

# Crop-Tech Consulting Inc.

## Beyond the Basics

5-part series on the 4R systems approach to soil tests, fertility, and nutrient management.

15 CEUs  
applied for

**5-Week Series  
for \$250**

\*See last page for  
registration details\*

5-Week  
Virtual  
Series

Thursdays  
at 8:00 a.m.

Live  
Q & A

Session 1  
1/21

- The Foundation of a Good Soil Test

Session 2  
1/28

- Reading Between the Lines on Your Soil Test  
- A Deep Dive into Phosphorus

Session 3  
2/4

- Drilling Down on Calcium and pH  
- Sifting out Lime Surprises

Session 4  
2/11

- The ABCs of Potassium  
- All Things Nitrogen

Session 5  
2/18

- Understanding  
the Soil Ecosystem





# Beyond the Basics



Session 1 –January 21, 2021

## The Foundation of a Good Soil Test

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- ⇒ Major schools of thought for how to pull samples and write recommendations
- ⇒ What method Crop-Tech uses and why
- ⇒ What the soil test can tell you
- ⇒ Why we build zones in a field, and how that plays into a systems approach
- ⇒ Using layers of data to build your zones (aerial, LiDAR, yield maps, soil lines)



Session 2 –January 28, 2021

## Reading Between the Lines on Your Soil Test

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- ⇒ The importance of knowing before making a recommendation:
  - \* How the sample was pulled
  - \* When the sample was pulled
  - \* What lab ran the test, and what extraction method was used
  - \* What units are the results reported in
- ⇒ How to read the values reported and how to interpret them to make the best management decisions regarding:
  - \* Organic Matter
  - \* Cation Exchange Capacity
  - \* P1 and P2
  - \* Base Saturation
  - \* pH

## A Deep Dive into Phosphorus

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- ⇒ Availability in the soil, and the plant uptake process
- ⇒ What role it plays in the plant
- ⇒ Phosphorous tie-up and what that changes in terms of management
- ⇒ All things starter fertilizer

Each week will start at 8:00 a.m.  
and, depending on Q and A,  
will last around 3 hours



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# Beyond the Basics



## Session 3 – February 4, 2021

### Drilling Down on Calcium and pH

- ⇒ Availability in the soil, and the plant uptake process
- ⇒ What role it plays in the plant
- ⇒ How to use the pH values on a soil test to decide when, how much, and what type of lime to apply
- ⇒ What can cause false or varying pH results

### Sifting out Lime Surprises

- ⇒ How to evaluate a lime source
- ⇒ Vocabulary for understanding acronyms on a lime sample
- ⇒ How lime quality standards differ between states.
- ⇒ Why a good spread pattern matters and overcoming obstacles to achieve it.



## Session 4 – February 11, 2021

### The ABCs of Potassium

- ⇒ Availability in the soil and what affects it
- ⇒ Plant uptake process and what impedes it
- ⇒ What role it plays in the plant
- ⇒ What causes a K<sup>+</sup> deficiency, how to identify it, and what it does to the plant
- ⇒ Effects of an abundance of K<sup>+</sup> creating imbalances in the soil

Live Q and A each week.  
(No camera or microphone required)

### All Things Nitrogen

- ⇒ Different sources: Ammonium Nitrogen (NH<sub>4</sub><sup>+</sup>), Nitrite (NO<sub>2</sub><sup>-</sup>), Nitrate (NO<sub>3</sub><sup>-</sup>)
- ⇒ The conversion process between the different forms, and factors that influence it
- ⇒ What source the soil microbes like best, and what the plants use most efficiently
- ⇒ How and when to protect against volatilization and leaching
- ⇒ Nitrogen Extenders
- ⇒ Illinois Soil Nitrogen Test (ISNT) and how we use it to variable rate Nitrogen
- ⇒ VRT Nitrogen and it's affect on soil health and organic matter



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Session 5 – February 18, 2021

## Understanding the Soil Ecosystem

⇒ Examining soil microbes' role in growing a crop

- \* Heterotrophs vs autotrophs
- \* Bacteria and fungi, small particles with big roles
- \* Stages of organic matter
- \* The carbon cycle and the importance of the carbon to nitrogen ratio
- \* Nutrient cycling-what is involved and when do you see returns

## Details



Sessions start on Thursday, January 21<sup>st</sup> and will run for 5 Thursdays (1/21, 1/28, 2/4, 2/11, 2/18)



Each week will start at 8:00 a.m. and, depending on the live Q and A, will last around 3 hours



Each week's session will be posted by the next day for review, accessible to registrants via a password. Materials will be left up for two weeks following the last session (Material comes down March 4<sup>th</sup>)



The virtual meeting will be on the WebinarJam platform. No camera or microphone needed. Attendees can submit typed questions during the meeting via the chat box.

## To Register:

1. Email: [Events@CropTechConsulting.com](mailto:Events@CropTechConsulting.com) that you want to register for Beyond the Basics.
2. You will be emailed a PayPal invoice for \$250.00. (5-Part series only sold as a whole, can not buy single weeks)
3. Once confirmation has been received that the invoice has been paid, you will receive a confirmation email with your meeting link.



We are applying for 15 CEU credits for the series. There must be a registration for each person submitting a CCA number to the sign-in sheet. Per organization guidelines, those that watch it live can be included on the sign-in sheet. Those that watch the recording later can self-report the credits.

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