

Compost Council of Canada

The “Biology of Soil Health” Workshop Program

Time	Activity	Content
9:30-10:00	Registration: Coffee and networking	
10:00-10:15	Welcome/Group participation	Introductions; overview of day (15 minutes); Introduction – What is soil health?
10:15-11:15	Presentation: The Biology of Soil Structure	How aggregates are formed; what makes them stable; how what we do above ground affects their stability. Includes: short descriptions of bacteria and fungi, supplemented with video footage of each. Finish this section with Ray Archuleta video (7 minutes) and discussion.
11:15-11:45	Coffee break	During break, soil samples are loaded into slake-test bottles. Participants are invited to observe results during break period, and discuss with workshop leaders.
11:45-12:30	Presentation: The biology of soil fertility	How plants “eat” their nutrients; how microbes facilitate plant access to nutrients. Includes: short descriptions of microbe predators – protozoa and nematodes, supplemented with video footage.
LUNCH (12:30 – 1:15) – penetrometer demo (if interest expressed)		
Beginning after lunch, we will be interrupting the presentations from time to time to look at soil samples under the microscope.		
1:15-1:45	Presentation: The biology of disease & pest suppression	How plants work in tandem with various types of microbes to suppress or fight disease and pests. Examples from the scientific literature.
1:45-2:30	Presentation: The Biology of Soil Carbon	The carbon cycle; how soils sequester carbon; the benefits of higher levels of soil carbon; findings of the latest research on soil humus and what they mean for climate and sustainable farming.
2:00-2:30	Presentation: Ecological Succession	The basic science of ecological succession and how this process affects farming; some recent science on how the successional status of soil affects productivity and carbon sequestration
2:30-2:45	Coffee break	
2:45-3:00	Exercise – Microbe ID quiz	Accompanied by summary of day (key points) and Q&A
3:00-3:45	Conclusion: Creating Healthy Soil Ecosystems	The principles and practices of soil-health management and how they relate to everything about the soil food web that we have discussed to this point. Some case studies are presented.
3:45-4:30	Further microscope work	An opportunity for participants to see their own soils under the microscope – we will do some quick assessments of soil samples for those who wish to stay and participate.
4:30	Adjournment	