TWENTY EIGHTH ANNUAL CONGRESS

November 17 - 18, 2016
Plant Genetic Resources Centre (PGRC), Gannoruwa, Peradeniya

PROGRAMME

November 17, 2016

INAUGURAL SESSION
Chairperson: Prof. S. Samita, Director, PGIA

08.00 a.m. Registration
08.45 a.m. National Anthem
08.50 a.m. Traditional Lighting of the Oil Lamp
09.00 a.m. Welcome Address by Dr. Mojith Ariyaratne
Coordinator - PGIA Congress 2016
09.10 a.m. Address by Ms. Samurdi Ariyarathne
President, Postgraduate Agriculture
Students’ Association
09.20 a.m. Address by Prof. Gamini Pushpakumara
Dean, Faculty of Agriculture
University of Peradeniya
09.30 a.m. Address by Prof. S. Samita
Director, Postgraduate Institute of Agriculture
University of Peradeniya
09.40 a.m. Address by Prof. Upul B. Dissanayake
Vice Chancellor, University of Peradeniya
09.50 a.m. Address by the Chief Guest H.E. Ms. Shelley Whiting
High Commissioner of Canada to Sri Lanka and Maldives
10.05 a.m. Presentation of the Journal
“Tropical Agricultural Research, Vol. 28 (1)”
10.10 a.m. Keynote Address by Prof. Alistair Hetherington
“Understanding How Stomata Respond to Changes in the Environment”
University of Bristol, United Kingdom
10.40 a.m. Highlights of the 28th Annual Congress 2016
10.50 a.m. Refreshments
Technical Session I

Genetics & Plant Breeding

Chairperson: Prof. A.L.T. Perera

Venue: Main Auditorium, PGRC

11.15 a.m. Morpho-genetic Diversity and Anti-bacterial Activity in Root Extracts of Nine Solanaceous Species

11.35 a.m. Quantitative Genetic Assessment of Phosphorus Deficiency Tolerance in Selected F2 Progenies of Rice (Oryza sativa L.) Genotypes in Sri Lanka
Y.C. Aluwihare, R. Lebwala, D.R.R.P. Dissanayake, M.D.M. Chamikara, D.N. Sirisena, W.L.G. Samarasinghe and S.D.S.S. Sooriyapathirana

11.55 a.m. Determination of Parents and Cross Combinations for Rice (Oryza sativa L.) Hybrids via Line×Tester Analysis
W.S. Priyantha, V.A. Sumanasinghe, S. de. Z. Abeysiriwardena and U.A.K.S. Udawela

12.15 p.m. Tri-species Bridge Crosses [(Capsicum annuum L.×Capsicum chinense Jacq.)×(Capsicum chinense Jacq.×Capsicum frutescens L.)] as an Alternative Approach for Introgression of Cucumber Mosaic Virus and Chilli Veinal Mosaic Virus Resistance from C. frutescens L. into C. annuum L.

12.35 p.m. LUNCH
Technical Session II

Food Technology

Chairperson: Prof. R. Sivakaneshan
Venue: Seminar Room, PGRC

11.15 a.m. Impact of Moderate Intensity Pulsed Electric Field Treatment on Lycopene Content and Its Invitro Bioaccessibility of Whole Tomato (Solanum lycopersicum L)

11.35 a.m. Optimization of Enzymatic Interesterification of Coconut (Cocos nucifera L.) and Sesame (Sesamum indicum L.) Oils Using Thermomyces lanuginosus Lipase by Response Surface Methodology
S. Sivakanthan, L.J.P.A.P. Jayasooriya, M. Kulatunga and W.M.T. Madhujith

11.55 a.m. Comparative Study on Major Chemical Constituents in Volatile Oil of True Cinnamon (Cinnamomum verum Presl. syn. Cinnamomum zeylanicum Blume) and Five Wild Cinnamon Species Grown in Sri Lanka
T. Liyanage, W.M.T. Madhujith and K.G.G. Wijesinghe

12.15 p.m. The Effect of Antioxidative Extracts in Reducing Oxidation of Selected Edible Oils during Deep Frying

12.35 p.m. LUNCH
Invited Presentation - I

Chairperson: Prof. D. de Costa

Venue: Main Auditorium, PGRC

01.15 p.m. Theory and Practice of Surfactant-Colloidal Science in the Development of Innovative Products for Agrochemical Industry

Dr. Manilal Dahanayake

Director and Scientist Fellow at Solvay Group of Companies and the Surfactant Research Institute CUNY, USA.

Technical Session III

Water: Treatments & Dynamics

Chairperson: Prof. K.D.W. Nandalal

Venue: Main Auditorium

02.00 p.m. Coagulation-Flocculation Treatment for White Pepper (Piper nigrum L.) Processing Wastewater

M.A. Tharmalingam, M. Gunawardana, M.I.M. Mowjood and D.A.N. Dharmasena

02.20 p.m. Spatial and Temporal Dynamics of Water Quality in Batticaloa Lagoon in Sri Lanka

M. Sugirtharan, S. Pathmarajah and M.I.M. Mowjood

02.40 p.m. Water Regimes and Ecosystem in Lowland Paddy Field: A Case Study in Awlegama, Kurunegala, Sri Lanka


03.00 p.m. Situation Analysis of Socio Environmental Aspects of Non Point Source Water Pollution in Intensively Cultivated Areas of Nuwara Eliya

K.D.M.S.S. Sarathchandra, N.D.K. Dayawansa and M.I.M. Mowjood

03.20 p.m. TEA
Technical Session IV

Molecular Genetics

Chairperson: Prof. Parakrama Karunarathne
Venue: Seminar Room, PGRC

02.00 p.m. Variation of Field Symptoms and Molecular Diversity of Virus Isolates Associated with Chilli Leaf Curl Complex in Different Agroecological Regions of Sri Lanka
G.D.N. Menike and D.M. De Costa

02.20 p.m. Molecular Marker Validation for Bacterial Leaf Blight Resistant Genes Xa21 and Xa4 in Ld 99-12-38 / IRBB 60 Genetic Background

02.40 p.m. Evaluation of Genetic Diversity of Cis-acting Elements of Abscisic Acid Responsive Element Binding Protein (ABRE-BP) in Selected Sri Lankan Rice (Oryza sativa L.) Varieties
W.M.A. Senavirathne, D.V. Jayatilake, V. Herath and H.A.M. Wickramasinghe

03.20 p.m. TEA

Technical Session V

Agrostology & Aquaculture

Chairperson: Prof. K. Samarasinghe
Venue: Main Auditorium

04.00 p.m. Captive Breeding of Fire Shrimp (Lysmata debelius) Under Sri Lankan Conditions
H.A.S.U. Hettiarachchi and U. Edirisinghe

04.20 p.m. Yield and Nutritional Quality Potential of Three Fodder Grasses in the Northern Region of Sri Lanka
M. Sarmini and S. Premaratne

04.40 p.m. Present Status of Holothurian Fisheries in Mullaitivu Coastal Waters in the North-East Region of Sri Lanka
K. Veronika, U. Edrisinghe, K. Sivashanthini and A.R.S.B. Athauda
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Technical Session VI

Agronomy

Chairperson: Prof. H.P.M. Gunasena

Venue: Main Auditorium, PGRC

09.00 a.m. Impact of Variety and Seed Priming on Anaerobic Germination Tolerance of Rice (Oryza sativa L.) Varieties of Sri Lanka
T.K. Illangakoon, E.S. Ella, A.M. Ismail, B. Marambe, R.S.K. Keerthisena, A.P. Bentota and S. Kulatunge

09.20 a.m. Temporal Tillerinig Behavior of Sri Lankan Elite Rice (Oryza sativa L.) Varieties in Response to Phosphorus Availability
D.S. Kekulandara, P.C.G. Bandaranayake, D.N. Sirisena, W.L.G. Samarasinghe and L.D.B. Suriyagoda

09.40 a.m. Influence of Whole and Subsoil Salinity on Growth, Development, Physiology and Yield of Selected Rice (Oryza sativa L.) Varieties Cultivated in Jaffna District, Sri Lanka
L. Pradheeban, S.P. Nissanka and L.D.B. Suriyagoda

10.00 a.m. Evaluation of Paddy Fields System Layout for Other Field Crops (OFC) in a Minor Irrigation System in Bayawa, Sri Lanka

10.40 a.m. TEA
Technical Session VII

Entrepreneurship & Extension

Chairperson: Prof. L.H.P. Gunarathne
Venue: Seminar Room, PGRC

09.00 a.m. Entrepreneurial Potential of Small Scale Beekeeping in Rural India: A Case Study in Kanniyakumari District, Tamil Nadu
M. Esakkimuthu and V.L.V. Kameswari

09.20 a.m. Clientele Satisfaction Towards the Public-Private Partnership Extension Model Introduced for Technology Dissemination in Tea Smallholding Sector in Sri Lanka
M.K.S.L.D. Amarathunga, W.A.D.P. Wanigasundera and M. Wijeratne

09.40 a.m. Water Conflicts among Different Water Users and Uses in the Hakwatuna Oya Watershed in the Deduru Oya Basin, Sri Lanka

10.00 a.m. Effectiveness of Health and Safety Training for Municipal Waste Collectors: A Case Study from Galle, Sri Lanka
T. Rajapaksha, Saliya De Silva, B.F.A. Basnayake, Lahiru N. Jayakody
R.T.K. Ariyawansha, A.N. Siriwardana

10.20 a.m. Fostering Technology Stewardship Approach to Promote Knowledge Sharing among Farming Communities in Sri Lanka
G.A. Gow and N. Waidyanatha

10.40 a.m. TEA
Technical Session VIII

Climate Change & Water Management

Chairperson: Prof. B. Marambe
Venue: Main Auditorium, PGRC

11.15 a.m. Impact of Climate Change on Irrigation Water Demand of Paddy: A Case Study from Hakwatuna Oya Irrigation Scheme in Sri Lanka
M. Rajendran, E.R.N. Gunawardena and N.D.K. Dayawansa

11.35 a.m. Recent Changes of Rainfall Regime of Hakwatuna Oya Watershed of Sri Lanka
A.C.S. Perera, B.V.R. Punyawardena and E.R.N. Gunawardena

11.55 a.m. Vulnerability of Smallholder Farmers to Climate Change or Variability: A Case Study from Hakwatuna-Oya Irrigation Scheme in Sri Lanka
D.M.N. Diyawadana, S. Pathmarajah and E.R.N. Gunawardena

12.15 p.m. Assessment of Environmental Flow Release from Deduru Oya Reservoir to Mitigate Possible Impact on Downstream Ecosystem
M.M.J.G.C.N. Jayasiri, N.D.K. Dayawansa and E.R.N. Gunawardena

12.35 p.m. Land Use Changes Resulting From Construction of Deduru Oya Reservoir and its Impact on Livelihood
S.M.L.D. Samarakoon, N.D.K. Dayawansa and E.R.N. Gunawardena

12.55 p.m. LUNCH
Invited Presentation - II

Chairperson: Prof. B. Marambe

Venue: Main Auditorium, PGRC

02.00 p.m.  Increasing Atmospheric CO₂ Concentration Threatens The Human Nutrition

Prof. Saman Seneweera

Associate Professor at the University of Southern Queensland, Australia.

Poster Presentations

Venue: Lobby, PGRC

03.00 p.m. Clustering of Selected Sri Lankan Rice (Oryza sativa L.) Varieties Based on Plant Architecture and Evaluation of Their Association to Relative Water Content under Drought


Screening of Sri Lankan Rice (Oryza sativa L.) Landraces for Drought Tolerance

S.P. Munasinghe, S. Somarathne and S.R. Weerakoon

Economic and Technical Feasibility of Upcountry Vegetable Production in Halmillewa, Sri Lanka

D.G.K.P. Wijerathne and W.A.P. Weerakkody

Evaluating the Growth Performance of Two Azotobactor species as an Inoculum for the Production of Bio-Fertilizers in Liquid Glucose Broth and Tryptic Peptone Broth


Competing Risk Model for Dengue Epidemiology in Sri Lanka: Modeling the Length of Stay in Hospital

G.H.S. Karunarathna and M.R. Sooriyarachchi

Mass Rearing of Cheilomenes sexmaculata (Coleoptera : Coccinellidae) on Different Diets under Laboratory Conditions

Biogas Slurry as a Fertilizer in Hydroponic Lettuce (*Lactuca sativa* L.) Cultivation  
*A.N. Siriwardana, W.A.P. Weerakkody and R. Pallawala*

Weed Management Practices in Machine Transplanted Rice Cultivation  

Practical Field Test on Newly Designed Burial Type Lowland Power Cultivator for Effective Weed Control in the North-Central Province, Sri Lanka  
*G.V.T.V. Weerasooriya, D.N. Jayatissa and M. Rambanda*

The Effect of Maturity Stage on Ripening and Quality Characters of Four Tomato (*Solanum lycopersicon* L.) Varieties of Sri Lanka  
*G.G.D.S. Priyankara, C.L.S.M. Karunaratne, K.H. Sarananda and M. Ariyarantne*

Prospects and Issues Related to Tea Cultivation in Mid Country Homegarden Based Tea Smallholdings in a Selected Village in Sri Lanka  

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**Closing Session**

Chairperson: Dr. M. Ariyarathne  
*Venue: Main Auditorium, PGRC*

4.00 p.m.  Invited Presentation by Distinguished PGIA Alumnus  
“How to Build on your differences to be a successful leader”  
**Dr. Rukshan Gunathilake**  
Supply Chain Director, Ceylon Tobacco Company

4.40 p.m.  Presentation of Awards

5.00 p.m.  Vote of Thanks  
**Ms. Thilini Jayasekara**  
Secretary, Postgraduate Agriculture Students’ Association, PGIA