Thompson Rivers University
ENVIRONMENTAL SCIENCES SEMINAR SERIES
Fall 2025

Guest speaker information

Name of guest speaker:	Nicole Bamber
Current affiliation:	University of British Columbia, Okanagan
Seminar date:	October 9th, 2025
Title of seminar:	Improving the sustainability of Canadian food production systems using life cycle assessment

Abstract: 5-8 lines in length, non-technical, written to be accessible and "catchy" to a general audience

Food systems are a major driver of many environmental impacts, including ~1/3 of greenhouse gas emissions, and ~1/2 of global land use. In the Food Systems PRISM Lab at UBCO, we use life cycle assessment (LCA) to assess the total environmental impacts associated with the supply chains of commodity food products. LCA is commonly used for food and other products to assess the environmental impacts along the entire supply chain (or life cycle) of the product - including resource extraction, manufacturing, transportation, product use, and end-of-life. In our research, we have used LCA to provide industry benchmarks for Canadian food products, including eggs, pulses (beans, peas, and lentils), and other commodity field crops. We have also investigated many best management practices for crop and livestock production to reduce their environmental burdens, including a pathway to net-zero emissions for the Canadian egg industry, and an optimization of Canadian field crop production for environmental and nutritional objectives. LCA is key in this kind of research to identify trade-offs between supply chain stages, and between different types of environmental impacts, as well as other objectives like economics or animal welfare.