

MEAGAN ERIN SCHIPANSKI

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EDUCATION

2009 **Ph.D. in Horticulture**
Minor concentrations: Soil science; International agriculture
Cornell University, Ithaca, New York

1995 **B.A. in Biology**, Minor in Environmental Studies
Oberlin College, Oberlin, Ohio

ACADEMIC POSITIONS

2019-present **Associate Professor**, Department of Soil and Crop Sciences, Colorado State University, Fort Collins, CO

2014-2019 **Assistant Professor**, Department of Soil and Crop Sciences, Colorado State University, Fort Collins, CO

2010-2013 **Postdoctoral Scholar**, Department of Plant Science & Department of Ecosystem Science and Management, The Pennsylvania State University, University Park, PA

2009-2010 **Postdoctoral Fellow**, Department of Natural Resource Sciences
McGill University, Montreal, QC

2003-2009 **Graduate Research Assistant**, Department of Horticulture
Cornell University, Ithaca, NY

HONORS AND AWARDS

2021 **Crop Science Teaching Award**, Crop Science Society of America

2020-2021 **Colorado State University Monfort Professor**

2021 **CSU Interdisciplinary Scholarship Team Award**, Ogallala Water Coordinated Agriculture Team

2018 **Invited Agronomy Society of America (ASA) Plenary / E.T. & Vam York Distinguished ASA Lectureship**, Designing agricultural systems for resilience through partnerships among plants and people. ASA Annual Meeting. Baltimore, MD, November 4-7, 2018.

2018 **Invited keynote plenary**, Leveraging plant diversity for multifunctionality in agroecosystems. European Society of Agronomy Congress. Geneva, Switzerland, August 27-31, 2018

2017 **Team Research Award** (Food Systems Team), College of Agricultural Sciences, Colorado State University

2016 **Invited keynote**, Plant-mediated nitrogen cycling in agricultural systems. 19th European Nitrogen Workshop, Skara, Sweden. June 22-26, 2016

2016 **Outstanding Research Award**, College of Agricultural Sciences, Colorado State University

2009 **Macdonald Sustainable Agriculture Postdoctoral Fellowship**, McGill University

2007 **Barbara McClintock Award**, Plant Sciences outstanding graduate student
Cornell University

2005 **Outstanding Teaching Assistant Award**, Department of Horticulture
Cornell University

PUBLICATIONS (* graduate student, ** postdoc, ‡ undergraduate student)

1. Obour, A. Simon, L. Holman, J., Carr, P., Schipanski, M., Fonte, S. Ghimire, R., Thandiwe, N., Blanco-Canqui, H. 2021. Cover crops to improve soil health in the North American Great Plains. *Agronomy Journal*.
2. Cotrufo, M.F., Lavalley, J., Zhang, Y., Hansen, P., Paustian, K., Schipanski, M., Wallenstein, M.D. 2021. In-N-Out: A Hierarchical Framework to Understand and Predict Soil Carbon Storage and Nitrogen Recycling. *Global Change Biology*. DOI: 10.1111/gcb.15782

3. Jabbour, R., McClelland, S. C.*, Schipanski, M.E. 2021. Use of decision-support tools by students to link crop management practices with greenhouse gas emissions: A case study. *Natural Sciences Education, Special Section: Natural Sciences Education in a COVID-19 World*. 50(2): e20063. <https://doi.org/10.1002/nse2.20063>
4. McClelland, S. C.*, Paustian, K., Williams, S., & Schipanski, M. E. 2021. Modeling cover crop biomass production and related emissions to improve farm-scale decision-support tools. *Agricultural Systems* 191:103151.
5. Kelly, C., Schipanski, M. E., Tucker, A., Trujillo, W., Holman, J. D., Obour, A. K., Johnson, S.K., Brummer, J.E., Haag, L., Fonte, S. J. 2021. Dryland cover crop soil health benefits are maintained with grazing in the US High and Central Plains. *Agriculture, Ecosystems & Environment* 313:07358.
6. Thapa, V.R., R. Ghimire, V. Acosta-Martinez, M.A. Marsalis, M.E. Schipanski. 2021. Cover crop biomass and species composition affect soil microbial community structure and enzyme activities in semiarid cropping systems. *Applied Soil Ecology* 157: 103735.
7. Weersink, A., von Massow, M., Bannon, N., Ifft, J., Maples, J., McEwen, K., ..., Schipanski, M... & Richards, T. 2020. COVID-19 and the agri-food system in the United States and Canada. *Agricultural Systems*, 103039.
8. McClelland, S.C.*, Paustian, K., Schipanski, M.E. 2020. Management of cover crops in temperate climates influences soil organic carbon stocks: a meta-analysis. *Ecological Applications*. doi:10.1002/eap.2278
9. Hale, J.***, M. Schipanski, M. Carolan. 2020. Just wheat transitions? Working toward constructive structural changes in wheat production. *Local Environment* DOI: 10.1080/13549839.2020.1861591
10. Kelly, C.*, M. Schipanski, B. Kondratieff, L. A. Sherrod, J. Schneekloth, S. J. Fonte. 2020. The effect of dryland cropping system intensity on soil function and associated changes in soil macrofauna communities. *Soil Science Society of America Journal* doi.org/10.1002/saj2.20133
11. Bailey, R.T. M. Schipanski, I. Kissekka. 2020. Special issue introduction: Managing the Ogallala. *Agricultural Water Management* 242.
12. Peterson, G.P., D.G. Westfall, M.E. Schipanski, S.J. Fonte. 2020. Soil and crop management systems that ameliorate damage caused by decades of dryland agroecosystem mismanagement. *Agronomy Journal* DOI: 10.1002/agj2.20257
13. Deines, J.M., M.E. Schipanski, B. Golden, S.C. Zipper, S. Nozari, C. Rottler, B. Guerrero, V. Sharda. 2020. Transitions from irrigated to dryland agriculture in the Ogallala Aquifer: Land use suitability and regional economic impacts. *Agricultural Water Management (Special Issue on Ogallala Aquifer)* 233.
14. Rosenzweig, S.T.*, Carolan, M., Schipanski, M.E. 2020. A dryland cropping revolution? Linking an emerging soil health paradigm with shifting social fields among wheat growers of the High Plains. *Rural Sociology* 85(2): 545-574.
15. Rosenzweig, S.T.*, Schipanski, M. E. 2019. Landscape-scale cropping changes in the High Plains: Economic and environmental implications. *Environmental Research Letters*, 14(12).
16. Khoury, C.K., Kantar, M., Barber, E., Kisel, Y., Ricciardi, V., Klirso, C., Kucera, L., Mehrabi, Z., Johnson, N., Klabin, S., Valino, A., Nowakowski, K., Bartomeus, I., Ramankutty, N., Miller, A., Schipanski, M. Gore, M.A., Novy, A. 2019. Science - graphic art partnerships to increase research impact. *Nature Communications Biology* 2 (295): 1-5.
17. Kallenbach, C. M.***, Wallenstein, M., Schipanski, M., Grandy, S. 2019. Managing agroecosystems for optimal microbial carbon use efficiency: Unknowns, interactions, and a path forward. *Frontiers in Microbiology* 10 (1146).
18. Kaye, J.P., D. Finney, C. White, B. Bradley, M. Schipanski, M. Alonso-Ayuso, M. Hunter, M. Burgess, C. Mejia. 2019. Managing nitrogen through cover crop species selection in the U.S. mid-Atlantic. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0215448>
19. Jablonski, B.B.R., M. Carolan, J. Hale, D. Thilmany McFadden, E. Love, L. Christensen, T. Covey, L. Bellows, R. Cleary, O. David, K.E. Jablonski, A.S. Jones, P. Meiman, J. Quinn, E.P. Ryan, M. Schipanski, H. Summers, M. Uchanski. 2019. Connecting urban food plans to the countryside: Leveraging Denver's Food Vision to build meaningful rural-urban linkages. *Sustainability* 11(7): 2022.
20. Hunter, M., M.E. Schipanski, M. Burgess, J. LaChance, B. Bradley, M.E. Barbercheck, J.P. Kaye, D.A. Mortensen. 2019. Cover crop mixture effects on maize, soybean, and wheat yield in rotation. *Agricultural and Environmental Letters* 4:180051.
21. Haacker, E.M.K., V. Sharda, A.M. Cano, R.A. Hrozencik, A. Nuñez, Z. Zambreski, S. Nozari, G.E.B. Smith, L. Moore, S. Sharma, P. Gowda, C. Ray, M. Schipanski, and R. Waskom. 2019. Transition pathways to sustainable agricultural water management: A review of integrated modeling approaches. *Journal of the American Water Resources Association* 1–18. <https://doi.org/10.1111/1752-1688.12722>.

22. Rudnick, D. R., Irmak, S., West, C., Kisekka, I., Marek, T. H., Schneekloth, J., Mitchell McCallister, D., Sharma, V., Djaman, K., Aguilar, J., Chávez, J. L., Schipanski, M., Rogers, D. H., Schlegel, A. 2019. Deficit irrigation management of maize in the High Plains Aquifer region: A review. *Journal of the American Water Resources Association*. 1–18. <https://doi.org/10.1111/1752-1688.12723>.
23. Nogeire-McRae, T.**, Ryan, E. P., Jablonski, B., Carolan, M. S., Arathi, H.S., Brown, C. S., Honarchian Saki, H., McKeen, S. A., Lapansky, E., Schipanski, M. 2018. The role of urban agriculture in a secure, healthy, and sustainable food system. *BioScience*. doi.org/10.1093/biosci/biy071
24. Rosenzweig, S.T.,* M.E. Stromberger, M.E. Schipanski. 2018. Intensified dryland crop rotations support greater grain production with fewer inputs. *Agriculture, Ecosystems & Environment* 264: 63-72. doi.org/10.1016/j.agee.2018.05.017
25. Cano, A., A. Núñez*, V. Acosta-Martinez, M. Schipanski, R. Ghimire, C. Rice, C. West. 2018. Current knowledge and future research directions to link soil health and water conservation in the Ogallala Aquifer region. *Geoderma* 328: 109-118. doi.org/10.1016/j.geoderma.2018.04.027
26. Sherrod, L.A., G.S. McMaster, J.A. Delgado, M.E. Schipanski, S.J. Fonte, R.L. Montenieri, K. Larson. 2018. Soil carbon pools in dryland agroecosystems as affected by several years of drought. *Journal of Environmental Quality (special section Predicting soil organic carbon in agroecosystems under climate change)*. doi:10.2134/jeq2017.09.0371.
27. Rosenzweig, S.T.*, S.J. Fonte, M.E. Schipanski. 2018. Intensifying rotations increases soil carbon, fungi, and aggregation in semi-arid agroecosystems. *Agriculture, Ecosystems & Environment* 258: 14-22. doi.org/10.1016/j.agee.2018.01.016
28. Uddameri, V., Singaraju, S., Karim, A., Gowda, P., Bailey, R. T., Schipanski, M. 2017. Understanding climate-hydrologic-human interactions to guide groundwater model development for Southern High Plains. *Journal of Contemporary Water Research & Education*, 162(1), 79-99.
29. Robertson, A. D.**, Zhang, Y., Sherrod, L. A., Rosenzweig*, S. T., Ma, L., Ahuja, L., & Schipanski, M. E. 2017. Climate change impacts on yields and soil carbon in row crop dryland agriculture. *Journal of Environmental Quality (special section Predicting soil organic carbon in agroecosystems under climate change; Highlighted in Crops, Soils, Agronomy News)*. doi:10.2134/jeq2017.08.0309
30. Baraibar, B., M. Hunter*, M.E. Schipanski, A. Hamilton, D. Mortensen. 2017. Weed suppression by cover crop monoculture and mixtures: The importance of planting window and cover crop species. *Weed Science*. doi.org/10.1017/wsc.2017.59
31. Finney, D. M., E. G. Murrell, C. M. White, B. Baraibar, M. E. Barbercheck, B. A. Bradley, S. Cornelisse, M. C. Hunter, J. P. Kaye, D. A. Mortensen, C. A. Mullen, and M. E. Schipanski. 2017. Ecosystem services and disservices are bundled in simple and diverse cover cropping systems. *Agricultural & Environmental Letters* 2:170033. doi:10.2134/aer2017.09.0033
32. Rosenzweig, S.* , M.E. Schipanski, J.P. Kaye. 2017. Rhizosphere priming and plant-mediated cover crop decomposition. *Plant and Soil* 417: 127-139.
33. Calderon, F.J., S.W. Culman, J. Six, A.J. Franzluebbers, M. Schipanski, J. Beniston, S. Grandy, A. Kong. 2017. Quantification of soil permanganate oxidizable C (POXC) using infrared spectroscopy. *Soil Science Society of America Journal* 81(2): 277-288. doi:10.2136/sssaj2016.07.0216
34. Hunter, M.C.* , R.G. Smith, M.E. Schipanski, L.W. Atwood, D.A. Mortensen. 2017. Agriculture in 2050: Recalibrating targets for sustainable intensification. *BioScience* 67(4): 386-391. doi.org/10.1093/biosci/bix010
35. Schipanski, M.E., M.E. Barbercheck, E.G. Murrell, J. Harper, D.M. Finney, J.P. Kaye, D.A. Mortensen, R.G. Smith. 2017. Balancing multiple objectives in organic feed and forage cropping systems. *Agriculture, Ecosystems & Environment* 239: 219-227.
36. Murrell, E.G., M.E. Schipanski, D.M. Finney, M.C. Hunter*, M. Burgess, J.C. LaChance, B. Baraibar, C.M. White, D.A. Mortensen, J.P. Kaye. 2017. Achieving diverse cover crop mixtures: Effects of planting date and seeding rate. *Agronomy Journal* 109(1): 1-13.
37. Hurisso, T.T., S.W. Culman, W.R. Horwath, J. Wade, D. Cass, J.W. Beniston, T.M. Bowles, A.S. Grandy, A.J. Franzluebbers, M.E. Schipanski, S. Lucas, C. Ugarte. 2016. Comparison of permanganate oxidizable carbon and mineralized C to assess organic matter stabilization and mineralization. *Soil Science Society of America Journal* 80(5): 1352-1364.
38. Schipanski, M.E., G.K. MacDonald, S. Rosenzweig*, J. Chappell, E.M. Bennett, R. Bezner Kerr, J. Blesh, T. Crews, L. Drinkwater, J.G. Lundgren, C. Schnarr* 2016. Realizing resilient food systems. *BioScience* 66 (7): 600-610.

39. Crews, T.E., J. Blesh, S.W. Culman, R.C. Hayes, E. Steen Jensen, M.C. Mack, M.B. Peoples, M.E. Schipanski. 2016. Going where no grains have gone before: From early to mid-succession. *Agriculture, Ecosystems & Environment* 223:223-238
40. Schipanski, M.E., R.G. Smith, T.L. Pisani Gareau, R. Jabbour, D.B. Lewis, M.E. Barbercheck, D.A. Mortensen, J.P. Kaye. 2014. The structure of multivariate relationships influencing crop yields during the transition to organic management. *Agriculture, Ecosystems, and Environment* 189: 119-126.
41. 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. 2014. A framework for evaluating ecosystem services provided by cover crops in agroecosystems. *Agricultural Systems* 125: 12-22.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. 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.
48. 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.
49. Knapp, A.K., M. Coker (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.

Book chapters

- Trujillo, W., S. Fonte, M. Schipanski, G. Peterson. 2021. Managing Soil Organic Matter for Alleviating Drought Stress in Dryland Farming in the US Great Plains. In R. Lal and B.A. Steward, eds. *Soil Organic Carbon and Feeding the Future: Crop Yield and Nutritional Quality*. Advances in Soil Science / CRC Press. Boca Raton, FL.
- Schipanski, M.E. and E.M. Bennett. 2021. Phosphorus. In K.C. Weathers, D.L. Strayer, G. E. Likens, eds. *Fundamentals of Ecosystem Science* (2nd edition). Elsevier Press. Waltham, MA.
- Bennett, E.M., and M.E. Schipanski. 2012. Phosphorus. In K.C. Weathers, D.L. Strayer, G. E. Likens, eds. *Fundamentals of Ecosystem Science* (1st edition). Elsevier Press. Waltham, MA.
- Drinkwater, L.E., M. Schipanski, S. Snapp, and L.E. Jackson. 1st ed. 2008, 2nd ed. 2017. Ecologically-based nutrient management, In S. Snapp and B. Pound, eds. *Agricultural systems: Agroecology and rural innovation for development*. Academic Press, San Diego, CA.

CONTRACTS & GRANTS

External Awarded as PI

- 2016-2021 **USDA NIFA-National Institute of Food and Agriculture Coordinated Agricultural Project.** Sustaining agriculture through adaptive management to preserve the Ogallala Aquifer under a changing climate. Lead PI M. Schipanski, coPIs E. Kelly, R. Waskom, C. Rice, C. West, K. Wagner, B. Auvermann, C. Ray, M. Marsalis, J. Warren, B. Guerrero (\$9,800,000)
- 2016-2020 **USDA NIFA-National Institute of Food and Agriculture Organic Transitions Program.** Decision support to quantify GHG mitigation and ecosystem services from organic production systems. Lead PI M. Schipanski, coPIs K. Paustian, R. Jabbour (\$499,990)
- 2016-2020 **USDA-ARS-Agricultural Research Service** Develop knowledge for the efficacy of using cover crops in place of summer fallow in dryland wheat-fallow cropping. Lead PI M. Schipanski, Key Person S.J. Fonte (\$20,000)

- 2015-2019 **USDA NRCS Conservation innovation Grant.** Demonstrating the Potential of Cover Crop and Forage Mixtures to Improve Soil Quality, Productivity, and Profitability in Water-Limited Regions. Lead PI M. Schipanski, coPIs J. Brummer, A. Seshadri, N. Dalsted, S. Ward, R. Meyer, W. Trujillo, K. Larson, J. Holman L. Haag, et al. (\$995,492)
- 2015-2017 **USDA Western Sustainable Agriculture Research and Education Grant.** Dryland cropping system intensification in the West-Central Great Plains: Impacts and barriers to adoption. Lead PI M. Schipanski in collaboration with graduate student S. Rosenzweig (\$25,000)
- 2015-2016 **USDA-ARS Specific Cooperative Agreement.** Science and Technology Transfer and Software Support for the Wind Erosion Prediction System. Lead PI M. Schipanski (\$175,000)
- 2014-2019 **USDA-ARS Specific Cooperative Agreement.** Inter-compare and improve soil-crop models for evaluating effects of climate change and adaptations on production and natural resources. Lead PI. (\$138,855)
- 2014-2015 **Denver International Airport.** Agricultural and natural resource management internship program, Lead PI M.E. Schipanski (\$20,000)
- 2012-2016 **USDA NIFA Postdoctoral Fellowship.** Plant mediation of nitrogen mineralization via shifts in rhizosphere carbon allocation. (\$130,000)

Internal Awarded as PI

- 2018-2020 **Colorado Wheat Research Foundation.** Evaluating emerging practices and markets for Colorado wheat-based systems. Lead PI M.E. Schipanski, coPI B. Jablonski, Collaborators: S. Fonte, J. Brummer, S. Ward (\$30,000)
- 2015-2016 **CSU Water Center Fellowship.** Improving precipitation use efficiency in dryland cropping systems. Lead PI. (\$9,760)
- 2015-2016 **CSU School for Global and Environmental Sustainability Global Challenges Research Team grant.** Food Systems Research Team. Lead PI with Co-PIs A. Seshadri, C. Brown, M. Carolan, R. Duffy (\$10,000)
- 2015-2017 **Colorado Wheat Research Foundation.** Diversifying wheat-based rotations for profitability, pest management, and soil quality. Lead PI M.E. Schipanski, coPI S. Ward (\$54,000)

External Awarded as coPI

- 2021-2024 **USDA-NIFA Foundational Program.** Investigating the relationship between cover crop species diversity, the composition and functional potential of the soil microbiome, and soil health. Lead PI J. Prenni, coPIs M. Schipanski, K. Wrighton (\$740,000)
- 2020-2023 **NSF-DEB.** A novel theoretical and quantitative framework to understand and predict soil carbon storage and nitrogen recycling. Lead PI M.F. Contrufo, coPIs M. Schipanski, M. Wallenstein (\$729,060)
- 2019-2022 **NSF-National Science Foundation.** NRTINFEWS: Interdisciplinary Training, Education and Research for Food-Energy-Water Systems (InTERFEWS) in Semi-Arid Regions, Lead PI S.E. Sharvelle, coPIs R.T. Conant, T.H. Bradley, M. Arabi, K.F. Reardon, M.E. Schipanski, S. Malin (\$2,999,980)
- 2018-2021 **Foundation for Food and Agricultural Research.** Integrating community and modeling efforts to evaluate impacts and tradeoffs of food system interventions. PI B. Jablonski, coPIs A. Bonnano, D. Thilmany, R. O'Cleary, L. Bellows, M. Carolan, E. Ryan, M. Schipanski, P. Meiman, O. David, et al. (\$1,000,000)
- 2018-2021 **Western SARE-Sustainable Agriculture Research & Education.** Examining cover crops for soil health restoration in dryland cropping systems in SW Colorado and SE Utah. PI S. Fonte, coPIs M. Schipanski, A. Berrada, K. Russell, P. Trivedi. (\$249,972)
- 2018-2021 **USDA-NIFA-National Institute of Food and Agriculture.** Leveraging crop genotype x soil rhizosphere community interactions to better manage N cycling in a context of improved soil health. S. Fonte (PI), coPIs Wallenstein, M. Byrne, P. F., Cotrufo, M. F., Schipanski, M. E., Kallenbach, C. M. (\$500,000)
- 2018-2021 **USDA-NIFA-National Institute of Food and Agriculture.** Drivers and indicators of soil health in semi-arid agroecosystems: Addressing the soil carbon dilemma through the lens of microbes and soil physical structure. PI P.F. Contrufo, coPIs Wallenstein, M., Schipanski, M. E., Calderon, F. (\$500,000)
- 2017-2020 **USDA-NIFA-National Institute of Food and Agriculture,** Integrative agroecology and sustainability fellows program, Lead PI J.C. Moore, coPI A. Seshadri, Key Persons S.L. Archibeque-Engle, C.

- Aldridge, P.M. Vigil, M. Wallenstein, P.F. Byrne, D.K. Holman, T.P. Covino, M.E. Schipanski (\$281,475)
- 2015-2016 **Colorado Wine Industry Development Board.** CSU Viticulture and Enology Program for the Colorado Wine Industry. Lead PI H. Caspari, coPIs M.E. Schipanski, N.Doesken, S. Menke, M. Stromberger. (\$270,421)
- 2011-2016 **USDA OREL.** Finding the right mix: Multifunctional cover crop cocktails for organic systems. Lead PI J. Kaye, coPIs M.E. Schipanski, M. Barbercheck, S. Cornelisse, N.E. Kiernan, D. Luthe, D. Mortensen, C. White, S.T. DuPont, D. Hartman, M. Hautau. (\$2,300,000)

Internal Awarded as coPI

- 2020-present **CSU Digital Learning Initiative grant.** Virtual field trips to support enhanced learning in the plant sciences, P. Byrne (PI), M. Schipanski (coPI) (\$19,973)
- 2019 **CSU Institutional Diversity Strategic Plan grant.** Analysis of the College of Agricultural Sciences Diversity Teaching Inventory. M. Martin (PI), A. Norton (coPI), M. Schipanski (coPI) (\$2000)
- 2017-2019 **CSU Catalyst Innovation Partnership grant.** Rural wealth creation: exploring food systems-led development strategies, Carolan, M. S. (PI), Jablonski, B. (PI), coPIs E.P. Ryan, A. Bonanno, A. Jones, M. Schipanski, M. Wallenstein, P. Meiman, P. Cabot, M. Martin (\$200,000)
- 2016 **CSU Pre-Catalyst for Innovative Partnerships (PRECIP).** Rural Wealth Creation: exploring food systems-led development strategies, Lead PIs M.S. Carolan, B. jablonski, coPIs A. Bonanno, M. Schipanski, M. Martin (\$5,000)
- 2016 **CSU Water Center.** Evaluating alternative water and nutrient management strategies as climate-smart agricultural options for Colorado and beyond, Lead PI S.J. Fonte, coPIs L. Comas, C. Stewart, J.L. Chavez, M. Schipanski, T.A. Bauder, E.M. Wardle (\$23,813)
- 2015-2017 **CSU Catalyst Innovation Partnership grant.** Center for Sustainable Agriculture Innovation. Lead PI M. Wallenstein, coPIs M.E. Schipanski, R. Conant, C. Jahn, K. Reardon, A. Jones, G. Graff (\$199,434)

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

Conference Sessions Organized

- Schipanski, M.E., A. Gaudin, J. Franco. (Co-Organizers) Symposium--Translating Sustainable Intensification Research into Practice. ASA, CSSA and SSSA International Annual Meetings, November 9, 2020
- Schipanski, M.E. and Ghimire, R. (Co-Organizers) Special Session Symposium--Managing Limited Water Resources in a Changing Climate. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.
- Machmuller, M., Schipanski, M. E., Wrighton, K., & Norton, J. M. (Co-Organizers). Symposium--Managing Plant-Soil-Microbe Partnerships for Soil Carbon Stabilization and Nutrient Cycling: From Genes to Landscapes. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.

Conference Abstracts (Invited)

- Schipanski, M.E., Kremen, A. Linking innovations in practices and policies for groundwater conservation across the Ogallala aquifer region, Central Plains Irrigation Association Conference, February 18, 2020.
- Schipanski, M. Supply chain approaches to crop diversification for mitigating risks. American Association for the Advancement of Science annual meeting, Seattle, WA, February 16, 2020.
- Rice C, Sarto M, Cano A, Acosta-Martinez V, Schipanski M. What role can soil stewardship play in improving water use efficiency and help with climate change mitigation? ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.
- Cotrufo MF, van der Pol L, Schipanski ME. Intensifying Crop-Microbiota Partnership to Solve the Soil C Dilemma: A Lesson Learned from Natural Ecosystems. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.
- Schipanski, M. S. Fonte, C. Kelly*, J. Brummer, D. Finney, J. Kaye, S. Rosenzweig*. Integrating plant functional diversity into cropping systems to support multifunctionality. Soil Science Society of America, San Diego, CA, January 7-10, 2019.
- Schipanski. M.E., S.T. Rosenzweig*, A.D. Robertson**, L.A. Sherrod, G.S. McMaster, I. Kisekka, P. Gowda. Linking measurements and models to estimate landscape-scale impacts of agricultural management on soil carbon and groundwater use. American Geophysical Union, Washington, DC, December 10-14, 2018.

- Schipanski, M. Leveraging plant diversity for multifunctionality in agroecosystems. Invited plenary. European Society of Agronomy, August 27-31, 2018, Geneva, Switzerland.
- Schipanski, M. A. Nunez*, A. Andales, J. Suter, L. Moore, R. Waskom, R. Bailey, A. Kremen, J. Schneekloth, D. Manning, C. Goemans, P. Gowda, C. West, R. Ghimire. Evaluating transition options across the Ogallala Aquifer region. University Council on Water Resources, June 25-27, 2018.
- Schipanski, M. S. Rosenzweig*, J. Kaye, D. Finney. Plant-mediated nitrogen cycling in agricultural systems. Invited keynote for the 19th European Nitrogen Workshop, Skara, Sweden. June 22-26, 2016
- Schipanski, M. The next frontier in cropping systems research analysis: Moving beyond ANOVA. ASA/CSSA/SSSA Annual Meeting, Minneapolis, MN, November 16-18, 2015.
- Schipanski, M., E. Bennett, S. Riskin, and S. Porder. Agricultural trade and the global phosphorus cycle. American Geophysical Union, San Francisco, December 3-7, 2012.
- Schipanski, M. and J. Gardner. Nutrient loss from agricultural systems employing ecological approaches. Ecological Society of America, Austin, TX, August 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, October 1-4, 2009.
- Schipanski, M. Agroecology for a sustainable future: Cross-disciplinary research at multiple scales. Ecology Society of America, Albuquerque, NM, August 2-7, 2009.

Conference Abstracts (Contributed)

- Lindstrom, V*, K. Wrighton, M. Schipanski, J. Prenni. Genotypic variation in root exudate composition drives specific soil microbiome assemblage, ASMS Conference on Mass Spectrometry and Allied Topics. November, 2021
- Nunez, A.* MF Cotrufo, M Schipanski. Irrigation effect on the contribution of aboveground plant litter to soil organic matter formation in agricultural systems, AGU Fall Meeting 2020.
- McClelland, S.C.* , M. Schipanski. Above and belowground community responses to infrequent compost applications in semi-native and improved pastures. Ecology Society of America annual meeting. August 6-9, 2020.
- Nunez, A.* MF Cotrufo, M Schipanski. Effects of irrigation retirement on soil organic carbon dynamics in semi-arid agroecosystems. ASA, CSSA and SSSA International Annual Meetings, November 2020.
- Thapa, V.R., Ghimire, R., Acosta-Martinez, V., Marsalis M., Schipanski, M. Cover crops affect soil microbial community structure and enzyme activities in semiarid cropping systems. ASA, CSSA and SSSA International Annual Meetings, November 2020.
- Kelly, C., Haddix, M., Byrne, P., Cotrufo, M.F., Schipanski, M.E., Kallenbach, C.M., Wallenstein, M., Fonte, S.J. Variation in belowground traits of winter wheat influence soil microbial community function. ASA, CSSA and SSSA International Annual Meetings, November 2020.
- Ghimire, R., Thapa, V.R., Acosta-Martinez, V. and Schipanski, M., Soil Health and Agroecosystem Carbon Dynamics in the Southern Ogallala Aquifer Region. AGU Fall Meeting, San Francisco, CA. Dec 7, 2019.
- Carter C*, Schipanski ME. Nitrogen Uptake By Rapeseed Varieties from Organic Matter and Inorganic Fertilizer Sources. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.
- McClelland SC*, Paustian K, Schipanski ME. Cover Crop Management Impacts on Soil Organic Carbon Stocks-a Global Meta-Analysis. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.
- Kelly C*, Schipanski ME, Moore AC, Dalsted N, Haag LA, Trujillo W, Holman JD, Fonte SJ. The Benefits and Costs of Grazing Cover Crops in Dryland Semi-Arid Cropping Systems. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX, Nov 12, 2019.
- van der Pol L*, R. Even, M. Wallenstein, M.E. Schipanski, M.F. Cotrufo. Crop Growth Influences Microbial Activity in the Rhizosphere but Not Bulk Soils of Dryland Wheat. SSSA International Soils Meeting, San Antonio, TX, Jan 8, 2019.
- McClelland, S.* , R. Conant, M. Haddix, M. Schipanski. Soil health impacts of infrequent compost application in an irrigated perennial pasture system. Soil Science Society of America, San Diego, CA, January 7-10, 2019.
- Jackman, J. ‡, S. McClelland*, M. Schipanski. Impact of compost soil amendment on nitrogen availability in grazed perennial grasslands. Soil Science Society of America, San Diego, CA, January 7-10, 2019.
- Peterson, G. A., Westfall, D. G., Schipanski, M., Fonte, S. J. Soil and crop management systems that ameliorate damage caused by decades of dryland agroecosystem mismanagement. ASA/CSSA meeting, Baltimore, MD, November 2018.

- Schipanski, M. K. Caswell, C. Kelly*, A. Moore, J. Brummer, S. Fonte, L. Haag, S. Johnson, J. Holman, R. Meyer, A. Obour, W. Trujillo, S. Ward. Evaluating grazed crop crops for soil health and profitability in dryland cropping systems of the semi-arid High Plains. Soil and Water Conservation Society, Albuquerque, NM, July 29-31, 2018.
- Kelly, C.*, Schipanski, M., Moore, A. C., Trujillo, W., Melman, D., Kraich, B., Fonte, S. J. Are cover crop benefits to soil quality achieved under grazed management in dryland wheat systems? Great Plains Soil Fertility Conference, Denver, CO, March 2018.
- Schipanski, M.E., C. Schnarr*, S. Rosenzweig*, J. Kaye. A nutrient-centric view of rhizosphere priming: Corn mediation of cover crop litter decomposition and nitrogen cycling. ASA/CSSA/SSSA meeting, Tampa, FL, October 22-25, 2017.
- Seedorf, R. ‡, C. Schnarr*, S.T. Rosenzweig*, L. Sherrod, M.E. Schipanski. Labile soil carbon as impacted by dryland cropping systems in Eastern Colorado. ASA/CSSA/SSSA meeting, Tampa, FL, October 22-25, 2017.
- Rosenzweig, S.T.*, S.J. Fonte, M.E. Stromberger, M.E. Schipanski. A holistic assessment of the soil health and agronomic effects of dryland crop rotations. ASA/CSSA/SSSA meeting, Tampa, FL, October 22-25, 2017.
- Bailey, R. P. Gowda, I. Kisekka, S. Nozari, C. Ray, V. Uddameri, X. Lin, A. Andales, V. Prasad, M. Schipanski, R. Waskom. An integrated modeling framework for investigating water management practices in the Ogallala Aquifer Region. University Council on Water Resources, Fort Collins, CO. June 12-15, 2017.
- Kelly, C.*, M. Schipanski, W. Trujillo, D. Melman, A. Moore, S. Fonte. Soil health implications of grazed vs. ungrazed cover crops in the U.S. high plains. Soil Ecology Society, Fort Collins CO, June 5-8, 2017.
- Rosenzweig, S.*, M. Schipanski, S. Fonte, M. Stromberger. Crop rotation impacts on AMF, P acquisition and C sequestration in semi-arid agroecosystems. Soil Ecology Society, Fort Collins CO, June 5-8, 2017.
- Schnarr, C.*, M. Schipanski, J. Tatarko. Cropping system effects on wind erosion potential. ASA/CSSA/SSSA meeting, Phoenix, AZ, November 7-9, 2016.
- Rosenzweig, S.*, M. Schipanski. On-farm assessment of dryland cropping system intensification effects on soil carbon and annualized grain yield. ASA/CSSA/SSSA meeting, Phoenix, AZ, November 7-9, 2016.
- Hunter, M.C.*, R.G. Smith, M.E. Schipanski, L.W. Atwood, D.A. Mortensen. Agriculture in 2050: Recalibrating targets for sustainable intensification. ASA/CSSA/SSSA meeting, Phoenix, AZ, November 7-9, 2016.
- Robertson, A.***, M. Schipanski. L. Ma, J. Ahuja, N. McNamara, P. Smith, C. Davies. Comparing measured and modelled soil carbon: which site-specific variables are linked to high stability? European Geophysical Union Meeting, Vienna, Austria, April 17-22, 2016.
- Robertson, A.***, M. Schipanski. L. Sherrod, L. Ma, J. Ahuja, N. McNamara, P. Smith, C. Davies. Simulating soil C stability with mechanistic systems models: a multisite comparison of measured fractions and modelled pools. European Geophysical Union Meeting, Vienna, Austria, April 17-22, 2016.
- Baraibar, B., M. Schipanski, M. Hunter*, D. Mortensen. Cover crops affect weed abundance but not weed community assembly. Northeastern Plant, Pest and Soil Conference, Philadelphia, PA, January 3-6, 2016.
- Rosenzweig, S.T.*, M. Schipanski, J.P. Kaye, D.A. Mortensen. Rhizosphere priming of cover crop decomposition. ASA/CSSA/SSSA Annual Meeting, Minneapolis, MN, Nov 16-18, 2015.
- Schipanski, M. (Invited) The next frontier in cropping systems research analysis: Moving beyond ANOVA. ASA/CSSA/SSSA Annual Meeting, Minneapolis, MN, Nov 16-18, 2015.
- Sherrod, L.A., L. Ahuja, M. Schipanski, G.A. Peterson. Systems approach critical to agroecosystems management. ASA/CSSA/SSSA Annual Meeting, Minneapolis, MN, Nov 16-18, 2015.
- Sherrod, L.A., L. Ahuja, M. Schipanski, G.A. Peterson. Dryland systems yields over 24 years as impacted by potential ET site and soil landscape position. ASA/CSSA/SSSA Annual Meeting, Minneapolis, MN, Nov 16-18, 2015.
- Ringer, L.*, C.S. Brown, V.P. Claassen, M.E. Schipanski. Soil amendment application after road construction alters resource availability and can benefit native over non-native species. Science for Parks, Parks for Science, Berkeley, CA, March 25-27, 2015.
- Schipanski, M. M. Barbercheck, D. Finney, R. Smith, J. Kaye, D. Mortensen, J. Harper. Rotation strategies for balancing multiple management objectives in organic cropping systems. ASA/CSSA/SSSA Annual Meeting, Long Beach, CA, Nov 2-5, 2014.
- Calderon, F.J., S. Culman, A. Franzluebbbers, M. Schipanski, J. Six, S. Snapp. Towards a rapid method of measuring labile soil C using infrared spectroscopy. ASA/CSSA/SSSA Annual Meeting, Long Beach, CA, Nov 2-5, 2014.
- Hunter, M.*, A. Hamilton, M. Schipanski, D. Mortensen. Diverse cover crop mixtures in organic grain crops: ecology and management for winter-annual weed suppression. ASA/CSSA/SSSA Annual Meeting, Long Beach, CA, Nov 2-5, 2014.

- 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.

Invited Lectures

- Building resilient food systems from rhizosphere to regional scales. School of Integrative Plant Science, Horticulture Section Seminar Series. Cornell University. May 3, 2021.
- Risks and rewards of ecological intensification in the Great Plains. Washington State University Department of Crop and Soil Science Student Choice Speaker, November 30, 2020.
- Managing for agricultural system resilience within different climate contexts. Iowa State University Agronomy seminar series. Ames, IA. October 10, 2019.
- Food-water (and energy) nexus issues in designing more sustainable food production systems. CSU InTERFEWS seminar series. Fort Collins, CO. April 26, 2019.
- Leveraging plant diversity to manage soil water, carbon, and nitrogen in agricultural systems. University of Nebraska Agronomy and Horticulture seminar series. Lincoln, NE. March 30, 2018.
- Grow it and they will come: Plant diversity effects on soil health and productivity. CSU Department of Bioagricultural Sciences and Pest Management seminar series. Fort Collins, CO. February 20, 2018.
- The Ogallala water coordinated agricultural project: Optimizing water use for agriculture and rural communities. Central Plains Irrigation Association, Burlington, CO, February 22, 2017.
- Managing plant diversity for resilient cropping systems. Department of Plant Sciences Seminar, University of Wyoming, May 6, 2016.
- Scale versus supply chain length in food systems. Global Challenge Research Team Food Systems Fusion event, Fort Collins, CO, April 18, 2016.
- Supporting wheat producers through systems-based research. Colorado Wheat Research Foundation, April 6, 2016.
- Reduce, reuse, recycle: Carbon-based nitrogen management strategies in agroecosystems. Natural Resource Ecology Laboratory, Colorado State University, February 19, 2016.
- Collaborative on-farm research: Soil nitrogen benefits of interseeding proso millet with sweet clover. High Plains Organic Farming Conference, Cheyenne, WY. February 24, 2016.
- Plants rule and microbes drool. Department of Soil and Crop Sciences seminar. Colorado State University. March 2015.
- Hot topics in agriculture. Invited panelist. CSU College of Agriculture Ag Ambassadors. February 25, 2015
- Why we need more agroecologists. Invited ignite talk. CSU Front Range Student Ecology Symposium. February 25, 2015.

Setting yourself up for success in the postdoc. ASA/CSA/SSSA Webinar. January 14, 2015.

Organic Agriculture: A Complement or Competitor to conventional methods for sustainably feeding the world. Managing the Planet Panel Discussion. Colorado State University School for Global Environmental Sustainability. Fort Collins, CO. November 12, 2014.

The nitrogen economy of perennial-based cropping systems. New Roots for Ecological Intensification Conference, Estes Park, CO. October 31, 2014.

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.

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

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

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.

TEACHING

Year/Semester Course No./Title

2020	Fall	SOCR100 - General Crops
2019	Fall	SOCR100 - General Crops
2018	Fall	SOCR100 - General Crops
2018	Spring	SOCR200 - Seed Anatomy and Identification
2017	Fall	SOCR100 - General Crops
2016	Fall	SOCR100 - General Crops
2015	Fall	SOCR100 - General Crops
2015	Fall	ECOL592 - Interdisciplinary Seminar in Ecology
2015	Spring	SOCR530 - Scientific Writing
2014	Fall	SOCR100 - General Crops

Guest Lectures

Year	Semester	Course No./Title
2020	Fall	GES180A4- Water Sustainability in the Western US
2020	Fall	Food Sci&Human Nutrition-FSHN500 - Food Systems
2019	Fall	Agriculture-AGRI181 - Contemporary Agricultural Systems
2019	Fall	Food Sci&Human Nutrition-FSHN500 - Food Systems
2019	Spring	Ecology-ECOL592 - Soil Health Seminar
2018	Fall	GES180A4- Water Sustainability in the Western US
2018	Fall	FSHN500 - Food Systems, Nutrition, and Food Security
2017	Fall	FSHN500 - Food Systems, Nutrition, and Food Security
2017	Spring	EBIO 5460 - Plant-Microbe Interactions, University of Colorado
2016	Fall	FSHN500 - Food Systems, Nutrition, and Food Security
2016	Fall	SOCR377 - Geographic Information Systems in Agriculture
2015	Fall	FSHN500 - Food Systems, Nutrition, and Food Security
2015	Fall	ECOL505 - Foundations of Ecology (2 lectures)
2015	Spring	SOCR571 - Foundations of Soil Science
2014	Fall	Cropping Systems Management & Ecology, University of Wyoming
2014	Fall	ECOL505 - Foundations of Ecology (2 lectures)
2014	Spring	SOCR475 - Global Challenges in Plant & Soil Science
2014	Spring	SOCR424 - Topics in Organic Agriculture

ADVISING

Current graduate student and postdoctoral advisees

M.S., Violeta Martinez-Mendoza
 M.S., Caroline Dewey
 Ph.D., Tyler Donovan
 Ph.D., Christopher Toy
 Postdoctoral Scholar, Bethany Avera

Graduate advisees completed

Ph.D., Agustin Nunez, Ph.D., Shelby McClelland, Ph.D., Steve Rosenzweig (**Recipient of 2018 Truog Soil Science Outstanding Dissertation Award from the Soil Science Society of America**), M.S., Cassandra Schnarr, M.S., Candace Carter

Former postdoctoral researchers advised

James Hale, Cynthia Kallenbach, Andy Robertson, Theresa Nogeire

Current graduate committee memberships

8 Ph.D., 2 M.S.

Completed graduate student committee memberships

4 Ph.D., 9 M.S.

UNIVERSITY SERVICE

2017-present **Fellow**, CSU Faculty Institute for Inclusive Excellence
 2015-present **Co-chair**, Future Farmers of America Crops Judging Contest
 2020-2021 **Working Group Member**, Department of Soil and Crop Sciences Curriculum
 2020-2021 **Working Group Member**, College of Agricultural Sciences Inclusive Syllabus
 2019-2020 **Committee Chair**, Wheat Breeding Faculty Search
 2016-2019 **Committee Member**, CSU Dept of Soil and Crop Sciences Research Panel
 2019 **Committee Member**, BSPM Plant Pathology Faculty Search
 2017-2019 **Committee Member**, CSU College of Agricultural Sciences Diversity Catalyst Team
 Spring 2019 **Committee Member**, CSU Graduate Degree Program in Ecology Executive Committee
 2018-2019 **Co-Organizer**, CSU Department of Soil and Crop Sciences Seminar
 2015-2018 **Faculty Advisor**, CSU Student Agronomy Club
 2017 **Committee Member**, CSU Area Extension Agronomist Search
 2017 **Committee Member**, Soil Microbiome Faculty Search
 2015-2017 **Associate Director**, CSU Innovation Center for Sustainable Agriculture
 2016 **Invited Organizer**, Food Systems Panel, CSU International Colloquium on Global Food Security and Sustainability
 2014-2015 **Committee Member**, Seed Technology and Education Program Committee
 2014 **Committee Member**, Agricultural Systems Faculty Search
 2014 **Judge**, Front Range Student Ecology Symposium poster session

PROFESSIONAL SERVICE

2021-present **Associate Editor**, *Agronomy Journal*
 2019-present **Editorial Review Board**, *Frontiers in Ecology and the Environment*
 2020-present **Associate Guest Editor**, *Frontiers of Sustainable Food Systems*
 2020 **Subject Matter Guest Editor**, *Ecological Applications*
 2020 **Task Force Member**, Soil Science Society of America Agricultural Innovations Agenda
 2019-2020 **Leader**, Agronomy Society of America Sustainable Intensification Community
 2019-2020 **Associate Guest Editor**, *Agricultural Water Management*
 2018-2019 **Vice-Leader**, Agronomy Society of America Sustainable Intensification Community
 2019-present **Mentor**, Women in Soil Ecology

- 2018 **Committee Member**, USDA-ARS Water Management & Systems Research Unit Research Leader Search
- 2015-2017 **Committee Member**, Gary “Pete” Peterson Dryland Soil Management Scholarship, SSSA
- 2013 **Organizer**, Ignite Session on Food Systems, Ecological Society of America
- 2011-2013 **Committee Member**, PA 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, Agron. Society
- 2009 **Symposium Organizer**, Ecological Society of America, Albuquerque, NM
- 2008 **Mentor**, SEEDS Program for Undergraduates, Ecological Society of America
- 2007 **Steering Committee**, National Sustainable Agriculture Education Conference

2020 reviewer for: PNAS, Plant and Soil, European Union Biodiversa Grant Program, Agronomy for Sustainable Development, Science of the Total Environment, Agriculture Ecosystems & Environment

Journals reviewed for in past 5 years: Agriculture, Ecosystems & Environment, Agricultural Systems, Agronomy for Sustainable Development, Agronomy Journal, Climatic Change, Ecological Applications, Ecological Economics, Ecological Indicators, Ecology Letters, Environmental and Experimental Botany, Elementa: Science of the Anthropocene, Environmental Research Letters, Environmental Science and Technology, Frontiers in Ecology and the Environment, Global Biogeochemical Cycles, Global Change Biology, Journal of Advances in Modeling Earth Systems, Journal of Arid Environments, Journal of Environmental Quality, Journal of Geophysical Research – Biogeosciences, Plant and Soil, Nature, Nature-Geosciences, Nutrient Cycling in Agroecosystems, Renewable Agriculture and Food Systems, SOIL, Soil Research, Soil Science Society of America Journal

Other invited reviews in past 5 years: Alfred P. Sloan Foundation, Western SARE Research and Extension Panel, USDA-NIFA Organic Agriculture Research and Extension Initiative Grant Panel, CSU School of Global and Environmental Sustainability, USDA-ARS Water Management Program, NSF Plant Biotic Interactions (Ad-Hoc reviewer), Swiss National Research Programme, USDA-NIFA Sustainable Agricultural Systems Grant Panel

Memberships: Agronomy Society of America, Soil Science Society of America, Ecological Society of America, American Association for the Advancement of Science

STAKEHOLDER ENGAGEMENT AND OUTREACH

Invited Talks to Stakeholder Audiences

1. Strategies for groundwater conservation across the Ogallala Aquifer. Rocky Mountain Agribusiness Association. January 2021.
2. Department of Soil and Crop Sciences Alumni Update. Panelist. January 2021.
3. Adapting regenerative ag principles to dryland systems of the High Plains. Soil Revolution Conference. November 2020.
4. The Ogallala Water Coordinated Agricultural Project: Lessons Learned Across State Lines Colorado Water Congress. September 2020.
5. Evaluating cover crop and forage mixtures for dryland systems. Colorado Master Irrigator Program. Wray, CO. March 2, 2020.
6. Sustainable agriculture panelist. Colorado Weather Summit. Steamboat Springs, CO. January 26, 2020.
7. The Ogallala Water Coordinated Agricultural Project: 2019 Updates. Republican River Water Conservation District Board Meeting. Broomfield, CO. January 9, 2020.
8. Food Systems: Measuring Impacts. (*Keynote*) Colorado Food Summit, Denver, CO. January 7, 2020.
9. Oklahoma Governor's Water Conference, Midwest City, OK. December 4, 2019.
10. NRCS Conservation Webinar. November 20, 2019.
11. Regenerative Earth Summit, Boulder, CO. October 29, 2019.
12. The Ogallala water coordinated agricultural project: Lessons learned across state lines, Colorado Ground Water Commission. Castle Rock, CO. May 17, 2019.

13. Management for soil health, ABInBev Global Agronomy Team, Wellington, CO, March 8, 2019.
14. Science, practice, and policy for water conservation, World Business Council for Sustainable Development, March 13, 2019.
15. Leveraging diverse forage mixtures for production and soil health goals, No-Till on the Plains. Wichita, KS, January 28-30, 2019. (150 people)
16. The Ogallala water coordinated agricultural project: Lessons learned across state lines, Republican River Water Conservation District board. Burlington, CO, January 11, 2019. (50 people)
17. Strategies for improving water management in irrigated systems, Colorado Crops Clinic. Fort Morgan, CO, December 6, 2018. (100 people)
18. Evaluating cover crop and forage mixtures for dryland systems, CSU Cropping Systems Program Reporting Unit annual meeting, October 25, 2018. (20 people)
19. The nitrogen cycle. La Luna Dairy Farm Field Day for Wellington Middle School students, Wellington, CO. September 27, 2018. (90 students)
20. Learning across state lines to improve irrigation and groundwater management. Univ of Nebraska Testing Ag Performance Systems Field Day. North Platte, NE. August 23, 2018. (60 people)
21. Grazed cover crop research. KSU Cover Crop Field Day. HB Ranch, Brownell, KS. May 25, 2018. (50 people)
22. Putting science into action: Groundwater conservation in support of agriculture and rural communities. Water in the West Symposium, Denver, CO, April 26, 2018. (250 people)
23. Evaluating cover crop and forage mixtures for dryland systems. Oklahoma No-Till Conference. Swanee, OK. February 6, 2018. (60 people)
24. No-till crop rotation effects on soil health and profitability. Cover Your Acres annual conference. Oberlin, KS. January 16, 2018. (200 people)
25. Soil health management in dryland cropping systems. San Luis Valley Soil Health Working Group Meeting. Center, CO. December 19, 2017. (20 people)
26. Dryland cropping systems intensification for soil health and profitability. Eastern Colorado Crop Production Conference. Fort Morgan, CO. December 5, 2017. (80 people)
27. Managing for soil health in water-limited systems. Colorado Chapter of the Soil and Water Conservation Society Annual Meeting. Loveland, CO. November 29, 2017. (30 people)
28. Optimizing water use for agriculture and rural communities. Republican River Conservation Water District Annual Meeting. Denver, CO. November 20, 2017. (20 people)
29. The Ogallala Water Coordinated Agricultural Project: Optimizing water use for agriculture and rural communities. Climate Learning Network Webinar. October 5, 2017. (80 people)
30. The nitrogen cycle. La Luna Dairy Farm Field Day for Wellington Middle School students, Wellington, CO. September 21, 2017. (80 students)
31. Evaluating cover crop and forage mixtures for dryland systems. No-Till on the Plains Field Day, Bucklin, KS. August 22, 2017. (75 people)
32. Cropping system effects on soil quality under limited water availability. West Central Research and Extension Center Field Day, North Platte, NE. August 24, 2017. (80 people)
33. On-farm cover crop research. KSU Cover Crop Field Day. HB Ranch, Brownell, KS. May 19, 2017. (30 people)
34. Managing for soil health and resilience in dryland systems. **Invited keynote** for Soil Revolution: It's More than Just Dirt Conference, Longmont, CO, March 9, 2017. (100 people)
35. Soil quality and crop diversity for risk management and resilience, Rocky Mountain Farmer's Union, Loveland, CO, November 10, 2016. (80 people)
36. Soil health initiatives at Colorado State University. NRCS Colorado Soil Health Team Meeting, April 10, 2016. (15 people)
37. Building soil quality in semi-arid regions. Independent Agricultural Consultants of Colorado annual meeting, Denver, CO. January 12, 2016. (60 people)
38. Building soil organic matter in semi-arid regions. High Plains No-Till Conference, Burlington, CO. February 3-4, 2015. (80 people)
39. Intensification for improved productivity and soil quality in low precipitation environments. No-Till on the Plains Conference, Salina, KS. January 27-28, 2015. (120 people)
40. Assessing soil quality. CSU Colorado Crop Clinic. Sterling, CO. November 19, 2014. (50 people)
41. Ecosystem services: What they mean to you. NRCS State Soil Quality Training. Salina, KS. May 13, 2014. (30 people)

42. Frameworks for evaluating cover crops in cropping systems. No-Till on the Plains Research Symposium, Hays, KS. April 2-3, 2014. (20 people)
43. Take cover: Selecting and managing cover crops. Pennsylvania Organic Farm Fest, Centre Hall, PA. 2012.
44. Soil health indicators: Active carbon and particulate organic matter workshop. Penn State Extension Organic Vegetable Production Intensive, Bethlehem, PA. 2011.
45. The effects of soil fertility on legume nitrogen fixation. Dryden Organic Dairy Discussion Group, Dryden, NY. 2008.
46. The effects of compost applications on nitrogen fixation. New York Organic Farming Association Conference, Syracuse, NY. 2007.
47. The effects of nutrient management history on soybean nitrogen fixation. New York Certified Organic meeting, Geneva, NY. 2006.

Video

Rosenzweig, S., Schipanski, M. 2017. *Resilience: Dryland farming in the semi-arid High Plains*. Short film produced with Lexicon of Sustainability. www.drylandag.org

Web Pages

Dryland Agriculture, <http://www.drylandag.org>

The Ogallala Water Project, <http://ogallalawater.org>

Extension Publications

- Johnson, S. J. Brummer, A. Obour, A. Moore, J. Holman, M. Schipanski. 2020. Cover crops grown post-wheat for forage under dryland conditions in the High Plains. Kansas State University Extension Fact Sheet MF3523.
- Tatarco, J. W. Trujillo, M. Schipanski. 2019. Wind erosion processes and control. Technical Bulletin, Colorado State University Agricultural Experiment Station.
- Brummer, J. E., S. Johnson, M. Schipanski, K. Caswell, A. Obour, J. Holman. 2018. Managing spring planted cover crops for grazing. Colorado State University Extension Fact Sheet No. 0.309.
- Jablonski, B. and M. Schipanski. 2018. Evaluating opportunities Along the Colorado Wheat Supply Chain. Technical Bulletin, Wheat Field Days. Colorado State University Agricultural Experiment Station.
- Rosenzweig, S.R.* and M. Schipanski. 2017. Digging deeper into the relationship between crop rotation and soil health in no-till soils. Technical Bulletin, Wheat Field Days. Colorado State University Agricultural Experiment Station.
- Schnarr, C.* and M. Schipanski. 2016. Keeping the farm on the farm when the wind blows. Technical Bulletin, Wheat Field Days 2016. Colorado State University Agricultural Experiment Station.
- Schipanski, M. 2015. Evaluating the ripple effect of cropping systems research. Technical Bulletin, Wheat Field Days 2015. Colorado State University Agricultural Experiment Station.

Magazine/Trade Publication/Newsletter

- Schipanski, M. B. Auvermann, P. Gowda, B. Guerrero, A. Kremen, D. Porter, C. Rice, M. Sanderson, K. Wagner, J. Warren, C. West, R. Waskom. 2017. The future of the Ogallala Aquifer: We can measure it, but can we manage it? *Colorado Water* Vol. 34(6): 2-7.
- Gowda, P., R. Bailey, I. Kisekka, X. Lin, M. Schipanski. 2017. An integrated modeling framework for investigating water management practices in the Ogallala Aquifer Region. *Colorado Water* Vol. 34(6):36-37.
- Cano, A., A. Nunez*, V. Acosta-Martinez, M. Schipanski, R. Ghimire, C. Rice. 2017. Linking soil health to water conservation in the Ogallala Aquifer Region. *Colorado Water* Vol. 34(6):38-40.
- Byrne, P. F., M. Schipanski, A.L. Elliott. 2016. Perspectives on Sustainable Agriculture. *College of Ag Sciences 'Food for Thought', Summer 2016*: Food for Thought.
- Schipanski, M. 2014. Reframing the discussion about cover crops in semi-arid regions. Southeast Area Extension Farm and Ranch Newsletter. Colorado State University Extension. Volume 2, Issue 3.
- 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.