

Curriculum vitae

Massimo Tagliavini

Professor, Faculty of Science and Technology
Free University of Bozen-Bolzano
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Professional experience

Full professor of at the Faculty of Science and Technology of the Free University of Bozen-Bolzano (2007-now). He has teaching responsibilities on the following courses at bachelor and master level: Agricultural ecology; Principles of tree management; Crop ecosystems.

Dean of the Faculty of Science and Technology of the Free University of Bozen-Bolzano (October 2008-September 2014)

Previous University positions: Associate professor: 1998-2007. University of Bologna, Faculty of Agricultural Sciences, "Dipartimento di Colture Arboree"

Research areas

1. Ecophysiology of the internal-tree cycling of nitrogen
2. Nutrient needs, uptake and partitioning in fruit trees
3. Iron nutrition and lime-induced iron chlorosis
4. Physiology of the root system and rhizosphere studies
5. Carbon fluxes at orchard ecosystem scale and C footprint of fruit products
6. Water needs and water stress indexes

Main recent research projects with scientific responsibility

Iron Nutrition in fruit tree ecosystems and its interaction with nitrogen, soil management and oxidative stress Progetto Cofin 2002. Minister of University, PI of the Research Unit of Bologna (47,000 euro).

Carbon cycle in managed tree ecosystems. Project Cofin 2004. Minister of University, National coordinator the Project (60,000 euro).

Nutrient Cycle in Citrus, funded by the Italian Minister of Agriculture, project MIPAF Ricerche Avanzate in Agrumicoltura e loro applicazioni" 2007-2010. (89,000 euro).

ISAFRUIT Project, Pi of WP51 Development of a model for the prediction of nutrient demand rates, funded by the European Union 6th frame program, 2006-2010. (30,000 euro).

Potential of CO₂ fixation by apple orchards in South Tyrol. Autonomous Province of Bolzano-Bozen 2008-2011. (120,000 euro).

Assessing the role of environmental and tree-internal factors to the soil respiration of the apple orchard", funded by the Free University of Bolzano-Bozen. 2008-2010. (28,000 euro).

Carbon cycle in managed tree ecosystems. Progetto Prin 2008. Minister of University, National coordinator the Project. 2010-2012 (56,000 euro).

Quantification of net carbon ecosystem exchange in an apple orchard in South Tyrol, funded by the Free University of Bolzano-Bozen. 2011-2013. (34,000 euro).

Carbon and energy budgets along the apple production and storage chain. Founded by the Apple growers' association "Assomela" 2012-2014 (32,900 euro)

Valorization of agriculture for the water supply in context with climate change. Founded by the Province of Bolzano-Bozen 2014-2014 (59,400 euro).

Leaf uptake and partitioning of nitrogen deriving from atmospheric deposition in agricultural and forest trees. Funded by the Free University of Bolzano-Bozen. 2014-2016 (47,000 euro).

Editorial activity

Editor of "Italus Hortus", the official Journal of the Italian Society for Horticultural Sciences (2005-2013).

Member of the Editorial Board of "European Journal of Agronomy" (since 1997) and "Tree Physiology" (since 2004).

Guest Editor of the Journal of Plant Nutrition (together with R. Pinton, Z. Varanini and G. Zocchi) special issue Vol.26 (n.10 & 11), 2003.

Editor of the following volumes of the Series Acta Horticulturae (international Society for Horticultural Sciences):

324 ISBN n. 90 6605 3658

383 ISBN n. 90 6605 7572

594 ISBN n. 90 6605 8269

596 ISBN n. 90 6605 8668

Referee for many International Scientific Journals, including

American Journal of Horticultural Sciences
Australian Journal of Experimental Agriculture
Canadian Journal of Plant Sciences
Canadian Journal of Forest Research
European Journal of Horticultural Sciences
Journal of Horticultural Sciences and Biotechnology
Journal of Plant Physiology
Physiologia Plantarum
Plant and Soil
Scientia Horticulturae
Soil Science
Trees, Structure and Functions
New Zealand Journal of Crop and Horticultural Sciences

Activities for the international scientific community

Chairman of the working group on "Mineral Nutrition of Fruit Crops" of the International Society for Horticultural Sciences (2000-2005; 2012-now)

Activity as evaluator for other Universities of scientific activities for progresses in career

2001 for the Department of Pomology, University of California (Davis, USA): evaluation of scientific activity of a candidate for advancement of career in the role of Full Professor.

2003 for the Institute For Applied Research, Ben Gurion University of the Negev (Israel): evaluation of scientific activity of a candidate for a promotion to Associate Professor.

2004 for the College of Agriculture and Life Sciences (Dept. Horticulture) Cornell University (Ithaca, NY, USA): evaluation of scientific activity of a candidate for a promotion to Associate Professor

2010 for the Department of Pomology, University of California (Davis, USA): evaluation of scientific activity of a candidate for advancement of career in the role of Full Professor.

2008-2011- Member of a commission for Habilitation. Wissenschaftszentrum Weihenstephan, TUM Munich (Germany).

2009-now - Member of the Scientific Committee of Institute for Alpine Environment of European Academy (EURAC), Bozen.

Organization of Scientific events

Scientific Secretary of the "International Symposium on Soil Sickness and Replant Disease in Fruit Trees, ISHS" (Bologna, Italy) 1990.

Scientific Secretary of the "Second International Symposium on Diagnosis of Nutritional Status of Deciduous Fruit Orchards, ISHS" S. Michele A.A. (TN, Italy) 1993.

Scientific Secretary of the "VIII ISHS International Pear Symposium" (Ferrara-Bologna, Italy) 2000.

Convener of the "International Symposium on Foliar Nutrition of Deciduous Fruit Plants" (ISHS), (Meran, Italy) 2001

Co-convener of the "IX International Symposium on Iron Nutrition and Interactions in Plants" (Udine, Italy) 2002.

Convener of the National conference on "Mineral Nutrition of fruit trees" (Bologna, Italy) 2005.

Organizer of the Workshop on "Mineral Nutrition of crops for mountain areas" (Bolzano, Italy) 2012.

Member of the scientific committee of many international and national conferences, including, more recently:

7th International Symposium on Mineral Nutrition of fruit Crops.
Thailand, 2012

The second Horticulture Symposium in Europe, Angers (France), 2012

The 18th Nitrogen Workshop: The Nitrogen challenge, Lisbon,
(Portugal), 2014

Invited lectures and seminars

1994: Iron chlorosis in fruit trees: developing alternative strategies to iron chelates, Pflanzenernahrungs Colloquia, Institute of Plant Nutrition, Justus Liebig University, Giessen (Germany).

1997: Alternatives to iron chelates for overcoming fruit tree iron chlorosis in Mediterranean Countries. 9th International Symposium on Iron Nutrition and Interactions in Plants, Hohenheim (Germany).

1998: Partitioning of Mineral Nutrients to Fruits of Deciduous Trees. ISHS Symposium on Mineral Nutrition and Fruit Quality. Brussels (Belgium)

2000: Main nutritional issues of deciduous fruit crops in orchards of northern Italy. Fourth International ISHS Symposium on Mineral Nutrition of Deciduous Fruit Crops. Penticton (Canada).

2002: Understanding nitrogen cycling to optimize fertilization in fruit tree ecosystems, IX Iberic Symposium on Plant Mineral Nutrition, Zaragoza (Spain)

2004: Fluxes of nutrients in tree ecosystems, The second national Symposium on mineral Nutrition of Plants, Warsaw Agricultural University, Warsaw (Poland).

2005: Nutrient cycling in orchard ecosystems, Fifth International ISHS Symposium on Mineral Nutrition of Deciduous Fruit Crops. Talca (Chile).

2006: Nutrient fluxes in kiwifruit orchards, 6th ISHS International Kiwifruit Symposium, Rotorua (New Zealand).

2007: Use efficiency of within-orchard sources of nutrients, Conference "RATIONAL METHODS FOR THE SELECTION AND USE OF AGROCHEMICAL MEASURES: RISK MODELING, MONITORING AND MANAGEMENT", University of Agricultural Sciences and Veterinary Medicine, USAMV, Cluj-Napoca, (Romania).

2008: I fabbisogni nutrizionali del pero per la definizione del piano di fertilizzazione, Convegno Nazionale sulla coltura del Pero. Ferrara (Italy).

2008: Esigenze nutrizionali e tecniche sostenibili di concimazione della fragola, Convegno Nazionale sulla coltura della fragola. Marsala (Italy).

2008: Carbon fluxes in orchard ecosystems. Invited Seminar at University of the State Santa Catarina, Lages (Brasil).

2008 Use of Stable isotopes in mineral nutrition research: principles and applications to fruit trees. Invited seminar for the PhD program in Soil Science. Federal University de Santa Maria (Brasil).

2009: Carbon cycle in the apple orchard, Invited Seminar, Department of Horticulture, Pennsylvania State University (USA).

2009: Nutrient cycling in fruit tree systems. Invited Seminar for the PhD program in Soil Science, Federal University de Santa Maria (Brasil).

2010: Carbon Footprint and Energy Use in Apple Orchards: Introduction and Basic Concepts, Interpoma Conference, Bolzano (Italy)

2011: Sfide della frutticoltura del futuro, tra tradizione e innovazione, Innovation Day, Commerce Chamber, Bolzano (Italy).

2012: Nutrient uptake requirements and partitioning in fruit trees, 7th International ISHS Symposium on Mineral Nutrition of fruit Crops, Chanterboury (Thailand).

2012 Nutrient fluxes in orchard ecosystems. 3rd SLOVENIAN FRUIT GROWING CONGRESS 21–23. 11. 2012 Krško (Slovenia).

2014: Recenti conoscenze sulla nutrizione minerale per concimare il frutteto in modo sostenibile, Interpoma Conference, Bolzano (Italy) 21.11.2014

2014: La sostenibilità ecologica del frutteto, Accademia dei Georgofili: Giornata di Studio su «sistemi arborei da frutto di domani: intensivi, volti alla qualità del prodotto e resilienti» Firenze 18 dicembre 2014

Professional societies

Italian Society for Horticultural Sciences, since 1992; currently member of the steering committee.

International Society for Horticultural Sciences, since 1996.

Languages

Italian: native speaker

English: C1 level (CAE obtained in 2013)

German: B2 (Goethe Certificate obtained in 2012)

International Publications

A) PEER REVIEWED INTERNATIONAL JOURNALS

1. **TAGLIAVINI M.** and N. E. LOONEY. 1991. Response of peach seedlings to root-zone temperature and root-applied growth regulators, **HortScience**, 26 (7),870-872.
2. **TAGLIAVINI M.**, G. E. HOGUE and G.H. NEILSEN. 1991. Influence of phosphorus nutrition and root zone temperature on growth and mineral uptake of peach seedlings, **Journal of Plant Nutrition**, 1991, 11, 1267-1276.
3. PONI S., **M. TAGLIAVINI**, D. NERI, D. SCUDELLARI and M. TOSELLI. 1992. Influence of root pruning and localized water stress on growth and physiology of apple, grape, peach and pear. **Scientia Horticulturae**, 52,223-236.

4. **TAGLIAVINI M.**, B. MARANGONI, D. SCUDELLARI, A. BASTIANEL, F. FRANZIN and M. ZAMBORLIN. 1992. Leaf mineral composition of apple trees: sampling date and effects of cultivar and rootstock. **Journal of Plant Nutrition**, 15 (5), 605-619.
5. **TAGLIAVINI M.** and B.MARANGONI.1992. Growth of peach as affected by decomposition of own root residues in soil. **Plant and Soil**, 145, 253-260.
6. **TAGLIAVINI M.**, L. VETO and N.E. LOONEY. 1993. Measuring root surface-area and mean root diameter of peach seedlings by digital image analysis, **HortScience**, 28. 1129-1130.
7. **TAGLIAVINI M.**, D. BASSI and B. MARANGONI. 1993. Growth and mineral nutrition of pear rootstocks in lime soils. **Scientia Horticulturae**, 54, 13-22.
8. **TAGLIAVINI M.**, A. MASIA and M. QUARTIERI. Bulk soil pH and rhizosphere pH of peach trees in calcareous and alkaline soils as affected by the form of nitrogen fertilizers. 1995. **Plant and Soil**, 176(2), 263-271.
9. **TAGLIAVINI M.**, A.D. ROMBOLA' and B. MARANGONI. 1995. Responses to the iron-deficiency stress of pear and quince genotypes. **Journal of Plant Nutrition**, 18(11),2465-2482.
10. **TAGLIAVINI M.**, D. SCUDELLARI, B. MARANGONI and M. TOSELLI. 1996 Nitrogen fertilization management in orchards to reconcile productivity and environmental aspects. **Fertilizer Research**, 43(1-2),93-102.
11. **TAGLIAVINI M.**, M. QUARTIERI and P. MILLARD. 1997. Remobilised nitrogen and root uptake of nitrate for leaf growth, flowers and developing fruits of pear (*P. communis*) trees. **Plant and Soil**, 195,137-142.
12. **TAGLIAVINI M.**, P. MILLARD and M. QUARTIERI. 1998. Storage of foliar absorbed N and remobilisation for spring growth in young nectarine (*P.persica var nectarina*) trees. **Tree Physiology**, 18, 203-207.
13. **TAGLIAVINI M.**, P. MILLARD, M. QUARTIERI and B. MARANGONI. 1999. Timing of N uptake affects storage and remobilisation of nitrogen in nectarine trees. **Plant and Soil**, 211 (2) 149-153.
14. **TAGLIAVINI** , P. INGLESE AND A. D. ROMBOLA'. 2000. Root uptake, storage and remobilisation of autumn applied nitrogen to kiwifruit (*Actinidia deliciosa*) vines. **Agronomie Agriculture and Environment**, 20, 23-30.
15. A.D ROMBOLA', W. BRUEGGEMANN, **M. TAGLIAVINI**, B. MARANGONI and P. MOOG. 2000. Iron source affects Fe reduction and re-greening of kiwifruit (*Actinidia deliciosa*) leaves **Journal of Plant Nutrition**, 23 (11&12),1751-1765
16. J. ABADIA, **M. TAGLIAVINI**, A. ABADIA, M. SANZ, C. TSIPOURIDIS, E. FARIA., and B. MARANGONI. 2000. Using the flower Fe concentration for estimating crop chlorosis in fruit tree orchards. A summary report. **Journal of Plant Nutrition**, 23(11&12), 2023-2033.
17. **TAGLIAVINI.**, J. ABADIA, A.D. ROMBOLA', A. ABADIA, C. TSIPOURIDIS and B. MARANGONI. 2000. Agronomic means for the control of iron deficiency and chlorosis in deciduous fruit plants. **Journal of Plant Nutrition**, 23((11&12), 2007-2022.
18. TOSELLI M. MARANGONI B. and **TAGLIAVINI M.** 2000. Seasonal variation of Fe content in vegetative and reproductive organs of nectarine trees in calcareous soils during the development of chlorosis. **European Journal of Agronomy**, 13(4) 279-286.

19. MALAGUTI D. MILLARD P., WENDLER R., HEPBURN A. and **TAGLIAVINI M.** 2001. Translocation of amino acids in the xylem of apple (*Malus domestica* Borkh.) tree as a consequence of both N remobilization and root uptake. **Journal of Experimental Botany**, 52 (361) , 1665-1671.
20. **TAGLIAVINI M.** and ROMBOLA' A.D. 2001. Iron deficiency and chlorosis in orchard and vineyard ecosystems – a review. **European Journal of Agronomy**, 15, 71-92.
21. **TAGLIAVINI M.** and B. MARANGONI. 2002. Major nutritional issues in deciduous fruit orchards of Northern Italy **HorTechnology**, 12(1).26-31.
22. M QUARTIERI , P MILLARD and **M TAGLIAVINI.** 2002. Storage and remobilization of nitrogen by pear (*Pyrus communis* L.) trees as affected by timing of N supply. 2002. **European Journal of Agronomy**, 17, 105-110. .
23. M. POLICARPO, L. DI MARCO, T. CARUSO, P. GIOACCHINI and **M. TAGLIAVINI.** 2002 Dynamics of nitrogen uptake and partitioning in early and late fruit ripening peach (*Prunus persica*) tree genotypes under a mediterranean climate. **Plant and Soil**, 239 (2), 207-214.
24. ROMBOLA' A.D., BRÜGGEMANN W., LOPEZ-MILLAN A.F., ABADIA J. **TAGLIAVINI M.**, MARANGONI B., and MOOG P.R., 2002. BIOCHEMICAL MECHANISMS OF TOLERANCE TO FE-deficiency in kiwifruit (*A. deliciosa*) plants. **Tree Physiology**, 22, 869-875.
25. GRASSI G., MILLARD P., WENDLER R., MINOTTA G. and **M. TAGLIAVINI.** 2002 Measurements of xylem sap amino acid concentrations in conjunction with whole tree transpiration estimates spring N remobilization by cherry trees. **Plant Cell & Environment**, 25, 1689-1699.
26. PONI S., QUARTIERI M. and **M. TAGLIAVINI.** 2003. Potassium nutrition of Cabernet Sauvignon grapevines (*Vitis vinifera* L.) as affected by shoot trimming. **Plant and Soil**, 253, 351-351.
27. GRASSI G., P. MILLARD, P. GIOACCHINI, and **M. TAGLIAVINI.** 2003. Recycling of nitrogen in the xylem of *Prunus avium* trees starts when spring remobilization of internal reserves declines. **Tree Physiology**, 23, 1061-1068.
28. TOSELLI M., M. THALHEIMER and **M. TAGLIAVINI.** 2004. Leaf uptake and partitioning of urea-N as affected by the concentration and volume of spray solution and by the shoot leaf position in apple (*Malus domestica*) trees. **J. Hort. Sci Biotec.** ,79 (1),97-100.
29. J. ABADÍA, A. ÁLVAREZ-FERNÁNDEZ, A. D. ROMBOLÀ, M. SANZ, and **M. TAGLIAVINI,** A. ABADÍA. 2004. Technologies for the Diagnosis and Remediation of Fe Deficiency. **Soil Sci. Plant Nutr.** 50 (7), 965-971.
30. A.D. ROMBOLÀ, Y. GOGORCENA, A. LARBI, F. MORALES, E. BALDI, B. MARANGONI, **M. TAGLIAVINI** and J. ABADÍA. 2005 Iron deficiency induced changes in carbon fixation and leaf elemental composition of sugar beet (*Beta vulgaris*) plants. **Plant and Soil**, 270, 39-45.
31. R NESTBY, F LIETEN, D PIVOT, C RAYNAL LACROIX, and **M TAGLIAVINI,** 2005. Influence of Mineral Nutrients on Strawberry Fruit Quality and Their Accumulation in Plant Organs A Review. **Int. J. Fruit Science**, 5 (1),141-158.
32. R. NESTBY and **TAGLIAVINI.M.** 2005 Foliar uptake and partitioning of urea-N by strawberry plants as affected by timing of supply and plant N status. **J. Hort Sci Biotec.**, 80(2): 272-275.

33. **M. TAGLIAVINI**, E. BALDI, P. LUCCHI, M. ANTONELLI, G. SORRENTI, G. BARUZZI and W. FAEDI. 2005. Dynamics of nutrients uptake by strawberry plants (*Fragaria x ananassa* Dutch.) grown in soil and soilless culture. **European Journal of Agronomy**. 23, 15-25.
34. MUSACCHI S., M. QUARTIERI and **M. TAGLIAVINI**. 2006. Pear (*Pyrus communis*) but not quince (*Cydonia oblonga*) roots are able prevent excessive uptake of Cl⁻ and Na⁺ in saline soils. **European Journal of Agronomy**. 24, 268-275.
35. MILLARD P., R. WENDLER, G. GRASSI, G.AELLE GRELET and **M. TAGLIAVINI**. 2006 Translocation of nitrogen in the xylem of field-grown cherry and poplar trees during remobilization. **Tree Physiology**, 26, 527-536.
36. CESCO S., A. D. ROMBOLÀ, **M. TAGLIAVINI**, Z. VARANINI and R.PINTON. 2006. Phytosiderophores released by graminaceous species promote 59 Fe uptake in citrus. **Plant and Soil**, 287(1-2), 223-233.
37. TONON G., C. CIAVATTA, D. SOLIMANDO, P. GIOACCHINI and **M. TAGLIAVINI**. 2007 The fate of the 15N deriving from soil decomposition of abscised leaves and pruning wood from apple (*Malus domestica*) trees. **Soil Sci. Plant Nutr.**, 53, 79-86.
38. **TAGLIAVINI M.**, G TONON, F. SCANDELLARI, A.QUINONES, P GIOACCHINI , S. PALMIERI , G. MENARBIN and A MASIA. 2007. Nutrient release during the decomposition of abscised leaves and mowed grasses in an apple (*Malus domestica*) orchard. **Agriculture, Ecosystems & Environment**, 118, 191-200.
39. FRANCESCA SCANDELLARI, G. TONON, M. THALHEIMER, C. CECCON, P. GIOACCHINI, J. D. ABER and **M. TAGLIAVINI**. 2007 Assessing nitrogen fluxes from roots to soil associated to rhizodeposition by apple (*Malus domestica*) trees, **Trees, Structure and Function**,21, 499-505.
40. VENTURA M., F. SCANDELLARI, VENTURA F. , GUZZON B., ROSSI PISA P. and **M. TAGLIAVINI**. 2008. Nitrogen balance and losses through drainage waters in an agricultural watershed of the Po Valley (Italy) **Europ. J. Agronomy**, 29, 108-115.
41. VENTURA M., F. SCANDELLARI , E. BONORA and **M. TAGLIAVINI**. 2010. Nutrient release during decomposition of leaf litter in a peach (*Prunus persica* L.) orchard. **Nutr. Cycl. Agroecosystems**, 87 (1) , 115-123.
42. SCANDELLARI F, VENTURA M; GIOACCHINI P., VITTORI ANTISARI L. and **M. TAGLIAVINI**. 2010. Seasonal pattern of net nitrogen rhizodeposition from peach (*Prunus persica* (L.) Batsch) trees in soils with different textures. **Agriculture, Ecosystems & Environment**, 136, 162-168.
43. CECCON C., P. PANZACCHI, F. SCANDELLARI, L. PRANDI, M. VENTURA, B. RUSSO, P. MILLARD and **M. TAGLIAVINI**. 2011. Spatial and temporal effects of soil temperature and moisture and the relation to fine root density on root and soil respiration in a mature apple orchard. **Plant and Soil**, 432,195-206.
44. BRUNETTO G., M. VENTURA , F. SCANDELLARI, C.A. CERETTA, J. KAMINSKI, G. WELLINGTON DE MELO and **M. TAGLIAVINI**. 2011 Nutrient release during the decomposition of mowed perennial ryegrass and white clover and its contribution to nitrogen nutrition of grapevine. **Nutr. Cycl. Agroecosystems**, 90, 299-308.
45. PIERI L., F. VENTURA, M. VENTURA, **M. TAGLIAVINI**, M. PONTI, R.PISTOCCHI, S. ALBERTAZZI, M. VIGNUDELLI and P. ROSSI PISA. 2011. Chemical and biological

indicators of water quality in three agricultural watersheds of the Po valley, Italy. **Italian J. Agronomy**, 6, 29-38.

46. PANZACCHI P. G.TONON, C. CECCON, F. SCANDELLARI, M. VENTURA, M. and **M. TAGLIAVINI**. 2012 Belowground carbon allocation and net primary and ecosystem productivities in apple trees (*Malus domestica*) as affected by soil water availability. **Plant and Soil**, 360, 229-241.
47. ROCCUZZO G., D. ZANOTELLI, M. ALLEGRA, A. GIUFFRIDA, B. TORRISI, A. LEONARDI, A. QUIÑONES, F. INTRIGLIOLO and **M. TAGLIAVINI**. 2012. Assessing nutrient uptake by field-grown orange trees. **Europ. J. Agronomy**, 41, 73-80.
48. CURETTI M., E. SANCHEZ, **M. TAGLIAVINI** and P. GIOACCHINI. 2013. Foliar-applied urea at bloom improves early fruit growth and nitrogen status of spur leaves in pear trees, cv. Williams Bon Chretien. **Scientia Horticulturae**, 150, 16-21.
49. D. ZANOTELLI, L. MONTAGNANI, G. MANCA and **M. TAGLIAVINI**. 2013. Net primary productivity, allocation pattern and carbon use efficiency in an apple orchard assessed by integrating eddy-covariance, biometric and continuous soil chamber measurements. **Biogeosciences**, 10, 3089-3108.
50. D. ZANOTELLI, M. RECHENMACHER, W. GUERRA, A. CASSAR and **M. TAGLIAVINI**. 2014 Seasonal uptake rate dynamics and partitioning of mineral nutrients by bourse shoots of field-grown apple trees. **Europ. J. Hort. Sciences**. 4 (79), 203-211
51. D. ZANOTELLI, L. MONTAGNANI, G. MANCA, F. SCANDELLARI and **M. TAGLIAVINI**. 2015 Net ecosystem carbon balance of an apple orchard. **Europ. J. Agronomy**, 63, 97-104.
52. E. TOME', **M. TAGLIAVINI** and F. SCANDELLARI. 2015. Recently fixed carbon allocation in strawberry plants and concurrent inorganic nitrogen uptake through arbuscular mycorrhizal fungi. **Journal of Plant Physiology**. 179, 83-89.
53. VAROLO E, D.ZANOTELLI, **M. TAGLIAVINI**, S. ZERBE & L. MONTAGNANI. 2015. Net ecosystem production in a Little Ice Age moraine: the role of plant functional diversity. **Biogeosciences Discuss.**, 12, 10271-10310, 2015www.biogeosciences-discuss.net/12/10271/2015/doi:10.5194/bgd-12-10271-2015
54. F. SCANDELLARI, D. ZANOTELLI, C. CECCON, M. BOLOGNESI, L. MONTAGNANI, P. CASSOL, G. W. MELO, and **M. TAGLIAVINI**. Enhancing prediction accuracy of soil respiration in an apple orchard by integrating photosynthetic activity into a temperature-related model. **European Journal of Soil Biology**, in press.

B) INTERNATIONAL PEER REVIEWED BOOK CHAPTERS

1. **TAGLIAVINI M.** B.MARANGONI and P. GRAZIOLI . 1993. Effects of P-supply on growth and P-micronutrient interactions of potted peach seedlings. in **Development in Plant and Soil Sciences**, Vol. 53, Optimization of Plant Nutrition, Kluwer Academic Publishers, 325-331.
2. **TAGLIAVINI M.**, D. SCUDELLARI, B. MARANGONI and M. TOSELLI. 1995. Acid-spray greening of kiwifruit leaves affected by lime-induced iron chlorosis. In **Development in**

Plant and Soil Sciences, Vol. 59, Iron Nutrition in Soils and Plants, Kluwer Academic Publishers, 191-195.

3. MALAGUTI D., **M. TAGLIAVINI**, A. MASIA, B. MARANGONI, P. GIOACCHINI L. VITTORI ANTISARI and MILLARD P. 2001. Dynamic of root uptake of ammonium and nitrate by pear (*Pyrus communis* L.) trees after growth resumption in spring. P.124-125. In Horst et al.(ed.) **Plant Nutrition – Food security and sustainability of agro-ecosystems**, Kluwer Academic Publishers. The Netherlands.
4. **TAGLIAVINI M.** and M. TOSELLI. 2005. Foliar application of nutrients In **Encyclopedia of Soils in the Environment** . (Ed. D. Hillel) Elsevier Ltd., Oxford, U.K. ISBN (Set), 0-12-348530-4
5. ROMBOLA' A.D. and **M. TAGLIAVINI**. 2006. Iron nutrition of fruit tree crops. pp 61-83. In **Iron Nutrition in Plants and Rhizospheric Microorganisms** (L. Barton e J. Abadia Eds.). Springer. ISBN: 1-4020-4742-8

C) PROCEEDINGS OF INTERNATIONAL CONFERENCES

1. **TAGLIAVINI M.** and B. MARANGONI. 1993. Effects of high root-zone temperature on growth, water relations and mineral uptake of Trebbiano grapevine (*Vitis vinifera*). **Proceedings of IV International Symposium on Grape Physiology**, 299-303.
2. **TAGLIAVINI M.**, G. HOGUE and G. NEILSEN.1993. Phosphate and peat additions affect growth, P and N nutrition of peach seedlings in newly planted and replanted peach soil. **Acta Horticulturae**, 324, 97-101.
3. BASSI D., **M. TAGLIAVINI** and B. MARANGONI, 1994. Selection of clonal rootstocks of *Pyrus communis* (L.). **Acta Horticulturae** 367, 364-371.
4. **TAGLIAVINI M.** e B. MARANGONI. 1994. Effects of peach root residues in soil on growth, water relations and mineral status of peach trees with slit root system. **Acta Horticulturae**, 363,93-100.
5. **TAGLIAVINI M.**, M. TOSELLI, B. MARANGONI, G. STAMPI and F. PELLICONI. 1995. The nutritional status of kiwifruit affects yield and fruit storage. **Acta Horticulturae**, 383,227-238.
6. **TAGLIAVINI**, M. QUARTIERI, B. MARANGONI and P. MILLARD. 1997. Foliar nitrogen uptake and withdrawal from peach leaves during senescence. **Acta Horticulturae**, 448, 459-465.
7. **TAGLIAVINI M.**, D. NEILSEN, E.G. HOGUE and G.H.NEILSEN. 1997. Effects of nitrogen-fertilizer form on rhizosphere pH and growth of apple in soils with different soil buffer capacity capacity. **Acta Horticulturae**, 448, 297-302.
8. SANZ M., R. BELKHODJA, M. TOSELLI, L. MONTANES, A. ABADIA, **M. TAGLIAVINI**, B. MARANGONI and J. ABADIA. 1997. Floral analysis as a possible tool for the prognosis of iron deficiency in peach. **Acta Horticulturae**, 448, 241-245.
9. QUARTIERI M., **M. TAGLIAVINI**. B. MARANGONI and P. MILLARD. 1998. Storage and remobilisation of nitrogen in nectarine trees as affected by the timing of N uptake. **Acta Horticulturae**, 465,319-325.
10. BASSI D., L. CORELLI-GRAPPADELLI, A. D. ROMBOLÀ, **M. TAGLIAVINI** and S. SANSAVINI. 1988. Tree structure and orchard management influence yield and fruit quality. 11^{eme}

Colloque INRA-Ctifl sur "Les Recherches Fruitières Architecture et Modélisation en Arboriculture Fruitière" Montpellier 5-6- Mars 1988, 97-109.

11. **TAGLIAVINI M.**, C.- ZAVALLONI, A. D. ROMBOLÀ, M. QUARTIERI, D. MALAGUTI, F. MAZZANTI, P. MILLARD e B. MARANGONI. 2000. Mineral nutrient partitioning to fruits of deciduous trees. Atti Simposio ISHS "Mineral Nutrition and fruit Quality", Brussel 6 agosto 1998. **Acta Horticulturae**, 512, 131-140.
12. ZAVALLONI C., B. MARANGONI B., D. SCUDELLARI and **M. TAGLIAVINI**. 2001 Dynamics of uptake of calcium, potassium and magnesium into apple fruit in high density planting. **Acta Horticulturae**, 564, 113-122.
13. TOSELLI M., **M. TAGLIAVINI**, K. LE BRIS, M. THALHEIMER and N. PAOLI . 2002. Leaf uptake and tree partitioning of urea-N as affected by sprayed solution and leaf age of apple trees. Proc. Int. Symp. on Foliar Nutrition of Perennial Fruit Plants. **Acta Horticulturae**, 594, 591-594.
14. QUARTIERI M., A. LUCCHI, B. MARANGONI, **M. TAGLIAVINI** and L. CAVANI. 2002 Effects of rate of proteinhydrolysis and spray concentration on growth of potted kiwifruit. Proc. Int. Symp. on Foliar Nutrition of Perennial Fruit Plants. **Acta Horticulturae**, 594, 341-348.
15. ROMBOLA' A.D., S. DALLARI, M. QUARTIERI, T. AMMARI, D. SCUDELLARI and **M. TAGLIAVINI**. 2002. Effect of foliar applied Fe sources, organic acids and sorbitol on the re-greening of kiwifruit leaves affected by lime-induced Fe chlorosis. Proc. Int. Symp. on Foliar Nutrition of Perennial Fruit Plants. **Acta Horticulturae**, 594, 349-356.
16. MALAGUTI D., A.D. ROMBOLA', M. GERIN, G. SIMONI, **M. TAGLIAVINI** and B. MARANGONI. 2002. Effects of seaweeds extract based leaf sprays on the mineral status, yields and fruit quality of apple. Proc. Int. Symp. on Foliar Nutrition of Perennial Fruit Plants. **Acta Horticulturae**, 594, 357-359.
17. MUSACCHI S., , M. QUARTIERI, M. CIAMBELLINI, A. MASIA E L. CORELLI GRAPPADELLI and **M. TAGLIAVINI**. 2002. Behaviour of pear trees grafted on pear and quince rootstocks at increasing levels of salinity in the irrigation water Proceedings VIII Int. Symp, on Pear Growing. Ferrara-Bologna Sett.. 2000 **Acta Horticulturae**, 596, 683-686.
18. TOSELLI M., D. SCUDELLARI, F. MAZZANTI, B. MARANGONI and **M. TAGLIAVINI**. 2002. Determination of leaf standards for mineral diagnosis in pear orchards of the Po Valley. Proceedings VIII Int. Symp, on Pear Growing. Ferrara-Bologna Sett.. 2000 **Acta Horticulturae**, 596, 665-669.
19. PREVIATI A, F. DAL RE, D. BASSI, **M. TAGLIAVINI** and B. MARANGONI. 2002. Development of protocols for in vitro rooting of advanced selections of *Pyrus communis* rootstocks. Proceedings VIII Int. Symp, on Pear Growing. Ferrara-Bologna Sett.. 2000 **Acta Horticulturae**, 596, 485-486.
20. **TAGLIAVINI M.**, G. TONON, D. SOLIMANDO, P. GIOACCHINI, M. TOSELLI, P. BOLDREGHINI and C. CIAVATTA. 2004. Nitrogen uptake by ryegrass (*Lolium perenne*) as affected by the decomposition of apple leaves and pruning wood in soil. pp. 239-241. In D.J. Hatch, D.R. Chadwick , S.C. Jarvis e J.A. Rocker (Ed.s) **Controlling Nitrogen flows and losses**, Wageningen Academic Publishers.

21. **TAGLIAVINI M.**, E. BALDI, R. NESTBY, C. RAYNAL LACROIX, P. LIETEN, T. SALO D. PIVOT , P.L. LUCCHI, G. BARUZZI and W. FAEDI. 2004. Uptake and partitioning of major nutrients by strawberry plants. **Acta Horticulturae**, 649, 197-200.
22. **TAGLIAVINI M.** and P. MILLARD. 2005. Fluxes of nitrogen within deciduous fruit trees. **Acta Scientiarum Polonorum – Hortorum Cultus**, 4 (1), 21-30.
23. CESCO S., ROMBOLA' A.D., **M. TAGLIAVINI**, and R. PINTON. 2005. Root exudates of grasses improve Fe uptake in a citrus rootstock sensitive to Fe-deficiency. pp. 480-481. **In (Li et al., Eds.) Plant Nutrition for food security, human health and environmental protection.** Tsinghua Un. Press. Beijing (China)
24. VENTURA M., N. OPSTAD, F. SCANDELLARI, D. ZANOTELLI, M. QUARTIERI and **M. TAGLIAVINI**. 2006 Soil nitrogen losses through leaching from tree row strips and grassed alleys in a pear orchard. Pp. 241-243. **Proceedings of the 14th N Workshop N management in agrosystems in relation to the water frame directive.** Maastricht October 2005.
25. D. MALAGUTI, A.D. ROMBOLA, M. QUARTIERI, A. LUCCHI, C. INDERST, B. MARANGONI and **M. TAGLIAVINI**. 2006. Effects of the rate of nutrients by fertigation and broadcast application in Gala and Fuji apples. **Acta Horticulturae**, 721:165-172
26. **TAGLIAVINI M.** and F. SCANDELLARI. 2007. Nutrient fluxes in kiwifruit orchards. Proceedings Int. Symp. on kiwifruit, Rotorua, New Zealand February 2006 **Acta Horticulturae**, 753, 487-494.
27. F. SCANDELLARI, M. VENTURA, C. CECCON and **M. TAGLIAVINI** . 2007 Nutrient use efficiency in orchards. In Proceedings of the conference “**RATIONAL METHODS FOR THE SELECTION AND USE OF AGROCHEMICAL MEASURES: RISK MODELING, MONITORING AND MANAGEMENT**” Cluj-Napoca (Romania), 14-16 June, 2007, 76-83
28. QUARTIERI M., G. CASTELLANI, E. BALDI, B. MARANGONI and **M. TAGLIAVINI**. 2010. Fine roots growth and longevity in a high-density pear orchard on quince C rootstock as affected by nitrogen supply. **Proceedings VI Int. ISHS Symp. On Mineral Nutrition of Fruit Plants.** Faro (Portugal) May 2008. **Acta Horticulturae**, 868, 149-154.
29. LA MALFA S., M. VENTURA, P. GIOACCHINI, E. TRIBULATO, A. GENTILE and **M. TAGLIAVINI**. 2010. ¹⁵Nitrogen natural abundance technique does not reveal nitrogen uptake from biological fixation in field grown carob (*Ceratonia siliqua*) trees. **Proceedings VI Int. ISHS Symp. On Mineral Nutrition of Fruit Plants.** Faro (Portugal) May 2008. **Acta Horticulturae**, 868, 191-196.
30. SCANDELLARI F., M. VENTURA, C. CECCON, D. MALAGUTI, G. MENARBIN and **M. TAGLIAVINI**. 2010. Net Primary productivity and Partitioning of Absorbed Nutrients in field-grown apple trees. **Proceedings VI Int. ISHS Symp. On Mineral Nutrition of Fruit Plants.** Faro (Portugal) May 2008. **Acta Horticulturae**, 868, 115-122.
31. **TAGLIAVINI M.** and F. SCANDELLARI. 2013. Methodologies and Concepts in the Study of Nutrient Uptake Requirements and Partitioning in Fruit Trees. Proceedings of the Seventh International Symposium on Mineral Nutrition of Fruit Crops 19-25, Chanthaburi, Thailand. May 2012. **Acta Horticulturae**, **984**, 47-56.
32. ZANOTELLI D., W. GUERRA, M. RECHENMACHER, A. CASSAR, R. STAINER, AND **M. TAGLIAVINI**. 2013. Leaf Mg sprays reduce leaf chlorosis and necrosis symptoms in apple trees (cv. Nicoter). Proceedings of the Seventh International Symposium on Mineral

Nutrition of Fruit Crops 19-25, Chanthaburi, Thailand. May 2012. **Acta Horticulturae, 984, 339-346.**

33. SESSA F., M. MARINO, G. MONTANARO, A. DAL PIAZ, D. ZANOTELLI and **M. TAGLIAVINI.** 2014. Life cycle assessment of apple at Country level: the case of Italy. Pp. 1242-1247 Proceedings of the 9th LCA Conference on Food. San Francisco. 8-10 October 2014.