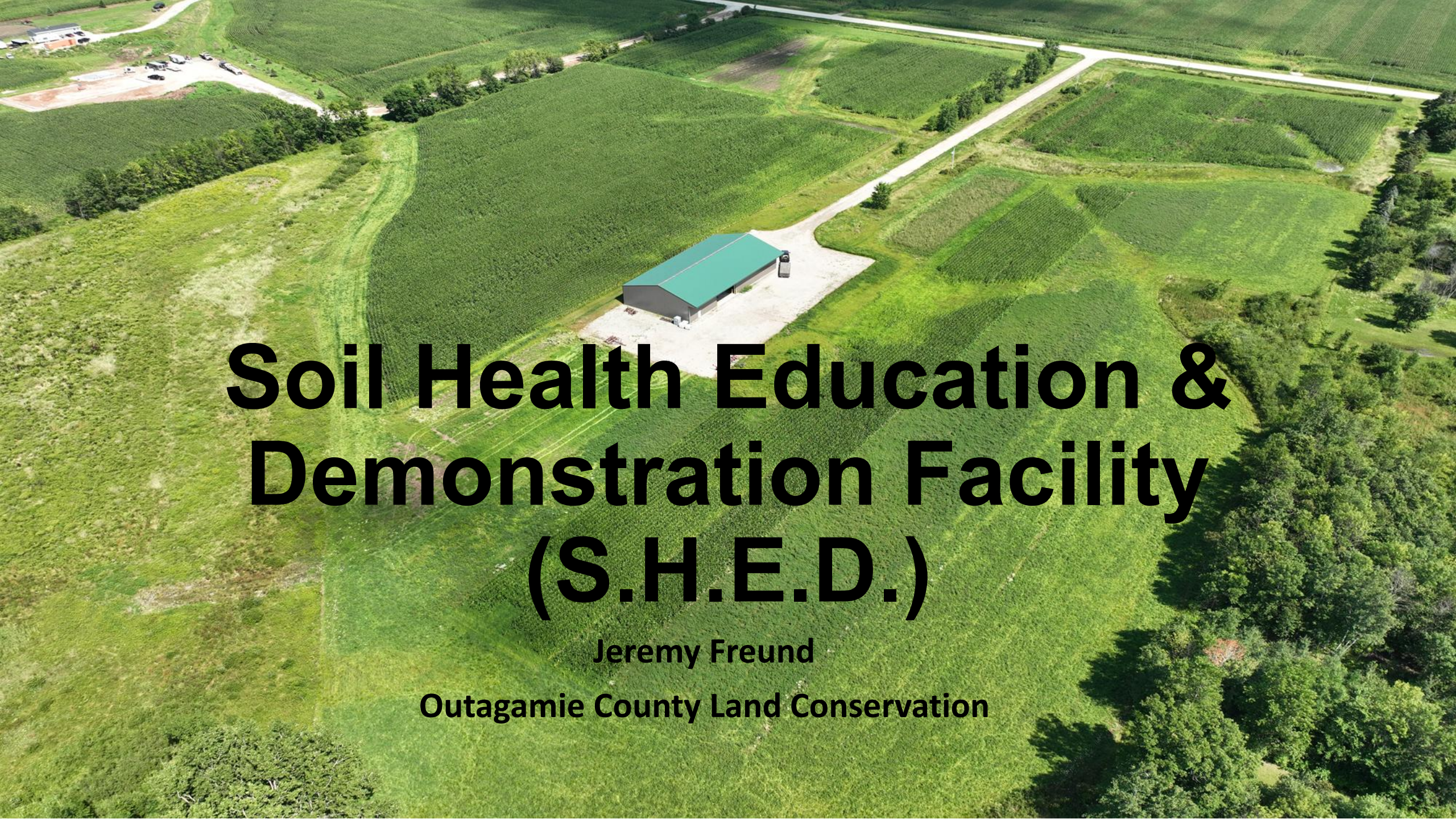


An aerial photograph of a rural farmstead. In the center, a large barn with a bright green metal roof sits on a light-colored gravel or dirt pad. A paved road runs diagonally from the top right towards the barn. The surrounding landscape is a mix of green fields, some of which appear to be planted in crops like corn, and areas of grass. In the top left corner, there's a small cluster of buildings and a parking area with several vehicles. The bottom right corner shows a dense line of trees. The overall scene is bright and sunny, with clear shadows cast by the barn and trees.

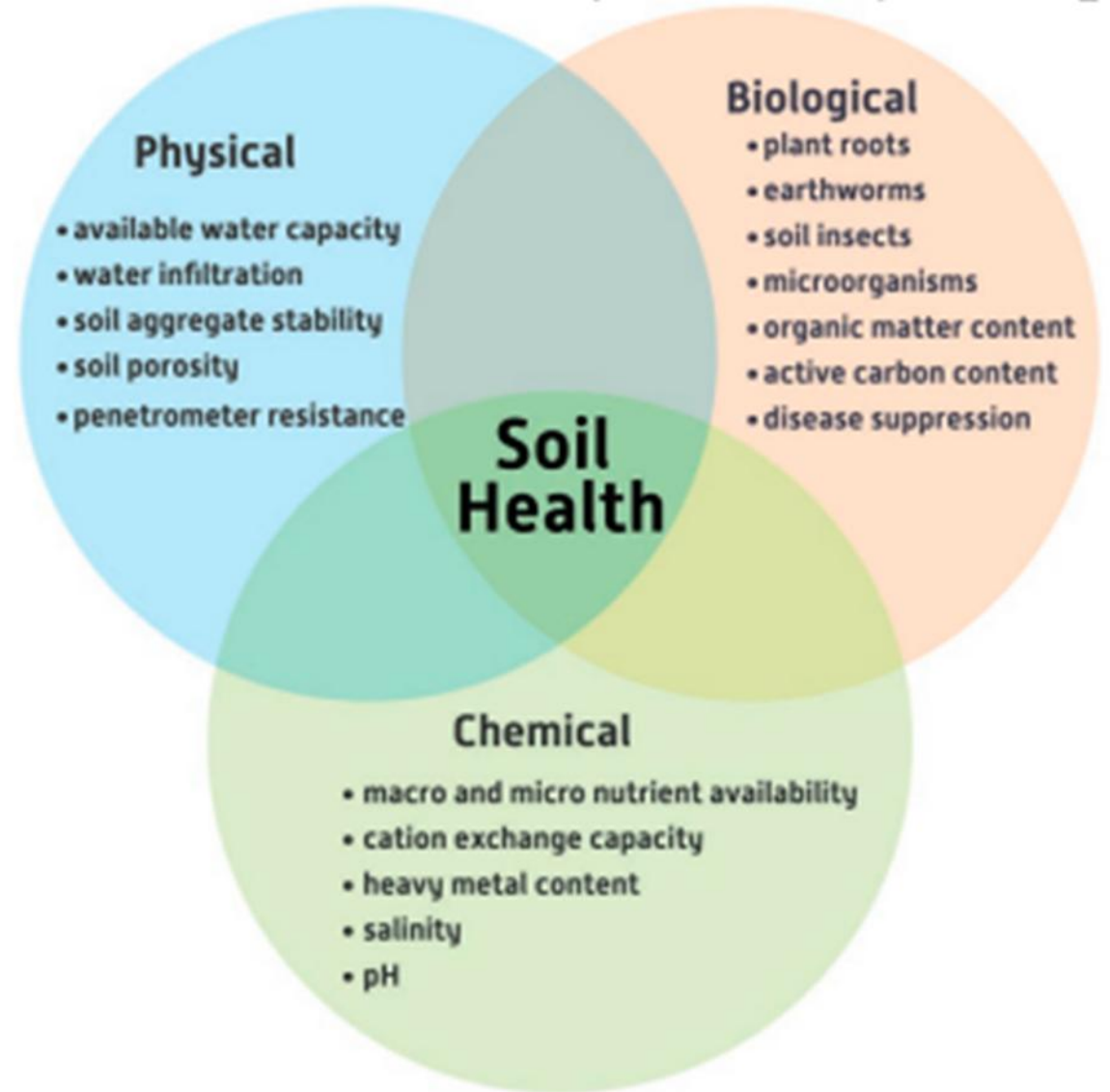
Soil Health Education & Demonstration Facility (S.H.E.D.)

Jeremy Freund

Outagamie County Land Conservation

What is Soil Health?

- “Soil health is defined as the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans.”
-NRCS

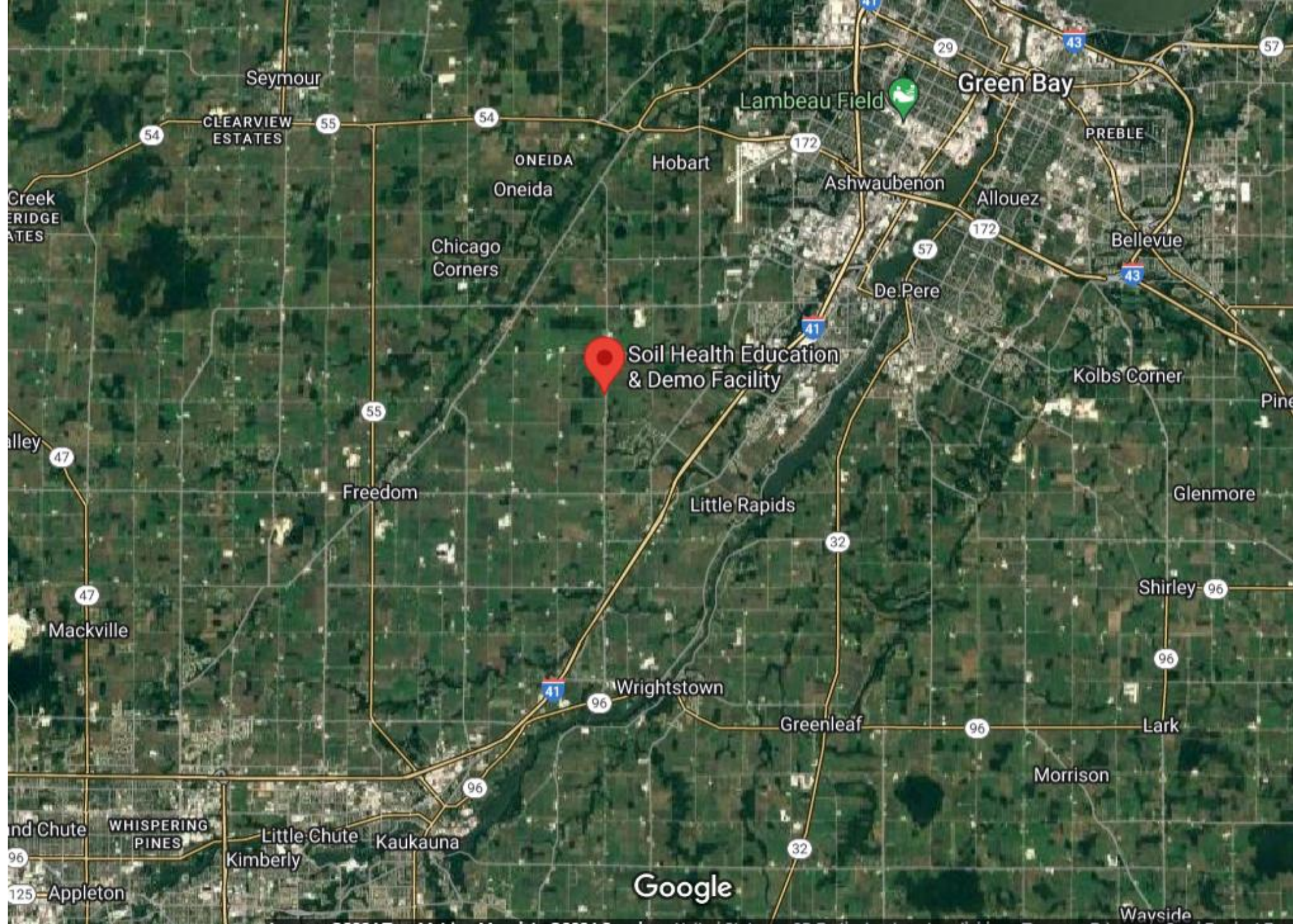


What is Soil Health?



What is Soil Health?





November 15th 2023 Ribbon Cutting



L to R: Andy Kiefer, Tehassi Hill, Jessica Schultz, Debbie Vanderheiden, Tom Nelson, Jeff Smudde, Erin Houghton, Greg Baneck, Eric McLester, Sherrole Benton, Alex Krepline

Overview

- 30 acres total
 - 20 acres of trials
 - 2020 – First year of trials
 - 2022 – Building
- Oneida Nation
 - 2015 – EPA Great Lakes Restoration Initiative
“Targeting Outcome-Based Sediment Reduction in the Lower Fox Watershed”
 - Awarded to FWWA
 - Subaward to Outagamie LCD, Brown LCD, The Nature Conservancy, Great Lakes Commission, UW-GB, DNR

#6 - Context

- Making the 5 principles work on each farm
- Climate – NE Wisconsin
- Crops – Dairy Rotation
- Opportunities – Traditional & New
- Challenges – WEATHER and Manure



INTERSEEDING/NO-TILL DRILL

- 6row-7.5"(2) and 12row-10"
- Establish cover crops early
- Interseeders are able to adapt to no-till drills



LOW DISTURBANCE MANURE APP

- Mitigates bottleneck of fall cover crops and manure.
- Apply into living cover.
- In fall, established cover crops can store available manure nutrients for the following crop.

1. Bazooka Coulter Injector
 - 14,000GPA
2. Dietrich Shank Injector
 - Sidedress growing corn.
 - 18,000GPA



CLOSING WHEELS

Find Out What Work Best on Your Farm.



AIR SEEDER

- Donated By TNC
- ADAPTABLE
 - Up to 60ft working width
 - Able to plant any mix or specie
- EFFICIENT
 - Plant cover crops without an extra pass



NO-TILL PLANTER

JD 7200 Upgrade/Modification

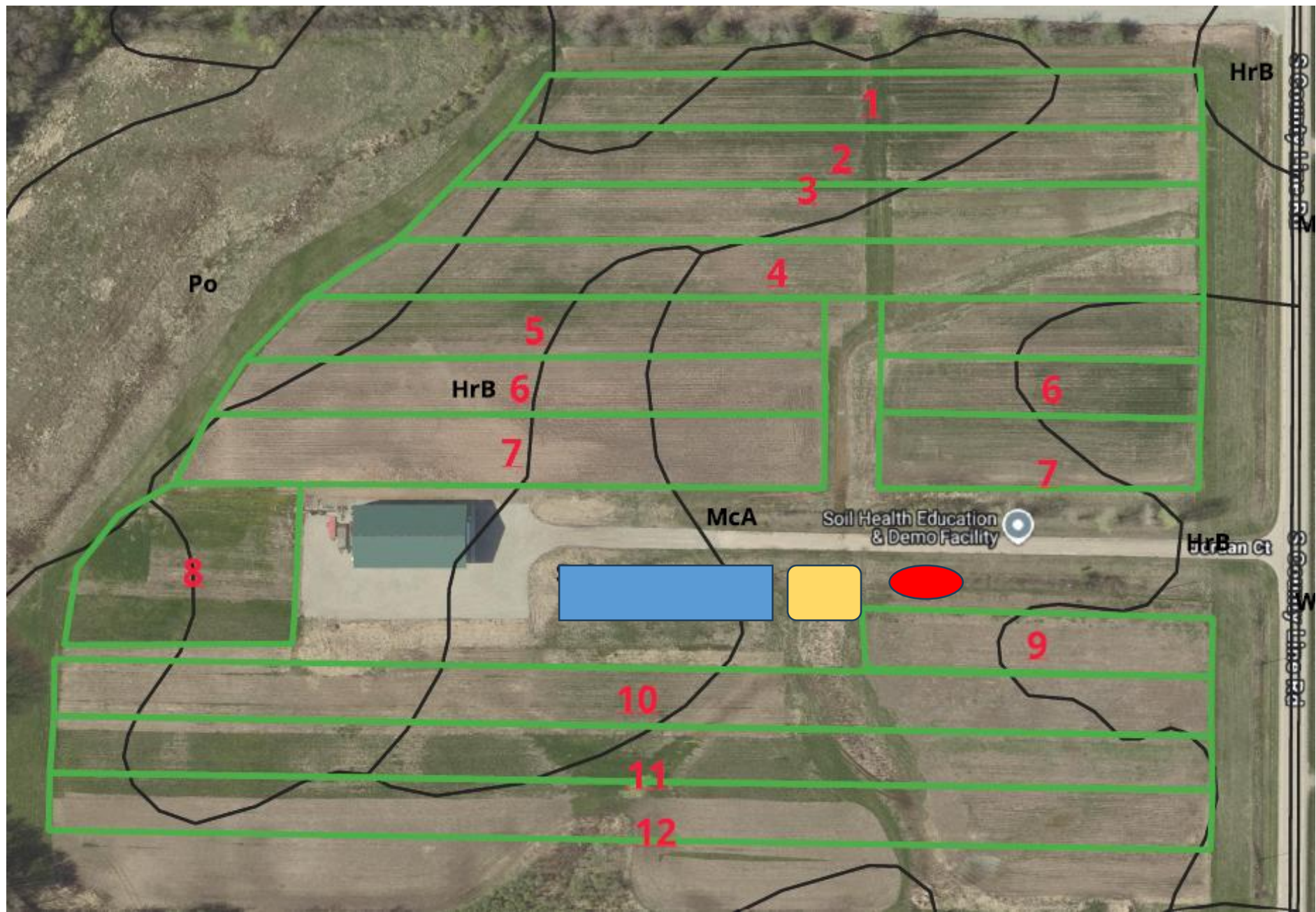
- Modest updates to conventional planter.
- Roll/Crimp Winter Cover
 - Conserves moisture
 - Suppresses weeds
 - Reduces erosion
 - Build OM



H. Strip-tilling into wheat stubble.







Interseeding

- Establish cover crops early
- Reduce fall field work bottleneck
- Increase species diversity
- Specialized equipment
- Herbicide management
- Timing









Planting Date:	May-18	May-18	June-6	May-18	May-18	May-30
<u>Yield</u>	<u>67 bu</u>	<u>67 bu</u>	<u>40 bu</u> <u>(7.6)</u>	<u>40 bu</u>	<u>65 bu</u>	<u>50 bu</u> <u>(4.8)</u>
Income	\$830.13	\$830.13	\$495.60	\$495.60	\$805.35	\$619.50
Expense	\$580.70	\$518.70	\$530.60	\$530.60	\$553.70	\$553.70
<u>PROFIT</u>	<u>\$249.43</u>	<u>\$311.43</u>	<u>(\$35.00)</u>	<u>(\$35.00)</u>	<u>\$251.65</u>	<u>\$65.80</u>

Conventional

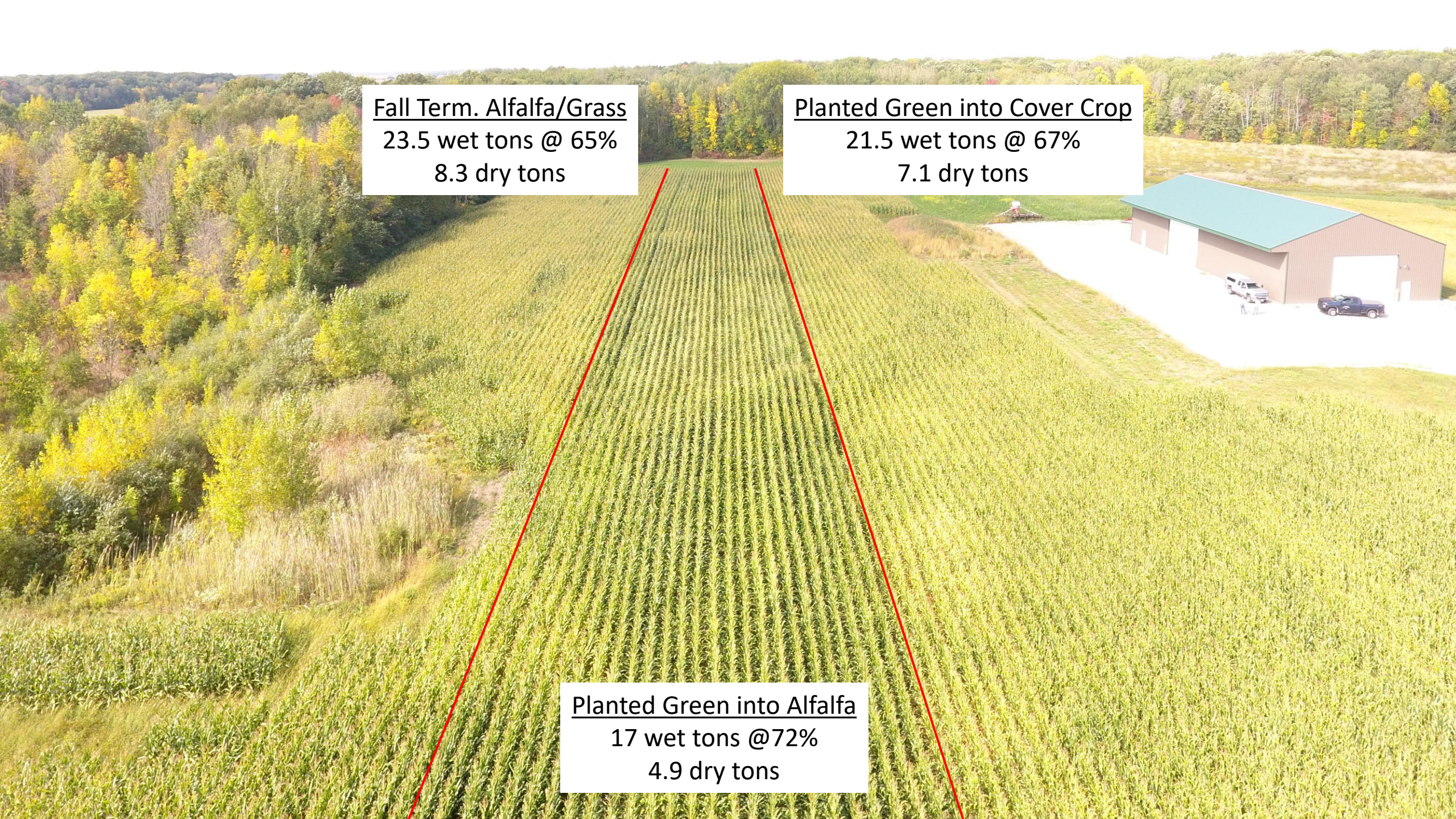
Stale NT

Crimp&Plant

Delay Crimp

NT Green

Forage NT



Fall Term. Alfalfa/Grass
23.5 wet tons @ 65%
8.3 dry tons

Planted Green into Cover Crop
21.5 wet tons @ 67%
7.1 dry tons

Planted Green into Alfalfa
17 wet tons @ 72%
4.9 dry tons

Plot	Corn Silage T/ac 65%	Corn Silage dmT/ac	Crude Protein	NDFD 30	Milk/Ton	Starch	Kernal Count bu/ac
Same Day 7# A.R. + 4# Red Clover	12.1	4.2					105.6
V3 7# A.R. + 4# Red Clover	21.1	7.4	6.82	65.26	3658	31.2%	172.6
V8 7# A.R. + 4# Red Clover	22.4	7.8					182.7
V3 35# Jungle Mix	23.2	8.1	6.65	60.28	3735	37.9%	183.6
V8 35# Jungle Mix	22.3	7.8					175.3
Tilled Ground No Interseeding	23.6	8.2	7.24	58.39	3505	38%	170.3
30-60-30 V3 Interseeded	19.2	6.7	7.16	65.43	3676	37.8%	160.6
60 inch V3 Interseeded	22	7.7	7.16	65.43	3676	37.8%	159.2

Looking Ahead

- Continuous Living Cover System
- Soil Health Translation
- Runoff Irrigation
- Strip-Till/Manure
- Grazing – Conventional/Hybrid



An aerial photograph of a rural farm. In the center, there is a large barn with a bright green roof and a light-colored gravel driveway. The surrounding landscape is dominated by vast, lush green cornfields. To the right, a dense line of trees borders the fields. In the upper left corner, a small cluster of buildings and a parking area with several vehicles are visible. A dirt road or path runs through the middle of the farm, separating the barn area from the rest of the property.

Questions?

Jeremy Freund

Outagamie Land Conservation

920-574-6965