



Seminar Series

Winter 2025

Hybrid

Alex 265

Thursday,

February 27

12 noon

Dr. Serra-Willow Buchanan

School of Environmental Sciences, University of Guelph

Tiny Pollutants, Big Questions: The Role of Microplastics in Soil Ecosystems



Light refreshments
will be served

Dr. Serra-Willow Buchanan is a postdoctoral scholar with Dr. Kari Dunfield and Dr. Adam Gillespie. Her current research explores impacts of **terrestrial microplastics on soil biota, plant performance, and soil carbon cycling**.

Microplastic (MP) pollution in soils is an emerging environmental issue. These tiny and diverse pollutants have the potential to alter essential plant-soil-microbe interactions and impact soil carbon dynamics. Drawing on three complementary studies, this talk explores how different types of MPs affect plant growth and nutrition, root morphology, arbuscular mycorrhizal fungal interactions, and soil carbon dynamics. By investigating these relationships in controlled experiments, this research unravels the complex ways in **which MPs interact with both living and non-living components of soil ecosystems**. While the accumulation of MPs in soils poses significant challenges, it's not all bad news! This work also highlights the **remarkable resilience of plants** and their ability to adapt to these unexpected soil contaminants.

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