2021

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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
2021

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

Acting 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 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 and therefore student contribution for practical and field visit component 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 skill compare 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 promotion of banana, mango and mushroom cultivation to strengthening the Government's drive in poverty eradication by improving income of the farming community. The institute has 40 acres farm land with several crop and livestock models allowing student field practical and research of students and staff.

As the Acting Director of the UCIARS, it is with profound gratitude that I recall the excellent support and guidance extended to us by Prof. S. Sutharsan, Former Director (up to 07.08.2021)/Part-time Consultant, our Vice Chancellor, 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'.

Dr.N.P.Vidanapathirana
Acting 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 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 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. The Order came into operation with effect from 23rd 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, 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 2021

Ex-officio members (as specified in the Ordinance)		
1	Director – Chairman/UCIARS	Prof.S.Sutharsan Director/UCIARS (up to 07.08.2021) Dr. (Mrs.) N.P.Vidanapathirana Acting Director/UCIARS (from 08.08.2021)
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.S.H.S.A.De Silva Additional Secretary, Ministry of Agriculture
5	The Dean of the Faculty of Science of the University	Prof. D.U.J. Sonnadara
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 among its members	Prof.S. Karunaratne
		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	Dr.S.H.S.A.De Silva Additional Secretary, Ministry of Agriculture
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 2021.

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 2021

1	Director – Chairman/UCIARS	Prof.S.Sutharsan Director/UCIARS (up to 07.08.2021) Dr. (Mrs.) N.P.Vidanapathirana Acting Director/UCIARS (from 08.08.2021)
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.S.H.S.A.De Silva Additional Secretary, Ministry of Agriculture Eng (Mrs).P.A.A.P.K.Pannala Additional Secretary, Ministry of Irrigation (Water Resources Planning and Development)
4	A member nominated by each Department of Study	Dr.S.S.Weerasinghe, Senior Lecturer I
5	The Coordinators of each Course of Study	-
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 eight (8) times during the year 2021.

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.

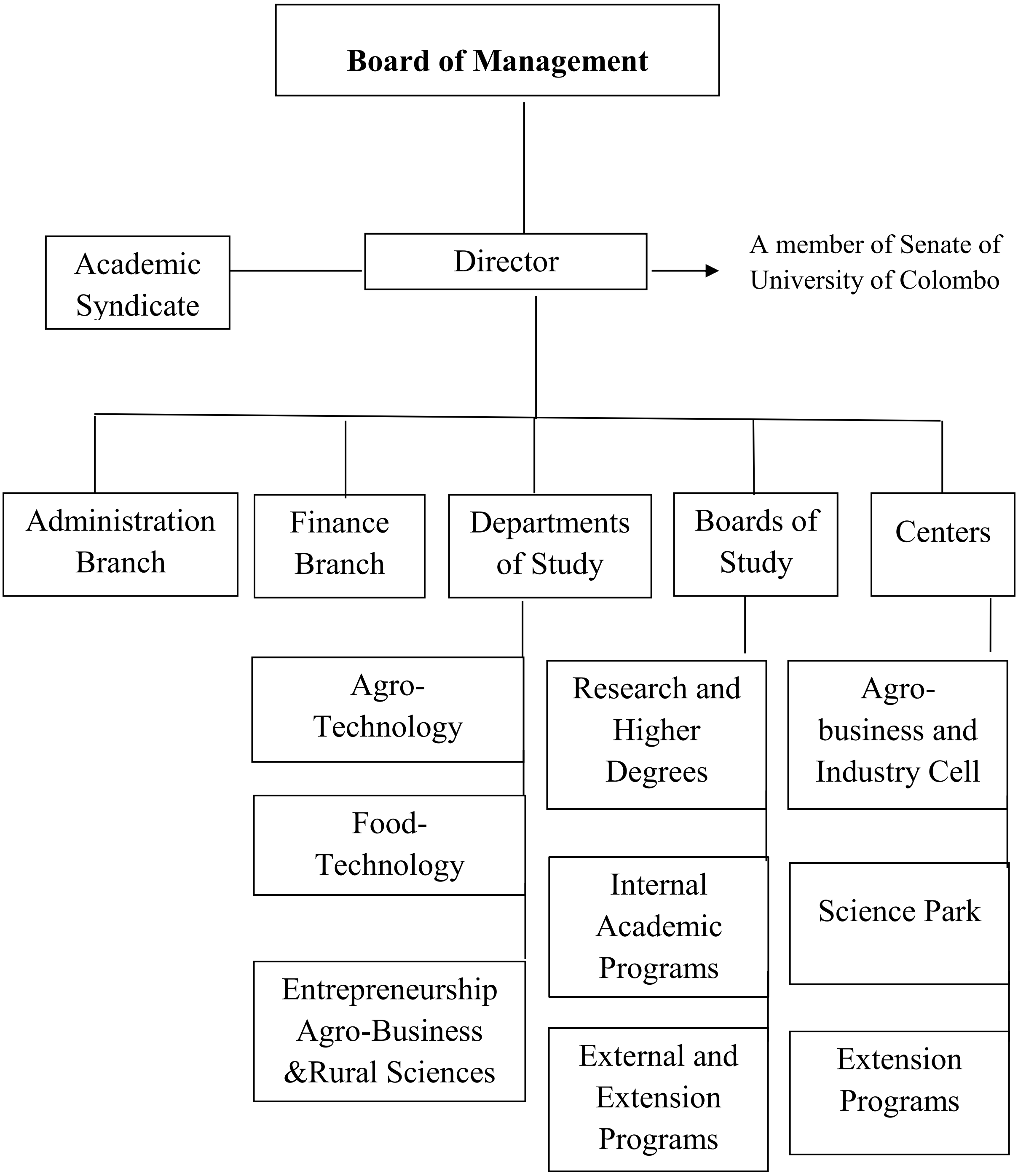
The Audit Committee of the institute met quarterly during a year. The Audit Committee has met four (04) times during the year 2021.

The composition of the Audit Committee in 2021 is as follows:

Table 03: The composition of the Audit Committee in 2021

1	Chairman (Nominated member of the Board of Management)	Mr. N.K.De Silva Senior Lawyer
2	Two other members nominated by the Board of Management	Dr.S.H.S.A.De Silva Additional Secretary, 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	Ms.K.V.T.N.Sinhaghosha Superintendent of Audit, Government Audit Division, University of Colombo
5	Representative from University Grants Commission	Mr.Janaka Bogamuwa Internal Auditor/UGC
7	Representatives from UCIARS	Prof.S.Sutharsan Director/UCIARS (up to 07.08.2021) Dr. (Mrs.) N.P.Vidanapathirana Acting Director/UCIARS (from 08.08.2021) Head of the Department of Agro-Technology Ms.A.D.P.De Zoya/Mr.K.Sunil Assistant Bursar/UCIARS S.A.S.Priyyadarshnai Senior Assistant Registrar/UCIARS
8	Secretary to the Audit Committee	Mr.K.E.W.Jayasiri/Mr.S.P.G.Nihal Senior Asst. Internal Auditor, University of Colombo

1.5 Organizational Structure



Flow Chart 1 – Organizational Structure

2 OVERALL PERFORMANCE

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

In the year 2021, 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 31.12.2021.

Table 04: Staff of the UCIARS in 2021

Staff Category	No.of Employees
Administrative	02
Academic/ Academic support (Permanent)	09
Academic (Assignment/Temporary)	09
Non-Academic Staff	47
Total Staff	**67**

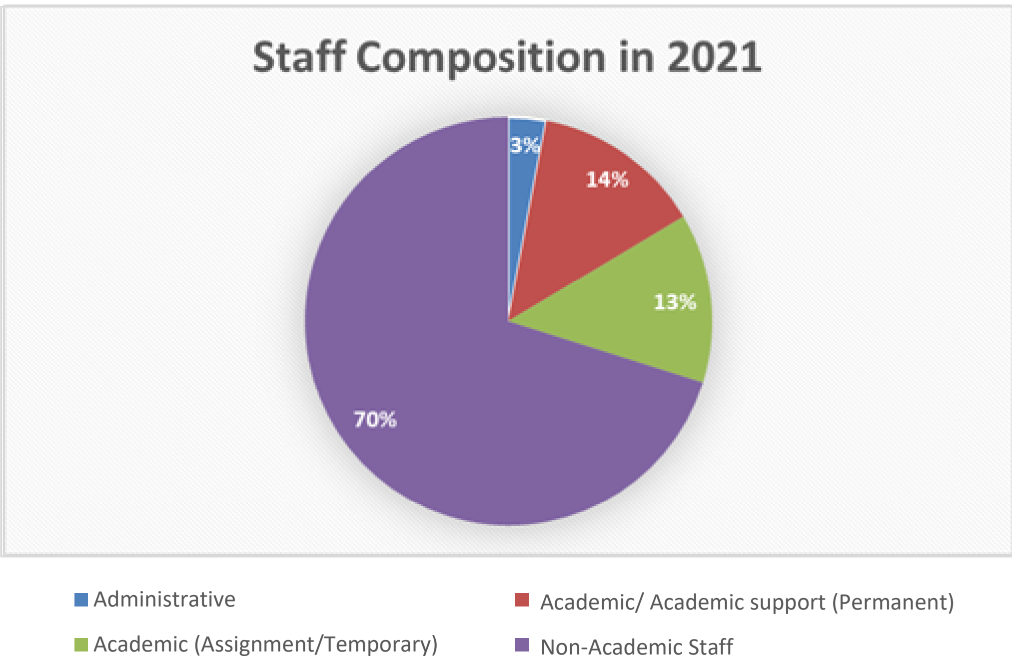


Figure-01: Staff of the UCIARS in 2021

Table 05 : Approved cadre & existing cadre of UCIARS as at 31.12.2021

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 06: Administrative Staff of the Institute as at 31.12.2021

S/n	Name	Designation
1	Dr (Mrs). N.P Vidanapathirana	Acting Director/UCIARS (From 08.08.2021)
2.	Mrs.S.A.S.Priyadarshani	Senior Assistant Registrar
3.	Mrs.A.D.P.De Zoysa	Assistant Bursar

Table 07: Non-Academic Staff (Administrative Support) of the Administrative/Finance divisions as at 31.12.2021

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.W.H.U.Kaushalya	Laboratory Attendant
10	Mr.P.B.Darshana	Works Aide III
11	Mr. K.S.R.Sampath	Works Aide III
12	Mr. W.M.Chaminda	Works Aide III
13	Mr. B.G.S. Kumara	Laboratory Attendant
14	Mr.S.V.Upali	Driver Grade II
15	Mr.W.W.K.C.Priyankara	Driver Grade II

2.1 Academic Programme Performance

The UCIARS introduced its academic programs in the year 2008 and has a mandate to provide, promote and develop among persons presently engaged in Agriculture and Agro-technology, higher education in the disciplines 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 dreamt of entering the portals of higher education. However, they have aspirations 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 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.

This is a novel educational venture for Agriculture entrepreneurs and this is the first opportunity for rural farming community to upgrade their knowledge using local language in Sri Lanka. Farming community of Sri Lanka is mostly concentrated in rural areas and their contribution to the agriculture is very high. But the rural farming community has low facilities to pursue their education, personal and professional development. Hence, for the first time, Institute of Agro technology and Rural Sciences which was affiliated to the University of Colombo (UCIARS) at Weligatta offered a Bachelor of Agro-Technology Degree programme for farmers who were presently engaged in agriculture. The significant feature of this programme is that it operates through online and distance e-learning method which is a novel experience in Sri Lanka.

Objectives of the Academic Program

1. To democratize higher education underpinned by principles of lifelong learning, flexibility and learner centeredness and widen the access to masses, in particular to the farming community, through the provision of blended learning.

2. Farming community /Agriculturists to be involved in knowledge-based agriculture and thereby enhancing the quality and quantity of agricultural products.

Special features of the program

- These activities change individual and social needs by taking education through online learning mode for the farming community who has never dreamt of entering the portals of higher education.

- Providing opportunities for the farming community to pursue higher education while being in cultivation of crops.

- Introduction of new agro-technologies and Introduction of ICT for Sri Lankan farming community.

- First ever University academic program for the farming community in Sri Lanka.

- In 2018 the Institute has taken a new group of students from A/L passed students who are willing to study agriculture as group A.

Bachelor of Agro-Technology (B.Ag.Tec) Course approval details

Senate approval:	338th Senate Meeting (29.09.2010)-Syllabus
Council approval:	462nd Council Meeting (15.08.2012)- By Laws
UGC approval:	867th UGC Meeting (07.02.2013)- Degree Program

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 06).

Curriculum - Bachelor of Agro-Technology

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

Table 08 : 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 09 : 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
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 10 : Total Number of Students in the year 2020 for Bachelor of Agro-Technology Degree program

Year of Study (Batch/Year)	Year of Intake	No. of Students		
		Male	Female	Total
1st Year(11th /12th/13th Batches)	2019/2020-2020/2021-2021/2022	202	306	508
2nd Year (10th/11th/12th/13th Batches)	2018/2019-2019/2020-2020/2021-2021/2022	69	94	163
3rd Year (8th /9th /10th /11th /12th /13th Batches)	2016/2017-2017/2018-2018/2019-2019/2020 2020/2021-2021/2022	96	105	201
4th Year (/7th /8th /9th /10th Batches)	2015/2016-2016/2017-2017/2018-2018/2019	44	23	67

Table 11 : Student Enrollment and Passed out students during last 3 years

Year	Student enrollment	No. of students passed out
2021	323	-
2020	343	31**
2019	267	32*

* Passed out students of the 2012/2013 and 2013/2014 intakes (4th & 5th batches)

**Passed out students of the 2014/2015 intake (6th batch)

Staff of the Academic Program as at 31.12.2021 is given below.

Table 12: 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
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)

***Six members (1- Senior Lecturer Gr.I and 5- Lecturer (Probationary) have joined the Department of Agro - Technology to its permanent cadre by strengthening the Academic syndicate of the institute from the second quarter of 2021.*

Table 13: 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
8	Ms. M.U.N. Gunawardana	Temporary Demonstrator
9	Ms. T.V.R.C. Perera	Temporary Demonstrator
10	Ms. H.I.G.K.Anuruddi	Temporary Demonstrator

Table 14: 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

- The Director Professor Sutharsan Somasundaram, the third Director of the UCIARS completed the term of office on 07.08.2021 and he served as the Part-Time Consultant of the Institute from 08.08.2021 up to the end of the year.

- 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 2021.

- 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.

Academic activities during COVID -19 pandemic period

Students in all academic years attended lectures conducted via online and they attended practical activities in groups staying in the hostels comply with the health regulations and safety guidance.

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. This farm practice course has been started on 13th November 2021 in compliance with health rules and regulations and following all the health guidelines at their work.

Special Events in the Department of Agro-Technology (2021)

- **Admissions for the academic year 2021 and accomplishment of the academic programme**

Applications were called for the new academic year and over 1200 applications had been received by 16.06.2021. There were applicants from all districts. All eligible applicants were called for the aptitude test on 13th of November 2021 at the Debarawawa Central College, Thissamaharama. There were about 350 applicants faced for the entrance examination in compliance with all health regulations and guidelines. The new students were enrolled for the programme and started the academic semester as scheduled on 29th December 2021. The orientation programme was implemented covering ICT, English, Mathematics and Basic Science. The students were categorized into two groups considering the access and the convenience to follow the academic programme as full-time students (group A) and part time students (group B) who attend studies during weekdays and only during weekends.

- **National Virtual Symposium 2021**

The second National (Virtual) Symposium on Agro Technology and Rural Sciences (NSATRS) was held on 28th May 2021 with the theme of " A way Forward for Smart Agriculture Towards Rural Development". The NSATRS 2021 provided a forum to discuss the challenges and future directions in different research in Argo Technology. The proceeding was published as an online publication provides a glance of the different interests on Agro-Technology based research and its new directions. Hence, this Symposium provided an immense opportunity to share brilliant ideas and concepts, invigorate attention and inspire the national agriculture beyond the production.

Symposium Tracks:

- Smart Agriculture and Eco System Safety
- Agricultural Innovations for Food Security
- Climate Resilient Agriculture
- Empowering Rural community Through Novel Agricultural Technologies

Key note Speakers:

1. Prof. Ranjith Senaratne - Chairman, National Science Foundation, Sri Lanka.
2. Dr. Richard S. Cahoon - WIPO, Sr. Expert, Bio-property Strategy Group, Inc., President, Cornell University College of Agriculture & Life Sciences, Department of Global Development, Professor-adjunct, USA

The Symposium was directed by Professor S. Sutharsan, Director of the Institute with the involvement of all staff members and students. The Senior Professor Chandrika N. Wijeyaratne, Vice Chancellor, University of Colombo was the Symposium chief guest.

- **Students qualified for graduation 2021**

32 students were graduated in 2021 from 4th and 5th batches of the Bachelor of Agro-Technology degree programme at the BMICH.

- **Enhancement of the Wi Fi system within hostels**

The currently operating Wi Fi system was strengthened by fixing a handwear device of Wi Fi access point to the existing system. This was a great help for students to engage with online academic activities with no interruptions.

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.

Table 15: Staff of the Plant Nursery and Laboratory as at 31.12.2021

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 2021

Performance during the year 2021 of the tissue cultured plant production and sales are indicated in below tables and figures.

Table 16: Plant Production Records from Tissue Culture Laboratory (Nos.)

Month	Banana plants	*Aloe vera* plants
January	5,609	-
February	5,185	-
March	5,465	2,694
April	5,678	2,289
May	8,257	-
June	8,182	-
July	8,250	-
August	11,237	2,262
September	11,412	-
October	12,100	-
November	12,528	-
December	15,246	-
Total	**109,149**	**7,245**

Table 17: Comparison of Banana plant production for last eight years (Nos.)

Month	2014	2015	2016	2017	2018	2019*	2020*	2021
January	18,514	20,315	20,594	20,386	18,826	25,628	7,861	5,609
February	18,209	20,127	20,476	21,527	24,882	19,025	16,360	5,185
March	18,960	20,611	16,918	25,150	24,680	8,949	10,751	5,465
April	14,275	12,580	10,815	19,703	18,873	5,429	5,166	5,678
May	10,043	14,852	19,079	24,351	27,514	24,023	10,097	8,257
June	10,550	14,218	19,359	23,260	23,504	19,425	18,384	8,182
July	12,791	12,029	19,750	25,184	8,673	20,005	10,437	8,250
August	7,770	14,021	20,875	22,151	11,318	6,669	5,538	11,237
September	18,831	18,030	24,180	25,420	22,770	6,774	5,750	11,412
October	25,300	22,427	23,481	21,732	27,810	24,243	5,854	12,100
November	23,106	21,557	18,807	24,481	8,993	18,891	5,126	12,528
December	26,409	21,339	18,100	18,180	7,822	14,374	5,211	15,246
Total	**204,758**	**212,106**	**232,434**	**271,525**	**225,665**	**193,435**	**106,535**	**109,149**

*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.

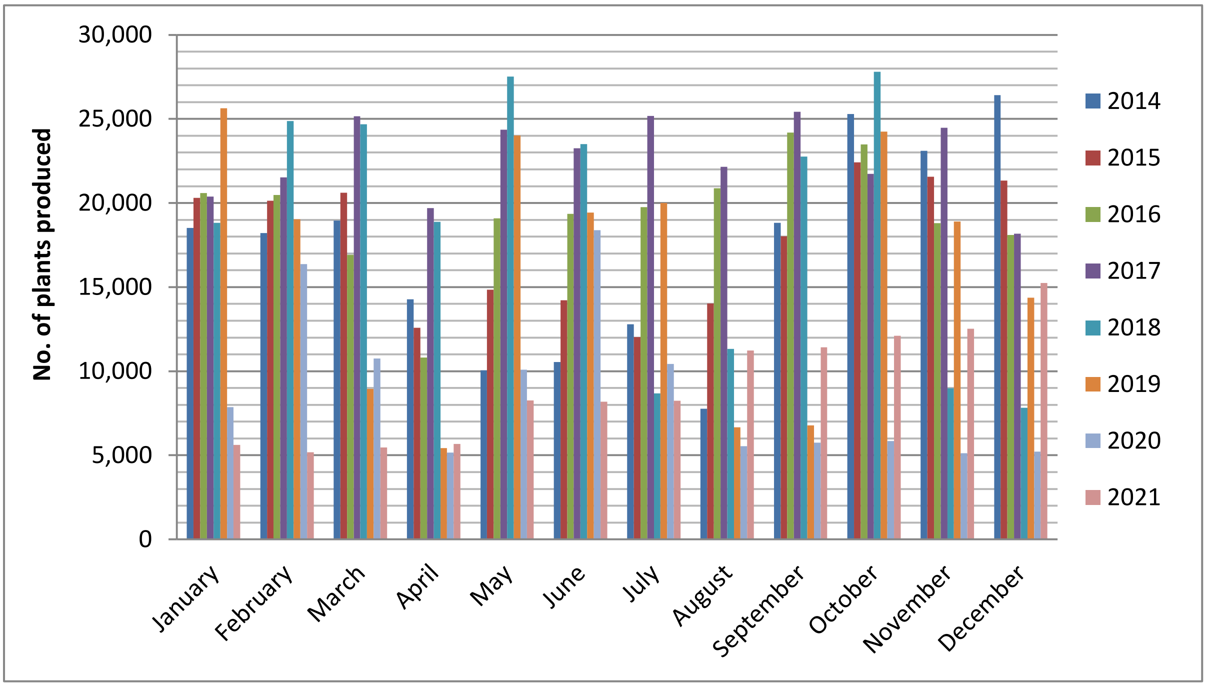


Figure 02: Plant Production Comparisons 2014 - 2021

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, COVID 19 pandemic situation adversely affected on plant production.

Banana Production Comparison in the year 2021

98 % of the total production accounts for Embul Banana and rest 2 % represents by Kolikuttu banana variety.

Plant Sale Comparison

Typically, demand for the Tissue Cultured banana is highly depended 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 2021, COVID 19 pandemic situation adversely affected on considerable reduction of plants sales.

Table 18: Comparison of plant sale for last eight years (Nos.)

Month	2014	2015	2016	2017	2018	2019	2020	2021
January	10,823	14,672	21,738	17,980	17,759	3,851	27,222	5,551
February	6,816	18,427	17,950	22,141	12,738	9,704	526	2,712
March	2,715	19,835	14,924	22,536	26,232	2,344	4,292	5,048
April	7,697	20,579	13,721	21,467	15,259	11,524	19,668	5,617

May	7,113	12,531	12,830	19,652	18,968	4,923	7,434	5,785
June	3,381	15,132	13,527	20,780	6,489	6,211	10,956	6,222
July	3,680	12,682	11,490	20,576	11,049	7,008	14,276	6,348
August	18,404	12,954	19,465	21,097	13,454	15,425	9,106	6,820
September	11,766	20,943	18,837	20,877	7,697	21,701	5,791	7,384
October	18,498	15,151	22,040	22,302	19,692	5,988	5,169	8,514
November	25,705	16,656	17,327	21,137	19,349	12,744	2,810	5,759
December	13,369	24,595	20,884	20,530	14,405	8,027	4,658	7,212
Total	**1,29,967**	**2,04,157**	**2,04,733**	**2,51,075**	**1,83,091**	**109,450**	**111,908**	**72,972**

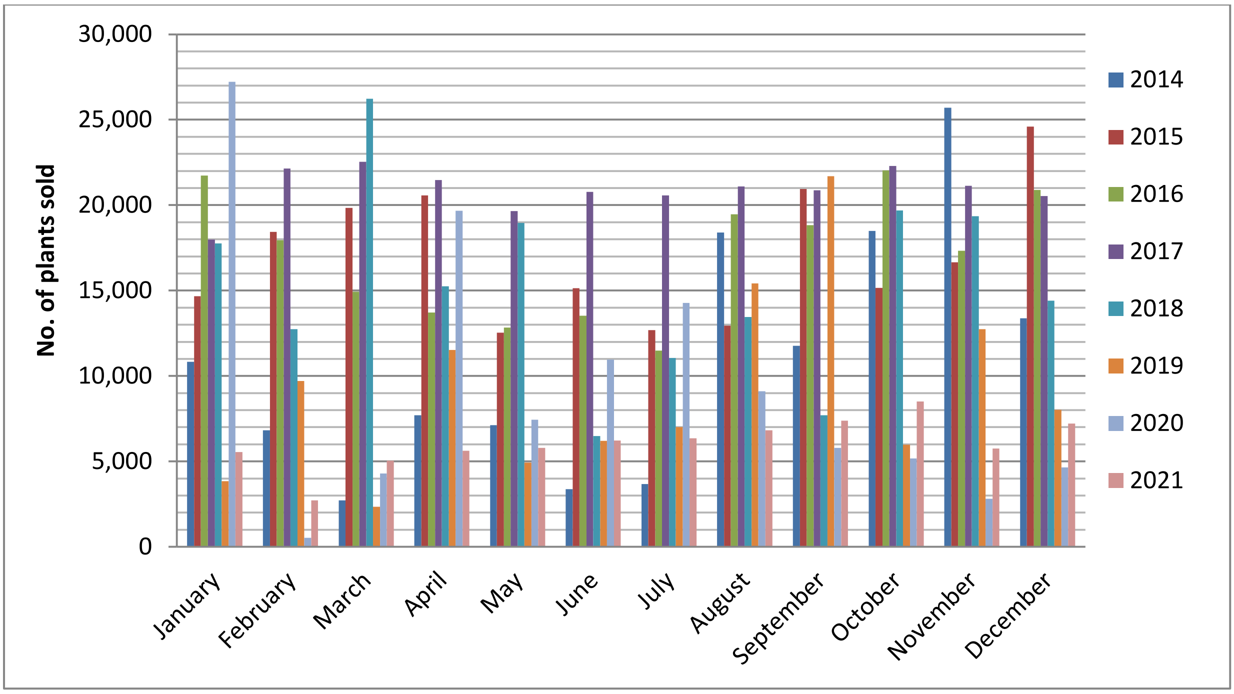


Figure 03 : Plant Sale Comparison 2014 - 2020

Table 19: Plant sale comparison in no. of plants sale basis – 2021

Description	**No. of Plants**
Plant sale >100 plants	3,690
Plant sale <100 plants	69,289

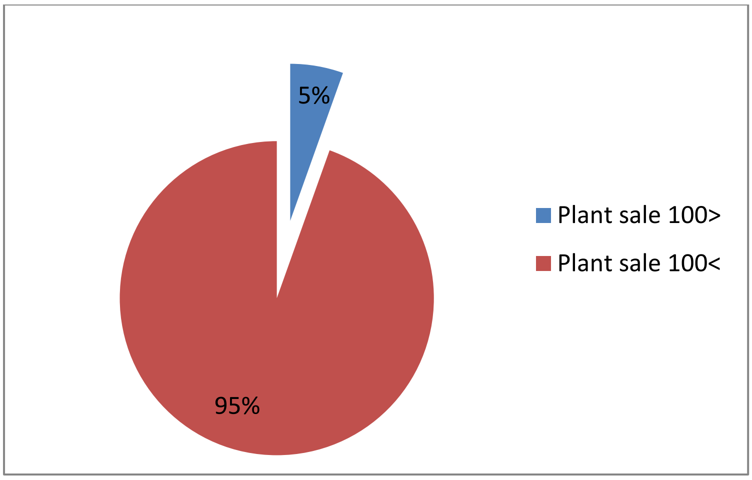


Figure 04: Plants sale - 2021

Table 20: Plant Sale in Variety Basis – 2021

Variety	No. of Plants
Ebul	71,537
Kolikuttu	1,442

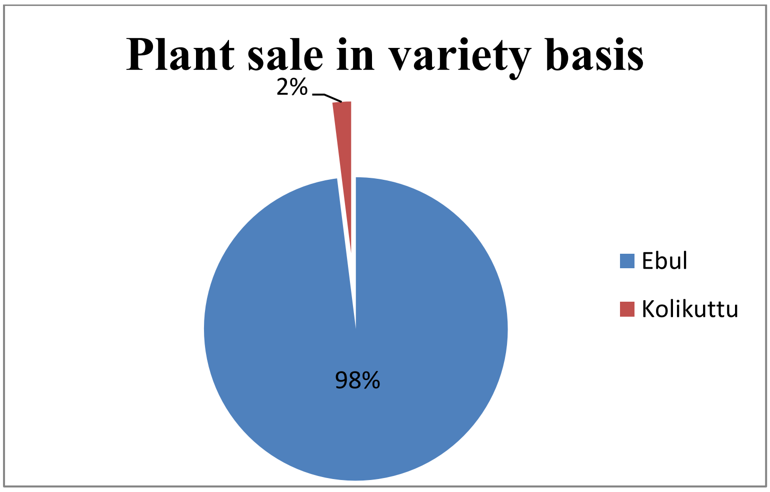


Figure 05 : Plant sale in variety basis

Income generation through Tissue cultured banana sale was 5.9 Mn. in 2020. 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 high purchasing power farmers (42%) while engaged low percentage of low purchasing power farmers (58%).

Table 21: Purchasing power of the farmers - 2021

Purchasing power of the farmers	No. of farmers
No. of farmers purchased more than 100 plants	81
No. of farmers purchased less than 100 plants	113

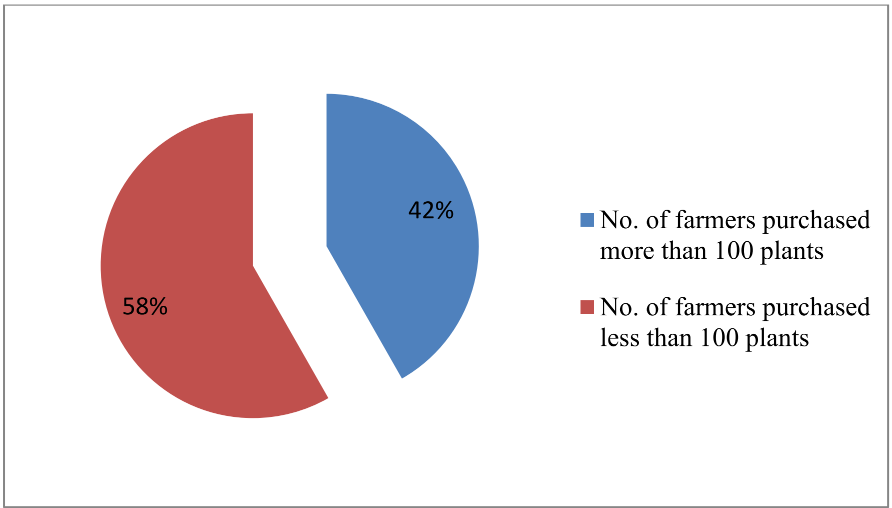


Figure 06: Purchasing power of the farmers - 2021

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.

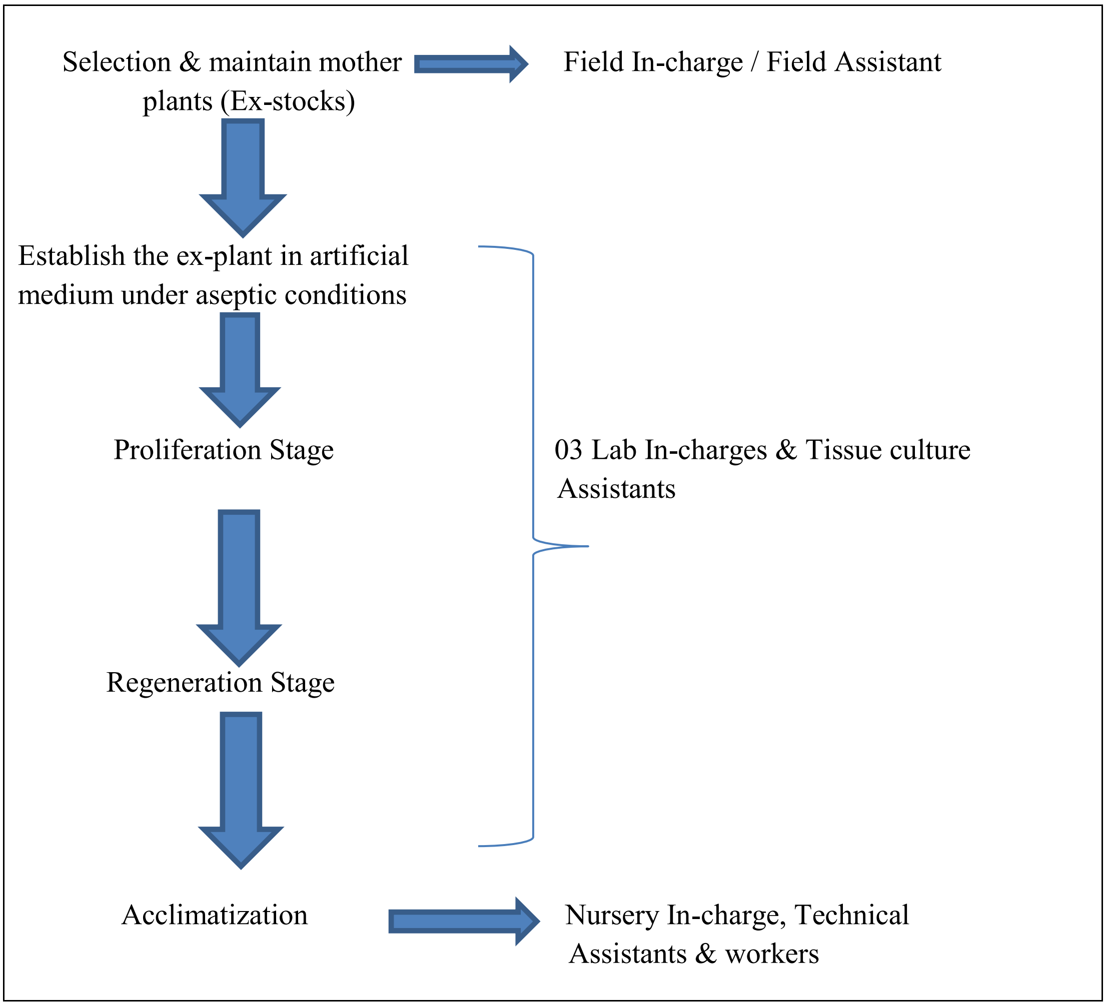


Figure 07 : Production Process of Tissue Culture Banana Plants

3. RESEARCH AND INNOVATIONS

<u>Published in Local</u>

Publications in 2021

1. Anuruddi, H. I. G. K., Samarasinghe, K. P., Rifnas, L. M., Weerasinghe, S. S., (2021) Eco-Friendly Bio Prills with Water Hyacinth (*Eichhornia Crassipes*) To Raise Nursery Plants, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 4

2. Anuruddi, H. I. G. K., Samarasinghe, K. P., Rifnas, L. M., Weerasinghe, S. S., (2021) Water Hyacinth Based Organic Grow Bags for Urban Gardening, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 5

3. Samarasinghe, K. P., Anuruddi, H. I. G. K., Rifnas, L. M., Weerasinghe, S. S. (2021) Grow Bags from Banana (*Musa Spp*) Pseudo Stem for Urban Farming, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 6

4. Madushani, W. G. C., Dodampe, I. C., Weerasinghe, S. S. (2021) Technique to Remove the Ash Adhered on Banana (*Musa Spp*) Leaves Before Curing as Food Wrappers, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 7

5. Sandaruwan, H. M. A. Y. A., Anuruddi, H. I. G. K., Weerasinghe, S. S., Saneer, M. F. A., (2021) Effect of Organic Manure on Performances of Paddy (*Oryza Sativa*) Cultivation in Ampara District, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 8

6. Bandusekara, B. S., Weerasinghe, S. S., Wijesinghe, K. G. G., (2021) YIELD AND PEELING PERFORMANCES OF CLONAL-CUTTINGS AND SEEDLINGS OF CINNAMON (*Cinnamomum Zeylanicum*) *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 18

7. Ketipearachchi, K. G., Subasinghe, S., Vidanapathirana, N. P., Silva, T. D., (2021) Morphological Characterization of Terminalia Catappa L. (*Tropical Almond*) In Galle District, Sri Lanka. *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 24

8. Kumara, K., Nelka, S. A. P., Subasinghe, S., Vidanapathirana, N. P., Anuruddhi, H. I. G. K., (2021) Effects of Seed Treatments and Growing Media on Germination of Vara (*Calotropis Gigantea*) Seeds. *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 26

9. Kumari, H. K. S. N., Rohanadheera, H., Vidanapathirana, N. P., (2021) Development of An In-Vitro Propagation Protocol to Induce Suckers from Sour Banana, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 27

10. Tharanga, S. J., Vidanapathirana, N. P., Siriwardana, A. J. M. C. M., (2021) Effects of Cinnamon (*Cinnamomum Zeylanicum*) Powder Extract Against the Pests of Radish (Raphanus Raphanistrum Subsp. Sativus) *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 28

11. Kumara, M. M. P. A., Anuruddi, H. I. G. K., Weerasinghe, S. S., Somachandra, M. N., (2021) Effect of Different Soil Amendments on Soil Moisture Retention and Bean (*Phaseolus Vulgaris*) Crop Growth. *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 34

12. Kumara, T. T. M., Anuruddi, H. I. G. K., Madushani, W. G. C., Weerasinghe, S. S., (2021), Formulation, Evaluation and Antibacterial Efficiency of Aloe Vera-Based Herbal Hand Sanitizer. *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 47
13. Chandimala, U. R.., Arampath, P. C., (2021), Review: Association In-Between Food Additives and Non-Communicable Diseases in Modern World, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 48

14. Sarangi, W. G. K., Siriwardena, B. P., Dhanushka, T. G. B., Vidanapathirana, N. P., (2021) Farmer Awareness on Agro-Chemical's Application in Sooriyawewa of Hambantota District in Sri Lanka – A Case Study, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 48

15. Chandimala, U. R., Vidanapathirana, N. P., Rifnas, L. M., (2021) A Study on Perception of Sri Lankan Society on Cultured Meat. *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 50

16. Herath, H. M. M. T., Kumara, H. K. R. S., Anuruddi, H. I. G. K., (2021) Consumer and Producer Concerns on Quality of Dried Fish in Hambantota District, *Proceedings of the 2nd National Symposium on Agro-Technology and Rural Sciences (NSATRS).* 28th June 2021. Pp 51

Published in Foreign

JOURNAL PAPERS

2021

1. Rifnas L.M., Vidanapathirana N. P., Silva T. D., Dahanayake N., Subasinghe S., Weerasinghe S. S., Madushani W. G. C., Nelka S. A. P. and Rohanadeera H. (2021), Vegetative propagation of Acalypha hispida through cuttings with different types of media-minor fruits, International Journal of Minor Fruits and Medicinal Plants

2. Gamage, L.K.T., Thushari G.G.N., Atapaththu K.A,S., H.K.R.S. Kumara, Senevirathna J.D.M., (2021) Diversity, Length-Weight Relations, and Condition Factor of Sea Cucumbers in Three Coastal Areas Along the Southern Coast of Sri Lanka: A Case Study, Turkish Journal of Fisheries and Aquatic Sciences- HKRS Kumara

ABSTRACTS

2021

1. Ketipearachchi, K.G., Vidanapathirana, N.P., Somachandra, K.P., Mangalika, W.P.W., (2021) Influence of integrated plant nutrient management using "Newly Modified Panchagavya" and "Albert Solution" on growth and yield parameters of *Capsicum annuum* (Variety - Muria 358 F1) under polytunnel cultivation, Proceeding of the International Symposium on Agriculture and Environment (ISAE 2021) University of Ruhuna, Sri Lanka,7th May 2021, Pp 78

2. Ketipearachchi, K.G., Vidanapathirana, N.P., Wickramasinghe, M., Weerasinghe, W.K., (2021) Enhancement of seed germination by pre-plant treatments of *Cyrtostachys renda* (Red palm), Proceeding of the International Symposium on Agriculture and Environment (ISAE 2021) University of Ruhuna, Sri Lanka, 7th May 2021, Pp 95.

RESEARCH PROPOSALS SUBMITTED

1. The project on "Implementation of the Special Initiative for Improving English Through Blended Learning at UCIARS" submitted to the AHEAD-ICE.

2. About ten research proposals were submitted to the Sri Lanka Council for Agriculture Research Policy.

   i. Utilization of disused banana fruits for value added product development.
   ii. Establishment of Agri-business incubator as a tool for accelerating agricultural entrepreneurship.
   iii. Development of Bio Pesticide for Papaya Mealybug (*Paracoccus marginatus*) using Commonly Available Medicinal Plant Extracts .
   iv. Evaluation of the performances of different traditional and improved rice (Oryza sativa L.) varieties for organic manure application.
   v. Development of a mass propagation protocol for *Cleistanthus collinus* (Gaja madara) as a natural deterrent for crop raiding elephants.
   vi. Foliage of different Cassia species as an alternative feed for growing goats in Sri Lanka
   vii. Development of Eco friendly weed management techniques in commercial cultivation of Pineapple (Ananas comosus
   viii. Development of liquid fertilizer to promote growth and yield performances of Chili (Capsicum annum) and Tomato (Lycopersicon esculentum.
   ix. Development of a protocol for muzle cell isolation and production of invitro meat in Sri Lanka. Submitted to the Ministry of Agriculture

3. Banana fiber: Environmentally Sustainable Alternative for Synthetic Fiber - Submitted to the Indian Agriculture Research Council.

INNOVATIONS

1. Development of a software to update the Learning Management system

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.

2. Introduced a Management Information System (MIS)

This system supports students and staff 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.

3. Production of a mutant plant of *Catharansus roseas*

Having attractive flowers with streaked petals was developed through mutational breeding. Generally, this mutant is not existed in the floriculture industry and expect to produce them on commercial scale in connection with a commercial partner with the guidance of the University

Business Link in the University of Colombo. This invention was done by Ms. S.A.P. Nelka with the guidance of a team or supervisors under the project of AHEAD – ICE.

Muted plant bearing flowers with streaked petals

4. Production of protein rich meal for inland fish Thilapia (*Oreochromis niloticus*)

The blood meal has been introduced as a substitute for the costly fish meal available in the market. The scarcity, high cost and the poor quality are some constraints of the fishmeal currently existing in the market. The animal wastes of blood have incorporated into the new invention, and it successfully improve the growth of fingerlings. This invention has been developed by Mr. G.G.L Indika, a research student with the guidance of Mr. H.K.R.S. Kumara, Course Coordinator/UCIARS.

Blood meal for inland fisheries

5. Eco friendly growth structures with aquatic weeds: pellets and Loaf for urban agriculture

As a substitute for synthetic containers and media with coir dust an aggressive aquatic weed has been fabricated in to eco-friendly containers. They are light in weight and ideal for vertical farming in restricted space common in urban areas. This absorbs water and expand as an elongated structure. This invention was developed by Ms. Anuruddhi Kokila (Temporary Demonstrator/UCIARS), Mr. L.M.Rifnas (Lecturer (Probationary)/UCIARS), Mr. Kalum Prasad Samarasinghe with the guidance of Dr. Sujatha Weerasinghe (Senior Lecturer I/UCIARS).

Growth structure derived from aquatic weeds

6. **Jam with Egg Fruit (*Pouteria campechiana*) incorporated to Winer melon (*Benincasa hispida*)**

   Using an underutilized fruit of Egg fruit a nutritive jam has been produced as a value added product by Mr. M.G.D.P Jayalath ,a research student with the guidance of Mr B. P. Siriwardana, Course Coordinator/UCIARS. This Jam is having a natural egg yellow colour came from the Egg fruits.

Egg fruit based Jam

7. **Biscuits from Red Pumpkins (Wattakka)**

   Red Pumpkin is a vegetable having a marketing glut causes a massive post-harvest loss. As a solution a biscuit has been produced using Red Pumpkin which is nutritive, naturally coloured and sweet in taste. This has been invented by Mr. L.M.Perera, research student with the guidance of Mr. B.P.Siriwardana, Course Coordinator/UCIARS.

8. Production of invitro propagated Aloe Vera and Turmeric plants

Generally, Aloe vera is vegetatively propagated with suckers and turmeric is propagated by rhizomes. However, it is difficult to meet the demand for planting materials in both these crops hence invitro propagation was initiated. Two new proposals have been developed and presently plants are successfully producing on commercial scales. This endeavor helps to generate an income to the Institute too. Mr. H.Rohanadheera, Scientific Assistant is the in-charge of this programme having competence and expertise with outstanding interest in the subject area.


PATENTS AND AGREEMENTS

Application for Patents

Four (04) applications have been submitted requesting patents for four inventions; three products and one technology by the institute. Such as;

i. *Acalypha hispida* plant with multi coloured inflorescence
ii. Banana coins developed with banana pseudo stems for raising seedlings.
iii. A machine to fabricate bio pots with Banana pseudo stems
iv. Rapid propagation technique along with potting media for *Alamanda cathertica* (Rukatthana)

Among them two patents have been submitted to the National Intellectual Properties Organization (NIPO) by the University Business Link of the University of Colombo and the rests are processing by the UBL.

Signing Memorandum of Understandings

In order to commercialize the inventions, the Institute has signed four MOUs with four business partners. Two of them have been submitted to the OPERATIONAL TECHNICAL SECRETARIAL (OTS) in the University of Colombo and signed the agreements. The license agreements connected with these MOUs also have been submitted to the OTS and moving through the process.

4. TRAINING, WORKSHOPS AND STAFF DEVELOPMENT

During the year 2021, Academic and Non-Academic staff members participated few training programmes and workshops via online and Academic staff were involved in their post-graduate courses as detailed below in tables.

Table 22 : Academic Staff attended programmes

S.N.	Name of the Employee	Designation	Programs attended
1	Mr.B.S.Bandusekara	Lecturer (Probationary)	1. Professional Development Workshop-BRITAE project conducted by BRITAE team held on 19.09.2021 (via Online) 2. Training programme on Mushroom cultivation conducted by DATC, Horana held on October 2021 (via Online) 3. AMP Induction 2021 program for early career Academics of University of Colombo conducted by Academic mentoring program, Faculty of Medicine, University of Colombo held on 02.07.2021 (via zoom)
2	A.J.M.C.M. Siriwardana	Lecturer (Probationary)	AMP Induction 2021 program for early career Academics of University of Colombo conducted by Academic mentoring program, Faculty of Medicine, University of Colombo held on 02.07.2021 (via zoom)
3	Ms.U. R. Chandimala	Lecturer (Probationary)	AMP Induction 2021 program for early career Academics of University of Colombo conducted by Academic mentoring program, Faculty of Medicine, University of Colombo held on 02.07.2021 (via zoom)
4	Mr.L.M.Rifnas	Lecturer (Probationary)	AMP Induction 2021 program for early career Academics of University of Colombo conducted by Academic mentoring program, Faculty of Medicine, University of Colombo held on 02.07.2021 (via zoom)
5	Ms.K.G. Ketipearachchi	Lecturer (Probationary)	1. AMP Induction 2021 program for early career Academics of University of Colombo conducted by Academic mentoring program, Faculty of Medicine, University of Colombo held on 02.07.2021 (via zoom) 2. Training programme for Student Counsellors 2021/2022 conducted by Student Counsellor Unit, University of Colombo held on 7/6/2021, 14/06/2021, 21/06/2021, 28/06/2021, 05/07/2021,

			08/07/2021, 15/07/2021 (via Online) 3. Workshop on Turnitin conducted by Senior Assistant Librarian Gr. I, University of Colombo held on 12.10.2021 (via Online)
6	Ms.S.A.P.Nelka	Course Coordinator	Training programme for Student Counsellors 2021/2022 conducted by Student Counsellor Unit, University of Colombo held on 7/6/2021, 14/06/2021, 21/06/2021, 28/06/2021, 05/07/2021, 08/07/2021, 15/07/2021 (via Online)
7	Ms.S.L.Nawarathna	Course Coordinator	1. Training programme on How to train your faculty instructors using Turnitin: with real class experience conducted by the Library, University of Colombo held on 02.06.2021 (via online) 2. Seminar on Creating Interactive learning content using H5P conducted by Blended Learning Committee/University of Colombo held on 19.01.2021 (via online) 3. Seminar on Regenerative Organic Farming for Economy of Permanence and Prosperity for All conducted by National Institute of Plantation Management, Sri Lanka held on 07.06.2021 (via online) 4. Seminar on How to prepare an effective research proposal to a studentship/scholarship for higher studies abroad? Conducted by National Science Foundation, Sri Lanka held on 12.08.2021 (via online) 5. Seminar on Near Infrared Spectroscopy Applied to Solid Organic Waste: How to Avoid Water Effects conducted by Aquaphotomics Research Department, Graduate School of Agricultural Sciences, Kobe University, Japan held on 15.12.2021 (via online)
8	Mr.B.P.Siriwardena	Course Coordinator	AMP Induction 2021 program for early career Academics of University of Colombo conducted by Academic mentoring program, Faculty of Medicine, University of Colombo held on 02.07.2021 (via zoom)

Table 23 : Postgraduate courses involved by Academic Staff

S.N.	Name of the Employee	Designation	Postgraduate Course
1	Mr.B.S.Bandusekara	Lecturer (Probationary)	Ph.D. (Reading) at PGIA, Post Graduate Institute of Agriculture, University of Peradeniya (2018-2023)
2	Ms.U. R. Chandimala	Lecturer (Probationary)	M.Sc. in Food Science and Technology at Post Graduate Institute of Agriculture, University of Peradeniya (2018.09.29-2021.11.11)

3	Mr.A.J.M.C.M. Siriwardana	Lecturer (Probationary)	M.Phil. in Crop Science at Department of Crop Science Faculty of Agriculture, Faculty of Graduate Studies - University of Ruhuna (30.11.2021)
4	Mr.L.M.Rifnas	Lecturer (Probationary)	M.Phil. (Reading) at University of Colombo (2019-2022)
5	Ms.K.G. Ketipearachchi	Lecturer (Probationary)	M.Phil. in Plant Science (Reading) at Department of Plant Science, Faculty of Science, University of Colombo (2020-2022)
6.	Ms.S.A.P.Nelka	Course Coordinator	M.Phil. (Reading) at University of Colombo (2019-2022)

Table 24 :Non-Academic Staff completed courses and attended training programmes

S.N.	Name of the Employee	Designation	Programme
1	Ms.S.A.S.Priyadarshani	Senior Assistant Registrar	Completed a Certificate Course in Human Resource Management conducted by Miloda Academy of Financial Studies, Ministry of Finance held from 03.11.2021 to 01.12 2021 (via online)
2.	Ms.R.A.M.Dilhari	Laboratory Attendant	Training programme on Personal File Management conducted by Miloda Academy of Financial Studies, Ministry of Finance from 26.10.2021 to 28.10.2021 (via online)

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 2017		
01	Building Complex for Tissue Culture Laboratories	Project Cost Rs.150 Million (with VAT) Contractor : KSJ Construction (Pvt) Ltd Physical Progress : 100% Financial Progress : 94%
Projects commenced in 2019		
02	Construction of Engineering Workshop	Project Cost Rs.7.89 Million (with VAT) Contractor : Wijesinghe Construction Physical Progress : 100% Financial Progress : 73%

03	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 : 62%
04	Construction of Goat shed	Project Cost Rs.5.45 Million (with VAT) Contractor : Chandana Enterprises Physical Progress : 100% Financial Progress : 63%

Infrastructure Developments of the Institute during the year 2021

- **Development of a model farm**

A jungle covered over 40 acres of land was developed as a farmland with the contribution of all staff members at the Institute. The farm comprised of fruits, vegetables, medicinal plants, field crops, industrial crops, livestock, and inland fisheries. This 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 most importantly, it generates an income to the Institute. The entire responsibility of the farm is shouldered by Mr.T.G.B Dhanushka, Course Coordinator/Acting Farm Manager of the institute having, energetic and determined personality.

- **Establishment of a Technology Transfer Center (TECTRACE)**

Established a unit 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. The establishment procedure of the unit was following the bylaws of the institute and comply with the regulations of the University of Colombo. The activities undertaken by the TECTRACE in 2021 were:

1. Compiled of practically applicable technologies in diverse agriculture related areas as a booklet and released them in both Sinhala and Tamil languages for the benefit of the farmers.
2. Announced two certificate courses on “Organic farming” and “Edible mushroom production” comprised of 20 hours theory and 30 hours practical for participant having minimum of SLQF 1 qualifications.
3. Production of ecofriendly pesticides, rich organic manure, liquid fertilizer, and introduction of ecofriendly agronomic practices for paddy, field crops, vegetables and fruit crops.
4. Displaying wall papers and take-home messages, to convey the critically important ideas to students at the institute.
5. Assisting small scale entrepreneurs to produce value added product of “Rasam” using freely available fruit of Tamarind.
6. A volunteer advisory service was started to address the problems for farmers via e-mail, over the phone, social media and direct contact.
7. Initiated a programme to produce herbal sanitizer, based on *Aloe vera* with the objective of fulfilling the sanitizer requirement within the University of Colombo.

8. Launched a Private Public Partnership Programme by signing a MOU with Multilac Pvt Ltd to produce liquid fertilizer " Jeevamurtham" as a replacement for chemical fertilizer.
9. Contributed for a national webinar organized by "Oxfam" on "Eco friendly techniques in Export Agriculture Crops Production in Sri Lanka" to aware field level officers in the Department of Export Agriculture and growers in Kegalle and Jaffna districts.
10. Conducted a National Webinar on "Bio food wrappers with banana leaves" in connection with the Small Entrepreneur Department, District Secretariat, Matara.

- **Easy access for money – Installment of an Automated Teller Machine of Peoples Bank**

UCIARS is nearly about 12 km away from the nearby city and students must go there with a great difficulty for making transactions with Banks. As a solution the institute initiated to install a Teller Machine of the Peoples Bank to provide the easy access in transactions for students. Prof.S Sutharsan, Director/UCIARS, Mr.K.Sunil, Assistant Bursar (on assignment)/UCIARS and Ms. S.A.S.Priyadarshani, Senior Assistant Registrar/UCIARS led this activity and it was eventually accomplished amongst several impediments. This would be a better facility not only for the university community but also for the villages and pilgrims who visit the centuries passing across the institute.

6. FINANCE

6.1 Financial Progress

Table 26 : Details of Recurrent Expenditure

Subject	2021 (Rs)	2020 (Rs)
Personal emoluments	75,582,791.25	57,874,671.83
Travelling	86,466.12	1,098,988.84
Supplies	3,818,709.02	4,308,735.62
Maintenance	1,353,142.92	1,169,112.00
Contractual Services	18,677,394.67	20,348,281.24
Other	8,911,868.15	5,447,118.43
Total	**108,430,372.13**	**90,246,907.96**

Table 27 : Details of Capital Expenditure

Subject	2021 (Rs.)	2020 (Rs.)
Acquisition and Improvements of Buildings & Structures	38,563,126.37	59,908,525.91
Rehabilitation of Building & Structures	46,136,943.00	1,121,464.40
Vehicles	4,899,999.00	-
Lab and Teaching	120,670.00	1,879,200.00
Plant Machinery & Equipment	1,011,270.00	5,256,165.45

Fixtures & Fittings	-	173,995.00
Furniture & Office Equipment	-	-
Hostel Project	-	-
House Hold Equipment's	595,578.00	267,929.08
Office Equipment's	803,520.00	293,240.50
Furniture & Fittings	236,115.00	13,874,133.95
Software	695,000.00	-
Sport Goods	-	-
Books	-	-
Land Initial Cost	-	47,836,210.92
Work In Progress	-	23,302,214.45
Musical Instruments	-	-
Total	**93,062,221.37**	**153,913,079.66**

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

Name	TCE Rs.	Exp in 2021 Rs.	Cumulative Exp. as at 31.12.2021	% of Physical Progress (2021)
Projects commenced in 2017				
Building Complex for Tissue Culture Laboratories	150,000,000.00	11,390,407.00	140,746,549.44	100%
Sub Total	**150,000,000.00**	**11,390,407.00**	**140,746,549.44**	
Projects commenced in 2019				
Construction of Engineering Workshop	7,891,359.00	1,822,503.07	5,681,718.70	100%
Supply, installation and commissioning of outdoor lighting system	9,995,800.00	2,000,000.00	6,096,192.50	100%
Construction of Goat shed	5,454,840.51	1,745,007.55	2,907,232.60	100%
Sub Total	**23,341,999.51**	**5,567,510.62**	**14,685,143.80**	
Grand Total	**173,341,999.51**	**16,957,917.62**	**155,431,693.24**	

Table 29 : Details of Financial Progress (Generated Income)

Source of Revenue	Provision in 2021 Rs.	Collecting in 2021 Rs.	(Deficit)/Surplus Rs.
Certificate Courses-IARS	18,706,000.00	41,077,942.00	22,371,942.00
Sales in Tissue Culture Banana Plants	10,775,000.00	5,892,590.00	(4,882,410)

Other Income	441,000.00	5,180,956.00	4,739,956.00
Total	**29,922,000.00**	**52,151,488.00**	**22,229,488.00**

Table 30 : Financial Performance Analysis

Subject	Formula	Exp.per Student(Rs) 2021	Exp.per Student(Rs) 2020	Exp.per Student(Rs) 2019	Exp.per Student (Rs) 2018
Recurrent Expenditure per Student (RE)	RE/No of Student strength	115,474.30	156,174.10	125,517.26	243,798.41
Capital Expenditure per Student (CE)	CE/No of Student strength	99,107.79	233,948.07	214,065.48	113,867.42
Total		**214,582.09**	**390,122.17**	**339,582.74**	**357,665.83**

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 diverse ornamental plant species for commercial cultivations and popularize via students learning at this institute and through interested floriculturists.

Hence, the research team started the project to release following innovations as commercialized research products.

1. Improves saman pichcha (*Jasminum officinale*) accessions
2. *Catheranthus roseus* (Vinca rosea) flowers with diverse colors and multi whirl of petals
3. Rukkaththana, Allamanda cathertica flowers with diverse colors and multi whirls of petals
4. Improved accessions of Etteria, *Murraya paniculata* plant
5. Improvement of Vesak orchid varieties with different colors and variation in petals
6. Protocol develop for individual flower species

Due to the difficulties of finding Vesak orchid plants, it replaced with *Acalipa histida* Cat's tail Plant and additionally Sunflower and Heen bovitiya species also selected.

Duration of the project : 3 Years

Purpose/objectives of the project :

1. Development of attractive accessions of unattended but important flower species through selection, hybridization and mutational breeding.
2. Popularization and commercialization of developed accessions in partnerships with well

established entrepreneurs.

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

Renovation works done :

1. Renovations of shade net house
2. Renovation of Bio-Technology Laboratory
3. Signed Memorandum of Understanding(MOU) on **"Improvement of aesthetic values of indigenous ornamental plants through Bio- technology" between University of Colombo and (A) Canal Corner Flower Gardens and (B) Charles Roses Plant Nursery on 12th October 2021**

Table 31 : Grants (~~Local~~/Foreign Funded) - 2021

Grant Name	TCE (Total Cost Estimate)	Exp in 2021	Cumulative Exp. as at 31.12.2021	% of Physical Progress (2021)
AHEAD/ICE grant	40 Mn	3.7 Mn	30 Mn	70

Table 32 : Purchased equipment/renovation works done

S.No.	Description of theArticles	Inventory Folio No	Verified Balance Quantity
01	Desktop Computers HP	1	03
02	DNA/RNA Quantifier	2	02
03	PCR Machine	3	02
04	Laboratory Shaker	4	02
05	Gel Electrophoresis Unit	5	02
06	Gel Documentation Unit	6	01
07	UV Cross Linker	7	01
08	Liquid Nitrogen Tank	8	01
09	Refrigerated Centrifuge	9	01
10	Spectrophotometer	10	01
11	Water bath	11	02
12	Light Microscope	12	04
13	Sterilization Boxes	13	05
14	Trinocular Microscopewith LCD Monitor and Digital Camera	14	01
15	Milli Q water purification unit	15	01
16	Microfuge	16	01
17	Distillation Unit	17	01
18	Incubator	18	02
19	Dry oven	19	02
20	Air Conditioner	20	03
21	Hand held GPS	21	01
22	Micro Pipettes	22	12
23	Laminar Flow	23	03
24	Hybridization oven	24	01

25	Autoclave	25	03
26	Motor and Pestles	26	10
27	-80˚C Refrigerator	27	01
28	Fume Hoods	28	02
29	Multipurpose Photocopy Machine with Printer	29	01
30	Black and white Printer	30	01
31	-20˚C Freezer	31	01
32	Analytical Balance	32	02
33	Refrigerator	33	01
34	Knapsack sprayer	34	01
35	Bush cutter	35	05
36	UPS	36	02
37	Microwave Oven	37	01

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 2021 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 2021 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 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. The blood meal has been introduced as a substitute for the costly fish meal available in the market. The animal wastes of blood have incorporated into the new invention of protein rich meal for inland fish Thilapia (*Oreochromis niloticus*) and it successfully improve the growth of fingerlings.

10. As a substitute for synthetic containers and media with coir dust an aggressive aquatic weed has been fabricated in to eco-friendly containers. They are light in weight and ideal for vertical farming in restricted space common in urban areas. This absorbs water and expand as an elongated structure.

11. Red Pumpkin is a vegetable having a marketing glut causes a massive post-harvest loss. As a solution a biscuit has been produced using Red Pumpkin which is nutritive, naturally coloured and sweet in taste.

12. Using an underutilized fruit of Egg fruit a nutritive jam has been produced as a value added product by UCIARS which is having a natural egg yellow colour came from the Egg fruits.

13. To meet the demand for planting materials in both these crops of Aloe Vera and turmeric, invitro propagation was initiated and presently plants are successfully producing on commercial scales by generating an income to the Institute.

14. 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.

15. 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.

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

FINAL ACCOUNT

2021

University of Colombo Institute for Agro Technology and Rural Sciences

Statement Of Financial Position
As at December 31, 2021

		2021 Rs.	2020 Rs.
ASSETS			
CURRENT ASSETS			
Bank Balances	**Note 01**	1,973,732	16,548,694
Inventory	**Note 02**	7,247,711	5,142,979
Interest Receivable	**Note 03**	281,494	82,360
Receivable - Loans	**Note 04**	1,987,271	1,463,081
Prepayment Ac	**Note 05**	159,822	643,852
Advance A/C		-	26,000
Live stock		265,600	-
Other current assets		75,000	75,000
		11,990,629	23,981,965
NON CURRENT ASSETS			
Property Plant And Equipment	**Note 06**	523,810,609	470,749,416
Live stock		4,421,000	306,300
Deferred Expenditure	**Note 07**	1,356,784	1,883,437
Deposit for Transformer		500,000	500,000
Work in Progress		-	51,743,291
Investments	**Note 08**	21,299,950	300,000
		551,388,343	525,482,444
TOTAL ASSETS		563,378,971	549,464,409
LIABILITIES			
CURRENT LIABILITIES			
Accrued Expeses	**Note 09**	12,716,835	7,335,518
Other Current Liabilities		64,271	22,394
		12,781,107	7,357,912
NON CURRENT LIABILITIES			
Non Current Liabilities	**Note 10**	18,868,082	12,481,668
		18,868,082	12,481,668
TOTAL LIABILITIES		31,649,189	19,839,580
NET ASSETS/EQUITY		531,729,782	529,624,829
Accumulated Funds			
Capital Grant Spent		234,705,740	223,926,232
Capital Grant Unspent		-	870,576
IT Grant		-	3,160,390
Other Grant Spent		95,145,445	94,229,423
Other Grant Unspent		685,468	916,022
Accumulated Reserves		22,542,960	15,072,294
Other Reserves		9,858,571	416,000
Special Grant Spent		168,791,599	191,033,892
TOTAL NET ASSETS/ EQUITY		531,729,782	529,624,829

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

Dr N P Vidanapathirana
Director(UCIARS)
For and on behalf of the Board of Management

Acting Director
Institute for Agro Technology & Rural Sciences
University of Colombo
Weligatta-Hambantota

University of Colombo Institute for Agro Technology and Rural Sciences

Statement Of Financial Performance

For the period ended December 31, 2021

		2021 Rs.	2020 Rs.
Revenue		5,892,590	8,964,380
Cost of sales	**Note 11**	(16,925,243)	(20,503,926)
Gross Profit		(11,032,653)	(11,539,546)
Government Grant - Recurrent		78,170,000	73,650,000
Generated Income	**Note 12**	46,258,898	30,058,381
Interest Income	**Note 13**	388,461	33,586
Amortization		37,333,360	33,761,155
Gain on revaluation of Live stock		2,885,800	-
		154,003,866	**125,963,577**
EXPENDITURE			
Personal Emoluments	**Note 14**	(63,666,739)	(50,035,020)
Travelling	**Note 15**	(86,466)	(89,999)
Supplies	**Note 16**	(3,818,709)	(3,254,044)
Maintenance Expenditure	**Note 17**	(1,353,143)	(747,103)
Contractual Services	**Note 18**	(18,677,395)	(19,535,428)
Other Recurrent Expenses	**Note 19**	(8,911,868)	(5,866,266)
Human Capital Development	**Note 20**	-	(82,250)
Gratuity		(2,624,621)	4,061,321
Write Off Amount Of Defferd Expenditure		(526,653)	(526,653)
Depreciation		(38,784,378)	(32,914,139)
Amortization - Software		(84,500)	-
		(138,534,472)	**(108,989,582)**
Surplus/ (Deficit)for the year		**15,469,394**	**16,973,994**

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

Assistant Bursar
Institute for Agro - Technology & Rural Sciences
University of Colombo
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For and on behalf of the Board of Management

Acting Director
Institute for Agro-Technology & Rural Sciences
University of Colombo
Weligatta-Hambantota

Plants production unit
For the period ended December 31
Manufacturing cost calculation 2021

Rs. For the period ended December 31	Notes	Total		Rs. Banana		Rs. Aloe Vera
Cost of Raw materials		1,447,106		1,387,090		60,016
Other Direct cost - Direct labour		11,916,052		11,728,552		187,500
Prime Cost		13,363,157		13,115,642		247,516
Closing Work In Progress (10183/10081)		103,016		68,970.08		34,045
Closing Work In Progress		(170,949)		(170,949.37)		-
Total Prime Cost		13,295,224		13,013,663		281,561
Indirect / Overhead cost		3,498,601		3,260,282		238,319
Total Cost of Production		**16,793,824**		**16,273,944**		**519,880**
SALES		5,892,590		5,867,240		25,350
Cost of Sales						
Plants as at 01.01.2021 1703 unit cost of Rs. 149.68 and 8905 at 147.62		**1,560,553**	1,703	**254,902**	**8,905**	**1,305,651**
Add: Cost Of Production	99,114	16,793,824		16,273,944		519,880
	7,245	18,354,378		16,528,846		1,825,531
Plants as at 31.12.2021 unit cost of Rs.		(1,429,135)	15,729	(1,262,260.00)	**6,675**	(166,875)
Total cost of production		16,925,243		15,266,586		1,658,656
Profit / Loss		**(11,032,653)**		**(9,399,346)**		**(1,633,306)**

University of Colombo Institute for Agro Technology and Rural Sciences
Statement of Changes In Equity
As at December 31, 2021

Rs. For the year ended December 31, 2021	Capital grant spent	Capital grant unspent	IT grant	Other grant spent	Other grant Unspent	Accumulated Surplus	Special grant	Other Reserves	Total
Balance as at 01.01.2021	223,926,232	870,576	3,160,390	94,229,423	916,022	15,072,294	191,033,892		529,208,829
Amortization - correction	11,121,146						(11,121,146)		-
Opening corrections	870,576	(870,576)	(3,160,390)			(7,998,728.53)		4,578,725	(6,580,394)
Restated Balance	235,917,954	-	-	94,229,423	916,022	7,073,566	179,912,745	4,578,725	522,628,435
Changes in Equity for Year 2021									
Deficit/Surplus For the period									-
Capital grant received during the year		25,000,000			685,468	15,469,394			41,154,862
Capital expenditure during the year	25,000,000	(25,000,000)		916,022	(916,022)				-
Gratuity Acturia gain / loss								1,915,792	1,915,792
Amortization	(26,212,214)						(11,121,146)		(37,333,360)
Live stock revaluation									-
PPE revaluation								3,364,054	3,364,054
31.12.2021 Balance carried forward	**234,705,740**	-	-	**95,145,445**	**685,468**	**22,542,960**	**168,791,599**	**9,858,571**	**531,729,782**

University of Colombo Institute for Agro Technology and Rural Sciences
Statement of Cash Flows
For the year ended December 31, 2021

	2021 Rs.	2020 Rs.
Surplus/(Deficit) for the year	15,469,394	16,973,994
Adjustments for items not involving movement of Funds		
Prior year adjustments		36,013
Depreciation for the year	39,717,793	32,914,139
Write Off Amount of Deffered expenditure	526,653	526,653
Genetic grant		-
Amortization	(37,333,360)	(33,761,155)
Interest Income	(388,461)	(33,586)
Loss on disposal		-
Provision for Gratuity	2,624,621	(4,061,321)
Live stock valuation	(2,885,800)	-
Other comprehensive reserves		(4,162,725)
		130,000
Net Operating cash flow before working capital changes	**17,730,839**	**8,562,012**
Working capital payments		
Increase/Decrease in Inventories	(2,104,732)	7,272,465
Increase/Decrease in Receivables	13,960	65,140
Increase/Decrease in Loan Receivable	(524,190)	775,318
Increase/Decrease in Prepayment	484,030	(388,433)
Increase/Decrease in Advance Account	26,000	(26,000)
Increase/Decrease in Other current assets	-	-
Increase/Decrease in Accrued expenses	3,399,990	(1,533,066)
Increase/Decrease in Other current Liabilities	41,878	5,980
Net operating cash flow after working capital changes	**19,067,775**	**14,733,416**
Gratuity payments		
Net operating cash flows	**19,067,775**	**14,733,416**
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of Fixed Assets	(36,336,989)	(31,099,922)
Increase/Decrease of Live stocks	(1,364,500)	(213,000)
Disposal receipts of fixed assets		-
Increase/Decrease of Deffered Expenditure	-	-
Increase/Decrease Working Progress	-	(8,888,283)
Increase/Decrease investments	(20,999,950)	(300,000)
Interest Income For The Year	175,367	33,586
Net cash flow from Investing activities	**(58,526,071)**	**(40,467,618)**
CASH FLOWS FROM FINANCING ACTIVITIES		
Gratuity Payments	-	(260,418)
Increase of Borrowings	-	-
Decrease of borrowings	(116,666)	(600,000)
Government Grants and other funds for Capital Expenditure	25,000,000	39,123,208
Net cash flow from Financing activities	**24,883,334**	**38,262,790**
NET INCREASE IN CASH EQUIVALENTS	**(14,574,962)**	**12,528,588**
Cash & cash equivalents at the beginning of the period	**16,548,694**	**4,020,106**
Cash & cash equivalents at the end of the period	**1,973,731**	**16,548,694**

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 31/12/2021.

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.

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.

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.
For the year 2021 internal valuation committee was appointed to cover the delay of the government valuation department and revaluation figures are stated based on the revaluation committee reports.

Stocks
Stock of Raw Materials and consumables, Stock of Work in Progress, Stock of Tissue Culture Banana Plats as at 31.12.2021 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.

1.3.2 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	-	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	-	10 Years
• Furniture & Fittings	-	10 Years
• Plant Machinery And Equipment's	-	10 Years
• Books	-	10 years
• Sports Goods	-	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.

1.3.3 Amortization

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

1.3.4 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.

1.3.5 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 is calculated by the Institute following the 19 Public Sector Accounting Standards of Sri Lanka.

c) And from the year 2021 onwards Actuarial valuation will be done by a professional actuarial organization. Disclosures for the year 2021 is as follows. And we restate balance for 2020.12.31 and has been recognize in the Changes in equity.

Change in the Present Value of The Difined Benefit Obligation (PV-DBO)

Provision for PV-DBO as at 01 January 2021	=	13,074,250
Interest Cost for the period	=	1,045,940
Current Service Cost for the period	=	1,578,681
Gratuity paid/payable for those who left during the period	=	-
Actuarial (Gain)/Loss on PV-DBO	=	(1,915,792)
Provision for PV-DBO as at 31 December 2021	=	13,783,079

AMOUNTS RECOGNIZED IN THE BALANCE SHEET AND INCOME STATEMENT

Liability recognised in the balance sheet

Provision for Gratuity as at 31 December 2021	=	13,783,079
Unrecognized actuarial Gains/(Losses) as at 31 December 2021	=	-
Liability recognized in the balance sheet as at 31 December 2021	=	13,783,079

Expenses recognised in the income statement

Interest Cost	=	1,045,940
Current Service Cost	=	1,578,681
Net Actuarial (Gain)/Loss recognized immediately	=	(1,915,792)
Expences recognized in the Income Statement	=	708,829

Movements in the Net Liability Recognised in the balance sheet

Opening Net Liability as at 01 January 2021	=	13,074,250
Expences recognized in the Income Statement	=	708,829
Gratuity paid/payable for those who left during the period	=	-
Closing Net Liability as at 31 December 2021	=	13,783,079

1.4 Income and Expenditure

1.4.1 Government Grant and other grants

The total capital grant received for the year was Rs.25Mn. The Recurrent Grants that have been used for the operational activities for the year was Rs.74.17Mn and have been recognized as revenue in the Income Statement.

Other Grants received during the year from AHED Project values to Rs. Rs. 685,468.

1.4.2 Revenue Recognition

(a) Government Grants (Recurrent)

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

(b) Course Fees

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.

(c) Investment Income

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

1.5 Receivables

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

1.6 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 and goat milk production. So livestock consists with 10 number of cattles, 14 number of pigs,25 number of goats and 415 of layer birds. 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 as at 31.12.2021

1.7 Cash and Cash Equivalents

Cash and Cash equivalents comprise bank balances.

1.8 Current Assets

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

1.9 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.

1.10 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 - 2021

Note - 01
Bank Balances

	2021 Rs.	2020 Rs.
Current Accounts		
BOC Bank - (Plant Sale Collection)/87319817	632,796	-
Peoples Bank - (Plant Sale Collection)/007100146432005	-	2,159,769
Peoples Bank - (Cetificate Course Collection)/007100130005888	282,320	10,452,006
Peoples Bank - (Government Grant (Capital) Collection and Disbursement)/007100120005006	881,141	1,605,480
Peoples Bank - (Farmers Trust Fund Collection)/007100130012515	12,495	14,795
Peoples Bank - (Personal Emolument Remmitance)/007100326432005	-	1,206,835
Peoples Bank - (Disburesement Account (Recurrent)/007100236432005	164,980	1,109,808
	1,973,732	**16,548,694**

Note - 02
Inventory

	2021 Rs.	2020 Rs.
Stock - Coir Pellets	3,283	157,846
Work In Progress - Banana plants	136,904	68,970
Finished Goods - Banana Plants	1,262,260	254,902
Aloevera	166,875	1,305,651.00
Harvest - Sales center	6,550	30,940
Stationery	1,186,291	1,403,790
Chemical	924,315	543,466
Electrical & Hardware	1,110,603	973,430
Consumables & Glassware	2,450,631	1,203,339
	7,247,711	**5,142,979**

Note - 03
Interest Receivable

	2021 Rs.	2020 Rs.
Interest receivable - Repo	1,753	-
Farmers Trust Fund	68,400	82,360
3 months investment interest	192,231	
Fixed deposit interest	19,110	
	281,494	**82,360**

Note - 04
Receivable - Loans

	2021 Rs.	2020 Rs.
Farmers Trust Fund Loan	634,820	737,920
Distress Loan	1,352,451	725,161
	1,987,271	**1,463,081**

Note - 05
Prepayments

	2021 Rs.	2020 Rs.
Insurance	40,338	-
Other Contractual services	119,484	643,852
	159,822	**643,852**

Note - 06
Property Plant & Equipment

Table I

Rs.	Electrical Equipments	Hostel Project	Building & Structures	Building & Structures Rehabilitation	Vehicles	Lab and Teaching Equipment	Plant Machinery & Equipment	Musical Instruments	Total
Cost / Valuation									
Balance as at January 01, 2021	311,816	222,422,928	266,161,794	10,595,700	6,176,271	11,636,344	11,494,587	373,925	529,173,365
Adjusted Opening Balance			(4,156,366)	(31,886)			25		(4,188,227)
	311,816	222,422,928	262,005,428	10,563,814	6,176,271	11,636,344	11,494,612	373,925	524,985,137
Additions/Improvements			38,563,126.37	46,136,943	4,899,999	120,670	1,011,270		90,732,008
Revaluation						2,736,727	(1,229,364)		1,507,363
Capital Grant									-
Other Grant									-
Remove				(212,574)					(212,574)
As at December 31, 2021	311,816	222,422,928	300,568,554	56,488,183	11,076,270	14,493,742	11,276,518	373,925	617,011,935
									-
Accumulated Depreciation									-
Rate of Depreciation	20%	5%	5%	5%	20%	20%	10%	10%	95%
Balance as at January 01, 2021	165,520.21	67,023,450.40	30,095,571.01	1,352,112.94	2,573,128.27	8,087,036.93	3,579,437.89	83,284.12	112,959,541.76
Adjusted Opening Balance			(207,818)	(1,594)	(47,925)				(257,337.62)
	165,520	67,023,450	29,887,753	1,350,519	2,525,203	8,087,037	3,579,438	83,284	112,702,204
									-
Remove									-
Depreciation for the Year	45,590	11,121,146	15,028,428	2,824,409	1,469,448	1,678,455	1,196,188	37,393	33,401,056.75
As at December 31, 2021	211,110	78,144,597	44,916,180	4,174,928	3,994,651	9,765,492	4,775,625	120,677	146,103,260.89
									-
Net book value as at December 31, 2021	100,706	144,278,331	255,652,374	52,313,255	7,081,618	4,728,249	6,500,892	253,248	470,908,674

Note - 06
Property Plant and Equipment

Table II

Rs.	House Hold Equipments	Office 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, 2021	1,262,029	14,727,157	37,409,870	223,200	643,498		22,394,006	76,659,760	529,173,365	605,833,125
Adjusted Opening Balance			500,000					500,000	(4,188,227)	(3,688,227)
	1,262,029	14,727,157	37,909,870	223,200	643,498	-	22,394,006	77,159,760	524,985,137	602,144,897
								-	-	-
Additions/Improvements	595,578	803,520	236,115			695,000		2,330,213	90,732,008	93,062,221
Revaluation	(81,192)	4,626,603.83	(2,688,722)					1,856,691	1,507,363	3,364,054
Capital Grant								-	-	-
Other Grant								-	-	-
Remove			(9,100)	(1,200)				(10,300)	(212,574)	(222,874)
As at December 31, 2021	1,776,415	20,157,281	35,448,164	222,000	643,498	695,000	22,394,006	81,336,364	617,011,935	698,348,299
								-	-	-
Accumulated Depreciation								-	-	-
Rate of Depreciation	10%	10%,20%	10%	10%	10%	20%		60%	95%	
Balance as at January 01, 2021	432,792.00	9,818,211.00	11,522,723	67,862.00	282,579.00		-	22,124,167.00	112,959,541.76	135,083,709
Adjusted Opening Balance			(5,394)	(1,080.00)				(6,474.16)	(257,337.62)	(263,812)
	432,792.00	9,818,211.00	11,517,328.84	66,782.00	282,579.00	-	-	22,117,692.84	112,702,204.14	134,819,896.98
								-	-	-
Remove								-	-	-
Depreciation for the Year	171,385	2,205,094	3,769,207	22,200	64,350	84,500		6,316,736	33,401,056.75	39,717,792
As at December 31, 2021	604,177	12,023,305	15,286,536	88,982	346,929	84,500	-	28,434,429	146,103,261	174,537,689
								-	-	-
Net book value December 31, 2021	1,172,238	8,133,976	20,161,628	133,018	296,569	610,500	22,394,006	52,901,935	470,908,674	523,810,609

Note - 07
Deffered Expenditure

	2021 Rs.	2020 Rs.
Transformer - Ceylon Electricity Board	519,720	779,580
Electrical Equipments	837,064	1,103,857
	1,356,784	**1,883,437**

Note - 08
Investments

	Value Rs.
Opening Balance	300,000
Add : Treasury Bill investments	4,999,950
Add : Repo investments	16,000,000
Closing balance	**21,299,950**

Note - 09
Accrued Expences

	2021 Rs.	2020 Rs.
Electricity	281,468	319,761
Water	47,822	15,422
Internet Service	592,185	197,901
EPF	74,709	70,105
ETF	-	103,010
Domestic Travelling	6,250	3,986
Fuel Allocation	17,175	-
Telephone	27,979	-
UPF	799,011	-
Over Time	72,319	81,084
Hiring/Transport	62,890	5,550
Plant & Machinery (Main)	73,441	3,100
Examination fee	273,270	175,980
Consultancy fee	123,551	-
Other Contractual Services	102,831	112,003
Visiting Lectures Fee	111,000	-
Workshop & Seminars	-	28,000
Janitorial Service	844,483	486,500
Printing & Advertising	-	172,245
Security Service	371,963	1,443,809
Trainess Allowance VTA	19,500	-
Expenditure on Degree progarm	69,530	-
Consumable Stock Stationery	22,500	2,916
Consumable Stock Consumable & Glassware	209,832	25,090
Translation	6,063	-
Consumable Stock Electric & Hardware Items	114,317	90,650
Animal Husbudry	285,696	171,550
Farm Development-Banana	53,825	-
Farm & Irrigation expenses	145,825	-
Other RE	34,150	534,000
Functions Inaguration	8,400	-
Special Services	73,000	42,000
Vehicle	131,630	3,300
License & Insurance Charges	847	-
Field Visit	2,000	-
Photocopies, Air Conditioners & Lift	7,000	-
Auditor fee	672,000	
Postage	1,830	-
Consumable & Glassware expenses	6,445	-
EX on plant sale	1,488	-
Mushroom Project	1,400	
Maintain lab	680	-
Pension	242,598	-
EDCS	910	-
Fuel Allowance - Other	1,886	-
Improvement of Infrastructure	4,090,596	-
Building & Structure	2,571,290	-
Software	59,250	-
Other Capital	-	3,247,557
	12,716,835	7,335,518

Note - 10
Non Current Liabilities

	2021 Rs.	2020 Rs.
Farmers Trust fund	75,003	191,669
Provision for gratuity	13,783,079	7,279,999
Refundable Deposit	10,000	10,000
Repayable - Grant from UOC	5,000,000	5,000,000
	18,868,082	12,481,668

Note 11
Notes to the Cost calculation

Direct cost

Cost of Raw materials

Description	2021 Chemicals	2021 Coir pellets	2020 Chemicals	2020 Coir pellets
	1,447,106		**1,141,812**	
Opening stock	210,671.24	157,846.00	193,914.55	114,393.50
Issues to Lab and Nursery	549,907.80	657,800.00	396,021.10	806,000.00
Closing stock	(125,836.82)	(3,282.50)	(210,671.24)	(157,846.00)
Cost of raw materials for production	**634,742.22**	**812,363.50**	**379,264.41**	**762,547.50**

Production Personnel Emoluments

	2021	2020
Salary	10,261,454	10,325,002
UPF	712,665	721,058
Pension	666,166	666,577
ETF	275,766	277,527
	11,916,052	**11,990,164**

Indirect expenses / Other overhead

Description	2021	2020
Telephone - 5%	14,222	14,420
Water - 40%	469,487	493,575
Electricity - 30%	1,067,599	1,225,993
Maintaince Expenses	87,754	84,417
Hardware and consumable items	936,351	777,797
Depreciation for Lab equipment	848,914	847,016
Other indirect expenses	74,274	940,665
	3,498,601	**4,383,883**

Note - 12
Generated Income

	2021 Rs.	2020 Rs.
Certificate Course - IARS	41,077,942	26,596,625
Other Income	811,119	445,797
Plant sale other	3,337,294	2,389,686
Tender Fee	-	32,000
Hostel Fee	1,032,543	594,273
	46,258,898	**30,058,381**

Note - 13
Interest Income

	2021 Rs.	2020 Rs.
Distress Loan Interest	69,137	33,227
Interest in REPO	108,344	-
Interest income - other	210,981	-
	388,461	**33,227**

Note - 14
Personal Emoluments

	2021 Rs.	2020 Rs.
Salaries & Wages	55,629,177	43,534,889
E.P.F	778,690	514,667
UPF	3,440,584	2,672,535
Pension	1,998,899	1,526,164
E.T.F.	1,214,086	968,406
Extra Working Day Payments	37,314	32,792
Over Time	567,989	785,567
	63,666,739	**50,035,020**

Note - 15
Travelling

	2021 Rs.	2020 Rs.
Foriegn	-	-
Domestic	86,466	89,999
	86,466	**89,999**

Note - 16
Supplies

	2021 Rs.	2020 Rs.
Mechanical and Electrical Goods	261,390	679,662
Stationery & Office Requisites	1,130,166	648,796
Medical Suplies	-	10,461
Uniform	480,296	-
Fuel and Lubricant	1,202,685	659,832
Consumable and Glassware	416,421	1,064,663
Other	305,575	-
Chemical	22,175	190,630
	3,818,709	**3,254,044**

Note - 17

Maintenance Expenditure	**2021 Rs.**	**2020 Rs.**
Plant, Machinery Equipment	520,304	239,716
Vehicles	565,956	318,960
Buildings & Structures	139,510	120,112
Electrical equipment	-	19,270
Other	127,373	49,045
	1,353,143	**747,103**

Note - 18

Contractual Services	**2021 Rs.**	**2020 Rs.**
Transport	1,110,845	410,613
Postal & Telecommunication	3,801,121	2,561,865
Electicity	2,491,063	2,860,651
Water	704,230	740,363
Security Service	3,768,350	5,658,899
Cleaning Service	5,051,523	5,780,975
Other Contractual Services	737,541	648,413
Printing, Advertising etc.	1,012,722	873,650
	18,677,395	**19,535,428**

Note - 19

Other Recurrent Expenditure	**2021 Rs.**	**2020 Rs.**
Visiting Lecturers Fee	790,500	1,635,825
Special Services - Board Meeting & Committees	845,400	378,000
Workshops and Seminars	25,000	28,000
Bank Charges	166,700	2,450
Expenditure on Certifictre Courses UCIARS	444,269	126,855
Entertainment Expenditure	53,088	63,281
Staff Development	-	18,105
Proffesional Fee	540,939	261,435
Farm & Irrigation Expenses	1,242,762	369,871
Examination Expenditure	526,586	481,864
Animal Husbandry	1,852,687	1,394,431
Interest on Loans		12,000
ETF Surcharge	847	-
Expenses born on International Symposium	-	4,925
Other	398,230	618,651
Write off Deffered Expenditure		-
Loss on Disposal	3,826	-
Research of Termaric Finger	42,550	80,000
Mushroom production expences	-	6,250
Sympossium Expenditure	87,954	47,823
Trainee Allowance	170,000	336,500
FARM Development	571,073	-
Audit fee	336,000	
Consultancy fee	123,551	
Other	689,906	
	8,911,868	**5,866,266**

Note - 20

Human Capital Development	**2021 Rs.**	**2020 Rs.**
Strenghthing Research	-	82,250
	-	**82,250**

Director
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 31 December 2021 in terms of Section 12 of the National Audit Act, No. 19 of 2018.

1. Financial Statements

1.1 Unqualified 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 31 December 2021 comprising the statement of financial position as at 31 December 2021 and the statement of financial performance, statement of changes in equity and cash flow statement and notes to the financial statements for the year then ended and summary of significant accounting policies was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka to be read in conjunction with provisions of the National Audit Act No. 19 of 2018 and the Finance Act No. 38 of 1971 . This report will be presented to Parliament in due course in terms of Article 154 (6) of the Constitution of Sri Lanka.

In my opinion, due to the significance of the matters described in the section of basis for unqualified opinion of my report, financial statements of the Institute for Agro – Technology and Rural Sciences Affiliated to the University of Colombo does not reflect a true and fair view of the financial performance and cash flow for the year ended as at 31st of December 2021 in accordance with Public Sector Accounting Standards.

1.2 Basis for the Unqualified Opinion

(a) Since measures were not taken to recognize the due course fees as at 31st of December 2021 and enter them into account, course fees amounting Rs. 7,790,020 pertaining to the year under review was not included in the financial statements. Hence, surplus of the year was understated by the same value in the financial statements.

(b) Depreciation cost of 05 plant, property and equipment items amounting Rs. 2,403,244 and amortization cost of developing buildings and constructions amounting Rs. 998, 835 which come under non- current assets as at 31st of December 2021 had been overstated in the financial statements. Surplus of this year had been understated by Rs. 3,402,046.

(c) Even though the profit of Rs. 1,915,792 recognized at the calculation of provisions for compensation as at 31st of December 2021 on a professional valuation should be accounted as other comprehensive income in the comprehensive income statement as per the public sector accounting standard 19, contrary to that it had been accounted as other reserve under reserves.

(d) It was observed that there were difference of Rs. 74.293,890 between the value presented in the financial statements in respect of three accounting subjects and the ledger value and the difference of Rs. 9,415,448 between value in the cash flow statement in respect of 05 accounting subjects and the value to be adjusted in terms of Sri Lanka Public Sector Accounting Standard. However, necessary explanations on such differences had not been submitted for audit.

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 2021 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 2021 of the institute which is expected to be submitted me after 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.

In reading the Annual Report of the Institute, if I determine that material misstatements are found such misstatements should be communicated to the parties which control them for rectification. Further, in case of not corrected misstatements if any, I will include in the reports which are to be tabled in parliament in due course in terms of article 154(6) of the Constitution of Sri Lanka.

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**

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/	Observation

direction	
(a) Assets and Liabilities Declaration Act No. 01 of 1975 of the National State Assembly amended by Act No. 74 of 1988.	Even though Assets and Liabilities Declaration as at 31^{st} of each year should be presented before 30^{th} June, 11 staff officers had not submitted Assets and Liabilities Register from 2014 to the year under review.
(b) F.R. 1645 (b), (c) and 1646	During the year under review, daily running charts and monthly summary of two vehicles had not been submitted for audit during the relevant period.

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 institute 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) Of the 1,391 students who got admission for Agro-technical degree programme during the period from 2017 to the year under render review, the present number of students is 904 while 487 which is 35% has quitted the degree programme. Accordingly, it was observed that courses have not been updated as appropriate for current market needs.

(b) Failed to fill 23 vacancies in respect of 12 posts prevailed as at 31st of December 2021.

(c) Even though the costs on producing a banana plant and an aloe vera plant were respectively Rs. 164 and Rs. 72 and due to sale of them respectively at the costs of Rs. 85 and Rs.25. Hence, the production loss of each plant was respectively Rs. 79 and Rs. 47 and the total loss of the year under review Rs 5,500,712.

W.P.C.Wickaramarathne
Auditor General

Auditor General's Report – Answers for 2021

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

Year	Para. No.	Audit Observation	Answers given to the Audit Observation
2021	**1.2**	**Basis for Unqualified Opinion**	
	(a)	Since arrangements have not been made to duly recognize due course fees as at 31st of December and to enter them into accounts, course fee income amounting Rs. 7,790,020 of the year under review was not included in the year under review. Hence, surplus of the year had been understated from value equal to the said value in the financial statements.	A separate bank account is handled by the institute to collect course fees and all the other student fees are credited to that account. Direct deposits made by the students are identified through bank receipts. Deposits that could not be identified in the above way are identified through the bank reconciliation statement. Hence, even though payments are made by the students, such deposits are recorded as due fees from students. Due to the Catastrophic socio economic background arisen in the country with the Corona pandemic, it was unable to send bank receipts to the institute and consequently a large amount was recorded as due course fees. Such amounts have to be entered into the books of the institute through a receipt at the end of the financial year and when money is recorded as outstanding, even though it has already been received and this amount does not indicate a realistic value. **Non- registration of the academic term** Measures are being taken by the institute to register the fist term of 2022 and since relevant information was not received in 2021 number of students and their information could not be decided precisely. **Percentage of students who quitted the programme** Approximately 50% students quitted the programme and under these circumstances actual values cannot be determined.
	(b)	Depreciation expenses amounting Rs. 2,403,244 pertaining to 05 property, plant and equipment items which come under non-current asset as at 31st of December 2021and amortization of Rs. 998,835 on building and construction development cost had been overstated in the financial statements. Hence, surplus of the year had been understated	Even though payments were made on buildings and building development, since such projects were not suitable for use from 01.01.2021 they have been depreciated for the whole year and Rs. 15,028,428 and 2,824, 409 have been recorded. As per the depreciation policy maintained within the property, plant and equipment percentage has been stated accurately and office equipment,

		by Rs. 3,402,046.	furniture and equipment and software have been depreciated correctly. Since effective life time has been incorrectly stated in the disclosures these values are indicated. Disclosures of the year 2022 will be stated accurately.
	(c)	Even though the profit amounting Rs. 1,915,792 which had been identified when provisions for compensation are calculated based on a professional valuation should be accounted as under other comprehensive income in the comprehensive income statement as per the Public Sector Accounting Standard 19, contrary to that, it had been accounted as other reserve under reserves.	In terms of Public Sector Accounting Standard 01, Statement of Financial Performance has been presented in a correct format. Accordingly, Comprehensive Income Statement was removed on the instructions of the Internal Auditor and compensation as at 31st of December and the profit amounting Rs. 1,915,792 identified when calculating based on a professional valuation have been correctly calculated and shown under other reserves in the Statement of Changes in Equity. It will be added to the accrued profit in 2022.
	(d)	During the year under review, it was observed that there was a difference of Rs. 74,293,890 between the value of the financial statements of 03 accounting subjects and the ledger value and a difference of Rs. 9,415,455 between the value stated in the cash flow statement in respect of 05 accounting subjects and the value to be adjusted in terms of Public Sector Accounting Standard 2. However, necessary explanations for such differences had not been presented for audit.	Impairment will be accurately submitted for the financial year 2022.
	2.	**Report on other legal and regulatory requirements**	
	2.2.2	**Reference to rules and regulations/ provisions**	
	(a)	Assets and Liabilities Declaration Act No. 01 of 1975 of the National State Assembly amended by Act No. 74 of 1988. Even though Assets and Liabilities Declaration as at 31st of each year should be presented before 30th June, 11 staff officers had not submitted Assets and	Measures will be taken to present Assets and Liabilities Declarations as at 31st of March 2022 of the staff officers before 30th June 2022. However, only 02 staff officers of the said staff officers have been employed in this institute and the rest of the officers have been recruited recently.

		Liabilities Register from 2014 to the year under review.	
	(b)	F.R. 1645 (a), (c) and F.R. 1646 of the Democratic Socialist Republic of Sri Lanka Daily running charts and monthly summaries of 02 vehicles of the institute during the year under review had not been submitted for audit	Do not agree with your observations. Daily running charts and monthly summaries of all the vehicles belonging to the institute pertaining to the year 2021 have been submitted for audit.
	2.3	**Other matters**	
	(a)	Of the 1,391 students who got admission for Agro-technical degree programme during the period from 2017 to the year under render review, the present number of students is 904 while 487 which is 35% has quitted the degree programme. Accordingly, it was observed that courses have not been updated as appropriate for current market needs.	Among the matters that cause to quit the course, inability to pay course fee is one of the major reasons and the course was updated in 2017 while initial measures have been taken to update it again.
	(b)	Failed to fill 23 vacancies in respect of 12 posts prevailed as at 31st of December 2021.	Do not agree with your observations. Even though the institute is taking measures to fill employee vacancies, the institute could not complete it as the government decided to suspend all the recruitments as a policy decision.
	(c)	Even though the costs on producing a banana plant and an aloe vera plant were respectively Rs. 164 and Rs. 72 and due to sale of them respectively at the costs of Rs. 85 and Rs.25. Hence, the production loss of each plant was respectively Rs. 79 and Rs. 47 and the total loss of the year under review Rs 5,500,712.	The production of banana plants of the year was 109,149 for the year 2021 and monthly average was 9096. Further, due to the Covid pandemic, production and sale of plants had been considerably decreased. Hence, production cost has been recorded as a high cost. Accordingly, it has been planned to maintain monthly plant production at the average of Rs. 16,000 in the year 2022 and it will decrease the production cost considerably. Further, attention has been paid on primary field study data to increase the sale price of banana plant. Further, due to travel restrictions and supply limits amidst the covid 19 situation reporting to work of employees was decreased and production was limited. However, the cost was gradually increased on paying salaries and wages continuously. Hence, cost of a plant is higher than the sale price.