

UNIVERSITY OF ALBERTA

MSc Graduate Position (Dept. of Agricultural, Food & Nutritional Sci.)

Project Title: *Conservation of lentic riparian areas using virtual fencing*

Degree Opportunity: MSc (1)

Project Leads: Dr. Edward Bork, Professor and Mattheis Chair, Rangeland Ecology & Management; Dr. Carolyn Fitzsimmons, Beef Research Scientist, AAFC/University of Alberta; Dr. Francisco Novais, Post-doctoral Fellow.

Timelines: Start date can be any time after application but no later than January 1, 2024.

Project Description: We are seeking a highly qualified MSc graduate student to work on:

- Virtual fencing technologies to alter the spatio-temporal distribution and forage utilization by beef cattle while grazing on pasture so as to ensure riparian area (wetland) conservation.
- This work builds on ongoing research done in 2022 and 2023 demonstrating that VF technologies provide a novel tool to control cattle geolocation and facilitate rotational grazing of summer pastures.
- Monitoring of outcomes in the field include (but are not limited to) cattle spatial distribution, grazing behavior, forage utilization patterns, and riparian area condition/health.
- Study sites will be situated at the Kinsella and Mattheis Research Ranches operated by the University of Alberta, with substantial time spent in the field during 2024 (see weblinks below for information).

Position Requirements: All individuals applying should have:

- Strong academic background and interest in conducting advanced studies in beef cattle science, applied animal behavior, or rangeland management. Students should have a min GPA > 3.3 in their last 2 yr.
- Experience with plant identification, conducting field sampling, and working with beef cattle.
- Excellent communication skills, both verbal and written.
- An ability to work closely with others in a team environment, as well as an interest in developing and undertaking innovative scientific approaches.
- Possess strong organizational skills, and problem-solving ability.
- Willingness to engage in data analysis, critical thinking and thesis development.
- Ability to work in the field for extended periods during the summer field season.
- A valid graduated (non-probationary) drivers' license and a clean driving record to facilitate field work.

Annual Stipend: ~Cdn \$24,000 annually, with potential for teaching assistantships

How to Apply: Interested candidates should send a copy of transcripts, CV, and a statement of research experience and interests (1 page limit), with the names of three references, to: **Drs. Edward Bork** (edward.bork@ualberta.ca) and **Carolyn Fitzsimmons** (cfitzsim@ualberta.ca), at the Department of Agricultural, Food and Nutritional Science, University of Alberta.

Websites: <https://apps.ualberta.ca/directory/person/ebork>, <https://apps.ualberta.ca/directory/person/cfitzsim>, <https://www.ualberta.ca/agricultural-food-nutritional-science/index.html>; <https://rri.ualberta.ca/about-us/our-facilities/mattheis-research-ranch/>; <https://rri.ualberta.ca/about-us/our-facilities/roy-berg-kinsella-research-ranch/>