

## Jennifer Blesh

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Research group website: <https://bleshlab.com/>

### EDUCATION

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- 2012      Doctor of Philosophy, Soil and Crop Sciences, Cornell University, Ithaca, NY  
*Minors:* Ecology and Evolutionary Biology, Development Sociology
- 2008      Master of Science, Soil and Crop Sciences, Cornell University, Ithaca, NY
- 2003      Bachelor of Science, Ecology, University of Georgia, Athens, GA

### POSITIONS

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- 2020 – present      Associate Professor, School for Environment and Sustainability, University of Michigan, Ann Arbor, MI
- 2014 – 2020      Assistant Professor, School for Environment and Sustainability, University of Michigan, Ann Arbor, MI
- 2012 – 2013      Post-Doctoral Fellow: National Science Foundation International Research Fellowship Program, Faculty of Agronomy and Veterinary Medicine, Federal University of Mato Grosso, Cuiabá, MT, Brazil, and Department of Development Sociology, Cornell University, Ithaca, NY  
*Advisors:* José Fernando Scaramuzza and Wendy Wolford
- 2005 – 2011      Graduate Research Assistant: Department of Horticulture, Cornell University, Ithaca NY
- 1999 – 2000      AmeriCorps Member: Habitat for Humanity International, Americus, GA.

### PUBLICATIONS: PEER-REVIEWED JOURNAL ARTICLES

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#### \*Advisees

44. Vang Rasmussen, L., Grass, I., Mehrabi, Z., Smith, O.M., Bezner-Kerr, R., **Blesh**, J., Garibaldi, L.A., Isaac, M.E., Kennedy, C.M., Wittman, H., plus 49 other authors. 2024. Agricultural diversification promotes environmental and social synergies. *Science* 384(6691):87-93. <https://www.science.org/doi/full/10.1126/science.adj1914>.
43. **Blesh**, J. and M. Schipanski. 2024. Blending knowledge systems for agroecological nutrient management and climate resilience [Commentary]. *Journal of Agriculture, Food Systems, and Community Development*. <https://doi.org/10.5304/jafscd.2024.133.004>
42. Surdoval, A., Jain, M., Blair, E., Wang, H., and J. **Blesh**. 2024. Financial incentive programs and farm diversification: Assessing opportunities and challenges. *Environmental Research Letters* 19(4). <https://iopscience.iop.org/article/10.1088/1748-9326/ad35d8/meta>.

41. Wang, X., **Blesh**, J., Rao, P., Paliwal, A., Umashaanker, M., and M. Jain. 2023. Mapping cover crop species in Southeastern Michigan using Sentinel-2 satellite data and Google Earth Engine. *Frontiers in Artificial Intelligence* 6. <https://doi.org/10.3389/frai.2023.1035502>.
40. James, D., **Blesh**, J., Levers, C., Ramankutty, N., Bicksler, A.J., Mottet, A. and H. Wittman. 2023. The state of agroecology in Brazil: An indicator-based approach to identifying municipal “bright spots.” *Elementa* 11(1): 00011. <https://doi.org/10.1525/elementa.2023.00011>.
39. **Blesh**, J., Mehrabi, Z., Wittman, H., Bezner Kerr, R., James, D., Madsen, S., Smith, O.M., Snapp, S.S., Stratton, A.E., Bakkar, M., Bicksler, A.J., Galt, R.E., Garibaldi, L.A., Gemmill-Herren, B., Grass, I., Isaac, M.E., John, I., Jones, S.K., Kennedy, C.M., Klassen, S., Levers, C., Vang Rasmussen, L. and C. Kremen, C. 2023. Against the odds: network and institutional pathways enabling agricultural diversification. *One Earth*. <https://doi.org/10.1016/j.oneear.2023.03.004>.
38. Bressler, A. and J. **Blesh**. 2023. A grass-legume cover crop maintains nitrogen inputs and nitrous oxide fluxes from an organic agroecosystem. *Ecosphere* 14(2): e4428. <https://doi.org/10.1002/ecs2.4428>.
37. **Blesh**, J., Isaac, M., Schipanski, M.E. and S.J. Vanek. 2022. Editorial: Ecological nutrient management as a pathway to Zero Hunger. Special Issue in *Frontiers in Sustainable Food Systems* 6. <https://doi.org/10.3389/fsufs.2022.1079973>.
36. Plumhoff, M., Connell, R.K., Bressler, A., and J. **Blesh**. 2022. Management history and mixture evenness affect the ecosystem services from a crimson clover-rye cover crop. *Agriculture, Ecosystems and Environment* 339. <https://doi.org/10.1016/j.agee.2022.108155>.
35. Bressler, A. and J. **Blesh**. 2022. Episodic N<sub>2</sub>O emissions following tillage of a legume-grass cover crop mixture. *Biogeosciences* 19, 3169–3184. <https://doi.org/10.5194/bg-19-3169-2022>.
34. Stratton, A.E., Comin, J.J., Siddique, I., Zak, D.R., Filipini, L., Lucas, R.R., and J. **Blesh**. 2022. Assessing cover crop and intercrop performance along a farm management gradient. *Agriculture Ecosystems and Environment* 332: 107925. <https://doi.org/10.1016/j.agee.2022.107925>.
33. Bressler, A., Plumhoff, M., Hoey, L., and J. **Blesh**. 2021. Cover Crop Champions: Linking strategic communication approaches with farmer networks to support cover crop adoption. *Society and Natural Resources*. <https://doi.org/10.1080/08941920.2021.1980165>.
32. Valencia, V., Wittman, H., Jones, A.D., and J. **Blesh**. 2021. Public policies for agricultural diversification: Implications for gender equity. *Frontiers in Sustainable Food Systems*. <https://doi.org/10.3389/fsufs.2021.718449>.
31. Sampson, D., Cely, M., Gemmill-Herren, B., Babin, N., Bernhart, A., Bezner Kerr, R., **Blesh**, J., Bowness, E., Feldman, M., Goncalves, A.L.R., James, D., Kerksen, R., Klassen, S., Wezel, A., and H. Wittman. 2021. Food sovereignty and rights-based approaches strengthen food security and nutrition across the globe: A systematic review. *Frontiers in Sustainable Food Systems*. <https://doi.org/10.3389/fsufs.2021.686492>.
30. Herrick, E. and J. **Blesh**. 2021. Intraspecific trait variation improves understanding and management of cover crop outcomes. *Ecosphere*. 12 (11), e03817. <https://doi.org/10.1002/ecs2.3817>.

29. Stratton, A.E., Wittman, H., and J. **Blesh**. 2021. Diversification supports farm income and improved working conditions during agroecological transitions in southern Brazil. *Agronomy for Sustainable Development* 41(3): 1-22. <https://doi.org/10.1007/s13593-021-00688-x>.
28. **Blesh**, J. and T. Ying. 2020. Soil fertility status controls the decomposition of litter mixture residues. *Ecosphere* 11 e03237. <https://doi.org/10.1002/ecs2.3237>.
27. Stratton, A.E., Kuhl, L., and J. **Blesh**. 2020. Ecological and nutritional functions of agroecosystems as indicators of smallholder resilience. *Frontiers in Sustainable Food Systems*. <https://doi.org/10.3389/fsufs.2020.543914>.
26. Zimnicki, T., Boring, T., Evenson, G., Kalcic, M., Karlen, D., Zhang, Y. and J. **Blesh**. 2020. On quantifying water quality benefits of healthy soils. *BioScience*. doi:10.1093/biosci/biaa011
25. Jain, M., Singh, B., Rao, P., Srivastava, A.K., Poonia, S., **Blesh**, J., Azzari, G., McDonald, A.J., and D.B. Lobell. 2019. Using satellite data to evaluate and target sustainable intensification interventions can double their impact. *Nature Sustainability* 2: 931-934. <https://doi.org/10.1038/s41893-019-0396-x>.
24. **Blesh**, J. 2019. Feedbacks between nitrogen fixation and soil organic matter increase ecosystem functions in diversified agroecosystems. *Ecological Applications*. <https://doi.org/10.1002/eap.1986>.
23. Bukovsky-Reyes, S., Isaac, M., and J. **Blesh**. 2019. Effects of intercropping and soil properties on root functional traits of cover crops. *Agriculture, Ecosystems, and Environment*. <https://doi.org/10.1016/j.agee.2019.106614>.
22. Valencia, V., Wittman, H., and J. **Blesh**. 2019. Structuring markets for resilient farming systems. *Agronomy for Sustainable Development* 39: 25. <https://doi.org/10.1007/s13593-019-0572-4>.
21. **Blesh**, J. Hoey, L., Jones, A.D., Perfecto, I. and H. Friedmann. 2019. Development pathways toward “zero hunger.” *World Development* 118: 1-14. <https://doi.org/10.1016/j.worlddev.2019.02.004>.
20. Zak, D.R., Pellitier, P.T., Argiroff, W.A., Castillo, B., James, T.Y., Nave, L.E., Averill, C., Beidler, K., Bhatnagar, J., **Blesh**, J., Classen, A.T., Craig, M., Fernandez, C.W., Gunderson, P., Johansen, R., Koide, R., Lilleskov, E.A., Lindall, B.D., Nadelhoffer, K., Phillips, R.P., and A. Tunlid. 2019. Exploring the function of ectomycorrhizal fungi in soil organic matter dynamics. *New Phytologist*. <https://doi.org/10.1111/nph.15679>.
19. **Blesh**, J., VanDusen, B.M., and D.C. Brainard. 2019. Managing ecosystem services with cover crop mixtures. *Agronomy Journal* 111: 826-840. doi:10.2134/agronj2018.06.0365
18. Vandermeer, J., Aga, A., Allgeier, J.E., Badgley, C., Baucom, R., **Blesh**, J., Fink Shapiro, L., Jones, A.D., Hoey, L., Jain, M., Perfecto, I., and M.L. Wilson. 2018. Feeding Prometheus: An interdisciplinary approach for solving the global food crisis. *Frontiers in Sustainable Food Systems* 2:39. doi: 10.3389/fsufs.2018.00039.
17. Jones, A.D., Hoey, L., **Blesh** J., Janda, K., Llanque, R., and A.M. Aguilar. 2018. Peri-urban, but not urban regions, are associated with the nutritional double burden among children and within households in Bolivia. *The Journal of Nutrition* 148: 632-642. <https://doi.org/10.1093/jn/nxy017>.
16. **Blesh**, J. 2018. Functional traits in cover crop mixtures: biological nitrogen fixation and multifunctionality. *Journal of Applied Ecology* 55: 38-48. <https://doi.org/10.1111/1365-2664.13011>.

15. **King**, A.E. and **J. Blesh**. 2018. Crop rotations for increased soil carbon: perenniality as a guiding principle. *Ecological Applications* 28:249-261. <https://doi.org/10.1002/eap.1648>.
14. **Guerra**, J., **Blesh**, J., Schmitt, A., and H. Wittman. 2017. Pathways to agroecological management through mediated markets in Santa Catarina, Brazil. *Elementa: Science of the Anthropocene* 5: 67. doi: <https://doi.org/10.1525/elementa.248>.
13. Wittman, H., Chappell, M.J., Abson, D., Bezner-Kerr, R., **Blesh**, J., Hanspach, J., Perfecto, I., and J. Fischer. 2017. A social-ecological perspective on harmonizing food security and biodiversity conservation. *Regional Environmental Change* 17: 1291-1301. <https://doi.org/10.1007/s10113-016-1045-9>.
12. Jones A.D., Hoey, L., **Blesh**, J., Miller, L., **Green**, A., and L. Shapiro. 2016. A systematic review of the conceptualization and measurement of sustainable diets. *Advances in Nutrition* 7: 641-664. <https://doi.org/10.3945/an.115.011015>.
11. Schipanski, M.E., MacDonald, G.K., Rosenzweig, S., Chappell, M.J., Bennett, E.M., Bezner-Kerr, R., **Blesh**, J., Crews, T., Drinkwater, L.E., Lundgren, J., and C. Schnarr. 2016. Realizing resilient food systems. *BioScience* 66: 600-610. doi:10.1093/biosci/biw052.
10. Crews, T.E., **Blesh**, J., Culman, S.W., Hayes, R.C., Jensen, E.S., Mack, M.C., Peoples, M.B., and M.E. Schipanski. 2016. Going where no grains have gone before: from early to mid-succession. *Agriculture, Ecosystems and Environment* 223: 223-238. <https://doi.org/10.1016/j.agee.2016.03.012>.
9. **Blesh**, J. and H. Wittman. 2015. "Brasilience:" Assessing resilience in land reform settlements in the Brazilian Cerrado. *Human Ecology* 43:4. <https://doi.org/10.1007/s10745-015-9770-0>.
8. Wittman, H., and **J. Blesh**. 2015. Food sovereignty and Fome Zero: Connecting public food procurement programs to sustainable rural development in Brazil. *Journal of Agrarian Change*. <https://doi.org/10.1111/joac.12131>.
7. **Blesh**, J. and S.A. Wolf. 2014. Transitions to agroecological farming systems in the Mississippi River Basin: toward an integrated socioecological analysis. *Agriculture and Human Values* 31:621-635. doi: 10.1007/s10460-014-9517-3.
6. **Blesh**, J. and L.E. Drinkwater. 2014. Retention of <sup>15</sup>N-labeled fertilizer in an Illinois prairie soil with winter rye. *Soil Science Society of America Journal* 78:496-508. doi:10.2136/sssaj2013.09.0403.
5. **Blesh**, J. and L.E. Drinkwater. 2013. The impact of nitrogen source and crop rotation on nitrogen mass balances in the Mississippi River Basin. *Ecological Applications* 23(5):1017-1035. <https://doi.org/10.1890/12-0132.1>.
4. **Gardner (Blesh)** J. and L.E. Drinkwater. 2009. The fate of nitrogen in grain cropping systems: a meta-analysis of <sup>15</sup>N field experiments. *Ecological Applications* 19(8): 2167-2184. <https://doi.org/10.1890/08-1122.1>.
3. Pimentel, D., **J. Gardner (Blesh)**, A.J. Bonnifield, X. Garcia, J.B. Grufferman, C.M. Horan, J.L. Schlenker, and E.E. Walling. 2007. Energy efficiency and conservation for individual Americans. *Environment, Development and Sustainability* 11:523-546. <https://doi.org/10.1007/s10668-007-9128-x>.

2. **Blesh, J.** and G.W. Barrett. 2006. Farmers' attitudes regarding agrolandscape ecology: a regional comparison. *Journal of Sustainable Agriculture* 28(3):121-143.

1. O'Malley, M., **Blesh, J.**, Williams, M. and G.W. Barrett. 2003. Food preferences and bioenergetics of the white-footed mouse (*Peromyscus leucopus*) and the golden mouse (*Ochrotomys nuttalli*). *Georgia Journal of Science* 61:233-237.

#### OTHER PUBLICATIONS

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Sutton, E. and J. **Blesh**. 2023. Field assessment protocol for non-destructive estimation of single- and multi-species cover crop biomass. *Protocols.io*.

[dx.doi.org/10.17504/protocols.io.n2bvj3n9wlk5/v1](https://doi.org/10.17504/protocols.io.n2bvj3n9wlk5/v1)

Valencia, V., Wittman, H. and J. **Blesh**. 2021. Public procurement for farming system diversification. *Pages 248-261 in: Swensson, L.F.J., Hunter, D., Schneider, S., and F. Tartanac, Eds. Public Food Procurement for Sustainable Food Systems and Healthy Diets. Volume 1.* Food and Agriculture Organization of the United Nations (FAO), Alliance of Bioversity International and CIAT, and Universidade Federal do Rio Grande do Sul – Editora da UFRGS, Rome, Italy.

**Blesh, J.** and R.E. Galt. 2017. Transitions to agroecological nutrient management practices in the USA Corn Belt. *Pages 85-126 in: Wezel, A., Ed. Agroecological Practices for Sustainable Agriculture.* World Scientific, London, UK.

Daigger, G., Newell, J.P., Love, N., McClintock, N., Gardiner, M., Mohareb, E., Horst, M., **Blesh, J.**, Ramaswami, A. 2016. Report: Scaling up agriculture in city-regions to mitigate FEW system impacts. Ann Arbor, MI: School of Natural Resources and Environment, Department of Civil and Environmental Engineering, University of Michigan. 68 pages.

**Blesh, J.** 2013. Review of the book Nature's matrix: linking agriculture, conservation and food sovereignty. *Journal of Peasant Studies* 40:786-790.

<https://doi.org/10.1080/03066150.2013.824742>. (IF=4.3)

**Blesh, J.** and M. Williams. 2003. Booklet: *HorseShoe Bend: A center for ecological teaching, research and service at the University of Georgia*. Odum School of Ecology, 28 pages.

#### RESEARCH FUNDING: CURRENT GRANTS

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2024-2028 “Increasing ecosystem services from agriculture by coupling ecological nutrient management and circular nutrient economies.” USDA NIFA: AFRI Foundational Program. **Role: PI** (\$800,000).

2024-2029 “Pollinator Health: Assess, Construct, Test, and Survey (PHACTS)” Meet the Moment Research Initiative, University of Michigan. **Role: Co-PI** (\$1,998,931).

2024-2026 “Improving cover crop performance with community science.” North Central Sustainable Agriculture and Research Education (SARE) Partnership Grant. **Role: PI** (\$49,992).

2022-2024 “Harnessing long-term data to understand the N demands of soil C sequestration across a crop diversification gradient”. Environmental Defense Fund. **Role: PI** (\$233,400).

2021-2025 “Transformative food systems fellows program: cultivating resilient agriculture” USDA NIFA National Needs Graduate and Postgraduate Fellowship Grant. **Role: Co-PI** (\$262,500).

2021-2024 “Understanding variation in cover crop performance across spatial scales” USDA NIFA Predoctoral Award to PhD student Etienne Herrick. **Role: PI** (\$180,000).

2021-2024 “Harnessing perennial grain-legume intercrops for agroecosystem sustainability” USDA NIFA: AFRI Foundational Program. **Role: PI** (\$338,976).

#### RESEARCH FUNDING: COMPLETED GRANTS

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2019-2023 “Linking plant traits with soil health to determine optimal cover crop mixtures on organic farms” USDA NIFA: Organic Transitions. **Role: PI** (\$500,000).

2019-2023 “Ecosystem services from cover crops: Management legacy effects from field to landscape scales.” USDA NIFA: AFRI Foundational Program. **Role: PI** (\$500,000).

2021-2023 “Diversifying cover crops to sequester carbon in agricultural soils” Graham Institute: Carbon Neutrality Acceleration Program. **Role: PI** (\$151,009).

2019-2021 “Next generation cover crops: driving innovation in soil management with participatory certification.” Conservation, Food and Health Foundation. **Role: Co-PI** (\$55,000); led by a non-profit partner in Santa Catarina, Brazil, CEPAGRO (*Center for the Study and Promotion of Community Agriculture*).

2018-2021 “Cover crop mixtures for nitrogen use efficiency on grain farms in Southern Michigan” North Central Region Sustainable Agriculture Research & Education (NCR SARE) Graduate Student Grant (to PhD student Alison Bressler). **Role: PI** (\$11,970)

2019-2021 “Establishing a SE Michigan sustainable livestock working group to increase supply-chain capacity from farmer to institutional procurement.” Graham Sustainability Institute, Catalyst Grant, University of Michigan. **Role: PI** (\$9,971).

2019-2020 “Managing agricultural diversity for ecological and nutritional goals” ADVANCE Elizabeth Caroline Crosby Research Award, University of Michigan. **Role: PI** (\$11,900).

2019-2020 “Cover crops for conservation: Does management legacy alter nitrogen losses?” University of Michigan Office of Research, Small Scale and Preliminary Projects. **Role: PI** (\$19,510).

2016-2017 “An integrated assessment of family farming systems in southern Brazil” ADVANCE Elizabeth Caroline Crosby Research Award, University of Michigan. **Role: PI** (\$12,800)

2016-2018 “Curriculum development in Sustainable Food Systems: Increasing the number and diversity of students in Sustainable Food System Studies” USDA Higher Education Challenge Grant. **Role: Co-PI** (\$138,000)

2015-2019 “Transforming Sustainability Education and Case-Based Teaching” University of Michigan, Transforming Learning for a Third Century Program. **Role: Co-PI**, with 17 others (\$1,595,749)

2015-2017 “Developing an innovative approach to measuring the livelihoods of smallholder farmers and testing critical linkages from farmer livelihoods to nutrition” IMMANA Grant, London School of Hygiene and Tropical Medicine. **Role: Co-PI** (\$346,232)

2015-2017 “A socio-ecological analysis of diversified agricultural landscapes in Santa Catarina, Brazil” UM-Brazil Partnership Grant, Graham Institute. **Role: PI** (\$90,000)

2015-2018 “Legume cover crop impacts on soil nitrogen cycling and soil fertility on organic vegetable farms” Ceres Trust, Organic Research Initiative. **Role: PI** (\$179,324)

2015-2018 “Food systems typologies and nutritional impacts in the transitioning Global South” Daniel and Nina Carasso Foundation, Sustainable Food System Project. **Role: Co-PI** (\$299,466)

2014-2015 “Socio-ecological resilience of diversified family farms in Mato Grosso, Brazil” UM-Brazil Partnership Sustainability Cooperation Grant. **Role: PI** (\$9,817)

2012-2013 “Agroecology in practice: Agrarian reform, ecological sustainability and social equality in Brazil” National Science Foundation, International Research Fellowship Program (IRFP). **Role: PI** (\$110,068)

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#### CURRENT MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Ecological Society of America; Soil Science Society of America; American Society of Agronomy; American Geophysical Union; Association of American Geographers; Agriculture, Food & Human Values Society; Sustainable Agriculture Education Association

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#### ACCOLADES AND AWARDS

2022- Nominated for the ACUM Outstanding Advisor Award at the University of Michigan

2017- Nominated for the Golden Apple Award, which recognizes outstanding university teaching at the University of Michigan

2012-2013 NSF International Research Postdoctoral Fellow

2010- Teresa Heinz Scholars for Environmental Research, Heinz Family Philanthropies

2009- Annie’s Sustainable Agriculture Scholarship, Annie’s Homegrown

2009-2010- Foreign Language and Area Studies Fellowship, Portuguese. U.S. Department of Education

2005-2007- NSF IGERT Fellowship, Biogeochemistry and Environmental Biocomplexity

2008- Natural Systems Agriculture Workshop Fellowship, The Land Institute

2008, 2010- Biogeochemistry and Environmental Biocomplexity Small Grants, Cornell University

2007- Land Institute Graduate Student Fellowship, The Land Institute

2002- Joshua Laerm Memorial Outstanding Ecology Undergraduate Award, Institute of Ecology, University of Georgia

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#### INVITED WORKSHOPS

2023. Agroecology Summit: Co-creating a research roadmap for the USA. Excelsior Springs, MO, May 22-25.

2019. “Can enhancing diversity help scale up agriculture’s benefits to people and the environment?” Role: Collaborator/Team Member; National Socio-Environmental Synthesis Center (SESYNC) Pursuit. PIs: Zia Mehrabi and Claire Kremen, University of British Columbia.

2018. Cooperative Institute for Great Lakes Research (CIGLR). *Improving Models of Nutrient Loading and Harmful Algal Blooms through a Watershed-Scale Approach that Emphasizes Soil Health and Upland Farming Practices*. The University of Michigan, Ann Arbor, MI, July 16-18.

2018. The University of British Columbia, Centre for Sustainable Food Systems. *A Research Network for Diversified Agroecosystems*. Vancouver, BC, June 12-14.

2018. Beyond Carbon Neutral. *Enhancing Long-Term Soil C Sequestration by Ectomycorrhizal Fungi*. The University of Michigan, Ann Arbor, MI, May 21-22.
2018. National Socio-Environmental Synthesis Center (SESYNC). *Data to Motivate Synthesis: Food- Energy-Water Nexus*. Annapolis, MD, February 26-28.
2016. Environmental Defense Fund. *Data Needs for Implementing an N Surplus Framework in EDF's Supply Chain Work*. Washington, D.C., July 19-20.
2015. National Science Foundation FEW Workshop. 'Scaling Up' Urban Agriculture to Mitigate Food-Energy-Water (FEW) Impacts. The University of Michigan, Ann Arbor, MI, October 5-6.
2014. The Land Institute. *New Roots for Ecological Intensification*. Estes Park, Colorado, October 27-31.
2013. National Socio-Environmental Synthesis Center (SESYNC). *Food Security, Equity and Ecological Sustainability: A multi-indicator, process-oriented framework for food systems research*. Annapolis, MD, October 8-9.

#### INVITED ACADEMIC PRESENTATIONS

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- Blesh, J.** 2024. Optimizing environmental benefits from diversified farms. *Institute for Global Change Biology Monthly Seminar Series*, University of Michigan, May 6.
- Blesh, J.** 2024. Advancing agroecological approaches to soil nutrient management. University of Minnesota, *Plant and Microbial Biology Weekly Seminar Series*, April 2.
- Blesh, J.** 2024. Ecological nutrient management with cover crops (lightning talk). *Kellogg Biological Station (KBS) 2024 LTAR Scientist and Stakeholder Summit*, January 19.
- Blesh, J.** and A.E. Stratton. 2021. Against the odds: Farmer-led transitions to agroecology in the midwestern US and southern Brazil. *Tufts University Hoch-Cunningham Lecture Series*, November 4.
- Blesh, J.** 2021. Linking crop diversity, soil health, and ecosystem function: from theory to practice. University of Kentucky, *Department of Plant and Soil Sciences Seminar Series*, April 9.
- Blesh, J., Bressler, A.,** and T. Zimnicki. 2020. Managing legume nitrogen fixation to reduce nitrogen losses from farms. AGU Annual Meeting *Bio-atmospheric Nitrogen Cycle* session, Virtual, December 16.
- Blesh, J.** 2020. Managing crop diversity to benefit people and ecosystems: understanding processes and outcomes in the US and Brazil. University of California, Berkeley, *Diversified Farming Systems Seminar Series*, November 9.
- Blesh, J.** 2020. Diversifying cropping systems to enhance agroecosystem multifunctionality. Michigan State University, *Kellogg Biological Station Seminar Series*. October 16.
- Blesh, J., Wittman, H., Valencia, V.,** and A.E. Stratton. 2019. Social-ecological linkages between policies, ecosystem functions, and food security in Brazilian agroecosystems. *Symposium—Agroecology with Communities: Cross-Disciplinary Collaborations Between Ecology, Agriculture, and Social Science*. Ecological Society of America Annual Meeting, Louisville, KY, August 13.
- Blesh, J.** 2019. Ecological approaches to managing soil biological processes for agroecosystem multifunctionality. *Symposium—Driving Multifunctionality through Soil Processes: Impacts of*



*Diversified Farming Systems on Soil Biology and Biogeochemistry*. Soil Science Society of America International Soils Meeting, San Diego, CA, January 7.

**Blesh, J.** 2018. Managing for multifunctionality: insights on carbon and nitrogen dynamics in agroecosystems. Cornell University, *Biogeochemistry and Environmental Sciences and Sustainability Seminar Series*. November 16.

**Blesh, J.** 2018. Understanding impacts of agroecosystem diversification using a social-ecological systems approach. Tufts University, *Department of Biology, Fall 2018 Seminar Series*, September 14.

**Blesh, J.** 2018. Managing ecological processes for agroecosystem multifunctionality. *School of Natural Resources Seminar*, The University of Missouri. August 29.

**Blesh, J.** 2018. The real world: On-farm and farmer-led research. The University of British Columbia Centre for Sustainable Food Systems Workshop. *A Research Network for Diversified Agroecosystems*. June 12.

**Blesh, J.** 2018. The role of ecological and interdisciplinary research in developing multifunctional agroecosystems. *Graduate Degree Program in Ecology Seminar Series (Series theme, "Multi-Functional Ecology: Perspectives across Scales and Systems")*, The Pennsylvania State University, State College, PA, March 19.

**Blesh, J.** 2017. Functional traits in agroecosystems: managing plant diversity for multifunctionality. *Green Life Science Symposium*, University of Michigan, Ann Arbor, MI, October 21.

**Blesh, J.** 2017. Leverage points for food system transformation toward sustainability. Invited keynote speech, *Food, The Future, and You Symposium*, University of British Columbia, Centre for Sustainable Food Systems, January 26.

**Blesh, J.** 2016. Rural landscapes as social-ecological systems: Examples from Brazil's Zero Hunger program. *International Colloquium on Global Food Security and Sustainability*, Colorado State University, Fort Collins, CO, November 30.

**Blesh, J.** 2016. Ecosystem management for resilient and multifunctional food systems. *Intersections Seminar Series*, Department of Geography, University of Toronto, Toronto, Ontario, Canada, November 18.

**Blesh, J.** 2016. Cropping system diversity, resilience, and multifunctionality. Center for Molecular and Clinical Epidemiology of Infectious Diseases (*MAC-EPID*) *Symposium: Agriculture: Health Benefits, Health Risks, and Environmental Impact, Pre-symposium workshop*, University of Michigan, April 14.

**Blesh, J., Drinkwater, L.E., Wittman, H., and S.A. Wolf.** 2015. Agroecology and resilience in socio-ecological systems. *Ecological Society of America Annual Meeting*. Baltimore Convention Center, Baltimore, MD, August 9-14.

**Blesh, J.** 2014. Socio-ecological resilience of family farms on land reform settlements in Mato Grosso, Brazil. *Department of Horticultural Science Seminar*, University of Minnesota, St. Paul, MN, November 19.

**Blesh, J.** 2014. Working with community stakeholders to improve food system resilience: comparison across industrialized and developing countries. *Resilience 2014, Resilience and Development: Mobilizing for Transformation*, Montpellier, France, May 7.

**Blesh, J.** 2014. Transitions to agroecological management: The case of nitrogen pollution from the Mississippi River Basin. *Technological & Social Innovation in Global Food Systems*, Yale School of Forestry and Environmental Studies, February 19.

**Blesh, J.** 2014. Brasilience: Assessing resilience on smallholder farms in Mato Grosso, Brazil. *Kellogg Biological Station Seminar Series*, Michigan State University. January 24.

**Blesh, J.** 2013. Agroecosystem management and nitrogen balance on grain farms in the Mississippi River Basin. *Department of Horticulture and Crop Science Seminar*, The Ohio State University. November 8.

**Blesh, J.** 2013. Brasilience: Realizing resilient food systems in Mato Grosso, Brazil. Ignite! Symposium Talk, *Ecological Society of America Annual Meeting*. Minneapolis, MN, August 4-9.

**Blesh, J.** 2012. From the Mississippi River Basin to the Cerrado: Assessing Processes and Practices of Sustainable Food Systems. *School of Natural Resources and Environment Seminar*, University of Michigan. Dec. 4.

**Blesh, J.** 2011. Agroecosystem sustainability in the Mississippi River Basin: Assessing ecological and social drivers of nitrogen pollution. *Agronomy Department Seminar*, Iowa State University. Oct. 6.

**Blesh, J.** and M.J. Chappell. 2011. Revolutionary action ecology: Concepts and actions for a new generation of (agro) ecological citizen-scientists. *Ecological Society of America Annual Meeting*. Austin Convention Center, Austin, TX Aug. 7-12.

**Blesh, J.** 2011. Engaged agroecology: Exploring the dynamic processes and practices of sustainable food systems. *Faculty of Land and Food Systems Seminar*, University of British Columbia. March 2.

**Blesh, J., L.E. Drinkwater, and S.A. Wolf.** 2010. The dilemma of nitrogen pollution from farms in the upper Midwest: Exploring opportunities for change through cross-disciplinary collaboration. *Enhancing Communication in Cross-Disciplinary Research*, sponsored by the National Science Foundation and the University of Idaho. Coeur d'Alene, Idaho, Sept. 30-Oct. 2, 2010.

**Blesh, J., L.E. Drinkwater, and R.E. Galt.** 2009. What barriers prevent the application of soil ecology to agricultural systems? *Ecological Society of America Annual Meeting*. Albuquerque, NM, Aug. 2-7.

#### CONFERENCE PRESENTATIONS

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**Blesh, J., Sutton, E., Morrone, V. and S. Snapp.** 2023. Linking plant traits with soil health to determine optimal cover crop mixtures on organic farms. Project Director Meeting OREI and ORG Programs, USDA NIFA, Washington, DC, April 19-20.

**Blesh, J., Valencia, V., and H. Wittman.** 2018. Structuring markets for diversified agricultural ecosystems. Sustainability and Development Conference. Ann Arbor, MI, Nov. 9-11.

**Blesh, J.** 2018. Assessing legume nitrogen fixation in cover crop mixtures across a soil fertility gradient. Ecological Society of America Annual Meeting. New Orleans, LA, Aug. 5-10.

**Blesh, J.** 2018. Managing soils for C stabilization: Insights from agroecosystems. The University of Michigan, Beyond Carbon Neutral Workshop. *Enhancing Long-Term Soil C Sequestration by Ectomycorrhizal Fungi*. May 21.

- Blesh, J.** 2016. Assessing on-farm performance of cover crop mixtures in vegetable cropping systems. American Society of Agronomy-Crop Science Society of America-Soil Science Society of America (ASA-CSSA-SSSA) International Annual Meeting, Phoenix, AZ, Nov. 6-9.
- Blesh, J.** 2015. The ecology of agroecology and the agroecology of food sovereignty. Michigan Meeting on Food Sovereignty, University of Michigan, May 29.
- Blesh, J.** and H. Wittman. 2015. Food sovereignty in Brazil: an interdisciplinary indicator and evaluation framework. Association of American Geographers Annual Meeting. Chicago, IL, April 21-25.
- Blesh, J.** 2014. Assessing resilience of smallholder farms in the Brazilian Cerrado. ASA-CSSA-SSSA International Annual Meeting, Long Beach, CA, Nov. 1-5.
- Blesh, J.** and H. Wittman. 2014. Resilience of smallholder farms in the Brazilian Cerrado: An interdisciplinary and participatory assessment framework. Resilience 2014, Resilience and Development: Mobilizing for Transformation, Montpellier, France, May 4-8.
- Blesh, J.** and H. Wittman. 2013. Land reform as a socioecological system: assessing food sovereignty and resilience in Mato Grosso, Brazil. Association of American Geographers Annual Meeting. Los Angeles, CA, April 9-13.
- Blesh, J.** and L.E. Drinkwater. 2010. Comparing nitrogen cycling on grain farms in the Mississippi River Basin using a mass balance approach. Ecological Society of America Annual Meeting. Pittsburgh, PA, Aug. 1-6.
- Blesh, J.,** L.E. Drinkwater, and S.A. Wolf. 2010. A socioecological lens on nitrogen pollution of waterways: exploring farm-scale dynamics in the Mississippi River Basin. Association of American Geographers Annual Meeting, Washington, D.C., April 14-18.
- Blesh, J.** and L.E. Drinkwater. 2009. Agroecosystem management and nitrogen balance on grain farms in the Midwestern United States. ASA-CSSA-SSSA International Annual Meeting, Pittsburgh, PA, Nov. 1-5.
- Blesh, J.** and L.E. Drinkwater. 2008. How does agroecosystem management affect potential nitrogen loss from grain farms in the Mississippi River Basin? Joint Annual Meeting, ASA-CSSA-SSSA and GSA. Houston, TX, Oct. 5-9.
- Blesh, J.** and L.E. Drinkwater. 2008. The fate of nitrogen in grain cropping systems: A meta-analysis of <sup>15</sup>N field experiments. Ecological Society of America Annual Meeting, Milwaukee, WI, Aug. 3-8.
- Blesh, J.** and L.E. Drinkwater. 2006. Understanding human impacts on the nitrogen cycle using a mass balance approach. SWCS conference, Managing Agricultural Landscapes for Environmental Quality, Strengthening the Science Base. Kansas City, Missouri, Oct.11-13.
- Blesh, J.** and G.W. Barrett. 2004. Farmers' attitudes regarding agroecology: a regional comparison. Georgia Conservation Tillage Alliance conference, Sustainable Agriculture and Conservation Tillage: A Systems Approach Training. Douglas, Georgia, Feb. 10.
- Blesh, J.** and M. Williams. 2003. Food preferences and bioenergetics of the white-footed mouse (*Peromyscus leucopus*) and the golden mouse (*Ochrotomys nuttalli*). Georgia Academy of Sciences annual meeting, Mar. 21.

## CONFERENCE SESSIONS ORGANIZED

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Sustainability and Development Conference, University of Michigan, Ann Arbor, MI, November 9-11, 2018. Coordination Committee Member.

Sustainability and Development Conference, University of Michigan, Ann Arbor, MI, Nov. 9-11, 2018. Co-organizer and moderator of the session, Development Pathways Towards Zero Hunger: Insights from Ecology, Geography, Public Health, and Policy Science.

Association of American Geographers Annual Meetings, Boston, MA, April 5-9, 2017. Co-organizer and chair of three sessions titled: Resilience, Food, and Agriculture: Social-Ecological Frameworks for Sustainability and Social Justice.

Member, Organizing Committee, Michigan Meeting on Food Sovereignty: Construction of an International Sustainable Food Movement, University of Michigan, May 28-30, 2015.

Ecological Society of America Annual Meeting, Albuquerque, NM, Aug. 2-7, 2009. Co-organizer and moderator of the symposium: Agroecology for a Sustainable Future.

2<sup>nd</sup> National Conference on Facilitating Sustainable Agriculture Education, Cornell University, Ithaca, NY, July 11-14, 2007. Chair of facilitation workgroup; helped coordinate facilitation of the meeting's participatory format.

## CO-AUTHORED CONFERENCE AND POSTER PRESENTATIONS

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### \*Advisees

Connell, RK., O'Neill, B., and J. **Blesh**. 2023. Harnessing data from long-term sites to understand the N demands of soil C sequestration. Oral presentation. ASA-CSSA-SSSA Annual Meeting, St. Louis, MO, Oct. 30.

Sutton, E., and J. **Blesh**. 2023. Understanding cover crop performance with citizen science. Oral presentation. ASA-CSSA-SSSA Annual Meeting, St Louis, MO, October 30.

Chojnowski, S., Sutton, E., and J. **Blesh**. 2023. Using citizen science to inform Great Lakes cover crop management. Poster presentation. Kellogg Biological Station Undergraduate Research Symposium, Hickory Corners, MI, July 26.

Nord, A. and J. **Blesh**. 2022. Agronomic productivity and nitrogen dynamics in a 2- and 3-year perennial grain-legume intercropping system. ASA-CSSA-SSSA 2022 International Annual Meeting, Baltimore, MD, Nov. 8.

Sutton, E. and J. **Blesh**. 2022. Belowground cover crop traits and functions along a soil health gradient. Ecological Society of America Annual Meeting, Montreal, Quebec, Canada, Aug. 17.

Ward, M., Herrick, E. and J. **Blesh**. 2022. Using observational and experimental approaches to understand cover crop performance. Undergraduate Research Opportunity Program (UROP) Spring Symposium, University of Michigan, Ann Arbor, MI, April 20.

Herrick, E., and J. **Blesh**. 2022. Citizen science for Great Lakes cover crops. Michigan University-wide Sustainability & Environment Conference. Ann Arbor, MI, February 2-4.

Stratton, AE, and J. **Blesh**. 2021. Cover cropping and intercropping increase crop nutrient content and nutrient yield in vegetable agroecosystems. Oral presentation. 2<sup>nd</sup> International Agrobiodiversity Congress, Rome, Italy, Nov. 15-18.

Stratton, AE, Comin, JJ, Siddique, I, Filipini, LD, Lucas, R, and J. **Blesh**, J. 2021. Agroecosystem diversification increases soil nitrogen availability and vegetable yields across a soil fertility gradient in southern Brazil. Oral presentation. Ecological Society of America Annual Meeting, Long Beach, CA, Aug. 2-6.

Bressler, A., M. Plumhoff, L. Hoey, and J. **Blesh**. 2021. Cover Crop Champions: Linking strategic communication approaches with farmer networks to support cover crop adoption. Oral presentation. International Association for Society and Natural Resources Conference. June 20-24.

Stratton, A.E., Wittman, H., and J. **Blesh**. 2021. Diversification supports farm profitability and improved working conditions during agroecological transitions. Oral presentation. American Association of Geographers Annual Meeting, Seattle, WA, Apr. 7-11.

Bressler, A., and J. **Blesh**. 2021. Cover crop decomposition on higher fertility soils leads to higher pulse N<sub>2</sub>O emissions following tillage. Oral presentation. Science for Mitigation of Trace Gas Emissions. American Geophysical Union Fall Meeting, New Orleans, LA, Dec. 13-17.

Bressler, A., Plumhoff, M., Hoey, L., and J. **Blesh**. 2020. Cover Crop Champions: farmer-farmer messaging about cover cropping in the U.S. Midwest. Oral Presentation. Michigan University-Wide Sustainability and Environment Conference 2020, Ann Arbor, MI, Feb 20-22.

Valencia, V., Wittman H., and J. **Blesh**. 2019. Sustainable public procurement: An underutilized policy instrument to transform governance in food systems. Oral Presentation. Conference on Earth System Governance, Oaxaca, Mexico, Oct.

Stratton, A.E. and J. **Blesh**. 2019. Transitions to agroecological management: effects of increased crop functional diversity vary along environmental gradients. Oral Presentation. Ecological Society of America Annual Meeting, Louisville, KY, Aug. 15.

Bressler, Alison and J. **Blesh**. 2019. Managing cover crop mixtures to reduce soil N<sub>2</sub>O flux while maintaining crop nitrogen assimilation. Oral Presentation. Ecological Society of America Annual Meeting, Louisville, KY, Aug. 15.

Herrick, E. and J. **Blesh**. 2019. Plant functional traits as a predictive link between cover crop diversity and agroecosystem function. Oral presentation. Ecological Society of America Annual Meeting, Louisville, KY, Aug. 15.

Stratton, A.E. and J. **Blesh**. 2019. Transitions to sustainable farm management: impacts of crop diversification across environmental gradients. Oral presentation. Michigan University-Wide Sustainability (MUSE) Initiative Conference, Ann Arbor, MI, February 22.

Stratton, A.E. and J. **Blesh**. 2018. *O manejo da diversidade funcional nos agroecossistemas: efeitos na fertilidade do solo e a produtividade e qualidade nutricional dos cultivos*. Oral presentation in Portuguese. VII Congreso de la Sociedad Científica Latinoamericana de Agroecología (SOCLA), Guayaquil, Ecuador, Oct. 2-5.

Bressler, A. and J. **Blesh**. 2018. Ecological nutrient management with cover crop mixtures: impacts on nitrous oxide flux following soil disturbance. Oral presentation. Ecological Society of America Annual Meeting. New Orleans, LA, Aug. 5-10.

Stratton, A.E. and J. **Blesh**. 2018. Opportunities for agroecological management in fruit and vegetable systems. Oral presentation. Workshop: Investigating Global Fruit and Vegetable Food

Systems to Help Bring Sustainable Nutrition Security. Aspen Global Change Institute, Keystone Policy Center, Keystone, CO, July 31.

Hoey, L., **Blesh**, J. Llanque, R. and A.D. Jones. 2018. Explaining the nutritional double burden: The (non)role of food environments in Bolivia. Oral presentation. Latin American Studies Conference, Barcelona, Spain, May 23.

Herrick, E. and J. **Blesh**. 2018. Plant functional traits as a predictive link between cover crop diversity and agroecosystem function. Oral presentation. Program in the Environment Honors Symposium. University of Michigan, April 27.

Herrick, E., Moghtader, J., and J. **Blesh**. 2017. Summer cover crops: functional traits and ecosystem services. Poster presentation. Green Life Science Symposium, University of Michigan, October 21.

Herrick, E., and J. **Blesh**. 2017. Farming for a sustainable future. Oral presentation. LSA Honors Summer Fellowship Symposium. University of Michigan, August 14-18.

Stratton, A.E., Kuhl, L., and J. **Blesh**. 2017. Ecological and nutritional indicators for agroecosystem resilience. Poster presentation. Ecological Society of America Annual Meeting. Oregon Convention Center, Portland, OR, August 6-11.

Hoey, L., **Blesh**, J., Llanque, R., and A.D Jones. 2017. Explaining the nutritional double burden: The (non)role of food environments in Bolivia. Oral presentation. Annual Meetings and Conference of the Agriculture, Food & Human Values Society (AFHVS) and the Association for the Study of Food and Society (ASFS), Los Angeles, CA.

Valencia, V., Jones, A., and J. **Blesh**. 2017. Assessing links between agrobiodiversity and human nutrition among family farmers in Brazil: The role of gender equity and mediated markets. Oral presentation. Association of American Geographers Annual Meetings, Boston, MA, April 5-9.

Jones, A.D., Hoey, L., **Blesh**, J., Janda, K., and A.M. Aguilar. 2017. Peri-urban, but not urban regions, in Bolivia are associated with the double burden of malnutrition among children and within households. Oral presentation. Experimental Biology Conference, Chicago, IL, April.

VanDusen, B. and J. **Blesh**. 2017. Assessing performance of cover crop mixtures in organic vegetable cropping systems. Poster presentation. Midwest Organic and Sustainable Education Service (MOSES) Conference, La Crosse, WI, February 23-25.

Jones, A.D., Janda, K., Hoey, L., **Blesh**, J., Llanque, R., Aguilar, A.M., and L. Rico. 2015. Examining the influence of food insecurity on the nutritional double burden across gradients of urbanicity in Bolivia. Oral presentation. Second International Conference on Global Food Security, Ithaca, NY, October.

King, A.E. and J. **Blesh**. 2015. Effects of species and functional diversity of crop rotations on soil organic matter: a meta-analysis. Oral presentation. Ecological Society of America Annual Meeting. Baltimore Convention Center, Baltimore, MD, August 9-14.

Wittman, H. and J. **Blesh**. 2015. Food sovereignty and Fome Zero: connecting public food procurement programs to sustainable rural development in Brazil. Oral presentation. Association of American Geographers Annual Meeting. Chicago, IL, April 21-25.

Tonitto, C., **Blesh**, J., David, M.B., and L.E. Drinkwater. 2011. Nitrogen management through coupling carbon and nitrogen in agroecosystems. Oral presentation. American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 5-9.

Schipanski, M. and J. **Blesh**. 2011. Ecological approaches to reducing agricultural nutrient losses. Ecological Society of America Annual Meeting. Oral presentation. Austin Convention Center, Austin, TX Aug. 7-12.

Drinkwater, L.E., David, M.B., Galt, R.E., **Blesh**, J., Hufnagl-Eichiner, S., Marshall, L., Snapp, S., Tonitto, C., Westra, J.V., and S.A. Wolf. 2009. Hypoxia and the Mississippi River Basin as a model system: What can we learn about the social-ecological interface? Oral presentation. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, Aug. 2-7.

Drinkwater, L.E., David, M.B., Wolf, S.A., **Blesh**, J., and S. Hufnagl-Eichiner. 2009. Coupled human-natural systems: Hypoxia and the Mississippi River Basin as a model system. Oral presentation. CHANS-Net Symposium, U.S. Regional Association, International Association for Landscape Ecology

**Blesh**, J. and L. E. Drinkwater. 2006. Understanding human impacts on the nitrogen cycle in agroecosystems using a mass balance approach. Poster presentation. Soil and Water Conservation Society Meeting, Kansas City, MO, October 11-13.

## STUDENTS AND RESEARCHERS SUPERVISED

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### **Post-Doctoral Fellow**

Dr. Vivian Valencia (2015-2017), Assistant Professor (Fall 2019), Farming Systems Ecology Group, Wageningen University, The Netherlands

Dr. Kent Connell (2020-2024), Data Strategist, Malcolm X College, Chicago, IL

Dr. Alison Nord (2021-2023), Senior Associate at Climate Action Reserve, Los Angeles, CA

### **Graduate Students**

#### Ph.D. Students (Committee Chair)

Alison Bressler, candidate, 2016-2022 (NCR-SARE Graduate Student Grant)

Anne Elise Stratton, candidate, 2016-2021 (National Science Foundation GRFP Fellowship)

Etienne Sutton, 2019-present (USDA AFRI Predoctoral Fellowship)

William Brinkerhoff, 2022-present (National Science Foundation GRFP Fellowship)

Ana Gunther, 2024-present

#### Ph.D. Students (Committee Member)

Marcelo Leite, Federal University of Mato Grosso, Brazil, 2014-2018

Lauren Schmitt, SEAS, University of Michigan, 2015-2020

Dana James, University of British Columbia, 2017-2022

Sonal Gupta, EEB, University of Michigan, 2018-2022

Nicholas Medina, EEB, University of Michigan, 2018-2023

Bridget Shayka, EEB, University of Michigan, 2019-present

Alyssa Tarrant, Horticulture, Michigan State University, 2020-present

Rabin KC, Plant, Soil and Microbial Sciences, Michigan State University, 2021-present

Stephen Stresow, Horticulture, Michigan State University, 2024-present

#### Master's Students (Committee Chair or Advisor)

Alison King (thesis), 2014-2017

Tianyu Ying (thesis), 2016-2018  
Santiago Bukovsky-Reyes (thesis), 2016-2018  
Katherine Grantham (thesis), 2016-2018  
Andrew Harmon (practicum), 2014-2017  
Kari Paine (practicum), 2014-2016  
Erica Blair (co-chair; thesis), 2019-2020  
Marta Plumhoff (thesis), 2019-2021  
Sarah Bellaire (practicum); 2020-2021  
Ali Surdoval (thesis), 2020-2021  
Erika Dodge (thesis); 2020-2022  
Jourdan Clements (thesis); 2021-2023  
Delfina Grinspan (thesis); 2022-2023  
Casey Haggerty (thesis); 2022-2023

Master's Students (Committee Member)

Hailey Schurr (thesis), 2015-2017  
Stephanie Alcala, EEB (thesis), 2016-2018  
Marisa Benzle, Michigan State University (thesis), 2017-2019  
Bolívar Aponte-Rolon (thesis), 2016-2018  
Kimin Cho (thesis), 2019-2021  
Xuewei Wang (thesis), 2017-2019  
Bella Mayorga (thesis), 2020-2021  
Yiwen Shao (thesis), 2020-2021  
Xochyl Perez (thesis), 2022-present  
Hannah Nossan (thesis), 2022-2023

Master's Project (Faculty Advisor)

“Nature and Nurture Farmstead Design and Management Plan,” 2016-2017  
Jared Aslakson, Yihan Li, Michael Lordon, Alexandria Peters  
“Building Agroecological Systems at D-Town Farm,” 2018-2019  
Linnea Carver, Ardra Venugopal  
“Hayfield Transformation for Sustainable Small Grain Production to use in Zingerman's  
Bakehouse,” 2019-2020  
Sheila Wald, Nick Empey, Zixuan Jiang  
“Agricultural Carbon Offset Market Development,” 2021-2022  
Sean Cannady, Katharine Chute, Wes Davis, Colleen Sain

Undergraduate Research Opportunity Program students supervised

Aminta Valmon-Charles, Sean Danaher, Alec Reznich, Nicole Rhoads, Makayla Ward  
Brianna Hansen, Riley Noble (high school student from Greenhills Advanced Research Program)

Other undergraduate independent study projects supervised

Elliot Nichols, Ryan Nelson (Wesleyan University, Doris Duke Conservation Scholar), Lindsay Rosenthal, Sally Plank, Etienne Herrick (Honor's thesis), Aminata Fofana (The University of Toledo, Doris Duke Conservation Scholar), Sydney Fuller (University of Michigan, Doris Duke Conservation Scholar), Samara Almonte (Western Washington University, Doris Duke Conservation Scholar), Thea Louis (Wellesley College, Doris Duke Conservation Scholar), Taylor McKenzie (Seattle University), Sara Chojnowski (REU student, Kellogg Biological Station and University of Michigan)



## TEACHING

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*Courses at the University of Michigan:*

**ENVIRON 462/EAS 528/NUTR555/UP427/527: Foundations of Sustainable Food Systems**

Department/Unit: SEAS and Program in the Environment, Nutrition Sciences, Urban Planning

Taught: Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2021, Fall 2022, Fall 2023

**EAS 524: Agroecosystem Management: Nutrient Cycles and Soil Fertility**

Department/Unit: SEAS

Taught: Winter 2015, Winter 2016, Winter 2017, Winter 2019, Winter 2022, Winter 2024

**EAS 556/NUTR 563/URP 536: Transformative Food Systems Seminar**

Department/Unit: SEAS, Nutrition Sciences, Urban Planning

Taught: Winter 2024

**ENVIRON 305.003/NRE 639.038: Food Literacy for All**

Department/Unit: SEAS and Program in the Environment

Taught: Winter 2017

**NRE 639-075: Food Sovereignty**

Department/Unit: SEAS

Taught: Winter 2015

**Other teaching experience:**

**Teaching Assistant**, Ecology of Agricultural Systems (HORT 2730, Cornell University)

**Curriculum Development**, Organic Food and Agriculture (AGSCI 3800, Cornell University)

**Guest Lecturer:**

*Agroecology Seminar* (Interdisciplinary Center for the Study of Global Change, University of Minnesota)

*Research Paradigms* (EAS 741, University of Michigan)

*Alternative futures in the Michigan food system* (RCNSCI 300, University of Michigan)

*Sustainability Issues in the Great Lakes Region* (ENVIRON 305, University of Michigan)

*Conservation Biology* (SEAS, University of Michigan)

*International Agricultural Systems* (Crop and Soil Sciences, Michigan State University)

*Ecology of Agriculture* (Department of Horticulture and Crop Science, Ohio State University)

*The Nature of Plants* (Department of Horticulture, Cornell University)

*Hunger Amidst Surplus* (Science and Technology Studies, Cornell University)

*Plant Ecology* (Biology, University of Wisconsin–La Crosse)

*Organic Food and Agriculture* (Agricultural Sciences, Cornell University)

*Principles of Biogeochemistry* (Ecology and Evolutionary Biology, Cornell University)

## ACADEMIC SERVICE

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### **National and International Service**

Specialty Chief Editor, *Frontiers in Sustainable Food Systems*, Agroecology and Ecosystem Services Section, January 2023-present.

Editorial Board, *Agroecology and Sustainable Food Systems*, January 2023-present.

Subject Matter Editor, *Ecosphere*, Agroecosystems Track, October 2020-present.

Member, Design team, Kellogg Biological Station Long-Term Agroecosystem Research (LTAR), January 2021- present.

Member, Justice Working Group, INFAS (Inter-Institutional Network for Food, Agriculture and Sustainability), June 2020- April 2022.

Member Representative, Sustainable Agriculture Education Association Steering Council, May 2016 – 2019.

Sustainable Agriculture Education Association Steering Council Member; August 2010- January 2012

Facilitating Sustainable Agriculture Education Conference Steering Committee Member; July 2006- September 2007

### Journal Editor/Reviewer

*Foundations of Sustainable Food Systems (Editor, Special Issue on Ecological Nutrient Management); AoB Plants (Temporary Associate Editor); PNAS (Direct Submission Editor)*

*Biogeosciences; Ecological Applications; Ecosystems; Journal of Applied Ecology; Plant and Soil; Agriculture and Human Values; Nutrient Cycling in Agroecosystems; Agriculture, Ecosystems, and Environment; Current Opinion in Environmental Sustainability; Trends in Plant Science; Agronomy Journal; Foundations of Sustainable Food Systems; Earth's Future; Agroecology and Sustainable Food Systems; Ecology Letters; Agricultural and Environmental Letters; European Journal of Agronomy; Agronomy for Sustainable Development*

### Book/Report Reviewer

Frances Moore Lappé and Joseph Collins (2015). *World Hunger: 10 Myths*. Reviewed section on “Manufactured Fertility”

USDA, UCAR, NCAR Report (2015). *Climate Change, Global Food Security, and the U.S. Food System*.

### Scientific Research Proposal Reviewer

*USDA panelist*, National Institute for Food and Agriculture, Sustainable Agricultural Systems  
*National Science Foundation* (ad hoc), Geography and Spatial Sciences Program

*USDA panelist*, Agriculture and Food Research Initiative (AFRI) Foundational Program

USDA Sustainable Agriculture Research and Education (NCR-SARE) Research & Education Grant Program

### Proposal Reviewer (Other)

Graduate Women in Science (GWIS) National Fellowship Program

## University of Michigan Service

Specialization Coordinator, Ecosystem Science and Management, SEAS, fall 2023 – present

Program Director, SEAS Graduate Certificate in Sustainability, fall 2016 – present (sabbatical 2020-2021 academic year)

Member, Space Committee, SEAS, fall 2021 – spring 2022

Member, Diversity, Equity, and Inclusion Committee, fall 2016 – winter 2017

Member, PhD Admissions Committee, 2016

Member, Search Committee, Sustainable Food Systems Cluster Hire, School of Natural Resources and Environment, University of Michigan, 2014

Member, Search Committee, Campus Farm Manager, SNRE and Matthaei Botanical Gardens, 2016

Member, Sustainable Food Systems Initiative, 2014 – present

Doris Duke Conservation Scholars Program, Faculty Mentor, 5 students mentored, 2016-2019

Member, Faculty Advisory Board, Sustainability without Borders, 2015-2016

Member, Advisory Committee, MSU Good Food Charter Evaluation (PI: Hoey, L), 2015-2016

Faculty Associate, Matthaei Botanical Gardens, UM, 2015 – present

## Cornell University Service

Cornell University Working Group on Public Engagement (Re-Imagining Cornell); August 2009- July 2010

Cornell University Provost's Advisory Council of Graduate and Professional Students; August 2009- July 2010

New World Agriculture and Ecology Group (NWAEG) at Cornell: Vice President, November 2005- September 2006; President, September 2006-January 2009; Secretary, January 2009-August 2011

Biogeochemistry and Environmental Biocomplexity Graduate Student Association: Treasurer, January 2008-December 2008

Founding member, Cornell Dining Local Foods Advisory Council, and member of Farm to Cornell; August 2006- July 2011

## COMMUNITY ENGAGEMENT

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**Blesh, J.** 2023. “Soil health and cover crop performance on farms in Michigan.” Invited presentation at the Great Lakes EXPO, Grand Rapids, MI, December 6.

Sutton, E. and **J. Blesh.** 2023. Managing crop diversity – strategies and benefits. Fall field day, co-hosted with Michigan Agriculture Advancement at JD Layman Farms, Berrien Center, MI, Sept. 22.

**Blesh, J.** 2023. “Soil health and nutrient management with cover crops.” Invited presentation at the Lenawee County Center for Excellence Field Day, Clayton, MI, August 9.

Roundtable Meetings organized in partnership with Michigan Agriculture Advancement (MiAA) to share research findings and receive feedback from the agricultural community on research activities: December 16, 2021; December 15, 2022; March 20, 2023.

**Blesh, J.** 2023. “Soil health and nutrient management with cover crops.” Invited presentation at the Conservation Tillage and Technology Conference, Ohio State University, Ohio Northern University, Ada, OH, March 15.

**Blesh, J.** 2023. “Rethinking soil carbon sequestration in agriculture.” Invited presentation at Fast Food for Thought, Sustainable Food Systems Initiative, University of Michigan, March 14.

Sutton, E., and **J. Blesh.** 2023. “On-farm research in the Great Lakes region.” Invited presentation at the Underground Innovations farmer conference, Frankenmuth, MI, Jan. 24.

Sutton, E., and **J. Blesh.** 2022. “Embracing real-world variability to improve cover crop outcomes.” Invited presentation for the Iowa Learning Farms webinar series, Dec. 21.

Field day to share research results with farmer research partners; Tuscola County, MI, July 26, 2022.

Herrick (Sutton), E., and **J. Blesh.** 2022. “Understanding variation in cover crop performance across spatial scales.” Midwest Cover Crop Council Annual Meeting. Ada, OH, March 7-8. Poster presentation.

NFUniversity Climate Class, 2021. Agroecology: What is it? How does it work? Can it reduce emissions? Webinar for National Farmers Union Canada. March 11.

Keynote address, 2020. “Learning from farmers: Diversifying crop rotations to make farms more resilient.” Practical Farmers of Iowa Small Grains Conference. Springfield, IL. March 5.

Conference workshop, 2020. “Managing legume cover crops for multiple benefits on farms.” Practical Farmers of Iowa Small Grains Conference. Springfield, IL. March 5.

Panel organizer and participant, 2019. “Soil resistance and recovery: How academic institutions learn from farmers.” The Community of Food, Society, and Justice Conference, Residential College, University of Michigan, Ann Arbor, MI. October 17-19.

Participant in the **Sustainable Food Teach Out**, a short, online learning experience, part of the University of Michigan Teach-Out Series for public engagement, Coursera, April 2019. Over 400 people enrolled: <https://www.coursera.org/learn/sustainable-food>.

Herrick, E., Moghtader, J., and **J. Blesh.** 2019. Summer cover crops: functional traits and ecosystem services. Midwest Cover Crops Council Annual Meeting. Springfield, IL, February 20-21. Poster presentation.

Bressler, A. and **Blesh, J.** 2019. Ecological nitrogen management with cover crop mixtures in Michigan. Midwest Cover Crops Council Annual Meeting, Springfield IL, Feb 20-21. Poster presentation.

Women in Science and Engineering (WISE) Residence Program Dinner Discussion presentation, for undergraduate students planning to major in STEM fields. University of Michigan, Mosher-Jordan Hall, November 28, 2017.

Blesh, J. 2017. Invited speaker at the Science Café, *Oil and Soil: The Forces of Climate Change*. Conor O’Neills, Ann Arbor, MI, October 4.

Co-organizer of a Community Discussion with Jane Fonda, Lily Tomlin, and Saru Jayaraman on ROC United’s One Fair Wage campaign focused on wages, living conditions, and economic inequality in the restaurant industry. The Power Center, University of Michigan, September 15, 2017.

Presenter at the Organic Vegetable Twilight Meeting; Zilke Vegetable Farm, Milan MI in September 2015 and 2016.

Grossman, J. and J. Blesh. 2016. Beyond rye: summer and winter cover crops. Co-led Workshop at the Midwest Organic and Sustainable Education Service (MOSES) Conference, La Crosse, WI, February 26.

Member of planning team and facilitator of Open Space sessions: “Local Food Summit 2014,” Washtenaw County Community College, Ann Arbor, MI, March 31, 2014.

Panel moderator and event co-organizer: “A Farm for the Future” film screening and panel discussion. Mann Library Local Food and Fiber Fair, Cornell University, November 18, 2010.

Panel moderator and event co-organizer: “Urban Harvest: Perspectives on Urban Agriculture and Food Justice,” NWAEG at Cornell University and Gardens4Humanity, Ithaca, NY, April 9-10, 2010.

Panel moderator and event co-organizer: A panel discussion, “Food Justice and Agricultural Sustainability Practitioners and Activists” at the event, “World Food Crisis Solutions: Get involved locally and globally!” NWAEG at Cornell University, April 5, 2009.

Co-organizer with NWAEG at Cornell: “Facilitating Sustainable Agriculture Education” seminar series. Spring Semester, 2005, Cornell University.

## FOREIGN LANGUAGES

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Portuguese and Spanish

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