

**University of Guelph
School of Environmental Sciences**

**MSc and PhD positions in 'Soil Carbon Storage and Greenhouse Gas Mitigation Modelling'
available at University of Guelph for Fall 2016 and Winter 2017**

We are seeking highly motivated individuals to study the impact of crop rotation diversification on soil carbon storage and greenhouse gas mitigation. Research activities will involve: 1) obtaining baseline data for a long-term field infrastructure (lysimeters) dedicated to the study of soil health and its impacts on soil ecosystem services; 2) an inter-comparison of models (DayCent, DNDC) using data from soil lysimeters and long-term experiments to assess their applicability for estimating soil water, carbon and nitrogen dynamics for Ontario conditions; 3) to address model limitations through development of new algorithms; 4) assessing the effect of management practices for improved soil health (e.g. diversified crop rotations) on soil ecosystem services, including carbon sequestration and greenhouse gas reduction for current and future climates.

The research project is a collaboration between the University of Guelph and Agriculture and Agri-Food Canada (AAFC). The selected candidates will be stationed at Guelph, conduct field research at the University of Guelph Elora Research Station and will spend 1-2 semesters being trained on modelling at AAFC, Ottawa (Ward Smith, ward.smith@agr.gc.ca).

The ideal candidates will have a background in soil, crop science and biogeochemical carbon and nitrogen cycling with knowledge of computer programming. The candidates will be required to gain expertise in developing algorithms and applying complex process-based models to simulate crop productivity and sustainability in agricultural systems.

Please e-mail a statement of interest that highlights related experience, CV and transcript (unofficial copy is sufficient) to Prof. Claudia Wagner-Riddle (cwagnerr@uoguelph.ca) by July 31, 2016.