

Xavier Mack

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Recent laboratory instructor and USDA ARS research assistant. Former library research consultant, laboratory assistant, writer, and research intern with experience in teaching, lab management, gel electrophoresis, DNA extraction, protocol revision, plant propagation, research visualization and presentation, and writing.

Education

MAY 2022

B.S. Agriculture Sciences / Pennsylvania State University, State College, PA

- Major: Agriculture Sciences, Minor: Horticulture
- GPA: 3.660
- Pennsylvania School for Excellence in the Agriculture Sciences (PSEAS) - Class of 2017

Experience

Research Assistant / United States Department of Agriculture (USDA ARS)

AUGUST 2022 – MAY 2023

E-PORTFOLIO WORK LINK: [HTTPS://SITES.PSU.EDU/XAVIERMACKEPORFOLIO/GRADUATE-EXPERIENCE/](https://sites.psu.edu/xaviermackportfolio/graduate-experience/)

- Supported germplasm evaluation and improvement projects at the United States Department of Agriculture (USDA ARS) in Stillwater Oklahoma which I was responsible for the successful propagation of 70-80 sorghum plants, genetic phenotype data collection on 24 sorghum plants, gel electrophoresis, autoclaving, NanoDrop spectrometry, and DNA & RNA extraction.

Plant Biology Laboratory Instructor / Oklahoma State University - College of Arts & Sciences

AUG. 2022 – May 2023

E-PORTFOLIO WORK LINK: [HTTPS://SITES.PSU.EDU/XAVIERMACKEPORFOLIO/TEACHING-EXPERIENCE/](https://sites.psu.edu/xaviermackportfolio/teaching-experience/)

- Facilitated undergraduate lab activities for 2 sections as a laboratory instructor for PBIO 1404 – Introductory Plant Biology in the Department of Plant Biology, Ecology, & Evolution mentoring 48 undergraduate students per semester, collecting growth data on plants, editing and finalizing 12 student research posters per semester, and writing activity protocols.

Laboratory Assistant / Pennsylvania State University – Eberly College of Science

OCT. 2021 – JULY 2022

E-PORTFOLIO WORK LINK: [HTTPS://SITES.PSU.EDU/XAVIERMACKEPORFOLIO/EMPLOYMENT-EXPERIENCE/](https://sites.psu.edu/xaviermackportfolio/employment-experience/)

- Served the plant genetics lab of Dr. Jesse R. Lasky in developing research procedures, recording and processing data, calibrating equipment, greenhouse maintenance, harvesting grass seeds, sterilizing tools, pipetting, revising lab protocols, and extracting DNA from approx. 200 cheatgrass genotype replicates.

Skills

- Gel Electrophoresis
- Data Collection
- Tissue Culture
- Teaching/Instructing/Mentoring
- Greenhouse & Lab Maintenance
- Plant Propagation
- Protocol Writing & Revision
- DNA & RNA Extraction

