TWENTY NINTH ANNUAL CONGRESS

November 16 - 17, 2017
Amaya Hills Resort, Heerassagala, Kandy

PROGRAMME

November 16, 2017

INAUGURAL SESSION
Chairperson: Prof. C.M.B. Dematawewa, Director, PGIA

04.00 p.m. Registration
05.00 p.m. National Anthem
05.05 p.m. Traditional Lighting of the Oil Lamp
05.10 p.m. Welcome Address by Dr. S.M.C. Himali
           29th Annual Congress Coordinator
05.20 p.m. Address by Mr. Chathura Vidyarathne
           President, Postgraduate Agriculture
           Students’ Association
05.30 p.m. Address by Prof. Gamini Pushpakumara
           Dean, Faculty of Agriculture
           University of Peradeniya
05.40 p.m. Address by Prof. C.M.B. Dematawewa
           Director, Postgraduate Institute of Agriculture
           University of Peradeniya
05.50 p.m. Address by Prof. Upul B. Dissanayake
           Vice Chancellor, University of Peradeniya
06.00 p.m. Address by the Chief Guest H.E. Mr. Yi Xianliang
           Ambassador of Embassy of the People's Republic of China to
           the Democratic Socialist Republic of Sri Lanka
06.20 p.m. Presentation of the Journal
           “Tropical Agricultural Research, Vol. 29 (1)”
06.25 p.m. Keynote Address by Dr. Roland Buresh
           Guangdong Academy of Agricultural Sciences, China
07.00 p.m. Research Highlights of the 29th Annual Congress
07.15 p.m. Plenary speech by Dr. Samuel Thevasagayam
           Bill & Melinda Gates Foundation
November 17, 2017

Technical Session I

Animal Science & Mariculture

Chairperson: Prof. Thakshala Serasinghe
Venue: Main Auditorium, Amaya Hills Resort

8.30 a.m. Captive Breeding of *Hippocampus reidi* Ginsburg, 1933 (Longsnout Seahorse) in Sri Lanka under Artificial Conditions

*H.A.S.U. Hettiarachchi and U. Edirisinghe*

8.50 a.m. Ensiling Property and Nutritional Quality of Palmyrah (*Borassus flabellifer*) Leaves incorporated Corn (*Zea mays*) or Sorghum (*Sorghum bicolor* (L.) moench) silage

*M. Sarmini, S. Premaratne, G.G.C. Premalal and M.B.P.K. Mahipala*

9.10 a.m. Productive and Reproductive Performance of Crossbred Dairy Cows in Tropical Highlands in South Western Ethiopia

*W. Ayalew*

9.30 a.m. Serum Metabolic Profile Based Assessment of Nutritional Status of Temperate Crossbred, Stall-fed, Lactating Dairy Cows: A Case Study of a Medium Scale Mid-country Cattle Farm

*H.M.G.P. Herath, K.K.T.N. Ranaweera, W.M.P.B. Weerasinghe and M.B.P.K. Mahipala*

9.50 a.m. Phenotypic Marker Based Evaluation of Resistance to *Haemonchus contortus* in Sri Lankan Indigenous Goats and Their Jamnapari Crossbreds

Technical Session II

Tissue Culture & Plant Characterization

Chairperson: Prof. Siril Wijesundara
Venue: Seminar Room A, Amaya Hills Resort

8.30 a.m. Development of an Effective Propagation Protocol for *Osbeckia octandra* (L.) DC. (Heen Bovitiya)
*D.M.I.C.B. Dassanayake, S.A. Krishnarajah and J.P. Eeswara*

8.50 a.m. A Protocol for In-vitro Direct Plant Regeneration from Leaf Tissues for Micropropagation of Sugarcane
*D.N. Balagalla, A. Wijesuriya, N.P. Ranathunge and A.M.M.S. Perera*

9.10 a.m. Effect of Phenological Growth Stage on Establishment of In-vitro Cultures of Bael (*Aegle marmelos* (L.) Corr.)

9.30 a.m. Reproductive Phenology of Tea (*Camellia sinensis* (L.) O. Kuntze) Cultivars in Sri Lanka

9.50 a.m. Morphological Characterization of Local and Introduced Finger Millet (*Elusine coracana* (L.) Gaertn) Germplasm in Sri Lanka
Technical Session III

Agronomy, Food & Nutrition

Chairperson: Prof. Deepthi Bandara
Venue: Seminar Room B, Amaya Hills Resort

8.30 a.m.  Evaluation of the Nutritional Value of Selected Leafy Vegetables Grown in Sri Lanka
            H. Nadeeshani, K.M.S. Wimalasiri, G. Samarasinghe, R. Silva and T. Madhujith

8.50 a.m.  Macronutrient Composition of Selected Traditional Yams Grown in Sri Lanka
            W.M.A.A. Kulasinghe, K.M.S. Wimalasiri, G. Samarasinghe, R. Silva and T. Madhujith

9.10 a.m.  Potential of Rhizobacterial Pseudomonas and Bacillus spp. to Manage Papaya Ringspot Virus Disease of Papaya (Carica papaya (L.))
            C. Ranasinghe, D.M. De Costa, B.M.V.S. Basnayake, D.M. Gunasekara, S. Priyadarshani and N.V.R. Navagamuwa

9.30 a.m.  Performance of Anaerobic Germination-tolerant Rice Varieties in Direct Seeding: Effects on Stand Establishment, Weed Growth and Yield under Different Seeding Rates
            T. K. Illangakoon, B. Marambe, R.S.K. Keerthisena, A.P. Bentota, S. Kulatunge, V. Kumar and A. Ismail

9.50 a.m.  Potential of Eppawala Rock Phosphate as a Phosphorus Fertilizer for Rice Cultivation in Acid Sulphate Soils in Matara District of Sri Lanka

10.10 a.m. TEA
Technical Session IV

Communication Technologies & Social Sciences

Chairperson: Prof. C. Sivayoganathan
Venue: Main Auditorium, Amaya Hills Resort
Time: 10.30 a.m.

Stable Isotopes to Understand Processes Controlling Trace Metals and Quantify Their Fluxes in the Soil-plant System

Prof. Emmanuel Frossard
Department of Environmental System Sciences
ETH Zurich, Institute of Agricultural Sciences, Zurich, Switzerland

Invited Presentation - I

Chairperson: Prof. Chandi Rajapakshe
Venue: Main Auditorium, Amaya Hills Resort
Time: 10.30 a.m.

Stable Isotopes to Understand Processes Controlling Trace Metals and Quantify Their Fluxes in the Soil-plant System

Prof. Emmanuel Frossard
Department of Environmental System Sciences
ETH Zurich, Institute of Agricultural Sciences, Zurich, Switzerland

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11.15 a.m. Use of Free Open Source Software Technologies to Enhance Knowledge Mobilization in Smallholder Agricultural Communities in Sri Lanka

11.35 a.m. Severity of Climate Induced Drought and its Impact on Migration: A Study of Ramechhap District, Nepal
N. Joshi and R. Dongol

11.55 a.m. Impact of Adversity Quotient on Stress Levels of Middle-Level Managers of NGO Sector
C.S.N Somaratne, L.N.A.C. Jayawardena and B.M.K. Perera

12.15 p.m. Resilience of Farmers at Water Shortage Situations in Minor Irrigation Systems: A Case Study in Kurunegala District, Sri Lanka
Technical Session V

Biotechnology

Chairperson: Prof. J.M.R. Sarath Bandara
Venue: Seminar Room B, Amaya Hills Resort

11.15 a.m. In-silico Promoter Analysis Reveals Rice Wx Promoter Could be a TATA-less Promoter with a Putative Pyrimidine Rich Region
K.R.D. Hemage and V.A. Sumanasinghe

11.35 a.m. Preliminary Investigations on the Genetic Relationships and Origin of Domestication of the Tea Plant (Camellia sinensis (L.)) Using Genotyping by Sequencing
M.K. Meegahakumbura, M.C. Wambulwa, D.Z. Li and L.M. Gao

11.55 a.m. Mapping and Validation of Quantitative Trait Loci for Root Architectural Traits in Rice (Oryza sativa) under Non-Stress and Salinity Stress Conditions
D.R. Gimhani, B.P. Abhayawickrama, M.S.F. Saliha and N.S. Kottearachchi

12.15 p.m. Phenotypic Screening of Rice Varieties Tolerant to Salt Stress at Seed Germination, Seedling and Maturity Stages

12.35 p.m. LUNCH

Invited Presentation - II

Chairperson: Prof. S.P. Nissanka
Venue: Main Auditorium, Amaya Hills Resort
Time: 01.30 p.m.

Can Semi-commercial Agricultural/Agroforestry Commodity Value-Addition Contribute to Rural Livelihood Enhancement?

Prof. Naresh Thevathasan
School of Environmental Sciences,
University of Guelph, Guelph, Ontario, Canada
Technical Session VI

Agricultural & Biosystems Engineering

Chairperson: Prof. Sarath Ilangathileke
Venue: Seminar Room B, Amaya Hills Resort

2.15 p.m. Comparative Assessment of Newly Designed Burial Type Lowland Power Cultivator for Weed Control
G.V.T.V. Weerasooriya, D.N. Jayatissa and M. Rambanda

2.35 p.m. Design and Development of a Heat Pump Based Moisture Control System for Industrial Drying of Medicinal Plants

2.55 p.m. Scaling-Up of an Up-Flow Anaerobic Sludge Blanket Incorporated with a Bio-Filter Liner System for Treating Kitchen Wastes
R.T.K. Ariyawansha, B.F.A. Basnayake and A.K. Karunarathna

3.15 p.m. Development of an Auger Conveyor Type Metering Device for Transplanting of Vegetable Seedlings Raised in Paper Pots
R. Chilur, B.M. Nandede and P.S. Tiwari

Technical Session VII

Spatial Analysis, Forecasting and Mapping

Chairperson: Dr. W.M.D.B. Wickramasinghe
Venue: Main Auditorium, Amaya Hills Resort

2.15 p.m. Classification of Geographical Origin of Sri Lankan Black Tea Using Discriminant Function Analysis
T.U.S. Peiris, C.K. Walgampaya, R.O. Thattil and I.S.B. Abeysinghe

2.35 p.m. Forecasting Annual Tea Production in Sri Lanka
H.P.A.S.S. Kumara and B.L. Peiris

2.55 p.m. Detailed Mapping of Soil Texture of a Paddy Growing Soil Using Multivariate Geostatistical Approaches

3.15 p.m. Mapping of Soil Erosion Hazard Zones of Sri Lanka
M.J.P.T.M. Jayasekara, H.K. Kadupitiya and U.W.A. Vitharana
Invited Presentation - III

Chairperson: Prof. Buddhi Marambe

Venue: Main Auditorium, Amaya Hills Resort
Time: 3.35 p.m.

Importance of Industry-focused Research to Agriculture in Tasmania

Dr. Alistair Gracie
Tasmanian Institute of Agriculture,
University of Tasmania, Hobart, Tasmania, Australia

Poster Presentations

Venue: Amaya Hills Resort, Kandy

Development of a Protocol for In-vitro Establishment of Gyrinops walla
S. Selvaskanthan, D.K.N.G. Pushpakumara and J.P. Eeswara

Development of an Artificial Breeding and Hatchery Technique for Exotic Ornamental Fish Sahyadria denisonii (Day, 1865)

Length-Weight Relationships of Four Different Sea Cucumber Species in North East Coastal Region of Sri Lanka
K. Veronika, U. Edirisinghe, K. Sivashanthini and and A.R.S.B. Athauda

Cost-benefit Analysis on Introduction of Macrobrachium rosenbergii (De Man, 1879) in Puthumurippu Medium Perennial Reservoir in Sri Lanka
R. Rajeevan, U. Edirisinghe and A.R.S.B. Athauda

Socio Economic Status of Crab Fishers and Marketers in Navanthurai Fishing Village in Jaffna Estuary, Sri Lanka
A. Tharmine, K. Sivashanthini and U. Edirisinghe

Identification of Cyanobacteria Inhabiting Paddy Fields in Intermediate Zone and Dry Zone of Sri Lanka
R.P.U.I. Amarawansa, B.L.W.K. Balasooriya, W.S. Dandeniya, B. Suganthan and T. Dasanyaka

A Gendered Analysis on Adaptation to Resettlement Stress: Case Studies from Deduru Oya Reservoir Project in Sri Lanka
Morphological Characteristics and Traits of Agronomic Interest of Cultivated Eggplant (*Solanum melongena* L.) and its Wild Relatives: Guide for Potential Utilization in Eggplant Breeding

*A. Dissanayaka, H. Fonseka, T. Welegama, L. Niran, R. Rajapaksha, R.M. Fonseka and J. Prohens*

Modeling and Forecasting Rainfall in Catchment Area of Kotmale Reservoir, Sri Lanka

*A.M.P.D. Abeykoon and B.L. Peiris*

Bound and Total Phenolic Contents and Antioxidant Potential of Selected Sri Lankan Millet Varieties

*N. Jayawardana, S. Wimalasiri, G. Samarasinghe and T. Madhujith*

A Binary Logit Estimation of Factors Influencing Awareness of Grasscutter (*Thryonomys swinderianus*) Farming among Farming Households in Kwara State, Nigeria

*S.A. Salau, O.J. Yusuf, D.F. Apata and O.M. Adesina*

Molecular Diversity Analysis of Conserved Capsicum *Chinense* Jacq. Germplasm in Sri Lanka


Prevalence of Mistletoes in Fruit and Timber Trees in the Wet and Intermediate Zone of Sri Lanka

*S.S. Yapa, A.J. Mohotti, M.A.P.K. Seneviratne, B.L. Peiris and K.U. Tennakoon*

**Closing Session**

*Chairperson: Dr. (Ms.) S.M.C. Himali*

*Venue: Main Auditorium, Amaya Hills Resort*

4.00 p.m. Invited Presentation by Distinguished PGIA Alumnus
“Capacity Building in Research through Postgraduate Experience”

*Dr. B. Wasana Wijesooriya*
Principal Research Officer, Biometry Section, Rubber Research Institute of Sri Lanka, Dartonfield, Agalawatta

4.30 p.m. Presentation of Awards

5.00 p.m. Vote of Thanks

*Ms. Sathsara Samaranayake*
Secretary, Postgraduate Agriculture Students’ Association, PGIA

5.10 p.m. Closing Remarks

*Dr. S.M.C. Himali*
Congress Coordinator-2017