

A publication of the International Society for Horticultural Science

Chronica Horticulturae



Horticultural highlights

How to make substrates' R&D greater? • Record giant pumpkin fruit weights: 1857 to 2017
• A national value: Turkish figs • An overview on fruit breeding in Turkey

Symposia and workshops

Cactus Pear and Cochineal • Pomegranate and Minor Mediterranean Fruits
• Walnut, Cashew and Pecan • Peach • Papaya • Seed, Transplant and Stand
Establishment of Horticultural Crops • Production and Establishment of
Micropropagated Plants • Growing Media, Soilless Cultivation, and Compost
Utilization in Horticulture • Postharvest Unlimited

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Cover photograph: 'Alata' seedless lemon cultivar. See article p.23.



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› International Symposium on Growing Media, Soilless Cultivation, and Compost Utilization in Horticulture

Commission Plant Substrates and Soilless Culture
Commission Organic Horticulture
Commission Protected Cultivation
Section Vegetables, Quality Production Systems,
Leafy Green and Non-Root Vegetables
Section Vegetables, Roots, Tubers, Edible Bulbs, Brassica,
Asparagus

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The International Symposium on Growing Media, Soilless Cultivation, and Compost Utilization in Horticulture was convened in Portland, Oregon, USA from 20-25 August, 2017. Members of the ISHS Commissions Organic Horticulture, Plant Substrates and Soilless Culture, and Protected Cultivation were well represented. At this symposium, there were 150 attendees present from 21 countries representing the Growing Media, Substrate Analysis, Hydroponics and Aquaponics, and Composting for Horticultural Applications Working Groups within ISHS.

With the ever-increasing production of ornamental, edible, medicinal, and recreational crops in controlled environments, the need for specialized substrates will only increase in the years and decades ahead. Scientists and industry professionals from around the world joined in a unified agreement and belief that our industry must continue to evolve to meet the ever-growing needs of our ever-changing industry. Substrates are now being designed, engineered, constructed, and utilized like never before in the history of container substrate production. It is the goal, challenge, and livelihood of members

of the participating groups and industries to continue meeting the needs of the horticultural industry.

In addition to tours of botanical gardens, greenhouses, nurseries, and substrate producers in the Portland area, this symposium had over 60 oral and 40 posters presentations covering a broad range of topics related to substrate science. The North American and European growing media industries were well represented with numerous peat producers present, as well as growing media manufacturers, hydroponic product/system distributors, fertilizer companies, compost



› Participants of the symposium.



> Convener Brian E. Jackson (left) presenting the ISHS young minds awards to A) Paul Bartley for the best oral presentation and B) Joshua Henry for the best poster.

companies, plant/soil analytical companies, private consultants, coconut coir distributors, wood fiber manufacturers, and academic researchers. The support from the North American and European industries, both in sponsorships and participation, was outstanding and with their support, the symposium was considered by all to be a tremendous success.

One of the great successes of this symposium was the active participation of graduate students from around the world. Oral and poster presentations from graduate students filled the first day of the scientific session and later in the week during the symposium business meeting the first, second, and third place winners in each category were presented with plaques. ISHS young minds awards were presented to Paul Bartley from NC State University, USA, for the best oral presentation entitled "3-Dimensional characterization of substrates with X-ray microtomography" and to Joshua Henry from NC State University for

the best poster entitled "Redefining phosphorus nutrition and deficiency symptomatology for ornamentals grown in soilless substrates". The delegates present at the symposium were in great support of continued efforts to encourage graduate students and other young professionals to attend future symposia with ideas of scholarships or travel grants being a potential way of supporting this initiative.

In addition to a near total eclipse on 21 August in Portland, there were many topics of primary and frequent discussions, including: 1) the world-wide revolution of wood fiber usage in growing media, 2) the emerging *Cannabis* industry and its growing media needs and opportunities, 3) the debate of growing media regulations and standards, 4) the role of biological additives to growing media, 5) the future of composting and compost systems, 6) raw material sourcing and processing, 7) environmental and governmental regulations, 8) microbiology of organ-

ic substrates, 9) substrate induced nutrient relations and deficiencies, and 10) substrate hydrology and water capture for maximum crop efficiency. Also discussed during many sessions (formally and informally) was carbon footprint/sequestration of substrates and substrate materials, and end-of-life reuse and recycling of substrate materials.

Brian E. Jackson

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