Agroforestry Greenhouse Gas Emissions

PROJECT DESCRIPTION

Our study examines the impact of agroforestry systems—which incorporate woody perennials into agricultural fields—on carbon (C) storage and greenhouse gas (GHG) emissions. This work is intended to provide management practices to help increase C storage in soils and decrease GHG emissions from agriculture (which contributes about 10% of the national total GHG emissions for Canada), thus mitigating climate change. Adding a forestry component to agricultural fields has shown promise in increasing C sequestration and reducing GHG emissions. Biochar and manure compost additions to cropland soils have shown similar promise. We are conducting a three-year study which will analyze the effects on GHG emissions and C storage in agroforestry systems of: (1) adding trees to the forested component and (2) incorporating biochar and manure compost into the cropland soils. This study will ultimately provide tools for landowners to use to improve the ecological goods and services of agricultural land.

FACULTY-DEPARTMENT

Agricultural, Life & Environmental Sciences - Renewable Resources

OPEN TO STUDENTS FROM THE FOLLOWING INSTITUTIONS

Chinese universities participating in the *Double First-Class Initiative*.

DESIRED FIELD OF STUDENT STUDY

A background in environmental, forest/agricultural, or soil science is preferred; a background in biology, geology, or chemistry is also applicable

INTERNSHIP LOCATION

Edmonton Campus

NUMBER OF INTERNSHIP POSITIONS

2

INTERNSHIP DATES

Start: July 2, 2019

End: October 2, 2019

ARE THE DATES FLEXIBLE?

Yes, I am flexible regarding the internship dates. Selected students can contact me to request a date change.