Christopher E. Nieters

Current Position:

Graduate Research Assistant
University of Georgia
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Education:

M.S. - Horticulture, 2022 - Current
University of Georgia, Athens, GA
Research topic: Hydroponic nutrient solution management in CEA

B.S. - Botany, 2017
University of Wyoming, Laramie, WY
Undergraduate research: High-throughput root phenotyping across *B. rapa* morphotypes

Research Experience:

Ferrarezi Controlled Environment Agriculture Lab, University of Georgia, 2022 - Current:

- Design and construct vertical farm research space
- Data logger programming for automation and environmental controls
- Nitrate and nitrate reductase transcript quantification in lettuce
- Manage undergraduate researchers

Plenty Unlimited Inc, 2018 - 2022:

- Crop physiological assessments and phenotyping
- LED lighting research: light quality and quantity impact on leafy greens and fruiting crops
- Hydroponic strawberry production: cultivar screening and system validation
- Experiment planning, design, and execution
- Programming (R) and statistical analysis

Ewers Plant Physiological Ecology Lab, University of Wyoming, 2016-2018:

- Phenotyping *B. rapa* accessions for above and below ground carbon partitioning
- Quantifying PSII stress via chlorophyll a fluorescence using FluoPen/MultispeQ/LICOR 6400/Fluorcam
- Sterile preparation of non-structural carbohydrate/pigment extraction
- Diurnal CO_2 assimilation surveys of *B. vulgaris*
- Soil, stem, and leaf water potential quantification

Wyoming Natural Diversity Database (WYNDD), University of Wyoming, 2015:

- Field collection methodology
- Delineation of wetland plots
- Soil core horizon classification
- Dataset management

Presentations:

Upcoming: American Society for Horticultural Science 2023. Orlando, Florida. Oral Presentation. *Waste Not, Want Not: Strategies for Managing Hydroponic Nutrient Solutions in a Vertical Farm.* Chris Nieters, Rhuanito Soranz Ferrarezi, Anish Malladi, Paul R. Fisher, Pedro Furlani, Melanie Yelton and Micah Gilbert.

American Society for Horticultural Science 2021. Denver, Colorado. Poster Presentation. *Cotyledon Competency in CEA: Light Response Curve Analysis across Emerging Mizuna Leaf Tissues*. Chris Nieters, Phoebe Killea, Alia Gonzales, Tessa Pocock.

American Geophysical Union 2017. New Orleans, Louisiana. Poster presentation*. Mind the Roots: Phenotyping Below-Ground Crop Diversity and Its Influence on Final Yield.* Christopher Nieters, Carmela Rosaria Guadagno, Sarah Lemli, Atefeh Hosseini and Brent E Ewers**.**

University of Wyoming Undergraduate Research Day 2017. Laramie, Wyoming. Poster presentation. *How can temporal dynamics in root growth improve model predictions of crop yield?* Christopher Nieters, Carmela R. Guadagno, Brent E. Ewers.

Academic Lab Teaching/Lectures:

Lab TA: HORT 3200 - Hydroponics and Protected Horticulture
Lecture (1/30/2023): HORT 3200 - Hydroponic Plant Nutrition

Academic Awards and Nominations:

2017. CWT Penland and Nyla Penland Memorial Scholarship for Outstanding Botany Senior Student
2017. Wilhelm G and Ragnhild Solheim Memorial Scholarship
2017. University of Wyoming Dean's List
2016. University of Wyoming President's List
2013 -2017. Hathaway Performance Scholarship

Academic Service & Volunteering:

- University of Wyoming Botany & Biology Club - 2015 - 2017
- Laramie Humane Society Dog Walker - 2018
- Plenty R-gonauts R Programming Learning Group - 2019
- Plenty Plant Physiology Discussion Group - 2020

References:

References available upon request