

MEAGAN ERIN SCHIPANSKI

Department of Soil and Crop Sciences
Colorado State University
Fort Collins, CO 80523

Email : meagan.schipanski@colostate.edu
<http://mschipanski.weebly.com>

EDUCATION

- 2009 **Ph.D. in Horticulture**, Minor concentrations: Soil science and international agriculture
Cornell University, Ithaca, New York
Dissertation title: *Nitrogen cycling in agroecosystems: The effects of soil fertility and plant species interactions on legume nitrogen fixation*
- 1995 **B.A. in Biology**, Minor in Environmental Studies
Oberlin College, Oberlin, Ohio

PROFESSIONAL EXPERIENCE

- 2014-present **Assistant Professor**, Department of Soil and Crop Sciences, Colorado State University
- 2010-2013 **Postdoctoral Scholar**, Department of Plant Science & Department of Ecosystem Science and Management, The Pennsylvania State University, University Park, PA (Advisors: Dave Mortensen and Jason Kaye)
- 2009-2010 **Postdoctoral Fellow**, Department of Natural Resource Sciences
McGill University, Montreal, QC (Advisor: Elena Bennett)
- May 2009 **Consultant**, Natural Resource Defense Council
San Francisco, CA
- 2003-2009 **Graduate Research Assistant**, Department of Horticulture
Cornell University, Ithaca, NY (Advisor: Laurie Drinkwater)
- 2001-2003 **Program Manager**, Environmental Careers Organization
Seattle, WA
- 1997-2000 **Field Manager**, Angelic Organics CSA Farm
Caledonia, IL

GRANTS AND FELLOWSHIPS

- 2012-2014 **USDA NIFA Postdoctoral Fellowship**. Plant mediation of nitrogen mineralization via shifts in rhizosphere carbon allocation. (\$130,000)
- 2011-2014 **USDA OREI**. Finding the right mix: Multifunctional cover crop cocktails for organic systems. Co-PI with J. Kaye (Lead PI), and co-PI's M. Barbercheck, S. Cornelisse, N.E. Kiernan, D. Luthe, D. Mortensen, C. White, S.T. DuPont, D. Hartman, M. Hautau. (\$2,300,000)
- 2009-2010 **Macdonald Sustainable Agriculture Postdoctoral Fellowship**, McGill University (\$70,000)
- 2006 **NSF IGERT Small Grant**, Cornell University Biogeochemistry Program with J. Maul (co-PI) (\$4,000)
- 2006 **USDA Mini-Grant**, Upper Susquehanna Agricultural Ecology Project
Cornell University (\$1,000)
- 2004 –2008 **Natural Systems Agriculture Graduate Research Fellowship**, The Land Institute, Salina, KS (\$7,500)
- 2004 **NSF IGERT Small Grant**, Cornell University Biogeochemistry Program (\$4,000)

TEACHING AND TRAINING EXPERIENCE

2012	Guest instructor , Emerging Issues in Agroecology, Penn State University
2011	Instructor , Special Topics Course: Multifunctional Cover Cropping, Penn State University
2011	Guest instructor , Ecology of Agricultural Systems, Penn State University
2010	Guest instructor , Principles of Ecological Agriculture, McGill University
2007	Lead instructor , Practicing Sustainable Landcare, Cornell University
2007	Guest instructor , Organic Food and Agriculture, Cornell University
2006	Participant , Biogeochemistry program workshop in Teaching for Student Learning
2005	Teaching Assistant , Introduction to Biology, Cornell University
2005	Curriculum Development Assistant , Department of Horticulture, Cornell University
2004	Teaching Assistant , Berry Crops: Culture and Management, Cornell University

PEER-REVIEWED PUBLICATIONS
In review

Schipanski, M.E., M.E. Barbercheck, M.R. Douglas, D.M. Finney, K. Haider, J.P. Kaye, A.R. Kemanian, D.A. Mortensen, M.R. Ryan, J. Tooker and C. White. A framework for evaluating multifunctionality of cover crops in agroecosystems. *Agricultural Systems*

Published

Riskin, S.H., S. Porder, **M.E. Schipanski**, E.M. Bennett, and C. Neill. 2013. Soils mediate agricultural consequences: the role of phosphorus in soybean agriculture. *BioScience* 63: 49-54.

Bennett, E.M., and **M.E. Schipanski**. 2012. Phosphorus. In K.C. Weathers, D.L. Strayer, G. E. Likens, eds. *Fundamentals of Ecosystem Science*. Elsevier Press. Waltham, MA.

Schipanski, M. E., and L.E. Drinkwater. 2012. Soil fertility effects on nitrogen fixation in annual and perennial legume-grass mixtures. *Plant and Soil* 357: 147-159.

Culman, S., S.S. Snapp, **M.E. Schipanski**, M.A. Freeman, J. Beniston, L.E. Drinkwater, A.J. Franzluebbers, J.D. Glover, A.S. Grandy, R. Lal, J. Lee, J.E. Maul, S.B. Mirsky, J. Six, J.T. Spargo, M.M. Wander. 2012. Permanganate oxidizable carbon reflects a processed soil fraction that is sensitive to management. *Soil Science Society of America Journal* 76: 494-504.

Schipanski, M.E. and E.M. Bennett. 2012. The influence of agricultural trade and livestock production on the global phosphorus cycle. *Ecosystems* 15: 256-268.

Grossman, J.M., **M.E. Schipanski**, T. Sooksanguan, S. Seehaver, L.E. Drinkwater. 2011. Diversity of rhizobia nodulating soybean [*Glycine max* (Vinton)] varies under organic and conventional management. *Applied Soil Ecology* 50: 14-20.

Schipanski, M. E., L.E. Drinkwater. 2011. Nitrogen fixation of red clover interseeded with winter cereals across a management-induced fertility gradient. *Nutrient Cycling in Agroecosystems* 90(1): 105-119.

Schipanski, M. E., L.E. Drinkwater, and M.P. Russelle. 2010. Understanding the variability in soybean nitrogen fixation across agroecosystems. *Plant and Soil* 329: 379-397.

Drinkwater, L.E., **M. Schipanski**, S. Snapp, and L.E. Jackson. 2008. Ecologically-based nutrient management, *In* S. Snapp and B. Pound, eds. Agricultural systems: Agroecology and rural innovation for development. Academic Press, San Diego, CA.

Knapp, A.K., **M. Cocke (Schipanski)**, and E.P. Hammerlynck. 1994. Effect of elevated CO₂ on stomatal density and distribution in C₄ grass and a C₃ forb under field conditions. *Annals of Botany*, 74: 595-599.

AWARDS

- 2008 **Agroecology Section** student presentation competition honorable mention
Ecological Society of America
- 2007 **Barbara McClintock Award**, Plant Sciences outstanding graduate student
Cornell University
- 2005 **Outstanding Teaching Assistant Award**, Department of Horticulture
Cornell University
- 2004 **NSF Travel Scholarship**, North American Nitrogen Fixation Conference
Montana State University

SELECTED LEADERSHIP AND SERVICE ACTIVITIES

- 2013 **Organizer**, Ignite Session on Food Systems, Ecological Society of America meeting
- 2011-2013 **Committee Member**, Pennsylvania Certified Organic Certification Committee
- 2011-2013 **Organizer**, Penn State Sustainable Agriculture Systems Research Symposium
- 2010 **Invited Participant**, Graduate Student and Early Career Member Summit, Soil Science Society of America (co-authored summary article published in *CSA News*, October 2010)
- 2009 **Committee Chair**, Hank Beachell Future Leaders Scholarship, Agronomy Society
- 2009 **Symposium Organizer**, Ecological Society of America meeting, Albuquerque, NM
- 2008 **Mentor**, SEEDS Program for Undergraduates, Ecological Society of America
- 2007 **Steering Committee**, National Sustainable Agriculture Education Conference
- 2007 **Invited Participant**, Leadership Development Course, Cornell University
- 2005, 2006 **Instructor**, 4H Environmental Awareness Days, Ithaca, NY
- 2006 **Instructor**, Expanding Your Horizons science workshop for middle school girls
- 2006 **President**, New World Agriculture and Ecology Group, Cornell University
- 2005 **Invited Panelist**, Women in Science, President's Council of Women, Cornell University
- 2002-2003 **Volunteer**, Casa Latina Women's Program, Seattle, WA
- 2002-2003 **Committee Member**, West Seattle High School Environmental Science Academy
- 1999-2000 **Founding Board Member**, Angelic Organics Learning Center
- 1999-2000 **Director**, Midwest Collaborative Regional Alliance for Farmer Training (CRAFT)

Journal reviews for: Agriculture, Ecosystems & Environment, Ecological Applications, Ecological Economics, Environmental and Experimental Botany, Journal of Arid Environments, Journal of Environmental Quality, Journal of Geophysical Research – Biogeosciences, Plant and Soil, Soil Science Society of America Journal

Other invited reviews: Swiss National Research Programme, Towards Sustainability Foundation, Stewardship Index for Specialty Crops, eOrganic.com, Penn State Extension *Agroecology in Practice* series

Member: Agronomy Society of America, Soil Science Society of America, Ecological Society of America, Sustainable Agriculture Education Association

SELECTED PRESENTATIONS

Invited presentations at scientific meetings

Schipanski, M., E. Bennett, S. Riskin, and S. Porder. Agricultural trade and the global phosphorus cycle. American Geophysical Union, San Francisco, Dec 3-7, 2012.

Schipanski, M. and J. Gardner. Nutrient loss from agricultural systems employing ecological approaches. Ecological Society of America, Austin, TX, Aug 7-12, 2011.

Schipanski, M. Phosphorus movement through the transport of food and animal feed. Workshop on the State of the Global Phosphorus Cycle, Aspen Global Change Institute, Aspen, CO, Oct 1-4, 2009.

Schipanski, M. Agroecology for a sustainable future: Cross-disciplinary research at multiple scales. Ecology Society of America, Albuquerque, NM, Aug 2-7, 2009.

Invited seminars

Schipanski, M. From tweaks to transformations: Approaches to reducing nitrogen losses from agricultural systems. Department of Crop and Soil Sciences Seminar Series, Penn State University, October 7, 2011.

Schipanski, M. Weed management, environmental quality, and profitability in organic feed and forage production systems. Penn State Sustainable Agriculture Systems Triad Research Symposium. February 25, 2011.

Schipanski, M. Trading spaces: Redistribution of phosphorus through international agricultural trade. Department of Natural Resource Sciences Seminar Series, McGill University. October 21, 2010.

Schipanski, M. Better living through mutualisms: Nitrogen fixation on grain farms in New York State. Agroecological Perspectives on Sustainable Development Seminar Series. Cornell International Institute for Food, Agriculture, and Development. April 20, 2008.

Contributed presentations at scientific meetings

Schipanski, M.E., R.G. Smith, T.L. Pisani Gareau, R. Jabbour, D.B. Lewis, M.E. Barbercheck, D.A. Mortensen, J.P. Kaye. The structure of multivariate relationships influencing crop yields during the transition to organic management. Ecological Society of America, Minneapolis, MN, Aug 3-8, 2013.

Schipanski, M., S. Bailey, M. Barbercheck, M. Douglas, D. Finney, K. Haider, J. Kaye, D. Mortensen, J. Tooker and C. White. A conceptual framework for evaluating multifunctionality of cover crops in agroecosystems. ASA/CSSA/SSSA Annual Meeting, San Antonio, TX, Oct. 16-19, 2011.

Hayhoe Riskin, S., S. Porder, **M. Schipanski**, E. Bennett, C. Neill. The role of phosphorus in intensive soybean production. Ecological Society of America, Austin, TX, Aug 7-12, 2011.

Ryan, M., **M. Schipanski**, M. Barbercheck, W. Curran, J. Harper, R. Hoover, G. Hostetter, J. Kaye, N.E. Kiernan, D. Mortensen, T. Pisani Gareau, R. Smith, and D. Voight. Organic cropping systems research at The Pennsylvania State University: Designing reduced-tillage systems for organic feed crop production. USDA Organic Farming Systems Conference, Washington, D.C., March 16-18, 2011.

Schipanski, M.E., E.M. Bennett, and G.K. MacDonald. The influence of agricultural trade and livestock production on the global phosphorus cycle. Ecological Society of America, Pittsburgh, PA, Aug 1-6, 2010.

Schipanski, M.E., L.E. Drinkwater, S.J. Vanek, and S.W. Waterman. Nutrient mass balances and agroecosystem management in New York State. ASA-CSA-SSSA Joint Meetings, Pittsburgh, PA, November 1-5, 2009.

Schipanski, M.E. and L.E. Drinkwater. Managing biological nitrogen fixation in cash grain agroecosystems. Ecology Society of America, Milwaukee, WI, Aug 3-8, 2008.

Grossman, J.M., **Schipanski, M.E.**, Patel, M.R., and Drinkwater, L.E. The Sustainable Agriculture Scholars Program: Enhancing students' summer agroecological laboratory employment through structured experiential learning and reflection. Ecological Society of America, Milwaukee, WI, Aug 3-8, 2008.

Schipanski, M. and L.E. Drinkwater. Managing biological nitrogen fixation: Plant species and soil fertility interactions. Ecology Society of America, San Jose, CA, Aug 5-10, 2007.

Schipanski, M., L.E. Drinkwater, and S. Vanek. Legume nitrogen fixation as an internal regulator of nitrogen cycling in agroecosystems. ASA-CSA-SSSA Joint Meetings, Indianapolis, IN, Nov 12-16, 2006.

Cocke (Schipanski), M. and L.E. Drinkwater. Shifts in soybean nitrogen fixation across a management-induced soil fertility gradient. INTECOL/ Ecology Society of America Conference, Montreal, QC, Aug 7-12, 2005.

Cocke (Schipanski), M. and L.E. Drinkwater. Shifts in biological nitrogen fixation of perennial and annual legumes across a fertility gradient. 19th North American Symbiotic Nitrogen Fixation Conference. Bozeman, MT, June 27- July 1, 2005.

Extension presentations

Schipanski, M. 2012. Take cover: Selecting and managing cover crops. Pennsylvania Organic Farm Fest, Centre Hall, PA.

Schipanski, M. 2011. Soil health indicators: Active carbon and particulate organic matter workshop. Penn State Extension Organic Vegetable Production Intensive, Bethlehem, PA.

Schipanski, M. 2008. The effects of soil fertility on legume nitrogen fixation. Dryden Organic Dairy Discussion Group, Dryden, NY.

Schipanski, M. and L.E. Drinkwater. 2007. The effects of compost applications on nitrogen fixation. New York Organic Farming Association Conference, Syracuse, NY.

Cocke (Schipanski), M. and L.E. Drinkwater. 2006. The effects of nutrient management history on soybean nitrogen fixation. New York Certified Organic meeting, Geneva, NY.

EXTENSION PRODUCTS

Schipanski, M., Sandy, D., Barbercheck, M. 2011. Organic corn yields in a drought year. Organic Matters, PCO Quarterly Newsletter Winter 2011, pp. 11, 22.

Dempsey, M., **M. Schipanski**, and M. Barbercheck. 2011. Penn State organic corn variety trial. Field Crop News Vol.11 (1). Penn State Crop Management Extension Group, University Park, PA; Also printed in Organic Matters, PCO Quarterly Newsletter Winter 2011, pp. 9 – 10.

Schipanski, M. and L. Drinkwater. 2007. Legume nitrogen fixation learning module, Organic Cropping Systems Project Web site: http://www.organic.cornell.edu/ocs/tutorial/legume_n

Schipanski, M. and L. Drinkwater. 2007. Researching legume nitrogen fixation, Organic Cropping Systems Project Web site: http://www.organic.cornell.edu/ocs/tutorial/legume_n_research