

Boosting yields and profits with increased soil and plant health

A day with Joel Williams, Agronomist from London, UK

Date: February 6th 2014 – 9 to 4:30

Cost: \$40

Location: Limestone City Legion Branch 560 - 734 Montreal St, Kingston - <http://tinyurl.com/lpk4oa4>

Lunch: BYO – Refreshments provided

This workshop will make the connection between the theory, practice and benefits of developing a well functioning biological soil for greater crop success. A detailed itinerary is included below.



Joel is an agronomist with a wide array of experience in all agricultural crops and an expertise in vegetables. Add to that his youthful enthusiasm for the future of agriculture and his engaging presence, we hope you can join us for this productive day.

This event is made possible in partnership with the Frotenac Community Futures Development Corporation, Agriculture Solutions and organizing efforts of Harris Ivens, Ian Stutt and Jeff Klug

Registration appreciated but not required: <http://tinyurl.com/ly2tdll>

Detailed Itinerary: <http://tinyurl.com/lwkj42a>

Quick 3 minute video with Joel: <https://www.youtube.com/watch?v=PPMEE2XpZo0>

Itinerary:

9:00 Coffee and registration

9:30 *Overview*

9:45 *Leveraging Soil Biology and the Soil Food web*

10:45 Break

11:00 *Disease Management/Induced Resistance*

12:00 Lunch

1:00 *Managing Soil Biology*

2:30 Break

3:00 *Understanding Amendments*

4:00 *Questions*

4:30 End

Session 1 - 1 hour

- ***Leveraging Soil Biology and the Soil Food web***
 - General introduction of the main microbe groups.
 - Functions, roles and interactions of microbes in agro-ecosystems.
 - Nutrient cycling, availability and extraction.
 - Influences on the soil environment.
 - Influences of plant morphology.
 - Environmental and agronomic influences on soil life.

Joel's comment: I spent 3 years working for the soil foodweb in the UK training and consulting with farmers on soil biology – I have an in-depth knowledge of soil biology and have been told my presentations

pitch soil biology in an easy to understand, practical and real world viewpoint. From a practical point of view I was implementing biological principles on the farm in both intensive horticulture (vines, field veg, market garden) and agriculture (cereals, pasture).

- ***Disease Management/Induced Resistance***

- Role of balanced essential nutrients in optimising photosynthesis and the influence on:
 - Plant's own immune system.
 - Microbial synergy for disease resistance.
 - Crop performance/quality generally speaking.
- Disease preventing nutrients – silicon, potassium, calcium, nitrogen excess.
- Microbial inoculants and ensuring they are applied properly to improve chance of success.

Joel's comment: This is one of my personal favourite topics to discuss. I am excited by the problem solving opportunities that arise when a disease outbreak occurs. I discuss the things to look out for/test for during outbreak to identify root cause of the disease problem and hence how to avoid next time/season. Every problem provides a learning opportunity for next season.

- ***Managing Soil Biology***

- Manipulating native organisms.
- Introducing new populations.
- Agronomic practices that support/suppress soil life.
- Soil amendments and inputs to work with biology.
- The role of carbon and carbon-input complexes.
- Soil disturbance/no-till farming – Pros and Cons – discusses SCS, soil microbes, soil structure, how to offset negative effects of tillage to support soil life.
- Compost and Compost Tea.

Joel's Comment: During my time at SFW Europe I did a huge amount of trial work on compost and compost teas on our farm. 3.5 years of making composts and compost teas on a commercial farm simply means not only do I have the technical knowledge base, but also the practical sensibility to discuss the technology in full. Having a real world view, I also acknowledge the need to compromise in certain farming situations and suggest low-tech alternatives that are at least a step in the right direction if the luxury option is not possible.

Understanding Amendments

- Slow release, fast release.
- Biostimulants.
- Biofertilisers.
- Chemical Inputs.
- How these inputs influence soil biology and crop quality.
- Practical tips of applications – timing, crop management, nutrient uptake, applying inoculants.

Joel's Comment: I've been advising on the application and use of various amendments in a range of cropping scenarios for over 10 years. Having worked in Australia and the UK I have worked with growers of all types and a huge range of crop types and production methods. I'm familiar with a range of inputs and have learnt to 'read between the lines' of product labels/info sheets so can always offer some useful advice on most products.
