NEWSLETTER

Commissions
Plant Substrates and Soilless Culture
Protected Cultivation

ISSUE 3 **2009**

NEXT SYMPOSIA

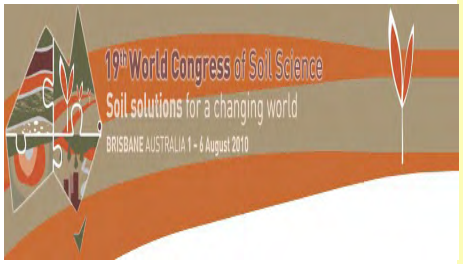
VII INTERNATIONAL SYMPOSIUM ON CHEMICAL AND NON-CHEMICAL SOIL AND SUBSTRATE DISIFESTATION

September 13 -18, 2009 Leuven, Belgium
There were already successful previous symposia held in Leuven, Torino and Corfu.
The symposium will cover the state of the art on soil and substrate disinfestation based on current and ongoing research for growers and applicators, but also for decision makers in agricultural legislation, to develop economically viable and environmentally sound plant production. Replacement of methyl bromide by different alternatives is worldwide still a hot topic. The program will include oral and poster presentations on topics dealing with fundamental and practical aspects of integrated and biological control of soil-borne pathogens, solarization and bio-fumigation, detection and quantification of pests and diseases, use of novel chemicals and alternatives such as substrates, soilless cultures and hydroponics.

The symposium is co-convened by Prof. Dr. J. Coosemens, Katholieke Universiteit Leuven, Belgium and Prof. Dr. A. Gamliel, Agricultural Research Organisation, The Volcani Center, IsraelThe symposium website is available at http://ishs-horticulture.org/soildisinfest2009/

It was a pleasure for ISHS to be invited by the organizers to participate and co-sponsor this event.

Brisbane, Australia, August 01 - 06, 2010
19th WORLD CONGRESS OF SOIL SCIENCE
Soil Sulutoions for a changing World



Thankfully, this is principally an initiative of Dr. Michael Raviv, chair of the WG Compost in Growing Media who was approached by an Australian friend suggesting to hold a joint IUSS / ISHS seminar on compost during the 19th World Congress of Soil Science. On this occasion, it was proposed holding an ISHS-sponsored seminar, titled: 'Compost for Horticultural Uses', divided in 3 3-hour sessions with the following topics: 1. Composting for horticultural uses. 2. Compost use in growing media. 3. Compost use for field horticulture (orchards and vegetables). The lectures and posters delivered during these sessions will be collected, peer-reviewed and published as an issue within the Acta Horticulturae series.

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People that will give lectures or posters within the framework of this seminar, and others who might be interested in getting the published Acta, will have to add an additional 50€ to the registration fees (based on the assumption that this Acta publication will have up to 300 pages).
Our Commission hopes that this unique initiative will become successful for continuous future cooperation with this important society of International Union of Soil Science.

The 5th International Conference "Modern Problems of Plants Soilless Cultivation"

Institute of hydroponics Problems of the National Academy of Sciences of Armenia

Yerevan, Armenia September 09 - 11, 2009

The conference is devoted to the prominent Scientist, Academician Gagik Davtyan's 100th anniversary.
G.S. Davtyan had a significant contribution to the science development in Armenia, particularly in the sphere of agro-chemistry. He is considered to be one of the founders of a very important and up-to-date scientific direction in plant soilless cultivation / hydroponics in the Soviet Union.
Conference organizers are: National Academy of Sciences of Republic of Armenia, the Ministry of Science and Education, the Ministry of Agriculture, Yerevan State University and G.S.Davtyan of Hydroponics Problems NAS RA.

2nd Symposium for Hydroponics and Soilless Culture for South America

Puebla, Mexico May 2011

During the ISHS symposium in Lima, Peru in August 2008 Prof. Dra. Maria de las Nieves Rodriguez of the Colegio de Postgraduados, Area de Nutrición Vegetal offered to organize this 2nd symposium for South America. We are looking forward to this outstanding event in a country where hydroponics has already taken off substantially.

International Symposium on Sustainability of Peatlands management and Growing Media Production

Quèbec City, Canada June 13 - 16, 2011

The Symposium Secretariat of the International Symposium on Sustainability of Peatlands Management and Growing Media Production in

Québec hosted and established by IPS Canadian National Committee (Canadian Society of Peat and Peatlands) and Université Laval, and co-chaired by Line Rochefort and Jean Caron and the International Society of Horticultural Science have agreed to jointly organize this International Symposium on Sustainability of Peatlands Management and Growing Media Production. This will be other of already many previous event of the International Peat Society and the ISHS, Commission of Plant -substrates and Soilless Cuture.

XXVII. International Horticultural Congress - IHC2010

Lisbon, Portugal August 22 - 27, 2010

Our two Commissions will actively participate with several events and we hope that may of our members will share their experience with own contributions!

Symposium

Greenhouse 2010: Environmentally Sound Greenhouse Production for People

Conveners: Dr. Nicolas Castilla, Dr. Olaf Van Kooten, Dr. Sadanori Sase and Dr. Jorge Meneses. Organized by the Commissions Protected Cultivation (CMPC), Horticultural Engineering (CMEN), Plant Substrates and Soilless Culture (CMPS) and the Section Vegetables (SEVE).
Web: http://www.ihc2010.org/

Seminar

New and Innovative Techniques in Soilless Cultivation

Conveners: Wilfried H. Schnitzler and Erik van Os (chair person of the WG Hydroponics, CMPS&SC)
Today, Soilless Cultivation has become a growing method for many crops in horticulture all over the world. This Seminar offers participants a platform for introduction and discussion of new and innovative techniques for economically and environmentally sound production. This includes automation, saving of agrochemicals and water, use and reuse of substrates to achieve a superior product quality and quantity.

Proposed Workshop

Good Agricultural Practices (GAP) in Protected Cultivation of Vegetables

Organized by Wilfried H. Schnitzler and Cherubino Leonardi (chair person of the WG Protected Cultivation in Mild Winter Climates, CMPC**)**

New Initiative by Dra. Silvia Bures, Chair person of the WG "Growing Media" of the Commission PS&SC for a new electonic platform to share information.

I would invite all members of the working groups to send information on group or national activities (collective), such as what is going on in a particular country or region or what are the latest developments on a given subject, but I would use a different platform for particular communications exchange. To me there are two things that can be exchanged and have to be so to make science progress:
- Exchange of information (it is sad to have groups working in the same research areas in different geographical areas and not exchanging information).
- Exchange of excellence, ability, capacity (I mean, students or researchers that would like to work in research on a specific subject or scientists that would like to find

PUBLICATIONS

ACTA HORTICULTUREA

-Acta Horticulturae 797 ("Greenhouse Environmental Control and Crop Production in Semi-Arid Regions". Tucson, Arizona, USA, October 2008)

-Acta Horticulturae 801 ("High Technology for Greenhouse System Management: GreenSys-2007". Naples, Italy, October 2007).

-Acta Horticulturae 807 ("Strategies towards Sustainability of Protected Cultivation in Mild Winter Climates". Antalya, Turkey, April 2008).

-Acta Horticulturae of the Symposium "Soilless Culture and Hydroponics". (Lima, Peru. 25-28 August 2008), is in the editing process.

The European Journal of Plant Science & Biotechnology 2008 Global Science Books

Plant Nutrition and Physiological Disorders in Greenhouse Grown Tomato, Pepper and Eggplant

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ABSTRACT

Optimization of the nutritional status of plants is fundamental to high production in a greenhouse environment, and especially so in the case of fast-growing, high-yielding Solanaceous vegetables such as tomato, pepper and eggplant. Nutritional disorders (deficiencies and toxicities) may arise in either soil or soilless media due to imbalanced fertilization and/or shortcomings in the root environment and can result in serious losses of yield and quality. The present paper reviews research findings related to the nutrition of greenhouse Solanaceous vegetable crops when cultivated in the soil or in hydroponic systems. In addition, some of the more frequently observed physiological disorders, particularly those affecting fruit quality and to a significant extent resulting from nutritional and/or environmental deficiencies are reviewed. The scope of the review is to summarize our current knowledge concerning plant nutrition management in soil- and soilless-grown tomato, pepper and eggplant crops as well as the impact of nutrition and greenhouse environment on the main physiological disorders of these crops.

Postgraduate School "Microbial Horticulture" (ìHORT)
Invitation for enrollment
The postgraduate school

"Microbial horticulture" provides innovative solutions for sustainable
horticultural production, healthy food and sustainable development. It is a collaborative initiative of
departments at SLU (Horticulture, Plant Protection Biology, Plant Breeding and Biotechnology, Forest
pathology and mycology, in Alnarp and Uppsala), Lund University (Food hygiene) and University of
Applied Sciences Wiesbaden, Campus Geisenheim, Germany (Phytomedicine). As an interactive
network, the postgraduate school promotes top-level postgraduate education within horticulture, plant
pathology, microbiology, bio- and food technology and offers:

• State of the art research facilities
• Structured scientific program (Courses, seminars and conferences within fields related to microbial horticulture as well as for generic skills in scientific writing, statistics, bibliometry, pedagogics at SLU Alnarp)
• Transdisciplinary science college
• Supervision and mentoring arrangements and career guidance
• International collaboration
• Collaboration with academia and industry related to horticulture.

We also provide a limited number of PhD-positions.
ìHORT provides wide prospects for an individual research project in an attractive and international research environment.
We invite graduate students heading for a licentiate exam or PhD in horticulture, biology or technology
within the following thematic priorities to enroll into ìHORT:
Environmentally sound horticultural production
Threats of human and plant pathogens in horticultural production chains related to global climate change
Horticultural production systems as bio-factories
Microbial quality of horticultural growing media
Microbial horticultural produces and their production
Recycling and bioremediation in connection to horticultural production systems and horticultural produces
Deadline for application is April 10, 2009.
Details on the research fields and admission procedure can be obtained at www.phd-microhort.se
The coordination is handled by the executive committee of the postgraduate school. Further details
regarding open PhD-positions can be obtained at www.phd-microhort.se

ISHS International Symposium GREENSYS-2009

Dear Colleagues,

We are glad to announce that Québec City and Université Laval will soon host GreenSys2009 and welcome 400+ delegates from 32 countries for the upcoming International Symposium on High Technology for Greenhouse Systems. For the first time in ISHS GreenSys history, joint scientific and technical programs will rally scientific and industrial communities under the same event to discuss key topics such as Energy, Greenhouse Systems and Management, Plant Protection, Modelling, Fertigation, Controlled Environment, and Sustainable and Organic Growing Systems. Two ISHS, two North American, and one international working group have also joined GreenSys2009 for this unique event:

- **Hortimodel** – Modelling Plant Growth, Environmental Control, Greenhouse Environment
- **Computational Fluid Dynamics** (CFD)
- **NCERA-101** North American Committee on Controlled Environment Technology and use
- **NE-1035** Multi-state Project on Developing and Integrating Components for Commercial Greenhouse Production System
- **ICCEG** International Committee for Controlled Environment Guidelines

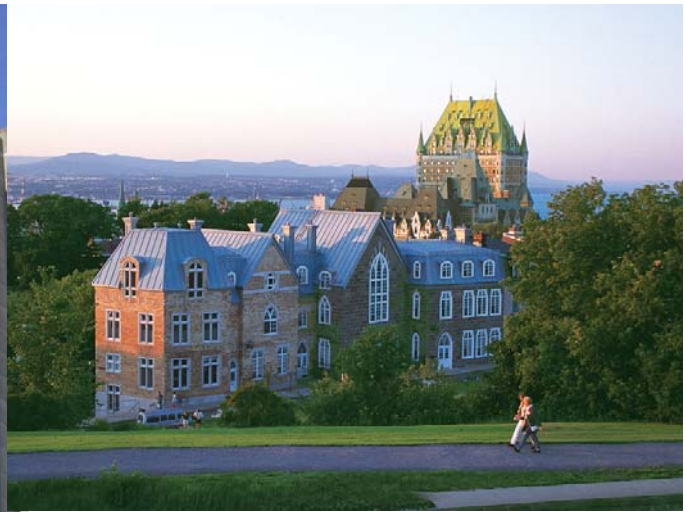
Greenhouse production in Northern countries faces new challenges in terms of energy efficiency and sustainability, while extending greenhouse production to semiarid and arid regions where there is abundance of solar radiation leads to other challenges such as water availability, cooling and pest control. New technologies and new integrated multidisciplinary approaches should be developed by researchers and adapted by the industry in order to fulfil the three basic cornerstones of sustainability: profitability, environment, and social/equity. Closed and semi-closed greenhouses, new greenhouse designs and covers, and renewable energy sources are promising avenues. Improvement of microclimate control via advanced sensor technology and algorithms, better understanding of the impact of climate change and variability on crop production by modelling as well as the development of decision support systems for the industry, are essential for the state of the art of the Greenhouse Agrotechnology. Development of new niche market products such as functional foods, plant-made vaccines and bio-pharmaceuticals offer great opportunities for the greenhouse industry but will require new structural and operational approaches for commercial production of this plant biomass.

The Symposium will consist of fourteen sessions: 1) Greenhouse Design and Systems, 2) Efficient Energy and Resource Use, 3) Greenhouse Management and Abiotic stresses, 4) Crop Modelling – HORTIMODEL, 5) CFD, 6) Microclimate, 7) Robotic and Sensors, 8) Controlled Environment Technology and Use – NCERA-101/NE-1035, 9) Fertigation and Management of Growing Media, 10) Plant Protection, 11) Sustainable Growing Systems, 12) Organic Crop Systems, 13) High Tunnels, and 14) New Products and Quality. With 4 keynote speakers, 25 invited speakers, 145 oral presentations, and

poster sessions consisting of more than 150 posters, the scientific committee is confident that GreenSys2009 will be a very informative and stimulating Symposium to all of us.

In addition, to attract people from the greenhouse industry and to stimulate many “interactions” and “cross-talks”, a Technical Program has been defined by the organizing committee. Fourteen selected R&D presentations on Energy, Greenhouse Structure and Equipment, and Innovation and Trends will be held on Wednesday, while on Thursday, eight and ten presentations, will cover different aspects of the floriculture and vegetable productions, respectively.

This unique Symposium will be held in the beautiful city of Québec at the Loews Le Concorde from June 14 to 19. Québec City is the birthplace of French civilization in North America. It guards access to the entire region from its perched position on the Cape Diamond promontory, high above the mighty St. Lawrence River. Québec City is the only city in North America still surrounded by ancient stone fortifications. UNESCO recognized this uniqueness by including Old Québec in the prestigious family of world heritage treasures monuments of exceptional universal value worthy of special protection.



The Symposium includes a tour of the Horticultural Research Centre of Laval University, the Institute of Functional and Nutraceutical Foods, and the new greenhouse facilities at the agriculture and agri-food faculty. Participants arriving at the International airport of Montréal (PET) will have the opportunity to take the Scientific Tour (June 13-14, and June 19-20), including two nights in Montréal, visits of the unique Montréal Biodôme, the Montréal Botanical Garden, a large flower greenhouse operation and garden center, and on their way back (June 19-20), visits of three greenhouse operations featuring vegetable and flower production. The tour will include a scenic drive along the St-

Lawrence River. A one-day post-tour (Thursday June 18th), featuring the beautiful area of Charlevoix is available to all participants. The tour will start with a short visit of the magnificent shrine of Ste-Anne de Beaupré and the morning will be completed with a visit of a greenhouse complex specialized in bedding plants and hydroponic tomato production. Lunch will be taken at Manoir Richelieu and include a visit of the beautiful garden. A 2-hr whale watching cruise and visit of the Saguenay River will complete the afternoon.

Please access our workshop website for more details and updated information (www.GreenSys2009.com).
We look forward to seeing you in Québec City in June!

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