Jared Seneca Adam

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EDUCATION

Montana State University
PhD College of Agriculture, Land Resources and Environmental Sciences
PI: Dr. Will Wetzel
Expected graduation: Summer 2028

Oral Presentation
- 2025 Research presentation to Land Resources and Environmental Sciences department
- 2025 Land Resources and Environmental Sciences 3-Minute Thesis Competition
- 2025 Plant-Herbivore Interactions Gordon Conference (GRC) Poster Presentation
    - Title: Climate change and plant trait diversity: Bridging the divide between biotic interactions and abiotic stress
- 2025 Plant-Herbivore Interactions Gordon Seminar (GRS) Poster Presentation
    - Title: Climate change and plant trait diversity: Bridging the divide between biotic interactions and abiotic stress

Guest Lectures
- Plants in the Environment *Spring 2025*

Graduate Student Organization (GSO)
- President *2025-2026*
- Emcee and Co-organizer of the 2025 Land Resources and Environmental Sciences Graduate Research Symposium
- Organizer of Weekly Statistics and Programming Working Group *Spring 2025*

The Pennsylvania State University *Summer 2024*
MSc College of Agricultural Science, Entomology: Graduate Assistantship
Graduate School Teaching Certificate, Schreyer Institute
PI: Dr. John Tooker
GPA: 3.91

Oral Presentation
- 2024 Entomological Society of America, Eastern branch
    - Invited talk in, 'Updates on Biological Control of Pests and Weeds in the Northeast'
- 2023 Entomological Society of America, Annual meeting
    - 10-minute student competition

Graduate Teaching Assistant (ENT 535) *Fall 2023*
- Applied Biostatistics for Entomology and Ecology
- A course on Statistical Techniques in Entomology for graduate students
- Lecture, assist in assignment development and grading, and be the immediate contact for statistical and coding support.
- Course language: R

Graduate Teaching Assistant (ENT 316) *Spring 2023*
- Agronomic pests of Pennsylvania
- Developed and graded quizzes and lab materials in learning management system (Canvas)

Guest Lectures

- Integrated Pest Management, Fourth-year Plant Science Capstone Course *Fall 2023*
- Introduction to Agronomy *Fall 2022, 2023*

BS College of Agricultural Science, Agroecology *December 2019*
Minors: International Agriculture, Entomology, and Soil Science
GPA: 3.52

Undergraduate Teaching Assistant (SOILS 422) *Spring 2019*

- Classroom teaching assistant; attended class sessions, field trips, set up course site in the learning management system (Canvas), graded assignments, and created and graded exams under the direction of the faculty member.

ARTICLES AND PUBLICATIONS

- **Co-author**: High-resolution surface and rootzone soil moisture over US cropland: A novel framework assimilating multi-source remote sensing data, machine learning, and the Layered Green and Ampt Infiltration with Redistribution model; Shuohao Cai, Yijia Xu, Zhengwei Yang, Wade T Crow, Zhou Zhang, Jiali Shang, Jiangui Liu, Peter La Follette, Chris Reberg-Horton, Harry Schomberg, Steven Mirsky, Brian Davis, Sarah Seehaver, Alexis Correira, Andrea Basche, Ashley Waggoner, Charles Ellis, Dara Park, Danielle D Treadwell, David Campbell, Deann Presley, Esleyther L Henriquez Inoa, Heather Darby, Jared Adam, Jarrod Miller, Joseph Haymaker, John Wallace, Julia Gaskin, Kipling S Balkcom, Lindsey Ruhl, Mark Reiter, Matthew Ruark, Michael Flessner, Cynthia Sias, Payton Davis, Peter Tomlinson, Richard G Smith, Nicholas D Warren, Ryan Dierking, Shalamar Armstrong, Tauana Almeida, Jingyi Huang; Remote Sensing of Environment, Elsevier; Volume 334; 1/3/2026

- **Co-author**: Effect of cereal rye termination timing on seedling disease and yield of corn across 16 states; RL Matthiesen, J Adam, S Amissah, M Bagavathiannan, A Basche, C Chase, HM Darby, De Almeid, T Ferreira, M Flessner, E Haramoto, M Henrickson, A Koehler, J McVane, S Mirsky, F Oreja, D Presley, A Raundebausch, C Reberg-Horton, M Ruark, M Ryan, N Seiter, C Sias, KJ Tilmon, P Tomlinson, J Tooker, M VanGessel, A Waggoner, J Wallace, AE Robertson; American Phytopathological Society; Volume 114, Issue 11, Pages 58-58; 1/11/2024
- **Author**: Introduction to R tutorial: "One Code to Rule Them All", 6/6/2023
    - https://jared-adam-psu.github.io/R-Tutorial-for-Tooker-Lab/
- **Co-author**: "Why are snails and slugs so slow?". The Conversation, 4/3/2023
    - https://theconversation.com/why-are-snails-and-slugs-so-slow-199376

PROFESSIONAL HISTORY

Pennsylvania State University, Entomology *2022-2024*

- Manage the entomology component of Common Experiment 2 (16 states) of the Precision Sustainable Agriculture Grant
    - Responsibilities include protocol troubleshooting, data collection, whole-team data flow and analyses, and fieldwork
- Augmentation experiment
    - Working to quantify the role web-building spiders have as biological control agents in conventional soybeans
- Agroecosystem health
    - Partnered with the Rodale Institute
    - Using microarthropods as biological indicators to determine the ecosystem quality of different agricultural practices/ land-uses
        - E.g., legacy no-till vs. till, organic vs. conventional, etc.

Pennsylvania State University, Weed Science *Jan. 2021- Aug. 2022*

- Full-time research technician in the lab of Dr. John Wallace

    - Managed three projects of the Precision Sustainable Agriculture Grant
        - Common Experiment 1 (CE1): Nitrogen Cycling
        - Common Experiment 2 (CE2): Inter-disciplinary pest interactions
        - On-Farm: Implementing similar field management practices from CE1 and 2 with Pennsylvania growers
- Equipment operation
    - E.g., cultivation, spraying, planting, etc.
- Managed a crew of undergraduates.

Lehigh Agricultural and Biological Services *Apr.-Nov* 2020
- Field research technician *Summer 2016, 2018*
- Managed bid-acquired insecticide efficacy trials within several agricultural and forest ecosystems.
- Colorado Potato Beetle and Potato Aphid (2018, 2020), Spotted Lanternfly (2018, 2020), Alfalfa insect diversity (2018), Mushroom fly set up (2018), Peppers (2018)

*Peace Corps Nepal** *Feb.- March 2020*
- *Evacuated from Peace Corps Nepal due to COVID-19 (3/22/2020)
- Participated in 7 weeks of language and technical training.
- Lived with Nepali family for the entire duration of training.
- Worked in Nepali agricultural systems.

Weed Science Department (Undergraduate) *Fall 2018- Jan. 2020*
- Herbicide testing and evaluation of efficacy
- Weed control tactics/ management strategies
- Weed identification
- Organic and conventional systems

Weed Science Society of America research grant recipient ($2000) *May 2019-Jan. 2020*
- Studying glyphosate-resistant horseweed combatted with management strategies and herbicide application tactics, 40 hours/week (summer 2019), research facilitated through the Weed Science Department at Pennsylvania State University
- Poster presentation at Northeastern Plant, Pest, and Soil Conference (January 2020)

PlantVillage application scouting in Kenya and Togo *May-June 2018*
- Scouted for Fall Armyworm damage on maize in Kenya (3 weeks), continued work in Togo and tested several versions of the revised software on Fall Armyworm in corn (1 week).

Kenya (Children and Youth Empowerment Center) *May-June 2018*
- Dry season silage production and crop rotation/ climate change adaptation

Camp Counselor- Outdoor School *March 2018, 2019*
- Counselor for 10-15 middle school-aged children for two, one-week periods

Pennsylvania State University Horticulture Farm *Fall 2017-Spring 2018*
- Fall 2017: Apple and pear orchard
    - Harvested and graded apples and pears
- Spring 2018: Tree fruit lab and vineyard
    - Purpose: determine if fit for human consumption
    - Performed grape juice chemistry testing for sugar, pH, and titratable acids.

REVIEWER EXPERIENCE

- Ecology
- Environmental Entomology

- Nature Communications

EXTRACURRICULAR

- Previous President and Co-founder of the Graduate and Professional Outdoor Club (GPOC) at Penn State.
- Tussey Mountain Ski Patrol basic and advanced rope management and chair lift evacuation trainer
- Certified sport climbing instructor (CWI) through the American Mountain Guides Association (AMGA)

CERTIFICATIONS

- Licensed commercial chemical applicator (CORE) (Pennsylvania)
- Licensed research chemical applicator (Category 18) (Pennsylvania)

SCHOLARSHIPS

- Agricultural Science Alumni Internship Award (Spring 2019)
- Fehnel Scholarship in Agroecology (Fall 2018-Spring 2019)
- Wolfe Scholarship in Agriculture (Fall 2018-Spring 2019)
- Harbaugh Fund for International Experiences (Summer 2018)

CONTINUING EDUCATION

- Paraquat Application Certification (June 2020)
- Spotted Lanternfly Permit Training for Penn State Extension (May 2019)
- Fundamentals of Coaching; First Aid Health and Safety (August 2018, May 2016)

SERVICE

- National Ski Patrol; 2021-2024
- Earth Day Spring Creek clean up; 2018
- Operation Christmas Child; December 2016
- Oley Valley High School Volunteer Assistant Wrestling Coach; 2014-2020
- Berkshire Baseball Organization Volunteer Baseball Coach; 2013-2014

REFERENCES

- Dr. Sara Hermann; Assistant Professor of Arthropod Ecology and Trophic Interactions at The Pennsylvania State University
    - SLH@psu.edu
- Dr. John Wallace; Assistant Professor of Weed Science at The Pennsylvania State University
    - Jmw309@psu.edu
- Dr. James Steffel; Founder of Lehigh Agricultural and Biological Services
    - jim@labservices.com
- Dr. John Tooker; Professor of Entomology at The Pennsylvania State University
    - tooker@psu.edu