Compostable food ware and packaging protocol development and compost quality analysis

ANTICIPATED START DATE: August 2014
POSITION TYPE: Masters level graduate research assistantship
FACULTY: Faculty of Land & Food Systems
GRADUATE PROGRAM: Integrated Studies in Land & Food Systems; Soil Science

PROJECT DESCRIPTION

With the global efforts to reduce waste, there are more and more compostable products entering different product lines – especially notable is compostable food ware and packaging. The composting industry however is having problems incorporating these new products in their processes because they lack clear protocols on how best to assess their degradation under different composting conditions.

This project will help increase the incorporation of compostable food ware and packaging into the compost stream by creating and refining in-field testing protocols and assessing the quality of their compost. The aim is to help bridge the gap between the current laboratory certifications and on site facility experience by creating transferrable testing protocols for use by individual compost facilities. The project will assess the quality and environmental outcomes of various compost products both in the greenhouse and in field trials at the UBC Farm. Specifically the nutrient dynamics of the composts and their impact on vegetable production will be analyzed.

JOB DESCRIPTION

The research assistant (RA) will work as part of the Sustainable Agricultural Landscapes Laboratory (http://sal-lab.landfood.ubc.ca/) with an industry partner to develop details for a comprehensive interdisciplinary analysis of compostable packaging from the establishment of new protocols for the composting industry to the assessment of the quality of compost products. The RA will review existing compostable food ware and packaging composting protocols, and survey composting facilities to develop a protocol for various facility types. The RA will then use the protocols to test the disintegration of compostable products from the industry partner at various compost facilities and will conduct a greenhouse study to assess the impact of various compost products on vegetable production. Finally the RA will participate in compost field trials where vegetable yields and nutrient dynamics (e.g. greenhouse gas emission and nitrogen leaching) will be quantified.

QUALIFICATIONS

Successful applicants will need to demonstrate an interest and ability to conduct interdisciplinary research (e.g. social, economic and environmental). The applicant must have a willingness and ability to work in a physically demanding environment. Applicants will be expected to work outside in all kinds of weather and must be able to lift 25 kg. This position requires organizational skills and the ability to work effectively as part of a team. Applicants that have demonstrated previous experience with fieldwork or other outdoor activities are preferred. Applicants' resumes should include a summary of field and laboratory course work completed and/or any applicable employment or volunteer experience.

REQUIREMENTS

- Undergraduate degree in science, preferably environmental, soil or agricultural science or equivalent work experience
- 1-2 years of work experience in a related field

CONTACT INFORMATION

Interested applicants should email Dr. Sean Smukler at sean.smukler @ubc.ca the following:

- Brief email or cover letter describing the applicants qualifications and interests
- Resume or curriculum vitae
- Unofficial Transcript
- An example of written work