



Application of the Denitrification-Decomposition (DNDC) model for estimating the impacts of short-term grassland set-asides on plant-available nitrogen and crop yields in Delta, BC

Abstract: Grassland Set-asides (GLSAs) are a conservation practice commonly used by farmers in Delta, B.C to improve soil that has deteriorated due to continual cultivation, to transition to organic production, or as a part of crop rotation. Based on the motivations listed farmers are selecting fields of differing quality to enter into the GLSA program. GLSAs are grass and legume species that have potential to supply or immobilize nutrients to subsequent crops. Consequently, farmers using recommended fertilizer rates on fields following GLSA incorporation could be over- or under- supplying nitrogen and phosphorus. My project will evaluate soil nutrient data following the incorporation of a short-term GLSA and use the process-based model, DNDC, to simulate plant available nitrogen and crop yields.

Bio: Originally from the Okanagan Valley, Trish's interest in soil science was ignited while living on a sheep and broad acre production farm in Australia. After returning from time abroad she undertook an associate of science degree at Okanagan College and then a BSc in Plant and Soil Science at UBC in the Faculty of Land and Food Systems. Currently, Trish is currently working to complete a masters degree program at UBC with Dr. Sean Smukler in the Sustainable Agricultural Landscapes Lab. Trish actively participates in soil science education through teaching assistant positions as well as community outreach events. Trish is engaged in the Pacific Regional Society of Soil Science where she serves as the treasurer and president-elect. Trish's dream is a small secluded plot of land in a moderate climate with fertile loam soil and a creek that runs year-round.