

Research Scientist Position in Soil Health in Agricultural Crop systems

Position description

The Fredericton Research and Development Centre, Agriculture and Agri-Food Canada (AAFC), invites applications for a Research Scientist in soil science and related research fields with specialization in nutrient cycling, greenhouse gases (nitrous oxide and carbon dioxide) and precision agriculture. The Centre, located in Fredericton, New Brunswick, conducts world-class research in the areas of enhancing the productivity and environmental performance of potato and other arable crop production systems; potato crop protection; and potato germplasm enhancement. The incumbent's research will focus on understanding and managing nutrients within agricultural landscapes to enhance soil health and productivity in croplands in Atlantic Canada.

The growing global human population requires increased agricultural productivity on a shrinking land base to meet the need for food, fibre and bioenergy. At the same time, increased climate variability is inducing greater stresses on our crop production systems. Loss of productivity due to soil degradation is a primary limitation to agricultural production in intensively managed arable cropping systems. Soil degradation makes production systems less resilient and more susceptible to climatic variation and to environmental nitrogen losses. This position will focus on the critical role of nitrogen management at the landscape scale in enhancing the resiliency and reducing the environmental footprint of agricultural production systems. The incumbent will examine the effects of soil, crop and water management practices (e.g. cropping systems, inorganic and organic fertilizer amendments, conservation tillage, water management, precision agriculture, remote and/or proximal sensing), soil properties and climatic conditions on nitrogen dynamics within the soil-plant-animal-atmosphere system with the aim of identifying management strategies to increase the efficiency of nutrient utilization, reduce nutrient losses to water and air, and sustain productivity within agricultural landscapes in the context of variable climatic conditions.

The incumbent will be part of a multidisciplinary team of soil scientists, agronomists, microbiologists, hydrogeologists, entomologists and pathologists, and will have access to state-of-the-art laboratories and research field sites. The incumbent will have the opportunity to collaborate closely with industry stakeholders in Atlantic Canada as well as academia to address soil quality and sustainability needs. Research Scientists have access to significant funding opportunities and are well supported by technical and administrative staff. Research Scientists are encouraged to seek university affiliation and co-supervise graduate students.

Requirements:

- Graduation with an acceptable doctoral degree from a recognized post-secondary institution in agronomy, soil science, natural resources, environmental science or other relevant discipline.
- Applications will be accepted from candidates enrolled in their final year, but who have not yet completed a Ph.D. program. Completion of the Ph.D. thesis must occur before the date of appointment.

Hiring of research scientists at AAFC is now being done solely by the use of an inventory. Please apply on-line at the Government GC Jobs, Research Scientist – Growing Agricultural Innovation at this website: <https://emploisfp-psjobs.cfp-psc.gc.ca/psrs-srfp/applicant/page1800?poster=1206690>