Elizabeth (Betsy) Verhoeven

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EDUCATION

Swiss Federal Institute of Technology (ETH-Zurich)

Ph.D. Agricultural Sciences 2014-2018

Dissertation: *Agricultural Management Effects on N Cycling and N2O Emissions Across the Soil Profile*

University of California, Davis

M.Sc. Soils and Biogeochemistry 2010-2012

Thesis: *Nitrous Oxide Emissions in Response to Physical and Chemical Properties of Biochar Amended Soils*

Oberlin College

B.A. Biology 2003-2007

AWARDS

Henry A. Jastro Graduate Research Award, UC Davis **2011 – 2012**

Department of Plant Sciences Research Assistantship, UC Davis **2010 – 2012**

TEACHING EXPERIENCE

Swiss Federal Institute of Technology, ETH Zurich

Teaching Assistant: Tropical Soils and Land Use Field Course 2016

Teaching assistant for a three-week field course to Kenya; assisted with soil and land use classification, field methods and report writing.

Swiss Federal Institute of Technology, ETH Zurich

M.Sc and B.Sc thesis supervisor 2015-2017

Developed projects, advised and mentored one M.Sc thesis and two B.Sc theses.

University of California, Davis

Teaching Assistant: Agroecosystem Management 2011

Responsible for the majority of lab teaching, which consisted of a randomized complete block field trial, excursions and a nitrogen budget lab exercise. Gave one lecture and was responsible for 50% of all grading.

RELATED EXPERIENCE

Department of Plant Sciences, UC Davis

**Research Technician** **2013-2014**

Researcher for the field component of an orchard crops life cycle assessment. Managed field sampling and lab analysis for soil gas flux measurements, inorganic soil nitrogen and chemical properties. Prepared a 60+ page grant report for the California Energy Commission.

Barley Breeding and Genetics Lab, Oregon State University

Lab Technician 2009

Lab and greenhouse work; maintenance of test populations, data collection and plant tissue DNA extractions. Preparation of technical manuscript.

Chicago Botanic Gardens / Bureau of Land Management

Intern: Conservation and Land Management Program 2009

Worked for the BLM in Worland, Wyoming. Rangeland monitoring and evaluation of fuel reduction, fire rehabilitation and weed management projects. Native seed collection and plant population monitoring.

Archery Summit Winery (OR) / Central Otago Vintners Ltd (New Zealand) / 12th and Maple Wine Co. (OR)

Harvest intern 2007-2008

Lab and cellar hand during the harvest period. Daily monitoring of fermentations (pH, sugar, titratable acidity, SO2). Involved in all aspects of fruit processing, plunging, draining and cleaning.

PUBLICATIONS AND PAPERS

**Verhoeven, E.**, Pereira, E., Decock, C., Suddick, E., Angst, T., & Six, J. (2017). Toward a Better Assessment of Biochar–Nitrous Oxide Mitigation Potential at the Field Scale. *Journal of Environmental Quality*, 46(2), 237-246.

**Verhoeven, E.**, Pereira, E., Decock, C., Garland, G., Kennedy, T., Suddick, E., Horwath, W. and Six, J., (2017). N2O emissions from California farmlands: A review. *California Agriculture*, *71*(3), pp.148-159.

**Verhoeven, E.**, & Six, J. (2014). Biochar does not mitigate field-scale N2O emissions in a Northern California vineyard: an assessment across two years. *Agriculture, Ecosystems & Environment*, 191, 27-38.

**Verhoeven, E.**, Bonman, J., Bregitzer, P., Brunick, B., Cooper, B., Corey, A., Cuesta-Marcos, A., Filichkina, T., Mundt, C., Obert, D., Rossnagel, B., Richardson, K., Hayes, P. (2011). Registration of the BISON Genetic Stocks in *Hordeum vulgare* L. *Journal of Plant Registrations.* 5, 135-140

**Verhoeven, E.**, Decock, C., Barthel, M., Bertora, C., Sacco, D., Romani, M., Sleutel, S., Six, J. (2018). A depth differentiated approach to measure N2O production and emissions in rice systems using natural abundance δ15N with known drivers of N2O emissions. *Soil Biology and Biochemistry.* 120, 58-69.

**Verhoeven, E.**, Decock, C., Barthel, M., Celi, L., Said-Pullicino, D., Romani, M., Sleutel, S., Six, J. (in review, Biogeosciences). Early season N2O emissions under variable water management in rice systems: source-partitioning N2O emissions using isotopocule signatures across a depth profile.

Akter, M., Deroo, H., Kamal, A.M., Kader, M.A., **Verhoeven, E**., Decock, C., Boeckx, P., Sleutel, S. (2018). Impact of irrigation management on paddy soil N supply and depth distribution of abiotic drivers. *Agriculture, Ecosystems & Environment.* 261, 12-24.

SkIlls

German – speak, read and write with basic competence

Spanish – basic conversation

R – competent in using R for data management, statistical and graphical analyses

Competent in all Microsoft Word applications

Experience in multi-institution project coordination and cooperation