



XI International Symposium on Protected
Cultivation in Mild Winter Climates
& I International Symposium on Nettings
and Screens in Horticulture
Tenerife (Spain - Canary Islands) January 27-31, 2019

Sunday January, 27 2019

17:30-18:30 Registration

18:30-20:30 Welcome Reception, Sol Costa Atlantis Hotel

Monday January, 28 2019

08:00-09:00 Registration

09:00-09:45 Opening Ceremony

SESSION I: Innovative strategies for irrigation, nutrition and management

Chairs: Yosepha Shahak & Francesco Orsini

09:45-10:30 **Keynote lecture**

Dimitrios Savvas, Agricultural University of Athens, Greece
Current knowledge and recent technological developments in nutrition and irrigation of greenhouse crops

10:30-10:50 Youssef Roupheal, University of Naples, Italy

Implications of microbial and non-microbial biostimulatory action on the quality of leafy and fruit vegetables

10:50-11:10 Dana Charuvi, The Volcani Center, Israel

Daytime LED-interlighting for improving photosynthesis and productivity in bell pepper grown in high tunnels

11:10-11:30 **Coffee break**

11:30-11:50 Erik Van Os, Wageningen University, Netherlands

An investment order tool to facilitate coordinated development of greenhouse horticulture

11:50-12:10 Thomas Bartzanas, CERTH, Greece

Assessing the sustainability of greenhouse crops using life cycle analysis tools

12:10-12:30 Esteban Baeza, Wageningen University, Netherlands

Exploring the Boundaries of the Passive Greenhouse in Jordan: a Modelling Approach



- 12:30-12:50 Georgia Ntatsi, Hellenic Agricultural Organization, Greece
Metabolic profile of two different *Cichorium spinosum* L. ecotypes as influenced by nitrogen form and supply levels
- 12:50-13:10 Alexander Boedijn, Wageningen University, Netherlands
Modelling and dimensioning of circular food production systems fed by geothermal energy: aquaponics
- 13:10-13:30 Erik Van Os, Wageningen University, Netherlands
Application of the adaptive greenhouse concept in Lebanon

13:30-15:00 Lunch

SESSION II: Abiotic stresses and environmental impacts

Chairs: Dimitrios Savvas & David Ben-Yakir

- 15:00-15:45 Keynote lecture**
Rodney Thompson, University of Almeria, Spain
Reducing nitrate leaching losses from vegetable production in Mediterranean greenhouses
- 15:45-16:05 Dimitrios Savvas, Agricultural University of Athens, Greece
Can grafting onto suitable rootstocks contribute to less discharge of drainage water in semi-closed soilless cultivations of tomato?
- 16:05-16:25 Lidia López-Serrano, Inst. Valenciano de Investigaciones Agrarias, Spain
Physiological mechanisms of tolerance of grafted pepper under salt stress
- 16:25-16:45 Giuseppina Pennisi, University of Bologna, Italy
Salt stress in hydroponically grown lettuce is alleviated by greenhouse white plastic covering film and exogenous proline application
- 16:45-17:05 Hagai Yasuor, Gilat, The Volcani Center, Israel
Plant nutrition as a tool for improving greenhouses vegetable crop performance and quality under heat stress condition
- 17:05-17:15 Mirella Sorrentino, PSI Photon Systems Instruments, Czech Republic;
Lettuce reaction to drought stress: high-throughput automated phenotyping of growth and photosynthetic performance
- 17:15-18:15 Poster session & coffee break**



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Tuesday January 29, 2019

SESSION III: Sustainable systems and pest management

Chairs: Esteban Baeza & Salvador Lopez-Galarza

08:30-09:15 **Keynote lecture, Carlo Leifert, Southern Cross University, Australia**
Integrating the use of resistant rootstocks/varieties, suppressive composts and elicitors to improve yields and quality in protected organic cultivation systems

09:15-09:35 David Ben-Yakir, The Volcani Center, Israel
Means to reduce invasion and infestation of small insect pests in protected crops

09:35-09:55 Ockert Stander, University of Stellenbosch, South Africa
The influence of drape-nets on foliar spray deposition, insect pests, and important tree phenological responses of 'Nadorcott' mandarin

09:55-10:15 Gérald Chouinard, R&D Institute for Agri-Environment, Canada
Exclusion nets, a step towards pesticide-free apple growing in North America

10:15-10:35 Nikolaos Katsoulas, University of Thessaly, Greece
Development of an insect screen with silica coating for environmental friendly control of insects in greenhouses

10:35-11:00 Coffee break

11:00-11:45 **Keynote lecture, Jan van der Blom, COEXPHAL, Spain**
Biological control: the only sustainable basis for pest management in greenhouse horticulture

11:45-12:05 Ard Nieuwenhuizen, Wageningen University, Netherlands
Automated spider mite damage detection on tomato plant leaves in greenhouse

12:05-12:25 Juan A. Fernandez, Universidad Politécnica de Cartagena, Spain
Effect of the application of a compost tea on the production of baby leaf lettuce in a floating system

12:25-12:55 José A. Pascual Valero, CEBAS-CSIC, Spain
Soil fungicides to control soil-borne diseases of Mediterranean crops grown under greenhouse

12:55-14:30 Lunch



SESSION IV: Climate control

- Chairs:** Jan van der Blom & Giuseppe Colla
- 14:30-15:15** **Keynote lecture, Esteban Baeza, Wageningen University, Netherland**
Smart greenhouse covers: a Look into the future
- 15:15-15:35** Shabtai Cohen, The Volcani Center, Israel
Exploiting dynamic changes in internal screenhouse climate to inform irrigation in bananas
- 15:35-15:55** Maayan Friman Peretz, The Volcani Center and Ben-Gurion University, Israel
Organic Photovoltaic Modules as a Greenhouse cover: Determination of the Spectral and Thermal Properties and the Electricity Production Efficiency
- 15:55-16:15** Thomas Bartzanas, CERTH, Greece
Numerical evaluation of greenhouse's covering materials
- 16:15-16:35** Meir Teitel, the Volcani Center, Israel
Light intensity and distribution in screenhouses with different roof shape
- 16:35-16:55** Josef Tanny, The Volcani Center, Israel
Microclimate, evapotranspiration and water use efficiency of pepper in high-tunnel greenhouses and screenhouses in semi-arid regions
- 16:55-17:15** Hanna Schwartz, Kafrit Group, Israel
Method for evaluation of heat buildup reduction efficiency of various solutions
- 17:15-18:15** **Posters & Coffee**
- 18:15-19:15** **Working Group Business Meeting**
Chairs: Youssef Roupheal & Juan A. Fernandez
- 20:30** **Farewell dinner (buses leave for dinner)**

Wednesday
January 30, 2019

SESSION V: Semi protected horticulture

- Chairs:** Carlo Leifert & Meir Teitel
- 08:30-09:15** **Keynote lecture, Yosepha Shahak, The Volcani Center, Israel**
Netting and photosensitive netting: friendly solutions for high-quality production together with crop protection.



- 09:15-09:35 Avi Sadka, the Volcani Center, Israel
Top netting as a practical tool to mitigate the effect of climate change and induce productivity in citrus
- 09:35-09:55 Graham Barry, University of Stellenbosch, South Africa
Microclimate and tree physiology of 'Nadorcott' mandarin are affected by shade netting
- 09:55-10:15 Yishai Netzer, Eastern R&D, Israel
Shading table grapes-effect on water consumption, physiology and yield parameters
- 10:15-10:35 Maanea L Ramphinwa, University of Venda, South Africa
Effect of net shading and season on plant growth, productivity and quality of bush tea (*Athrixia phyllicoides* dc)
- 10:35-11:00 Coffee break**
- 11:00-11:20 Paul J.R. Cronje, University of Stellenbosch, South Africa
The influence of 20 % white shade nets on fruit quality of 'Nadorcott' mandarin
- 11:20-11:40 Fernando José Hawerroth, Est. Exper. de Fruticultura de Clima Temp., Brazil
Anti-hail nets in apple orchards in Southern Brazil: current situation and perspectives to improve fruit production and quality
- 11:40-12:00 Mike Nichols, Massey University, New Zealand
Recent changes in berry fruit production in New Zealand
- 12:00-12:20 Juan Carlos Diaz-Perez, University of Georgia, GA, USA
Bell Pepper (*Capsicum annum* L.) Plant Growth and Fruit Yield Under Colored Shade Nets
- 12:20-12:40 Mirella Aoun, American University of Beirut, Lebanon
Assessment of a netting system for apple production in a Mediterranean semi-arid climate
- 12:40-13:00 Leonardo Soldatelli Paim, Federal University of Rio Grande Do Sul, Brazil
Sequential application of budbreak promoters in 'Baigent' apple trees under anti-hail nets in orchards of Southern Brazil
- 13:00-13:30 Closing ceremony**
- 13:30-15:00 Lunch**



SESSION VI: Industry perspective of protected and semi protected agriculture

- 15:45 - 16:00 Presentación
- 16:00 - 16:30 Secretos, verdades y mentiras de los textiles destinados a la protección de cultivos contra plagas.
Antonio J. Álvarez. Universidad de Almería (CRIADO & LÓPEZ)
- 16:30 - 17:00 Uso de pantallas y mallas anti-insecto en la producción bajo invernadero.
Nelson Pérez. SVENSSON
- 17:00 - 17:30 Plásticos inteligentes para aumentar rendimientos.
Celeste Savio. POLITÍV EUROPA
- 17:30 - 17:45 Innovative solutions for Agricultural films with Kafrit Masterbathes.
Hanna Schwartz. KAFRIT
- 17:45 - 18:15 Descanso
- 18:15 - 18:45 Manejo Integrado de Microorganismos en cultivos protegidos. Experiencias y resultados
Manuel Pérez Escobar. ASM de SYMBORG (Andalucía Oriental y Canarias)
- 18:45 - 19:00 Desarrollo de difusores de feromona para el control de *Tuta absoluta* en tomate y de *Cosmopolites sordidus* en platanera
Fernando Pinacho. ECOBERTURA
- 19:00 - 19:15 Experiencias de suelta de *Trichogramma* sp. en el control de *Chrysodeixus chalcites* en platanera en invernadero de malla y en aire libre
Tomás Martín. BIOAGROLÓGICA
- 19:15-19:30 Hidroponía recirculante: sostenibilidad e intensificación de rendimientos
Antonio Oliva. DIRECTOR I+D DE NGS
- 19:30 - 19:45 La importancia de la información para un fertirriego eficiente
Antonia Felices. WISE-AGROTECNOLOGÍA
- 19:45 - 20:00 Efecto de NOVIHUM® sobre la producción y calidad de cultivos de pimiento y tomate en invernadero
Carmen García. IFAPA La Mojonera (NOVIUM TECHNOLOGIES, S.L.)



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Thursday January 31, 2019

08:00	Departure (Hotel Sol Costa Atlantis, Puerto de la Cruz)
09:30 - 11:00	Pitaya Farm (PITABER http://www.pitaber.com)
11:00 - 11:30	Coffee at the facilities of PITABER
12:00 - 13:30	Strawberry Farm (SAT IZAÑA http://www.izaña.com)
14:00 – 16:00	Lunch in San Cristóbal de La Laguna
CULTURAL VISIT	
16:00 - 18:00	San Cristóbal de la Laguna