

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 29 th Annual Congress Coordinator
05.20 p.m.	Address by Mr. Chathura Vidyarthne 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 29 th 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
M.S. Kurukulasuriya, G.L.L.P. Silva, C.M.B. Dematawewa, H.B.S. Ariyaratne, R.P.V.J. Rajapakshe, S.H.G. Wickramaratne, L.J.P.A.P. Jayasooriya, D.M.S. Munasinghe, L.G.S. Lokugalappatti and D.R. Notter

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.)
C.K. Pathirana, A.M.U.R.K. Attanayake, D.M.U.S.K. Dissanayake, J.G.K.L. Gamlath, K.W. Ketippearachchi, T. Madhujith, P.C.G. Bandaranayake and J.P. Eeswara
- 9.30 a.m. Reproductive Phenology of Tea (*Camellia sinensis* (L.) O. Kuntze) Cultivars in Sri Lanka
J.H.N. Piyasundara, I.P. Wickramasinghe, M.T.K. Gunsekara, M.A. Wijeratne, S.A.C.N. Perera, M.A.B. Ranathunga and A.K. Mudalige
- 9.50 a.m. Morphological Characterization of Local and Introduced Finger Millet (*Elusine coracana* (L.) Gaertn) Germplasm in Sri Lanka
W.M.R. Kumari, D.K.N.G. Pushpakumara, W.M.W. Weerakoon, D.M.J.B. Senanayake and H.D. Upadhyaya

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
U.A.J. Ratnayake, K.D.N. Weerasinghe, U.W.A. Vitharana and K.K.J. Chandika
- 10.10 a.m. TEA

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

Technical Session IV

Communication Technologies & Social Sciences

Chairperson: Prof. C. Sivayoganathan

Venue: Main Auditorium, Amaya Hills Resort

- 11.15 a.m. Use of Free Open Source Software Technologies to Enhance Knowledge
Mobilization in Smallholder Agricultural Communities in Sri Lanka
***H.A.C.K. Jayathilake, U.K. Jayasinghe-Mudalige, L.D.R.D. Perera,
G.A. Gow and N. Waidyanatha***
- 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
***W.M.S.M. Wijekoon, E.R.N. Gunawardena, M.M.M. Aheeyar and
W.P.R.P. De Silva***

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
R.M.N.H. Senanayake, H.M.V.G. Herath, I.P. Wickramesinghe, U.A.K.S. Udawela and D.N. Sirisena
- 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 Ilanganthileke
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
E.M.A.C. Ekanayake, K.S.P. Amaratunge, H.K.P.P. Kariyawasam, M.G.M. Kumara and H.L.A.P.G.I.L. Bandara
- 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. Kumarasinghe and B.L. Peiris
- 2.55 p.m. Detailed Mapping of Soil Texture of a Paddy Growing Soil Using Multivariate Geostatistical Approaches
R.A.A.S. Rathnayaka, U.W.A. Vitharana and W.K. Balasooriya
- 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*

3.35 p.m. TEA

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)
A.M.A.N. Adikari, U. Edirisinghe, E.D.M. Epasinghe, H.M.P. Kithsiri, V. Phalawathtaarachchi and T.A.D.W. Karunaratne

Length-Weight Relationships of Four Different Sea Cucumber Species in North East Coastal Region of Sri Lanka
K. Veronika, U. Edirisinghe, K. Sivashanthini 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
M.M.J.G.C.N. Jayasiri, D.M.N. Diyawadana, S.M.L.D. Samarakoon, S. Pathmarajah and N.D.K. Dayawansa

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

N.H.L.D.L.D. Nanayakkara, S.K. Wasala, N.M. Ubeysekara, K.G.C.N. Jayarathne and I.P. Wickremasinghe

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

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| 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 |