



IV International Conference on Postharvest and Quality Management of Horticultural Products of Interest for Tropical Regions ~ PQMHP 2017



6th – 8th April, 2017
Organizer: Agriculture Education Unit, Faculty of Agriculture, University of Peradeniya, Peradeniya 20400, Sri Lanka. +94 718 501 686 pqmhp2017@gmail.com
Kandy, Sri Lanka

PROGRAMME

Inaugural Session 06th April 2017 (Thursday) at Conference Hall No. 1 (from 8.50 a.m. to 10.30 a.m.)

08.50 a.m. – 09.00 a.m.	Receiving the guests
09.00 a.m. – 09.05 a.m.	Traditional Lighting of the Oil Lamp
09.05 a.m. – 09.15 a.m.	Welcome Address by Convener/Conference Chair - PQMHP2017 Dr. Chalinda Beneragama, Director, Agriculture Education Unit, University of Peradeniya
09.15 a.m. – 09.20 a.m.	Address by Dean, Faculty of Agriculture, University of Peradeniya Prof. Gamini Pushpakumara
09.20 a.m. – 09.25 a.m.	Address by Chief Guest Prof. Upul B. Dissanayake, Vice-Chancellor, University of Peradeniya
09.25 a.m. – 09.35 a.m.	Address by Guest of Honour Prof. Hiroyuki Konuma, Director, Organization for International Collaboration, Meiji University ASEAN Center, Japan FAO Regional Representative for Asia and the Pacific (2010-2015)
09.35 a.m. – 09.45 a.m.	Address by ISHS Executive Committee Member Prof. Margrethe Serek, Leibniz University of Hannover, Germany
09.45 a.m. – 10.00 a.m.	Invited Speech “Pesticides and Food Safety in Fruits and Vegetables: Challenges in Feeding 9.7 Billion People by 2050” Prof. Buddhi Marambe, Department of Crop Science, Faculty of Agriculture, University of Peradeniya
10.00 a.m. – 10.30 a.m.	Networking Tea

Technical Session I - Good Postharvest Practices (GPPs) targeting quality consumers - I

06th April 2017 (Thursday) at Conference Hall No. 1 (from 10.30 a.m. to 12.30 p.m.)

Session Chairs : Prof . Hiroyuki Konuma and Prof. Sriyani Peiris

Moderators : Dr. G.D. Kapila Kumara, Dr. Mojith Ariyaratne and Dr. Malkanthi Daundasekara

10.30 a.m. – 11.00 a.m.	Key Note speech: Use of genetic manipulation for reduction of ethylene sensitivity in ornamental plants - Prof. Margrethe Serek
11.00 a.m. – 11.15 a.m.	Production and Commercialization of Eco Friendly Packaging Material for Transportation of Fruits and Vegetables - Dr. Shanthi Wilson Wijeratnam, Ms. Yoga Milani, Mr. Dineth Samarawickrama
11.15 a.m. – 11.30 a.m.	Effects of Ozonated Water Treatment and MA Storage on the Postharvest Storage of Wax Apple Fruit (<i>Syzygium samarangense</i> [Blume] Merrill & L. M. Perry) - Prof. Dr. Jeng-Jung Shyr, Sheng-Feng Peng, Wei-Tzuo Hong
11.30 a.m. – 11.45 a.m.	Production of spiral from <i>Dracaena sanderiana</i> canes as value added products - Dr. Shelomi Krishnarajah, Dr. H. K. L. K. Gunasekera, H. P. T. L. Sewwandi
11.45 a.m. – 12.00 p.m.	Effects of hot water incorporated with salicylic acid dips on postharvest quality of papaya fruit cv. `Holland´ during storage - Dr. Suriyan Supapvanich, Assist. Prof. Panida Boonyaritthongchai, Assist. Prof. Surassawadee Promyou, Assist. Prof. Chalermchai Wong-Aree
12.00 p.m. – 12.15 p.m.	Effect of hydrothermal postharvest treatment on skin ultra-structure of papaya (<i>Carica papaya</i> L.) Pococi hybrid - Paula Calvo, Tatiana Vargas, Marisol Jimenez
12.15 p.m. – 12.30 p.m.	Community of Practice (CoP) on food loss reduction: a global and dynamic platform for sharing solutions on post-harvest management and loss reduction - Ms. Francesca Gianfelici, Ms. Rosa Rolle, Ms. Mireille Totobesola-Barbier
12.30 p.m. – 01.30 p.m.	Lunch

Technical Session II - Quality fruits and vegetables for healthy life

06th April 2017 (Thursday) at Conference Hall No. 2 (from 10.30 a.m. to 12.30 p.m.)

Session Chairs : Dr. M.W.M. Weerakoon and Prof. Diane Beckles

Moderators : Dr. Pradeepa Bandaranayake, Dr. Kapila Dissanayake and Dr. Lakmini Ashroff

10.30 a.m. – 11.00 a.m.	Key Note speech: The Effects of Thermal Treatment and Sonication on the Quality of Guava (<i>Psidium guajava</i>) and Pineapple (<i>Ananas comosus</i>) Juice Blend - Dr. Chandran Somasundram
11.00 a.m. – 11.15 a.m.	Does kernel position on the cob affect zeaxanthin, lutein and quality parameters in zeaxanthin-biofortified sweet-corn? - Paula Calvo, Dr. Tim O'Hare, Dr. Kent Fanning, Dr. Kinnari Shelat
11.15 a.m. – 11.30 a.m.	Effect of cross and self-pollination on 2-acetyl-1-pyrroline content and other fruit characteristic of aromatic coconut (<i>Cocos nucifera</i> Linn.) - Prof. Dr. Jingtair Siriphanich, Assoc. Prof. Vorapat Vorapat
11.30 a.m. – 11.45 a.m.	Present Status of Fruit Crop Industry in Sri Lanka - Dr. Mojith Ariyaratne, Mr. J.T.K.H. Gamage, Ms. C.L.S.M. Karunarathne, Dr. Chalinda Beneragama
11.45 a.m. – 12.00 p.m.	Variation of fruit quality and taste related sensory perception of two apple cultivars 'Ohrin' and 'Sunfuji' stored in different refrigerated containers - Ms. R.P. Sakalya S. Rajapakse, Prof. Munehiro Tanaka, Mr. Huynh Van Kiet Mr. Shoichiro Fuji
12.00 p.m. – 12.15 p.m.	Dynamics of Sri Lankan fresh vegetable industry in the international trade: past, present and future - Ms. C.L.S.M. Karunarathne, Mr. J.T.K.H. Gamage, Dr. Mojith Ariyaratne, Dr. Chalinda Beneragama
12.15 p.m. – 12.30 p.m.	Evaluation of physicochemical, microbial and organoleptic properties of low calorie pineapple nectar sweetened with Stevia (<i>Stevia rebaudiana</i> Bertoni) - R.M.M.L. Rathnayake, A.Y.L. Fernando, Dr. K.H. Sarananda Dr. Mojith Ariyaratne
12.30 p.m. – 01.30 p.m.	Lunch

Technical Session III - Good Postharvest Practices (GPPs) targeting quality consumers - II

06th April 2017 (Thursday) at Conference Hall No. 1 (from 01.30 a.m. to 03.30 p.m.)

Session Chairs : Prof. Margrethe Serek and Dr. Shanthi Wilson

Moderators : Dr. Lasantha Weerasinghe, Dr. Harindra Champa and Dr. Kumari Fonseka

01.30 p.m. – 02.00 p.m.	Key note speech: Hexanal based Nanotechnology to Minimize Post-harvest losses in Tropical Fruits - Prof. J.G. Janavi
02.00 p.m. – 02.15 p.m.	Effect of Bio-safe on Shelf-life and Quality of Alphonso Mango - Dr. Keshav Pujari
02.15 p.m. – 02.30 p.m.	Factors Influencing Cracking in Polished Namhom Coconut and Its Prevention - Prof. Dr. Jingtair Siriphanich, Thanachok Taticharoen
02.30 p.m. – 02.45 p.m.	Drying flowers of <i>Brunfelsia pauciflora</i> , <i>Jasminum</i> spp. and <i>Tagetes erecta</i> using silica is efficient and yields best dried flower quality - Dr. Shelomi Krishnarajah, Dr. H. M. E. Hindagoda, Dr. S.M.M.R. Mawalagedara, Ms. L. N. S. Perera, Dr. U.G.A.I. Sirisena
02.45 p.m. – 03.00 p.m.	Effect of growth hormones and de-topping on <i>Cordyline terminalis</i> `Red edge` - Dr. Shelomi Krishnarajah, Dr. H. K. L. K. Gunasekera, D. A. M. N. Chamini
03.00 p.m. – 03.15 p.m.	A Low cost fruit Ripening Chamber - Dr. Keshav Pujari, Dr. Vijay Mehta, Vivek Jogalekar
03.15 p.m. – 03.30 p.m.	Analysis of Dilemma in Horticultural Co-Branding - Dr. Tomy Perdana, Fernianda Rahayu Hermiatin, Sonny Sanjaya
03.30 p.m. – 03.45 p.m.	Tea Break

Technical Session IV - Value chain and supply chain management for better quality

06th April 2017 (Thursday) at Conference Hall No. 2 (from 01.30 a.m. to 03.30 p.m.)

Session Chair : Dr. Shelomi Krishnarajah and Prof. Anibal Herrera Arevalo

Moderators : Dr. Janaki Mohotti, Dr. Nilanthi Wijewardena and Mr. Chandana Wasala

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| 01.30 p.m. – 02.00 p.m. | Key note speech: Potentials and constraints to develop Sri Lankan Fruit and Vegetables supply chain – Dr. K.H. Sarananda |
| 02.00 p.m. – 02.15 p.m. | Crowd sourcing for value chain management: A case of market decision support system - Prof. Asha Karunaratne
W.M.T.B. Weddagala, Prof. Achini De Silva |
| 02.15 p.m. – 02.30 p.m. | Introduction of plastic crates to vegetable wholesalers in major economic centers in Sri Lanka: why do people refuse it? - Ms. Chamindi Dissanayake, Mr. Chandana Wasala, Mr. C.R. Gunawardhane, Dr. R.M.N.A. Wijewardhane, Dr. Chalinda Beneragama, Mr. M.M. Herath |
| 02.30 p.m. – 02.45 p.m. | Self-congruity in the purchase behavior of floral gifts - Li-Chun Huang |
| 02.45 p.m. – 03.00 p.m. | Value chain analysis of the underutilized crops of different farming systems in Sri Lanka - Prof. Asha Karunaratne
Ms. T. M. Liyanagamage, Prof. Achini De Silva, Mr. Helitha Nilmalgoda, Dr. Patrick O'Reilly |
| 03.00 p.m. – 03.15 p.m. | Black and white faces of banana value chain in Sri Lanka: A case study - Mr. Isuru Hettiarachchi, Prof. Asha Karunaratne, Prof. Achini De Silva |
| 03.15 p.m. – 03.30 p.m. | Risk Management in Tomato Supply Chain using House of Risk Method - Dr. Tomy Perdana, Mr. Tetep Ginanjar, Mr. Sonny Sanjaya |
| 03.30 p.m. – 03.45 p.m. | Tea Break |

Poster Session

06th April 2017 (Thursday) at Conference Hall No. 1 (from 03.45 p.m. to 04.45 p.m)

03.45 p.m. – 04.45 p.m. Poster Session (Conference Hall No. 1)

- Effect of lemon basil (*Ocimum basilicum*) seed mucilage and Chinese quince (*Pseudocydonia sinensis*) seed mucilage coating on quality changes in cherry tomato (*Solanum lycopersicum* cv. Sida) fruits - Dr. Yasunori Hamauzu, Patthre Inthamat, Dr. Wirongrong Tongdeesoontorn
- Effect of different concentrations and exposure times of 1-MCP (1-Methylcyclopropene) on delaying the ripening of 'Ambul' banana at ambient conditions - Mr. Chandana Wasala, Dr. Chalinda Beneragama, Ms. Chamindi Dissanayake, Dr. Nilanthi Wijewardhane, Dr. K.H. Sarananda
- Evaluation of the suitability of prototype wooden bulk packages for transportation of leeks (*Allium porum*) in Nuwara-Eliya to Dambulla vegetable supply chain in Sri Lanka - Dr. Nilanthi Wijewardane, Mr. Chandana Wasala, Mr. Mahesh Dissanayake
- Storage temperature and packing influence on minimally processed pineapple and papaya - Paula Calvo, Paula Cristina Carvalho Lima, Paulo Sergio de Souza, Brigida Monteiro Vilas Boas, Bianca Sarzi de Souza
- Development of Electrospun Nano-Fibre Matrix to Extend Shelf-life of Mango Fruits - Ms. R Shanmugapriya, Dr. Kizhaeral Subramanian, Dr. GJ Janavi, J. Mohanraj, Dr. Loong-Tak Lim, Dr. Gopinadhan Paliyath, Prof. Jayasankar Subramanian,
- Pre-harvest sprays of hexanal nano-formulation for extending shelf-life of mango fruits - Prof. Jayasankar Subramanian, Dr. P Anusuya, R Manikandan, Dr. Kizhaeral Subramanian, Dr. GJ Janavi, Dr. Gopinadhan Paliyath
- Effects of passive modified atmosphere storage incorporated with 1-MCP on quality of asparagus spears during cold storage - Dr. Chairat Techavuthiporn, Assist. Prof. Suriyan Supapvanich
- b- Cyclodextrin based Inclusion Complex for the smart delivery of hexanal to enhance shelf-life of Mango (*Mangifera indica*) - Prof. Jayasankar Subramanian, Mr. R Vivek Kumar, Dr. S Marimuthu, Dr. Kizhaeral Subramanian, Dr. Gopinadhan Paliyath
- Hexanal Vapour Induced Resistance against Major Post-harvest Pathogens of Banana (*Musa* sp.) - Prof. Jayasankar Subramanian, Dr. D Durgadevi, Mr. I Arumuka Pravin, Dr. Kizhaeral Subramanian, Dr. GJ Janavi, Dr. Gopinadhan Paliyath
- Synthetic seed production in *Celastrus paniculatus* as a conservation technique - Dr. DLC Kumari Fonseka, Sachintha Madushani

04.45 p.m. End of Day 1 Technical Sessions

06.00 p.m. – 06.45 p.m.

Cultural Show

06.45 p.m. – 10.00 p.m.

Networking Dinner

Technical Session V - Manipulating the growing environment for product quality – I

07th April 2017 (Friday) at Conference Hall No. 1 (from 08.30 a.m. to 10.00 a.m.)

Session Chair : Prof. Omar Franco Mora and Prof. J.G. Janavi

Moderators : Dr. Janaki Mohotti, Dr. Lasantha Weerasinghe and Dr. Chandrika Dissanayake

- 08.30 p.m. – 08.45 a.m. Cytological changes and some postharvest quality traits of leeks grown in soil incorporated with partially burnt rice hull as a low cost silicon source - Dr. Darshani Weerahewa, Ms. Sakalya Rajapaksha
- 08.45 p.m. – 09.00 a.m. High temperature effect on strawberry fruit quality and antioxidant contents - Ms. Himali Balasooriya, Assoc. Prof. Said Ajlouni, Dr. Kithsiri Dassanayake, Mr. Bruce Tomkins, Dr. Saman Seneweera
- 09.00 a.m. – 09.15 a.m. Biological scaling of *Anthurium andraeanum* 'Tropical' and 'Pistache': Finding secrets of nature to improve floral quality - Ms. Himali Balasooriya, Mr. Ruchika Perera, Dr. Chalinda Beneragama
- 09.15 a.m. – 09.30 a.m. Investigation of the effect of day length through black cloth treatment on flowering of potted poinsettia (*Euphorbia pulcherima* Willd. ex Klotzsch) and evaluation of its longevity under indoor conditions - Ms. Dayani Karunananda, Prof. Sriyani Peiris, Dilhani Ms. Samaradiwakara
- 09.30 a.m. – 10.00 a.m. **Key Note speech:** Investigating Postharvest Chilling Injury in Tomato Fruits - Prof. Diane Beckles
- 10.00 a.m. – 10.30 a.m. Tea Break

Technical Session VI- Manipulating the growing environment for product quality - II

07th April 2017 (Friday) at Conference Hall No. 2 (from 08.30 a.m. to 10.00 a.m.)

Session Chair : Dr. Chandran Somasundaram and Prof. Jeng-Jung Shyr

Moderators : Dr. Vindya Basnayake, Dr. Dr. R.H.G. Ranil and Dr. Ilmi Hewajulige

08.30 a.m. – 08.45 a.m.	New sweet potato cultivation method for quality tuber production in homegardens - Ms. Dayani Karunananda Ramya Ranathunga
08.45 a.m. – 09.00 a.m.	Effect of thermal summation on harvest maturity of <i>Citrus aurantifolia</i> Swingle 'Local' - Ms. Dilhani Samaradiwakara, Dr. Harindra Champa Wickrema Arachchige, Prof. Janaki Eeswara
09.00 a.m. – 09.15 a.m.	Stomatal behavior and postharvest quality of yellow pitahaya (<i>Selenicereus megalanthus</i>) (K. Schum. ex Vaupel) Moran - Prof. Anibal Herrera, Edwin Espitia, Deisy Fontecha, Prof. Gerhard Fischer
09.15 a.m. – 09.30 a.m.	Land optimization for sustainable production of leafy vegetables - Mr. Nuwan Ekanayake, Prof. Asha Karunaratne, Prof. Sue Walker
09.30 a.m. – 10.00 a.m.	Key Note speech: Recent developments in postharvest technology of pineapple - Prof. Sisir Kumar Mitra
10.00 a.m. – 10.30 a.m.	Tea Break

Panel Discussion

07th April 2017 (Friday) at Conference Hall No. 1 (from 10.30 a.m. to 12.30 p.m.)

Session Chairs : Dr. Chalinda Beneragama and Mr. I. Anandatissa

Moderators : Mr. Ruchika Perera, Ms. Himali Balasooriya, Ms. Sakalya Rajapakse and Ms. Lankani Karunaratne

10.30 a.m. – 12.30 p.m. “Industry for Research – Research for Industry”
A panel discussion to bridge the Industry and Researchers

12.30 p.m. – 01.30 p.m. Lunch Break

Technical Session VII - Managing agro-inputs for high quality products

07th April 2017 (Friday) at Conference Hall No. 1 (from 01.30 a.m. to 03.15 p.m.)

Session Chair : Prof. Margrethe Serek and Prof. Sisir Kumar Mitra

Moderators : Dr.Mojith Ariyaratne, Dr. Darshani Weerahewa and Ms. Prathibhani Kumarihami

- 01.30 p.m. – 02.00 p.m. **Key Note speech:** Effects of preharvest fertilizer application on postharvest quality of ornamentals – Prof. Sriyani Peiris
- 02.00 p.m. – 02.15 p.m. Improve of the preharvest application of resveratrol and BAP technique to reduce postharvest cherimoya fruit softness - Prof. Dr. Omar Franco Mora, Juan Salomon-Castaño, Prof. Dr. Ivaro Castañeda-Vildózola, Prof. Dr. Juan Manuel Villarreal-Fuentes, Prof. Dr. Jesús Ricardo Sánchez-Pale, Aaran A. Morales P
- 02.15 p.m. – 02.30 p.m. Pre harvest application of silicon reduces internal browning development of pineapple (*Annanas comosus* cv. Mauritius) during cold storage: A novel approach - Dr. Darshani Weerahewa, Mr. Indika Wicramasekra
- 02.30 p.m. – 02.45 p.m. Effect of vermiwash on the productivity of *Gerbera jamesonii* L. compared to chemical fertilizer - Dr. Shelomi Krishnarajah, Mr. S.A.A.U. Subasinghe, Ms. R.H.A.W. Ruvini, A Nanayakkara
- 02.45 p.m. – 03.00 p.m. Application of Polyphasic OJIP Chlorophyll Fluorescent Transient Analysis in Seed and Seedling Testing in Common Bean (*Phaseolus vulgaris* L.) - Ms. W.A.K.D.R. Bandulasena, Dr. Chalinda Beneragama, Ms. R.A.I.S. Ariyaratne , Dr. Lakmini Priyantha
- 03.00 p.m. – 03.15 p.m. Effect of magnesium phosphide on the presence of *Copitarsia* sp. and quality in postharvest of thyme (*Thymus* sp.) and mint (*Mentha* sp.) - Prof. Dr. Anibal Herrera, Andres Mon, Carlos Camacho, Cristian Cuitiva, Andres Osorio, Gloria Vidal, Juan Getiva, Boris Orduz, Jorge Stamatiu,

03.15 p.m. – 03.45 p.m. ISHS Business meeting (Conference Hall No. 1)

- 03.45 p.m. – 04.15 p.m. Closing Session and Awards Ceremony
- 04.15 p.m. – 04.30 p.m. Vote of Thanks and Concluding Remarks

Conference Tour

08th April 2017 (Saturday) (from 07.30 a.m. to 06.30 p.m.)

07.30 a.m.	Leaving Peradeniya heading Rambukkana
09.00 a.m. – 10.00 a.m.	Visiting “Mike Flora” - one of the largest foliage plant exporters in Sri Lanka (http://www.mikeflora.com/)
10.15 a.m. – 12.15 p.m.	Visiting Elephant Orphanage at Pinnawala (http://nationalzoo.gov.lk/elephantorphanage/about_us/)
12.15 p.m.	Leaving Rambukkana heading Peradeniya - Snack Time (on-the-go)
02.15 p.m. – 03.00 p.m.	Tour within University of Peradeniya – “The Garden University” (www.pdn.ac.lk)
03.00 p.m. – 06.00 p.m.	Visiting Royal National Botanic Gardens, Peradeniya (https://en.wikipedia.org/wiki/Royal_Botanical_Gardens,_Peradeniya)