



Curriculum Vitae Dr. Judith Wirth

Institute for Plant Production Sciences (IPS)
Research division: Plant Protection for Field Crops and Viticulture/Oenology
Research group: Herbology in Field Crops and Viticulture
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Personal details

Date of birth: 6th December 1975
Nationality: German

Work experience

Agroscope, Switzerland

Head of Research Group Herbology in Field Crops and Viticulture, since July 2010

Agroscope, Switzerland

Research associate in the research group weed control, December 2008 – June 2010

ETH Zürich, Switzerland

Postdoc, Group of Plant Biotechnology, Mai 2007 – November 2008

INRA Montpellier, France

Postdoc, Département de Biochimie et Physiologie Moléculaire, 2 months, 2006

Bayer Crop Science, Germany

Herbicide research, 2 months, Leverkusen, 2001

GAB Biotechnologie GmbH, Germany

Registration of agrochemicals, 1 month, Niefern Öschelbronn, 2001

Institute of Phytomedicine, Germany

Part-time work, University of Hohenheim, 2000-2001

Federal Environmental Agency, Germany

Soil department, 2 months, Berlin, 2000

Practical work on a farm, Germany

3 months, Freising, 2000



Education

PhD in Molecular Plant Biology

Institut National de la Recherche Agronomique (INRA),
Département de Biochimie et Physiologie Moléculaire des Plantes, Montpellier, France,
2003-2006

Field of study: Molecular Plant Physiology

Thesis: Regulation of NO_3^- transporters at the mRNA and protein level in roots of
Arabidopsis thaliana

Master of Crop Science

Faculty of Agricultural Sciences, University of Hohenheim, Germany, 2000-2003

Major field of study: Specialization in Phytomedicine

Thesis: The contribution of AtAMT1;1 and AtAMT1;3 to the total NH_4^+ uptake capacity in
Arabidopsis thaliana

Basic Study Period

TU Munich, Freising-Weihenstephan, Germany, 1997-2000

Training as foreign language correspondent in English and French

Erlangen, Germany, 1996-1997

Abitur (school leaving examination)

HCA-Gymnasium Amberg, Germany, 1996

Languages

Fluent in German, English and French

Research interests

Allelopathy and resource competition

The utilization of weed suppressive cover crops for weed management, with a focus on the separation of resource competition for water, light and nutrients and allelopathic root interactions. Identification of allelopathic molecules.

Herbicide resistance in weeds

Monitoring herbicide resistances in Switzerland.

Invasive alien species

Developing control strategies for invasive alien plants who have become serious problems in agriculture, like *Cyperus esculentus* in Switzerland.



Peer Reviewed Publications

- Falquet B., Roux D., Henriët L., Tschuy F. & **Wirth J.**, 2014. Simple method to separate resource competition from allelopathic root interactions. *Allelopathy Journal* 34 (2), 227-240.
- Melander B., Munier-Jolain N., Charles R., **Wirth J.**, Schwarz J., van der Weide R., Bonin L., Jensen P.K. & Kudsk P., 2013. European Perspectives on the Adoption of Nonchemical Weed Management in Reduced-Tillage Systems for Arable Crops. *Weed Technology* 27 (1), 231-240.
- Beleggia R., Platani C., Papa R., Di Chio A., Barros E., Mashaba C., **Wirth J.**, Fammartino A., Sautter C., Conner S., Rauscher J., Stewart D. & Cattivelli L., 2011. Metabolomics and Food Processing: From Semolina to Pasta. *Journal of Agricultural and Food Chemistry* 59 (17), 9366-9377.
- Wirth J.**, Poletti S., Aeschlimann B., Yakandawala N., Drosse B., Osorio S., Tohge T., Fernie A.R., Gunther D., Gruissem W. & Sautter C., 2009. Rice endosperm iron biofortification by targeted and synergistic action of nicotianamine synthase and ferritin. *Plant Biotechnology Journal* 7 (7), 631-644.
- Lejay L., **Wirth J.**, Pervent M., Cross J.M.F., Tillard P. & Gojon A., 2008. Oxidative pentose phosphate pathway-dependent sugar sensing as a mechanism for regulation of root ion transporters by photosynthesis. *Plant Physiology* 146 (4), 2036-2053.
- Chopin F., **Wirth J.**, Dorbe M.F., Lejay L., Krapp A., Gojon A. & Daniel-Vedele F., 2007. The Arabidopsis nitrate transporter AtNRT2.1 is targeted to the root plasma membrane. *Plant Physiology and Biochemistry* 45 (8), 630-635.
- Girin T., Lejay L., **Wirth J.**, Widiez T., Palenchar P.M., Nazoa P., Touraine B., Gojon A. & Lepetit M., 2007. Identification of a 150 bp cis-acting element of the AtNRT2.1 promoter involved in the regulation of gene expression by the N and C status of the plant. *Plant Cell and Environment* 30 (11), 1366-1380.
- Wirth J.**, Chopin F., Santoni V., Viennois G., Tillard P., Krapp A., Lejay L., Daniel-Vedele F. & Gojon A., 2007. Regulation of root nitrate uptake at the NRT2.1 protein level in Arabidopsis thaliana. *Journal of Biological Chemistry* 282 (32), 23541-23552.
- Ioset J.R., Urbaniak B., Ndjoko-Ioset K., **Wirth J.**, Martin F., Gruissem W., Hostettmann K. & Sautter C., 2007. Flavonoid profiling among wild type and related GM wheat varieties. *Plant Molecular Biology* 65 (5), 645-654.
- Loque D., Yuan L., Kojima S., Gojon A., **Wirth J.**, Gazzarrini S., Ishiyama K., Takahashi H. & von Wieren N., 2006. Additive contribution of AMT1;1 and AMT1;3 to high-affinity ammonium uptake across the plasma membrane of nitrogen-deficient Arabidopsis roots. *Plant Journal* 48 (4), 522-534.

Technical publications

- Tschuy F., Gfeller A., Azevedo R., C. K., Henriët L. & **Wirth J.**, 2014. Suppression des adventices par les couverts végétaux: différents facteurs analysés. *Recherche Agronomique Suisse* 5 (7-8), 292-299.
- Tschuy F., Gfeller A., Azevedo R., Khamissé C., Henriët L. & **Wirth J.**, 2014. Unkrautunterdrückung durch Zwischenfrüchte: Analyse verschiedener Faktoren. *Agrarforschung Schweiz* 5 (7-8), 292-299.



- Bohren C. & **Wirth J.**, 2013. Souchet comestible (*Cyperus esculentus* L.): situation actuelle en Suisse. *Recherche Agronomique Suisse* 4 (11-12).
- Bohren C. & **Wirth J.**, 2013. Erdmandelgras (*Cyperus esculentus* L.): die aktuelle Situation in der Schweiz. *Agrarforschung Schweiz* 4 (11-12), 460-467.
- Wirth J.**, Büchi L. & Charles R., 2012. Allelopathie als natürliches Herbizid? *Landwirtschaft ohne Pflug* 9-10, 29-34.
- Delay O. & **Wirth J.**, 2010. Unkrautbekämpfung im Herbst beim Getreide - weshalb? *UFA revue* 10, 44-45.
- Delabays N., **Wirth J.** & Vaz C., 2009. Nouveaux enjeux dans la gestion de la flore des vignobles. *Revue suisse de viticulture, arboriculture, horticulture* 41 (4), 207-211.
- Delabays N., **Wirth J.**, Bohren C., Mermillod G. & de Joffrey J.P., 2009. L'allélopathie: un phénomène controversé, mais prometteur. *Revue Suisse D Agriculture* 41 (6), 313-319.