

PGIA News



The Newsletter of Postgraduate Institute of Agriculture, University of Peradeniya

*Be Innovative and Employable
Join the Prestigious Institution for Postgraduate
Agricultural Education and Research
in Sri Lanka*



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ABOUT THE NEWSLETTER

Established in 1975, the Postgraduate Institute of Agriculture (PGIA), affiliated to the University of Peradeniya is a prestigious Institution devoted to the development of higher level manpower in agriculture and related areas in Sri Lanka. During its over four decades of existence, it has made tremendous progress in developing nationally and internationally important consortium of degree and non-degree programmes together with necessary infrastructure for teaching and research. Its' biggest strength is the availability of qualified and experienced staff, both from within the university and outside research and development institutes and linkages with many reputed international universities and research centers. PGIA NEWS is the main organ for the communication of various activities of the institute to the policy makers, academic community, stakeholders and the general public. It is published semi-annually and incorporates current news, research briefs and other information relating to agricultural education, research and development. The PGIA requests comments/suggestions from the readers on this newsletter if any, to improve its quality and content in the future issues.

EDITOR'S MESSAGE

DISCOVER THE BROAD RANGE OF STUDY OPPORTUNITIES AT THE PGIA

The Postgraduate Institute of Agriculture (PGIA) affiliated to the prestigious University of Peradeniya is a unique institution offering a consortium of higher degree programs in agriculture and allied fields since its inception in 1975. During its four decades of existence, it has expanded its demand driven degree offerings and gained recognition locally and internationally as a premier institution of higher education in agricultural sciences.

The degree programs of the institute are offered through several Boards of Study which correspond to different disciplines of agricultural sciences. These boards constitute a mix of experts of each discipline from within and outside the university system. They are responsible for the identification and development of degree programs according to the current trends and future needs of the global agricultural sector, further they are involved in the formulation of course capsules, entry requirements of prospective students, appointment of competent and experienced panels for teaching and research supervision and up to date assessment procedures. Currently, the institute offers 30 Master's programs in diverse fields of agricultural sciences. The institute also offers a Master's in Business Administration (MBA) for professionals which commenced in 1998. The Masters degree programs offered are of two types, some only with course work while others have course work and research component.

The Masters programs are the most popular among students due to their short duration of 1-2 years, hence annual enrolments are very high. These are ideally suited for students who plan to upgrade their professional careers or intend to travel overseas for further studies or employment. There are also opportunities to upgrade these short term degrees to longer duration M.Phil, DBA or Ph.D programs depending on the preference and performance of students. The students can also opt for Diploma programs, if needs arise to shorten their study programs.

The institute recognizes research as an important pillar of postgraduate education and promotes the enrolment of students for M.Phil, DBA and Ph.D degrees which are offered by research. These programs which include a comprehensive research project take about 2-3 years or more to complete. The research projects are selected based on several criteria and main concerns will be the preference of students and their capacity to conduct high quality original research with minimum supervision and willingness to maintain the required quality standards expected by the institute. The research of national and international relevance is an important consideration in selecting research projects. The institute provides financial assistance as incentives through the Research Facilitation Fund to conduct research and funds for publishing the findings of research through the Research Publication Facilitation Fund.

The institute vigorously promotes the admission of international students for postgraduate programs to facilitate academic interaction and scholarship. Due to the availability of highly competent teaching staff and laboratory and field facilities for research PGIA is ideally suited for foreign students. The PGIA is situated within the University of Peradeniya Campus, the only residential university in Sri Lanka in an attractive location surrounding the river Mahaweli engulfed with unparalleled scenic beauty. It is in proximity to the city of Kandy and the Royal Botanic Gardens, and facilities such as accommodation for staff and students are available. It has the large sports complex with an indoor gymnasium and an Olympic size swimming pool.

The PGIA Annual Congress is an international event and a forum at which both local and foreign postgraduates participate and present their research findings and discuss outcomes and future actions. These presentations are published in the institute's Journal of Tropical Agriculture Research, an indexed journal having four issues per year.

The institute has also developed several international linkages with globally renowned universities and research institutions to strengthen the research programs of postgraduate students. The students from univer-

sities world over participate through these link programs. Many of these linkages also foster effective partnerships for exchange of academic materials, staff and students. Some links like the Quwwnsland University of Technology offers joint degrees which enable local students undertake part of their research under the supervision of foreign supervisors.

As a provider of postgraduate education, quality is a major challenge for the PGIA, it is not an accident but has become a habit and every activity maintains utmost quality. All the current degree programs offered by the institute are subjected to quality assurance according to the Sri Lanka Qualification Framework (SLQF) standards set by the University Grants Commission (UGC). Based on guidelines provided by the UGC in 2015, the University of Peradeniya has formalized the quality assurance procedures by establishing an Internal Quality Assurance Unit (IQAU) under which a Quality Assurance Cell has been established in the PGIA to maintain the highest quality in all its academic and non academic activities.

For more information contact : www.pgia.ac.lk

ACADEMIC NEWS

33rd PGIA Annual Congress Successfully Concluded

The PGIA Annual Congress is a scientific forum for researchers to present, discuss and disseminate their scholarly research findings in agriculture and allied disciplines to a wider national and international scientific community. The 33rd Annual Congress of the PGIA was held from 16-17 November, 2021 as a virtual conference at the Postgraduate Institute of Agriculture University of Peradeniya.

It provided an opportunity for postgraduate students and budding scientists to showcase their research findings to a virtual audience comprised of academics, researchers, PGIA alumni and other stakeholders. In this year, 30 oral and 21 poster presentations were made under 8 scientific sessions: Oral technical sessions were Stakeholder behavior in agricultural processes, Food quality and processing, Agricultural production and environment, Pest and disease management in agriculture, and Technological interventions in agriculture. Poster sessions were on Stakeholder behavior on food quality and safety, Disease and pest management in food crops, and Experimentation and data analysis.

Inaugural session was held on 17 November 2021 in the midst of covid pandemic with a very limited number of on-ground participants. Mr. Vimlendra Sharan, Representative for Sri Lanka and the Maldives, Food and Agriculture Organization of the United Nations (FAO) graced the inaugural session as the Chief Guest. Distinguished Professor Jessica Fanzo, Johns Hopkins Nitze School of Advanced International Studies Department of International Health, Johns Hopkins Bloomberg School of Public Health, delivered the keynote speech on "Can We Have it All".



Professor Diane Beckles, University of California Davis, USA and Professor Wenyan Han, Tea Research Institute, China delivered invited speeches. Prof P.C.G. Bandaranayake coordinator of the 33rd Annual Congress and Mr. V.G.D.T. De Silva, President of the Postgraduate Student Association (PASA) also addressed at the inaugural session. Several other dignitaries including Prof. M.D. Lamawansa, Vice Chancellor, University of Peradeniya, Prof. S.S. Kodituwakku, Dean, Faculty of Agriculture and Prof. C.M.B. Dematawewa, Director, PGIA addressed the Inaugural Session of the Congress.

In order to improve the communication skills and effective dissemination scientific findings by budding scientists, three workshops were also held on different topics related to publications and presentations. These workshops and technical sessions were well attended by the participants. SeniorProf. Udith K. Jayasinghe-Mudalige, Secretary, Ministry of Agriculture delivered the Distinguished Alumnus speech at the closing session of the Congress.



BEST PRESENTERS & AWARDEES IN THE TECHNICAL & POSTER SESSIONS

Technical Session	Title of the Paper	Presenter
Oral Presentations		
Stakeholder Behavior in Agricultural Processes	Spatial Price Linkages of Regional Vegetable Markets of Sri Lanka: A Comparison of Pre- and Post-COV-19 Periods	D. M. N. J. Kumari
Food Quality and Processing	Manufacturing of Low Haze Instant Tea Extracts Using Sri Lankan Broken Mixed Fannings (BMF) as Raw Materials	K.A.P. Dalpathadu
Agricultural Production and Environment	Effects of Exotic Tilapia on Native Fish, Climbing Perch : An Environmental Perspective.	P. A. C. T. Perera
Pest and Disease Management in Agriculture	Prevalence of Bovine Tuberculosis among Cattle and Buffaloes in the Central Province of Sri Lanka	Y.H.P.S.N. Kumara
Technological Interventions in Agriculture	Ex-post Study on Expected Utility of Weather Information: Quasi Experiment on Sri Lankan Paddy Farming	N. M. K. C. Premarathne



Overall Best Presenter

Y.H.P.S.N. Kumara

Title: Prevalence of Bovine Tuberculosis among Cattle and Buffaloes in the Central Province of Sri Lanka



Poster Session	Title of the Poster	Presenter
Stakeholder Behaviour on Food Quality and Safety	Assessment of Knowledge and Practices regarding Iron Deficiency Anemia among Pregnant Women in Kattankudy D.S. Division of the Batticaloa District	M.R. Roshana
Disease Control and Pest Management in Food Crops	Wild Rice Species in Sri Lanka as Genetic Resources in Breeding for Brown Planthopper (<i>Nilaparvata lugens</i>) Resistance in Rice	A.V.C. Abhayagunasekara
Experimentation and Data Analysis	Mid-IR Spectral Characterization and Chemometric Evaluation of Different Solvent Extracts of Coconut Testa Flour	K. M. R. U. Gunarathne



PGIA Alumni award

Winner	Tea Extracts Using Sri Lankan Broken Mixed Fannings (BMF) as Raw Materials Manufacturing of Low Haze Instant	K.A.P. Dalpathadu
1 st Runner up	Spatial Price Linkages of Regional Vegetable Markets of Sri Lanka: A Comparison of Pre- and Post-COVID-19 Periods	D. M. N. J. Kumari
2 nd Runner up	Ex-post Study on Expected Utility of Weather Information: Quasi Experiment on Sri Lankan Paddy Farming	N. M. K. C. Premarathne



Hantana Essence: PGIA Congress in Brief

Winner	The Abandoned Nutrition Bag: A Sneak Peak Into the World of Underutilized Wild Edible Plants and Their Nutritional Potential	P.S. Peduruhewa
1 st Runner up	Goraka to Prevent Food Born Diseases and Food Spoilage	K.T.N.K. Wijithasena
2 nd Runner up	Will Sugarcane Face Challenges with Global Warming?	A.L. Chandrajith De Silva



PGIA Congratulates Profs. Niranjana Rajapaksha & Eresha Mendis for Global Scientific Achievements



Twenty-four Sri Lankan scientists were among the top 2% of scientists in the world, according to a list released by Stanford University and Elsevier BV.

The list included Profs. Niranjana Rajapaksha and Eresha Mendis, academics from the University of Peradeniya's Faculty of Agriculture, among the world's top 2% of researchers in the field of food science. Prof. Niranjana Rajapaksha is the current secretary of the Board of Study Food Science & Technology.

Both Prof. Rajapaksha and Prof. Mendis are members of Board of Study Food Science & Technology.

PGIA STRATEGIC MANAGEMENT PLAN UNDER PREPARATION

A committee consisting of Emeritus Prof. H.P.M. Gunasena, Profs. K.A.S.S. Kodituwakku, Jeevika Weerahewa, and Dr. L.N. Jayawardena were appointed by the Board of Management to prepare an updated Strategic Plan of the institute for the period 2022 – 2026. Historically, the 1st Strategic Plan of this institute covered 1998 – 2005, after a lapse of 25 years of its establishment. During this era the preparation of these plans were vigorously promoted by the UGC following the corporate sector.

In fact, the first such plan of the institute was titled as Corporate Plan which later became the strategic plan. However, these plans originally meant to meet the statutory requirements of some monitoring organizations of the government. The initial strategic plans of the institute were over ambitious and consisted of several goals and an unmanageable number of objectives and programs. Some of them were later found to be even irrelevant to the academic programs and development initiatives of the institute. Having learnt bitter lessons from the previous experience, the subsequent strategic management plans were more carefully designed and trimmed down to the most essential components that were directly relevant to the student centered development of the academic programs and quality assurance, financial management and social cohesion of the institute.

During the past five years several important development initiatives have taken place in postgraduate education in agriculture and related fields. One of the most recent developments is the introduction by the UGC of a systemic quality assurance (QA) process for all postgraduate degree programs offered by various postgraduate institutes of national universities. In response, the institute has made advance preparation to meet this challenge by creating QA Cell under the University of Peradeniya and appointing a committee to oversee the implementation of the QA process. Additional staff were also recruited to develop QA procedures, documentation and methods of its implementation to create a sense quality in all its activities. If the QA process is well planned and successfully implemented, the institute will be able to score a first not by accident but by habit. This aspect will receive highest priority in the planned strategic plan.

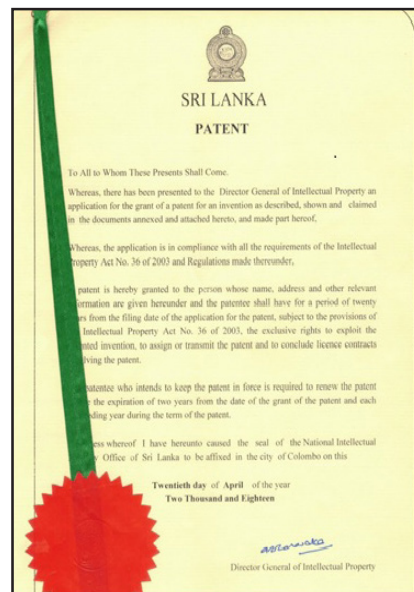
Another area for consideration of the forthcoming strategic plan will be the orientation of degree programs for gainful employment by strengthening the public – private sector participation, orienting the research agenda to be in line with the national/international research agendas and providing adequate funds and facilities for conducting meaningful research. Exploiting opportunities for enrolment of foreign student by encouraging international linkages with recognized universities and research institutes and fund raising to facilitate research is another key area receiving attention. Another issue that will be given priority is the on-line teaching which became a necessity due to the COVID pandemic a blessing in disguise. Currently, the PGIA offers most of the courses on-line including the taught Masters degree programs, but these require through assessment of their effectiveness as a method of virtual instruction.



Srima obtains Patent for Postgraduate research ; Congratulations !!



Eng. (Ms.) D.M.S.P Bandara, PhD student of PGIA in Agriculture Engineering received the patent right for her research finding titled on “Evaporative Water Cooling (EWC) Method for grinding Spices” from Intellectual Property Department, Sri Lanka under Patent No: 18833 Sri Lanka and International Patent Classification (IPC): A47J 42/00). Prof. K.S.P Amaratunga, Department of Agricultural Engineering, Faculty of Agriculture, University of Peradeniya and Prof. L. Rajapaksha, Faculty of Engineering, University of Peradeniya served as her senior supervisor and supervisor respectively.



In this study, Evaporative Water Cooling (EWC) has been introduced for grinding spices where water is injected into the grinding chamber during the milling process. In this method, both atomized water and dehumidified air are fed into the grinding chamber of the spice grinder while feeding spices to chamber.

The aim is to facilitate the absorption of heat that is being accumulated in the chamber during the milling process, by injecting water vapour inside. The role of water vapour is to absorb heat by converting water from its liquid phase to gaseous phase which is also called as the phenomenon of latent heat of vaporization. Water vapour is specifically used because it has the highest latent heat capacity than any other compound. The schematic diagram of the experimental setup is shown in Figure I. Factually, the technology can be extended to heat sensitive spices in the future and the EWC grinding technology would answer the quality issue in spice processing industry in the world.

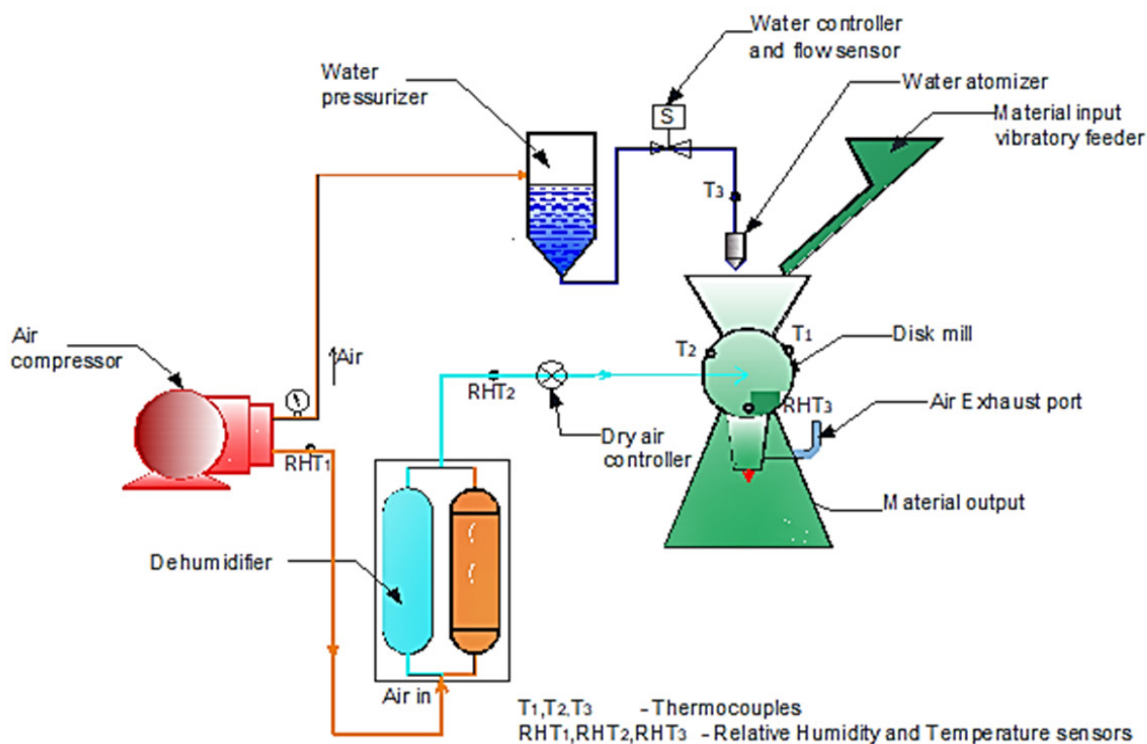


Figure I: Schematic diagram of The Model Evaporative Water Cooling (EWC) grinding system



MBA Orientation Programme



The orientation programme for the new students of 2020 batch of the MBA program was held on the 07 March 2021. The event was attended by the panel of lecturers, current students and members of the Alumni. The event included an introductory session and a motivational speech by an Alumni member.



STAFF / STUDENT NEWS

New Staff Appointments

Prof. Sarath Kodithuwakku New Dean, Faculty of Agriculture



Prof. Sarath Kodithuwakku, Senior Professor and Head of the Department of Agricultural Economics and Business Management, Faculty of Agriculture, was unanimously elected as the Dean of the Faculty of Agriculture on 11th November 2021 for a period of three years. He succeeded the previous Dean, Prof. Gamini Pushpakumara.

Prof. Sarath Kodithuwakku, a graduate specialized in Agricultural Economics from the University of Peradeniya, Sri Lanka, obtained his B.Sc degree in 1990. Since joining the staff of the Faculty of Agriculture, he was awarded a British Council scholarship tenable in the UK. He pursued his postgraduate studies at the prestigious University of Stirling, Scotland. In 1993 he earned his Masters of Business Administration degree in Marketing, followed by a PhD in Entrepreneurship in 1997.

After returning to the Department, he vigorously endeavored to use his newly acquired knowledge to expand the curricula and courses to meet the diversifying needs of the agriculture and allied sectors of Sri Lanka to meet the future needs of the country. Based on his background knowledge, he succeeded in introducing a Masters of Business Administration degree in 1998 despite considerable friction from the higher education authorities. Currently, the MBA offered by the PGIA is highly recognized by the private industry professionals. Historically, this is the third MBA program initiated by a State University in Sri Lanka and the first MBA program offered outside the commercial city of Colombo. The PGIA gratefully acknowledged the contribution made by Prof. Kodithuwakku for developing this program which is highly popular among the postgraduate students working in various Sri



Lankan industrial sectors. He was the founder coordinator and still serves in the same position of the MBA program. Prof. Kodithuwakku has served as the Head of the Department of Agricultural Economics and Business Management for four terms and as Chairman of the Board of Study in Business Administration, PGIA, before becoming the Dean of the Faculty of Agriculture.

At the national level, he has been serving as the President of the Institute of Management (IMSL) of Sri Lanka, the premier institution for Sri Lankan management professionals, since 2017, and as a member of the Board of Study of the Sri Lanka Institute of Marketing (SLIM), the professional body in Sri Lanka for marketing.

Dr. Sanjeevani Wasana Appointed as (Temp) Senior Lecturer



Dr. Sanjeevani Wasana was appointed as Senior Lecturer (Temp) of the Postgraduate Institute of Agriculture from 01 January 2022. Dr. Wasana holds a BSc (Hons) degree in Chemistry from the University of Ruhuna, with Second Class Upper Division. She also secured her Ph.D. in Chemical Sciences from the University of Peradeniya in 2016. She has several publications to her credit as the first author and some of them in prestigious Nature Publications. She counts three years of teaching experience at university level and more than decade of research experience at recognized Institutes. Dr. Wasana has excelled in scientific research winning several merit awards; NRC Merit award for scientific publications for three consecutive years (2015-2017), Competitive International Training Fellowship offered by Chinese Academy of Sciences in 2018 and NSF International

Travel Grant in 2016. As an undergraduate, she was a Bronze Medal Winner from All Island Inter-University Chemistry Quiz competition conducted by the Royal Society of Chemistry, UK, in 2008. She also won a Competitive Research Grant from the International Union of Conservation of Nature (IUCN) for her final year undergraduate research project. Dr. Wasana is a Co-grantee of a NRC Investigator Driven Research Grant -2021 and currently supervising three M.Phil students on product developments based on Green Nanotechnology applications related to the agriculture sector.

Virashmi Kodithuwakku appointed as new PGIA Course Coordinator



Virashmi; the new Course coordinator of the PGIA holds B.Sc. in Agriculture Technology and Management from the Faculty of Agriculture, University of Peradeniya, with a Second-class Upper Division.

Based on her academic performance as an undergraduate, she was recruited as a demonstrator of the Department of Crop Science in the Faculty of Agriculture on a temporary basis immediately after graduation. Currently, she is reading for M.Sc. in Biotechnology at the Postgraduate Institute of Agriculture, University of Peradeniya. She is member of the Editorial Board of the PGIA news letter.

New Appointments : Board of Study Plant Protection



Dr W.H. Jayasinghe and Dr (Ms) P.A.I.U. Hemachandra Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya were appointed as new members of the teaching panel of the Board of Study Plant Protection.

Dr W.H. Jayasinghe completed his Ph.D in University of Hokkaido, Japan and researched on the area of tritrophic interactions between plant, insect, and virus. Dr (Ms) P.A.I.U. Hemachandra completed her Ph.D in The University of Texas-Arlington, USA and studied on beneficial plant - microbial interactions.



Prof. SARATH BANDARA : UNFORGATEBLE TEACHER AND RESEARCHER

Prof. J.M.R.S.Bandara, a member of the Peradeniya university community fondly known as Sarath among his colleagues and friends passed away in October after a long illness. Prof. Bandara entered University of Ceylon, Peradeniya in 1966 and joined the Department of Agricultural Biology of the Faculty of Agriculture as an Assistant Lecturer in 1970.

Immediately after joining the faculty, Prof. Bandara won a British Council Colombo Plan Scholarship to read for a Ph.D. degree at the prestigious Imperial College of Science, Technology and Medicine, University of London. Having completed the Ph.D degree successfully, he returned to Sri Lanka in 1976 and continued with many academic and administrative duties entrusted on him by the Faculty and the Postgraduate Institute of Agriculture for more than four decades. Prof. Bandara served for 41 long years as a university academic not only to teach subject-specific knowledge to the undergraduates and postgraduates but also to create vision and attitudes and ethics to be successful citizens and scientists.



His research interests were directed to molecular plant pathology and microbiology and in 1991, Prof. Bandara initiated molecular biology and biotechnology-related research at the Department of Agricultural Biology as a pioneering researcher in this field of research. He firmly believed that research is an integral part of a university teacher and a strong tool through which knowledge can be generated and disseminated to the public. An admirable feature of Prof. Bandara as a researcher was his continuous encouragement of younger academics towards research and publication of scientific findings in reputed journals. His ultimate desire was to develop a research culture and consolidating the research environment within the university system.

Prof. Bandara served as the Head of the Department of Agricultural Biology from 1981 to 1989 during which several landmark developments took place namely, the construction of the new Agricultural Biology Complex with modern classrooms and well equipped laboratories and commencement of an international research links with Katholieke University, Leuven, Belgium on Biological Nitrogen Fixation. Prof. Bandara became the founder Chair Professor of Plant Protection since the inception of the Board of Study in Plant Protection. Prior to this he contributed immensely to the development of the Board of Study in Agricultural Biology in the capacity of Chairperson and Secretary. Introduction of novel degree programmes, short term training programmes, review of curricula to suit the current demand of postgraduates and establishment of research links some of the outcomes of his long-term vision. He conceptualized the need for a common platform for the dissemination of the research finding of postgraduates which led to the creation of the Annual Research Congress of the PGIA in 1989 which continues to its 33rd year in 2021.

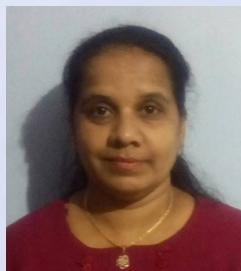
Prof. Bandara's experiences as a teacher, researcher and a scientist have been recognized by different authorities by appointing him to various national and international scientific committees in different capacities. His dedication to teaching, research and knowledge-sharing can be witnessed by the numerous awards received by Prof. Bandara.

The British Council Asset Award in the field of science awarded by the British government in 1994 summarizes his outstanding research capabilities. Prof. Bandara has been rewarded for the distinguished services rendered by him throughout his career by awarding him the National Honours - Deshabandu by His Excellency the President of the Democratic Socialist Republic of Sri Lanka in 2019. The remarkable service provided for more than four decades by Prof. Bandara to the University system has been exemplary.

The Postgraduate Institute of Agriculture and the Faculty/Department of Agricultural Biology express heartfelt gratitude to Prof. Bandara for his outstanding service rendered to these institutions of the University of Peradeniya and in general to the undergraduate and postgraduate education in Sri Lanka.

We wish Prof. Bandara peace and serenity in his sojourn in samsara and soon attain the Supreme Bliss of Nibbana.





K.K.K. Nawarathna
M.Phil
B/S in Soil Science
Senior Supervisor
Dr. W. S. Dandeniya

DEVELOPING BOTANICAL NITRIFICATION INHIBITORS TO IMPROVE NITROGEN NUTRITION OF SELECTED VEGETABLE CROPS

Nitrification is a process mediated by microorganisms where NH_4^+ is oxidized to NO_3^- . Highly mobile NO_3^- in soil reduces nitrogen fertilizer use efficiency in agricultural systems. Application of nitrification inhibitors, either synthetic or natural can be used to improve nitrogen fertilizer use efficiency. In Sri Lanka, farmers do not use nitrification inhibitors. This study assessed the potential activity of nitrifiers and their abundance in intensively vegetable grown regions in Sri Lanka and to develop botanical nitrification inhibitors from locally available materials to suppress the activity of soil nitrifiers. Soils collected and analyzed from Nuwara Eliya, Marassana, and Kalpitiya regions, where vegetables are intensively grown, indicated that basic soil characteristics and potential activity of nitrifying communities and abundance of nitrifying bacteria varied widely.

Ten botanicals (Neem, lantana, *karanda* *Brachiaria humidicola*, cinnamon, clove, wild sun flower, mee, nutmeg and pepper) were tested for nitrification inhibition potentials and non-target effects using series of laboratory bio-assays, pot-experiments and field experiments. Botanical formulations made from cinnamon, pepper, nutmeg, neem, lantana and *karanda* ranked as the top potential nitrification inhibitors. Applying urea with cinnamon and *karanda* based formulations gave numerically higher yield of capsicum compared to urea alone treatment in field experiments conducted for two seasons in Gannoruwa, Sri Lanka.



P. K. R. C. E. Munasinghe
M.Phil.
B/S in Agricultural Extension
Senior Supervisor
Prof. W. A D. P. Wanigasundera

FRAMING OF MOBILE PHONE VOICE MESSAGES TO COMMUNICATE TECHNICAL INFORMATION FOR THE TEA SMALL HOLDERS

Smallholdings sector plays a vital role in the tea industry of Sri Lanka. Mobile extension is one of the ICT based extension methods for effective dissemination of information to the smallholders. Under this, knowledge is disseminated through voice messages in the form of Interactive Voice Response (IVR). Message framing concept is widely used in composing IVR messages. This empirical study intends to explore the potential of using this concept in Mobile Extension. A survey was conducted to assess existing knowledge and attitudes of smallholders and extension officers on major recommended agronomic practices on tea. Simultaneously, a series of voice messages was composed to be delivered via mobile phones in three different message frames viz. Gain, Loss and Neutral frames. Finally, the same smallholders and extension officers were treated with voice messages via mobile phone to assess the impact

of each message frame on knowledge and attitudes in comparison to their initial status. In statistical analysis, Gain Frame was found effective in enhancing knowledge and attitude levels of smallholders followed by the Loss Frame. Gain frame was more effective for knowledge and attitude improvement of extension officers. Simultaneously, Neutral Frame was effective in enhancing their knowledge. In final conclusion, the Gain Frame is recommended for improving knowledge and attitudes of both smallholders and extension officers. Additionally, Loss Frame is recommended for smallholders and Neutral Frame is suggested for extension officers.

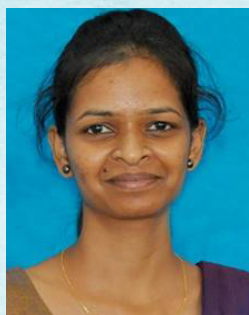


K.P.G.L. Sandaruwan
M.Sc. CW & R
B/S in Agricultural Economics
Senior Supervisor
Prof. H. L. J. Weerahewa

IMPACT OF NON-TARIFF MEASURES ON SEAFOOD EXPORTS FROM SRI LANKA

Seafood exports are an attractive market, which has globally grown over time. However, access to the international seafood market is difficult as seafood is highly regulated by Non-Tariff Measures (NTMs). This research has studied the effects NTMs on Sri Lanka's seafood exports and sustainable development goals (SDGs) of the fishermen. The gravity model estimations revealed that the most critical NTM types for Sri Lankan seafood exports are Sanitary and Phyto-sanitary Measures (SPS), Technical Barriers to Trade (TBT), and Pre-Shipment Inspection (PSI). A growing trend in NTMs and a decreasing trend in tariffs were observed indicating the substitution of NTMs for tariffs to control trade. The seafood entering the market of a developed country needs to comply with a substantial number of NTMs than developing countries. Not only has the frequency of the NTMs but also the diversity of the NTMs is affected by the second component. Region scores for the two latent components revealed a grouping of regions with similar attributes.

NTMs increased with time. The results depict that the total NTMs, increase the price of seafood by 62%. The index-based SDG analysis revealed that the NTMs generated mixed effects on a selected set of SDGs. The NTMs have had a positive impact on SDG 2 (No hunger), SDG 12 (Responsible production), SDG 14 (Life below water), but a negative impact on SDG 1 (No poverty) and SDG 8 (Economic growth).



P. Thiviya
M.Sc. (CW & R)
B/S in Food Science
Senior Supervisor
Prof. W M T Madhujith

SINGLE CELL PROTEIN PRODUCTION FROM LOCAL FRUIT WASTES

Locally available pineapple (*Ananas comosus*), watermelon (*Citrullus lanatus*), papaya (*Carica papaya*), sour orange (*Citrus medica* L), banana (*Musaceae Musa*) and sour mango (*Mangifera indica* L.) peel wastes were studied for their suitability to produce single cell proteins using natural palmyrah (*Borassus flabellifer*) toddy yeast under liquid state fermentation system. Moreover, this study aimed to select the best substrate and the optimized process condition for SCP production to increase the protein yield. Results revealed that the biomass yield ranged from 5.3 ± 0.6 to 11.7 ± 0.8 g/L with the least biomass yield being observed with watermelon peels while the maximum yield being observed with papaya peels. Papaya peel generated significantly higher ($p < 0.05$) amount of protein ($52.4 \pm 0.4\%$) followed by pineapple ($49.7 \pm 1.3\%$), watermelon ($45.2 \pm 0.7\%$), banana ($30.4 \pm 0.6\%$), sour orange ($29.5 \pm 1.2\%$) and sour mango ($24.6 \pm 0.2\%$) Peels. After optimization, protein content of biomass increased to $56.1 \pm 0.5\%$. Nucleic acid reduction has a significant effect on reduction of dried weight and protein content of biomass. It can be concluded that natural and locally available papaya peel wastes are good substrates for the production of protein-rich cell biomass using fermentation by natural toddy yeast of palmyrah.



W. M. D. R. Fernando
M.Sc. CW & R
B/S in Bio- Statistics
Senior Supervisor
Prof. S. Samita

THREE-WAY ANALYSIS METHODS TO DETECT PANEL DISSENSUS IN TEA SENSORY EVALUATION

Uncertainty and vagueness of sensory evaluation result in panel dissensus. An issue existing when assessing panel dissensus is that data of three-way or higher are often reduced to two-way data. Present study aimed to explore the panel dissensus in tea sensory evaluation by three-way analysis methods; Clustering around Latent Variables for three-way data (CLV3W) method and two-factor Multivariate Analysis of Variance (MANOVA) with Canonical Variate Analysis (CVA). A three-way data set, 8 tea tasters \times 13 tea growing regions \times 6 attributes, for each month with four replicates (4 factories per region), for a period of one calendar year were used for the study. Findings of CLV3W analysis revealed two-clusters (two-latent components) for the data of all months. Attribute loadings of colour and strength indicated that they are represented by the first latent component, and brightness, flavour, aroma, and quality are represented by the second component. Region scores for the two latent components revealed a grouping of regions with similar attributes.

Assessors who were in agreement and disagreement for each component were identified using assessor weights. A clear graphical interpretation on disagreement among assessors for each region was disclosed in canonical plots of first two canonical variates of MANOVA and CVA. It can be concluded that CLV3W would be an option to select appropriate assessors who are more sensitive to certain attributes. Conversely, two-factor MANOVA and CVA is a better suggestion to identify assessor groups with dissensus for each region and for all attributes.



D. W. L. U. De Silva
MSc. CW & R
B/S in Bio Statistics
Senior Supervisor
Prof. N. R. Abeynayake

SELECTION OF THE BEST FITTED MODEL TO DETERMINE THE FISH TRADE PERFORMANCE OF SRI LANKA

This study was conducted to select the best statistical approach to assess the seafood trade performance of Sri Lanka using the gravity model of trade theory and to identify the seafood trade determinants and their general and specific relationships with seafood trade flow. Result confirms that the zero-inflated negative binomial (ZINB) model was the best fitted statistical approach to couple with the gravity model of trade to assess the seafood trade determinants of Sri Lanka. Based on the ZINB model, the seafood trade value of Sri Lanka was positively determined by the GDP of importing country and GDP of Sri Lanka with elasticity values of 2.44 and 1.11 respectively and negatively determined by the geographical distance (-2.47), tariff (-5.76), number of NTMs imposed by importing countries on seafood exports of Sri Lanka (-0.19) and population of importing country (-1.34). A log-run association was not found between the seafood trade value and its determinants but there was a bi-directional causality between tariff rates imposed on seafood trades of Sri Lanka and the seafood trade value and unidirectional causality from the GDP of importing countries and NTMs to seafood trade.



M.T.M. Perera
Ph.D.

B/S in Agricultural Engineering

Senior Supervisor:
Prof. Shameen Jinadasa

IDENTIFICATION OF PREVALENCE, PATHOGENS, AND RISK FACTORS AND DEVELOPMENT OF AN ENZYME BASED EARLY DETECTION METHOD FOR SUB-CLINICAL MASTITIS IN CROSSBRED COWS OF SRI LANKA

An intra-mammary infection, mastitis, is the economically most important disease in lactating cows. Early detection of mastitis, especially sub-clinical mastitis (SCM) is an essential component in a well-managed dairy. A study was carried out to investigate the prevalence of SCM, isolate the pathogens and identify risk factors and to develop an early detection method based on enzyme found in milk. Further, assessment were carried to find out the correlation among California mastitis test score, somatic cell counts and enzyme activity and to identify the relationship of SCM and enzyme activity in milk. The prevalence of SCM in crossbred cows in Kurunegala district, Eastern Province and Kandy district of Sri Lanka were 49%, 46% and 43% respectively.



U.G.L.B. Jayasooriya
MSc (CW & R)

B/S in Agricultural Extension

Senior Supervisor:
Prof. W. A.D. P. Wanigasundera

IMPACT OF OFFICIAL DRESS CODES OF FEMALE SCHOOL TEACHERS ON JOB PERFORMANCE: A COMPARATIVE STUDY BETWEEN SRI LANKA AND JAPAN

The objectives of the research were to find out the factors that determine the dress code of female school teachers and to determine sociological, psychological, economic, and safety aspects of female school teachers' official dress to investigate effects of a dress on job performances of the wearer. The study was a comparative study between Japan and Sri Lanka. Sample of the study included 30 school teachers from Saga city, Japan and 100 teachers from central and western provinces in Sri Lanka. Secondary data survey, self-administrated questionnaires and interviews were used as data collection tools.

The results showed that Japanese female school teachers have moved from traditional to casual dresses considering convenience, whereas Sri Lankan history and the evolution of the female dress code show promotion of nationalism through the dress. Both Japanese and Sri Lankan teachers believed that wearing casual dress is significantly comfortable and efficient compared traditional dresses ($p < 0.05$). Majority from both the countries preferred casual wear over traditional dress at work. Qualitative study showed that Japanese teachers' role in the school is more dynamic than that of Sri Lankan teachers and they find their dress supportive at work. to their Sri Lankan teachers in contrast are more likely to be away from activities that involve physical movements as their dresses do not support them. 30 per cent of Sri Lankan teachers have faced accidents/difficulties due to their dress. The study recommends a change in the current dress code of female school teachers into a more relaxing one learning lessons from Japan.



J.S.N. P. Dharmawardena
Ph.D.

B/S in Bio- Statistics

Senior Supervisor:
Prof. R.O. Thattil

DEVELOPMENT OF STATISTICAL METHODOLOGY FOR URBAN/RURAL CLASSIFICATION IN SRI LANKA

Well defined urban and rural classification is vital to make development policies effectively. But in Sri Lanka, urban sector, defined based on local authorities does not reflect the actual urbanization. Thus, it is important to develop a statistical method to classify urban sector based on smallest administrative unit, which is Grama Niladhari Division (GND). Eight variables, which are different in scale and having their own inherent variability were considered for the study. The classification was done constructing a composite index (CI) using Principal Component Analysis (PCA) based Factor Analysis (FA). PCA based on correlation matrix (CORM), scale dependency can be removed but inherent variability cannot. When PCA based on covariance matrix (COVM), inherent variability can be preserved but scale dependency cannot. As a solution, this study proposed the application of COVM having scaled each indicator by its mean, resulting in new mean equal to 1 and standard deviation equal to the coefficient of variation. Using the eigenvalues and factor scores, CI was calculated. If the CI value of a GND was above the overall mean, it was considered as urban. The population of the classified urban sector was 41.2 % and it reflects the real urban nature of Sri Lanka.



A L C De Silva
Ph.D.

B/S in Bio-Statistics

Senior Supervisor:
W A J M De Costa

VARIETAL RESPONSE OF SUGARCANE TO CHANGING CLIMATE AND SOIL CONDITIONS IN SRI LANKA

This study combined a multi-locational field experiment and an open-top chamber experiment to determine the varietal variation in responses of sugarcane to irrigation, time of planting, differences climate and soil conditions and future increases in atmospheric CO₂ and temperature. Significant genotype × environmental variation existed in yield and quality parameters of sugarcane. Solar radiation had a strong positive influence whereas pan evaporation had a strong negative influence on cane and sugar yields. Maximum temperature (T_{max}) had a positive effect on cane and sugar yields and pure obtainable cane sugar (POCS) whereas minimum temperature (T_{min}) had a negative effect, so that a higher diurnal temperature range (i.e. T_{max} – T_{min}) increases cane yield, juice quality and sugar accumulation. The influence of elevated CO₂ and temperature on growth and physiology varied depending on growth stage and variety. Elevated CO₂ and temperature did not influence leaf net photosynthetic rate, biomass accumulation and cane yield, but decreased the juice quality parameters.

It is concluded that sugarcane varieties in Sri Lanka are sensitive to climate variability across the sugarcane-growing regions. While cane yields of these varieties are not sensitive to future climate change, juice quality parameters and therefore sugar yield could decrease in a future climate.



D. M.S.P. Bandara
Ph.D.

B/S in Agricultural Engineering

Senior Supervisor:
Prof. K.S.P. Amarathunga

USE OF EVAPORATIVE WATER COOLING (EWC) IN GRINDING CHILLI (*Capsicum annum* L.)

Grinding of spices and other raw food is an age-old technique in Sri Lanka. The main aim of spice grinding is to obtain smaller particle size with good product quality in terms of flavour and colour. Due to the temperature rise when spices are ground by conventional methods, a significant fraction of their volatile oil or flavouring components is lost. As a preliminary study, a preference evaluation was done for different types of spice grinding machinery for their performances. Accordingly, the pin mill was selected because that was the best as a single machine for obtaining the optimum particle size of ground product among two types of spice processing machinery used in this research. An Evaporative Water Cooling (EWC) technique to reduce the temperature rise in grinding chilli was developed in this research. A measured amount of water was sprayed on to chilli to achieve the target temperature reduction, along with batch feeding into the mill. The required volume of dehumidified air was supplied into the grinding chamber of the mill to facilitate evaporation. The feeding rate of chilli into the grinding mill was kept constant at 30 kg/h in this study. The Capsaicin contents in the chilli pods and in the ground, was measured using HPLC method compared to the control as keeping conventional grinding. This model was programmed with Arduino Uno pro

gramme to obtain all the real time data and control the dry air and atomized water flow rates fed in to the system. Observed data revealed that increasing rate of water spray under EWC set up significantly decreased the temperature inside the grinder. The water activity observed for all the EWC grinding samples showed that the products are within the acceptable limits for storage.



A.D.D.C. Athauda
M. Phil.

B/S in Food Science & Technology

Senior Supervisor:
D.G.N.G. Wijesinghe

HOUSEHOLD FOOD SECURITY IS ASSOCIATED WITH CENTRAL OBESITY IN FEMALE ADOLESCENTS AGED 11-13 IN CITY OF COLOMBO

The epidemic of overnutrition among early adolescents in the city of Colombo has risen steeply during past decades. The highest proportion of food insecure population in Sri Lanka is living in Colombo district. Therefore, a study was conducted using 11-13 year old adolescents in the city of Colombo to find out whether overnutrition and household food security status were associated. This study revealed, overweight and obesity are not consequences of household food security status of both boys and girls, however, food secure girls tend to have more fat distribution in the abdominal area.



Pre-Congress workshops

In order to improve the communication skills and effective disseminating scientific findings by young scientists, three workshops were also held on different topics related to publications and presentations.



1. Data Analysis Using SAS

The above workshop was held on 18 and 19 September 2021, organized by the 33rd Congress Organizing Committee of PGIA. The workshop was conducted online with 15 participants, which included PGIA students, academics, and researchers. The workshop covered the areas of experimental designs important for research, introduction to Statistical Analysis Software (SAS) and practical session on data analysis using SAS.

Principals and applications of experimental design and regression analysis were discussed on the first day of workshop. Principals and applications of non-parametric data analysis for rank data and categorical data were discussed as the main topics on the second day. The organizing committee provided facilities for the analysis of participants' own research data under the supervision of an expert panel. Necessary advice and support provided for own data analysis. The resource person of the workshop were Prof. T. Sivananthawerl and Prof. LDB Suriyagoda. The program evaluation showed that the participants were highly satisfied with the overall program.

2. Upon Journal Submission to the Publication the Process and the Journey

The PGIA's 33rd Congress Committee conducted the above workshop, on October 1, 2021 for 23 participants, including academics, researchers, and students.

The workshop covered the areas of over-viewing reviewers' comments, what to do with blames, do I need to address all the comments? Can I agree or disagree? , What are the Dos and Don'ts? What changes can be made and how? , Letter of response to reviewers and letter to the managing editors. Prof. Saman Seneweera, University of Melbourne, Australia, conducted a session titled "Reviewing Process of a Journal and Addressing Reviewers' Comments." The session was titled "Got rejected, then what?" presented by Prof. Lahiru Jayakody, Assistant Professor in Microbiology, Southern Illinois University, USA.

A practical session was conducted by Prof. Saman Dharmakeerthi, Editor in Chief, and Prof. Janaki Mohotti, Former Editor in Chief, Tropical Agricultural Research (TAR) Journal. Dr. Dilini Hemachandra coordinated the above workshop.

3. Presentating 'Science' online

With conferences and other scientific events being transitioned to virtual events in the new normal situation, many professionals need to get comfortable with virtual presenting. That requires conscious adjustments to stimulate the benefits of a live presentation. In this workshop, the participants were given knowledge on how to plan, craft, and deliver virtual presentations and how to effectively present "Science."

The workshop were conducted online for eleven participants, including postgraduate students, research officers, executive officers, and university academics on November 5, 2021.

Dr. Aanjeli Wimalasiri (Faculty of Medicine), Dr. Chandrindu Abeykoon (Faculty of Veterinary Medicine & Animal Science), Dr. Rangeeka Perera (Faculty of Science), and Dr. Panduka Neluwala (Faculty of Engineering) served as resource persons. The workshop was coordinated by Dr. Nipuna Perera, Department of Animal Science.

Outbound Training Programme for PGIA Staff

The staff of the PGIA participated in a one day outbound training programme 23 December 2021 at Oruthota chalet, Diagan Road, Rajawella. It consisted different group activities to improve interpersonal skills and team skills.



World Water Day – 2021



In order to mark the World Water Day-2021, an educational programme for school children was organised on 24 March 2021 at the Kothmale International Training Institute of Irrigation and Water Management (KITI-IWM), Sri Lanka.

The programme was conducted for the Ordinary Level School children aged 15-16, representing seven rural schools in the central hilly areas. Altogether, 80 participants (34 males and 38 females), including teachers, attended the programme. Art, poster and essay competitions on the WWD-2021 theme of “Valuing Water” were held in advance, and the winners were rewarded at the event. All the participating students were issued certificates and plants at the end of the programme.

Two presentations; one on “Water Conservation” and the other one on “Climate Change in Sri Lanka and its Impact on Water Resources” were made by two eminent resource persons in the country.

Students were informed that follow-up activities would be conducted to assess the outcomes and support their initiatives.



Dr. S. Pathmarajah, Country Coordinator/Cap-Net Lanka and Eng. (Mr.) Frankie Perera, Director, KITI-IWM coordinated the event.



Webinar 1 : “Jaffna and its unique water”

At the invitation of the Leo Club of Wattala and Nallur, Dr. S. Pathmarajah, Country Coordinator, Cap-Net Lanka, has conducted a Webinar on “Jaffna and its unique water” on 16.09.2021. More than 75 participants from six countries attended.



Webinar 2 : “Next-generation water interventions”

At the invitation of Young Water Professionals - Northern Province, Dr. S. Pathmarajah, Country Coordinator, Cap-Net Lanka, has conducted a Webinar on “Next-generation water interventions: Thoughts for action in the north” on 30.09.2021. More than 25 young water professionals from six countries attended.



Core-Group Meeting of Cap-Net Lanka – 2021

Cap-Net Lanka's Core-Group (the decision-making body) met at the Postgraduate Institute of Agriculture (PGIA) on 16 December 2021. Ten members, including the Director, Postgraduate Institute of Agriculture (PGIA) attended. The meeting was held in hybrid mode.

Physical and Financial progress, activity plan for 2022, monitoring evaluation and learning plan, website re-vamping, appointing new members to Core Group etc., were discussed. Dr. S. Pathmarajah, Country Coordinator, Cap-Net Lanka facilitated the discussions.



Appointment as a steering committee member - NSF

Having considered the outstanding profile and track records, Dr. S. Pathmarajah, Country Coordinator, Cap-Net Lanka has been appointed as a member of the Steering Committee on Research & Development of Water of the Research Arm of the National Science Foundation (NSF) with effect from 15 November 2021.



B/S in Agricultural Biology

Y.G.M. Prasadani
P.R. Weerasinghe
S.L.R. Begum

B/S in Plant Protection

L.Y. Malika

B/S in Agricultural Economics

S. Gnanasubramaniam K.P.G.L. Sandaruwan
V.G.E. Karunathilake M.G. Priyadarshanie
W.M.T.C.L. Madanayake

B/S in Crop Science

K.A.M. Premamali H.M. Wedagedara
A.M.C.M. Alahakoon U.W.B.A. Weragoda
K. Narmhikaa W.G.R. Rajadurai

B/S in Agricultural Engineering

A.M.Y.W. Alahakoon S.C. Ekanayake
A.K.G.I.H. Abeykoon K.H.T.R. Kumara
V. Thamodharan

B/S in Bio Statistics

W.M.D.R. Fernando
D.W.L.U. De Silva
K.A.N.L. Kuruppuarachchi

B/S in soil Science

D.M.M.R. Dissanayake
W.D.E.P.A. Withana

B/S in Animal Science

V. Tharmakokilam Nusrathali N.
R.M.N.P.K. Ranathunga Sapumohotti C.K.
W.A.J.R. Fernando Muthunayake M.U.W.

B/S in Agricultural Extension

J.K.A.D. Kalhari I.R.M. Wijerathna P.A.B.D. Premathilaka D.K.K. Keerthirathne
P.G.D.T. Pinnawala K.W.L. Kumudumali M.V.M.L. Jayasinghe W.L.I.L. Liyanage
W.A.W. Chathurangani U.G.L.B. Jayasooriya S.M.A. Samarakoon

B/S in Food Science & Technology

P.H. Thantrige K.C.S. Kulathilaka H.W.S.W. Dharmawardhana
J.A.S. Jayawardhana D.M.K.P. Weerasinghe W.P.D.S. Perera
I.C.D. Perera W.M.C.N.K. Wickramasinghe R.J. Bangamuwege
S.M.D.C.P. Senarathne G.H.S. Niroshika S.M.R.G. Godawita
V. Sivarajah A.U. Pinnaduwa W.A.E.M.P. Menike
D.B.N.U. Kulasooriya W.D.N. Wickramasinghe K.M. Lakmali
M.G.A.U. Morawaliyadda T. Punniamoorthy D.G.H. Shamika
U.R. Chandimala W.M.N.L. Weerasooriya K.T.N.K. Wijithasena
M.C.W. Gamage S. Thuraisingam G.N. Shantha

B/S in Business Administration

H.M.A.C. Senevirathne S.M.N.D. Rathnayake R.M.C. Siyambalagastenne
A.J.K.N. Samuel L.R.K. Tilakaratne R.M.A.C.B. Rathnayake
R.R.P. Wijesekara D.M.U.A.N. Gunathilaka S.M.D.K. Samarakoon
M.A.D.S.S. Madurapperuma B.G. Bartholameusz H.M.C. Lakshani
M.A.S.C. Gunawardhana T.M. Dayananda R.M.J. Rathnayaka
H.H.M.M.R.B. Jayasooriya N.P. Weeratunga S. Thusiyanthini
K.G.I. Dilrukshi V.W. Jayaweera

Postgraduate Diploma (January - December 2021)

M.C.W. Gamage K.R.V.L.C.K. Karunatilake T.A.S.S. Thelasinghe
E. N. Gamage D.M.I. Perera B.V.S.N. Wijesena Jayasekara.
A.H. Bogahawatta S.R. Niroshan G.H.E. Chandrarathna
G. Theavivirathan W.W.S.R.M.H. Samaranayake F.R. Mahroof

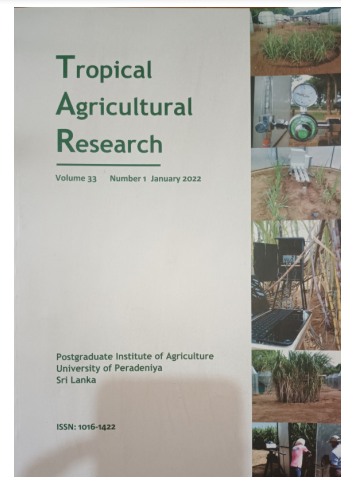


NEW PUBLICATIONS

Tropical Agricultural Research (TAR) Journal ; Volume 33- Issue (1) :2022

The above issue of TAR, the official journal of the Postgraduate Institute of Agriculture, University of Peradeniya was launched at the inaugural session of the 33rd Annual Congress held on 17 November 2021.

Authors can obtain the hard copy of the journal from the TAR Journal Secretariat. This is also available online (<https://tar.sljol.info/>).



FORTHCOMING EVENTS

Applications are open for MBA programme for the Academic year 2022

The MBA programme offered by the PGIA by the Board of Study in Business Administration of PGIA., provide an opportunity for early and mid career professionals to stand out from the crowd. There are two options, MBA by course work (Minimum 2 years) and MBA by course work research. Applications and more details are available in the PGIA website.

Applications are open for Colombo Intake for the Academic year 2022

The applications for degree programs offered by the Board of Study in Food Science and Technology and Bio Statistics are still open. Of the above, Masters and M. Sc. program will be offered at the Sir John Kotelawala Defence University, Rathmalana. Application forms and more details are available in the PGIA website, www.pgia.ac.lk

34th PGIA Annual Congress; will be held on 17 & 18 November 2022

The Annual Congress is an international scientific forum organized by the PGIA.

The congress promotes postgraduate research in agriculture by providing a platform for postgraduate students to showcase their research findings for discussion and debate among wider scientific community. In addition, the congress is graced by eminent scientists delivering invited speeches.

34th PGIA Annual congress will be held on 17 & 18 November 2022. Papers for oral or poster presentation can be submitted online.

Please visit : [http:// www.pgia.ac.lk](http://www.pgia.ac.lk)

Smart Agriculture for Sustainable Farming
Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka
17 & 18 November 2022

The Annual Congress is an international scientific forum organized by the PGIA. The congress promotes postgraduate research in agriculture by providing a platform for postgraduate students to showcase their research findings for discussion and debate among wider scientific community. In addition, the congress is graced by eminent scientists delivering invited speeches.

CALL FOR PAPERS	SUBMISSION OF PAPERS
You are invited to submit a full paper if your postgraduate research is ongoing or completed after July 31, 2020. Abstracts of all accepted papers will be published in the Proceedings of the Congress. Selected papers will be considered for publication in the peer reviewed, DOAJ, AGORA, J-Gate, and EBSCO CAB indexed, quarterly journal "Tropical Agricultural Research" Volume 34, available in Sri Lanka Journals Online (www.sljol.info/).	Papers for oral or poster presentations can be submitted online. Please visit: https://www.pgia.ac.lk/congress or email to congress@pgia.ac.lk

KEY DATES
April 15 2022 - Commencement of registration
June 15 2022 - Last date to receive full papers
October 31 2022 - Last date for registrations

THEMATIC AREAS	REGISTRATION FEE
<ul style="list-style-type: none"> Agricultural Biology & Plant Protection Agricultural Economics & Business Management Agricultural Extension & Organizational Management Agricultural Mechanization & Post-Harvest Technology Agronomy & Crop Production Animal Production & Aquaculture Climate Change & Agriculture Computational Methods and Statistics Conservation & Improvement of Agro-biodiversity Energy & Waste Resources Systems Food Science & Nutrition Forestry & Agroforestry Geo-informatics in Agriculture Horticulture & Landscape Architecture Molecular Biology & Agricultural Biotechnology Soil & Water Resources Management 	<ul style="list-style-type: none"> Local students Rs. 1000 Local participants Rs. 1500 Participants of SAARC countries USD 75 Participants of other countries USD 150

Payment should be made by a bank draft written in favour of the Director, PGIA. Cash or VISA/ Debit card payments are accepted at the Shroff counter of the PGIA. Registration form and other details can be obtained from <https://www.pgia.ac.lk/congress.php>

FURTHER DETAILS

Prof. Lasantha Weerasinghe
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