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Academic Preparation

- 2005 - 2006 Postdoctoral researcher. Research project: "Comparison of muskmelon (*Cucumis melo* L.) organic and conventional greenhouse cultivation systems in Shanghai, P.R. China".
- 1999 - 2004 PhD project: Yield formation, nutrient and toxic element fluxes in stands of fiber nettle (*Urtica dioica* L.) as influenced by fertilization under organic farming conditions. University of Göttingen, Germany. Supervisors: Prof. Dr. R. Rauber and Prof. Dr. W. Römer.
- 1995 - 1999 Diplom (MSc Agriculture), University of Göttingen, Germany.
Thesis: Root and shoot development of fiber nettle (*Urtica dioica* L.) during the first vegetation period. (In German.) Diplomarbeit (MSc thesis). University of Göttingen, Germany. Supervisors: Prof. Dr. R. Rauber and Prof. Dr. W. Böhm.
- 1991 - 1994 Vordiplom (intermediate diploma, BSc Agriculture), University of Bonn, Germany.

Work Experience

- present Postdoctoral researcher, Protected Horticulture Group, Dept. of Plant Science, School of Agriculture and Biology, Shanghai Jiao Tong University.
- 2003 - 2004 Teaching Assistant, Institute of Agronomy and Plant Breeding, University of Göttingen.
- 1999 - 2002 Scientific Assistant, Institute of Agronomy and Plant Breeding, University of Göttingen, supported by the Deutsche Bundesstiftung Umwelt, Osnabrück (DBU, Project No. 11818).
- 1999 Graduate Student Researcher, Institute of Agronomy and Plant Breeding, University of Göttingen.
- 04/1996 - 07/1996 Student Assistant, Institute of Agroecology, University of Göttingen.
- 02/1996, 02/1997 Assistant, Office of Soil and Water Assessment, Gillersheim, Germany.

Teaching Experience

(All courses are for MSc level students.)

Experimental Crop Production (Experimenteller Pflanzenbau, in cooperation with Prof. Dr. W. Ehlers). *Taught experimental section of the course, served as examiner.*

Summer-Exercises in Crop Production, (Pflanzenbauliche Sommerübungen, with Prof. Dr. R. Rauber et al.). *Arranged field trips, gave lectures and prepared lecture notes, prepared and graded exams¹.*

Environmental Indicators and Ecological Assessment (Umweltindikatoren und Ökobilanzen). *Taught a part of the course and supervised students' work.*

Examples of Conversion to Organic Farming (Fallbeispiele zur Umstellung auf ökologischen Landbau). *Served as one of five interdisciplinary instructors guiding the students in developing a conversion strategy for a conventional farm.*

Interdisciplinary Seminar of Crop Production (Interdisziplinäres Seminar Pflanzenproduktion). *Gave a presentation and supervised students' work.*

Supervision of academic work (SONG Shiwei, PhD work, LE Jiangang, MSc work).

Research Experience

2005 Postdoctoral work. Muskmelon cultivation in organic and conventional greenhouse systems. Experimental work includes greenhouse trials, nutrient analysis in soil and plant and muskmelon fruit quality analysis.

2003 - 2004 - Intercropping *Cannabis sativa* and *Urtica dioica* for fiber production.
- Effect of soil inoculation with "Effective Microorganisms" (EM) on soil respiration and yield components of barley and pea.

1999 - 2002 Thesis work. Experimental work included implementation and evaluation of field and incubator trials, analysis of major and trace elements, estimation of nitrogen fixation by delta¹⁵N-technique, measurement of transpiration and net assimilation by infrared gas analysis.

10/1999, 11/2000 Visiting scientist, Institute of Plant Nutrition and Soil Science, Federal
02/2002 - 03/2002 Agricultural Research Centre, Braunschweig, Germany (FAL).
Preparation of plant, fertilizer and soil samples for ICP-MS and X-RF analysis. Set up a system for ensuring quality of analyses.

1997 Measuring plant root systems by profile wall and auger methods.

Training received

Research training on DNA isolation, AFLP and gel electrophoresis. Institute of Agronomy and Plant Breeding, University of Göttingen, Department of Plant Breeding, February 2002.
Instructor: Dr. R. Marschalek.

Training on "Soil quality assessment with the spade". Stiftung Ökologie und Landbau, Bad Dürkheim, 27 - 28 September 2000. Instructor: Dr. A. Beste.

Used scientific and office software such as SAS, Origin, Sigma Plot, Word, Excel, Power Point extensively. Set up former web page for the Department of Agronomy of the Institute of Agronomy and Plant Breeding, University of Göttingen².

Practical training on organic and integrated farms. (April 1994 to April 1995).

¹ For details see: www.gwdg.de/~mlehne/Sommeruebungen03 (In German.)

² See: www.gwdg.de/~mlehne/ab180100/ (In German.)

Languages

German (mother tongue)

English (fluent)

French (advanced)

Chinese (beginner)

Honors and Awards

1998 Award for best scientific poster (rated 3rd of about 100 posters): "Root development of fiber nettle in the first vegetation period". Annual Congress of the German Society of Agronomy, Munich.

Grants received

2002 Grant for the presentation of "Yield formation of fiber nettle (*Urtica dioica* L.) in organic farming" at the 14th IFOAM Organic World Congress, Victoria, Canada. Professor Werner Schulze-Stiftung im Stifterverband für die Deutsche Wissenschaft, Essen.

Affiliations

Gesellschaft für Pflanzenbauwissenschaften (German Society of Agronomy)

German Organic Cotton Working Group

Publications**I) Books**

Lehne, P. 2005. Yield formation, nutrient and toxic element fluxes in stands of fiber nettle (*Urtica dioica* L.) as influenced by fertilization under organic farming conditions. PhD Dissertation. Cuvillier Verlag, Göttingen. ISBN: 386537493X (In German with English Abstract.)

II) Refereed Publications

Römer, W. and P. Lehne. 2004. Neglected P and K fertilization in organic farming reduces N₂ fixation and grain yield in a red clover-oat rotation. *Journal of Plant Nutrition and Soil Science* 167:106-113. (In German with English abstract.)

III) Abstracts and Proceedings

Lehne, P., S. Song and D. Huang. 2006. Ecological farming in Europe - A model for China? *Journal of Shanghai Jiaotong University (Agricultural Science)* 24 (Sup.): 33-40 (In English with Chinese abstract.)

Song, S., P. Lehne, J. Le, T. Ge, D. Huang and C. Wu. 2006. Analysis of plant growth, development and yield of muskmelon under organic and conventional production systems. *Journal of Shenyang Agricultural University* 37, 3: 432-436. (In Chinese with English abstract.)

Römer, W. and P. Lehne. 2005. Nutrient deficiencies on organic farms. *Hannoversche Land- und Forstwirtschaftliche Zeitung* 158, 36: 20-21. (In German.)

- Römer, W. and P. Lehne. 2004. Nutrient removal requires nutrient supply. In organic farming nutrients are removed too - they have to be replaced. *Neue Landwirtschaft* 10/2004: 38-39. Deutscher Landwirtschaftsverlag, Berlin (In German.)
- Römer, W. and P. Lehne. 2004. Enhancing growth of clover - Clover can not fix nitrogen without phosphorus, potash and sulphur. *BLW - Bayerisches Landwirtschaftliches Wochenblatt* 42/2004: 37. Deutscher Landwirtschaftsverlag, München (In German.)
- Römer, W., J. Gerke and P. Lehne. 2004. Phosphorus-fertilisation increases nitrogen fixation of legumes. *Ökologie und Landbau* 132: 37-39. (In German.)
- Römer, W. and P. Lehne. 2004. Organic farming needs basic nutrient elements - Nitrogen fixation is often reduced. *LW-Landwirtschaftliches Wochenblatt Hessen/Rheinland-Pfalz - Hessenbauer*, 12/2004: 18-20. Landwirtschaftsverlag Hessen, Friedrichsdorf/Ts (In German.)
- Römer, W. and P. Lehne. 2004. Fixing more nitrogen - Additional nutrients for N-fixation of legumes. *BW agrar Stuttgart - Ravensburg*, 28/2004: 14-15. Verlag Eugen Ulmer, Stuttgart (In German.)
- Lehne, P. and W. Römer. 2003. Neglected P and K fertilization in organic farming impairs N₂ fixation of red clover. *Colloquium 200 years Justus Liebig*. Giessen, 12 - 13 Juli 2003. *Proceedings of Poster Presentations*:32. (In German.)
- Lehne, P., K. Schmidtke and R. Rauber. 2002. Yield formation of fiber nettle (*Urtica dioica* L.) in organic farming. p. 9. *In* R. Thompson (ed.) *Proceedings of the 14th IFOAM Organic World Congress*, Victoria, Canada, 21 - 24 August 2002. Canadian Organic Growers, Ottawa, Canada.
- Lehne, P., K. Schmidtke and R. Rauber. 2001. Litter fall of fiber nettle under differentiated nutrient supply. *Mitteilungen der Gesellschaft für Pflanzenbauwissenschaften* 13:156-157. (In German.)
- Lehne, P., K. Schmidtke and R. Rauber. 2001. Yield of fiber nettle in organic farming. *Mitteilungen der Gesellschaft für Pflanzenbauwissenschaften* 13:158-159. (In German.)
- Lehne, P., K. Schmidtke and R. Rauber. 1998. Root growth of fiber nettle (*Urtica dioica* L.) in the first vegetation period. *Mitteilungen der Gesellschaft für Pflanzenbauwissenschaften* 11:181-182. (In German.)

IV) Research Reports and Working Papers

- Lehne, P. and E. Hammes. 2003. Application of "Effective Microorganisms" (EM) on organic farms - Effects on yield and crop quality, and on soil organic matter. Unpublished proposal. (In German.)
- Lehne, P. 2003. Final report of the joint research project "Natural textiles from nettle - innovative technology and product development for the textile industry", Göttingen subproject. Submitted to the Deutsche Bundesstiftung Umwelt, Osnabrück. 142 pp. (In German.)
- Lehne, P. 2002. Third intermediate report of the joint research project "Natural textiles from nettle - innovative technology and product development for the textile industry", Göttingen subproject. Submitted to the Deutsche Bundesstiftung Umwelt, Osnabrück. 33 pp. (In German.)

Lehne, P. 2001. Second intermediate report of the joint research project "Natural textiles from nettle - innovative technology and product development for the textile industry", Göttingen subproject. Submitted to the Deutsche Bundesstiftung Umwelt, Osnabrück. 53 pp. (In German.)

Lehne, P. 2000. First intermediate report of the joint research project "Natural textiles from nettle - innovative technology and product development for the textile industry", Göttingen subproject. Submitted to the Deutsche Bundesstiftung Umwelt, Osnabrück. 37 pp. (In German.)

Manuscripts in Advanced Stage of Preparation

Lehne, P., K. Schmidtke and R. Rauber. 2006. Water potential, stomatal conductance and net photosynthesis of fiber nettle (*Urtica dioica* L.) at elevated saturation deficit of the air in water vapor.

Lehne, P., S. Song, J. Le and D. Huang. 2006. Muskmelon (*Cucumis melo* L. var. *reticulatus* Naud.) growth and yield in organic and conventional agriculture with varied amounts of fertilisation in humid climate in China.

Presentations for Scientific Audiences (Selection)

Lehne, P., K. Schmidtke and R. Rauber. 2004. Yield formation of fiber nettle in organic farming. PhD colloquium of the Zentrum Pflanzenbauwissenschaften Niedersachsen (ZPN), Institute of Crop and Grassland Science, Federal Agricultural Research Centre (FAL), Braunschweig, 17 February 2004.

Lehne, P., K. Schmidtke and R. Rauber. 2004. Cultivation of stinging nettle for fiber production. Presentation at the foundation of the Zentrum Pflanzenbauwissenschaften Niedersachsen (ZPN). Ministry of Rural Area, Food, Agriculture and Consumer Protection of Lower Saxony, Hannover, 06 February 2004.

Lehne, P., K. Schmidtke and R. Rauber. 2003. Fibers from stinging nettle for textile usage. Presentation at a seminar of the German Society of Agronomy, University of Halle/Saale, Germany, 6-7 March 2003.

Presentations for Students and the Public (Selection)

Lehne, P. and R. Rauber. 2001. Field presentation of fiber nettle cropping systems to the Lions Club Göttingen, 19 June 2001.

Lehne, P., K. Schmidtke and R. Rauber. 2000. New fibers for the textile market - Cultivation of stinging nettle in organic farming. Town hall Göttingen, 17 September 2000.

Lehne, P. and R. Rauber. 2000. Field presentation of fiber nettle cropping systems to high school students. Göttingen Week "Youth and Science", 05 July 2000.