



# HARTI

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### ஆண்டு அறிக்கை

## ANNUAL REPORT

# 2021



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ஹெக்டர் கொப்பேகடுவ கமநல ஆராய்ச்சி, பயிற்சி நிறுவகம்  
Hector Kobbekaduwa Agrarian Research and Training Institute

# **HARTI**

# **ANNUAL REPORT**

# **2021**



**Hector Kobbekaduwa Agrarian Research and Training Institute**

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## **About us**

Hector Kobbekaduwa Agrarian Research and Training Institute established under the Agrarian Research and Training Act. No. 5 of 1972 is a statutory body functioning under the Ministry of Agriculture.

Promotion of policy oriented research and addressing training needs of the agricultural and rural sector are the key objectives of the institution.

As a pioneer in the field of agricultural research in the country, the institution has been serving its stakeholders since its inception. It is armed with a wide range of experience gathered by conducting socio-economic research, training and providing information for formulation of development policies for the agricultural sector.

## **Vision**

Be the leader for generating and disseminating knowledge for sustainable agrarian and rural development.

## **Mission**

To strengthen agrarian and rural sector through conducting research and training.

**Board of Governors -2021**

Mr. Sumedha Perera. WWV RWP RSP USP NDU	Secretary, Ministry of Agriculture, Chairman of the Boards of governors (Feb: 2021)
<b>Senior professor Udith K. Jayasinghe</b>	Secretary, Ministry of Agriculture, Chairman of the Boards of governors (Mar: 2021)
<b>Senior Professor. Ranjith Premalal De Silva</b>	Director/ CEO (From January to February of 2021)
<b>Mr. Malinda Senevirathna</b>	Director/ CEO (From February 2021)
<b>Dr. W.M.W. Weerakoon</b>	Member, Director General, Department of Agriculture (From Feb; 2021 to Aug; 2021)
<b>Dr. S.H.A. De Silva</b>	Member, Director General, Department of Agriculture (From Sep; 2021)
<b>Mr. G.D. Keerthi Gamage</b>	Member, Land Commissioner General, Land Commissioner General's Department, (From Feb:2021)
<b>Mr. W.M.M.B. Weerasekara</b>	Member, Commissioner General, Department of Agrarian Development, (From Feb:2021)
<b>Mr. A.H.M.L. Abeyrathna</b>	Member, Commissioner General, Department of Agrarian Development, (From Mar: 2021)
<b>Mr. (Eng.) Nihal Siriwardena</b>	Member, Director General, Department of Irrigation (From Feb: 2021)
<b>Mr. Suvinda S. Singappuli</b>	Member, Commissioner, Department of Cooperative Development Registrar, Cooperative Societies Department of Cooperative Development (From Oct: 2021)
<b>Mrs. G.N. Liyanarachchi</b>	Member, Commissioner, Department of Cooperative Development Registrar, Cooperative Societies Department of Cooperative Development (From Nov: 2021)
<b>Dr. D.B.T. Wijerathna</b>	Member, Assistant FAO Representative (Programmes) Food and Agriculture Organization (From Feb: 2021)
<b>Mrs. P. Malathi</b>	Member, Additional Secretary (Agricultural technology)State Ministry of Agriculture (From Mar: 2021)
<b>Mr. K.P. Karawita</b>	Member, Additional Secretary (Agricultural Development-01)State Ministry of Agriculture (From Sep: 2021)
<b>Mrs. Pubudika S. Bandara</b>	Member, Senior Assistant Secretary (Administration) Ministry of Lands (From Aug: 2021)
<b>Mrs. R.P. R. Ranasinghe</b>	Member, Director (Land Acquisition) Ministry of Lands (From Aug: 2021)
<b>Miss. R.A.D.R. Ranasinghe</b>	Member, Director(Actg.) Ministry of Finance, Economy & Policy Development (From Feb:2021)

<b>Mrs. Aruni S. Ranasinghe</b>	Member, Additional Secretary (Administration) Ministry of Plantation Industries (From Feb:2021)
<b>Mrs. B.L,D. Balasooriya</b>	Member, Director of Education (Agriculture & Environment) Ministry of Education (From Feb:2021)
<b>Mrs. R.M,C.M. Herath</b>	Member, Additional Secretary (Lands & Law) Ministry of Irrigation (from Mar: 2021)
<b>Miss. Gilma Dahanayake</b>	Member, Assistant Secretary Ministry of Trade (From Feb: 2021)
<b>Dr. Chandranath Amarasekara</b>	Member, Additional Secretary, Department of Economic Research Central Bank of Sri Lanka (From Feb: 2021 to Oct; 2021)
<b>Professor. D,K,N,G. Pushpakumara</b>	Member, Dean, Faculty of Agriculture University of Peradeniya (From Feb: 2021 to Nov; 2021)

### Meetings of the Board of Governors – 2021

<b>Date of meeting</b>	<b>Number of participants</b>
1. 08 <sup>th</sup> February, 2021	14
2. 30 <sup>th</sup> March, 2021	17
3. 03 <sup>rd</sup> August, 2021	18
4. 14 <sup>th</sup> September, 2021	19
5. 12 <sup>th</sup> October, 2021	18
6. 30 <sup>th</sup> November, 2021	18

## Audit & Management Committee

### Members of the Audit & Management Committee

<b>Miss. R.A.D.R.Ranasinghe (Chairperson)</b>	<b>Director (Actg.) Ministry of Finance and Economic policy development</b>
<b>Miss. Gilma Dahanayake (Member)</b>	Assistant Secretary, Ministry of Trade
<b>Miss. Aruni S. Ranasinghe (Member)</b>	Assistant Secretary, Ministry of Plantation Industries
<b>Miss. S. A.D.N. Perera (Observer)</b>	Superintendent of Audit Auditor General's Department
<b>Mr. U.S.L. Kumara (Observer)</b>	Chief Internal Auditor, Ministry of Agriculture
<b>Mr. E.W.G.K. Priyadarshana (Observer)</b>	Chief Internal Auditor, Ministry of Agriculture (From August 2021)

### Meetings of Audit & Management Committee – 2021

Number of meetings held	05
Date of meetings	22 <sup>nd</sup> February, 2021
	25 <sup>th</sup> February, 2021
	13 <sup>th</sup> August, 2021
	29 <sup>th</sup> October, 2021
	16 <sup>th</sup> December, 2021

## Research and Training Committee

Research and Training Committee plays a prominent role in regulation of research and training conducted by Hector Kobbekaduwa Agrarian Research and Training Institute. The committee consisting of scholars, offers diverse support in determining the shape of the institutional academic activities.

We are entitled for receiving the observations of relevant members of Research and Training Committee for all the activities of capacity development and enhancement related to the institutional researches and trainings. Specially, all the research proposals developed by this institution are investigated by the members who possess the expertise of the field relevant to the proposal, as nominated by the Research and Training Committee.

1. Providing guidelines, inputs and expertise knowledge to plan researches and training programmes of the institution.
2. Investigating and approval of Research proposals presented by the researches under the annual action plan of the Hector Kobbekaduwa Agrarian Research and Training Institute.
3. Observing the progress of ongoing research projects and training programmes.
4. Taking steps to enhance research reports prior to publication through studying, scrutinizing draft research reports and presenting proposals.
5. Investigation and evaluation of training activities of the institution.

S/No	Name	Designation/ Institution
01.	Pro. Rev. Vijithapura Wimalarthana Thero	Senior Professor Department of Economics Faculty of Arts, University of Colombo.
02.	Professor. L.M. Abeywickrama	Senior Professor Department of Agricultural Economics and Projects, Faculty of Agriculture, University of Ruhuna.
03.	Mr .M.M.M. Ahiyar	Research Officer International Water Management Institute
04.	Professor. D.P.S. Chandrakumara	Senior Professor Department of Economics Faculty of Humanities and Social Sciences, University of Sri Jayawardenepura.
05.	Professor. N.D.K. Dayawansa	Professor Department of Agricultural Engineering Faculty of Agriculture, University of Peradeniya

<b>06.</b>	Dr. P.B. Dharmasena	Chief Scientist, International Centre for Research and Development
<b>07.</b>	Dileepa M Endagamage	Senior Lecturer Department of Decision Sciences Faculty of Management Studies and Commerce University of Sri Jayawardeneura
<b>08.</b>	Dr. A.P.S. Fernando	Senior Lecturer Department of Agricultural Systems Faculty of Agriculture University of Rajarata
<b>09.</b>	Dr. Frank Niranjana	Consultant Former Additional Director Sri Lanka Council for Agricultural Research Policy
<b>10.</b>	Dr. Fedrick Abeyrathna	Consultant Former Agricultural Economist United Nations Programme for Development
<b>11.</b>	Professor M.M. Gunathilake	Consultant Former Director (Environment and protective
<b>12.</b>	Professor E.R.N. Gunawardena	Senior Professor Department of Agricultural Engineering Faculty of Agriculture, University of Peradeniya
<b>13.</b>	Professor Keminda Herath	Professor Department of Agri- Business Management Faculty of Agriculture and Plantation Management University of Wayamba
<b>14.</b>	Dr. P.H.A.P.C. Girahagama	Senior Scientist Sri Lanka Council for Agricultural Research Policy
<b>15.</b>	Professor Manjula P. Sumith Magamage	Professor Department of Livestock Production Faculty of Agriculture University of Sabaragamuwa
<b>16.</b>	Eng. D.D. Prabhath Vitharana	Consultant Former Head of the Department Water Management Division Agricultural Development Department
<b>17.</b>	Professor D.V.P.Prasada	Professor Department of Agricultural Economics and Business Management, Faculty of Agriculture University of Peradeniya
<b>18.</b>	Professor Prasanthi Gunawardena	Senior Lecturer Department of Forestry and Environmental Science Faculty of Applied Sciences, University of Sri Jayawardeneura

<b>19.</b>	Professor Priyanga Dunusinghe	Senior Lecturer Department of Economics Faculty of Arts University of Colombo
<b>20.</b>	Dr. L.P. Rupasena	Senior Lecturer Department of Agricultural Systems Faculty of Agriculture University of Rajarata
<b>21.</b>	Professor K. Suriyakumara	Senior Lecturer Department of Agricultural Economics Faculty of Agriculture University of Jaffna
<b>22.</b>	Professor M. Zamad	Consultant Former Head of South Asia office International Water Management Institute
<b>23.</b>	Profesor M.M. Saman K. Herath	Professor Dean Faculty of Zoology and Export Agriculture Uva - Wellassa University
<b>24.</b>	Dr. Shantha Wijesinghe	Senior Lecturer Department of Geography Faculty of Humanities and Social Sciences University of Sri Jayawardenapura
<b>25.</b>	Dr. Thivahari Geretharan	Senior Lecturer Department of Agricultural Economics Faculty of Agriculture Eastern University
<b>26.</b>	Professor Tudor Silva	Emeritus Professor Department of Social Sciences University of Peradeniya
<b>27.</b>	Dr. D.B.T. Wijerathna	Assistant Representative ( Food and Agriculture Organization of the United Nations)

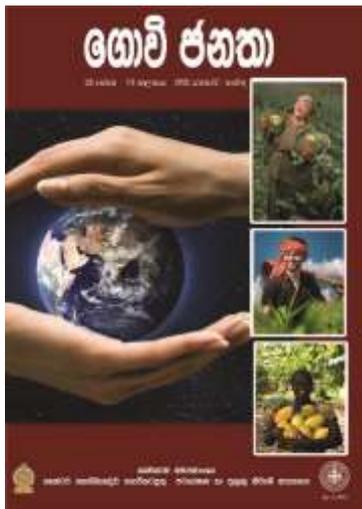
**Special events - 2021**



**Commencement of the Marketing Information Project – January 2021**



**Mr. Malinda Senevirathna assuming duties in the post of Director/ CEO – February 2021**



Publishing of the January – March issue of “ Govi Janatha” magazine – March 2021



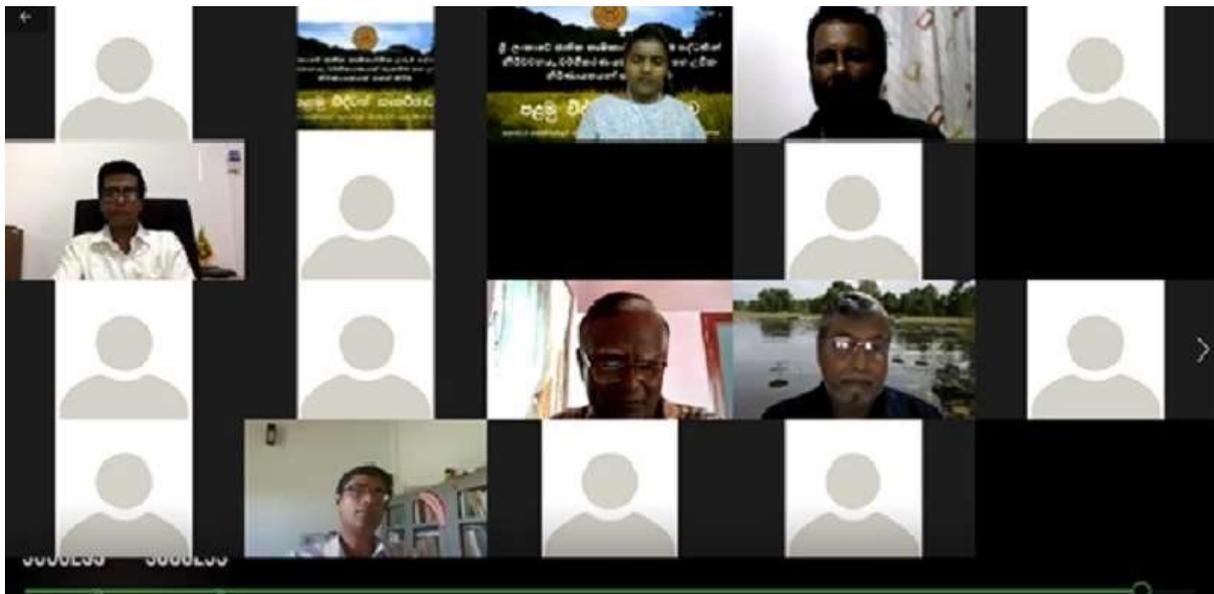
The sports meet was held with the participation of the staff coinciding the New Year Celebrations – April 2021



A training Programme organized by Food and Agri Business division. under the theme “ Usage of marketing information in Agri – business management”, held in Badulla.



Presenting the special review report on the National Agricultural Policy to the Minister of Agriculture - May 2021



An intellectual discussion was held on Zoom, on the study of "Agricultural heritage systems of national importance in Sri Lanka" with the participation of stakeholders from diverse fields – June 2021



**Honourable Minister of Paddy And Grains, Organic Food, Vegetables, Fruits, Chillies, Onion And Potato Cultivation Promotion, Seed Production and Advance Technology Agriculture, Mr. Shashindra Rajapakse meeting Research Officers of Hector Kobbekaduwa Agrarian Research and Training Institute. July - 2021.**



**Presenting two reports prepared by the Hector Kobbekaduwa Agrarian Research and Training Institute titled, “Damage to food crops by wild animals” and “Polythene and plastic Usage” to Honourable Minister of Environment Mr. Mahinda Amaraweera and Ministry Secretary Dr. Anil Jasinghe - August 2021**



**38<sup>th</sup> Commemoration of Late Mr. Hector Kobbekaduwa, the Founder of Hector Kobbekaduwa Agrarian Research and Training Institute**



**Honourable Minister of Agriculture Mr. Mahinda Amaraweera meeting the staff of HARTI after the institute was vested under supervision of the Ministry of Agriculture September -2021.**



**A discussion on: “ Setting up evidence on the impact of the improved project services towards rice production in Anuradhapura district in Sri Lanka”, based on a collaboration of Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) and Food and Agriculture Organization (FAO) of the United Nations in October -2021.**



**Workshop on Application of the Concept of Agri-business and Market Extension. November -2021.**



Received a research fund amounting to Rs. 11 Mn awarded by World Vision Lanka for the “Study on Climate Adapted Farming Practices and Climate Adaptation of Vulnerable Groups in the Dry Zone of Sri Lanka”.



Launching of “Govimina” Agricultural Newspaper and govimina.lk website – November 2021



Signing of an MOU between HARTI and the University of Sabaragamuwa for scientific and academic cooperation – December 2021

## Message of the Chairman

Among government entities working for the betterment of the agricultural and agrarian sectors of the country, Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) plays a significant role in terms of accumulation of data and dissemination of information through conduct of socio-economic research. Its scientific publications are of high significance in formulating government policies on agriculture and related fields.

This report is proof to HARTI's contribution in making the President's Green Agriculture concept a reality by correctly identifying its role despite the numerous challenges posed in the wake of Covid - 19 pandemic. It is evident that HARTI research and publications will serve immensely in materializing the goal of sustainable agriculture in Sri Lanka.

I believe HARTI will continue its support for the advancement of agriculture by furthering its role this year and beyond.

Secretary  
Ministry of Agriculture

## Message of the Director /CEO

The year 2021 was probably among the most challenging for the entire world after the Second World War. No continent, no country, no community or household was spared the trauma and constraints imposed by the Covid-19 pandemic. And yet, it pleases me to mention that 2021 has been one of the most productive years for HARTI in a long time.



HARTI, like all institutions private and public, was forced to shut down completely on two occasions and for a total period of four months and on several occasions lasting several weeks when it functioned with a skeletal staff complement. The accomplishments during the year under review are therefore that much more significant.

Over the course of the year all research projects planned for the year were completed. Moreover, exemplary dedication and productivity of the research team ensured that as many as 17 reports, some dating back as far as 2015, were completed and published. All this in addition to the daily collection of market prices and compilation of weekly and monthly analyses of the same. The Institute, as has always been the case, responded comprehensively and immediately to requests for data, analysis and reviews requested by government institutions and individuals.

At the beginning of the year, a draft 'National Agriculture Policy' was developed by a special committee of experts. HARTI researchers produced a comprehensive review of this document and shared it with the committee as well as key policy-makers and officials in the agriculture sector. It was heartening to note that the draft document echoed much of the research findings produced by the Institute over the years on almost all sections.

The research and support staff of the Institute must also be commended for expending enormous efforts to inform the policy makers on matters of topical and immediate concern during the year 2021. In particular, following the announcement of a ban on chemical fertilizer, the Institute conducted a comprehensive audit of all relevant factors relevant to this policy shift. This resulted in two important documents; first, 'Issues, Challenges and Strategies' related to the implementation of this policy, published in both Sinhala and English, and second, a 'Biomass Inventory,' an important intervention necessary to assess the potentials and challenges related to the production of organic fertilizer. In addition, the Institute responded in detail to a series of questions submitted by the State Minister of Agriculture, covering a wide range of issues which needed to be addressed by the implementing apparatus.

As important was the 18-month 'Road Map' developed by the Institute to bring to fruition the vision that inspired this policy shift. It was essentially a pragmatic approach that took into account the ground reality, farmers' perceptions and practices, food cultures and consumer behavior, availability and potential to produce alternative nutrients etc.

Following a policy decision on the use of peripheral forest lands, a HARTI research team studied and produced a preliminary report on the current status of deforestation in the Moneragala District. HARTI researchers also reviewed the draft National Environmental Policy. These documents were duly submitted to the Ministry of Agriculture as well as relevant line ministries and institutions. Several important and in many ways radical initiatives were launched during this year from the point of view of streamlining the institution's research architecture in ways that make for efficient and quality with regard to fulfilling the institution's mandated functions. Following extensive internal discussion

complemented by the views of the Research and Training Committee, a Corporate Strategy was developed and subsequently endorsed by the Board of Governors. This included a restructuring of the research and training apparatus. Two new divisions 'Data Management' and 'Information and Communication' were created, the first to provide better support to researchers with respect to data collection and analysis and the second for more aggressive dissemination of information and knowledge among all stakeholders.

With a view to enabling the rich, varied and extensive knowledge produced by academics to enter the policy making framework, HARTI initiated discussion with all universities that have agriculture faculties. This move was welcomed and commended by all the relevant Vice Chancellors and Deans, who recognized the importance of collaborative work. Accordingly, discussions were held with the University of Peradeniya, University of Wayamba, Rajarata University, Eastern University, Sabaragamuwa University, University of Ruhuna, Uva-Wellassa University and University of Jaffna. All universities agreed to sign Memoranda of Understanding with HARTI, thereby considerably enhancing the Institute's capacity for island-wide surveys and mobilisation of a wide range of experts for research and training while also creating an enabling environment for university students to benefit from the Institute through closely supervised internships.

One of the most important accomplishments during this year is that notwithstanding the bottlenecks created by Covid-19 related restrictions, no less than 15 training programmes were conducted covering a wide range of issues.

The year 2021 will also be remembered for the historic launch of a newspaper totally devoted to agriculture. The institute, with support from the State Ministry and thanks to aggressive pursuit of advertisements launched 'Govimina' towards the end of the year. The newspaper with a print run of 10,000 copies with zero returns, was distributed directly to farmer organizations through the Department of Agrarian Development. The newly formed Information and Communication Division has ensured knowledge dissemination through several social media platforms such as the Institute's official website, Facebook and Twitter.

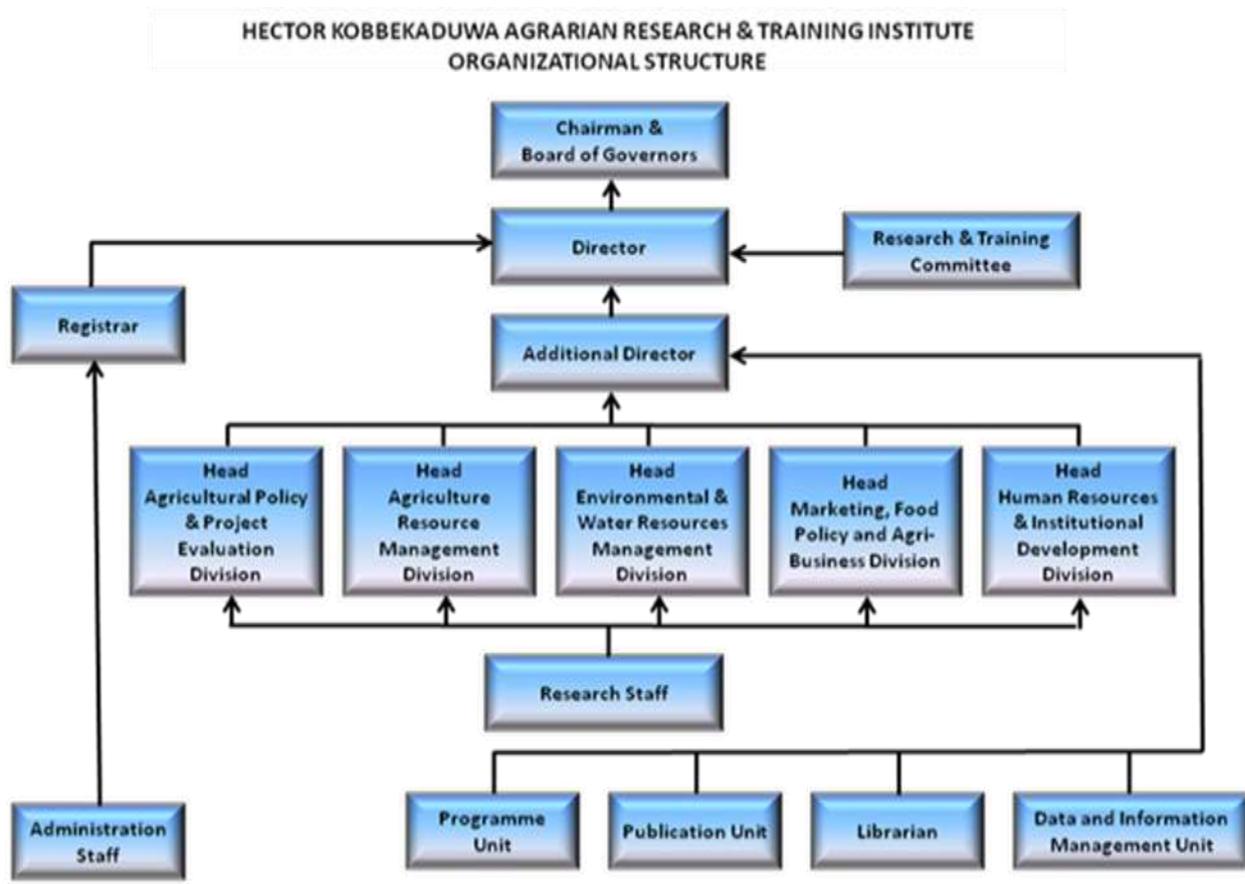
Much effort was expended during the year to rebuild relations with international organizations such as the FAO, WFP and international NGOs such as World Vision. These initiatives yielded immediate results by way of the institute being commissioned to undertake research, training and surveys. I am confident that the institute will be able to further enhance its scope of work through partnership with similar institutions thanks to a series of discussions that were initiated during the year under review.

I take this opportunity to express my sincere thanks to the entire HARTI team across all staff categories who spared no efforts to reboot the Institute, so to speak, and put it on a strong foundation from which it can aspire to reach the lofty goals set half a century ago. The Research and Training Committee, which provides oversight to the research process from conceptualization to the production of reports, has also contributed immensely to improve the quality of our work. I am also appreciative of the support and guidance provided by the Board of Governors, who have helped the institute adhere to the highest standards of compliance.

Finally, I believe that the year 2021 will be seen in the coming years as a turning point in the institute's history. The future, despite all challenges, I believe is bright due to the re-orientation process and renewed commitment to excellence demonstrated by the research and supporting staff.

**Malinda Senevirathna**  
**Director / CEO**

### Organizational Structure of the Hector Kobbekaduwa Agrarian Research and Training Institute.



## Achievements

### Digitization of institutional publications

Under the National Digitalization Project that aims at digitizing scholarly literature and setting up institutional repositories, scientific publications of HARTI has been digitized.

Users can access HARTI publications on <http://nsf.ac.lk> . This project has offered a fine platform to maintain an electronic repository of the institute's scholarly publications while facilitating convenient online access to the documents.

### Launching of "Govimina" National Agricultural Newspaper and govimina.lk website

As a pioneer institution in agrarian related policy development, launching of "Govimina" National Agricultural Newspaper is a new chapter in its role as a communicator and disseminator of knowledge. This newspaper, a general read, accompanies a supplement "Saara" and is distributed free of charge among farmers through the Agrarian Services Centers.

### Challenges

- Due to Covid-19 pandemic, field surveys were severely affected throughout the year and collecting data was a major challenge.
- A number of Research Officer and Statistical Officer positions remain vacant. It has hampered the progress of research activities to a great extent.

### Future goals

- A broad restructuring plan is contemplated to keep up with the changes taking place in the agricultural and agrarian here and abroad. As an initial step, restructuring of research division is underway.
- Providing of streamlined and efficient services through upgraded systems and procedures related to operational activities of the institution.
- Fostering relations and partnerships with government and non-government bodies to work cooperatively to overcome challenges in the agrarian sector. As enter into agreements based on large scale academic and training activities with institution carrying out agricultural researches and academic activities.

## Performance indicators

### Publications

Research reports	working papers	periodicals
13	03	01

Newsletter	newspaper
03 volumes	02 volumes

### Projects

Research	Research	Training
Consolidated fund	Financial aids (external)	
21	02	04

### Partnerships

Memoranda of understanding
01

**Social Media** - An increase of a 85% of Facebook users

**Publishing of 17 research reports that were due for years is also an outstanding achievement during the Covid -19 pandemic period, 2021**



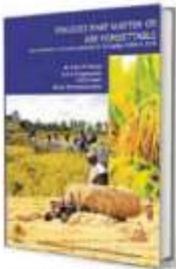
**OFCs in the INTERMEDIATE SEASON**  
Cultivation issues in selected districts



**DO WE KNOW WHAT WE SHOULD BE EATING?**  
Consumption Patterns of Fruit and Vegetables



**IMPACT OF HOME GARDEN COCONUT CULTIVATION ON COCONUT KERNEL BASED INDUSTRIES IN SRI LANKA**



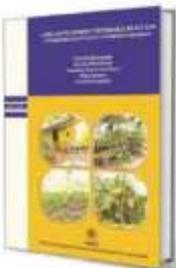
**POLICIES THAT MATTER OR ARE FORGETTABLE**  
An evaluation of paddy policies in Sri Lanka: 1998 to 2018



**THATTUMARU - KATTIMARU AND PRODUCTIVITY**  
An Assessment of Traditional Territorial Systems in The Wet Zone



**IT IS NOT JUST WATER THAT FLOWS DOWNSTREAM**  
Water Management in the Eastern Slopes of the Central Highlands



**LAND DEVELOPMENT ORDINANCE IN ACTION**  
Achievements and Prospects of Highland Alienation



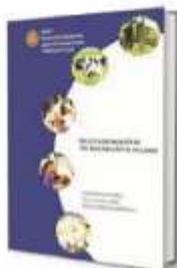
**MINOR IRRIGATION REHABILITATION**  
An Assessment of Awarding Rehabilitation Contracts to Farmer Organizations



**MOBILE BASED SOLUTION FOR PEST AND DISEASE MANAGEMENT IN PADDY CULTIVATION**



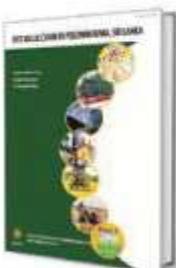
**FACTORS INFLUENCING VEGETABLE FARMER'S DECISIONS**



**VALUE CHAIN ANALYSIS OF THE MILK INDUSTRY IN SRI LANKA**



**TRANSACTION COSTS: POTATO AND RED ONION**



**OFC CULTIVATION IN THE NORTHERN PROVINCE: ISSUES AND POSSIBLE SOLUTIONS**

**CROP PRODUCTION PRACTICES IN VILLAGE TANK SYSTEMS IN DRY ZONE SRI LANKA**

**විද්‍යාමය වශයෙන් පර්යේෂණය කළ  
- ගම්වල ජලය සහ වනජීවීන් සහ  
පරිසරය පිළිබඳව දැන ගැනීම සහ ප්‍රවර්ධනය  
කිරීමේදී ප්‍රධාන කාරකයන්**

**Publishing of 17 research reports that were due for years is also an outstanding achievement during the Covid -19 pandemic period, 2021**



## Research

Until the third quarter of the year, the full workforce of the institute was not available due to the Covid-19 Pandemic. However, by adopting a well-formulated approach could cumulate in significant progress in research, training and communication activities.

As per the Action Plan of year 2021, 22 socio economic research leading to writing of research reports and the Agriculture Market Information Project were undertaken. Findings and recommendations related to those research have been forwarded to relevant stakeholders. Apart from that, a number of reports on timely issues were prepared, furthering HARTI's contribution to other institutions and sectors.

Evaluation of the draft National Agricultural Policy, presenting a report titled "Converting to Organic Farming: Issues, Challenges and Strategies for Way Forward" and submission of a feedback in response to the questionnaire on organic farming by the State Ministry of Agriculture, presenting a road map for organic agriculture, preparation of the bio mass inventory, evaluation of the National Environmental Policy and preparation of a report on deforestation based on a field visit are among key performances in the past year.

Another exceptional achievement in 2021 was publishing of 17 research reports that were pending in the wake of Covid -19 pandemic.

Approval of the Department of National Budget was not received for the following projects: Ex-Ante Situation Analysis on Dedicated Economic Centers to be modernized under the Inclusive Connectivity and Development Project (ICDP), Evaluation of the “*Krusha Shakti*” loan scheme implemented by the Farmers’ Trust Fund and formulation of the institutional research agenda.

Strengthening the Research and Training Committee (RTC) for addressing issues coming under the purview of the institution, preparation of the framework for strategy aimed at repositioning the institute, informing the RTC on the proposals of repositioning and obtaining their feedback, obtaining approval of the Board of Governors for the institutional framework were key performances in the year.

Updating the “Market Information Project” that aims at addressing the market information needs by setting up the Data Management Division and converting it into a fully automated system was also initiated this year.



## Rural Development

### Completed studies

#### 01. Land Development Ordinance (LDO) in Action: Achievements and Prospects of Highland Alienation

- R.M.D.H. Rathnayake

**Objective:** To review the use of highlands distributed under the Land Development Ordinance and identifying related achievements and prospects.

#### Key findings

01. Residential requirements have been prioritized over agricultural purposes in using highlands.
02. People anticipate solutions for land development related issues such as control of harms caused by animals, adequate water supply, granting of financial and material aids.

#### Recommendations

- I. Identification of drastically fragmented highlands and imposing strict laws.
- II. Thorough investigation of existing land and housing policies and addressing the housing needs of the public.
- III. Introduction and launch of suitable housing schemes (flats/ clusters) for needy rural youth.

#### 02. Minor Irrigation Rehabilitation (MIR): An Assessment of Awarding Rehabilitation Contracts to Farmer Organizations (FOs).

- M.A.C.S. Bandara

**Objective:** To assess the impact of awarding rehabilitation contracts to Farmer Societies (FS) outside the competitive bidding procedure and examine whether the original goals have been achieved.

#### Key findings

- Except for few (FS) with over 15 years of experience in undertaking minor irrigation rehabilitation projects, around a half of the Farmer Societies lack such experience.



- FS have received significant benefits for minor irrigation contracts such as expansion of their financial viability and improvement of software and hardware skills.
- Majority of the farmers cited that serious lapses exist in identification of rehabilitation needs despite having a well-drafted criteria as outlined by professionals.

### Recommendations

- I. Routine training and skills development workshops should aim at improvement of all aspects: strengthening of FS, water management and maintenance and operational activities pertaining to irrigation systems.
- II. A need-based approach should be adopted in selecting tanks for rehabilitation to achieve optimum economic productivity in formulation such, factors such as the actual requirements, tank capacity, number of beneficiaries, uses, catchment area and duration of the previous rehabilitation should be taken into account.
- III. From the initial stage of identification to execution of the project, full beneficiary participation should be allowed.

### 03. *Thattu maaru – Katti Maaru System and Productivity.* An assessment of Traditional Tenurial System in Wet zone.

- T.P. Munaweerage

**Objective:** To assess the impact of the traditional tenurial system (*Thattu Maru and Katti Maru System*) on paddy farming of the wet zone and to propose recommendations for the related issues.

#### Key findings

- Characteristics innate to the *Thattu maru and Katti maru* system in the wet zone paddy lands are diminishing,
- Soaring production cost and lower harvest have dimmed the financial returns of paddy farming.
- Farmers of the wet zone have moved away from this method due to socio-economic and ownership factors such as having received higher education, urbanization, smaller land plots, availability of other profitable income generation methods and distinctive ownership.



### Recommendations

- Strengthening of the institutional framework of Agrarian Centers or establishment of a new institutional mechanism for the promotion of *Thattu maru and Katti maru* system by dividing inheritance, commercialization of land plots and settling of disputes. Establishment of the Agrarian Development Council, land banks and agrarian tribunal proposed in the Agrarian Development Ordinance is recommended.
- Amalgamation and restructuring of drastically fragmented or widely scattered lands and redistribution.

### 04. Nationally Important Agricultural Heritage Systems (NIAHS) of Sri Lanka: Recognition and Conservation.

- J.A.U.P. Jayasinghe

**Objective:** Systematic identification of agricultural heritage systems of national importance in Sri Lanka and proposing methods of conservation.

#### Key findings

- Selection criteria and definition were developed based on four main factors such as;
  - a) Identifying of operational structure, functions and administrative principles of agricultural heritage systems of national importance;
  - b) Identifying the economic input of agricultural heritage systems of national importance;
  - c) Identifying of food security of agricultural heritage systems of national importance
  - d) Concept of sustainable agricultural system.
- Five common criteria, seven major definite criteria and 28 sub criteria are included in the selection criteria.

#### Recommendations

- Formulation of conservation and management policy of the agricultural heritage systems of national importance in Sri Lanka.
- Drafting a realistic, descriptive and timely conservation and management plan.
- The process of the conservation and management plan should be phased.



## 05. Programm Management: Challenges in implementing development programmes/projects by the Department of Agriculture and Department of Agrarian Development.

- I.K. Edirisinghe.

This study was conducted by the Hector Kobbekaduwa Agrarian Research and Training Institute on the request of the Ministry of Agriculture.

**Objective:** To identify challenges faced by the Ministry of Agriculture and the Department of Agrarian Services to forward recommendations for implementing effective and efficient projects. This study was conducted on the request of the Ministry of Agriculture.

### Key findings

01. The study identified 47 and 16 challenges related to the Ministry of Agriculture and the Department of Agrarian Services, respectively.

#### Ministry of Agriculture:

- At project initiation and planning stage: 14 challenges under two topics; the project scope and the project planning.
- At implantation stage: Five challenges such as; financing, human resources, implementation, and coordination
- Five at monitoring and closing stage.

#### Department of Agrarian Services:

- I. At project initiation and planning stage: 02 challenges under the main topic; project planning.
- II. At implantation stage: Five challenges such as; financing, human resources, implementation, and coordination
- III. Five challenges at monitoring and closing stage.

### Recommendations

- Focus should be on the methods like *log frame analysis*, *results resource framework*, *Gantt charts*.
- Enable the participation of stakeholders as and when necessary.



## 02. Ongoing studies

### 01. Agricultural Extension and Advisory Service in the Food Crop Sector in Sri Lanka: Challenges, Issues and Options.

- M.D.S. Lurdu

**Objective:** Identification of issues, challenges and potential improvements in the food crop sector and thereby presenting supportive proposals for an efficient and productive project service.

#### Key findings

- Sri Lanka's food crops sector is lacking in terms of coverage of project services, usage of information communication technology, human resource development, participation of project stakeholders and monitoring, administration and planning.
- Operational level and the institutional status of the present project should be revised to face impending challenges pertaining to the trends of globalization, division of power, use of information communication technology.
- Maintaining an effective level transmission of knowledge and technology of research institutions, project officers, and farmers is required. To that effect conducting a broad investigation to evaluate the efficiency of the present project service is needed.

#### Recommendations

- Formulation of a national project policy backed by a legal foundation and with a vision and mission for bringing forth farmers' needs.

### 02. Intensification of Active Paddy Land Use through Youth Participation and Organic Paddy Cultivation.

- M.B.F. Rifana

**Objective:** To identify knowledge gaps in paddy cultivation in LCWZ and to explore the power of youth and organic approach to prevent abandonment of active paddy lands in the region.



**Key findings**

- Inefficiency in sharing scientific findings and recommendations generated in earlier studies has been identified.
- In the study area, 11 youth Farmer Societies had been actively implemented.

**Recommendations**

- I. Filling knowledge gap by vast distribution of research findings using ICT apparatus.
- II. Strengthening the youth Farmer Societies by bringing those together to create a resource hub.
- III. Promotion of organic farming through education of farmers.

**03. Success of Re-Cultivation Efforts in Abandoned Paddy Lands in Low Country Wet Zone**

- **R.M.D.H. Rathnayake**

**Objective:** To assess the success of re-cultivation programmes in abandoned paddy lands in LCWZ

**Key findings**

- Technical issues (water supply, renovation of waterways) are largely attributed to abandonment of paddy lands.
- Owing to efforts and enthusiasm of farmers and officers, abandoned paddy lands have been re cultivated successfully.
- In terms of quality, financial and material grants farmer's needs are not fully addressed by the ongoing projects.

**Recommendations**

- I. Drafting robust project proposals with accurate budget estimates with the assistance of technical officers in the area.
- II. Making plans for maintenance of the developed aspects and assigning its responsibility to farmer organizations.



**04. Initiating farm mechanization through agricultural service providing hubs run by local agri-entrepreneurs: Challenges and opportunities**

- M.A.C.S.Bandara

**Objective:** To develop a sustainable and business model to commence agricultural mechanization through agricultural centres providing diverse agricultural services over the value chain of major agricultural products.

**Key findings**

- Agricultural machinery provided with government intervention has been found to be substandard owing to inefficiency and flawed procurement.
- Labor is a limiting factor as opposed to land.

**Recommendations**

- Machinery related technology should be provided to private entrepreneurs rather than to smaller farmers/sustenance farmers. Such measure should not affect the existing business of agricultural machinery suppliers.
- Government should act as a facilitator for eliminating market failure and meeting the demand. Institutional support should be extended.
- 

**05. Land Reforms and Land Consolidation: Towards Sustainable Rural Development**

- R.M.M.H.K. Rambodagedara

**Objective:** To analyze land reform and land consolidation programmes in Sri Lanka and identify strategies for consolidation of lands in small holder farming sector/ estates in Sri Lanka.

**Key findings**

- Land consolidation is a top priority in the policy-led land reform and agricultural development drives executed in many countries.



- When previous land consolidation programmes are reviewed, there is a gap in long term public policies and those programmes, raising the issue of sustainability.
- Objectives of the said programmes do not align with the broad rural and agricultural objectives.

### Recommendations

01. For land optimization and minimizing issues of land fragmentation plot combination can be introduced as the initial step.
02. With regard to land consolidation, an integrated approach should be adopted in making farmer communities concentrate on long term agricultural and rural development objectives and linking them with sustainable land reforms/policies.
03. A national level intervention should be made in consolidation of lands with the participation of all stakeholders.

### 06. Promote Mushroom Industry through Farm Entrepreneurship in Sri Lanka

- S.P. Fernando

**Objective:** To assess the entrepreneurial behavior of farmers and emerging agri -business opportunities to uplift the mushroom industry of Sri Lanka and thereby strengthening rural farmers' economy and food security.

Writing of the report is in progress



## Environment

Related to 2021, there are three completed studies and three continuing studies in the division.

### 01. Crop Production Practices in Village Tank Systems in Dry Zone Sri Lanka.

- W.H.A. Shantha

**Objective:** Identification of recent land use changes and current pattern of crop cultivation in sedimented village tank systems in the dry zone of Sri Lanka.

#### Key findings

- As a result of human activities, catchment area of rural *ellanga tank systems* are gradually decreasing and due to the conversion of adjacent lands and reserves into paddy lands, total cultivation area under the tank has considerably increased.
- A drastic decline in the irrigation capacity of village tanks is observed specially due to disregard of general maintenance and operational activities and long term negligence of minor and major rehabilitation activities and lack of attention towards rural tanks
- Tank sedimentation triggered by extreme soil erosion caused due to human activities is reported to be the main reason for declining capacity of rural tanks.

#### Recommendations

01. An assessment on rehabilitation requirement should be prepared prior to rehabilitation of rural tanks.
02. At least three or four minor tanks belonging to the entire *ellanga* system should be rehabilitated or brought into optimal operational level.
03. In the rehabilitation process, safety of adjoining environment should be ensured. Attention should be paid to catchment area, controlling measurements of silt flowing into tanks, and canals of lower land.



## 02. It is Not Just Water that Flows Downstream: Water Management in the Eastern Slopes of the Central Highlands

- W.H.A. Shantha

**Objective:** To analyse water management issues and investigate existing mechanisms for water allocation among different water user groups in the eastern slopes of the central highland region.

### Key findings

- Due to unauthorized cultivation of commercial crops and vegetable in forests and water course reserves and scrubs, land use and soil coverage in upper catchment area have considerably changed during the past few decades.
- Water consumption and the number of users groups have been highly increased with the passage of time, creating very complex and diverse conditions and water has become an extremely rare resource, creating a tight competition among different water user groups.
- Unauthorized consumption and high volume of water used for varied purposes from irrigation canals have severe implications on livelihoods and food safety of farmers in the lower lands in the catchment.

### Recommendations

- I. Intensified cultivation of commercial crops in the upper catchment area and canal reserves and higher levels of water consumption should be regularly monitored and livelihoods of unauthorized farmers should be protected by providing them with alternative lands.
- II. A systematic procedure should be devised in partnership with estate administration in resolving issues related to water management and minor irrigation rehabilitation.
- III. Timely rehabilitation of irrigation structures should be undertaken to increase water drainage and irrigation efficiency.



### 03. OFCs in the Intermediate Season Cultivation Issues in Selected Districts

- **N.P.G. Samantha**

**Objective:** To identify issues and hindrances related to other field crops in paddy lands during the intermediate season.

#### Key findings

- Plantation of untreated seeds, unavailability of quality seeds, higher seed price, spread of seed diseases were the main concerns.
- Green gram cultivations in the intermediate season in the Hambantota district are affected by animal-led-damage, mostly inflicted by cattle.
- Fluctuation of price, low income due to pests and diseases, absence of a robust marketing mechanism, adequate machinery and a lack of experience in post-harvest management are major challenges faced by green gram cultivators in the intermediate season.

#### Recommendations

- I. Special attention should be paid to resolve the issue of providing quality green gram seeds for off season's cultivation.
- II. Allocation of adequate pasturing lands for cattle farming in the Hambantota district is an important policy initiative for expansion of cultivation in intermediate season towards minimizing instances of cattle trespassing the cultivated lands.
- III. Post-harvest practices can be improved with state intervention through granting of seed drying and cleaning machinery.



## Ongoing Research

### 01. Integrated Solutions for Water and Energy Consumption in Selected High Value Fruit Crop Production in Sri Lanka.

- T.P. Muniweerage

**Objective:** To examine the relative importance and comparative advantage of efficient water supplying methods such and sprinkler irrigation system as opposed to the traditional water and energy supplying measures used in the production of high value fruit crops in Sri Lanka.

#### Key findings

- Investing on micro water supply systems for all crops considered under the study is economically advantageous and compared to the lifetime of the crop, investment can be regained within a shorter period.
- Farmers lack knowledge in growth period of the crop, capacity of pumping equipment and daily requirement of water.
- Costs of traditional water supplying methods are higher compared to that of micro systems. Further, farmers' lack of knowledge related to crop water requirement and irrigation water supplying lead to excessive watering of crops, incurring an extra cost on power and labor.

#### Recommendations

- I. In any policy planned for optimal use of water, water requirement of and the consumption patterns of power should be considered.
- II. Awareness programmes informing advantages of micro water supplying as a strategy of climate adaptability should be launched.
- III. Promoting micro water supply systems using green technologies for power saving and expanding harvest through improved resilience for climate changes are recommended.



## 02. Commercialization of Organic fertilizer production: Issues and Prospects

- M.P.N.M. Dias

**Objective:** To identify existing issues and potentialities in commercial level's production of organic fertilizer to increase the production of quality organic fertilizer in Sri Lanka

### Key findings

- Compost fertilizer is the main organic fertilizer produced in Sri Lanka at commercial level and the percentage of liquid organic fertilizer production is relatively low.
- There is a lack of raw material for fertilizer production, rapid price increase of raw materials, no mechanism to determine the price and market for organic fertilizers.
- Issuance of substandard organic fertilizer products to the market in the absence of a proper mechanism to maintain the product quality has been the major challenge.

### Recommendations

- I. Formulation of a long term national level policy to increase the production and usage of organic fertilizers within Sri Lanka.
- II. Devising a well-grounded methodology to maintain the standards of organic fertilizers while providing financial assistance to boost production.
- III. Establishing a stable market for organic fertilizer products and introduction of new technology and machinery for the efficient production of organic fertilizer



### 03. Factors Determining Soil Conservation Practices used in Upcountry Vegetable Farming in Sri Lanka

- G.V.N. Ayomi

**Objectives:** To identify of factors affecting soil conservation methods followed by vegetable farmers of up country, study the relationship of their cost effectiveness, production cost and profit per unit related to sustainable land management practices, propose strategies and initiatives for sustainable soil conservation technology for sustainable vegetable farming and evaluate farmers' attitudes and enhancing their knowledge on soil conservation practices.

The study is in progress



## Food Systems

Under this subjected, there are 12 completed studies and 09 ongoing studies.

### 01.“Do We Know what We should be eating?” Consumption Patterns of Fruit and Vegetables

- U.D.R. Udari

**Objective:** To identify the factors affecting consumption of vegetables and fruits and potentialities and obstacles in increasing the consumption.

#### Key findings

- Majority of households (urban-69%, estate-69% and rural -56%) completely depend on external market for their requirement of vegetables and fruits. Quality, freshness, price and safety of vegetables and fruits affect the purchase of these goods.
- Artificial ripening of fruits using chemicals, less taste, higher price are major obstacles in increasing vegetables and fruit.
- About 97% of the responders of this study believe vegetables and fruits they buy are not safe and contaminated with pesticide.



## Recommendations

- I. Community health and nutrition programmes should be held continuously for promotion of vegetables and fruit consumption in households. Considering minimum consumption and diversification estate sector should be mainly targeted. Attention should be paid to transmit accurate information to the public on a healthy diet and the importance, health benefits of consuming diverse vegetables and fruits.
- II. A potential market for organic fruits and vegetables can be created by bringing together all parties for promotion, certification and marketing of organic products, primarily by increasing farming capacity. National level regulations should be imposed for issuing organic certification at the supply of organic vegetables and fruits to the local markets.
- III. Promotion of home gardens is a measure to increase the consumption of vegetables and fruit among rural population.

## 02. Mobile based solution for pest and disease management in paddy cultivation

- **M.B.F. Rifana**

**Objective:** Develop community-based approaches to minimize the damage by pest and diseases, using social computing techniques.

### Key findings

- A large majority (90%) of farmers have used “ladybird” mobile app for identifying pests and diseases.
- Half (45%) of them have expected solutions; farmers below 40 years have reported about pests and diseases through mobile phones.
- Majority of paddy farmers used the mobile phone of basic versions not compatible with high tech mobile apps. Poor signal strength and unavailability of internet facilities are the major obstacles.



### Recommendations

- To realize the prospects of digitalization of agriculture, improving the connectivity with agricultural areas and farmers is a key requisite. Therefore, state and private entrepreneurs for integrated or collective enhancement of communication infrastructure covering all cultivation areas to reach farmers must be encouraged.
- Agrarian Services Centers should be converted into entities where officers with IT skills and project know-how are regularly in contact with each other.
- The Department of Agriculture can moot projects to familiarize farmer communities with e-solutions.

### 03. Factors Influencing Vegetable Farmers' Decisions

- I.P.P.M. Wijesinghe

**Objective:** To study availability and ability to access of information influencing vegetable growers' decisions, identifying such information and suggesting strategies to minimize harms of misinformation.

#### Key findings

- A sizeable percentage of farmers were aware of "1920" farmers assistance service implemented by the Ministry of Agriculture and "6666" Mobitel Agri price index implemented by Hector Kobbekaduwa Agrarian Research and Training Institute. Very less percentage of farmers were aware of "Govi mithuru" app "Krushi FM Web radio" and "Govi App". Most of the vegetable farmers (65%) have only little possibility to reach the sources where this information is shared due to technological barriers.
- At present, diverse sources (project service, agricultural chemical sales centers and neighboring farmers) are used for obtaining information from vegetable growers.
- About half of the vegetable growers have received productive information. A larger population has covered the production cost with profit.



## Recommendations

- I. Implement awareness programmes by the Ministry of Agriculture to raise farmers' awareness on making informed decisions.
- II. Setting up a system that enables vegetable growers to obtain information through project officers because the efficiency of systems sharing information from top to bottom level through a third party is at a higher level.
- III. Granting a fertilizer subsidy and a tax concession on imported vegetable seeds towards reducing seed price production cost.

## 04. Rice Value Chain in Polonnaruwa, Sri Lanka.

- W.A.N. Wijesooriya

**Objective:** To analyze the value chain of paddy/ rice in Polonnaruwa district, a major paddy cultivation zone in the country.

### Key findings

- The unit harvest of paddy cultivation remained 89-138 per bushel and during the *Yala* season farm price was between Rs. 48.00 - 52.00 per kilo (white long rice) indicating a growth of 25% compared to the price in 2018.
- In the value chain of paddy/rice, addition of value occurs in two instances as a 14% value addition by the paddy farmer and a 24% value addition by the rice mill owner. The proportion between the price received by the farmer and the retail price of rice in Colombo remained 1.97- 2.2.
- In the year 2011, the market share (concentration ratio) of the four main rice mills in the Polonnaruwa district was 30% and has increased to 50% by 2019, indicating a state of oligopoly in the market.

## Recommendations

- Increase productivity by studying the scientific cultivation methods followed by the farmers receiving a bountiful paddy harvest and sharing the methods among other farmers.



- Encouraging investments to establish several large scale rice mills in rural areas specially in the Eastern province, Anuradhapura and Mannar by medium scale rice mills showing a satisfactory progress and major food traders, introducing an integrated approach for small scale rice mills.
- Development of value chain through inspiring investors towards industries like producing rice bran oil, rice husk ash and promotion of other value added industries related to rice production.

### 05. Policies that Matter or Are Forgettable: The Evaluation of Paddy Policies in Sri Lanka: 1998 to 2018.

- **M.D.D. Perera**

**Objective:** To evaluate the government policies implemented in the past two decades for formulating effective policies for achieving sufficiency in rice.

#### Key findings

- All policies related to paddy production can be divided into: irrigation, paddy cultivation and diversification, lands, fertilizer, subsidies, adaptation, research and development, paddy marketing and trade.
- In production price estimate and market price estimates, a negative value is indicated, implying that policy tools of the government in power creates a minimum farm gate and a local market price and thereby discourage the production of goods.
- More access to information makes a positive impact on harvest and climatic variables, specially the rainfall has a substantial effect on paddy harvest.

#### Recommendations

Agricultural policies deviating from distorting the market and exchange of blanket incomes are recommended, focusing on strategic investments favourable in achieving sustainable productivity and climate resilience.

- Such action may facilitate a rise of income for farmer families while discouraging transition of farmers.
- Policies assisting climate change adaptability, particularly erratic rainfall patterns, are recommended.



## 06. Value Chain Analysis of the Milk Industry in Sri Lanka

- H.M.S.J.M. Hitihamu

**Objective:** To identify the actors of the existing value chain of dairy industry and to assess the efficiency of resource utilization by each actor of the existing value chain.

### Key findings

- Five major value chains of dairy industry have been identified. It was also found that dairy producers are not utilizing inputs (fodder, water) efficiently.
- Only six percent dairy farmers make byproducts. Milk toffee producers and traditional curd producers are better entrepreneurs.
- Labour cost constitutes half of the total cost.

### Recommendations

- I. Encourage dairy farmers to engage in related industries.
- II. Efficient use of inputs should be a key highlight in training and practical workshops.
- III. Educating farmers on increasing the productivity of small scale dairy farms and resource optimization.



## 07. Impact of Home Garden Coconut Cultivation on Coconut Kernel based Industries in Sri Lanka

- G.V.N. Aiome

**Objective:** To explore the possible impact of home garden in increasing national coconut production.

### Key findings

- Main impediment in coconut kernel based industries; plenty of relatively unstable market conditions.
- Due to harms of pests, coconut trees are affected annually.
- Producers emphasized the need for modern technology in processing sections to maintain higher production standards.



### Recommendations

- I. Promotion of planting of coconut in urban and peri urban home gardens.
- II. Following effective management practices to enhance productivity of coconut cultivation.
- III. Modern technology in processing sections in order to maintain higher production standards.

### **O8. Seed sector in Sri Lanka: performance, potentials and strategies: The way forward**

- **U.D.R. Udari**

**Objective:** To examine issues and potentialities in the seeds sector to plan strategies and policies for its development.

#### Key findings

- Declining of productivity as a result of substandard seeds, pests and diseases, declining of standards of harvest and non-availability of a mechanism to pay compensation to farmers are the main issues.
- Seed importation has serious implications on government finances and local genetic resource utilization.
- There is a need to devise mechanisms through public-private partnerships enabling farmers to obtain quality seeds in time.

#### Recommendations

- Amending the Act or drafting a new Act in conformity of present legal requirements and new trends in agricultural and scientific development.
- Through a public private partnership, strengthening the seed sector.
- Producing of informal seeds through seeds extension service should be improved with Agrarian Services Centers playing a lead role. Training farmers on diverse seed production sectors and motivating them to produce seeds will assure the availability of quality seeds.

## 09. Transaction Cost: Potatoes and Onions

- **W.H.D. Priyadarshana**

**Objective:** To educate policymakers on the trends of consumer price fluctuations of potatoes and onions

### Key findings

- A large quantity of onions and potatoes are supplied to special economic centers and Colombo Manning Market through traditional supply chains.
- Farmers sell their harvest to the collectors or send it to the commission agents of the wholesale market through transport agents.
- In marketing potatoes and onions, a major role is played by commission agents and large scale traders.

### Recommendations

- Reducing the number of middlemen in the supply chain by organizing farmers and directly connecting them with purchasers such as super markets, hotels, canteens, hospitals and retail sellers.
- Improvement of marketing infrastructure such as store facilities, cool houses, loading and weighing centers.

## 10. Socio – economic Status of Spice Industry in Sri Lanka and Challenges and Potentialities of the Industry (Research Related Pepper Cultivation)

- **R.L.N. Jayatissa**

**Objective:** Identifying reasons for the low productivity of pepper cultivation and impediments for improvement of the industry.

### Key findings

- Extension of pepper cultivation lands have been categorized into six groups and the smallest category is 0.25-0.5 acres (13) while the largest category is 0.5-1.0 acres (33%).
- It is the main source of income for a majority (63%) of farmers.

### Recommendations

- I. Persuading famers to increase the productivity of pepper cultivation in a national level programme.
- II. Further enhancement of field level project services of the Ministry of Export Agriculture and expanding the technological flow to the farmers.
- III. Enhancing the present value addition process of pepper cultivation and initiation of pepper processing zones at village level.

### 11. OFC Cultivation in the Northern Province: Issues and Possible Solutions.

- R.L.N. Jayatissa

**Objective:** To study the issues in additional crop cultivation in the North Central province and present solutions with policy inputs.

#### Key findings

- Agri- wells remaining in a dilapidated conditions for a long time has caused a scarcity of water for additional crops.
- Shortage of quality seeds, costs of cultivation, inability to receive a reasonable price for the harvest and difficulty to access cultivatable lands have been identified as other issues in the additional crops sector.
- Flawed government policies on food importation and labour, shortage of agricultural officers for project services, a lack of infrastructure, pests, diseases and damage caused by animals have contributed to low productivity in additional crops.

#### Recommendations

- I. Increasing the water capacity of local tanks under the scheme of Moragahakanda reservoir.
- II. Providing training to farmers on removing silt from medium and small scale tanks and expanding water capacity, renovation and maintenance of micro irrigation systems.
- III. Granting of land ownership and releasing already cultivated *Chena* lands and lands controlled by the Security Forces.

## 12. Promotion of Digital Marketing Platform to Create a Market Link among Producers, Sellers and Consumers

- H.M.J.K. Herath

**Objective:** To connect farmers, sellers and consumers in the agricultural market for minimizing marketing issues, post-harvest losses, the Geographical Technology Division of the Hector Kobbekaduwa Agrarian and Research Centre has introduced a mobile phone application.

**Progress:** Any smart phone user can order and get delivered daily needs. This application has been further developed with the assistance of the Arthur C. Clarke institution for Modern Technologies. “*Supiri Pola*” is accessible in Sinhala, Tamil and English languages. The consumer feedback on the services obtained can also be recorded. The Training Division of the Institute educate participants on this mobile application.

### Ongoing Research

#### 01. Evaluation of 2006 Dairy Development Policy in Sri Lanka

- H.M.S.J.M. Hitihamu

**Objective:** To understand the impact of implementation strategies of Dairy Production Development Policy 2006, assess the relevance, effectiveness and efficiency of the projects and programmes carried out for the development of dairy production in Sri Lanka.

#### Key findings

- In keeping with the national dairy policy, a number of projects to increase the milk production of Sri Lanka has been implemented.
- The Department of Animal Production and Health is continuing the artificial insemination programme at the Kundasale Artificial Insemination (AI) centre, to achieve higher productivity. AI centres in Kundasale and Polonnaruwa have been further developed to produce semen of Jersey and Friesian breeds.
- Despite of the numerous efforts of the Department to promote forage, issues related to producing of herbivorous food for increased milk production and preservation of such food persist.



### Recommendations

- I. Attention should be paid to enhance the knowledge of the factors such as nutrition, breeding, technology and livestock management as well.
- II. Educating farmers on providing required facilities for animals in artificial insemination procedures.
- III. Importance of providing herbivorous food for cattle should be highlighted and farmers should be provided facilities and encouraged to grow grasslands.

## 02. Production and Marketing Trends of Chillies in Sri Lanka

- **W.H.A. Shantha**

**Objective:** To observe the local hybrid chillie cultivation and to ascertain its potentiality in producing dried chillies.

### Key findings

- Due to factors: increased harvest, higher resistance to leaf curl disease, longer life span and being easier to harvest due to extra height of the plant, the local hybrid variety (MICH HY 1) is highly popular than the imported varieties.
- Higher market price of local hybrid chilli seeds can be identified as an obstacle for small scale farmers in converting into a commercial level cultivation.
- Adverse weather during the harvesting season, being labor intensive and lower market price have discouraged farmers from producing dried chillies.

### Recommendations

- I. Training programmes and other assisting programmes targeting seed producers as well as pep programmes should be intensified.
- II. Imposing a ceiling price for local hybrid chilli seeds, regulation of private sector seed producers' market and formulation and implementation of regulations for maintaining the quality of seeds.
- III. To get a better price for local dried chillies, import tax of dried chillies should be revised taking the customers' aspirations into consideration. Such measures are likely to encourage the local production of dried chillies.



### 03. A Value Chain Analysis of Big Onion in Sri Lanka

- **M.R.N.K. Rambukwella**

**Objective:** To identify major problems, obstacles and potentialities regarding B' onion production and marketing in Sri Lanka.

#### Key findings

- Farmers and private sectors intervention in B' onion seed production has been gradually decreased and data and information of seed production and importation has not correctly been recorded.
- The production cost has escalated with the spiraling local seed cost.
- A consistent imported B' onion supply exceeding the monthly and annual requirement and the Special Commodity Levy has not imposed during the harvesting period.

#### Recommendations

- I. A programme encouraging farmers and the private sector towards seed production should be implemented and an updated database on seed production and importation should be maintained.
- II. A government subsidiary scheme on inputs has to be in place to reduce the seed production costs.
- III. Importation of B' onions should be subjected to a licensed system which calculates the accurate monthly and annual requirements. Also, the Special Commodity Levy should be imposed at the correct time.



#### 04. Maize Value Chain Analysis: Status, Constraints and Opportunities in Feed and Food Industry.

- R.P. Vidanapathirana

**Objective:** To conduct a broad analysis of the value chains of maize for presenting recommendations on increasing the productivity and efficiency of value chains of maize in forage and different food sectors.

##### Key findings

- A lack of chemical fertilizers and agro chemicals, pest damage (Sena caterpillar), production price fluctuation, wildlife inflicted damages, land issue as well as higher seed price were among the main concerns.
- Higher prices for maize, financial impediments, import restrictions and unavailability of storage facilities were the major challenges faced by traders while higher price of maize, inconsistent supply, price instability, cost of power and higher price of imported inputs were the key issues faced by food producers.

##### Recommendations

- I. To meet the increasing demand of maize for forage production efficiency and productivity of maize value chains should be induced. For the development of the value chain, intervention in diverse stages of the value chain is required while building trust among different stakeholders.
- II. With the import ban of maize, local production and its productivity should be increased. Increasing the quantity of *Yala* season's cultivation and improving the productivity of *Maha* season is important. Expanding the access to quality inputs (hybrid seeds, fertilizer); granting loan facilities to farmers; encouraging cultivation on contract basis; making more investments for agricultural research for local maize are vital steps.
- III. Provision of modern technology and other services for the production of quality maize for poultry feed is essential. As the entire demand of maize cannot be met locally, policy decisions must be taken to allow these producers to import maize.





## 05. Modern Vegetable Value Chains of Sri Lanka which Use Online Sales Methods.

- **G.G.De.L.W. Samarasinghe**

**Objective:** To study the use of e-marketing methods for vegetable marketing in Sri Lanka.

### Key findings

- At present, use of e-marketing systems for buying vegetables is at a primary level.
- E-marketing methods that are continuously used for buying vegetables have been produced under special conditions.
- Through e marketing methods producers have received a higher price.

### Recommendations

- I. Providing the ordered goods correctly, timely and in right quantities fulfilling consumers' aspirations
- II. Supplying fresh vegetables at a lower price as opposed to traditional markets can motivate consumers to purchase vegetables through e marketing.





## 06. Potato Value Chain: Status, Challenges and Opportunities.

- R.D. Wijesinghe

**Objective:** To identify potato value chain actors, assess profitability of actors, marketing margin and identify constraints and opportunities in the sector

### Key findings

- Unavailability of high quality seeds at a reasonable /an affordable price is the major issue faced by farmers.
- In the marketing phase, commission agents at economic centres act as price adjustors mainly due to farmers lacking the bargaining power.
- Lack of chemical fertilizer, higher labour costs, lapses in project service, difficulties in obtaining formal loans, intense market competition with imported potatoes are the other problems faced by of farmers.

### Recommendations

- I. Strengthening of the government seed production process enabling farmers to buy quality seeds at a reasonable price.
- II. Making necessary improvements in the project service for educating farmers on the marketing and the production processes.
- III. Motivating farmers for cooperative activities and enabling their access for loan facilities and reducing production costs and strengthening their bargain ability.



## 07. Value Chain Analysis of Soya Beans

- N.P.G. Samantha

**Objective:** To conduct a broad value chain analysis to understand the market opportunities through the value chain of Soya beans.

### Key findings

In the Sri Lankan context, marketing system of Soya beans differs from that of other field crops such as green gram or Cowpeas. Even though it operates independently at horizontal level, there is a strong vertical bond among the actors of Soya bean value chain.

- The most popular soya beans cultivation system in Anuradhapura district is a forward contract system. All inputs are provided by soya beans processing companies.
- Unavailability of quality seeds at the market, lack of technical support at planting and harvesting levels, and excessive labor costs due to non-availability of suitable machinery are the main challenges of the farmers.

### Recommendations

- I. Through the introduction of machinery at seed processing and planting levels, production costs of soya beans can be substantially reduced.
- II. Granting quality inputs such as seeds and fertilizer in time is essential.
- III. Compared to other countries of the region, production of assorted soya foods is relatively low in Sri Lanka. However, the ability and opportunity of expanding soya foods is at a higher level; therefore, creating awareness for encouraging the soya food consumption is vital.



## 08. Comparative advantage and export competitiveness of selected food commodities

- **E.A.C. Priyankara**

**Objective:** Identification of more advantageous fruit varieties, main competitors and factors influencing comparative advantage

### Key findings

- Sri Lanka has advantage in the world market for papaya and pineapple exports.
- Despite the growth achieved in papaya exports, it is on the decline for pineapple exports.
- Labor-Capital ratio and direct foreign investments have contributed to the growth of comparative advantages of the exportation of papayas and pineapples.

### Recommendations

- I. By granting more land and capital for the cultivation of papaya and pineapple, Sri Lanka can claim more comparative advantages through exporting these fruits. National budget policy and State's financial policy can contribute significantly in this attempt.
- II. Transferring alternative markets with a special focus on raising the diminishing advantages regarding pineapple.
- III. Foreign direct investment in pineapple and papaya cultivation should be encouraged.

## 09. Export Potentials of Major Fruits of Sri Lanka: An Economic Analysis

- **A.K.A. Dissanayake**

**Objective:** To analyze the situation, performance and potentiality of present fruit exports and identifying major obstacles affecting the exports to facilitate policy making for progress of the fruit export industry in Sri Lanka.

Progress: Field work related to this study has been completed and writing of the research report is in progress.



## Agriculture Marketing Information System – AMIS

Agriculture Marketing Information System (AMIS) is a project primarily oriented towards gathering and distribution of information of food items daily for collecting information of food items (wholesale, retail and farm prices). Policy developers, producers, traders and consumers get immense benefits through this endeavor and our institution is continuously submitting information collected through the project for weekly meetings held at the Presidential Secretariat reviewing cost of living and food security.

Under this Project, price information and marketing information of food items is obtained, under both wholesale and retail price categories from 09 retails shops, Wholesale market at Pettah and from another 30 markets located in major districts considered producing and consuming food items and these information is published in the periodicals “Weekly food items reviewer” and the “Monthly food items reviewer” (published in the three languages) which are the main publications of the Marketing, Food Policies and Agri-Business division.

In addition, information of daily wholesale prices of food items obtained from main markets is distributed via the “6666 - Agri Price information index” feature of Mobitel mobile network. Such information being confirmed and authenticated of by us, later added to the data base. Thereby consumers willing to know the prices of food items can get connected to an Interactive Voice Response (IVR) available both in Sinhala and Tamil languages, by dialing 6666 through a Mobitel telephone line.

The objective of this project is to Submit marketing information for policy developers; publish of two major level periodicals; increase the income of beneficiary farmers by empowering them through the marketing information system and presenting recommendations for the enhancement of present Agricultural marketing information service if the distribution of marketing information among parties engaging in Agricultural marketing seems required. This project is continuously in operation since its inception in 1979. The project is funded by the general treasury and policy developers, traders, consumers and private entrepreneurs are the beneficiaries of this project.

We could collect price information from almost all markets during the period of January to August 2020 by deploying 28 field officers from 28 areas and another 11 casual inspectors for

Colombo market. However, on 24th of September 24 officers out of 28 casual inspectors resigned for joining the public service as development officers. Despite we had to face several hindrances due to the closure of the country in view of the outbreak of Covid – 19 pandemic, we were able to recruit 12 casual investigators in October 2020. In addition “6666 - Agri Price index” feature of Mobitel caller service is also currently in operation providing wholesale price information from seven economic centers.



## Training programmes

### 01. Workshop on Application of Agri-business Concept and Market Extension.

- W.H.A.Shantha

**Objective:** To enable Agriculture undergraduates in gather experience on agri business concepts of Sri Lanka with special focus on agricultural value chains and marketing sectors of subsistent agriculture.

Thirty final year students of agri business management of the Faculty of Agriculture and Plantation Management of the Wayamba University of Sri Lanka participated in this four-day training held from 28<sup>th</sup> of November to 01<sup>st</sup> of December 2021 at HARTI.

#### Targeted outcomes

- Transferring of practical knowledge and experience on “Agricultural Marketing and Information System” of the institute to the participants.
- Sharing research-related experience of HARTI, specially related to the production and marketing of food crops and agri businesses, with the participants.
- Creating a platform to share their views and discuss issues with main stakeholders and middlemen in selected agricultural value chains.

#### Team of trainers

Shantha Hewage, Sidath Bandara, Malinda Senevirathna, Dr. Samantha Palliyaguru, Geethani Samarasinghe, Dr. Chamith Priyankara, Thilani Padmajani, Nalaka Wijesuriya, Dr. Asanga Wijesinghe, Subhashini Abeyasinghe, Lal Hettige, Gamini Hadunge.

### 02. Training Programme on Social Mobilization

**Objective:** To provide theoretical and practical knowledge on the key concepts of social mobilization.

This four-day programme was conducted for 35 Development Officers attached to the Divisional Secretariat of Kegalle, from 26<sup>th</sup> -29<sup>th</sup> of October 2021 at Sanasa University, Kegalle.



**Targeted outcomes**

- Awareness creation in community development programmes, from programme planning to project implementation and evaluation.
- Improving resource optimization skills of communities in development programmes.
- Formulation of community action plans based on community participation plans and activities.

**Team of trainers**

S.M.A. Samarakoon, M.D.S. Lurdu, B.A.D.S. Bamunuarchchi, H.J.C. Jayasuriya, Rifana Buhari, Sangeeth Fernando.

**03. Application of Participatory Techniques for Planning and Managing Rural Development Programmes (PRA)**

- H.J.C. Jayasuriya

**Objective:** To enhance the theoretical, practical knowledge and skills of key concepts and methodologies in the formulation of community action plans for rural development through community participation.

Three five-day training programmes targeting 103 Assistant Planning Directors attached to the District Planning Division in the Nuwara Eliya, Puttalam and Badulla districts were held, from November to December 2021.

**Targeted outcomes**

Creation of a pioneer group of Development Officers and Assistant Planning Directors in the relevant districts using the community participation methodology,

**Team of Trainers**

S.M.A. Samarakoon, P.C.J. De Silva, H.J.C. Jayasuriya, Sangeeth Fernando, R.L.N. Jayathissa



#### 04. Training Programme for Strengthening Women Farmer Entrepreneurs to Enhance the Rural Economy

**Objective:** Improving knowledge, attitudes and skills of women to earn incomes at domestic level using their optimal skills and to contribute in poverty eradication.

Five hundred and eighteen female entrepreneurs selected from Agricultural Societies belonging to the Department of Agrarian Development in Rathnapura district were trained one-day training programmes held in 10 sessions.

##### Targeted outcomes

- To realize the ways and means to empower oneself as a woman.
- To identify the role of woman in nutrition, health and food security of the family.
- To identify how to act as resourceful entrepreneurs in the household with a home garden packed with nutritional food.

##### Team of Trainers

S.M.A. Samarakoon, P.C.J. De Silva, H.J.C. Jayasuriya, H.P. Munasinghe, U.W.P.R. Ranatunge





Reports prepared on timely topics on the request of sponsors

Periodicals

**REVIEW**  
Draft National Agriculture Policy

**Protein-rich Milk to Forest Destruction Sites in Sri Lanka**

**BIOMASS AVAILABILITY**

**REVIEW**  
National Environment Policy

Year	Value 1	Value 2	Value 3
2011	1,111,000	1,111,000	1,111,000
2012	1,111,000	1,111,000	1,111,000
2013	1,111,000	1,111,000	1,111,000
2014	1,111,000	1,111,000	1,111,000
2015	1,111,000	1,111,000	1,111,000
2016	1,111,000	1,111,000	1,111,000
2017	1,111,000	1,111,000	1,111,000
2018	1,111,000	1,111,000	1,111,000
2019	1,111,000	1,111,000	1,111,000
2020	1,111,000	1,111,000	1,111,000
2021	1,111,000	1,111,000	1,111,000

**රජයේ ප්‍රවර්ධන මණ්ඩලයේ ස්වයංපෝෂිත කෘෂිකර්මාන්තයේ සාර්ථකත්වය පිළිබඳව විමර්ශන ප්‍රවෘත්ති**

“Govimina” Newspaper and Website



Govimina, a monthly issue, is the latest addition to the list of general publications of HARTI. It carries current news and issues concerning agriculture and agrarian sectors. It is a free publication distributed among the farmer community through Agrarian Services Centres.

**Social Media**

Social media provide an interactive space and a common platform to share information and raise awareness of the current agrarian related issues and possible policy-directed remedies emerging from the research undertaken by the institute. A dedicated YouTube channel and Facebook, Twitter and Instagram accounts have been set up and are vigorously functioning to share information on HARTI research, field related conferences, seminars, training programmes and other services, reaching out to a wider range of users.

**Library**

The main purpose of the library is to collect and record agricultural information for the use of the staff of the Institute and other interested parties to meet their agricultural information needs.

**Digitalization of Institutional Publications**

Under the national digitalization project implemented by the National Science Foundation of Sri Lanka, an electronic repository of scholarly literature and electronic publications of our institution has been set up to enable a hassle-free access to the published contents of the Institute. The link is <http://nsf.ac.lk> .

**Contribution of Electronic and Printed Media**



TV Programmes



Scholarly Journals



## External Partnerships

- Collaborative Research
- Food and Agriculture Organization (FAO)

As per a previous collaboration of Hector Kobbekaduwa Agrarian Research and Training Institute and Food and Agriculture Organization (FAO) of the United Nations, the project titled: “Building evidence on the impact of improved project services towards rice production in Anuradhapura district in Sri Lanka,” is being implemented.

This study located in Anuradhapura district under the “Save & Grow” project conducted a domestic survey of 1100 paddy farmers of 110 Farmer Societies in the district in October 2018 and February 2020. This database is used as the foundation of the present project. The second stage implemented in 2019 would analyze the impact of diverse fertilizer subsidies through a survey involving 1100 households. The survey is redesigned as the previous “Save & Grow cultivation safeguarding resources” project. Due to revision of the national fertilizer policy, it is expect to compare the two methods of implementing fertilizer subsidy and to use panel data econometric methodologies.

## World Vision Lanka



HARTI received a research fund amounting to Rs. 11 million awarded by World Vision Lanka for the study: “Climate Adapted Farming Practices and Climate Adaptation of Vulnerable Groups in the Dry Zone of Sri Lanka”. The main objective of the study was to observe climate adaptive cultivation practices and their contribution in increasing women’s and children’s stamina in the dry zone with higher vulnerability to climate change.

Field activities of this project which will be implemented in two years have been planned up to September 2023.

A preliminary report of direct and indirect impacts of climate change towards women and children was prepared in 2021.

### **Training Partnerships**

A two-day training benefitting the agricultural entrepreneurs of Badulla and Nuwara Eliya districts on the usage of market information in agri business management was conducted by the Marketing, Food Policies and Agri business division of the Institute at the Capital City Hotel, Badulla.

Senior Research Officer Dr. E.A.C. Priyankara, and Research Officers Mr. Prasanna Wijesinghe and Virajith Kuruppu were the resource persons.

### **Memoranda of Understanding**

Furthering its research and training goals HARTI entered into several research and academic partnerships with all local universities constituting agriculture faculties.

On the approval of the Board of Governors, HARTI signed MoUs with eight state universities and the SANASA University. Another MoU will be signed with the University of Sabaragamuwa in December.

## Staff Capacity Development

### Status of the cadre as at 31st of December 2021

	Status as at 31.12.2020	Terminations, resigning during the year	appointments during	Status as at 31.12.2021
Director	1	-	-	1
Additional Director	-	-	-	-
Heads of the Divisions	6	-	-	6
Research Staff	30	1	-	28
Administrative Staff	9	-	-	9
Senior Library Staff	2	-	-	2
Data Development Bank	2	1	-	1
Computer Unit	1	-	-	
Publication Unit	5	-	-	4
Statistic Staff	21	6	-	15
Technical Staff	2	-	4	6
Clerical, Secretarial and Similar Grade Staff	45	1	-	44
Operational and Similar Grades	45	2	-	43
<b>Total</b>	<b>169</b>	<b>11</b>	<b>4</b>	<b>159</b>

## Training of the Staff

A large number of staff training programmes conducted in the year was held online. Training programmes, organized internally and externally, also aimed at the staff of HARTI.

### Training programmes organized by external institutions

	Training programme	Number of participants	duration
1.	<b>Digitalization of the village as an instrument for the promotion of economic empowerment and development of the village within the context of village ruling.</b>	Research Officers (01)	01 day
2.	<b>Online programme for the creation of research ideas.</b>	Research Officers (05)	01 day
3.	<b>Advisory development for the qualification of carbon footprint.</b>	Research Officers (01)	05 days
4.	<b>Analysis of agricultural policy</b>	Research Officers (01)	01 month
5.	<b>Modern developments in post-harvest management and value addition of fruits and vegetables</b>	Research Officers (01)	01 day
6.	<b>Online programme under the theme "How to success your profession?"</b>	Research Officers (01)	01 day

<b>7. Annual verification of stocks</b>	Accountant (01)	03 days
<b>8. Capacity development</b>	Administrative officer (01)	03 days
<b>9. Office management and financial regulation</b>	Management Assistant (01)	02 days

### **Training programmes organized by the institution for the staff**

01. The following was conducted for the Management Assistants on zoom.

1.2 Training programme on Bank reconciliation statement 02 days

1.2. Introduction to “double entries” in accounting 01 day

1.3 preliminary introduction of the procurement procedure 01 day

01. Training programme of “SATA” package for statistic staff.

## 15. Performance of Achieving Sustainable Development Goals (SDG)

Sustainable Development Goal	Target	Indices of Achievement	Progress of Achievements up to now		
			0% - 49%	50%- 74%	75%-100%
01. Zero poverty, end hunger in all its forms everywhere	Thattumaru - Kattimaru and Productivity: An Assessment of Traditional Tenurial Systems in the Wet Zone.	Research report			✓
	Initiating Farm Mechanization through Agricultural Service Providing Hubs Run by Local Agri-Entrepreneurs: Challenges and Opportunities.	Research report			✓
	Integrated Solutions for Water and Energy Consumption in Selected High Value Fruit Crop Production in Sri Lanka.	Research report			✓
	Policies that Matter or Are Forgettable: The Evaluation of Paddy Policies in Sri Lanka: 1998 to 2018.	Research report			✓
	Value Chain Analysis of the Milk Industry in Sri Lanka.	Research report			✓
	Socio-economic Status of Spice Industry in Sri Lanka and the	Research report			✓

02.Achieve Food Security and Improved nutrition and Promote Sustainable Agriculture	Challenges and Potentialities of the Industry				
	Transaction Cost: Potatoes and Onions	Research report			✓
	OFC Cultivation in the Northern Province: Issues and Possible Solutions.	Research report			✓
	Evaluation of 2006 Dairy Development Policy in Sri Lanka.	Occasional publication		✓	
	Potato Value Chain: Status, Challenges and Opportunities.	Research report		✓	
	Land Development Ordinance (LDO) in Action: Achievements and Prospects of Highland Alienation.	Research report			✓
	Minor Irrigation Rehabilitation (MIR): An Assessment of Awarding Rehabilitation Contracts to Farmer Organizations (FOs).	Research report			✓
	Nationally Important Agricultural Heritage Systems (NIAHS) of Sri Lanka: Recognition and Conservation.	Research report			✓
	Programm Management;	Research report			✓

	Challenges in implementing development programmes/projects by the Department of Agriculture and Department of Agrarian Development.				
	Agricultural Projects and Instruction Service in Food Crops Sector in Sri Lanka: Challenges, Issues and Alternatives for Improvement.	Working paper		✓	
	Intensification of Active Paddy Land use through Youth Participation and Organic Paddy Cultivation.	Working paper		✓	
	Success of Re-Cultivation Programmes in Abandoned Paddy Lands.	Occasional publication		✓	
	Initiating Farm Mechanization through Agricultural Service Providing Hubs Run by local Agri-Entrepreneurs: Challenges and Opportunities.	Periodical report		✓	
	Land Reforms and Land Consolidation: Towards Sustainable Rural Development.	Occasional publication		✓	
	Promotion of Mushroom	Research report		✓	

03.Ensure Availability and Sustainable Management of Water and Sanitation for All	Industry through Farm Entrepreneurship and Agri business Development for Strengthening of Food Security and Income Generation of Sri Lanka				
	It is Not Just Water that Flows Downstream: Water Management in the Eastern Slopes of the Central Highlands.	Working paper			✓
	OFCs in the Intermediate Season Cultivation Issues in Selected Districts.	Working paper			✓
	Integrated Solutions for Water and Energy Consumption in Selected High Value Fruit Crop Production in Sri Lanka.	Occasional publication		✓	
	Commercialization of Organic Fertilizer Production: Issues and Prospects.	Research report		✓	
	“Do We Know what We Should Eat?” Consumption Patterns of Vegetables and Fruit.	Research report			✓
	Mobile Based Solution for Pest and Disease	Research report			✓

Management in Paddy Cultivation.				
Factors Influencing Vegetable Farmers' Decisions.	Research report			✓
Rice Value Chain in Polonnaruwa, Sri Lanka	Research report			✓
Impact of Home Garden Coconut Cultivation on Coconut Kernel based Industries in Sri Lanka.	Research report			✓
Socio- economic Status of Spice Industry in Sri Lanka and the Challenges and Potentialities of the Industry	Research report			✓
Potato Value Chain: Status, Challenges and Opportunities.	Research report		✓	
Production and Marketing Trends of Chilies in Sri Lanka.	Occasional publication		✓	
A Value Chain Analysis of Big Onion in Sri Lanka.	Working paper		✓	
Maize Value Chain Analysis: Status, Constraints and Opportunities in Feed and Food Industry.	Working paper		✓	
Modern vegetable value chains of Sri Lanka which uses	Working paper		✓	

	on line sales methods.				
	Value Chain Analysis of Soya beans	Working paper		✓	
	Comparative Advantage and Export Competitiveness of Selected Food Commodities	Research report			✓
	Export Potentials of Major Fruits of Sri Lanka: An Economic Analysis	Research report			
	It is Not Just Water that Flows Downstream: Water Management in the Eastern Slopes of the Central Highlands.	Working paper			✓
04. Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable	Land Development Ordinance (LDO) in Action: Achievements and Prospects of Highland Alienation.	Research report			✓
05. Ensure Sustainable Consumption and Production Patterns	Crops Production Practices in Rural Tank Systems in Dry Zone.	Research report			✓
	Study on Water Management of the Eastern Slopes of Central Hills.	Working paper			✓
06. Calls for Urgent Action to Combat Climate Change and Its Impacts	Crop Production Practices in Village Tank Systems in Dry Zone Sri Lanka	Research report			✓
	Study on Water Management of	Working paper			✓

	the Eastern Slopes of Central hills.				
	Factors Determining Soil Conservation Practices used in Upcountry Vegetable Farming in Sri Lanka	Research reports		✓	
07 Ensure Sustainable Consumption and Production Patterns	Export Potentials of Major Fruits of Sri Lanka: An Economic Analysis	Research reports		✓	
	Workshop on Application of Agri-business Concept and Marketing Extension	Training programmes			✓
	Application of Participatory Techniques for Planning and Managing Rural Development Programmes (PRA)	Training programmes			✓
	Training Programme for Strengthening Farmer Women Entrepreneurs to Enhance Rural Economy.	Training programmes			✓
	Training Programme on Social Mobilization	Training programmes			✓

## The Way Forward

### Restructuring of the Research Divisions

With the outstanding progress achieved in the year 2021, HARTI is stepping ahead with heightened expectations. Challenges encountered in the latter part of 2021 have formed into a source that provides strength and a new direction to attain the goals outlined in the institute's mandate. Repositioning of the institution with changing perspectives amidst a host of challenges at home and abroad, while aligning with the institutional goals, is critical and key to meet the research demands of today's world.

As such, Hector Kobbekaduwa Agrarian Research and Training Institute is being restructured to meet the above criteria. Accordingly, research-the core dimension of the institution will be strengthened by attaching more human resources under the sectors of food, environments, and rural development. Preliminary focus will be given to ensure the reaching multifaceted fields, analytical accuracy, timeliness and policy relevancy of the research agenda and the research output of the institution.

Data Management Division will extend its support through analysis of data and information. Through a period of 50 years of its history, the Data Management Division of Hector Kobbekaduwa Agrarian Research and Training Institute is readily available for the provision of high quality data to Government, private and stakeholders, researchers and the general public. In dissemination of knowledge to stakeholders, a major role is played by the Information and Communication Division. Division of Education and Training is prepared to serve a large number of communities by widening of its scope under the guidance of Director. Mr. Malinda Seneviratne, and the heads of divisions.

In this background, for meeting the goals of the institute per se and socio-economic goals in general, HARTI is geared with research expertise with its cutting-edge research to disseminate knowledge through diverse tools such as training, education, data and communication to become a more productive and efficient research and training body for the coming year and beyond.

**Heads of the Research Division**



Director Mr. Malinda Seneviratne, Heads of the Divisions and Supra Grade Research Officers of Hector Kobbekaduwa Agrarian Research and Training Institute.

Hector Kobbekaduwa Agrarian Research & Training Institute  
Statement of Financial Position as at 31 December 2021

LKR

ASSETS	Notes	2021	2020
<b>Current assets</b>			
Cash and cash equivalents	2	13,984,557	9,743,479
Receivables-Debtors	3	34,310,368	28,791,749
Receivables-Deposits	4	613,070	613,070
Inventories	5	6,540,513	5,355,832
Prepayments	6	...	23,780
Other current assets	7	544,768	144,809
		<b>55,993,275</b>	<b>44,672,718</b>
<b>Non-current assets</b>			
Other financial assets	8	4,294,283	4,125,453
Infrastructure, plant and equipment	9	15,062,278	19,063,948
Land and buildings	10	35,479,441	36,782,585
		<b>54,836,002</b>	<b>59,971,987</b>
<b>Total assets</b>		<b>110,829,277</b>	<b>104,644,705</b>
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Payables	11	19,681,654	17,207,081
		<b>19,681,654</b>	<b>17,207,081</b>
<b>Non-current liabilities</b>			
Employee benefits	12	61,196,120	67,426,150
		<b>61,196,120</b>	<b>67,426,150</b>
<b>Total liabilities</b>		<b>80,877,774</b>	<b>84,633,231</b>
<b>Net Assets</b>		<b>29,951,503</b>	<b>20,011,474</b>
<b>NET ASSETS/EQUITY</b>			
Government Grant - Capital	13	34,582,108	39,140,540
Capital contributed by Ministry			
Reserves	14	3,376,907	3,376,907
Revaluation Reserve		26,450	26,450
Incentive and Training Fund	15	8,611	8,611
Accumulated surplus/(deficits)	16	(8,042,573)	(22,541,035)
<b>Total net assets/equity</b>		<b>29,951,503</b>	<b>20,011,474</b>

The accounting policies on pages 5 to 8 and Notes on pages 9 to 16 an integral part of these financial statements. I certify that the financial statements have been prepared in compliance with the requirements of Public Sector Accounting Standards.



Thushari Wedage

ACCOUNTANT

Date

25/02/2022

G. W. Thushari Wedage

Accountant

Hector Kobbekaduwa Agrarian Research  
and Training Institute  
114, Wijerama Mawatha, Colombo -07.



Malinda Seneviratne

DIRECTOR

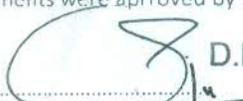
**Malinda Seneviratne**

Director / CEO

Hector Kobbekaduwa Agrarian  
Research & Training Institute

No. 114, Wijerama Mv., Colombo 07

The Board of Directors is responsible for the preparation and presentation of these Financial Statements. These Financial Statements were approved by the Board of Directors and signed on their behalf.



**D.M.L. BANDARANAYAKE**

Secretary

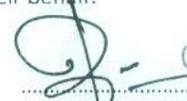
D.M.L. Bandaranayaka

CHAIRMAN

Ministry of Agriculture

80/5, "Govijana Mandiraya"

Rajamalwatta Lane, Battaramulla.



Board Member

Commissioner General of Agrarian Department

Department of Agrarian Development

No. 42, Sir Marcus Fernando Mawatha, Colombo 07

P.O.Box:537-Colombo 07



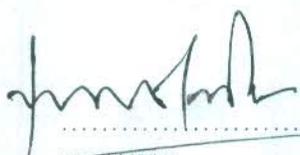
Hector Kobbekaduwa Agrarian Research & Training Institute  
Statement of Financial Performance for the year ended 31 December 2021

LKR

Revenue	Notes	2021	2020
Funds from government Treasury		181,409,088	154,739,750
Funds from Outsiders for Research and Training Activities		4,955,348	5,161,942
Capital Grant received for Research and Training Activities		7,692,746	500,000
Other revenue	17	17,972,548	19,863,438
Bad Debt over Provision			529,892
<b>Total Revenue</b>		<b>212,029,730</b>	<b>180,795,022</b>
<b>Expenses</b>			
Wages, salaries and employee benefits	18	(153,328,140)	(160,080,868)
Research and Training Activities		(7,692,746)	(1,519,380)
Funds to Outsiders for Research and Training Activities		(4,955,348)	(5,161,942)
Depreciation	9, 10	(5,565,686)	(5,830,615)
Other expenses	19	(28,312,644)	(24,192,865)
Bad Debt under Provision		(2,750)	(148,288)
Bank Charges		(38,815)	(62,260)
<b>Total expenses</b>		<b>(199,896,129)</b>	<b>(196,996,218)</b>
<b>Surplus / Deficit for the period</b>		<b>12,133,601</b>	<b>(16,201,196)</b>

  
ACCOUNTANT

**G. W. Thushari Wedage**  
Accountant  
Hector Kobbekaduwa Agrarian Research  
and Training Institute  
114, Wijerama Mawatha, Colombo - 07

  
DIRECTOR

**Malinda Seneviratne**  
Director / CEO  
Hector Kobbekaduwa Agrarian  
Research & Training Institute  
No. 114, Wijerama Mw., Colombo 07

Hector Kobbekaduwa Agrarian Research & Training Institute  
Cash Flow Statement for the year ended 31 December 2021

2020	Notes	2021	
		<b>Cash flow used in operating activities</b>	
(16,201,196)			12,133,601
-		<b>Adjustment for</b>	
5,830,615		5,565,686	
(5,830,615)		(5,565,686)	
10,912,233		5,108,663	
(1,175,853)		(1,382,793)	
(1,080,596)		2,364,861	
18,420		-	
(12,050)		(27,062)	
			6,063,669
<b>(7,539,042)</b>			<b>18,197,270</b>
		<b>Working Capital Changes</b>	
3,728,996		(5,518,619)	
(126,577)		(1,184,681)	
11,287		23,780	
(121,309)		(399,959)	
(1,736,135)		2,474,572	(4,604,907)
<b>(5,782,779)</b>			<b>13,592,363</b>
<b>(1,048,835)</b>			<b>(11,338,693)</b>
<b>(6,831,614)</b>			<b>2,253,670</b>
		<b>Cash Flow from Investing Activities</b>	
-			
(224,530)		(168,830)	
(7,200)		(263,398)	
-		-	
-		-	
1,175,853		1,382,793	
-			
2,737		2,527	
<b>946,860</b>			<b>953,092</b>
		<b>Cash Flow from Financing Activities</b>	
500,000		8,700,000	
(500,000)		(7,692,746)	
-		-	
12,050		27,062	
-		-	
-		-	
<b>12,050</b>			<b>1,034,316</b>
<b>(5,872,705)</b>			<b>4,241,078</b>
15,616,183	I		9,743,479
<b>9,743,479</b>	II		<b>13,984,557</b>
		<b>Notes:</b>	
		<b>1</b>	<b>11</b>
		<b>01.01.2021</b>	<b>31.12.2021</b>
9,723,479		9,723,479	13,916,913
20,000		20,000	67,644
<b>9,743,479</b>		<b>9,743,479</b>	<b>13,984,557</b>

Hector Kobbekaduwa Agrarian Research & Training Institute  
 Statement of Changes in Net Assets/Equity  
 for the year ended 31 December 2021

LKR

	Government Grant Capital	Reserves	Revaluation Reserve	Incentive and Training Fund	Accumulated Surplus/(Deficits)	Total
Balance as at 01 January 2021	39,140,540	3,376,907	26,450	8,611	(22,541,035)	20,011,474
Funds received from Treasury	8,700,000					8,700,000
Amortization for the year	(5,565,686)					(5,565,686)
Capital Grant received for Research and Training Activities	(7,692,746)					(7,692,746)
Prior Year balance transfer						-
Prior Year Adjustments					2,364,861	2,364,861
Income & Expenditure					12,133,601	12,133,601
Balance as at 31 December 2021	34,582,108	3,376,907	26,450	8,611	(8,042,573)	29,951,503



**Notes to the Financial Statements  
For the year ended 31<sup>st</sup> December 2021**

**1. Accounting Policies**

**1.1 General**

The Financial Statements are prepared under the historical cost basis in accordance with Sri Lanka Public Sector Accounting Standards (SLPSAS) laid down by the Institute of Chartered Accountants of Sri Lanka and the provisions of the Finance Act No.38 of 1971. Adjustments have not been made for inflationary factors in these financial statements. The accounting principles are applied consistently on accrual basis.

**1.2 Comparative information**

The Accounting Policies have been consistently applied by the Institute with these used in the previous year, Previous year figures have been rearranged wherever necessary to confirm to the current year presentation.

**1.3 Events occurring after the Balance Sheet date**

All material post Balance Sheet events have been considered and where appropriate adjustments or disclosures have been made in the financial statements.

**1.4 Valuation of Assets**

**(i) Property, Plant & Equipment**

The cost of property, plant & equipments are at their cost of purchase or construction together with any incidental expenses thereon. Expenditure incurred for the purpose of acquiring, extending or improving assets of a permanent nature by means of which to carry on the institute or for the purpose of increasing the capacity of the institute has been treated as capital expenditure. Cost of maintenance and repairs are expensed as incurred. The property, plant & equipment are recorded at cost (or revaluation) less accumulated depreciation which is provided for on bases specified below

a) Depreciation is provided on the straight-lines method at the following rates per annum.

Buildings	2 ½ % per annum
Equipment/Furniture	10% per annum
Computer	20% per annum
Welfare Equipment	10% per annum
Books	10% per annum
Vehicles	20% per annum

A full year's depreciation is charged in the year of purchase.



b) Amortization amount is recognized & accounted on LKAS 20

**c) Palwehera bungalow building**

Palwehera bungalow had been transferred to Divisional Secretarial office - Dambulla as at 01.11.2019 that transfer value was Rs 1,962,545.66.

**1.5 Debtors**

**i) Scholarship Debtors**

Presently six scholarship debtor balances are continued. According to SLIPSAS 08 this year adequate provision has been made on risk and uncertainties.

**ii) Other Debtors**

Other debtors are stated at the amounts which they are expected to realize. Adequate provision has been made for bad and doubtful debts as follows

1. Debtors balance over 5 years	-	100%
2. Debtors balance over 01 to 05 years	-	5%

**III) Unrecorded Hostel Income**

Unrecorded hostel income was Rs. 8,895,470/- that amount was created on hostel operation activities from 2015 may to 2018 July. This amount was identified by special committee that appointed by Director HARTI . This amount was not recorded that decision had been taken by Board of Governors'

**IV) Receivable from Divisional Secretarial Dambulla**

This amount was included the transfer value of Palwehera bungalow that total transfer value was not settled on due rental amount of bungalow.

**1.6 Stocks**

Stocks of consumable items are valued at cost. Other stocks are valued at lower of cost or net realizable value. Cost of the stocks is valued using FIFO method.

**1.7 Investment**

Fixed Assets deposits had re-invested on same banks.



## **1.8 Liabilities and Provision**

### **1.8.1 Gratuity**

Provision has been made in Financial Statements for Gratuity payable under the payment of Gratuity act No. 12 of 1983.

In the year 2021 gratuity has been calculated base on Basic Salary and Cost of Living Allowance.

### **1.8.2 Contingent Liabilities**

A provision for contingent liabilities has been made on pending court decision.

### **1.8.3 Contingent Assets**

Contingent Assets has been made on pending legal cases for recovering to scholarship debtors that details are given below

#### **Mr.P.D.J.Ananda**

Court case is laid due to non availability at the given address. Even though a sum of Rs. 1,250,000.00 has been charged from the guarantors. The balance amount of Rs. 2,759,754.28 is to be recovered from Mr.P.D.J.Ananda.

#### **Mr.M.S.Gowrisanker**

His address has not been found to send the letter of demand. However, the guarantors have already paid Rs. 1,250,000.00. The balance amount of Rs. 3,634,110.07 is pending to recover from Mr.M.S.Gowrisanker.

#### **Dr. Gamini Wickramasinghe**

He has appealed two times. A judgment received in favour of the HARTI. Finally a letter has sent to the Attorney General Department for Writ of Certiorari. Follow up fiscal action in progress. He has been deposited Rs 140,000.00 in 2021 but This deposit has been unauthorized by HARTI

#### **Ms.R.Athukorala**

Ms.R.Athukorala had a bond value of Rs. 2,181,521.00. The guarantors paid a sum of Rs.1,250,000.00 . The balance amount of Rs 931,521.00 could not be recovered. Her address has not been found to send the letter of demand.

#### **Mr.P.D.R.Kumarasiri**

The value of Mr.P.D.R.Kumarasiri's bond is Rs. 499,302.00. The guarantors have been charged Rs. 166,436.00. The balance of Rs. 332,866.98 has to be recovered from other two guarantors decided by the court. However, the address of one guarantor cannot be found.



**Ms.A.C.K.Sepala**

Ms. A.C.K.Sepala has a bond value of Rs. 1,249,641.11. A court judgment ordering to pay a sum of Rs. 1,200,000.00 has been received. She has settled Rs. 900,000.00 to date.

**1.8.4 Defined Contribution Plan**

Institute contributes 15% and 3% of employees monthly salary to Employee's Provident Fund (EPF) and Employee's Trust Fund (ETF) respectively. These contributions are recognized as expenses in the Statement of Financial Performance on current circulars issued by Department of Management Service.

**1.9 Statement of Financial Performance**

The statement of financial performance is stated after;

- a. Providing bad and doubtful debts and all expected future expenses in day - to- day operation of the institute and maintaining the property plants and equipment in a state of efficiency.
- b. Revenues are included Funds of Government Treasury, income of hostel charges, conference hall charges & others.

**2.0 Transport and Printing cost**

Transport and printing expenditures have to be accounted for all divisions and research and training. Therefore that expenditure has been valued at an approved rate and that cost is adjusted to a percentage between those relevant expenditures.

**2.1 Capital Grants received for Research and Training Activities**

The treasury was allocated the funds for research & training activities on head of government capital grants. According to LKAS -38, Research & Training cost can be treated as Intangible assets but institute's research & training cost can't be treated as intangible assets. Because output of institute's research was not comply with requirements of LKAS 38. Therefore total research & training cost are debited to the "statement of financial performance" that cost treated as recurrent expenses and above mentioned government capital grants also transferred to the institute's "statement of financial performance". for the year.

Covid -19 pandemic situations had been affected our research & training activities during the year.



LKR

2 Cash and cash equivalents	2,021	2,020
Cash in hand	67,644	20,000
Cash at bank - A/c No 2323292	6,192,464	8,200,359
Cash at bank - A/c No 2323293	2,150,947	1,045,857
Cash at bank - A/c No 2323315	1,482,074	197,345
Cash at bank - A/c No 2323317	4,091,429	279,918
	<b>13,984,557</b>	<b>9,743,479</b>

3 Receivables

Staff Debtors

Housing Loan	225,368	281,913
Consolidated loan	21,670,224	23,020,739
Festival Advance	3,750	5,425
Auditorum Income Receivable	236,750	13,375
Hostel Income Receivable	4,993,645	5,114
Scholarship debtors	12,859,881	12,874,881
Salary Advance	-	-
Special Advance (Books)	-	21,600
	<b>39,989,618</b>	<b>36,223,047</b>

Other Debtors

Investment income receivable	26,953	32,041
Receivable from - Ms.B.A.D.S.Bamunuarachchi	-	-
Recoverable from resigned employees	549,384	633,882
Recoverable from medical insurance	500	200
Debtors - Mobitel Pvt Ltd	334,818	334,818
G-97- Climate -smart crops and mechanization scaling	-	-
Receivable from Digi House	-	-
Recoverable from Metropolitan,Office (Pvt) Ltd	70	70
Receivable from Ministry of Public Administration	44,800	44,800
R-481 Jaffna Lagoon and Contribution of the lagoon to the livelihood og	-	111,922
Receivable from SMIB	32,398	39,866
Divisional secretariat Dambulla	1,962,546	962,546
R-540 Building the basis for impementing the "Save and Grow" Approach Regional strategies on sustainable and climate resilient intensification of cropping systems	-	-
561-2 Services in surport of the project Building evidence on the impact of omproved agricultural extension services on rice production in Anuradhapura district, Sri Lanka	900,475	-
Receivable from supply registration	63,000	-
	<b>3,914,943</b>	<b>2,160,144</b>
	<b>43,904,561</b>	<b>38,383,192</b>
<b>Less:</b>		
Provision for Bad & Doubtful Debtors	(667,830)	(667,830)
Provision for scholarship	(8,926,363)	(8,923,613)
	<b>34,310,368</b>	<b>28,791,749</b>

4 Receivables

Deposits

Fixed - Caterer	70,000	70,000
Sundry - Sri Lanka Telecom (Internet facility)	3,125	3,125
Sundry - Post Master General	24,945	24,945
Sundry - Colombo Gas and Water Co.	4,750	4,750
Sundry - Water supply and Drainage Board	500	500
Sundry - Celltel Lanka Ltd.	3,500	3,500
Sundry - Ceylon Electricity Board	406,250	406,250
Sundry - Fuel Deposit	100,000	100,000
	<b>613,070</b>	<b>613,070</b>



	2,021	2,020
<b>5 Inventories</b>		- LKR
Publication and journals	2,881,249	2,801,649
Consumables	2,454,882	1,444,486
Sales Center	1,204,382	1,109,697
	<b>6,540,513</b>	<b>5,355,832</b>

<b>6 Prepayments</b>		
Service Agreement Photocopy	-	-
Building Insurance	-	23,780
	<b>-</b>	<b>23,780</b>

<b>7 Other current assets</b>		
Purchase Advance	536,918	144,809
Advance	7,850	-
	<b>544,768</b>	<b>144,809</b>

<b>8 Other financial assets</b>		
Call Deposits	1,500	1,500
Fixed Deposits at State Mortgage & Investment Bank	1,500,000	1,500,000
Fixed Deposits at State Mortgage & Investment Bank-Housing Loan Schem	2,792,783	2,623,953
	<b>4,294,283</b>	<b>4,125,453</b>

9 Infrastructure, plant and equipment

Schedule of Depreciation of Assets - 31 December 2021

LKR

Particulars	Cost as at 01.01.2021	Additions / (Disposals) during the Year 2021	Total Cost as at 31.12.2021	Acc/Dep as at 01.01.2021	Dep. for the year 2021	Accu/Dep. ended 31.12.2021	Net Value as at 31.12.2021
Equipment/Furniture	61,194,426	196,038	61,390,465	48,493,297	2,628,450	51,121,748	10,268,717
Computer Installation	33,989,353	60,840	34,050,193	30,380,781	832,308	31,213,089	2,837,104
Motor Vehicles	71,888,647	-	71,888,647	71,315,527	268,816	71,584,344	304,303
Books	15,994,800	3,993	15,998,793	13,813,674	532,966	14,346,641	1,652,152
Welfare Equipment	3,735	-	3,735	3,734	-	3,734	1
<b>Total</b>	<b>183,070,961</b>	<b>260,871</b>	<b>183,070,961</b>	<b>164,007,013</b>	<b>4,262,541</b>	<b>168,269,555</b>	<b>15,062,278</b>

10 Land and buildings

Schedule of Depreciation of Assets - December 31, 2021

Particulars	Cost as at 01.01.2021	Additions/ (Disposals) during the Year 2021	Total Cost as at 31.12.2021	Acc/Dep as at 01.01.2021	Dep. for the year 2021	Accu/Dep. ended 31.12.2021	Net Value as at 31.12.2021
Land	1,857,387	-	1,857,387	-	-	-	1,857,387
Buildings	56,330,265	-	56,330,265	21,405,066	1,303,145	22,708,211	33,622,054
	<b>58,187,652</b>	<b>-</b>	<b>58,187,652</b>	<b>21,405,066</b>	<b>1,303,145</b>	<b>22,708,211</b>	<b>35,479,441</b>

LKR

	2,021	2,020
<b>Payables</b>		
11 Accrued expenses	8,329,123	9,281,062
Payable Research & Training Expenses	1,464,268	470,300
Tender deposit refundable	124,462	139,462
Canteen deposit refundable -Upatissa Paranamana	50,000	50,000
Salary Advance	-	-
Unpaid expenditure	26,333	188,930
Payable to Resigned Employees	841,520	189,151
Stamp Fees Payable	14,600	13,550
Retention	136,526	136,526
Creditors	825,452	601,748
Welfare Society	2	11,890
Gratuity Payable	126,913	126,913
Payable to Ministry	94,358	94,358
Management Development Book	8,000	8,000
Special Advance		
Payable to divisional secretary dambulla	1,000,000	-
Payable to Mr.Narayanasamy	10,800	10,800
Received in advance-Hostel & auditorium Income	-	26,769
Funded Project Payable	-	13,712
Unauthorized Deposit	140,000	-
<b>Creditors against projects:</b>		
Rapid food Security & need Assessment	7,774	7,774
R-512 Capacity Development of Agrarian Research -Technology personnel in Sri Lanka on Global Change and sustainability	22,831	22,831
R-530 Baseline study for strengthening value chain for Banana,Mango and pineapple corp in selected regions in Sri Lanka	2,518,787	2,518,787
R-535 Addressing climate change inpacts of Marginalized agricultural communitites living in the Mahaweli river basin of Sri Lanka	440,981	440,981
Service Contract 03-2017	245,902	245,902
R-559 Energy/water baseline assessment for drip irrigation technologies for various crops in sri lanka	648,588	695,063
R-561 Building evidence on the impact of improved agricultural extension services on rice production in Anuradhapura district Sri Lanka	-	89,595
Service Contract 01-2019	783,850	527,500
Service Contract 01-2020	488,404	488,404
R-540 Building the basis for impementing the "Save and Grow" Approach Reginal strategies on sustainable and climate resilient intensification of cropping systems	700,000	807,072
CR582 Researching climate adapted farming practices and climate adaptation of vulneable groups in the dry zone of sri lanka	416,370	-
T-442 Marketing information involved in agro products -Badulla	27,881	-
T-444 Marketing information involved in agro products -Monaragalla	58,109	-
T-450 Training programme on use of market information in agri business management - Nuwaraeliya	58,219	-
T-451 Training programme on use of market information in agri business management - Matale	71,600	-
	<b>19,681,654</b>	<b>17,207,081</b>
<b>Employee benefits</b>		
12 Balance as at January 01,	67,426,150	57,562,753
Payments during the year	11,338,693	1,048,835
Provision for the year	5,108,663	10,912,233
Balance as at December 31,	<b>61,196,120</b>	<b>67,426,150</b>
<b>Government Grant - Capital</b>		
13 Balance as at January 01,	39,140,540	44,971,155
Capital Contribution During the year	8,700,000	500,000
Capital Grant received for Research and Training Activities	(7,692,746)	(500,000)
Amotization for the year	(5,565,686)	(5,830,615)
Balance as at December 31,	<b>34,582,108</b>	<b>39,140,540</b>
<b>reserves</b>		
14 Project Capital Fund	-	-
Capital Reserve	1,675,000	1,675,000
Incentive Fund - Institute share	1,701,907	1,701,907
	<b>3,376,907</b>	<b>3,376,907</b>
<b>Incentive and Training Funds</b>		
15 Incentive Fund 10% from project	8,611	8,611
	<b>8,611</b>	<b>8,611</b>

Hector Kobbekaduwa Agrarian Research & Training Institute  
Notes to the Statements for the year ended 31 December 2021

		LKR
	2,021	2,020
<b>Accumulated deficits</b>		
16 Balance as at January 01,	(22,541,035)	(5,259,243)
Prior year adjustment - transfer	-	(135,675)
Prior year adjustment - for the year	2,364,861	(944,921)
Expenditure over income as at December 31,	12,133,601	(16,201,196)
Balance as at December 31,	<b>(8,042,573)</b>	<b>(22,541,035)</b>

<b>Other Revenue</b>		
17 Hostel charges	7,025,500	4,779,071
Conference hall charges	2,847,375	6,015,100
Income From Mobitel Customer service	-	84,815
Sales of publications	9,455	21,095
Interest on investments	197,001	232,901
Interest on staff loan	1,185,791	942,952
Recurrent contribution from projects	10,198	129,975
Bungalow fees and room rent	160,770	99,078
Final data base compling Income	45,000	-
Computer income	-	308
Manpower Income	-	838,872
Other income	54,057	66,156
Differ Income	5,565,686	5,830,615
Supplier's Registration	115,000	-
Advertising Income	-	19,450
Admin Cost	295,677	-
Questionnaire Editing Data Entering cleaning & analysis Income	-	240,000
Reporting writing (Interim, data & Final Report ) Income	-	450,000
Compile Background material on the Rice & OFC Sectors & draft a comprehensive background document Income	-	50,000
IncomeContribution to econometric analysis & Interpretation Income	-	48,000
Scrap Disposal	27,062	12,050
Tender Fees	29,000	3,000
Govimina Publication	404,975	-
Report Editing Income	-	-
	<b>17,972,548</b>	<b>19,863,438</b>

<b>Wages, salaries and employee benefits</b>		
18 Salary -Permanent staff	90,557,851	92,684,649
Salary - Investigators	10,172,250	8,328,830
Cost of Living Allowance,Special Allowance & other	24,476,651	24,739,048
EPF	17,408,158	17,513,688
ETF	3,481,631	3,502,737
Overtime	2,122,936	2,399,683
Gratuity	5,108,663	10,912,233
	<b>153,328,140</b>	<b>160,080,868</b>

Hector Kobbekaduwa Agrarian Research & Training Institute  
Notes to the Statements for the year ended December 31, 2021

	2,021	LKR 2,020
<b>Other expenses</b>		
19 Local subsistence & Local transport	1,838,279	972,663
Foreign Travel Allowance -	-	-
Stationery and office requisites	677,334	807,232
Fuel and lubricants	995,163	424,812
Uniforms	252,979	163,108
Vehicle repairs	1,009,564	725,811
Maintenance of Building	640,799	280,963
Plant machinery and equipment repairs	1,806,626	1,095,475
Telephone charges	2,354,974	3,795,191
Electricity	2,687,894	3,145,444
Water bills	1,056,647	495,343
Taxes to local authorities	579,456	579,456
Postal charges	116,830	250,100
Transport	316,865	347,940
Technical Advice for Vehicles	15,000	60,000
Technical Advice for Construction	15,000	30,000
Newspapers	98,570	125,080
License and insurance	872,607	802,104
Security charges	5,320,620	5,053,160
Cleaning services	919,765	726,644
Laundry services	138,655	225,645
Audit fees	725,250	747,606
Medical Insurance	934,000	978,500
Canteen charges	12,173	75,410
Miscellaneous expenses - Others	130,685	138,602
Legal charges	-	102,000
Welfare	43,029	98,159
Advertisement	344,331	18,360
Interview charges	16,245	-
Board of governors	469,040	83,015
Printing & Publication	1,528,449	823,769
Entertainment	2,520	-
Dissemination of information	331,800	395,575
Cost of Sales - Publications	9,015	21,449
Withholding Tax	-	-
Audit & Mgt Committee	146,222	60,972
Staff Development	462,744	444,566
EB Examination Fees & Other	318,808	-
Workmen's Compensation	-	-
Translation Fees	117,605	50,290
Technical Advice for Equipment & Others	30,000	30,000
Loss on printed books	-	-
Stock shortage	-	-
Scrap Item Disposal	-	18,420
Data Purchasing	51,750	-
Govimina Publication	925,351	-
contra	-	-
Salary control	0	-
	<b>28,312,644</b>	<b>24,192,865</b>



Chairman,

Hector Kobbekaduwa Agrarian Research and Training Institute.

**Report of the Auditor General on the Financial Statements and Other Legal and Regulatory Requirements of the Hector Kobbekaduwa Agrarian Research and Training Institute for the year ended 31 December 2021 in terms of Section 12 of the National Audit Act, No. 19 of 2018.**

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## **1. Financial Statements**

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### **1.1 Qualified Opinion**

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

In my opinion, the accompanying financial statements give a true and fair view of the financial position of the Hector Kobbekaduwa Agrarian Research and Training Institute as at 31 December 2021 and of its financial performance and its cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

### **1.2 Basis for Qualified Opinion**

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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 Institution**

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The information which I obtained prior to the date of this audit report and not included in the financial statements and my audit report but included in the Annual Report 2021 of the Institution is intended as “other information”. The management should be responsible for such “other information”.

In my opinion on the financial statement, any other information is not covered and I am not expressing any pinion or any assurance on that matter.

My responsibility on the financial statements in my audit is to read the above mentioned identified information as and when received and to consider whether it is not in accordance with the financial statements quantitatively or with my knowledge obtained in the audit or any other way.

Based on the information which I obtained prior to the date of this audit report and tasks performed by me, if I conclude there are quantitative errors shown in this other information, such matters should communicate to the controlling parties for the corrections. I have nothing to communicate this regard.

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

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Management is responsible for the preparation of financial statements that give a true and fair view in accordance with Sri Lanka Public Sector Accounting Standards and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, management is responsible for assessing the Institute’s ability to continue as a going concern, disclosing matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Institute or to cease operations, or has no realistic alternative but to do so. 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 for the Audit of Financial Statements**

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My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report 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 skepticism 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, misrepresentation 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 appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and 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 auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. 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 I have identified during my audit.

## **2. Report on Other Legal and Regulatory Requirements**

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- 2.1.1 Special provisions have been set out in the National Audit Act, No. 19 of 2018, with respect of the following requirements.
- 2.1.2 The financial statements presented is consistent with 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 Recommendations made by me in the previous year as per the requirement of section 6 (1) (d) (iv) of the National Audit Act, No. 19 of 2018, have been included in the financial statements presented.
- 2.2 Based on the procedures performed and evidence obtained, my observations were limited to matters that are material and nothing has come to my attention to state;
- 2.2.1 That any member of the governing body of the Institute has any direct or indirect interest in any contract entered into by the Institute out of the normal cause of business as per the requirement of section 12 (d) of the National Audit Act, No. 19 of 2018.
- 2.2.2 to state that the Institute has not complied with any applicable written law, general and 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 except for the following observations.

**Reference to Laws, Rules,  
Regulations etc.**

**Non-compliance**

- | <b>Reference to Laws, Rules,<br/>Regulations etc.</b> | <b>Non-compliance</b>  |
|---|--|
| -----<br>(a) Financial Regulation 237 (b)             | The institution has made an advance payment amounting LKR.536, 917 for suppliers prior to the receipt of goods, in the year under review.  |
| 2.2.3 tto(b)  | Annual performance reports of the year 2019 and 2020 have not been tabled in the parliament as per the Section No. 15.3.2. (e) of the Public Finance Circular No. 01/2020 of 28 <sup>th</sup> August 2020.   |
| 2.2.3.  | that the Institute has not performed according to its powers, functions and duties as per the requirement of section 12 (g) of the National Audit Act, No. 19 of 2018 .  |
| 2.2.4   | that 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 as per the requirement of section 12 (h) of the National Audit Act, No. 19 of 2018 , except for the following observations.   |
| (a)   | The bio gas unit established in the Head Office incurring a cost of Rs.1, 031,020 during the period of 2012-2015 had been inactive from the year 2016 and a balloon had been purchased for this unit by paying an advance amounted to Rs.22, 500 in the year 2018. However, the said balloon had not been installed considering other technical errors of the unit whereas the total expenditure of the unit as at 31 December 2020 amounted to Rs.1, 053,520. As a result of long term non repaired condition, the apparatus of this unit has been malfunctioning and ended up in an unusable condition. A committee has been appointed to conduct a F.R. 104 investigation in this regard but it had not submitted the report on it. |

### 2.3 **Other matters**

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- (a) A sum of Rs.12, 859,881 that should have been recovered from foreign scholar debtors remaining prior to the year 2002 as at 31 December 2020 had not been recovered.
- (b) In the audit it has been observed that out of the total debtors' balance of Rs.25, 508,310, other debtors' balance of Rs.610, 215 except for foreign scholar debtors had remained a none recovered debtors' balance over a period of 05 years as at 31 December 2021. It was further observed that the said loan balance included a sum of Rs.489, 326 which was recoverable from employees.
- (c) With regard to availing accommodation facilities in the hostel for security officers of the Minister of Agriculture for the period of May 2015 to July 2018, actions had not been taken to recover the rental amount of Rs.8, 895,470, either from the lodgers or from the officials authorized such accommodation facilities

**W.P.C Wickramarathne**  
**Auditor General.**

Auditor General,  
National Audit Office,  
306/72, Polduwa Road,  
Battaramulla.

**Report of the Auditor General on the Financial Statements and Other Legal and  
Regulatory Requirements of the Hector Kobbekaduwa Agrarian Research and Training  
Institute for the year ended 31<sup>st</sup> December 2021 in terms of Section 12 of the National Audit  
Act, No. 19 of 2018**

1.1 Qualified Opinion

1.2 Basis for Qualified Opinion

2.

2.2.2 (a)

(b) F.R.237

This advance amount of LKR.536, 917.00 has been provided as a purchasing (procurement) advance. More than a 50% of this purchasing (procurement) advance constitutes of the cheques issued for the Department of Government Printing and such advance payments have been made for printing covers of research reports. Since a large number of research reports have been published in the year 2021, it was required to make advance payments as mentioned. This type of purchasing (procurement) advance is paid only for the suppliers not supplying the concerned service or good without and advance payment.

(b) Progress of tabling Annual reports for the year 2019 and 2020 is as mentioned in the table below.

Year	Progress
2019	<ul style="list-style-type: none"> <li>i. 270 copies of the annual report (in the three languages) have been handed over to the Leader of the House on 13<sup>th</sup> January 2022.</li> <li>ii. Director attended the Sectoral Meeting on 22<sup>nd</sup> January 2022.</li> </ul>
2020	<ul style="list-style-type: none"> <li>i. 2021.03.08 - submissions of draft Annual report of 2020 (PED 27) for observations.</li> <li>ii. Institution received the audit report (Sinhala version) on 30.06.2021.</li> <li>iii. Translating based on the observations received for the draft report. (June –November 2021)</li> <li>iii. Receiving the approval of the Board of Directors for the annual report 04.01.2021</li> <li>iv. 2022.03.08 - Forwarding the Annual report to the Ministry of Agriculture to be sent for the approval of the Cabinet of Ministers.</li> </ul>

2.2.4 (a) Conduction of an investigation is in progress on this bio gas unit, as per the F.R. Section No. 104. Appointment of new officers to the relevant committee, upon the transferring, retirement of previous officers has been the reason for the delay in the submission of the investigation report. By now the committee has handed over the final report to the Director and future actions will be taken in compliance of the recommendations of this report.

2.3 (a) In circumstances where an amount of Rs. 12,874,881.49 brought forwarded prior to 2021, is pending recovery from the foreign scholarship debtors as at 31<sup>st</sup> December 2021, the following explanation is presented with regard the recovering efforts of the said sum in 2021.

Due to the inability to find present addresses of 05 out of the concerned 06 foreign scholarship debtors, further actions regarding the recovery of the due amounts from them has come to a grinding halt.

- |                   |   |   |
|-------------------|---|---|
| 01. R. Athukorala | } | Proceeding of the court case has been impossible. |
| 02. P.D.Ananda    |   |   |
| 03. Gauri Shankar |   |   |

04. G.D.R.Kumarasiri - Unable to find the present addresses for intimidating the guarantors the verdict of the case
05. A.C.K.Sepala - Upon the reconciliation in 2013, an amount of Rs. 900,000.00 has been paid and the email reminders sent in 2021 for the recovery of the balance .300,000.00 has not been responded
06. Dr. Gamini Wickramasinghe

According to the verdict dated 23.11.2011 against Dr. Gamini Wickramasinghe, the bill of fees including costs and legal interest amounting Rs. 14,620,132.76 as per the verdict dated 10.07.2020 has been filed in the court on 26.03.2021 and the Attorney General through the schedule dated 10.11.2021 has informed that the that filing is orderly. Accordingly, it had been further informed that document required for sending declarations of verdict for defendants has been filed in court on 19.04.2022. As such, fiscal reports were called in the court on 19.04.2022. However, due to the none presenting of the file to the court hall, the legal officer has informed us that a new date will be re fixed for calling fiscals.

The sum of Rs. 580,000 paid by Dr. Gamini wickramasinghe to the institution time to time has been deposited in the institution's account. In circumstances where the institution rejected the payments of Dr. Gamini Wickramasinghe upon the none conclusion of the court case, only a sum of Rs 140,000 received from Dr. Gamini wickramasinghe has been deposited in accounts as a receivable from debtors in the year 2021.

(b) Despite the reminders forwarded to recover the sums due from the officers left the service, no response have been received up to now. Attorney Generals Department had called the officers of the institution on 06.06.2022 and issued legal advice in this regard. Upon the said legal advice, future actions will be taken to recover the said sums. Also, expedite actions will be made to recover the due amount from Mobitel Private Limited, as well.

(C) Even though reminders have been sent for the recovery of the due amount, no response has been received up to now. Available documents, notes and other details in this regard are not sufficient for initiating legal actions for recover the said sum.

**Malinda Senevirathna**  
**Director / CEO**

**Copies:** Secretary, Ministry of Agriculture – For kind information