

Biology Seminar



Western
UNIVERSITY · CANADA

12:30 - 1:30 pm
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Hybrid presentation via Zoom
and live in BGS 0153



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The role of above and belowground biodiversity in ecosystem functioning: from concept to application

The ability of agroecosystems to sustain growing food production demands faces increasing challenges from climate change to land degradation; often resulting in the further intensification of agriculture production. It is well recognized that intensive agricultural practices, such as large crop monocultures with frequent soil tilling, pesticide, and fertilizer application, can erode the soil physical properties and deplete soil biodiversity. This is concerning as there is growing conceptual and empirical research demonstrating that more diverse plant and soil communities are needed to maintain desirable soil properties and its productivity. Thus, the development of agroecological tools is needed to reintegrate plant and soil biodiversity into agroecosystems to sustain productivity. Here I will present some of my research demonstrating the importance of plant species diversity and soil microbial diversity for maintaining ecosystem functioning and how we may be able to apply biodiversity-ecosystem functioning concepts to promote sustainable agroecosystems.

