GRADUATE STUDENT POSITION

Project Title: Longevity, Ecosystem Services and Productivity of Perennial Forage Mixtures in the Peace Region of Alberta.

Sought degree: M.Sc.

Supervisors: Dr. Akim Omokanye, PCBFA Science Director and Adjunct Professor at UAlberta. Dr. Guillermo, Hernandez Ramirez, Prof., Department of Renewable Resources, Faculty of Agricultural, Life and Environmental Sciences (ALES) at UAlberta.

Timeline for applications: until filled
Desirable timeline for beginning the program: September 2025 (prefer but flexible start date)

Project Description:

This project will examine the longevity, ecosystem services and productivity of perennial forage mixtures in the Peace Region of Alberta. Producers are increasingly interested in perennial forage species and mixtures including legumes such as alfalfa, sainfoin, cicer milkvetch and birdsfoot trefoil. This research will evaluate the plant interactions, complementarity, and resource capture within forage mixtures. Resilient perennial forages with high production potential can also provide ecosystem services and innovative sustainable solutions such as enhanced soil health, weed suppression, carbon sequestration, nitrogen fixation, and water use efficiency. Furthermore, this study will specifically examine the impacts of forage mixtures as well as grass and legume monocultures on soil hydraulic and physical quality, focusing on a selection of forage species and mixtures that may maintain or even enhance soil quality within forage systems. This information will help producers make informed decisions about which forage crops to use to build resilience, reducing the risk of feed shortages and improving the efficiency and sustainability of their production systems. The majority of the livestock feed requirement comes from mixed stands of perennial grasses and legumes, therefore optimizing these forage resources is very important to producers.

We are seeking for a responsible student interested in the project.

Initial requirements:

Knowledge of soils, plants and nitrogen cycling,
Proactive, flexible, dedicated, well-centered, responsible
Open to undertake scientific approaches and to engage intense numerical analyses, data interpretation and writing up of findings, and publications.

Other key assets:

A teamwork aptitude ─ ability to work independently and with others,
A desire to deliver, share and present results in public,
Computer skills,
A 3.3 GPA or better, and
A valid driver license and clean driving record/abstract.

For this project, the selected MSc student will be at UAlberta campus in Edmonton for fall semester and winter semester to complete coursework requirements and laboratory measurements. This collaborative research project entails field activities in Fairview and DeBolt, Peace Country. Therefore, during the growing season from late April to early September, the student will be based in Fairview, Peace Country where the main PCBFA facilities are located. This flexibility of relocating between Edmonton and Fairview and back is necessary for this MSc position.

Please e-mail transcripts (scanned unofficial copy), CV, a letter describing any research experience and interests (1-page), and a list of three references.

Keywords: Soil, Forages, Perennials, Nitrogen fixation, Legumes

Annual stipend: CAD 30,000, with a total period of 24 months.

Contact Information: ghernand@ualberta.ca; akim@pcbfa.ca

Additional Information
University of Alberta is consistently rated as one of the top 4 universities in Canada, and one of the top 100 universities worldwide. Located in Alberta's capital city, Edmonton (population of one million people), University of Alberta provides a dynamic mixture of a large research intensive university, urban culture and recreation. More than 46,000 students (including 8,400 graduate students) from across Canada and 144 other countries participate in nearly 400 programs and 18 faculties.

Website
https://www.peacecountrybeef.ca/
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