Christine D. Sprunger

W.K. Kellogg Biological Station • Department of Plant, Soil, and Microbial Sciences
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Education

Ph.D. in Crop and Soil Sciences 2015
and Ecology, Evolutionary Biology, and Behavior
Michigan State University

B.S. in Forest Resources, with Honors 2010
University of Washington

B.A. in Environmental Studies, Minor in Human Rights 2010
University of Washington

Awards

World Food Prize Foundation - Top Agri-food Pioneer 2025

KBS LTAR Researcher of the Year Award 2025

Ecological Society of America Early Career Fellow 2024-2028

Agricultural and Environmental Letters Outstanding Paper of the Year 2022

Appointments

Associate Professor of Soil Health 2024 – Present
W.K. Kellogg Biological Station
Department of Plant, Soil, and Microbial Sciences
Plant Resilience Institute
Ecology and Evolutionary Biology
Michigan State University

Interim Associate Director 2024 – 2025
W.K. Kellogg Biological Station
Michigan State University

Assistant Professor of Soil Health 2022 – 2024
Michigan State University
W. K. Kellogg Biological Station
Department of Plant, Soil, and Microbial Sciences

Assistant Professor of Soil Science and Rhizosphere Processes 2018 – 2022
The Ohio State University
School of Environment and Natural Resources

Post-doctoral Research Scientist 2018
The Ohio State University
School of Environment and Natural Resources

NSF Post-doctoral Fellow in Biology 2016 – 2018
Columbia University
Agriculture and Food Security Center

National Ford Foundation Pre-Doctoral Fellow 2012 – 2014
Michigan State University
Department of Plant, Soil, and Microbial Sciences

Publications

*denotes Sprunger lab advisee [+]denotes student co-author/mentee in collaborative lab

Under Review

*Naasko, K., *Robles, A., *Gervase, F., *Mann, M., **Sprunger, C.D.** *Under Review.* Soil fertility shapes root biomass distribution and carbon storage in perennial bioenergy crops on marginal lands. *GCB Bioenergy.*

[+]Dillard, D., **Sprunger, C.D.,** Schrah, M.N., *Smychovich., A., Landis, D.A., Burrack, H.J. *Under Review.* Sustainably intensified agriculture supports surface residue decomposition, carbon mineralization, and nutrient release on par with grassland restoration. *Agriculture, Ecosystems, and the Environment.*

*Smychkovich, A., *Naasko, K, [+]Mahmood, S., Lavallee, J.M., Lin, Y., Córdova, S.C., Schmer, M.R., Liebig, M.A., **Sprunger, C.D.** Sensitive soil health metrics and carbon fractions serve as early indicators of soil carbon trajectories. *Geoderma.*

*Drobnak, R.E., and **Sprunger, C.D.** *Under Review*. Prairie strips enhance soil health after four years of establishment in contrasting cropping systems. *Agriculture, Ecosystems, and the Environment.*

Sprunger, C.D. and Franco, A.L.C. *Under Review.* Quantifying soil fauna effects on soil organic matter: A review of experimental methods. *Soil Science Society of America Journal – Invited Review.*

Maisnam, P., **Sprunger, C.D.,** Falvo, G., Jones, J., Young, M.L., Vander Stel, H., Baker, N., Zarnetske, P., *Martin, T., Evans, S.E. *Under Review.* Land management shifts soil fungal and bacterial communities along a shared resistance-resilience tradeoff. *Ecology Letters.*

*Nelson, RA, **Sprunger, C.D.**, Evans, S., Klausmeier, C., Haddad, N.M. *Under Review.* Integrating spatial ecology into mutualisms. *American Naturalist.*

*Gattoni, K., *Drobnak, R., Dutter, C, Warchola, N, Haddad, N, McDaniel, M., **Sprunger, C.D.** *Under Review.* Nematode community dynamics indicate soil health spillover from contour prairie strips into surrounding cropland. *Ecological Applications*.

*Martin, T.K. and **Sprunger, C.D.** *Under Review*. Long-term perenniality is a stronger driver of soil health than individual regenerative agricultural practices. *Soil Ecology - special issue on Human Footprints Below Ground".*

In revision

*Naasko, K., *Robles, A., *Vergara, I., *Mann, M., **Sprunger, C.D.** *In Revision*. Soil health indicators reveal above and belowground controls on forest soil carbon cycling. *Biogeochemistry – Soil Health Special Issue.*

[+]Wanderson, N., **Sprunger, C.D.**, de Vasconcelos Gomes, V. Lindsey, A. *In Revision.* Water temperature in simulated flooding experiments alter corn N uptake and N dynamics. *Agrosystems, Geosciences, & Environment.*

Ngui, C. Sprunger, C.D., McHale, L., Mercer, K. *In Revision.* A comprehensive rhizobox pipeline for analyzing pepper root system architecture under well-watered and water deficit treatments. *Frontiers in Plant Science.*

Published

45. *Naasko, K., *Smychkovich, A., [+]Mahmood, S., Lin, Y., Lavallee, J.M., Córdova, S.C., Schmer, M.R., **Sprunger, C.D.** *Accepted.* Tracking soil organic carbon trajectories: Depth and fractions matter for carbon accounting in U.S. midwestern long-term no-tilled systems. *Biogeochemistry – Soil Health Special Issue.*

44. [+]Mahmood, S., Celestin, F., De Sa Leiato, A., Champiny, Wang, X., Donald, J.B, Plauche, A., Cordova, S.C., **Sprunger, C.D.,** Maltais-Landry, G., Lin, Y. *2026.* Long-term storage of air-dried samples comprises water-extractable organic carbon as a soil health indicator. *SOIL.* https://doi.org/10.5194/soil-12-937-2026.

43. de Camargo Santos, A., Culman, S., Robinson, B., Realsburg, J., Bohn, K., Crews, T., Dubois, M., Jungers, J., Rakkar, M., Ryan, M., Tajik, S., de Oliviera Scarpino van Cleff, F., van der Pol, L., Wayman, S., **Sprunger, C.D.,** Deiss, L. *In Press.* Forage harvest intensification improves feed nutritive value without reducing grain yields in organic Kernza.

42. Anuthara Nethasinghe, **Sprunger, C.D.,** Lindsey, LJ. *2026.* Water temperature during flooding affected corn (Zea mays L.) emergence and root growth. *Plant and Soil.* https://doi.org/10.1007/s11104-026-08943-4

41. Novais, Wanderson, **Sprunger, C.D.,** *Mann, M., Lindsey, L., Ortez, O, Manbir, R., Lindsey, A. *2026.* Waterlogged corn responded to post-flooding nitrogen in Ohio. *Crop, Forage, and Turfgrass Management.*

40. *Naasko, K. de Camargo Santos, A. **Sprunger, C.D**., Deiss, L. *2026*. Tradeoffs between soil organic carbon surface gains and subsurface losses following 60 years of contrasting tillage and crop rotations. *Soil Science Society of America Journal,* 90 (3), e70267. https://doi.org/10.1002/saj2.70267.

39. *Naasko, K., *Martin, T.K., * Zakolski, E., *Mann, M., Malacrino, A., [+]Wanderson, N., Lindsey, A., **Sprunger, C.D**. *2026.* The Impact of Short-Term Flooding on Soil Microbial Communities, Soil Nitrogen, and Maize Productivity in Clay Loam Soils of Ohio, United States. *Annals of Applied Biology,* 188(3), 971–982. https://doi.org/10.1111/aab.70107

38. *Gattoni, K., *Mann, M., and **Sprunger, C.D.** *2026.* Which indicators are most effective at detecting rapid shifts in soil health? *Agricultural and Environmental Letters*, 11 (1). E70056. https://doi.org/10.1002/ael2.70056

37. Sintov, N and **Sprunger, C.D.** 2026. Retire 'seminal' from the scientific vocabulary. *Correspondence* in *Nature,* Vol 649.

36. Arceno, MA., Menkoff, M., Kawa, N.C., *Singh, P., and **Sprunger, C.D.** *2025.* A spectrum of climate change adaptation: reactive and proactive responses to extreme weather in annual and perennial cropping systems in Ohio. *Environmental Research: Food Systems*, 2 045008. https://doi.org/10.1088/2976-601X/ae1b09.

35. [+]Wanderson, N., **Sprunger, C.D.**, *Mann, M, L. Lindsey, Osler, O, Lindsey, A. 2025. Assessing pre-plant nitrogen sources and waterlogging on corn growth and yield. *Crops, Forage, and Turfgrass Management. 2025, 11:e70071.* http://dx.doi.org/10.1002/cft2.70071

34. *Martin, T.K., Evans, S., **Sprunger, C.D.** *2025.* Early successional systems support nematode community resistance to drought stress. *Soil Biology and Biochemistry*, 109919. doi.org/10.1016/j.soilbio.2025.109919

33. Frey, T., Shah, D.A., Lindsey, L.E., **Sprunger, C.D.,** Lopez-Nicora, H., and Benitez Ponce, S.M. *2025.* Crop rotation and a rye cover crop have minor impacts on soil health, microbial communities, and soybean yield in Ohio. *Frontiers in Soil Science, 5.* doi.org/10.3389/fsoil.2025.1535734

32. Du Preez, G .,[+]Loggenberg, A., Fourie, D., Marcelo-Silva, Joao., *Martin, T.K., Ramphisa-Nghondzweni, D., Smith, H.J., **Sprunger, C.D.** *2025.* Context matters: Divergent outcomes of soil ecosystem status under different conservation agriculture systems. *Journal of Soil Science and Plant Nutrition.* 10.1007/s42729-025-02285-3

31. Nieland, M. Piper, L., Allison, S., Bhatnagar, J., Doroski, D., Frey, S., Greaney, K., Hobbie, S., Kuebbing, S., Lewis, D., McDaniel, M., Perakis, S., Raciti, S., Shaw, A., **Sprunger, C.D.,**

Strickland, M., Templer, P., Vietorisz, C., Ward, E., and Keiser, A. 2024. Nitrogen deposition weakens soil carbon control of nitrogen dynamics across the contiguous United States. *Global Change Biology*, 30: e70016. https://doi.org/10.1111/gcb.70016

30. Robertson, G.P., Wilke, B., Ulbrich, T., Haddad, N., Hamilton, S., Baas, D., Basso, B., Blesh, J., Boring, T., Campbell., Cassida, K., Charles, C., Chen, J.Q., Doll, J.E., Guow, T., Kravchenko, S., Landis, D., Marquart-Pyatt., Singh., M., **Sprunger, C.D.,** Stegink, J. 2024. The Kellogg Biological Station Long-Term Agroecosystem Research Site (KBS LTAR). *Journal of Environmental Quality*. http://doi.org/10.1002/jeq2.20638

29. Oldfield, E.E., Lavallee, J., Blesh, J., Bradford, M., Cameron-Harp, M., Cotrufo, F.M., Eagle, A.J., Eash, L., Even, R., Kuebbing, S., Kort, E.A., Lark, T.J., Latka, C., Lin, Y., Machmuller, M.B., O'Neill, B., Raffeld, A.M., RoyChowdhury, T., Rudek, J., Sanderman, J., **Sprunger, C.D.,** Uludere Argon, N., Vidal, M., Woolf, D., Zelikova, T.J., and Gordon, D.R. 2024. Greenhouse gas mitigation on croplands: clarifying the debate on knowns, unknowns, and risks to move forward with effective management interventions. *Carbon Management Journal. 15, 1, 2365896. https://doi.org/10.1080/17583004.2024.2365896.*

28. [+]Agyei, B. **Sprunger, C.D.,** Anderson, E. Curell, C., Singh, M. 2024. Farm-level variability in soil biological health indicators in Michigan is dependent on management and soil properties. *Soil Science Society of America Journal,* 88: 326-338. https://doi.org/10.1002/saj2.20630

27. *Singh, P., Kawa, N., **Sprunger, C.D.** 2024. More questions than answers: Ohio farmers perceptions of novel soil health data and their utility for on-farm management. *Agroecology and Sustainable Food Systems, 48 (1), 74-92.* https://doi.org/10.1080/21683565.2023.2270928

26. *Naasko, K. *Martin, T.K., *Murray, J. and *Mann, M, *Mammana, C., **Sprunger, C.D.** 2024. Soil protein: a key indicator of soil health and nitrogen management. *Soil Science Society of America Journal. 88, 89-108.* https://doi.org/10.1002/saj2.20600

- **Featured in CSA News March 2024 Issue:** https://doi.org/10.1002/csan.21246

25. **Sprunger, C.D.** and *Martin, T.K. 2023. An integrated approach to assessing soil biological health. *Advances in Agronomy. 182, 131-16.* https://doi.org/10.1016/bs.agron.2023.06.003

24. *Martin, T.K. and **Sprunger, C.D**. 2023. Nematodes require space: The relationship between nematode community assemblage and soil carbon across varying aggregate fractions. *Geoderma.* 436, 116536. https://doi.org/10.1016/j.geoderma.2023.116536

23. **Sprunger, C.D.,** Lindsey, A., *Lightcap, A**.** 2023. Above and belowground linkages during extreme moisture excess: Leveraging knowledge from natural ecosystems to better understand implications for row-crop agroecosystems. *Journal of Experimental Botany, 74 (9).* https://doi.org/10.1093/jxb/erad045

- Invited paper for special issue on Enhancing the Resilience of Plant Systems to Climate Change

- USDA Funded flooding experiment photo selected for cover

22. +Leiva Soto, A. Culman, S.W., Herms, C., C., **Sprunger, C.D.,** Doohan, D. 2023. Managing soil acidity vs. soil Ca:Mg ratio: what is more important for crop productivity? *Crop, Forage, and Turfgrass Management,* 9 (1), e20210. https://doi.org/10.1002/cft2.20210

21. *Martin, T.K. and **Sprunger, C.D**. 2022. Sensitive measures of soil health reveal carbon stability across a management intensity and plant biodiversity gradient. *Frontiers in Soil Science. 2:7.* https://doi.org/10.3389/fsoil.2022.917885

- Invited paper for special issue on Soil Health and Security.

20. *Martin, T. and **Sprunger, C.D.** 2022. Soil food web structure and function in annual row-crop systems: How can nematode communities infer soil health? *Applied Soil Ecology, 178, 104553.* https://doi.org/10.1016/j.apsoil.2022.104553

19. Wade, J., Culman, S.W., Gasch, C.K., Lazcano, C., Maltais-Landry, G., Margenot, A. J., *Martin, T.K., Potter, T. S., Roper, W.R., Ruark, M.D., **Sprunger**, **C.D.,** Wallenstein, M.D. 2022. Rigorous, empirical, and quantitative: a proposed pipeline for soil health assessment. *Soil Biology and Biochemistry, 170*, 108710. https://doi.org/10.1016/j.soilbio.2022.108710

18. *Martin, T., Culman, S.W., and **Sprunger, C.D.** 2022. Quality or Quantity? Determining the impact of fine root traits on soil health in row-crop agriculture. *Journal of Soil Science and Plant Nutrition, 22, 2322-2333.* https://doi.org/10.1007/s42729-022-00811-1

17. *Martin, T., Wade, J. *Singh, P., and **Sprunger, C.D.** 2022. The integration of nematode communities into the soil biological health framework by factor analysis. *Ecological Indicators. 136, 108676.* https://doi.org/10.1016/j.ecolind.2022.108676

16. *Martin, T. and **Sprunger, C.D**. 2021. Belowground dynamics influence nitrogen cycling and crop productivity in diversified corn systems. *Frontiers in Sustainable Food Systems. 5:705577.* https://doi.org/10.3389/fsufs.2021.705577

- Invited paper for special issue on Ecological Nutrient Management as a Pathway to Zero Hunger.

15. Mestelan, S., Smeck, N., **Sprunger**, **C.D.,** +Dyck, A., and Dick, W. 2021. Four decades of continuously applied tillage or no-tillage on soil properties and soil morphology. *Agrosystems, Geosciences, & Environment, 4(3),* e20195. https://doi.org/10.1002/agg2.20195

14. **Sprunger, C.D.**, Culman, S.W., Deiss, L. Brock, C., and Jackson-Smith, D. 2021. Which management practices influence soil health in Midwest organic corn systems? *Agronomy Journal. 113:5,* 4201-4219. http://dx.doi.org/10.1002/agj2.20786

13. Chaganti, V.N., Culman, S.W., Herms, C. **Sprunger, C.D.,** Brock, C. [+]Leiva Soto, A., and Doohan, D. 2021. Base cation saturation ratios, soil health, and yield in organic field crops. *Agronomy Journal. 113:5, 4190-4200.* https://doi.org/10.1002/agj2.20785

12. Culman, S.W., Brock, C., Doohan, D., Jackson-Smith, D., Chaganti, V.N., Herms, C., Kleinhenz, M., **Sprunger, C.D.,** and Spargo, J. 2021. Base cation saturation ratios vs. sufficiency level of nutrients: a false dichotomy in practice. *Agronomy Journal, 113:6, 5623-5634*. https://doi.org/10.1002/agj2.20787

11. *Martin, T. and **Sprunger, C.D.** 2021. A meta-analysis of nematode community composition across soil aggregates: Implications for soil carbon dynamics. *Applied Soil Ecology, 168,* 104143. https://doi.org/10.1016/j.apsoil.2021.104143

10. O'Neill**,** B.E., **Sprunger, C.D.,** and Robertson, G.P. 2021. Do soil health tests match farmer experience? Assessing biological, physical, and chemical indicators in the upper Midwest United States. *Soil Science Society of America Journal, 85,* 903-918. https://doi.org/10.1002/saj2.20233.

- **Featured in CSA News June 2021 Issue:** https://acsess.onlinelibrary.wiley.com/doi/10.1002/csan.20463

9. Lin, E., **Sprunger, C.D.**, and [+]Hwang, J. 2021. The Farmer's Battlefield: Traditional ecological knowledge and unexploded ordnances in Cambodia. *Agriculture and Human Values*, *38,* 827-837. https://doi.org/10.1007/s10460-021-10195-0.

8. **Sprunger, C.D. ***Martin, T.K., and *Mann, M. 2020. Systems with greater perenniality and crop diversity enhance soil biological health. *Agricultural and Environmental Letters, 5,* e20030. https://doi.org/10.1002/ael2.20030.

- **Awarded 'Featured Article' for issue**

- **Featured in CSA News March 2021 Issue:** https://acsess.onlinelibrary.wiley.com/doi/full/10.1002/csan.20414.

- **Named 2022 Outstanding Paper of the Year:** https://www.agronomy.org/publications/awards/

7. **Sprunger, C.D.**, Culman, S.W., Peralta, A.L. DuPont, S.T., Lennon, J.T., and Snapp, S.S. 2019. Perennial grain crop roots and nitrogen management shape soil food webs and soil carbon dynamics. *Soil Biology and Biochemistry, 137*, 107573. https://doi.org/10.1016/j.soilbio.2019.107573

6. **Sprunger, C.D.,** Culman, S.W., Thuita, M., Palm, C.A., and Vanlauwe, B. 2019. Long-term application of low C:N residues enhances maize yield and soil nutrient pools across Kenya. *Nutrient Cycling in Agroecosystems, 114,* 261-276. https://doi.org/10.1007/s10705-019-10005-4

5. +Pugliese, J.Y., Culman, S.W., and **Sprunger, C.D**. 2019. Grain and forage harvest of a perennial grain crop, Kernza (*Thinopyrum intermedium)*, increases its productivity and soil nutrient cycling. *Plant and Soil, 437,* 241-254. https://doi.org/10.1007/s11104-019-03974-6

4. **Sprunger, C.D.,** Culman, S.W., Robertson, G.P., and Snapp, S.S. 2018. How does nitrogen and perenniality influence belowground biomass and nitrogen use efficiency in small grain cereals? *Crop Science, 58, 2110-2120.* https://doi.org/10.2135/cropsci2018.02.0123

3. **Sprunger, C.D.,** Culman, S.W., Robertson, G.P., and Snapp, S.S. 2018. Perennial grain on a Midwest Alfisol shows no sign of early soil carbon gain. *Renewable Agriculture and Food Systems, 33,* 360–372. https://doi.org/10.1017/S1742170517000138

2. **Sprunger, C.D.** and Robertson, G.P. 2018. Early accumulation of active fraction soil carbon in newly established cellulosic biofuel systems. *Geoderma, 318,* 42-51. https://doi.org/10.1016/j.geoderma.2017.11.040

1. **Sprunger, C.D.,** Oates, L.G., Jackson, R.J., and Robertson, G.P. 2017. Plant community composition influences fine root production and biomass allocation in perennial bioenergy cropping systems of the upper Midwest, USA. *Biomass and Bioenergy, 105,* 248-258. http://dx.doi.org/10.1016/j.biombioe.2017.07.007.\

Book Chapters

du Preez, G., Campos-Herrera, Daneel, M., Korthals, G., Henrik Schmidt, **Sprunger, C.D.** Nematodes as bioindicators of ecosystem functions under different land uses. 2026. Nematodes as Environmental Bioindicators: from theory to practice. (2nd Edition).

Sprunger, C.D. *Martin, T.K., and *Singh, P. Integrating perennials into agroecosystems for enhanced soil biodiversity and long-term sustainability. 2024. Biodiversity and Bioeconomy. K. Singh (Ed.). Elsevier, Amsterdam, Netherlands. *https://shop.elsevier.com/books/biodiversity-and-bioeconomy/singh/978-0-323-95482-2*

Published Datasets

+Wanderson, N., **Sprunger, C.D.**, *Mann, M, L. Lindsey, Osler, O, Lindsey, A. 2025. Assessing pre-plant nitrogen sources and waterlogging on corn growth and yield. *Dryad Digital Repository.* 10.5061/dryad.5x69p8dhw

Sprunger, C. D. and Robertson, G. P. 2018. Data from: Early accumulation of active fraction soil carbon in newly established cellulosic biofuel systems. *Dryad Digital Repository.* https://doi.org/10.5061/dryad.7jq46.

Extension Materials

Robertson, G.P., T.C. Ulbrich, B.J. Wilke, B. Basso, H. J. Burrack, T. Butcher, L.Campbell, C. Charles, J.E. Doll, C. Forestieri, N.M. Haddad, R. Heinze, L.T. Johnson, C. Klein, A.N. Kravchenko, D. LaBar, S.T. Marquart-Pyatt, H. Miller, M. Mills, E. O?Halloran, K. Poley, A.Z. Polverento, S. Reed, A.P. Reimer, M. Shaw, A. Smith, C.D. Sprunger, J. Stegnik, B. Wickerham and L. Woodke. 2026. A Co-Produced Roadmap for Future Research at the KBS LTAR Site. Zenodo. https://doi.org/10.5281/zenodo.18226702

*Drobnak, R., Bziari, F., Swinton, S., Charles, C., Wilke, B., Schultheis, E., LaPorte, J., Sprunger, C.D., Tyndall, J., Gammans, M., and Doll, J.E. 2024. Prairie Strip Partial Budget Tool. https://www.canr.msu.edu/resources/prairie-strip-partial-budget-tool Michigan State University Extension.

Culman, S.W., Deiss, L., Fortune, B., Gingery, M, *Mann, M. **Sprunger, C.D.,** Hawkins, E., Brown, C., Hurriso, T., Fulford, T., Francis,D., Lindsey, L.E. Bergefurd, B. 2022. Baseline Assessment of Soil Health in Ohio. The Ohio State University Extension.

Competitive Grants

Pending Grant Proposals:

Sprunger, C.D. Harnessing Kernza-Legume intercropping to expand root systems and increase deep soil carbon. 2026 Google Carbon Removal and Superpollutant Elimination R&D Awards. $399,648. Submitted September 2026.

Rhee, S., Topps, C., VanBuren, R., **Sprunger, C.D.** A precision planter and combine to enable field to lab to field research for translating discovery to agricultural innovation and impact. USDA NIFA – Equipment Grant. $500,000. Submitted June 2026.

Sprunger, C.D., Long, C., Giri, S. Strengthening soil health to support climate resilience in potato production systems along a regenerative management gradient. MDARD Specialty Crop Block Grant. $125,000. Submitted February 2026.

Active Grants:

Sprunger, C.D. 2026-2029. Expanding the Michigan climate resilience network. Michigan Department of Agriculture and Rual Development. $449,693.

Kravchenko, A.S., Guber, A., Blackwood, C., **Sprunger, C.D.** Long-term impact of drought in Midwest soils: biophysical feedbacks and soil health. USDA NIFA. $749,954.

Franco, A. and **Sprunger, C.D.** 2026-2030. Harnessing soil animal diversity to promote multifunctionality and guide soil health management in agroecosystems. USDA NIFA. $750,000.

Sprunger, C.D. 2026-2027. Strengthening soil health recovery in potato production systems. Michigan Potato Industry Commission. $14,250.

Topp, C. et al. **Co-PI: Sprunger, C.D.** 2025-2030. N-SYNC: Engineering synchronized nitrogen efficiency traits in corn agriculture. DOE – ARPA-E. $5,600,000.

Sprunger, C.D. and Burrack, H. 2025-2027. Redefining Sustainable Soil Management: Diversifying Soil Food Webs for Resilient Agroecosystems. Project GREEN. $94,551.

Sprunger, C.D. 2025-2027. A state-wide assessment to better understand soil health and sustainability in potato-based cropping systems in Michigan. Potato Industry Commission. $48,450. 2025-2026.

T. Donohue. Co-PI: **Sprunger, C.D**. 2024-2027.Great Lakes Bioenergy Research Center. Department of Energy, Office of Science. Sprunger manages ~$150,000 per year as part of a $125M grant.

Blesh, J., Asher, A. **Sprunger, C.D.** 2024-2029. Understanding the outcomes of improved soil health to accelerate conservation in the Western Lake Erie Basin. MDARD. $4,013,324. Subaward to MSU: $1,411,282.

Sprunger, C.D. Robertson, G.P., Basso, B., Charles, C., DeDecker, J., Jean, M., Kravchenko, A.N., Laporte, J., Marquat-Pyatt, S., Sears, M., Singh, M., Ulbrich, T., Wilke, B. 2024-2027. MSU Agricultural Climate Resiliency Program. $1,249,599.

Haddad, N., Evans, S., and **Sprunger, C.D.** 2024-2027**.** Diversified cropping systems for biodiversity and ecosystem services. USDA NIFA. $749,999.71.

Wessel, B. and **Sprunger, C.D.** 2024-2026. Establishing Soil and Plant Nutrient Laboratory data as a research resource. Project Green. $19,488.45.

Sprunger, C.D. Robertson, G.P. and Evans, S. 2023-2027. MSU/Syngenta Soil Health Partnership. Syngenta. $350,000.

Sprunger, C.D., Shulthies, E., and Docherty, K. 2023-2027. Exploring the efficacy of prairie strips as a soil health promoting practice. North Central SARE. $119,055.

Haddad, N., Basso, B., Evans, S., Kravchenko, A., Landis, Lau, J., Robertson, G.P. **Sprunger**, **C.D.,** Zarnetske, P. 2022 – 2028. LTER: KBS – Revealing ecological and social mechanisms of resilience in agroecological systems. NSF LTER. $7,650,000.

Completed Grants:

Sprunger, C.D. 2023-2026. Expand knowledge of how changes in soil food web dynamics impact overall soil health outcomes by sampling NCSS characterized pedons. USDA NRCS Soil Survey. $489,613.

Sprunger, C.D., Haddad, N.K., and McDaniel, M.D. 2023-2025. Building a collaborative program to promote biodiversity and soil health in row-crop agriculture using prairie strip conservation. Doug and Maria Bayer New Initiatives Fund for Sustainable Agriculture 2023. $49,852.

Lindsey, A. and **Sprunger, C.D.** 2021-2026. After the Flood: Impacts on Rhizosphere Biology, Nutrient Cycling, and Corn Growth and Yield. USDA AFRI. $500,000. Subaward to Michigan State University for years 2022-2026.

Culman, S.W., **Sprunger, C.D.,** M. Sulc, B. Ward, R. Hayden, J. Jungers, M. Ryan, T. Crews, and L. DeHaan. 2019-2024. Organic dual-use perennial grain crops: Pathways to profitability and soil health. USDA OREI. $1,776,905.

Sprunger, C.D., Bhowmik, A. 2024. MSU and A&T Exchange: Training and mentorship in nematology to enhance soil health assessments across the Southeastern United States. MSU and NC A&T Research Exchange.

Sprunger, C.D., Cordova, C., Lin, L. 2022-2024. Assessing a suite of indicators to predict soil carbon trajectories in agricultural systems. Environmental Defense Fund. $298,433.

Lipschitz, F., B. Flemming, S. Inwood, S. Karle, B. Milligan, Z. Plakias, **C.D. Sprunger**, and P. Summerlin. 2019-2020. Identifying opportunities for Landscape Architectural Engagement with Climate Smart Agriculture. InFACT Linkage and Leverage Grant 2019. $34,613.

Martin, K*. and **C.D. Sprunger.** 2020-2021. The use of nematodes and enzyme activities for on-farm soil biological health tests. USDA North Central Sustainable Agriculture Research and Education Graduate Student Grant. $10,875.

Sprunger, C.D. 2020-2021. Nematode Quantification in Ohio Soybean Fields. Ohio Soybean Council. $35,000.

Sprunger, C.D., N.C. Kawa, J.E. Doll, P. Singh. 2020-2021. How can soil health indicators inform farmers' soil conservation practices and climate adaptation strategies? InFACT Linkage and Leverage Grant. $34,153.

Sprunger, C.D. 2019-2021. Rainfall extremes and rhizosphere dynamics: Implications for soil health and crop productivity. OARDC Seeds. $49,987.

Lindsey, L. E. Hawkins, and **Sprunger, C.D**. 2019-2020. Identifying the cause of soybean self-thinning using Climate FieldView™. Bayer Crop Science. $68,512.

Baethgaen, W. and **Sprunger, C.D.** 2016. Developing and assessing soil carbon management and restoration recommendations for climate smart agriculture: A pilot study with smallholder farmers in Tanzania. Columbia University, The Earth Institute: Cross-Cutting Initiative. $30,000.

Sprunger, C.D. and G.P. Robertson. 2015. Biodiversity effects on soil carbon gain in annual and perennial cropping systems. USDA Sustainable Agriculture Research and Education Program; 2014-2015. $6,382.

Submitted but unsuccessful grant proposals since 2022:

Haddad, N.M., **Sprunger, C.D.,** Evans, S.E., Huseth, A., Basso, B. Hidden in plain sight: Separating historical land use from contemporary ecology for precision conservation design. USDA NIFA. $650,000. Submitted October 2nd, 2025.

Sprunger, C.D. Cassida, K., Kravchenko, A.S., Ulbrich, T., Wilke, B. Ensuring farmer success by safeguarding the health of midwestern soils. USDA NIFA. $749,659. Submitted October 10th, 2025.

Zhou, Jizhong et al. **Co-PI: Sprunger, C.D.** Building Foundations: Harnessing Systems Biology of Switchgrass-Microbiome Interactions for Resilient and Sustainable Bioenergy Production. Subaward to MSU: $1,930,716. Submitted March 2025.

Bronikowski, A., F. Janzen, S. Roy, **Sprunger, C.D.** RaMP: Sustaining biodiversity through integrative Training, Interning, and Mentoring (STIM-bio): A field station and STEM stakeholders working together to grow a diverse workforce. NSF RaMP. $2,999,999. Submitted January 17, 2024.

Schultheis, E., Haddad, N., and Sprunger, C.D. MiSTRIPS: A collaborative program to improve Michigan agricultural outcomes with prairie conservation plantings. National Fish and Wildlife Foundation-Conservation Partners Program. $690,666 Submitted. February 26th.

Lebeis, S., Curell, C., Gilbert, K., Jean, M., Kirshenbaum, S., Lowry, D., Rhee, S., Singh, M., **Sprunger, C.D.,** Steinke, K. Advancing towards a robust assessment of the effects of biostimulants on soil and plant health. MSU Agricultural Climate Resiliency Program. $1,250,000. Submitted March 1st.

Haddad, N., Charles, C., Evans, S., Marquat-Pyatt, S., Schultheis, E., Sprunger, C.D., Sullivan, L. Diversified cropping systems for biodiversity and climate resilience. MSU Agricultural Climate Resiliency Program. $1,250,000. Submitted February 28th.

Franco, A. and **Sprunger, C.D.** Harnessing soil animal diversity to promote multifunctionality and guide soil health management in agroecosystems. USDA NIFA. $747,067. Submitted September 12th, 2023.

Sprunger, C.D., E. Schultheis. Collaborative Research: Promoting Soil Biodiversity and Ecosystem Function Using Prairie Conservation Corridors. NSF: Partnership to Advance Conservation Science and Practice. $308,416. Submitted with Western Michigan University and Edward Lowe Foundation. Submitted: Oct. 11, 2022.

Chiavegato, M., N. Bello, S. Lyon, **C. Sprunger**. Effects of grazing and flooding on nitrogen stocks and losses. NC SARE. $249,984. Submitted March 2022.

Sprunger, C.D. Bridging soil biodiversity and soil health through the quantification of nematodes and other dynamic soil properties. Soil Science Collaborative Research. USDA NRCS. $265,680.35. Submitted April 2022 via Michigan State University.

Invited Seminars since 2018

Sprunger, C.D. Advancing agricultural resilience through on-farm research and partnerships. Board of Trustees Community Reception. Invited evening speaker. June 11, 2026. Followed the President of MSU and introduced by the Chair of the MSU Board of Trustees.

Sprunger, C.D. Nematode communities reveal soil health and climate resilience across contrasting agroecosystems. April 2026. Department of Ecosystem Science and Management. Penn State University. Invited Seminar Speaker.

Sprunger, C.D. Nematodes as bioindicators of soil health and climate resiliency. December 2025. Department of Agronomy and Plant Genetics Seminar Series. University of Minnesota. Invited Seminar Speaker.

Sprunger, C.D. Soil health management for climate resilience and greenhouse gas mitigation. MSU AgBioResearch Stakeholder Annual Meeting. October 2025. Invited Speaker.

Sprunger, C.D. Integrating nematodes into the soil health framework. Nematological Society of Southern Africa. Malelane, South Africa. September 2025. Invited Speaker.

Sprunger, C.D. Building soil health to sustain life and the environment. University of Missouri Symposium on Soil Health and Human Health. Columbia, MO. August 2025. Keynote Speaker.

Sprunger, C.D. Integrating nematodes into the soil health framework in honor of Diana Wall. Ecological Society of America. Baltimore, MD. August 2025. Special Session on Soil Biodiversity in Honor of Diana Wall – Invited Speaker.

Sprunger, C.D. The long-term maintenance of regenerative agriculture enhances climate resiliency and soil biodiversity. June 2025. University of Michigan Biological Station. Pelston, MI. Distinguished Pettingil Lecture in Natural history (week-long visit interacting with faculty, staff, and students).

Sprunger, C.D. How can we build climate resilient soils? Climate Science and Theological Education Project. AAAS funded grant. International Center of Faith, Science, and History. Salisbury, NC. April 2025. Invited Virtual Seminar Speaker.

Sprunger, C.D. The long-term maintenance of regenerative agriculture enhances soil health and climate resiliency. Sustainable Agriculture and Food Systems Seminar Series. Michigan State University. March 2025. Invited Seminar Speaker.

Sprunger, C.D. What can beneficial nematodes tell us about soil health and soil carbon accrual? March 2025. University of Maine's Climate Adaptation and Mitigation Fellows Program. Webinar. Invited Seminar Speaker.

Sprunger, C.D. What can beneficial nematodes tell us about soil health? February 2025. Iowa Learning FAARMS webinar series n=189. Iowa State University Extension. Invited Seminar Speaker.

Sprunger, C.D. Can regenerative agriculture solve the dual crises of climate change and biodiversity. February 2025. Department of Biology. Occidental College. Invited Seminar Speaker.

Sprunger, C.D. Nematodes as bioindicators of soil health and climate resiliency. November 2024. Department of Entomology and Nematology Seminar Series.
U.C. Davis. Invited Seminar Speaker.

Sprunger, C.D. Assessing the resilience of soil health indicators in agroecosystems managed over a 30-year period. ASA-CSA-SSSA Annual Meetings. San Antonio, TX. November 2024. Invited Speaker.

Sprunger, C.D. The long-term maintenance of regenerative agriculture enhances climate resiliency. MSU-RIKEN Webinar Series. November 2024. Invited Speaker

Sprunger, C.D., Martin, T.K., Wall, D. 2024. The long-term maintenance of regenerative agriculture enhances soil health and climate resiliency. Special session on Agroecology for climate change mitigation and resilience. Ecological Society of America. Long Beach, CA. August 2024. Invited Speaker.

Sprunger, C.D. An integrated approach to assessing soil health for enhanced ecological function. O'Neill School of Public and Environmental Affairs Environmental Science Seminar. Indiana University. April 2024. Invited Seminar Speaker.

Sprunger, C.D. and Martin, T. What can beneficial nematodes tell us about soil health? MSU Extension Field Crop Webinar Series. February 2024. Attendees, n=118. Invited Webinar.

Sprunger, C.D. Soil Health, Nutrient Cycling, and Soil Biology in Reduced Tillage Systems. Organic vegetable production webinar series. University of Wisconsin. 2024 Invited Speaker.

Sprunger, C.D. Building a soil food web database to inform soil health in agroecosystems. ASA-CSA-SSSA Annual Meetings. St. Louis, MO. October 2023. Invited Speaker.

Sprunger, C.D. Nematodes as bioindicators of climate resiliency in agroecosystems. Diversity in STEM conference. SACNAS. Portland, OR. October 2023. Invited speaker.

Sprunger, C.D. 2023. Rhizosphere dynamics drive soil health and ecosystem services in agroecosystems. Department of Plant Biology. Athens, Georgia. October 2023. Invited Seminar Speaker.

Sprunger, C.D. 2023. Designing resilient agroecosystems: What is the role of soil health? Danforth Plant Science Center. St. Louis, Missouri. September 2023. Invited Seminar Speaker.

Sprunger, C.D. 2023. Promoting soil health management for enhanced agronomic performance and ecological function. School for Environment and Sustainability. Ecosystem Science and Management Seminar Series. University of Michigan. April 2023. Invited Seminar Speaker.

Sprunger, C.D. 2023. Advancing soil health assessments for enhanced agronomic performance and ecological function. Department of Environmental Science Seminar Series. University of Toledo. April 2023. Invited Seminar Speaker.

Sprunger, C.D. 2023. Baseline assessment of Soil health in Ohio (and our vision for assessments in Michigan). Soil Health Nexus Digital Café. Virtual Seminar. February 2023. Invited Speaker.

Sprunger, C.D. 2023. Regenerative Agriculture for new roots and soil health. Seminar. New Roots for Restoration Biology Integration Institute Seminar Series. The Danforth Center. January 2023. Invited Seminar Speaker.

Sprunger, C.D. 2022. Linking soil food web structure and function to soil health in agroecosystems. Special Session: The Microbiome of Soil Health. ASA-CSA-SSSA International Annual Meetings. Baltimore. November 2022. Invited Oral Presentation.

Sprunger, C.D. 2022. Enhancing soil health: Opportunities for climate mitigation and adaptation in agroecosystems. North Central Climate Collaborative Webinar Series. Invited Speaker.

Sprunger, C.D. 2022. The integration of nematode communities into the soil health framework. Department of Biological Sciences Seminar Series. Western Michigan University. Invited Speaker.

Sprunger, C.D. 2022. Soil carbon sequestration as a climate solution: Is there a market? Carbon Market Working Group. LTER All Scientist Meeting. Pacific Grove, CA. Invited Speaker.

Sprunger, C.D. 2022. Advancing soil health assessments for enhanced agronomic performance and ecological function. Pacific Northwest Laboratory. Environmental, Molecular Sciences Laboratory (EMSL) Exchange. Invited Speaker.

Sprunger, C.D. 2022. Lessons from the Rhizosphere: Opportunities for Climate Mitigation and Adaptation in Agroecosystems. University of Missouri Interdisciplinary Plant Group Symposium. Invited Speaker.

Sprunger, C.D. 2022. Advancing soil health assessments for enhanced agronomic performance and ecological function. Department of Geography. University of Wisconsin. Invited Speaker for the Yi-Fu Lecture Series.

Sprunger, C.D. 2022. Advancing soil health assessments for enhanced agronomic performance and ecological function. Department of Soil, Water, and Climate. University of Minnesota. Invited Speaker.

Sprunger, C.D. 2022. Rhizosphere dynamics drive soil health and plant performance in agroecosystems. Soil and Water Sciences Department. University of Florida. Diversity, Equity, & Inclusion Committee Invited Seminar Speaker.

Sprunger, C.D. 2022. Soil Biology Scientific Round Table Discussion. Washington State University Soils Conference 2022. Invited Panelist. https://www.youtube.com/watch?v=snVGOXSZAno&list=PLBU9aYUI-eYLLBBu-BxbTNMIlYJvXlunh&index=8

Sprunger, C.D. 2021. Advancing soil health assessments for enhanced agronomic performance and ecological function. Kellogg Biological Station and The Department of Plant, Soil, and Microbial Sciences. Michigan State University. Invited Speaker.

Sprunger, C.D. 2021. Rhizosphere dynamics drive soil health and plant performance in agroecosystems. Department of Plant Pathology. The Ohio State University. Invited Speaker.

Sprunger, C.D. 2021. Carbon Markets. Ask the Expert Panelist. Farm Science Review. The Ohio State University. Invited Panelist.

Sprunger, C.D. 2021. Soil Carbon Pools and their connection to soil health. Soil Health Nexus Conference. Michigan State University. Invited Speaker.

Sprunger, C.D. 2021. Encourage development of root stocks that increase carbon capture and can support grain crop cover. Agricultural Genome to Phenome Initiative. USDA funded virtual conference. Invited Speaker.

Sprunger, C.D. 2021. How do rhizosphere dynamics drive soil health in agroecosystems? Kellogg Biological Station Seminar Series, Michigan State University. Invited Seminar Speaker.

Sprunger, C.D. 2021. How do rhizosphere dynamics drive soil health in agroecosystems? Department of Environmental Science, Policy, and Management, University of California, Berkeley. Spring Seminar Series. Invited Seminar Speaker.

Sprunger, C.D. 2021. Which management practices most influence soil health in organic corn production? The Ohio State University Organic Webinar Series. Virtual Oral Presentation.

Sprunger, C.D. and T. Martin. 2020. Drivers of rhizosphere dynamics and soil biological health in agroecosystems. ASA-CSSA-SSSA International Meetings. Invited oral talk (Virtual).

Sprunger, C.D. 2020. How do rhizosphere dynamics drive soil health in agroecosystems? Department of Plant Science Fall Seminar Series, Penn State University. Invited Seminar Speaker.

Sprunger, C.D. 2020**.** Can nematodes serve as effective soil health indicators? Washington State University Soil Health Seminar. Oral Presentation.

Sprunger, C.D. 2020. The role that roots play in building soil organic matter and soil health. Association for Ohio Pedologists. February 27, 2020.

Sprunger, C.D. 2020. The role that roots play in building soil organic matter and soil health. Conservation Tillage Conference. March 4, 2020.

Sprunger, C.D. 2019. How do soils provide important ecosystem services? Invited Speaker. Environmental Professionals Network. Columbus, Ohio. December 4, 2019.

Sprunger, C.D. 2019. Perenniality or Diversity: Which is most effective at providing ecosystem services within agro-ecosystems? Ames, IA. Invited Speaker. Department of Agronomy seminar series, Iowa State University.

Sprunger, C.D. 2019. Embracing Difficult Conversations: The necessary path to diversifying soil science. Amherst, MA. Bridge Scholar/Invited Speaker. Stockbridge School of Agriculture Seminar Series: Bridge2Impacts, University of Massachusetts.

Sprunger, C.D. 2019. Perenniality or Diversity: Which is most effective at providing ecosystem services within agro-ecosystems? Amherst, MA. Bridge Scholar/Invited Speaker. Stockbridge School of Agriculture Seminar Series: Bridge2Science, University of Massachusetts.

Sprunger, C.D. 2019. Perenniality or Diversity: Which is most effective at providing ecosystem services within agro-ecosystems? Columbus, OH. Invited Speaker. Department of Horticulture and Crop Seminar Series, The Ohio State University.

Sprunger, C.D. 2019. What management practices most influence soil health in corn production? Conservation Tillage and Technology Conference. Ada, OH. Invited Speaker.

Sprunger, C.D. 2019. Sustainable Agriculture: Can we increase crop productivity while reducing agriculture's environmental footprint? Department of Biology Seminar Series, College of Wooster. Wooster, OH. Invited Seminar Speaker.

Sprunger, C.D. and S. W. Culman. 2019. On-farm evaluation of crop diversity effects on soil health and ecosystem function in the Great Lakes Region. Special Session. Soil Science Society of America International Annual Meetings. San Diego, CA. Invited Oral Presentation.

Sprunger, C.D. 2018. Root production and soil carbon dynamics in agroecosystems. Microbial Based Solutions for Agriculture. The Ohio State University. Wooster, OH. Invited Oral Presentation.

Sprunger, C.D. 2018. Root production and soil carbon dynamics in agroecosystems: A biogeochemical and social science approach. School of the Environment and Natural Resources, The Ohio State University. Invited Oral Presentation.

Presentations since 2022

Sprunger, C.D. Prairie strips enhance soil health after four years of establishment in the KBS LTER. KBS LTER All Scientist Meeting. September 2026. Hickory Corners, MI. Oral Presentation.

Spiegal, S., Wilke, B, **Sprunger, C.D.,** Aremendariz, G., Schreiner-McGraw, A., Schmer, M. 2026. Agricultural performance indicator and context knowledge system (AgPICKS). LTAR Annual Science Meeting. Ames, IO. Joint-Oral Presentation.

Sprunger, C.D. Uncovering the drivers of root distribution and soil health in perennial bioenergy systems. Great Lakes Bioenergy Research Center All Scientist Meeting. 2026 Lake Geneva, WI. Oral Presentation.

*Gattoni, K. *Drobnak, R., and **Sprunger, C.D.** Nematode community dynamics in and around prairie strips indicate increased soil health. CANVAS 2025. Salt Lake City, UT. Oral Presentation.

*Naasko, K. [+]de Camargo Santos, A., **Sprunger, C.D.** and Deiss, L. Tillage Intensity and Crop Rotation Impact Organic Carbon Storage and Aggregation at Different Depths. CANVAS 2025. Salt Lake City, UT. Oral Presentation.

*Drobnak, R. and **Sprunger, C.D.** Does Plant Species Richness Matter for Belowground Biodiversity and Soil Health in Edge of Field Conservation Practices? CANVAS 2025 (Formerly ASA-CSA-SSSA International Annual Meetings). Salt Lake City, UT. Oral and Poster Presentation.

*Martin, T.K. and **Sprunger, C.D.** How do bacterivore nematodes enhance plant available nitrogen in organically managed soil? Ecological Society of America. Long Beach, CA. August 2024.

Durso, L.M, Cater, T., Obour, AK., **C.D. Sprunger** and others. ASA. CSSA. SSSA Diversity, Equity, and Inclusion Committee Showcase Poster. ASA-CSA-SSSA International Annual Meetings. November 2022. Poster Presentation.

[+]Wanderson, N. **C.D. Sprunger,** L.E. Lindsey, S. Khanal, O. Ortez, M. Mann*, and A.J. Lindsey. Assessing various N sources and water excess on corn growth and grain yield. ASA-CSA-SSSA International Annual Meetings. November 2022. Oral Presentation.

[+]Wanderson, N. **C.D. Sprunger,** L.E. Lindsey, S. Khanal, O. Ortez, M. Mann*, and A.J. Lindsey. Elucidating how N management practices and excess water conditions affect corn N uptake and grain yield. ASA-CSA-SSSA International Annual Meetings. November 2022. Poster Presentation.

Martin, T. and **C.D. Sprunger.** Thirty-years of long-term management shifts nematode community composition across a suite of cropping systems. ASA-CSA-SSSA International Annual Meetings. November 2022. Oral Presentation.

Martin, T. and **C.D. Sprunger.** Assessment of soil food webs across time: How do nematodes infer shifts in community structure over 30 years under varying agroecosystems? Ecological Society of America. August 2022. Oral Presentation.

Fellowships and Honors

National Science Foundation Post-Doctoral Fellowship in Biology, $138,000	2016-2017
ASA, CSSA, SSSA Graduate Student Leadership Award	2014
Kellogg Biological Station Graduate Research Fellowship, $1000	2014
ASA, CSSA, SSSA Future Leaders in Science Award, Washington D.C.	2014
National Ford Foundation Fellowship, $66,000	2012-2014
Michigan State University Enrichment Fellowship, $48,000	2010, 2015
Soil Science Society of America Meeting, Cincinnati, OH, Student Poster Award	2012
Michigan Organic Reporting Session, Graduate Student Poster Award	2013
National Science Foundation Graduate Research Fellowship, Honorable mention	2012
Kellogg Biological Station, Summer Student Fellowship, $1000	2011
Michigan Organic Reporting Session, Graduate Student Poster Award	2011

Undergraduate Travel Award, Forest Resources, University of Washington, $400 2009

Teaching, Advising, and Mentoring

Teaching

Instructor, Michigan State University, *Professional Development Seminar* 2026-Present

Instructor, Michigan State University, *Sci. Comm; Professional Devel.* 2024- Present

Instructor, Michigan State University*, Soil Health Concepts and Methodology* 2023-Present

Instructor, The Ohio State University, *Root and Rhizosphere Ecology* 2019-2022

Instructor, The Ohio State University, *Advanced Principles in Enviro Sci* 2021-2022

Co-Instructor, The Ohio State University, ENR 8890.04 2020-2022

Post-doctoral Researchers
Current: Kaitlin Gattoni (2025- Present); Sandip Mondal (2025-Present); Rebecca Nelson, EEB Presidential Post-doc (2025-Present; co-mentor with Haddad and Evans)

Former: Alexandria Smychovich (2023-2024); Katherine Naasko (2023-2026)

Graduate Student Chair
Current: Isabella Vergara (PhD, CSS); Rachel Drobnack (PhD, CSS); Monica Jean (PhD, CSS); Sophia Kennedy (PhD, CSS); Christoff van Wyk (MS, North – West University, South Africa – co-advised).

Completed: Tvisha Martin (MS, ENR, 2021), Prabhjot Singh (MS, ESGP, 2021); Tvisha Martin (PhD, CSS, 2025).

Graduate Student Committee Member
Current MS students:); Brandon Scott (MSU, PSM); Cole Kelly (PSM, MSU); Sara Sadeghi (MSU, PSM)

Completed MS students: Ashly Dyck (SENR), Christine Charles (SENR), Francis Clark (HCS), Ana Vazquez (Plant Pathology), Jenna Moore (HCS), Chee Gang Ngui (HCS); Sarah Munezero (MSU, CSS); Blair Van Agen (MSU, PSM); Leah Dunlapp (CSS/IBIO); Jasmine Bontrager (MSU, PSM)

Current PhD students: Stephen Stresow (MSU, HORT); Zahid Chowdhury (MSU, Forestry); Aadil Rahman (MSU, PSM); Tanushree Gosh (MSU, PSM); Samuel Kweku Darko-Koosmon (MSU, AFRE); Francesca, Mignola (MSU, CSS); Ana Gunther (MSU, CSS)

Completed PhD students: Marissa Zaricor (MSU, Plant Biology), Andrea Leiva Soto (OSU, HCS); Sean Fenstemaker (OSU, HCS); Wanderson Novais (OSU, HCS); Prabhjot Singh (OSU, SENR); Benjamin Kwadwo Agyei (MSU, PSM).

Post-Bachelor Technicians

- Meredith Mann (2019 – Present)
- Lisa Hargest (2024- Present)
- Arlo Robles (2024- Present)
- Morgan Filhart (2024-Present)
- Aerin Braunholer (2025- Present)
- Kiera Werth (2025- Present)
- David Apple (2025- Present)
- Hailey Hilsher (2024- 2026)
- Emily Parker (2022 – 2024)
- Hanna Korn (2022- 2024)
- Louceline Fleuridor (2019)
- Nicole Hoekstra (2018-2019)

Undergraduate Research Assistants and Undergraduate Research Distinction

- Jacob Murray (Spring 2021-Fall 2023)
- Allison Bunce (Summer 2022)
- Ainsley Lightcap (Spring 2021-Summer 2022)
- Abby Rees (NSF REU 2022)
- Dani Alabyadh (Fall 2020-2021)
- Christian Mamana (NSF REU 2021)
- Ben Bridge (KBS URA 2023)
- Elena Zakolski (NSF REU 2023)
- Aiden Martin (Spring 2024)
- Andrew Wade (KBS URA 2024)
- Cherith Pickett (KBS REU 2025; REU 2026)
- Francesca Gervase (KBS REU 2025)
- Michael Ankley (Kalamazoo College Honors student, 2025)
- Adeline Gruen (KBS REU 2026)
- Jasper Swisher (KBS URA 2026)

Faculty Mentoring Committees at Michigan State University

- Olivia Smith, Department of Horticulture (Fall 2024 – Present)

Service

Michigan State University
- AgBioResearch Director Search Committee
- 2026-Present

World Food Prize – Agrifood Pioneer Review Panel
- 2026

Ecological Society of America
- Soil Ecology Section – Secretary
- 2025- Present

Michigan Department of Agriculture and Rural Development
- Soil Health Task Force
- 2024 – Present

Michigan State University
- KBS Housing Committee (co-chair)
- 2025-Present

Michigan State University
- KBS Faculty Advisory Committee
- 2024-2027

Michigan State University
- Sustainable Agriculture and Food Systems Steering Committee
- 2024-2027

Michigan State University
- PSM/KBS Agroecology Search Committee
- October 2023-May 2024

Michigan State University
- Plant Resilience Institute Faculty Search Committee
- Multiple position search
- September 2023- 2024

USDA NIFA
- Peer Review Panel Member
- Agricultural Microbiomes in Plant Systems and Natural Resources
- December 2022 – January 2023

Michigan State University
- Agronomy Committee (Chair, 2025 - Present)

- November 2022- Present

Michigan State University
- Regenerative Agriculture Extension Educator Search Committee Member
- October 2022- February 2023.

Michigan State University
- Long-Term Agroecosystems Research (LTAR) Steering Committee
- August 2022-Present

Michigan State University
- KBS Cultural & Inclusion Committee
- August 2022- December 2023

USDA NCR-SARE
- Peer Review Panelist
- Graduate Student Research Grant Program
- 2021-2022

Soil Science Society of America Outstanding Dissertation Committee
- January 2020-2024

Agronomy, Crops, and Soils Diversity Society Committee
- January 2020-2024

Soil Science Society of America Science Policy Committee
- January 2020- December 31, 2022

Peer Reviewer: PNAS, Biogeochemistry, Agriculture, Ecosystems, and the Environment, Plant and Soil, Soil Science Society of America, Geoderma, Agronomy Journal, Applied Ecology, Applied Soil Ecology, Nutrient Cycling in Agroecosystems, Global Change Biology, Journal of Animal Ecology, Ecology and Evolution, Forest Ecology and Management

Advisory Board Service
- New Roots for Restoration Biology Integration Institute (External Advisory Board/Executive Committee member), 2025 – 2026

Editorial Board Service
- Pedobiologia, Editorial Board, 2022- 2026
- Plant and Soil, Section Editor, 2024 – Present
- Biogeochemistry, Guest Editor, 2024- Present

Professional Development Training

DEI Foundations: Building Leadership Engagement Strategy – Association for Women in Science	2024
ADVANCEGeo Partnership Training, Kellogg Biological Station	2023
Teaching Assistant Seminar and Orientation, Michigan State University	2013
Science policy, Communication, and Advocacy training, ASA, CSSA, SSSA	2014
Mentoring workshop, W.K. Kellogg Biological Station	2013

Professional Memberships

Ecological Society of America, Soil Science Society of America, Crop and Soil Science Society of America, and Agronomy Society of America, Association for Women Soil Scientists, Graduate Women in Science, Xi Sigma Pi Honor Society.

Outreach, Public Engagement, DEIJ Efforts

Participated in the Trans and Gender Non-conforming Field Alliance training. March 24th, 2025.

Participated in the Association for women in Science – DEI Foundations: Building your leadership engagement strategy. June 2024.

Generated soil health test reports for farmers in the Midwest and Northeast (2019-present) 500+.

Sprunger, C.D. Advancing soil health to inform soil carbon dynamics and biodiversity. Symposium: Research, Extension, and Programming Highlights of NCA&T and MSU. April 26, 2023.

Sprunger, C.D. Round Table Discussion: Preparing for oral defense workshop. Women of Color Initiatives. Michigan State University. February 2023. Invited Panelist.

Sprunger, C.D. 2023. A holistic approach to assessing soil health. Open Access Government. January 2023. https://doi.org/10.56367/OAG-037-1040.

Sprunger, C.D. 2022. In the Weeds: All there is to know about organic matter! Michigan Field Crops Team. Podcast.

Sprunger, C.D. 2022. Deteriorating soil health: 'A teaspoon of soil contains more life than there are humans on earth". Open Access Government. October 2022. https://doi.org/10.56367/OAG-036-10403

Sprunger, C.D. 2022. The simple act of welcoming. Planting seeds and storytelling (DEIJ) Working Group. LTER All Scientists Meeting. Pacific Grove, CA. September, 2022.

Sprunger, C.D. 2022. Biodiversity! Smithsonian Science Education Center. Science for Global Goals.

Scienta Feature: Tackling Soil Health from Every Angle. March 2022 https://doi.org/10.33548/SCIENTIA803

Judge for Agronomy, Crops, and Soils Student Diversity Poster Competition. ASA-CSA-SSSA. Virtual Annual Meetings. November 2020.

Leaders of Color Career Panel: Young Professionals in the Environmental Space. River Network. October 7, 2020.

European Geosciences Union. Black in Soil Science Feature. Blog Post. 2020. https://blogs.egu.eu/divisions/sss/2020/07/06/black-in-soil-science/

Soil health in the No-till trial presentation to legislative staffers. CFAES. August 23, 2019.

Designed hands on soil science activities for 5th and 6th grade students as part of the Expanding Your Horizons Girl's Science Day. College of Wooster. April 6th, 2019.

Lin, E., **C.D. Sprunger**, N. T. Basta. Report on Heavy Metal Contamination from UXO and Landmine Areas in Cambodia. Cambodian government. April 2019.

Sprunger, C.D. 2019. Feature Interview. Women in Ag Science Organization. April 2, 2019. https://www.womeninagscience.org/post/christine-sprunger-soil-science-assistant-professor.