

Sarah Taylor Lovell

Assistant Professor
Department of Plant & Soil Science, University of Vermont
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EDUCATION

MLA (Master's in Landscape Architecture). University of Illinois, 2005. Thesis topic: *A New Design Framework for the University of Illinois Field Research Station.*

PhD in Agronomy. University of Illinois, 2000. Dissertation topic: *Soybean Response and Weed Control with Flumioxazin, and Sorption, Degradation, and Weed Control with Isoxaflutole.*

MS in Agronomy. University of Illinois, 1995. Thesis topic: *Investigation of Herbicide Resistant Weeds.*

BS in Agricultural Science. University of Illinois, 1992. Graduated with high honors.

RESEARCH INTERESTS

Multifunctional Landscapes • Urban Agriculture • Ecological Design • Stormwater management

PROFESSIONAL EXPERIENCE

Assistant Professor, Department of Plant and Soil Science, University of Vermont. 2006-Present.

Postdoctoral Research Associate, Departments of Landscape Architecture and Natural Resources & Environmental Sciences, University of Illinois, Urbana, Illinois, Spring 2006.

Postdoctoral Research Associate, The Environmental Council, University of Illinois, Urbana, Illinois, 2003-2005.

Senior Research Biologist, Midwest Research and Development Unit, Dow AgroSciences, Iowa, 2000-2003.

Graduate Research Assistant/Fellow, Agronomy Department, University of Illinois, Urbana, Illinois. 1997-2000.

Field Research Biologist, Midwest Field Station, Zeneca Agricultural Products, Champaign, Illinois. 1995-1997.

Graduate Research Assistant/Fellow, Agronomy Department, University of Illinois, Urbana, Illinois. 1992-1995.

TEACHING EXPERIENCE

Instructor, PSS 137: Landscape Design Fundamentals. Fall 2007. Course filled within 2 days of registration. University of Vermont, Burlington, VT

Co-Instructor, PSS 295: Agroecology and Multifunctional Landscapes. Fall 2007. Taught in collaboration with Ernesto Mendez. Advanced special topics course for graduate studies. University of Vermont, Burlington, VT

Instructor, PSS 295: Seminar. Fall 2007. Advanced special topics course for graduate studies. University of Vermont, Burlington, VT

Instructor, PSS 198: Residential Lawn Alternatives. Spring 2007. Independent study course. University of Vermont, Burlington, VT

Instructor, PSS 196: Sustainable Landscape Design. Spring 2007. Special problems course. University of Vermont, Burlington, VT, Spring 2007.

Guest Lecturer, Environmental Impact Assessment. Spring 2006. University of Illinois, Urbana, Illinois.

Guest Lecturer and Research Assistant for Curriculum Development, Ecological Design. Fall 2005. University of Illinois, Urbana, Illinois, Fall 2005.

Teaching Assistant, Introduction to Agronomy. Spring 1991, Fall 1991. Department of Agronomy, University of Illinois, Urbana, Illinois.

GRANTS AND AWARDS

Grants and Gifts Received

Taylor Lovell, S. (PI), Neher, D. (co-PI). Spatial Extent of the Impact of Transported Road Materials on the Ecological Function of Forested Landscapes. (Lovell/Neher portion: \$200,000 direct funds). Subaward under Signature Project 1: Integrated Land-use, Transportation and Environmental Modeling: Complex Systems Approaches and Advanced Policy Applications. University Transportation Center, 2007-2010, \$2,432,000.

Taylor Lovell, S. (PI), Drizo, A., McIntosh, A. Shelburne farms water quality project. Lintilhac Foundation. Summer 2007. \$15,000.

Taylor Lovell, S. (PI). Vermont farms as multifunctional landscapes: Spatial analysis of crop and non-crop areas of local agroecosystems. Hatch funds. FY 2007. \$10,000.

Grants Submitted

Taylor Lovell, S. (PI). Spatial analysis of agroecosystems and their habitat components to develop guidelines for designing farms for multifunctionality. Hatch funds. FY 2008. \$15,000. Outcome: Pending.

Taylor Lovell, S. (co-PI), Eva Wollenberg (co-PI). Preproposal. Ecological Design for Energy Efficiency and Independence on Small Diversified Farms. SARE grant. FY 2008-2010. Funds requested: \$280,000. Submitted June 2007. Outcome: Declined.

Taylor Lovell, S. (PI), Mendez, V.E. Characterization of structure and function of non-crop and crop habitats of agroecosystems to inform design of multifunctional landscapes. USDA-NRI, Managed Ecosystems Priority. Funds requested: \$200,000. Submitted: December 2006. Outcome: Declined.

PUBLICATIONS

Peer Reviewed Publications

Taylor Lovell, S., Sullivan, W.C. 2006. Environmental benefits of conservation buffers in the United States: Evidence, promise, and open questions. *Agriculture, Ecosystems & Environment* 112(4):249-260.

Sullivan, W.C. and **Taylor Lovell, S.**, 2006. Improving the visual quality of commercial development at the rural-urban fringe. *Landscape and Urban Planning* 77(1-2):152-166.

Sullivan, W.C., Anderson, O.M., and **Taylor Lovell, S.**, 2004. Agricultural buffers at the rural-urban fringe: an examination of approval by farmers, residents, and academics in the Midwestern United States. *Landscape and Urban Planning* 69:299-313.

Taylor-Lovell, S., Sims, G.K., and Wax, L.M. 2002. Effects of moisture, temperature, and biological activity on the degradation of isoxaflutole in soil. *Journal of Agricultural and Food Chemistry* 50:5626-5633.

Taylor-Lovell, S., Wax, L.M., and Bollero, G. 2002. Preemergence Flumioxazin and Pendimethalin and Postemergence Herbicide Systems for Soybean (*Glycine max*). *Weed Technology* 16:502-511.

Taylor-Lovell, S. and Wax, L.M. 2001. Weed control in field corn (*Zea mays*) with RPA 201772 combinations with atrazine and s-metolachlor. *Weed Technology* 15:249-256.

Taylor-Lovell, S., Wax, L.M., and Nelson, R. 2001. Phytotoxic response and yield of soybean (*Glycine max*) varieties treated with sulfentrazone or flumioxazin. *Weed Technology* 15:95-102.

Taylor-Lovell, S., Sims, G.K., Wax, L.M., and Hassett, J.J. 2000. Hydrolysis and soil adsorption of the labile herbicide isoxaflutole. *Environmental Science and Technology* 34:3186-3190.

Taylor Lovell, S., Wax, L.M., Horak, M.J., and Peterson, D.E. 1996. Imidazolinone and sulfonylurea resistance in a biotype of common waterhemp (*Amaranthus rudis*). *Weed Science* 44:789-794.

Taylor Lovell, S., Wax, L.M., Simpson, D.M., and McGlamery, M. 1996. Using the *in vivo* ALS assay for identifying herbicide-resistant weeds. *Weed Technology* 10:936-942.

Diehl, K.E., **Taylor, S.L.**, Simpson, D.M., Stoller, E.W., and Wax, L.M. 1994. Effect of soil organic matter on the interaction between nicosulfuron and terbufos in corn. *Weed Science* 43:306-311.

Publications Under Review

Taylor Lovell, S., Johnston, J.M. Creating multifunctional landscapes – How can the field of ecology inform the design of the landscape? *Submitted*.

Taylor Lovell, S., Johnston, J.M. Designing for Landscape Performance: Applying Principles of Landscape Ecology to Intensively-Managed Systems. *Submitted*.

Other Publications

Taylor Lovell, S., 2005. University of Illinois Field Research Station – Master Plan. University of Illinois, Champaign-Urbana.

Taylor Lovell, S., 2005. A New Design Framework for the University of Illinois Field Research Station. MLA Thesis. University of Illinois, Champaign-Urbana.

Taylor Lovell, S., 2000. Soybean Response and Weed Control with Flumioxazin, and Sorption, Degradation, and Weed Control with Isoxaflutole. PhD Dissertation. University of Illinois, Champaign-Urbana.

Taylor Lovell, S., 1995. Investigation of Herbicide Resistant Weeds. MS Thesis. University of Illinois, Champaign-Urbana.

ABSTRACTS AND PROCEEDINGS

Taylor Lovell, S. 2007. Advancing ecological function in managed ecosystems: An introduction. ESA/SER Proceedings. San Jose, CA.

Taylor Lovell, S., 2006. A new design framework for the University of Illinois Field Research Station. ASA-CSSA-SSSA International Meeting Abstracts. Indianapolis, IN.

Sullivan, W.C., **Taylor Lovell, S.**, and Anderson, O.M. 2003. Greening the campus research farm: Reactions from three stakeholder groups. In: Connecting to Place: Greening of the Campus V, Ball State University: Muncie, IN.

Babcock, J., Bing, J., **Taylor-Lovell, S.**, Olson, B., Ditmarsen, S., Thompson, L., Wright, T., Huckaba, R., and Lassiter, R. 2003. Control of black cutworm in Herculex I hybrid corn. North Central Branch Entomological Society of America. 58th Annual Meeting. Madison, WI.

Ditmarsen, S., Nolting, S., Peterson, M., **Taylor-Lovell, S.**, Thompson, L., and Babcock, J. 2003. Effects of soil insecticides on field corn tolerance to postemergence applications of mesotrione. North Central Branch Entomological Society of America. 58th Annual Meeting. Madison, WI.

Taylor-Lovell, S., Babcock, J.M., Ditmarsen, S.C., Peterson, M.A., and Thompson, L.G. 2002. Flumetsulam + clopyralid in combination with reduced rates of mesotrione for postemergence weed control in field corn. Proc. North Cent. Weed Sci. Soc. 57:219.

Ditmarsen, S.C., Nolting, S., Peterson, M.A., **Taylor-Lovell, S.**, and Thompson, L.G. 2002. Effects of soil insecticides on field corn tolerance to postemergence applications of mesotrione. Proc. North Cent. Weed Sci. Soc. 57:195.

Taylor-Lovell, S., Wright, T.R., Thompson, L., and Caceres, N. 2001. Weed control with combinations of clopyralid + flumetsulam with nicosulfuron or rimsulfuron + nicosulfuron. Proc. North Cent. Weed Sci. Soc. 56:219.

Ditmarsen, S.C., Babcock, J.M., Caceres, N.T., Nolting, S.P., **Taylor-Lovell, S.**, Thompson, L.G., and Wright, T.R. 2001. Crop tolerance and efficacy of flumetsulam + clopyralid tank mixed with reduced rates of dicamba + diflufenzopyr in field corn. Proc. North Cent. Weed Sci. Soc. 56:218.

Taylor-Lovell, S., Sims, G.K., and Wax, L.M. 2000. Effect of moisture and temperature on degradation of isoxaflutole in soil. Abstr. Weed. Sci. Soc. Am. 40:339.

Taylor-Lovell, S., Sims, G.K., and Wax, L.M. 1999. Adsorption and degradation of isoxaflutole in soil. Abstr. Soil Sci. Soc. Am., p. 341.

Lovell, S.T. and Wax, L.M. 1998. Response of fifteen soybean varieties to V-53482 or sulfentrazone. Proc. North Cent. Weed Sci. Soc. 53:128.

Wax, L.M., **Taylor, S.L.**, and McGlamery, M.D. 1994. Managing herbicide resistant weeds. Illinois Ag. Pest. Conf. Proc., University of Illinois Coop. Ext. Service. p 7-9.

Taylor, S.L., Diehl, K.E., Simpson, D.M., Wax, L.M., and Stoller, E.W. 1993. Effect of nicosulfuron plus terbufos on *in vivo* ALS activity in corn. Proc. North Cent. Weed Sci. Soc. 48:71.

Kelrick, M.I., Kasper, N.A., Bultman, T.L., and **Taylor, S.** 1990. Direct interactions between infected and uninfected individuals of *Festuca arundinacea*: differential allocation to shoot and root biomass. Proc. of International Symposium of Acremonium / Grass Interactions. Louisiana Ag. Experimental Station. p 21-29.

INVITED PRESENTATIONS

Sarah Taylor Lovell, 2007. Designing Multifunctional Landscapes – Water Infiltration and Treatment. New England Wild Flower Symposium. Randolph Center, VT.

Sarah Taylor Lovell, 2006. Sustainable Landscapes – Healthy Approaches to Stormwater Management. Department of Plant & Soil Science, University of Vermont.

Sarah Taylor Lovell, 2006. Improving Sustainability of Intensively-Managed Landscapes. Department of Plant & Soil Science, University of Vermont.

Sarah Taylor Lovell, 2005. Improving the Sustainability of Intensively-Managed Landscapes Using Multiple Assessment Tools. College of Forest Resources, University of Washington.

Sarah Taylor Lovell, 2005. A New Design Framework for the University of Illinois Field Research Station. Department of Natural Resources and Environmental Sciences, University of Illinois.

Sarah Taylor Lovell, 2002. Impact of herbicides on the environment and crop plants. Department of Crop Sciences, University of Illinois.

Sarah Taylor Lovell, 2002. Acetochlor Herbicides in Corn: Encapsulation and Weed Control. Certified Crop Advisor Training, Iowa, January 2002.

Sarah Taylor Lovell, 2001. Preemergence Weed Control in Corn: Spectrum, Safety, and Soil Behavior. Certified Crop Advisor Training, Iowa, January 2001.

Sarah Taylor Lovell, 2000. Characterization of Two New Soil-Applied Herbicides: Flumioxazin and Isoxaflutole. Dow AgroSciences.

Sarah Taylor Lovell, 2000. Weed Control in Soybeans with Valor. Illinois Agricultural Pesticide Conference, University of Illinois, January 2000.

Sarah Taylor Lovell, 1994. Minimizing Weed Resistance to Herbicides. Agronomy Field Day, 1994.

RESEARCH PRESENTATIONS

Sarah Taylor Lovell, 2007. Advancing ecological function in managed ecosystems: An introduction. Ecological Society of America/Society for Ecological Restoration. San Jose, CA, August 5-10, 2007.

Sarah Taylor Lovell, 2006. A new design framework for the University of Illinois Field Research Station. ASA-CSSA-SSSA International Meetings, Indianapolis, IN, November 12-16, 2006.

Sarah Taylor Lovell, 2002. Flumetsulam + clopyralid in combination with reduced rates of mesotrione for postemergence weed control in field corn. North Central Weed Science Society Conference, St. Louis, MO, December, 2002.

Sarah Taylor Lovell, 2001. Weed control with combinations of clopyralid + flumetsulam with nicosulfuron or rimsulfuron + nicosulfuron. North Central Weed Science Society Conference, Milwaukee, WI, December, 2001.

Sarah Taylor Lovell, 2000. Effect of moisture and temperature on degradation of isoxaflutole in soil. Weed Science Society of America Conference, Toronto, Canada, February, 2000.

Sarah Taylor Lovell, 1999. Adsorption and degradation of isoxaflutole in soil." Soil Science Society of America, Salt Lake City, UT, November, 1999.

Sarah Taylor Lovell, 1998. Response of fifteen soybean varieties to V-53482 or sulfentrazone.” North Central Weed Science Society Conference, Minneapolis, MN, December, 1998.

Sarah Lynn Taylor, 1993. Effect of nicosulfuron plus terbufos on *in vivo* ALS activity in corn.” North Central Weed Science Society Conference, December, 1993.

HONORS AND AWARDS

- Beatrice Hornemann Scholarship, Outstanding Female Grad Student, University of Illinois. 2006.
- Sasaki Day Award for Excellence in Design, University of Illinois, “Agrarian Village Square”. Alec Cashman, Sarah Taylor Lovell, Kathy McQuiggan, and Ruth Stafford. 2005.
- Sasaki Day Award for Excellence in Design, University of Illinois, “Landscape and Change: Fading Project”. Sarah Taylor Lovell and Kathy McQuiggan. 2004.
- Sigma Lambda Alpha, Landscape Architecture Honor Society. 2004.
- Award for Global Excellence in Technology Development, Dow AgroSciences. 2001.
- G.O. Mott Meritorious Graduate Student Award, American Society of Agronomy. 2000.
- Slife Graduate Fellowship in Weed Science. 1999.
- First Place Team, North Central Collegiate Weed Science Contest. 1998.
- Frerichs Graduate Fellowship in Agronomy. 1993-1994.
- Lang Aldrich Award for Student Excellence in Agricultural Sciences, Illinois Fertilizer and Chemical Association. 1993
- Phi Eta Sigma, Freshman Honor Society, Truman State University, Kirksville, MO. 1989.

PROFESSIONAL ACTIVITIES

- Member, Agronomy Society of America (ASA)
- Member, International Association for Landscape Ecology (IALE)
- Member, American Society of Landscape Architects (ASLA)
- Member, The Ecological Society of America (ESA)
- Ad-Hoc reviewer, *Journal of Applied Ecology*
- Ad-Hoc reviewer, *Environmental Science and Technology*
- Ad-Hoc reviewer, *Journal of Agricultural and Food Chemistry*
- Ad-Hoc reviewer, *Applied Vegetation Science (most recently Spring 2007)*
- Ad-Hoc reviewer, *Journal of Environmental Psychology (most recently Summer 2007)*
- Ad-Hoc reviewer, *Agronomy Journal*
- Ad-Hoc reviewer, *Journal of Natural Resources and Life Sciences Education*

STUDENTS

Graduate Students, Chairperson

Daniel Erickson, PhD candidate, to begin Fall 2007.

Sarah DeSantis, MS candidate, to begin Fall 2007. (Co-advising with V. Ernesto Mendez).

Meryl Richards, MS candidate, to begin Fall 2007. (Co-advising with V. Ernesto Mendez).

Hisashi Kominami, MS candidate, to begin Fall 2007. (Co-advising with V. Ernesto Mendez).

Graduate Students, Committee Member

Ashley Anne Lidman, MS Student, Rubenstein School of Natural Resources

Undergraduate Students, Advisor

Jennifer Johnston, Department of Plant & Soil Science. Expected graduation: Spring 2007.

SERVICE

Department of Plant and Soil Science Seminar Committee, Fall 2007.

Plant Science Building, Landscape Design Committee, Fall 2007.

Undergraduate Affairs Committee, Department of Plant & Soil Science, University of Vermont, Fall 2006
- present.

Feasibility Committee for development of a program for a Masters in Landscape Architecture (MLA),
University of Vermont, 2006-present.

Member, University of Illinois Sustainable Campus Landscape Committee, 2006.

PROFESSIONAL DEVELOPMENT

Symposium Organizer, Ecological Society of America, 2007 Conference.

Grant Writer's Workshop, Washington DC, 2006.

"Teaching College" Course, University of Illinois, Urbana, Illinois, 2005.