

Erica Shoenberger · Curriculum Vitae
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Education

University of Wisconsin, Madison, WI Joint PhD in Agronomy and Environment & Resources GPA: 3.90	Expected graduation, Summer 2026
University of Wisconsin, Madison, WI M.Sc in Agroecology GPA: 3.88	Graduated 2023
The Templeton Honors College at Eastern University, Saint Davids, PA BS in Biology, Minors in Chemistry and Environmental Science GPA: 3.87, <i>Summa Cum Laude</i>	Graduated 2016

Research Experience

Research Assistant, advised by Dr. Zac Freedman Nelson Institute for Environmental Studies, University of Wisconsin, Madison, WI	2022-current
- Led research for the on-farm project <i>Kernza in the Kickapoo Valley</i>. Designed and implemented an 11-site study investigating the impact of Kernza on soil health, nutrient loss, and soil erosion - Conducted on-farm research, collecting soil samples and analyzing for microbial biomass, microbial respiration, and nutrient content, including fractionated POM/MaOM	
Research Assistant, advised by Dr. Valentin Picasso Plant and Agroecosystems department, University of Wisconsin, Madison, WI	2020-current
- Led two on-farm research projects: <i>Kernza in the Kickapoo Valley</i> and <i>Maintaining Kernza grain yields over time in organic and conventional systems in WI</i> - Led research projects called <i>Agronomic practices to manage competition in dual-use Kernza to maintain grain yield over time</i> and <i>Managing weed competition in Kernza for human consumption</i> - Participated in field research with Kernza, Alfalfa, and Silphium trials, involving plot marking, fertilizing, mowing, harvesting, weighing, and dry lab sample processing	
Research assistant, advised by Dr. Benjamin Dube Plant Nematology lab, Department of Biology, Eastern University, PA	2015-2016
- Led research on the effect of coffee grounds on soil nematode populations under greenhouse conditions. Conducted inoculations, measured growth, collected soil samples, and presented results	
Research assistant, advised by Dr. John Cossel Quetzal Education Research Center, San Gerardo de Dota, Costa Rica	2016
- Participated in research on the reproductive ecology of the endangered frog species, <i>Isthmohyla pictipes</i>, in the neotropical montane forest in Costa Rica	

Teaching Experience

Guest Lecturer, <i>Global Food Production and Health</i> , University of Wisconsin-Madison	2023-2025
- Delivered a guest lecture with group discussions and activities to 100-200 students on designing agricultural ecosystems to mimic natural ecosystems	
Guest Lecturer, <i>Intro to Environmental Science</i> , University of Wisconsin-Whitewater at Rock County	2023
- Delivered a guest lecture with group discussions and activities to 25 students on adapting agricultural ecosystems for resiliency in the face of climate change	
Teacher Assistant, Plant and Agroecosystems department, University of Wisconsin, Madison, WI	2022
- Organized field trips, facilitated the online section of the class, created engaging review activities, address student inquiries, and graded papers for the course <i>Global Food Production and Health</i>	
Community Garden & Propagation Intern, ECHO Global Farm, North Fort Myers, FL	2018-2019

- Managed vegetable and fruit tree production, maintained the vermiculture system, cared for the sheep in a silvopasture system, led hands-on garden classes for elementary children, designed community gardens, and assisted community members with grant applications
- Engaged in participatory adult education and permaculture design courses while contributing as a research assistant studying cover crop mixtures on soil health, funded by the University of Florida

FoodCorps AmeriCorps Service Member, FoodCorps Connecticut, Norwalk, CT 2017-2018

- Regularly taught 200+ elementary school students in both classroom and garden settings.
- Designed and led a cooking and gardening club for elementary and high school students, installed a new garden, pioneered a recycling program in the school cafeteria, and engaged parents in community-led cooking demonstrations

Science club teacher, Science Explorers STEM program, Lancaster, PA 2017

- Led a 25-student weekly club with hands-on activities in chemistry, physics, and biology

Nature Coordinator and Camp Counselor, Camp Swatara, Bethel, PA 2015-2016

- Taught daily nature classes for children K-12th grade and adults with special needs.

Ecology TA, Biology department, Eastern University, Saint Davids, PA 2015

- Assisted with field trips, answered student questions, led review sessions, and graded lab reports

Publications

Shoenberger, E., Jungers, J., Law, E., Keene, C., Sheaffer, C., Wyse, D., Picasso, V., Stoltenberg, D (2023). Synthetic auxin herbicides do not injure intermediate wheatgrass or affect grain yield. *Weed Technology*. doi.org/10.1017/wet.2023.71

Shoenberger, E., Stolenberg, D., Picasso, V (2025). Managing nitrogen fertility and stand density for sustaining Kernza intermediate wheatgrass yields. *Crop Sciences*. doi.org/10.1002/csc2.70171

Ginot, C., **Shoenberger E.**, Picasso, V., Duchene, O (2025). Growing intermediate wheatgrass as a perennial grain crop in the United States: exploring the multifunctionality of agriculture within socio-technical constraints [Manuscript accepted]. *Renewable Agriculture and Food Systems*.

Research Presentations

KernzaCon, Fargo, ND 2025

- Poster presentation: *Farmer perspectives on growing intermediate wheatgrass as a perennial grain and forage crop in the USA*

Perennial Grains Early Career Researcher Workshop, Salina, KS 2024

- Research presentation: *Kernza Integration in Wisconsin Cropping Systems: Exploring Agronomic, Environmental, & Social Implications*

The Second Annual International Workshop on Kernza Physiology, Madison, WI 2024

- Research presentation: *N and thinning to maintain Kernza yields over time*

Perennial Farm Gathering, Virtual 2023

- Research presentation: *The scope of on-farm research on Kernza in Wisconsin*

American Society of Agronomy Conference, Saint Louis, MO 2023

- Flash talk & poster presentation: *Does N fertilization and thinning maintain Kernza yields over time?*

Kernza conference, Minneapolis, MN 2023

- Poster presentation: *Addressing the knowledge gap of herbicide effects on Kernza intermediate wheatgrass growth, development, and grain yield*

UW-Madison Agroecology public master's defense, Madison, WI 2022

- Paper presentation: *Agronomic practices to manage competition in dual-use Kernza intermediate wheatgrass to sustain grain yield over time*

American Society of Agronomy Conference, Baltimore, MD 2022

- Poster presentation: *Managing inter-row spacing and N fertility in dual-use Kernza*

intermediate wheatgrass to sustain grain yield over time and Addressing the knowledge gap of herbicide effects on Kernza intermediate wheatgrass growth, development, and grain yield

- ECHO International Development Conference, North Fort Myers, FL 2018
- Poster presentation: *Effect of coffee grounds on the soil nematode population, Meloidogyne hapla, under greenhouse conditions*
- Quetzal Education Research Center public forum, San Gerardo de Dota, Costa Rica 2016
- Paper presentation: *The reproductive ecology of the endangered frog species, Isthmohyla pictipes, in the neotropical montane forest in Costa Rica*

Outreach and Extension

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- Science communicator & outreach presenter, Farm to Flavor public event, Madison, WI 2025
- Engaged hundreds of attendees in conversations about Kernza breeding, markets, and research at a statewide food and agriculture event. Shared educational materials and facilitated public dialogue around sustainable agriculture and perennial grains.
- Speaker & event planner, Rooster Milling Wisconsin Kernza Field Day 2024
- Co-organized with the Wisconsin Kernza Supply Chain hub to gather 30 Kernza growers, processors, and buyers to build relationships among supply chain stakeholders and collectively decide on a fair Kernza grain price for Wisconsin Kernza growers.
- Speaker & event planner, Kernza Agronomy & Soil Health Field Day 2024
- Co-organized with NRCS, Clean Wisconsin, and Glacierland Resource Conservation and Development to recruit new Kernza growers, address agronomy and soil health, and share dinner featuring Kernza products. Delivered a presentation on on-farm research to an audience of 60-70 participants. Access a news article about the event [here](#)
- Interviewee, The Cap Times article, access the article [here](#) 2024
- Featured in an interview for the article, *Is kernza the miracle grain to help Wisconsin fight climate change?*, discussing my on-farm research and outreach with Kernza growers.
- Roundtable host, OGRAIN conference (organic grain), Madison, WI 2024
- Hosted a two-hour roundtable discussion on Kernza planting, harvesting, and marketing in organic systems in WI
- Panelist, Lake Pepin Legacy Alliance Kernza Fest and Benefit Concert, Stockholm, WI 2023
- Participated as a panelist, contributing insights to growing & marketing Kernza for 30-40 participants
- Interviewee, Edible Madison article, access the article [here](#) 2023
- Featured in an interview for the article, *Kernza: A Promising Wondergrain*, about my research and love of working with Kernza in WI
- Radio Show Guest, A Public Affair Radio Show, access the recording [here](#) 2023
- Shared expertise on the benefits of perennial agriculture and discussed the landscape of Kernza research in WI with the lead Kernza breeder at The Land Institute in Salina, KS
- Presenter, Organic Grains Field Day, West Madison Agricultural Research Station, Madison, WI 2023
- Presented research on agronomic management practices to sustain Kernza grain yield and addressed questions about growing Kernza in WI for 40-50 participants
- Presenter, *Agroecology field study*, University of Wisconsin-Madison 2022
- Discussed my research experiments and experience as a MS student for a class of 20 students
- Presenter, Brix Cider's Small Batch Science event, Mount Horeb, WI 2022
- Led a presentation and engaged with the community, answering questions on Kernza and related research for 20-30 participants
- Participant, PBS WI show: *Around the Farm Table*, access episode [here](#) 2021
- Contributed by answering questions, sharing insights about my research on Kernza, and joining in a final gathering with all episode participants

Liaison between WI Kernza farmers and the Perennial Grains Lab at University of Wisconsin 2021-current
 - Facilitated collaboration between the University and Kernza farmers to enhance research and practical knowledge while connecting growers with up to date resources on growing Kernza

Grants received

Environment and Resources Research Award. Project title <i>Sowing Sustainability: Cultivating Kernza Networks for Resilient Agriculture in Wisconsin</i> . Amount: \$2,000 PIs: Valentin Picasso, Zac Freedman / Role: Grant writer, lead researcher	2025
Center for Integrated Agricultural Systems Mini-Grant. Project title: <i>Sowing Sustainability: Cultivating Kernza Networks for Resilient Agriculture in Wisconsin</i> . Amount: \$2,102 PIs: Valentin Picasso, Zac Freedman / Role: Grant writer, lead researcher	2024
Center for Ecology and the Environment's Aldo Leopold Graduate Research Award. Project title: <i>Sowing Sustainability: Cultivating Kernza Networks for Resilient Agriculture in Wisconsin</i> . Amount: \$5,000. PIs: Valentin Picasso, Zac Freedman / Role: Grant writer, lead researcher	2024
Kickapoo Valley Restoration Fund. Project title: <i>Kernza in the Kickapoo Valley: a crop and reforestation alternative for reduced soil erosion and nutrient loss</i> . Amount: \$90,000 PIs: Dr. Valentin Picasso, Dr. Zac Freedman, Dr. Priscila Pinto / Role: Grant writer, lead researcher	2023-25
ON Allen Soil and Environmental Microbiology Small Grants Program. Project title: <i>SOM in different cropping systems: what are the stocks and turnover of POM and MOAM fractions?</i> Amount: \$3,500 PIs: Dr. Valentin Picasso, Dr. Priscila Pinto / Role: Co-investigator	2023-24
Center for Integrated Agricultural Systems Mini-Grant. Project title: <i>Managing inter-row spacing & N fertility in dual-use Kernza intermediate wheatgrass to sustain grain yield over time</i> . Amount: \$3,000 PI: Valentin Picasso / Role: Grant writer, lead researcher	2023
Sustainable Agriculture Research and Education North Central Graduate Student Grant. Project title: <i>Maintaining Kernza intermediate wheatgrass grain yields overtime in organic and conventional systems in WI</i> . Amount: \$15,000 PI: Valentin Picasso / Role: Grant writer, lead researcher	2022- 2023
Lowes Toolbox for Education. Project title: <i>School gardens for Brookside and Kendall Elementary Schools in Norwalk, CT</i> . Amount: \$10,000 Supervisor: FoodCorps, CT / Role: Grant writer, project coordinator	2017-18

Scholarships and Awards

DC Smith Wisconsin Distinguished Graduate Fellowship Award Awarded by: UW-Madison Plant and Agroecosystem Science department	2025
Dwayne Rohweder Forage Extension Fellowship Awarded by: UW-Madison's College of Agricultural and Life Sciences	2022, 2023, 2025
Graduate Student Support Competition Award Awarded by: UW-Madison Plant and Agroecosystem Science department	2024
Agronomy Outstanding Graduate Student Award Awarded by: UW-Madison's College of Agricultural and Life Sciences	2024
Detering Gurfield Family Scholarship Awarded by: UW-Madison's Nelson Institute for Environmental Studies	2024
Elwood & Lydia Brickbauer Research Scholarship Awarded by: UW-Madison's College of Agricultural and Life Sciences	2023
Eunice & Howard Ream Memorial Foundation Scholarship Awarded by: UW-Madison's College of Agricultural and Life Sciences	2023

Ruth & Carl Miller Academic Merit Award Awarded by: UW-Madison's College of Agricultural and Life Sciences	2023
Linda Wernecke Marshall Graduate Award in Environmental Studies Awarded by: UW-Madison's Nelson Institute for Environmental Studies	2023
Arthur B. Sacks Award for Graduate Excellence in Environmental Studies and Sustainability Awarded by: UW-Madison's Nelson Institute for Environmental Studies	2023
Southern Wisconsin Aspire Regional Collaborative (SWARC) Scholar Engaged in a career development program for underrepresented STEM graduate students, including cohort gatherings and inclusive education training with a mentor	2022
O.N. Allen Agronomy Graduate Scholarship Awarded by: UW-Madison's College of Agricultural and Life Sciences	2022
Who's Who Among Students Awarded by: Eastern University	2016
Outstanding Award in Organic Chemistry Awarded by: Eastern University	2015
Dean's List Awarded by: Eastern University	2013-16

Leadership and Volunteer activities

Review Panel for the Forever Green Initiative Crop Grant Program - Served as a panelist to evaluate interdisciplinary crop research proposals for the 2025–2026 grant cycle to determine funding allocations for projects advancing perennial and continuous living cover cropping systems in Minnesota.	2025
Wisconsin-Grown Kernza Supply Chain Hub - Serving on a team of members from Clean Wisconsin, Michael Fields Agricultural Institute, and UW-Madison Emerging Crops working to pilot a WI-grown Kernza Farm-to-Fork and Farm-to-Glass supply chain development program to help scale this natural climate solution for WI Agriculture.	2023 - current
Volunteer at the soil ecology and microbiology booth at the UW-Madison Science Expedition outreach event for children and families.	2024
Review panel for the O.N. Allen Soil and Environmental Microbiology Small Grants Program - Served as a panelist to evaluate grant proposals using an NSF-style of proposal ranking to determine which proposals receive funding for the 2024-2025 grant cycle	2024
Kernza technical assistance team - Serving on a team of growers, researchers, extension agents, and commercialization collaborators across the Midwest to support the advancement of Kernza	2023-current
Panelist for careers in food systems and sustainable agriculture - Participated as a panelist for the class <i>Food Excess to Access: Empowering Regional Resource Distribution</i> offering insights on life after undergrad and careers in food systems	2023
Quann Community Garden Grounds Committee Volunteer and Mentor - Served on the grounds committee and as a mentor for new gardeners. Responsibilities included maintaining and organizing communal tools, seeds, and the garden shed	2022-2024
Panelist for new master's students - Volunteered on a panel during welcome week at the University of Wisconsin-Madison, answering questions from new graduate students	2022
Volunteer at an elementary school field day, Jackson, WI - Assisted with activities during the farm visit and answered student questions	2022

Undergraduate Curriculum Committee at University of Wisconsin-Madison	2020-22
- Contributed to decision-making related to undergraduate curriculum development	
Volunteer for a summer program led by Wormfarm Institute, Ridgeway, WI	2021
- Assisted in leading a summer program with elementary school kids connecting arts and agriculture on a Kernza farm	
Agroecology representative for Plant Sciences Graduate Student Council	2021
- Organized activities that brought plant science departments together for social activities and a yearly symposium to foster community and support graduate students	
Undergraduate volunteer and leadership activities	2013-17
- Active member of Youth Against Complacency and Homelessness Today, Prison Ministry, Earthkeepers, and Environmental Science clubs	
- Volunteer with Habitat for Humanity, Homes of Hope, and the Waterstreet Rescue Mission	
- Served as a Youth Group and Worship Leader at the Lampeter Church of the Brethren	