



MS Research in Agriculture and Climate Change, starting Summer or Fall 2023
Rubenstein School of Environment and Natural Resources (RSENR) or Department of Plant and Soil Science (PSS) at the University of Vermont (UVM)

Position: MS GRA in agriculture and climate change

Project: As climate changes increasingly affect agriculture, farmers and policy makers are challenged by how to address climate change mitigation and adaptation. Central to this challenge is developing agroecosystems that improve soil health and mitigate agriculture's contribution to greenhouse gas (GHG) emissions, while remaining economically viable. Agricultural soils are often a source of CO₂ and N₂O (a powerful GHG), but management practices have great potential to reduce emissions. This position will be part of the multi-institutional Dairy Soil and Water Regeneration Project, whose goal is to bring the dairy industry to greenhouse gas neutrality and improve water quality, but data are sparse on how to manage feed production systems to achieve these goals. This project focuses changing soil and crop management practices to reduce GHG emissions. The student will work with Drs. Carol Adair (RSENR), Joshua Faulkner (PSS & UVM Extension), and Eric Roy (RSENR & CEE) to quantify yield, soil health, soil carbon, and GHG emissions from an on-farm field site in Vermont's Champlain Valley. This work focuses on the potential for agriculture to be both productive and provide a valuable service by mitigating climate change. Graduate Research Assistantship annual stipend and tuition are included. Read more about the Dairy Soil & Water Regeneration Project at UVM:

<https://www.uvm.edu/news/cals/optimizing-soil-health-fight-climate-change>

Responsibilities: Duties will include implementing gas and soil sampling protocols, analyzing data, supervising technicians/undergraduate assistants, and preparing publications and presentations for scientific and lay audiences (e.g., farmers and service providers). Applicants must be comfortable working independently and in inclement weather, operating field equipment and storing and processing soil samples after they are obtained. The position is currently funded for two years.

Qualifications

- Applicants should demonstrate a strong interest in soil biogeochemistry and agroecology.
- BS in ecology, plant and soil science, environmental sciences, or related field.
- While not required, priority will be given to applicants with experience GHG sampling, using and maintaining lab equipment, and/or carrying out field and lab work.
- Availability beginning Summer 2023 (starting Fall 2023 is a possibility)

Application: Applicants may apply by sending their resume and a cover letter stating their interest and any previous experience to Dr. Carol Adair (carol.adair@uvm.edu), Dr. Joshua Faulkner (Joshua.faulkner@uvm.edu), and Dr. Eric Roy (Eric.Roy.1@uvm.edu).

More information: Carol Adair's lab: <http://adairlab.weebly.com/>, Joshua Faulkner: <https://www.uvm.edu/cals/pss/profiles/research-assistant-professor-joshua-faulkner>, and Eric Roy's lab: <https://nced.weebly.com/>

UVM is an Equal Opportunity/Affirmative Action Employer. We encourage a diversity of applicants to apply. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other category legally protected by federal or state law. UVM encourages applications from all individuals who will contribute to the diversity and excellence of the institution.