounting based on the going concern and to disclose the matters on the going concern of the institute in future.

Those charged with governance are responsible for overseeing the Institute's financial reporting process.

As per sub section 16(1) of the National Audit Act No. 19 of 2018, the Institute is required to maintain proper books and records of all its income, expenditure, assets and liabilities, to enable annual and periodic financial statements to be prepared of the Institute.

1.5 Auditor's Responsibility on Audit of Financial Statements

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My objective is to express a reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue the Summary Report of the Auditor General that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sri Lanka Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.
As part of an audit in accordance with Sri Lanka Auditing Standards, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control.

- Evaluate the fairness of the accounting policies and accounting estimates used and the appropriateness of the related disclosures made by the management.

- Conclude on the appropriateness of the use of going concern basis of accounting based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Institute's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my audit report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. However, future events or conditions may cause the Institute to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

2. Report on the other legal and regulatory requirements

2.1 National Audit Act, No. 19 of 2018 includes specific provisions in respect of the following requirements.

2.1.1 I have obtained all the information and explanations for the purpose of audit, as per the requirement of Section 12(a) of the National Audit Act, No. 19 of 2018 except for the effects of the matters described in the section of basis for qualified opinion of this report and as per revelations from my examination, proper financial records have been maintained by the Institute.

2.1.2 The financial statements of the Institute are consistent with that of the preceding year as per the requirement of Section 6(1) (d) (iii) of the National Audit Act, No. 19 of 2018.

2.1.3 Any recommendation made by me in the preceding year as per the requirement of Section 6(1) (d) (iv) of the National Audit Act, No. 19 of 2018 had been included in financial statements.

2.2 Based on the procedures which had been adopted and the evidence obtained which limited to matters that are material, nothing has come into my consideration to express following statements.

2.2.1 As per the requirement of Section 12 (d) of the National Audit Act, No. 19 of 2018, whether any member of the governing body of the institute has any direct or indirect interest in any contract entered into by the Institute beyond the normal course of business.

2.2.2 Except for the below mentioned observation, whether Institute has not complied with any applicable written law or other general or special directions issued by the governing body of the Institute as per the requirement of Section 12 (f) of the National Audit Act, No. 19 of 2018.

Reference to rules and regulations/ direction	Observation
(a) University Grants Commission Circular No. 636 dated 14th July 1995	Even though the results of the examinations related to studies should be issued within 03 months, results of 13 examinations which were held in the years 2021 and 2022 were delayed by 26 to 360 days.

2.2.3 As per the requirement of section 12(g) of the National Audit Act No 19 of 2018, except for the following observations, the Institute has performed not complying with its powers, functions and duties.

2.2.4 As per the requirement in section 12(h) of the National Audit Act No. 19 of 2018, the resources of the authority had not been procured and utilized economically, efficiently and effectively within the time frames and in compliance with the applicable laws.

2.3 Other matters

(a) During the year under review a cost of Rs. 160,808,314 had been spent on producing banana and turmeric saplings and occurred a loss of Rs. 6,651,276 since sale price was not determined covering the cost.

(b) Of the loans granted to the students from the Farmers' Trust Fund in 2014 and 2015 , paying of loans amounting had been defaulted Rs. 685,790 as at 31st of December in the year under review.

(c) Of the 1637 students who enrolled for Bachelor of Agro Technology from 2017 to the year under review, only 1179 students continue studies and 458 students which is 28% of the total number have quitted the degree programme.

W.P.C.Wickramarthne
Auditor General

The Financial Audit - 2022
Auditor General's Report

Our No. - SPCG/HM/C/FA/IARS/05/2022/01

Institute for Agro – Technology and Rural Sciences Affiliated to the University of Colombo

Audit Para.	Audit Observation	Answers to the Audit Observation
1.	**Financial Statements** --------------	
1.2	**Basis for the qualified opinion** --------------------	
(a)	Course fee of Rs. 7,790,020 to be charged as at 31st of December of the preceding year was not accounted and the same error had been repeated in the year under review as well. Hence that amount has been understated in receivable accounts and cumulative fund.	Not agreed. Equity as at the last day of the financial year 2022 has been accounted properly. **Year 2021** In the financial statement of 2021, it has been disclosed that the institute enter course fees into accounts on cash basis according to the accounting policy for revenue recognition and it has been entered into accounts properly until 2021. According to the relevant policy, the receivables are not accounted and only cash receipts are entered into accounts. The following reasons on accounting on cash basis were revealed in the audit report 2021 . The institute is maintaining a separate bank account to collect course fee and the students' course fee is totally credited to that account. Direct deposits which are made by students are identified through bank statements while the deposits which are unidentified are identified through the bank reconciliation statement. Hence, even though payments are made by students, such deposits are recorded as due course fee from the students. Due to the unhealthy social and economic background in the country due to the corona pandemic, the banks couldn't provide bank statements to the institute and

		consequently they were recorded as receivables. At the end of the financial year such deposits were entered into the books of the institute through a receipt and recording received money as receivables will record an unrealistic amount of income. **Non registration of academic years** At the moment the institute is making arrangements in respect of registering students for the academic year 2022 and since relevant information was not received correct number of students and their information couldn't be determined. **Percentage of students who quitted the course** Percentage of students who have quitted the degree programme is approximately 50% and under these circumstances it is difficult to determine realistic values. Further, as per the information of the first intake within the amount of Rs. 7,790,020 the fees that have been charged from all the students are included. **Year 2022** Based on the recommendations of the auditor, the policy of accounting course fees was changed from cash basis to accrual basis in the year 2021 and it is disclosed under 1.5.2. (b). From 2022, it has been accounted accurately on accrual basis and equity and receivable course fees have been accurately accounted. Accounting policy has been followed from 2022 based on the agreement of the auditor and as indicated in the disclosures of practical and technical inconsistencies and the related explanations are given in the disclosures of policies and those matters have been re-filed below. *Earned income could not be accurately counted since sufficient information

		was unavailable to cover Revenue Recognition principles. Income could not be properly counted since the contracts with customers/ students and Performance obligations could not be recognized. 1. No-registration of academic years up to 2022 only information on student intake for the course is available. 2. Approximately 50% students have quitted the degree programme and under these circumstances it is difficult to determine real values. 3. Unavailability of an online payment method and the fact that the bank deposit slip should be reached to the institute. **Recommendations of LKAS 08** Further, recommendations to follow accounting policies and to make alternations from the existing year in the event accrual values cannot be counted based on serial No. 5 of LKAS 08 have been quoted.
(b)	Capital grants and the grants of Rs. 16,202,111 received from AHEAD Project had been neither identified nor measured.	Agreed with your statement. Correct financial statements will be submitted in 2023.
(c)	Even though purchasing of fixed assets and living stocks during the year under review was Rs. 12,871,027 , it had been given as Rs.14,814,439 under cash flow of investment activities in the Financial Statement. Hence, cash flow of investment activities in the Financial Statement has been overstated by Rs. 1,943,411.	Agreed with your statement. Correct financial statements will be submitted in 2023.
(d)	Not depreciating the assets which have been transferred from Building & Structures Rehabilitation to Building Account and Other Infrastructure Account and when depreciating not following the accurate depreciation rate resulted understating depreciation by Rs. 750,694 during the year under review.	Agreed with your statement. Correct financial statements will be submitted in 2023.
2.	**Report on the other legal and regulatory requirements** **-- -**	
2.2.2	**Reference to rules and regulations/ direction**	

	(a) University Grants Commission Circular No. 636 dated 14th July 1995 Even though the results of the examinations related to studies should be issued within 03 months, results of 13 examinations which were held in the years 2021 and 2022 were delayed by 26 to 360 days.	Results are issued on time (within 03 months).
2.3	**Other matters** **------------------**	
(a)	During the year under review a cost of Rs. 160,808,314 had been spent on producing banana and turmeric saplings and since price was not determined covering the cost occurring a loss of Rs. 6,651,276.	Agreed with your observations. Growing of turmeric saplings was started in 2021 amidst the Covid 19 pandemic and continued it based on the demand for turmeric production (because of restrictions on importing turmeric) .However in 2022 the demand was considerably decreased and due to the difficulty in the sale of products income was decreased. Tissue culture technology unit succeeded in increasing production and sale income of banana saplings in 2022 compared to the year 2021. Due to the fuel crisis arisen in the third quarter of 2022 buyer did not come to purchase banana saplings and sale targets could not be reached. Hence, at preset arrangements are being made to increase sale price of a sapling by Rs.10.00 and to increase production in order to decrease the loss occurred from the sale of banana saplings.
(b)	Of the loans granted to the students from the Farmers' Trust Fund in 2014 and 2015 , paying of loans amounting had been defaulted Rs. 685,790 as at 31st of December in the year under review.	The following measures were taken in this regard. **1.** Letters of Demand were sent the students who defaulted paying of loans through the Legal Division of University of Colombo on the recommendation of the Audit Committee (Date of the letter 04.03.2022). **2.** In consideration of the situation prevailed at that time taking into account the requests made to the Legal Division of University of Colombo by the students who defaulted paying of loans , a grace period of six months was informed in writing on the recommendation of the audit committee and approval of the management board (Date of the letter 06.06.2022) . **3.** After exceeding of 06 months a final notice including a loan recovery

		method was sent to the students who had not settled loans even during the grace period on the recommendation of the audit committee. (Date of the letter 25.01.2023)
(c)	Of the 1637 students who enrolled for Bachelor of Agro Technology from 2017 to the year under review, only 1179 students continue studies and 458 students which is 28% of the total number have quitted the degree programme the major reason was economic difficulties of the students.	The major reason for quitting the programme is inability of paying course fee due to economic difficulties.

I personally certify that the all the explanations above made in response of your query are correct.

Prof. M.A.A.D. Ampitiyawatta
Director
Institute for Agro – Technology and Rural Sciences Affiliated to the University of Colombo