

Postdoctoral Associate – Sustainable Animal Feed Systems/Climate Resilient Feed System

Location: Biology Department and Biotron Experimental Climate Change Research Centre, University of Western Ontario, London, Ontario, Canada

Category: Research

Group: Postdoctoral Scholar

Department: Biology

Duration: 1.5 years

Tenure: Full-time; Grant funded

Remuneration: \$52,600/annum * *Information about PDA benefits at Western University is available at: https://www.uwo.ca/hr/benefits/your_benefits/pda*

Deadline: Applications will be accepted for two weeks from the date of posting

Anticipated Start Date: Jan 1, 2025

Position Summary

This position seeks a scientist with interest in developing alternative sustainable animal feed systems for small ruminants using Agrivoltaics under temperate and tropical climates. Specifically, this position seeks a postdoctoral associate who has experience with forage crop production, or agriculture field crops using different crop management systems such as intercrop, mixed crop, strip crop, monocrop etc. Any experience developing animal feed or ration including economic assessment of the feed produced or production system is an asset. The postdoctoral associate will have opportunities to conduct this work in the state-of-the-art Biotron Experimental Climate Change Research Centre, and the Environmental Science Western Field Station, Department of Biology, Thompson Centre for Engineering Leadership and Innovations, Building Sustainable Value Centre at Ivey Business School, Western Center for Climate Change, Sustainable Livelihoods and Health at Western University, London, Ontario, as well as the Sustainable value and Research Farm, College of Science and Education, Portland, Jamaica.

About the Role

We invite applicants for a postdoctoral associate position to conduct research using alternative crop management systems to sustainably produce high quality animal feeds in both tropical and temperate climates. The incumbent will work in Dr. Raymond Thomas' Nootropic Foods Innovation, Brain Health, and Lipid Bioinformatics Research Program as part of a multidisciplinary research team. This research program is multidisciplinary and focuses on application of lipidomics to assess climate resilient food or feed systems, agricultural and nootropic food production, neurobiology/brain health validation, food/nutrient security, food system circularity, climate change mitigation, environmental stress biology, and boreal forest reclamation.

Research Focus

The successful candidate will be responsible for conducting research projects using alternative crop management systems in association with photovoltaics to develop high quality ruminant feed systems in both temperate and tropical climates. The project goals will be to evaluate the effectiveness of cropping systems on field crop agronomic performance, economy, social equity, and soil health status. The project will be conducted at two sites: Environmental Science Western Field Station, London, Ontario, Canada, and College of Science and Education Farm, Portland, Jamaica.

Key Responsibilities

- Conceptualize, develop, and conduct experiments using state-of-the-art methods from the scientific literature to develop novel cropping systems for animal feed production under field conditions that limit greenhouse gas emissions.
- Combine industrial byproducts, photovoltaics with different forage crops to develop high nutritional quality animal feed under different climate scenarios.
- Complete all research project objectives.
- Contribute to authoring reports, abstracts, poster presentations, peer-reviewed publications, and other relevant deliverables.
- Use a combination of microscopy, mass spectrometry, vibrational spectroscopy, and to assess feed and soil samples.

- Coordinate with the staff at the field station to conduct all aspects of the research including crop selection, field experimental design, field preparation, weed/pest control, data collection and harvesting.
- Data collection, analysis, interpretation, and presentation of results to technical, government, academic and industry partners.
- Prepare and review analytical output from experiments.
- Perform other duties as assigned within the scope of the position.
- Work collaboratively in a multidisciplinary research program with graduate students, research staff, academic, industry and government partners to co-create new knowledge in plant biology, social determinants, and economics of sustainable feed systems.

Qualifications

Education:

- A Ph.D. degree in biology, plant science, agricultural science, or similar discipline with a strong background in field crop production or forage production systems or management.

Experience:

- Strong background in plant and/or agricultural science focusing on field crop production.
- Research experience with animal feed production or forage crop management.
- Experience with agroeconomics (agriculture economics).
- Research experience using alternative management techniques to produce field crops or animal feed.
- Experience designing and executing field crop experiments and field equipment operations.
- Experience with animal feed analysis.
- The ideal applicant will possess a curiosity and passion for science, and a talent for independent multidisciplinary research in life, medical or natural sciences. This should be supported by a strong publication record with at least two first authored publications in respected journals.

Required Skills:

- A strong understanding of research design, research methodology and data analysis.
- Understanding of multivariate biostatistics and associated analytical software (e.g., XLStat, R, OriginPro, MathLab, SPSS, Python etc.) to analyze field and laboratory data.
- Proficient in using MS Office (Word, Excel, PowerPoint, Outlook, Teams, SharePoint).
- Well-developed oral, written, and interpersonal communication skills in English.
- Ability to manage and prioritize workload responsibilities and timelines.
- Ability to work effectively under pressure and meet project deadlines.
- Must be able to work independently and in a collaborative team environment.
- Must be able to interact effectively with diverse stakeholders.
- Deep understanding and expertise in sustainable feed or crop production systems under different climate scenarios or conditions
- Experience conducting economic analysis and social assessment of climate resilient cropping or feed system.

Application Instructions

Interested applicants should submit the following documents to Dr. Jian Yu at jian.yu@uwo.ca with the Subject “Application: Postdoctoral Associate Sustainable Feed System

- **Cover Letter including your academic interests, expertise, and career goals.**
- **CV**
- **One sample first author publication related to this area of research.**
- **Applicants should include the names and e-mail addresses of three potential referees familiar with your academic work.**

Additional Contact Information

Dr. Raymond Thomas, Ph.D.

Professor and Western Research Chair

Director Biotron Experimental Climate Change Centre

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About Western

Western ranks as one of Canada’s top research-intensive universities. From fundamental to applied discovery and other scholarly activities, its scholars advance knowledge that

provides tangible benefits for the economic, social, health and cultural development of citizens in London, in Canada, and around the world. Western Research supports scholars through collaboration, communication, and service. Western University and its affiliate colleges received more than \$267 million in research funding over the past year.

Western Values Diversity

The University invites applications from all qualified individuals. Western is committed to employment equity and diversity in the workplace and welcomes applications from women, members of racialized groups/visible minorities, Indigenous persons, persons with disabilities, persons of any sexual orientation, and persons of any gender identity or gender expression. Accommodation is available for applicants with disabilities throughout the recruitment. More information about benefits for postdoctoral associates at Western University is available at: https://www.uwo.ca/hr/benefits/your_benefits/pda/index.html
