

Student Name: Tanya Brouwers

Project Title: Measuring Carbon Cycling Changes in Soils Converted from Forests for Cattle Grazing to Cropping Systems for Cattle Grazing.

Principle Advisor: Dr. Lauchlan Fraser

Committee Members: Dr. Wendy Gardner (TRU), Dr. John Church (TRU), Dr. Shabtai Bittman (AAFC), Dr. Michael Preston (UNBC)

Timeline: 2023 - 2025

As climate change drives agriculture further north into areas previously unsuitable for farming, it becomes critical to understand the environmental impacts, like carbon emissions resulting from land conversion. The goal of my thesis is to understand how different agricultural management practices influence a soil's capacity for carbon sequestration. To achieve this, I will use several soil health indicators to analyze carbon changes in soils converted from forests used for cattle grazing to cropped systems for cattle grazing. The test site for this project is one of the BC Living Labs and is a collaboration between TRU, Devick Ranch, BC Forage Council and Agriculture and Agri-Food Canada to "help farmers mitigate climate change while improving the productivity and ecological benefits of farmland for future generations."

