

Final program
of the
VIII ISHS Symposium on
Mineral Nutrition of Fruit Crops
27th – 30th June 2017, Bolzano – Italy
Room D1.01



Program

Monday, 26 June 2017

17:00-
19:00 Registration of participants

Tuesday, 27 June 2017

09:00 Opening Ceremony

09:45 **Opening lecture**
Building resilience: future directions in mineral nutrition of woody perennial crops
Neilsen D, Neilsen G, Forge T

10:25 Coffee break

10:55 **Keynote** *Chairperson: Lang G*
Nutrient availability in the rhizosphere
Mimmo T

11:25 **Uptake and allocation of nutrients**
Chairperson: Lang G
Breeding apple rootstock for modulation of mineral nutrient composition in scions
Fazio G, Cheng L, Francescatto P, Lordan J, Grusak M, Robinson T
Iron deficiency root responses and effects of different iron fertilization practices in
Prunus
Abadia J, Luis-Villarroya A, Gogorcena Y, Abadia A, Alvarez-Fernández A
Potassium affects the sugar content and the expression of key genes involved in
sugar metabolism in leaves and fruit of “Huangguan” pear
Dong C, Shen C, Xu Y

12:30 Lunch

14:00 **Keynote** *Chairperson: Lang G*

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From isotopes to x-ray fluorescence and high-resolution 3-D visualization: alternative approaches for studying calcium uptake and distribution in apple
Kalcsits L, Giordani L, Van Der Heijden G, McNear D

14:30 **Uptake and allocation of nutrients**

Chairperson: Lang G

Impact of reduced post-véraison leaf area on the relationship between petiole and fruit composition

Holzappel B, Rossouw G, Smith J

Uptake and internal allocation of nitrogen in apple trees

Swarts N, Close D, Morris M

Leaf and root nitrogen uptake from simulated atmospheric deposition in potted apple trees

Zanotelli D, Panzacchi P, Scandellari F, Mosca E, Tagliavini M

15:30 Coffee break

16:00 **Mineral nutrition and environmental stresses**

Chairperson: Peryea FJ

Evaluating the efficiency of a pre-harvest combination of calcium and boron as foliar application to reduce sunburn on "Cripps Pink" apples

Lötze E, Daiber SH, Midgley SJE

Effect of soil phosphorous addition on growth, nutritional status and photosynthesis of potted grapevine plants grown with an excess of copper

Baldi E, Miotto A, Sorrenti G, Quartieri M, Brunetto G, Ceretta CA, Toselli M

Peach rootstock tolerance to excess zinc in sandy acidic soil

Brunetto G, Tiecher TL, Hammerschmitt RK, Basso Facco D, Ferreira PAA, De Conti L, Oliveira Stefanello da Silva L, Mayer NA, Correa Antunes LE, Cesco S, Mimmo T

17:00 Introduction to the poster session 1

Chairperson: Toselli M

17:20 Poster session 1

18:30 Welcome cocktail in Piazzetta Innerhofer (see map)

Wednesday, 28 June 2017

All day field trip

Program of the technical visit

Meeting point: Via Alto Adige 35, Bolzano (in front of Hotel Alpi, see map), at 8:00.

Departure at 8.15, sharp.

For logistic reasons, the participants will be divided into two groups.

The excursion will include visits to fruit processing/post-harvest plants, experimental fields at the Laimburg Research Center, commercial apple orchards and vineyards (guided by the local advisory service) and a botanical Garden (Trauttmansdorff Castle, Meran). Lunch break is included. Wear solid shoes and possibly bring a head cover.

Return to Bolzano around 20.00

Thursday, 29 June 2017

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- 09:00 **Keynote** *Chairperson: Achilea O*
Olive fertilization requirements under intensive cultivation management
Dag A, Erel R, Ben-Gal A, Yermiyau U
- 09:30 **Mineral nutrition and fruit quality**
Chairperson: Achilea O
Effects of potassium nutrition on fruit yield and quality of the Maltese citrus cultivar (*Citrus sinensis*, L.)
Ben Mimoun M, Dbara S, Lahmer K, Marchand M
Effect of plant growth-promoting rhizobacteria on the growth and quality of strawberry (*Fragaria ananassa*)
Pii Y, Graf H, Valentinuzzi F, Cesco S, Mimmo T
A review on balancing nitrogen and potassium nutrition of the pear cultivar 'Conference'
Gomand A, Vercammen J, Siongers V, Bylemans D
- 10:30 Coffee break
- 11:00 **Agronomic techniques and mineral nutrition**
Chairperson: Carranca C
Cover crops effects on grape yield and yield quality, and soil nitrate concentration in three vineyards in Ontario, Canada
Sharifi M, Carter K, Baker S, Verhallen A, Nemeth D
Remediation of soil fertility and management of mineral nutrition in fruit orchards under a sustainable farming system in semi-arid conditions
Xiloyannis C, Mininni AN, Dichio B, Pascazio S, Crecchio C, Sofo A
Cocoa (*Theobroma cacao* L.) trees benefit from nitrogen derived from the atmosphere when intercropped with the legume tree *Gliricidia sepium* (Jacq., Kunth ex Walp.) (P38)
Tagliavini M, Kaba JS, Zerbe S, Abunyewa AA, Zanotelli D
- 12:00 Lunch
- 13:30 **Keynote** *Chairperson: Scandellari F*
Role of mycorrhizae on mineral nutrition of fruit trees
Ortas I
- 14:00 **Mineral nutrition in organic farming**
Chairperson: Scandellari F
Apple root systems for organic orchards: what might be the contribution of the rootstock
Atkinson D
Vine performance and wine composition of chardonnay in relation to organic soil amendment in Mediterranean environment
Tarricone L, di Gennaro D, Debiase G, Amendolagine AM, GentileSCO G, Masi G
Fertilization strategies to increase nitrogen content in organic apple trees in the flowering period
Vangdal E, Koort A
- 15:00 Introduction to the poster session 2

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- Chairperson Nestby R*
- 15:20 Coffee break
- 15:50 Poster session 2
- 17:00 Business meeting
- 20:00 Social dinner at the Restaurant Lunas (see map)

Friday, 30 June 2017

- 09:00 **Keynote** *Chairperson: Villar J*
 Supplying nutrients through fertigation and the impact of rootstock to optimize yield and maximize quality in tree fruit
Fallahi E, Neilsen D
- 09:30 **Nutrient supply methods**
Chairperson: Villar J
 Combination of manure and chemical fertilizers improve Nanguo pear (*Pyrus ussuriensis* Maxim) growth and soil fertility in Northeastern China
Liu X, Chen L, Chen Q
 Autumn fertilization of berry crops
Sønsteby A, Woznicki TL, Heide OM
 Quantity and quality of production, partitioning of dry matter and of mineral nutrients in apple trees subjected to four-year different fertilization strategies
Porro D, Pedò S, Pasqualini J, Bertoldi D
- 10:30 Coffee break
- 11:00 **Nutrient supply methods**
Chairperson: Villar J (University of Lleida, Lleida, Spain)
 Uptake and effect studies with foliar-applied or fertigated phosphorus with apple and pear grown on soils with and without calcium carbonate
Van der Maas MP
 Foliar zinc applications in *Prunus*: from lab experience to orchard management
Saa Silva S, Negron C, Brown P
- 11:50 **Memorial lecture**
 Professor Dr. hab. Andrzej Witold Sadowski
Neilsen G, Wrona D, Atkinson D
- 12:30 Closing ceremony
- 13:00 Lunch