

**SD 2009**  
**7<sup>th</sup> INTERNATIONAL SYMPOSIUM**  
**ON CHEMICAL AND NON-CHEMICAL SOIL AND SUBSTRATE**  
**DISINFESTATION, 13 TO 18 SEPTEMBER, 2009**

*Collegium de Valk, Leuven, Belgium. Organized by an International Scientific Committee and the Department of Biosystems, Laboratory of Plant Protection, Katholieke Universiteit Leuven, Belgium and the ISHS*

**ORGANIZING COMMITTEE**

A. Gamliel	Agricultural Research Organization, Israel, Co-Convener
J. Coosemans	Katholieke Universiteit Leuven, Belgium, Co-Convener
J. Katan	Hebrew University of Jerusalem, Israel
M. Höfte	Universiteit Gent, Belgium
H. Maraite	Université Catholique de Louvain, Belgium
J. Dasque	EU Alterbromide Project, France
L. Ooms	Katholieke Universiteit Leuven, Belgium
A. Vanachter	Scientia Terrae Research Institute, Belgium
M. De Moor	Administrative and Logistic Association of Auctions, Belgium
H. Willocx	Ministry of the Flemish Government, Department Agriculture and Fisheries Belgium and Chair of the Benelux Society for Horticultural Science

**SCIENTIFIC COMMITTEE**

A. Gamliel	Agricultural Research Organisation, Israel, Co-Convenor
J. Coosemans	Katholieke Universiteit Leuven, Belgium, Co-Convenor
J. Katan	Hebrew University of Jerusalem, Israel
A. Vanachter	Scientia Terrae Research Institute, Belgium
E.C. Tjamos	Agricultural University of Athens, Greece
M. L. Gullino	DI.VA.P.R.A., University of Torino, Italy
D. Chellemi	USDA-ARS, Horticultural Research Laboratory, USA
M. Besri	Institut Agronomique et Vétérinaire Hassan II, Morocco
V. Cebolla	Instituto Valenciana de Investigaciones Agrarias, Spain
G. Lazarovits	Agriculture and Agri-Food Canada, Canada
M. Höfte	Universiteit Gent, Belgium
H. Maraite	Université Catholique de Louvain, Belgium
A. Legrève	Université Catholique de Louvain, Belgium
M. De Proft	Katholieke Universiteit Leuven, Belgium

**SYMPOSIUM PROGRAM**

**Sunday, 13 September 2009**

1500-2000 Registration at Collegium De Valk

1800-2000 Opening reception at Collegium De Valk

**Monday, 14 September 2009**

**0900-1000: Opening Session**

0900-0920 Welcome and introduction: *Prof. Jozef Coosemans (Belgium)*

Introduction to the scientific program *Dr. Abraham Gamliel (Israel)*

0920 Keynote lecture: Soil and crop health following soil disinfestation  
*Jaacov Katan (Israel) and Alfons Vanachter (Belgium)*

**1000–1200 Special session**  
**New developments and expectations since the Sixth Symposium - Corfu 2004. Needs, possibilities, legal changes, expectations**  
*Chairperson: Ian Porter (Australia)*

1000 Invited lecture:  
Emerging new pests and diseases and new trends in their management - *Angelo Garibaldi (Italy)*

1030 New developments and expectations: Vision from the scientific world – *Abraham Gamliel (Israel)*

1045 New developments and expectations: Vision and expectations from horticultural and agricultural sector- *Marta Pizano (Colombia)*

### **1100-11.30 COFFEE BREAK**

1130 New developments and expectations: Vision from *industry and fumigators* - *Husein Ajwa (USA)*

1145 New developments and expectations: Vision from *decision makers* - *Francesca Arena (EC)*

1200 Discussion

**1215-1330 Session 1**  
**MBr Alternatives**  
*Chairperson – Marta Pizano (Colombia)*

1215 Progress in the global phase out of methyl bromide and the relative effectiveness of soil disinfestation products to replace fumigation for pre-plant soil uses - *Ian Porter (Australia)*

1230 Is There a Future for 1,3-Dichloropropene and Other Chemical Soil Fumigants in European Agriculture? – *Andrew Leader (USA)*

1245 Adoption of Methyl Bromide Alternatives and a Profile of Turkish Cut flower sector – *Suat Yilmaz (Turkey)*

1300 Japan big effort to phase out of methyl bromide by 2013 – *Akio Tateya (Japan)*

### **13.30 14.30 LUNCH BREAK AND POSTER VIEWING**

**1430-1630 Special Session**  
**Methyl bromide alternatives : ALTERBROMIDE (EC) project**  
*Chairperson: Gael Du Fretay*

1430 Invited lecture  
ALTERBROMIDE, dissemination of sustainable alternatives to Methyl Bromide in soil disinfestation and in post harvest - *Gael Du Fretay (France)*

- 1500 Current status of chemical and non-chemical soil disinfestations solutions in France – *Jerome Fritsch (France)*
- 1515 Mechanical or manual applications of soil solarization for the control of soilborne pathogens in plastic house or open field in Greece – *Eleftherios Tjamos (Greece)*
- 1530 Soil disinfestation treatments with 1.3-dichloropropene and chloropicrin under low temperature conditions for strawberry mother plants – *Vicent Cebolla (Spain)*
- 1545 Greenhouse grafting cucumber crop – methyl bromide alternative in Romania – *Marian Bogoescu (Romania)*
- 1600 Soil and substrate microbiologizing: a promising approach for sustainable horticulture' – Frans Pauwels
- 1615 Discussions

**1630-1700 COFFEE BREAK**

**17.00 -1800 Special Session:  
Methyl bromide alternatives: ALTMET (B) project**  
*Chairperson: Henry Maraite – Belgium)*

- 1700 Efficacy of chemical alternatives for Methyl bromide in lettuce production: field experiment - *Ann Ceustermans (Belgium)*
- 1715 Combinations of chemical soil fumigants for broad spectrum soil disinfestation- *Etienne Van Wambeke (Belgium)*
- 1730 Microbial mechanisms involved in the suppression of *Rhizoctonia solani* AG1-1B by lignin incorporation in soil – *Sara Van Beneden*
- 1745 Use of oxamyl in the post methyl bromide era – *Johan De Saeger (USA)*

**18.00 Guided city tour**

**Tuesday, 15 September 2009**

**0830-1100: Session 2  
Chemical Soil Disinfestation**  
*Chairperson Husein Ajwa (USA)*

- 0830 Invited lecture:  
Biological control of plant-parasitic nematodes: from fantasy to reality - *Yitzhak Spiegel (Israel)*
- 0900 Multi-tactic Approaches to Manage Soilborne Pathogens of Specialty Crops in North Carolina – *Frank Louws (USA)*
- 0915 Powdery scab occurrence and control in Israel - *Lea Tsrar (Israel)*
- 0930 Soil chemical treatments for the control of Fusarium wilt of Carnation in Spain - *José Melero-Vara (Spain)*
- 0945 Effectiveness of fumigants alone and in combination with grafting to control Verticillium wilt and root-knot nematode in eggplant and tomato brown rot caused by *Colletotrichum coccode* - *Giovanna Gilardi (Italy)*
- 1000 Shank application of chloropicrin as an alternative to methyl bromide for peach tree replant – *Andrea Minuto (Italy)*
- 1015 Evaluation of the efficacy of DMDS using drip application for the control of root knot nematodes (*Meloidogyne spp.*) in Turkey – *Jean-Jacques.Heller (France)*

- 1030 Accelerated degradation of metam-sodium in soil: Isolation and characterization of the involved microorganism - *Abraham Gamliel (Israel)*
- 1045 Discussion

1100-11.30 **COFFEE BREAK**

**1130-1330 Session 3**  
**Assessment tools for soil infestation and disinfestation**  
*Chairperson – George Lazarovits*

- 1130 Invited lecture:  
 Assessing the spatial distribution of soil infestation by means of remote sensing and GIS as the “first-aid” for soil disinfestation - *Yafit Cohen (Israel)*
- 1200 Distribution and control of pod wart disease of peanuts as analyzed using spatial means – *Abraham Gamliel (Israel)*
- 1215 Unraveling Soil Communities Using the CPN60 Genomic Marker and Pyrosequencing *George Lazarovits (Canada)*
- 1230 A knowledge based system to Predict Plot infestation with *Verticillium dahliae* and the success of disinfestation in Potato production systems *Yafit Cohen (Israel)*
- 1245 Methods to monitor MITC for phytotoxicity and in the environment - *Etienne Van Wambeke (Belgium)*
- 1300 Discussions

**1330 - 1430 LUNCH BREAK AND POSTER VIEWING**

- 1430- 1500 Poster viewing**  
**1500- 1530 Poster Session discussion**  
*Chairperson – Alfons Vanachter (Belgium)*

**1530-1630 Session 4**  
**Integrated Control**  
*Chairperson Maria Lodovica Gullino (Italy)*

- 1530 Top applications of fungicides for the control of melon sudden wilt caused by *Monosporascus cannonballus*. - *Simon Pivonia (Israel)*
- 1545 A comparison of four pre-plant soil treatments for control of *Verticillium* wilt in field-grown trees - *Timothy O'Neill (UK)*
- 1600 TrichoNema: a *Trichoderma*-based project to develop a commercial biocontrol agent product against phytonematodes - *Edna Sharon (Israel)*
- 1615 Discussion

**1630-1700 COFFEE BREAK**

- 17.00 -1900 **Roundtable discussion**  
 Application of soil disinfestation agents and methods: bottlenecks, challenges and improvement.

## Wednesday, 16 September 2009

Technical Visit to the Vegetable Production in the region of Mechelen and Antwerp

## Thursday, 17 September 2009

### 0830-1100: Session 5

#### Physical methods of soil disinfestation and solarization

Chairperson - *Eleftherios Tjamos (Greece)*

- 0830 invited lecture:  
Physical methods for soil disinfestation in intensive agriculture: Old methods and new approaches - *Willemien Runia (the Netherlands)*
- 0900 Combining Effects of Soil Solarization and Grafting on Plant Yield and soilborne pathogens in cucumber – *Suat Yilmaz (Turkey)*
- 0915 Nitrate leaching after organic amendment under soil solarization in two different soils and its effects on yield and health of escarole and pepper - *Vicent Cebolla (Spain)*
- 0930 The Effect of Pre-wetting on Thermal Inactivation of Soilborne Pathogens in Connection with Structural Solarization of Greenhouses - *Eli Shlevin (Israel)*
- 0945 Perspectives of anaerobic soil disinfestation - *Willemien Runia (the Netherlands)*

### 1000

#### Session 6

#### Organic amendments

Chairperson *José Melero-Vara (Spain)*

- 1000 Effect of *Brassica* green manure and *Brassica* pellets in combination with grafting and soil solarization against *Verticillium* wilt of eggplant and *Fusarium* wilt of lettuce and basil - *Giovanna Gilardi (Italy)*
- 1015 Effect of Biofumigation with *Brassica* Cover Crops on Weed Populations, Soil microbial Activity, and Fruit Rot in Pickling Cucumber Production - *Mathieu Ngouajio (USA)*
- 1030 Green manures and organic amendments to control corky root of tomato - *Vincent Michel (Switzerland)*
- 1045 Additional benefits to the efficacy in containing soilborne pest and pathogens of biofumigant plant and materials – *Lucca Lazzeri (Italy)*

### 1100-11.30 COFFEE BREAK

- 1130 Use of pelleted medicago sativa meal for the control of root-knot and cyst nematodes - *Trifone D'addabbo (Italy)*
- 1145 Kakawate (*Gliricidia sepium*) as a Soil Amendment and Biological Control of Soil-borne Pathogens: The Philippines Experience *Gina Pangga (Philippines)*
- 1200 Combined Effects of Bio control Agent and Residues on Root Rot Mortality in Indian Mesquite (*Prosopis cineraria*) – *Satish Lodha (India)*
- 1215 Mycofumigation using *Muscodor albus* for control of soilborne plant pathogens - *Barry Jacobson (USA)*

- 1230 Plant metabolites derived from *brassica* spp. Tissues as biofumigant to control soil borne fungi pathogens- *Eva Romero Luna (Spain)*
- 1245 Induced soil suppressiveness to root diseases by herb amendments and solarization *Eyal Klein - Israel*
- 1300 Discussion

### **13.15 14.30 LUNCH BREAK**

#### **1430 - 1630 session 3 Soilless culture.**

*Chairperson Vicent Cebolla (Spain)*

- 1430 Invited lecture  
Disease control in soil-less systems - *Erik Van Os (the Netherlands)*
- 1500 Disinfestation of Polystyrene Seedling Trays for Substrate-based Float Systems in Australia - *Scott Mattner Australia)*
- 1515 Effect of commercially available composts on plant health – *Oliver Gurnett (Belgium)*
- 1530 Effect of ozone treatment on suppressivity of composted sewage sludge on *Meloidogyne incognita* - *Trifone D'Addabbo (Italy)*
- 1545 Microbial status following tomato culture in the new and reused rockwool substrate, subjected to chemical disinfection or not - *Czeslaw Slusarski (Poland)*
- 1600 Evaluation of some pre-plant soil treatments and chemical disinfectants for control of *Fusarium* wilt diseases in cut flowers - *Timothy O'Neill (UK)*
- 1615 **Discussions**

#### **1630 – 1700 Coffee break**

#### **1700 -1800 Closing Session**

– *Concluding remarks – Monica Hofte (Belgium)*

– General discussion and next meeting – Scientific Committee

#### **2000 Conference Dinner**

## **Posters**

### **Chemical disinfestation**

1. Effect of soil fumigants on fungal communities in protected pepper crops in Southeast Spain - *Maria Angeles Martínez (Spain)*
2. Efficacy of DMDS as a soil treatment against *Meloidogyne chitwoodii* in the Netherlands - *Charles patrick (France)*
3. Evaluation of DMDS as Soil Fumigant Application, Distribution and Pest control - *Abraham Gamliel (Israel)*
4. The emulsifiable formulations of Dimethyldisulfide (DMDS) and its mixtures with chloropicrin as alternatives to methyl bromide - *Vicent Cebolla (Spain)*
5. Reduction of peanut yield losses caused by *Sclerotium rolfsii* in the Hula Valley soils - *Michal Reuven (Israel)*

### **Integrated control**

6. The physiological sudden collapse of grafted melon as a result of a not appropriate growing procedure - *Andrea Minuto (Italy)*

7. Evaluation of Steam, Biofumigants, and Fungicides for Strawberry Production in Field Soils - *Steven Fennimore (USA)*

#### **MB alternatives**

8. Economic Evaluation of Chemical and Non-Chemical Soil Disinfestation - *Mehmet Ali Çelikyurt (Turkey)*
9. Maintaining Biosecurity and Market Access in the Australian Strawberry Industry Following Methyl Bromide Phase-out - *Scott Mattner (Australia)*
10. Pests and diseases of sweet basil after methyl bromide phase out: the Northern Italian experience - *Andrea Minuto (Italy)*

#### **Organic amendments**

11. Non-Chemical Options for Managing Soil Borne Plant Pathogens in Indian Arid Zone - *Satish Lodha (India)*
12. Effect of biosolarisation using pellets of *Brassica carinata* on soil-borne pathogens in protected pepper crops - *M. Mar Guerrero (Spain)*
13. Efficacy of biosolarisation with sugar beet vinasses for soil disinfestation in pepper greenhouses - *Maria Angeles Martínez (Spain)*
14. Integration of Non-chemical Methods of Controlling Fusarium Wilt of Carnation - *José Melero-Vara (Spain)*
15. Verticillium wilt suppression of olive plantlets using bio control products - *Thaer Yaseen (Iran)*
16. Application of organic amendments followed by plastic mulching for the control of Phytophthora root rot of pepper in northern Spain - *Mireia Núñez Zofío (Spain)*
17. Effect of meal of *Aster caucasicus* and *A. sedifolius* on the control of root-knot nematodes in glasshouse - *Mauro Di Vito (Italy)*,
18. Effects of Soil Organic Amendments and Incubation Temperature on the Control of *Fusarium oxysporum f. sp. Asparagi* - *José Melero-Vara (Spain)*

#### **Substrates**

19. Effects of Zeolite-Peat Mixtures on Yield and Some Quality Parameters of - *Mehmet Ali Çelikyurt (Turkey)*

#### **Biological control**

20. Guano biofertilizer in the biological control of Verticillium wilt in olive nursery plants - *Thaer Yaseen (Iran)*.
21. Biocontrol of Eggplant Bacterial Wilt with Combination of Avirulent Bacteriocin Producing Strain of *Ralstonia solanacearum* and Rhizosphere Bacteria - *Triwidodo Arwiyanto (Indonesia)*.
22. Biological Control of Common Root Rot of Wheat by Fluorescent Pseudomonads Isolated from Wheat Rhizosphere - *Nima Ranjba (Iran)*.
23. Biological Control of Wheat Take-all by *Trichoderma* spp. - *Ehsan Sari (Iran)*.
24. Determination of Deoxynivalenol in corn crop at Ardabil province in Iran and related Fusarium species in 2007-2008 - *neda aliakbari (Iran)*
25. Evaluating the Seedling Reaction of some major Wheat Cultivars of Tehran province to *Bipolaris sorokiniana* as the Casual Agent of Common Root Rot - *Nima Ranjbar (Iran)*
26. Evaluation of *Trichoderma* Isolates for Biological Control of Crown and Root rot in wheat (*Bipolaris spicifera*(Bain.)Subram) - *Hassan Reza Etebarian (Iran)*