

## CURRICULUM VITAE

### NAME

Stromberger, Mary E

### ADDRESS

Soil and Crop Sciences  
College of Agricultural Sciences

Plant Sciences

### PHONE

(970) 491-5283

### EDUCATION

BS, West Chester University

MS, University of Delaware

Ph D, Oregon State University

### ACADEMIC POSITIONS

2015 - Present Professor, Soil Microbiology, Colorado State University.

### SABBATICALS

(2009) University of College Dublin, Ireland, Fulbright award to study earthworm ecology.

### OTHER POSITIONS

2007 - 2015 Associate Professor, Soil Microbiology, Colorado State University.

2001 - 2007 Assistant Professor, Soil Microbiology, Colorado State University.

2000 - 2001 Instructor, Nutrient Mangement and Cycling, Oregon State University.

### PUBLISHED WORKS

#### **Refereed Journal Articles**

Arbuscular mycorrhizal fungal community differs between a coexisting native shrub and introduced annual grass.  
*Mycorrhiza*, doi: 10.1007/s00572-012-0455-x.

(in press). Assessment and evaluation of soil ecosystem services. *Soil Horizons (in press)*.

(in press). Changes in ecosystem carbon following afforestation of native sand prairie. *Soil Sci Soc Am J (accepted/in press)*.

Distinct microbial and microeukaryotic communities and translocated carbon in *Lumbricus terrestris* drilospheres.  
*Soil Biol Biochem*, 46, 155-162.

- Early seral plant species interactions with an arbuscular mycorrhizal community are highly variable. *Appl Soil Ecol*, 48, 257-262.
- Earthworm abundance and species composition in organic forage production systems of northern Colorado receiving different soil amendments. *Appl Soil Ecol*, 48, 218-226.
- Estimating nitrogen mineralization from composted dairy manure in an organically managed perennial grass system. *J Sustain Agr* (in review).
- Fate of graywater constituents after long-term application for landscape irrigation. *Water Air Soil Pollut*, 223, 4733-4749.
- High specific activity in low microbial biomass soils across a no-till evapotranspiration gradient in Colorado. *Soil Biol Biochem*, 43, 97-105.
- Long-term impacts of infrequent biosolids applications on chemical and microbial properties of a semi-arid rangeland soil. *Biol Fert Soils*, 42, 258-266.
- Microbial community structure and activity in a Colorado Rocky Mountain forest soil scarred by slash pile burning. *Soil Biol Biochem*, 39, 1111-1120.
- Microbial community structure and activity in a Colorado Rocky Mountain forest soil scarred by slash pile burning (vol 39, pg 1111, 2007). *Soil Biol Biochem*, 39, 2700-2700.
- N<sub>2</sub>O and CO<sub>2</sub> emissions from the shorgrass steppe: Controls over bacterial and fungal dynamics. *Soil Biol Biochem* (in review).
- New perspectives in soil ecology and biogeochemistry from extradisciplinary studies of microbial biofilms. *Biogeochemistry* (in review).
- Parallel shifts in plant and soil microbial communities in response to biosolids in a semi-arid grassland. *Soil Biol Biochem*, 38, 449-459.
- Rapid changes in microbial biomass and aggregate size distribution in response to changes in organic matter management in grass pasture. *Geoderma*, 193-194, 68-75.
- Relationships between microbial community structure and soil environmental conditions in a recently burned system. *Soil Biol Biochem*, 39, 1703-1711.
- Seasonal variation in arbuscular mycorrhizal fungi root colonization of downy brome (*Bromus tectorum*), an invasive winter annual. *J Ecosys Ecograph* S8:001 doi: 104172/2157-7625.
- Short-term nitrogen mineralization during transition from conventional to organic management is unchanged by composted dairy manure addition in perennial forage systems. *Org Agr*, doi: 10.1007/s13165-013-0037-z.
- Soil enzymes in a changing environment: Current knowledge and future directions. *Soil Biol Biochem*, 58, 216-234.
- Soil microbial communities of no-till dryland agroecosystems across an evapotranspiration gradient. *Appl Soil Ecol*, 35, 94-106.
- Soil scarification and wildfire interactions and effects on microbial communities and carbon. *Soil Sci Soc Am J*, 72, 111-118.

- Spatial distribution of enhanced atrazine degradation across northeastern Colorado cropping systems. *J Environ Qual*, 40, 46-56.
- Survivability of *Aporrectodea caliginosa* in response to drought stress in a Colorado soil. *Soil Science Society of America Journal* (in review).
- (in press). Survival of *Aporrectodea caliginosa* and its effects on nutrient availability in biosolids amended soil. *Applied Soil Ecology* (accepted/in press).
- Water Treatment Residuals and Biosolids Co-applications Affect Phosphatases in a Semi-arid Rangeland Soil. *Commun Soil Sci Plan*, 39, 2812-2826.
- Water treatment residuals and biosolids coapplications affect semiarid rangeland phosphorus cycling. *Soil Sci Soc Am J*, 72, 711-719.
- Water Treatment Residuals and Biosolids Long-Term Co-Applications Effects to Semi-Arid Grassland Soils and Vegetation. *Soil Sci Soc Am J*, 73, 1880-1889.
- Stromberger, M. E., Abduelafez, I., Byrne, P. F., Elamari, A., Manter, D. K., Moragues, M., Weir, T. L. Genotype-Specific Enrichment of ACC Deaminase-Positive Bacteria in Winter Wheat Rhizospheres. *Applied Soil Ecology*.
- McDaniel, J. P., Butters, G., Barbarick, K. A., Stromberger, M. E. (2015). Effects of *Aporrectodea caliginosa* on soil hydraulic properties and solute dispersivity. *Soil Science Society of America Journal*, 79, 838-847.
- Sukor, A., Stromberger, M. E., Storteboom, H. N., Davis, J. G. Nitrogen mineralization of cyanobacterial fertilizers compared to commonly-used organic fertilizers applied to different soil types. *Soil Science Society of America Journal*.
- Ippolito, J. A., Stromberger, M. E., Rick, L. D., Robert, D. S. (2015). Hardwood biochar and manure co-application to a calcareous soil. *Chemosphere*. [dx.doi.org/10.1016/j.chemosphere.2015.05.039](https://doi.org/10.1016/j.chemosphere.2015.05.039)
- Elzobair, K. A., Stromberger, M. E., Ippolito, J. A., Lentz, R. D. (2015). Contrasting effects of biochar versus manure on soil microbial communities and enzyme activities in an aridisol. *Chemosphere*. [dx.doi.org/10.1016/j.chemosphere.2015.06.044](https://doi.org/10.1016/j.chemosphere.2015.06.044)
- Elzobair, K. A., Stromberger, M. E., Ippolito, J. A. (2015). Stabilizing effect of biochar on soil extracellular enzymes after a denaturing stress. *Chemosphere*. [dx.doi.org/10.1016/j.chemosphere.2015.03.018](https://doi.org/10.1016/j.chemosphere.2015.03.018)
- Bertini, S. C.B., Azevedo, L. C.B., Stromberger, M. E., Cardoso, E. J.B.N. (2015). Soil properties discriminating *Araucaria* forests with different disturbance levels. *Environmental Monitoring and Assessment*, 187(94).
- Stromberger, M. E. (2014). Extracellular enzymes in terrestrial, freshwater, and marine environments: System variability and common needs. *Biogeochemistry*, 117, 5-21.
- Bell, C., Stromberger, M. E., Wallenstein, M. (2014). New insights into enzymes in the environment. *Biogeochemistry*, 117, 1-4.
- Hurisso, T. T., Davis, J. G., Brummer, J. E., Stromberger, M. E., Mikha, M. M., Booher, M. R. (2012). Short-term nitrogen mineralization during transition from conventional to organic management is unchanged by composted dairy manure addition in perennial forage systems. *Org. Agr.*, 2, 219-232. [link.springer.com/article/10.1007/s13165-013-0037-z#page-1](https://link.springer.com/article/10.1007/s13165-013-0037-z#page-1)

## Non-Refereed Journal Articles

McDaniel, J. P., Barbarick, K. A., Stromberger, M. E., Cranshaw, W. S. Survivability of Aporrectodea caliginosa in Response to Drought Stress in a Colorado Soil. *Soil Science Society of America*, 77, 1667-1672. <https://dl.sciencesocieties.org/publications/sssaj/abstracts/77/5/1667>

McDaniel, J. P., Stromberger, M. E., Barbarick, K. A., Cranshaw, W. S. Survival of Aporrectodea caliginosa and its effects on nutrient availability in biosolids amended soil. *Applied Ecology*(71), 1-6. <http://www.sciencedirect.com/science/article/pii/S0929139313001261>

Ippolito, J. A., Stromberger, M. E., Lentz, R. D., Dungan, R. S. (2014). Hardwood biochar influences calcareous soil physicochemical and microbiological status. *Journal of Environmental Quality*.

Bertini, S. C.B., de Azevedo, L. C.B., Stromberger, M. E., Cardoso, E. J.B.N. Soil biological, chemical and physical properties discriminating Araucaria forests with different disturbance levels. *Environmental Monitoring and Assessment*.

Nelson, S., Ajwa, H., Trout, T., Stromberger, M. E., Yates, S., Sharma, S. (2013). Water and methyl isothiocyanate distribution in soil after drip fumigation. *Journal of Environmental Quality*, 42, 1555-1564.

*Bridging the gap between modelers and experimentalists*. Eos 93:312.

*Long-term study on landscape irrigation using household graywater experimental study*. Water Environment Research Foundation (WERF) document no 06-CTS-1CO (Technical report).

*Long-term study on landscape irrigation using household graywater – experimental study*. Water Environment Research Foundation (WERF) Final Report document no 06-CTS-1CO.

## Abstract

Ippolito, J., Spokas, K., Novak, J., Lentz, R., Stromberger, M. E., Ducey, T. *Biochar Research: Land Application Advances to Reap its Multifunctional Abilities*. American Geophysical Union Annual Meeting.

Essah, S. Y., Holm, D. G., Stromberger, M. E., Kammlade, S. M. *The influence of agromanagement on potato mineral nutrients*. Potato Association of America.

## Technical Report

Stromberger, M. E., Hartsig, T. (2015). *Former Lowry Bombing and Gunnery Range Native Rangeland Restoration and Management Plan*. Denver, CO: Colorado State Land Board.

## PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

November 18, 2015, "Specificity of Root-Bacterial Interactions for Drought Stress Tolerance in Winter Wheat", ASA-CSSA-SSSA 2015 Annual Meeting, ASA-CSSA-SSSA, (Presenter) Stromberger, M. E.

December 2, 2014, "Root-microbial interactions to enhance wheat productivity under drought stress.", Heat and Drought Wheat Improvement Consortium, HeDWIC, Frankfurt, Germany.

June 11, 2014, "Breeding for Drought Tolerance in Winter Wheat through Above and Belowground Interactions", Annual Field Day, Akron, CO, USDA-ARS Central Great Plains Research Station, (Presenter) Byrne, P. F.,

Akron, CO.

March 31, 2014, "Breeding for Drought Tolerance in Winter Wheat through Above-Belowground Interactions", CSU Water Center, CSU.

March 7, 2014, "Rhizosphere engineering for drought tolerance in winter wheat", Soil's Role in Restoring Ecosystem Services Conference, SSSA and ESA, Sacramento, CA.

November 6, 2013, "Earthworm Affect on Chemical Leaching", American Society of Agronomy, Abstract 349-3, Tampa, FL.

November 6, 2013, "Earthworm effect on chemical leaching", Annual Meeting of the Soil Science Society of America, SSSA, (Presenter) McDaniel, J. P., Tampa, FL.

November 5, 2013, "Biochar effects on soil microbial communities and resistance of enzymes to stress", Annual Meeting of the Soil Science Society of America, SSSA, (Presenter) Elzobair, K., Tampa, FL.

November 4, 2013, "Fertilizer recovery of cyanobacterial and commonly-used organic fertilizers and lettuce growth response on different soil textures", Annual Meeting of the Soil Science Society of America, SSSA, (Presenter) Sukor, A., Tampa, FL.

November 3, 2013, "Metabolomic profiling of root exudates for wheat-microbial interactions", Annual meeting of the Soil Science Society of America, (Presenter) Maskus, C., Tampa, FL.

2012, "Barminski, R., J. Davis, H. Storteboom, Y.-Y. Yang, S. Dominick, K. Athey, H. Wang, and M. Stromberger. Development of an organically certified growth-medium for cyanobacteria. Annual meeting of the Soil Science Society of America, Cincinnati, OH, October 21-25, 2012."

2012, "Comerford, N., M. Stromberger, L. Morris, A.J. Franzleubbers, D. Markewitz, and R. Moore. 2012. Soil ecosystem services: a task force report for a SSSA position paper. Annual meeting of the Soil Science Society of America, Cincinnati, OH, October 21-25, 2012."

2012, "Elamari, A., T. Weir, I. Abduelafez, M. Moragues, and M. Stromberger. 2012. Diversity and abundance of ACC deaminase-positive bacteria from winter wheat rhizospheres in Colorado. Annual meeting of the Soil Science Society of America, Cincinnati, OH, October 21-25, 2012."

2012, "McDaniel, J., M. Stromberger, and K. Barbarick. 2012. Drought stress

affects earthworms in a biosolids amended Colorado soil. Annual meeting of the Soil Science Society of America, Cincinnati, OH, October 21-25, 2012."

2012, "Sukor, A., H. Storeboom, M. Stromberger, and J. Davis. 2012. Nitrogen mineralization potential of cyanobacterial fertilizers compared to traditional organic fertilizers applied to clayey and sandy soils. Annual meeting of the Soil Science Society of America, Cincinnati, OH, October 21-25, 2012."

October 24, 2012, "Drought Stress Affects Earthworms in a Biosolids Amended Colorado Soil", Soil Science Society of America, Abstract 389-7, Cincinnati, OH.

2011, "Abduelafez, I., M. Moragues, A.A. Elamari, G. Buchleiter, and M. Stromberger. Growth promotion of winter wheat under drought stress by ACC deaminase-positive bacteria. Annual meeting of the Soil Science Society of America, San Antonio, TX, October 16-19, 2011."

2011, "Busby, R., M. Paschke, D. Gebhart, and M. Stromberger. Cheatgrass and AMF: Impacts of invasion and mitigation for restoration. Annual meeting of the Soil Science Society of America, San Antonio, TX, October 16-19, 2011."

2011, "Busby, R.R., M.W. Paschke, M.E. Stromberger, D.L. Gebhart, and P.J. Meiman. Cheatgrass and AMF: Understanding interactions for improved restoration of invaded lands. Annual meeting of the Ecology Society of America, Austin, TX, August 7-12, 2011."

2011, "McDaniels, J., G. Butters, M. Stromberger, and K. Barbarick. Earthworm effects on solute leaching in a biosolids amended soil. Annual meeting of the Soil Science Society of America, San Antonio, TX, October 16-19, 2011."

2011, "Snider, K.E., and M. Stromberger. Hammer Time: A social center and

community garden case study. Annual meeting of the Soil Science Society of America, San Antonio, TX, October 16-19, 2011."

2011, "Stromberger, M. Genes, enzymes, and environment: What do we need to know to manage bioremediation activity in soil? International Enzymes in the Environment Conference, Bad Nauheim, Germany, July 17-21, 2011".

2011, "Stromberger, M. Managing microbial communities for ecosystem services: Do we know enough? Annual meeting of the Soil Science Society of America, San Antonio, TX, October 16-19, 2011 (invited speaker).".

2011, "Stromberger, M. Soil microorganisms as ecosystem providers. The National Academies Keck Future Initiatives (NAKFI) on Ecosystem Services, Irvine, CA, November 10-13, 2011."

2011, "Stromberger, M. Strategies to assess and manage microbial communities for ecosystem services. INDO-US Workshop on Precision Agricultural Techniques and Technologies. Ludhiana, India, February 28-March 3, 2011 (invited speaker).".

October 19, 2011, "Earthworm Affects On Solute Leaching In a Biosolids Amended Soil", American Society of Agronomy Annual Meetings, Abstract 391-6.

2010, "A.M. Keith, O. Schmidt, B. Boots, and M. Stromberger. Anecic earthworm removal in the field: Putting keystone species to the test using stable isotopes. 9th International Symposium on Earthworm Ecology, Xalapa, Mexico, September 5-10, 2010."

2010, "Busby, R., M. Stromberger, G. Rodriguez, and M. Paschke. Diversity of arbuscular mycorrhizal fungi associating with coexisting cheatgrass and big sagebrush. Annual meeting of the Soil Science Society of America, Long Beach, CA, October 31-November 3, 2010."

2010, "Ippolito, J., R. Lentz, R. Dungan, and M. Stromberger. Biochar affects an

eroded calcareous soil. Annual meeting of the Soil Science Society of America, Long Beach, CA, October 31-November 3, 2010."

2010, "Lang, G. B., M. Stromberger, and N. DuTeau. Effects of pine wood on microorganisms in subsurface soil microcosms: Application to permeable barrier nitrate removal. Annual meeting of the Rocky Mountain Branch - American Society for Microbiology, October 22-23, 2010, Laramie, WY."

2010, "McDaniel, J., M. Stromberger, and K. Barbarick. Microbial biomass and nitrogen cycling as affected by *A. trapezoides* in a Colorado soil. Annual meeting of the Soil Science Society of America, Long Beach, CA, October 31-November 3, 2010."

2010, "Shaner, D., M. Stromberger, and R. Khosla. How rapidly does enhanced degradation of atrazine in the soil develop? Joint meeting of the Society for Rangeland Management and Weed Science Society of America, Denver, CO, February 7-11, 2010."

2010, "Shaner, D.L., R. Khosla, and M. Stromberger. Spatial and temporal changes in atrazine degradation rates in soil. 10th International Conference on Precision Agriculture, Denver, CO, July 18-21, 2010."

2010, "Sharvelle, S., M.N. Azar, M. Stromberger, L. Roesner, and C. Olson. Effect of graywater application for landscape irrigation on soil quality. 2010 WEFTEC Conference, New Orleans, LA, October 2-6, 2010."

2010, "Stromberger, M. Strategies to assess and manage soil microbial communities for ecosystem services. Annual meeting of the Soil Science Society of America, Long Beach, CA, October 31-November 3, 2010."

2010, "Stromberger, M.E., R. Khosla, and D. Shaner. Spatio-temporal analysis of atrazine degradation and associated attributes in eastern Colorado soils.



10th International Conference on  
Precision Agriculture, Denver, CO, July  
18-21, 2010."

November 1, 2010, "Microbial Biomass and Nitrogen Cycling as Affected by A. Trapezoides in a Colorado Soil",  
American Society of Agronomy Annual Meetings, Poster 949.

### **OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD**

(October 19, 2013 - October 21, 2013). Leadership Development training, "2013 FastTrack Leadership Intensive,"  
Colorado State University, Chapel Hill, North Carolina, United States. Approximate Number of Hours Spent  
Per Year: 24.

### **TEACHING:**

<b><u>Year</u></b>	<b><u>Semester</u></b>	<b><u>Course No./Title</u></b>	<b><u>Cr. Hrs.</u></b>	<b><u>Enrollment</u></b>
2016	Spring	SOCR799 - Dissertation	18	12
2016	Spring	SOCR341 - Microbiology for Sustainable Agriculture	1	23
2016	Spring	SOCR441 - Soil Ecology	3	7
2016	Spring	SOCR441 - Soil Ecology - Lab	0	7
2015	Fall	SOCR799 - Dissertation	18	11
2015	Fall	SOCR455 - Soil Microbiology	3	17
2015	Fall	SOCR456 - Soil Microbiology Laboratory	1	5
2015	Spring	SOCR441 - Soil Ecology	3	3
2015	Spring	SOCR441 - Soil Ecology - Lab	0	3
2014	Fall	SOCR799 - Dissertation	18	15
2014	Fall	SOCR455 - Soil Microbiology	3	28
2014	Fall	SOCR456 - Soil Microbiology Laboratory	1	10
2014	Spring	SOCR755 - Advanced Soil Microbiology	3	12
2014	Spring	SOCR799 - Dissertation	18	15
2014	Spring	SOCR341 - Microbiology for Sustainable Agriculture	1	25
2013	Fall	SOCR799 - Dissertation	18	19
2013	Fall	SOCR455 - Soil Microbiology	3	25
2013	Fall	SOCR455 - Soil Microbiology	3	25
2013	Fall	SOCR456 - Soil Microbiology Laboratory	1	9
2013	Fall	SOCR456 - Soil Microbiology Laboratory	1	9
2013	Fall	SOCR784 - Supervised College Teaching	18	6
2013	Fall	SOCR699 - Thesis	18	5
2013	Spring	SOCR799 - Dissertation	18	17
2013	Spring	SOCR441 - Soil Ecology	3	11
2013	Spring	SOCR441 - Soil Ecology - Lab	0	11
2013	Spring	SOCR699 - Thesis	18	6
2012	Fall	SOCR799 - Dissertation	18	17
2012	Fall	SOCR455 - Soil Microbiology	3	27
2012	Fall	SOCR699 - Thesis	18	7
2012	Spring	SOCR755 - Advanced Soil Microbiology	3	7
2012	Spring	SOCR799 - Dissertation	18	15
2012	Spring	SOCR341 - Microbiology for Sustainable Agriculture	1	27
2012	Spring	SOCR441 - Soil Ecology	3	11
2012	Spring	SOCR441 - Soil Ecology - Lab	0	11
2012	Spring	SOCR699 - Thesis	18	11
2011	Fall	SOCR799 - Dissertation	18	12
2011	Fall	SOCR455 - Soil Microbiology	3	24

2011	Fall	SOCR456 - Soil Microbiology Laboratory	1	6
2011	Spring	SOCR699 - Thesis	18	13
2010	Fall	ECOL592 - Interdisciplinary Seminar in Ecology	3	9
2010	Fall	SOCR455 - Soil Microbiology	3	17
2010	Fall	SOCR456 - Soil Microbiology Laboratory	1	8
2010	Fall	SOCR699 - Thesis	18	9
2010	Spring	SOCR755 - Advanced Soil Microbiology	3	5
2010	Spring	SOCR341 - Soil Ecology	1	21
2009	Fall	SOCR341 - Soil Ecology	1	0
2009	Fall	SOCR455 - Soil Microbiology	3	16
2009	Fall	SOCR456 - Soil Microbiology Laboratory	1	7
2008	Fall	SOCR495 - Independent Study	18	4
2008	Fall	SOCR341 - Soil Ecology	1	9
2008	Fall	SOCR455 - Soil Microbiology	3	13
2008	Fall	SOCR456 - Soil Microbiology Laboratory	1	0
2008	Spring	SOCR479 - Environmental Soil Science Laboratory	1	1
2008	Spring	SOCR478 - Environmental Soil Sciences	3	1
2008	Spring	SOCR796 - Group Study	18	10
2007	Fall	SOCR455 - Soil Microbiology	3	20
2007	Fall	SOCR456 - Soil Microbiology Laboratory	1	8

## **EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS**

### **Presentation**

The role of soil organisms in supporting crop production under environmental stress. Denver, CO. Number of times program was made: 1. Total number of participants: 50. Percent Responsible: 100%. 1st Quarter 2014.

The role of soil organisms in supporting crop production under environmental stress. Denver, CO. Number of times program was made: 1. Total number of participants: 200. Percent Responsible: 100%. 1st Quarter 2014.

Wheat-Microbial Interactions for Enhanced Drought Tolerance. Sterling, CO. Number of times program was made: 1. Total number of participants: 40. Percent Responsible: 100%. 4th Quarter 2014.

### **Workshop**

The role of soil organisms in supporting crop production under environmental stress. Denver, CO. Total number of participants: 50. Percent Responsible: 100%. 2013.

The role of soil organisms in supporting crop production under environmental stress. Denver, CO. Total number of participants: 100. Percent Responsible: 100%. 2013.

## **COMMITTEES**

Faculty Council Chairperson, (July 1, 2015 - Present).

Faculty Council, (July 1, 2014 - June 30, 2015).

Faculty Council, (July 1, 2012 - June 30, 2014).

Committee on Libraries, (July 1, 2008 - June 30, 2014).

Committee on Scholarship, Research, and Graduate Education, (July 1, 2007 - June 30, 2014).

Acting Associate Department Head, (August 1, 2015 - Present).

## **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

Agronomy Society of America.

Soil Ecology Society.

Soil Science Society of America.

Crop Science Society of America. (January 1, 2013 - Present).

YubaNet.com. (November 9, 2015).

APlus.com. (November 2, 2015).

Nature World News. (November 2, 2015).

Albany Daily Star. (November 2, 2015).

PerfScience. (November 1, 2015).

Science World Report. (October 31, 2015).

Ag Professional. (October 30, 2015).

Tech01.us. (October 30, 2015).

Apex Tribune. (October 30, 2015).

Outer Places. (October 29, 2015).

Guelph Organic Conference update blog. (August 13, 2015).

Midwestern Bio Ag newsletter. (July 23, 2015).

Doane Ag Report. (July 17, 2015).

Ag Professional. (July 16, 2015).

Growing: Fruits, Vegetables, a Way of Life. (July 16, 2015).

Ag Professional. (July 2, 2015).

Hilary's Eat Well. (July 1, 2015).

Farm Futures. (June 29, 2015).

Science Daily. (June 25, 2015).

Morning Ag Clips. (June 15, 2015).

Agriculture, Ecosystems, and Environment.

Member, Agronomy Society of America.

Applied Soil Ecology.

Applied Soil Ecology.

Applied Soil Ecology.

Applied Soil Ecology.

Member, Applied Soil Ecology Journal Editorial Board.

Member, ASA Committee on Organic and Sustainable Agriculture.

Biology and Fertility of Soils.

Member, Committee on Libraries.

Committee Chair, Committee on Scholarship, Research and Graduate Education.

Member, Emerging Issues in Soil and Water Lecture committee.

Experimental Agriculture.

Member, Faculty Council.

Indo-US Workshop on Precision Agricultural Techniques and Technologies, Ludhiana.

Journal of Soil and Water Conservation.

Editor, Associate Editor, Journal of Soil and Water Conservation.

Land Degradation and Development.

Library liason.

Mountain States Chapter of the Internation Erosion Control Association, Denver, CO.

Mountain States Chapter of the Internation Erosion Control Association, Denver, CO.

National Science Foundation.

Reviewer, Ad Hoc Reviewer, National Science Foundation BREAD.

Nebraska Independent Crop Consultants Association, North Platte, NE.

Nebraska Independent Crop Consultants Association, North Platte, NE.

Panel speaker on "Enhancing Soil Biology" at the 2012 Colorado Agriculture Big and Small Conference, held February 15, 2012 in Brighton, CO. The Conference was organized in part by Adrian Card, CSU County Extension. Approximately 100 people were in attendance.

Pedosphere.

Plant and Soil.

Plos One.

RCN: Enzymes in the Environment, Fort Collins, CO.

Research Coordinated Network: Enzymes in the Environment, Fort Collins, CO.

Rocky Mountain Branch of the International Erosion Control Association, Denver, CO.

Rocky Mountain Branch of the International Erosion Control Association, Denver, CO.

Member, S490, Francis and Evelyn Clark Soil Biology Scholarship committee.

Sarhad Journal of Agriculture.

Sarhad Journal of Agriculture: 1.

Member, Soil and Water Conservation Society.

Soil Biology and Biochemistry.

Member, Soil Ecology Society.

Soil Science Society of America Journal.

Soil Science Society of America Journal.

Soil Science Society of America Journal.

Soil Science Society of America Journal.

Editor, Associate Editor, Soil Science Society of America Journal.

Committee Chair, Soil Science Society of America.

Member, Soil Science Society of America.

Member, Student Affairs committee.

Member, USDA NIFA.

USDA-ARS.

Reviewer, Journal Article, Soil Biology & Biochemistry. (May 9, 2016).

Reviewer, Journal Article, Journal of Microbiological Methods. (May 2, 2016).

Committee Chair, Soil Science Society of America. (January 1, 2015 - December 31, 2015).

Committee Chair, Soil Science Society of America. (January 1, 2015 - December 31, 2015).

Committee Chair, Soil Science Society of America. (January 1, 2015 - December 31, 2015).

Reviewer, Journal Article, Applied Soil Ecology. (August 1, 2015).

Reviewer, Journal Article, Soil Biology and Biochemistry Journal. (May 10, 2015).

Reviewer, Grant Proposal, USDA NIFA. (May 9, 2015).

Editor, Book, Soil Science Society of America. (January 14, 2014 - January 1, 2015).

Task Force Member, Soil Science Society of America. (January 1, 2012 - December 31, 2014).

Reviewer, Journal Article, Annals of Applied Biology. (November 16, 2014).

Reviewer, Journal Article, Applied Soil Ecology. (October 27, 2014).

Reviewer, Journal Article, Annals of Applied Biology. (October 19, 2014).

Reviewer, Journal Article, Applied Soil Ecology. (September 20, 2014).

Reviewer, Journal Article, Soil Biology and Biochemistry. (August 3, 2014).

Reviewer, Journal Article, Soil Biology and Biochemistry. (June 10, 2014).

Reviewer, Grant Proposal, BiodivERsA ERA-Net and the FACCE-JPI. (May 15, 2014).

Reviewer, Ad Hoc Reviewer, Soil Biology and Biochemistry. (March 23, 2014).

Conference-Related, Soil Science Society of America, Sacramento, California. (January 1, 2012 - March 9, 2014).

Reviewer, Journal Article, European Journal of Soil Science. (January 31, 2014).

Reviewer, Journal Article, Soil Biology & Biochemistry Journal. (January 16, 2014).

Reviewer, Journal Article, Soil Science. (December 20, 2013).

Committee Chair, USDA-ARS. (May 1, 2013 - June 30, 2013).

**OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH**

Academic, Colorado State Land Board, Denver, CO, United States. (August 4, 2014 - August 6, 2014).

For Profit Organization, Symmetry Oil. (June 1, 2013 - August 1, 2013).

Chair, Division of Soil Biology and Biochemistry, Soil Science Society of America. (January 1, 2014 - December 31, 2014).

\*\*\*\*\*