

Abigail Lazier

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Statement

Across my academic, professional, and extracurricular pursuits, I strive to promote resilient food systems that strengthen communities and support planetary health. By combining academic research and hands-on farming experience, I conduct applied, impactful science driven by a commitment to both scientific rigor and global food security.

Education

B.S. PLANT SCIENCE, SUMMA CUM LAUDE | MAY 2024 | UTAH STATE UNIVERSITY, LOGAN, UTAH

M.S. PLANT SCIENCE | IN PROGRESS | UTAH STATE UNIVERSITY, LOGAN, UTAH

Relevant Coursework:

Graduate

Plant Physiology, Plant Nutrition, Hunger Issues and Solutions, Communication Tools in Extension, Environmental Instrumentation, and Data Analysis and Programming

Undergraduate

Plant Physiology, Plant Pathology, Weed Science, Organic Chemistry, Soil Health and Fertility, Agricultural Economics, Botany, Chemistry, Ecology, Genetics, Plant Propagation, Herbaceous Plants, General Soils, Student Farm Practicum, Plant Structure and Function, and Urban Soil Reclamation.

Research and Relevant Experience

GRADUATE RESEARCH ASSISTANT

UTAH STATE UNIVERSITY | AUGUST 2025 – PRESENT

Develop and conduct controlled environment agriculture (CEA) research to address relevant scientific and industry needs. This includes carefully designing and executing experiments to investigate the potential for innovative dwarf crop genetics to enhance food security in space-limited growing systems, including on the International Space Station (ISS) and in urban and home gardens. This research will help promote resilient food systems on Earth and beyond that strengthen our future communities and support planetary health.

RESEARCH ASSOCIATE

CROP PHYSIOLOGY LABORATORY | UTAH STATE UNIVERSITY | SEPTEMBER 2024 – AUGUST 2025

In this role, I assisted with general greenhouse operations, designed and implemented trials to address gaps in research, and improved propagation protocols and best management practices of medical cannabis cultivation. Under a USDA-NIFA grant, I also developed a method of fiber extraction and processing of medical hemp plants for use in high-performance concrete.

UNDERGRADUATE RESEARCH ASSISTANT

SOIL HEALTH & FERTILITY LABORATORY | UTAH STATE UNIVERSITY | MAY 2022 – SEPTEMBER 2024

In this position, I assisted in data collection and management, oversaw the completion of various laboratory analyses related to soil health, kept detailed records of qualitative & quantitative

measurements, participated in weekly lab meetings & discussions, and worked outdoors at field sites and in a laboratory setting.

RESEARCH INTERN

UTAH STATE UNIVERSITY | MAY – JULY 2022

As an intern, I collected, analyzed, and interpreted data from a field study intended to investigate methods of weed suppression management on a certified organic farm in Greenville, UT. The effectiveness of cover crop, crop rotation, and fertilizer input was considered. Data were collected on biomass, species abundance, species identification, and tissue nitrogen content. Consolidated findings in graphical figures and created a poster describing the project rationale, methodology, and results.

Professional Experience

TEACHING ASSISTANT

UTAH STATE UNIVERSITY | JANUARY – DECEMBER 2023

As the assistant to the professor for the Principles of Organic Farming class at USU, my duties included managing groups of students outside of the classroom, coordinating community service opportunities, and leading immersive learning experiences to go along with in-class lectures.

STUDENT ORGANIC FARM MANAGER

UTAH STATE UNIVERSITY | DECEMBER 2022 – DECEMBER 2023

Responsibilities included the day-to-day management of the student farm operation. This included preparing planting plans and production maps for organic certification and carrying out the plan as documented. Other duties included seeding, transplanting, watering, fertilizing, pest/weed control, and ensuring timely and clean harvesting practices planned according to the needs of the CSA and Campus stand. Record-keeping duties included organizing work plans and volunteer activities, maintaining seed lists, input records, and contact lists. Extension and outreach duties included attending meetings, sitting in on roundtable events, and heading the farm's five-year partnership with CCOF and the USDA National Organic Program.

GARDEN CENTER ASSOCIATE, GREENHOUSE TECHNICIAN, & FARM LABORER

FARMSIDE GARDENS | SUSSEX, NJ | MAY 2021 – JANUARY 2023

Assisted in retail management, organization, set-up, and coordination of product delivery. Attended business and market meetings. Represented the company at local farmers' markets, garden shows, and community events. Helped coordinate the harvesting, processing, and selling of cut flowers to local vendors. Spearheaded the organization of educational community events and led classes on the topics of garden preparation, houseplant care, and the basics of floral design. Assisted in floral arrangement, design, and delivery.

Presentations

CANVAS Tri Societies Conference, Salt Lake City, Utah, November 2025. **Lazier A.**, Bugbee B., and Langenfeld N.. *"Space" Matters: Characterizing Dwarf Crops for Astronauts and Urban Farmers* [oral presentation by **Lazier A.**]

Utah State University Natural Fibers Summit, Logan, Utah, September 2025. **Lazier A.**, Macadam J., Banerji S., Bugbee B.. *Harvest and Fiber Method Alter the Composition of Hemp Fiber for High Performance Concrete* [poster presentation by **Lazier A.**]

SACNAS National Diversity in STEM Conference, San Juan, Puerto Rico, October 2022. **Lazier A.**, Reeve J., Schaefer-Fiello M. *Weed management in organic agriculture systems: Assessing complex interactions of crop rotation, cover cropping, and fertilizer application* [poster presentation by **Lazier A.**].

Awards and Honors

Crop Physiology and Metabolism, 1st Place Oral Presentation. Sponsored by Crop Science Society of America (CSSA); November 2025.

Graduated summa cum laude. B.S. Plant Science, Utah State University; May 2024.

Grants and Scholarships

Future Farmers Grant. California Center for Organic Farmers (CCOF); May 2023.

Angelyn & Bryce Wadley Scholarship recipient. Utah State University; April 2023.

Rocky Mountain Biological Laboratory Travel Grant recipient. National Science Foundation (NSF); July 2022.

Research Experience for Undergraduates Award & Grant. National Science Foundation (NSF); Summer 2022.

Presidential Academic Scholarship. Utah State University; August 2022-May 2026.

Volunteer and Extracurricular

Garden Volunteer and Garden-to-Pantry Co-founder

Flores Family Community Gardens, Logan, Utah; February 2024-Present.

Farm Volunteer

Steep Mountain Farms, Wellsville, Utah; May 2022-Present.

USU Backcountry Squatters Member

Utah State University, Logan, Utah; August 2022-August 2024.

Worldwide Opportunities on Organic Farms Volunteer

South Winds Farm, Benson, Arizona; January-February 2022.

Summer Blossoms 4-H Member and Officer

Sussex County, New Jersey; August 2008-June 2020.

Professional Societies

Crop Science Society of America | 2025-Present

American Society of Agronomy | 2025-Present

Soil Science Society of America | 2025-Present

American Horticultural Society | 2023-Present

Society for Advancing Chicanos/Hispanics & Native Americans in Science | 2023-Present