ses
school of environmental sciences

The Research Seminar Presentation by

Alison King

will be held on

Tuesday March 13th, 2018

At 1:30 pm

ALEXANDER HALL 265

Soil carbon storage: mechanisms and climate change adaptation potential

Abstract

Increasing soil carbon can both reduce atmospheric CO_2 and improve soil health. The potential of soil to store carbon, however, is poorly constrained because we lack understanding of how carbon persists in soil. One theory holds that soil stores carbon by forming aggregates, close associations of mineral particles and carbon that exclude carbon-consuming microbes. While it has been identified in some cases that aggregation increases soil carbon, it is not clear if this relationship is consistent across many cases. The first part of this research is a review of aggregate and soil carbon studies, which will enable quantitative comparisons of the aggregate-SOC relationship across sites. The second part of this project will explore the role of aggregation in soil carbon storage in a long-term comparison of six crop rotations. The third part of this research will assess the relationship between soil carbon and soil health. Specifically, it will test the extent to which increases in soil carbon can protect crop performance during drought. By describing mechanisms of soil carbon accrual, this research will improve our ability to estimate and realize soil's carbon storage potential.

Everyone is welcome to attend

(This is a Research Proposal presentation by students in ENVS*6900)