

Trialing On farm Biologicals PFI Panel 2024 Conference

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Do “they” work?????

- Yes! Native soil biology is doing this year round
 - James White Rutgers – **Rhizophagy cycle**
 - Young Red Angus – Youtube Channel
 - **You use rhizobia naturally present**
- ROI is a different story!
- Pitfalls of using them?
- 2024 next steps

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My Farm Lessons

- Lessons learned- Application
 - Mixes sitting overnight? PSI, sunlight UV, check soil PH!
- Lessons learned- Synergies?
 - Biology with sugars, application water quality, adding humic acid, using with synthetics?
- Lessons learned- General Farm Logistics
 - Time?, Labor?, Equipment?

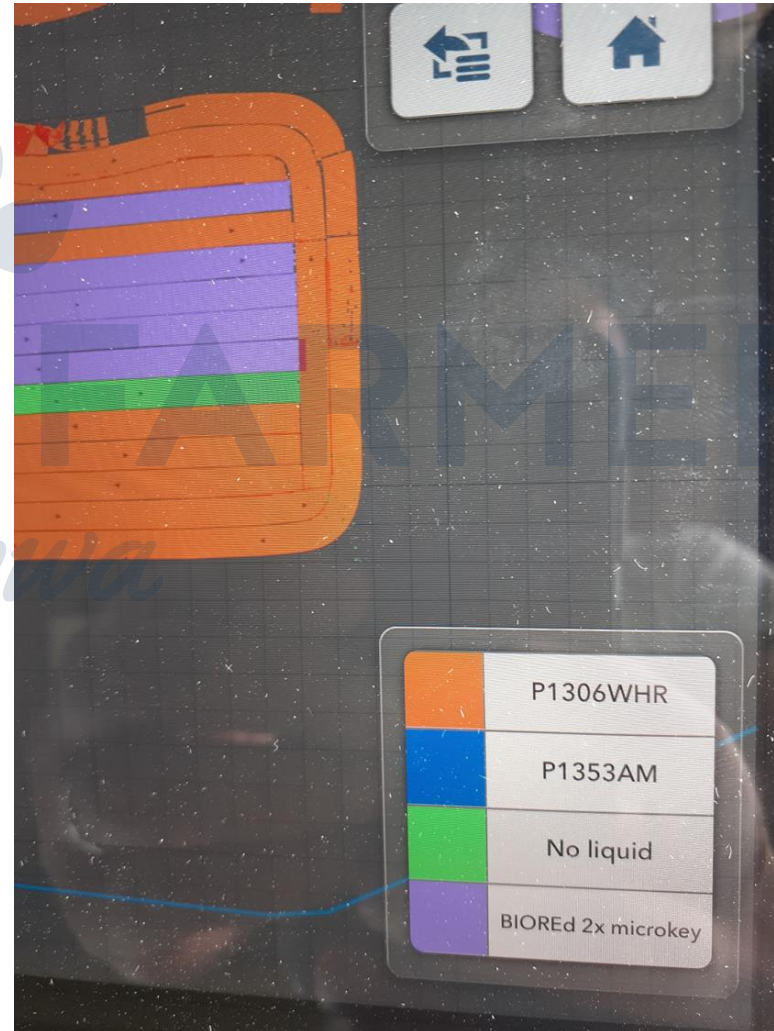
Quick Tricks for On-Farm Observations

- Root dig – Inoculation?



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- Stalk Nitrate samples
- Yield results



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High Level Results

Treatment – 2020 Fall	PPM at Harvest, Stalk Nitrate
Control	1670
Envita and Biovante – Bio Red	2820
Pivot Bio	2280

Did not see a meaningful yield response
– Nitrogen Probably not limited!

Treatments – 2023 Fall	Kernel Count
Revline, Endophyte, BCG	533
Control 1	539
ENDO	520
environocST	502
Revline only	643
BCG	595
Control 2	539

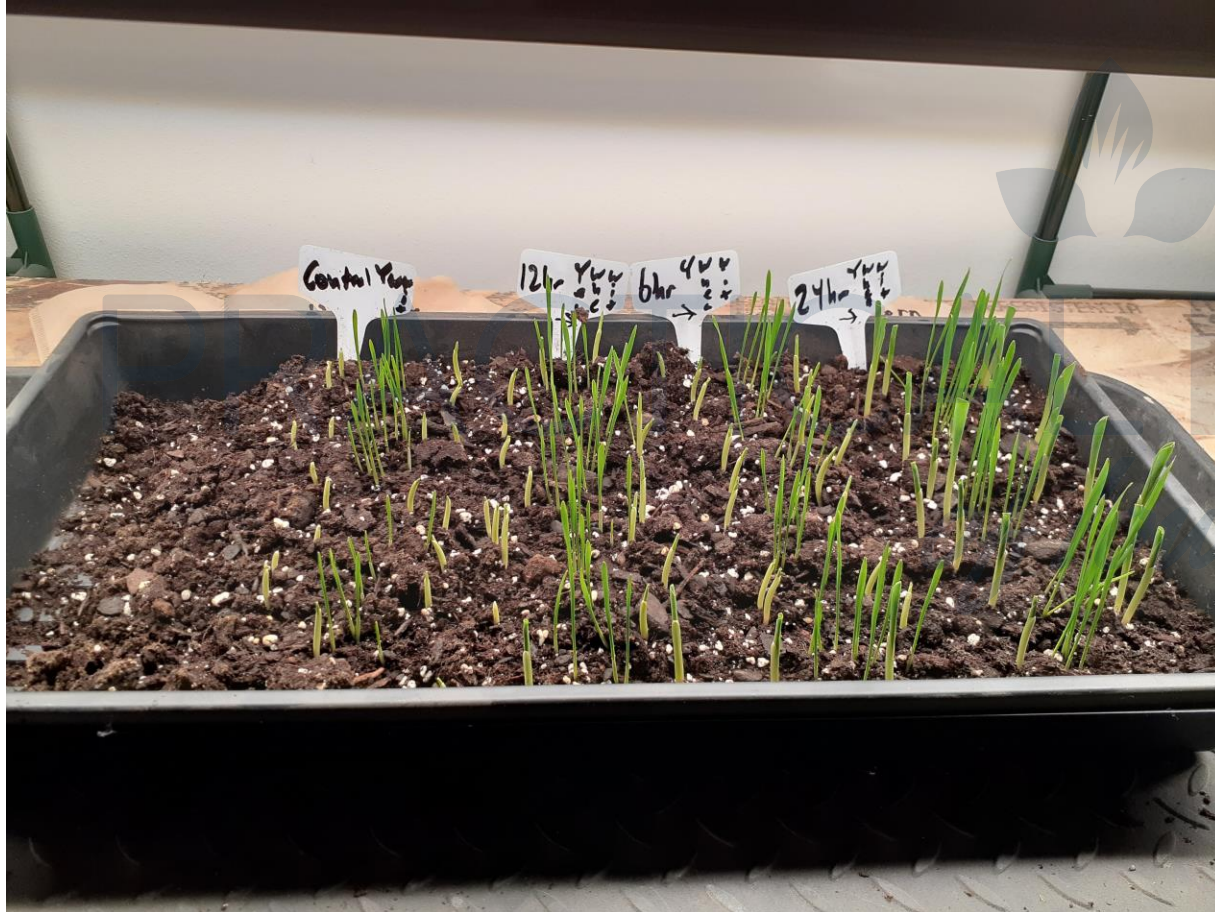
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- Seed germination early growth



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Simple Seed Prime Test



Get some clear plastic cups and record which roots are fastest to edge and most mass!

Quick Tricks for On-Farm Observations

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- Seed germination early growth
- If purchased somewhere ask them how to know it is present and working?



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Goal setting

- What is your goal?
- Key considerations:
 - ROI
 - Count the costs:
 - time/machinery/labor/results/analysis
 - Keep test small – repeat a couple areas of a field/farm
 - Results from small areas that look good – implement actual statistical design



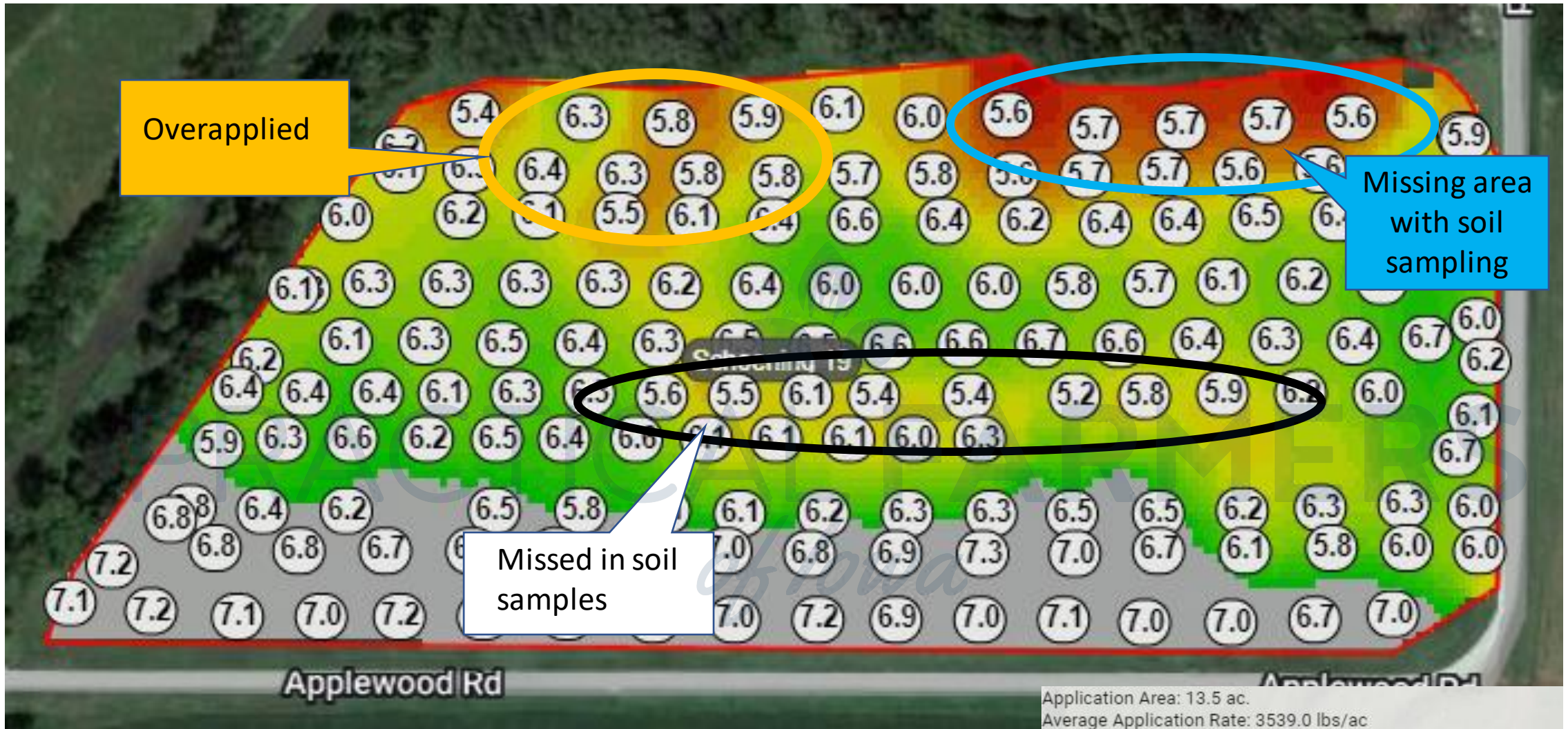
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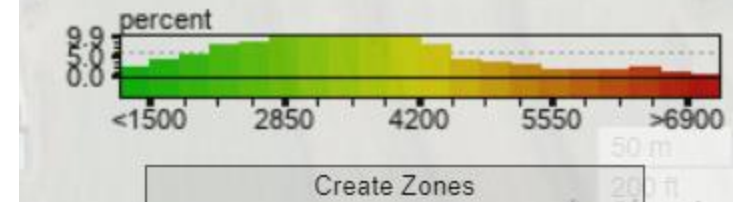
My farm in 2024

- Fix Soil pH! – Usually highest ROI
- Run Veris Mapping (come to my lightning talk!)

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Application Area: 13.5 ac.
 Average Application Rate: 3539.0 lbs/ac
 Total Product: 47648.9 lbs



Veris Advantages

- 30K pounds lime saved
- Over 3 acres does not require lime!
- Accuracy = Releasing nutrients not identified by soil sampling

My farm in 2024

- Fix Soil pH!
- Run Veris Mapping (come to my lightning talk!)
- Broad spectrum inoculants:
 - Holganix, Purple Cow Cx-1, compost extract
- Replicated Robust Test – Revline, BCG, Envita
- Whole farm shift; Basic focus on Agronomy
 - Minimize harsh synthetics
 - Keep living roots
 - Focus on soil health