SYDNEY GRAHAM

Currently searching for a plant breeding position

Organized and analytical plant breeder with experience in multiple crop breeing programs of different scales. Love to work in a team setting and committed to driving genetic gain.

EDUCATION

Expected 2025

University of Nebraska - Lincoln
Ph.D in Agronomy and Horticulture — Lincoln, NE

Dissertation: Breeding Winter Wheat for Improved Wheat Stem Sawfly Resistance

Expected 2025

University of Nebraska - Lincoln
M.S in Statistics — Lincoln, NE

2021

North Carolina State University
M.S. in Crop Science — Raleigh, NC

Thesis: Improving Selection Methods for Development of Freeze-Tolerant St. Augustinegrass Cultivars

2017

University of Wisconsin - Madison
B.S. in Genetics — Madison, WI

RESEARCH EXPERIENCE

May 2022 | Present

Graduate Research Assistant
University of Nebraska - Lincoln — Lincoln, NE

- Graduate research assistant for the small grains breeding and genetics program.
- Aid in essential breeding program process including planting, flowering date notes, crossing, harvesting, and seed packaging.
- Lead the barley breeding program by making selections for advancement, breeding population development decisions, and exploring genomic opportunities for improved breeding.
- Fly unmanned ariel vehicles to conduct high throughput phenotyping across the state.
- Screening for wheat stem sawfly resistance for research to developed improved wheat with wheat stem sawfly resistance.

CONTACT INFO

sgraham12@huskers.unl.edu
github.com/Sgraham12
1 515-333-1171

For more information, please contact me via email.

SKILLS

Experienced in statistical and genomic analysis.

Experience with applied plant breeding including crossing and selection.

FAA Part 107 Certified Drone Pilot.

*This resume was made with the R package **pagedown**.*

Last updated on 2023-10-26.

2018 | 2021

Graduate Research Assistant
North Carolina State University — Raleigh, NC

- Graduate research assistant for the turfgrass breeding and genetics program.
- Assisted in fieldwork including hand planting, weeding, and harvesting seed.
- Prepared for field season through greenhouse propagation and cross-pollination, and seed cleaning.
- Screened germplasm for freeze tolerance by preparing and maintaining plants in the greenhouse, planning and performing freeze tests, and evaluating and collecting data on the plants post-freeze.
- Analyzed data including multi-environment trials with SAS and R and conducting QTL mapping for pseudo-F2 populations.

PROFESSIONAL EXPERIENCE

2021 | 2022

Contract Research Associate
Syngenta — Durham, NC

- Assist the crop lab in the greenhouse to evaluate T0 and T+ maize and soybean events as part of a breeding pipeline.
- Hand harvest soybean and maize, pollinate corn, evaluate maize ears for embryo collection, tissue sample for bioassays, transplant T0 corn and soybean, assist with insect screenings.
- Lead project aiming to minimize the effects of supra-optimal root zone temperature for maize seedlings.

TEACHING EXPERIENCE

2022 | 2023

Mentor for Undergraduate Students
Research mentor for summer research projects in plant breeding

2020

Teaching Assistant for CS211, Plant Genetics
Taught recitation section for 19 students.

PUBLICATIONS AND PRESENTATIONS

2023

Unmanned Aerial Vehicle Phenotyping for Antixenosis Resistance to Wheat Stem Sawfly in Wheat (Triticum aestivum L.)
ASA, CSSA, SSSA Annual Meeting. Oct 31, 2023. (Oral Presentation)
Graham, S., Guttieri, M., Easterly, A., & Frels, K.

2022

Using base index for selection of St. Augustinegrass breeding lines evaluated in multienvironment trials for turfgrass quality traits and stress tolerance in North Carolina
Crop Science. Apr 20, 2022. DOI: https://doi.org/10.1002/csc2.20755
Graham S.E., Gouveia B.T., Carbajal, E.M., Van der Laat R., Milla-Lewis S.R.

2019

Detection of quantitative trait loci associated with drought tolerance in St. Augustinegrass

PLOS ONE. Oct 31, 2019. DOI: 10.1371/journal.pone.0224620

Yu X., Brown J.M., **Graham S.E.**, Carbajal E.M., Zuleta M.C., Milla-Lewis S.R.