



Pragmatic approaches to profitability and sustainability

Willie Hughes, Hughes Farms
January 20th, 2018







Maude Hughes and a Mangold harvesting hemp on Delavan Drive W.W.II





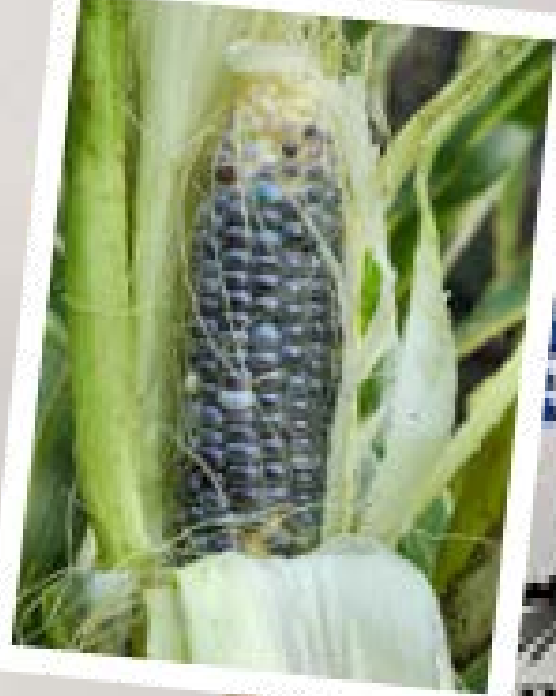
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CORN











An aerial photograph of a large agricultural field during harvest. A long line of semi-trailers, mostly with blue and white trailers, is parked in a row across the field. A yellow combine harvester is positioned at the front of the line, discharging harvested corn into the back of one of the trailers. The field is a mix of brown, harvested soil and some remaining crop residue. In the far distance, a small town or village is visible under a clear sky.

Long growing corn, 114 days

Requires good isolation

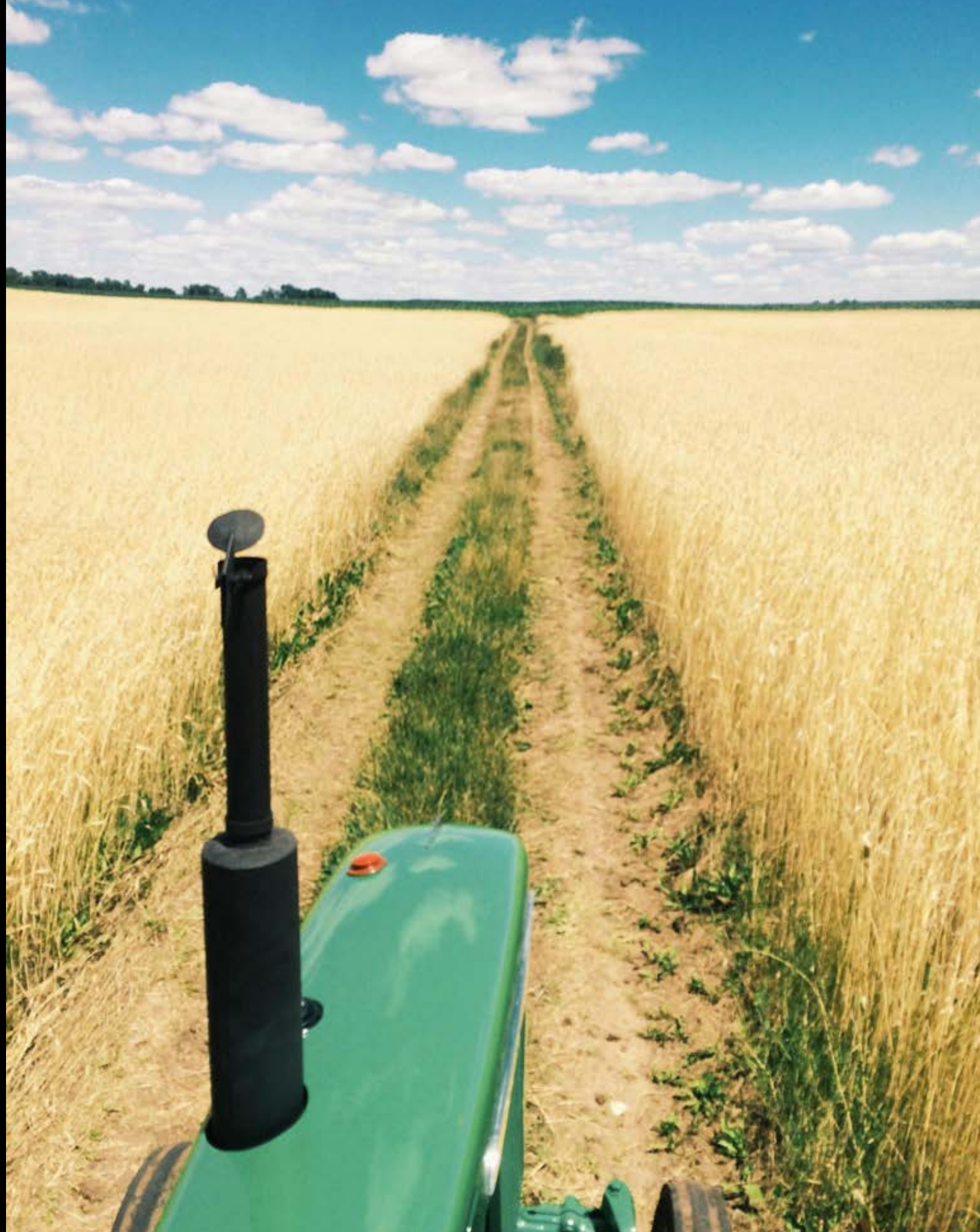
No yield drag compared to yellow corn

Dollar premium.

The background of the image is a close-up, top-down view of a vast field of wheat. The grains are a rich golden-brown color, indicating they are ripe. They are packed closely together, creating a textured, almost uniform surface. The lighting is even, highlighting the natural sheen and shape of the individual grains.

WHEAT







SOYBEANS



SUNFLOWERS



Daytona VNS variety

2 tons/ac of composted chicken manure, 5 lbs of nitrogen for every 100 lbs of production is often recommended

Too much N reduces oil content, causes lodging

22300 seeds/ac //// 80 days to maturity

2016 production of 1879 lbs/ac.

Deep tap root.

Busts up weed cycle.

Organic value of .40-.50 cents/ Lbs.









VEGETABLE CROPS





Vegetable Peas

Rotary hoed once or twice

1 ton/ac composted fertilizer

575,000 seeds per acre, drilled

Typical yield of 2 ton/ac

Take off early july

Snap beans

Cultivated

On after peas are tilled

155,000 seeds per acre

Typical yield of 2-5 ton/ac

Taken off in mid september

COVER CROPS



- increased microbial activity, increased microbial diversity
- reduction in erosion
- surface residue certainly help with wind erosion
- root biomass really keeps our soil in place
- in rock county we have soils typically with a 2-6 percent slope.
- better tilth
- biological nitrogen fixation
- economic form of nitrogen
- weed management
- - allelopathic effect
- nitrogen retention. Cover crop scavenge the nitrogen from our fall fert application and store in a form that can be readily available next spring.
- reduces nutrient leaching
- roots improve water infiltration.
- soil aggregation
- reduce compaction
- maintain soil moisture



VETCH

PROS

Improve soil aggregation

Plant available nitrogen
-Rhizobium bacteria

Excellent weed suppression

Beneficial predators

Relatively high price per
pound

CONS

Seed germ is hard to predict

Seed is indeterminate

Hard to plant early
following year

Pain in the butt to harvest



Listen to your customer!!!

Cultivate a relationship with your buyers

Take time to understand their concerns

Familiarize yourself with their operations and educate yourself on their motivations

Premium Prices

We pride ourselves on being the local operation willing to take on tough challenges

By providing highly specific products, we are able to capture value others are not willing to seek.

This should involve reaching out to customers, and actively listening to their needs



Re: 5 soil samples submitted June 29, 2005
Results emailed and mailed: July 8, 2005

Randy Hughes

NOTE: This test may underestimate the N contributions from organic N sources such as manures and previous legume crops when temperatures during the six weeks before sampling are below the long term average.

PRE-SIDEDRESS SOIL NITRATE TEST
(SEE TABLE BELOW FOR RECOMMENDATIONS)

Field ID	Sample No.	NO ₃ -N ppm	Nitrogen inputs
Airport - North by trailer court -1		20	2004 Oats w/ alfalfa seedling cover crop
- South - Between field rd + Shop -2		14	2004 - Wheat w/ 6000 GPH Hog slurry
Hugenin -3		10	2004 - Soybeans w/ hog manure before beans
Jones across from Power plant 4		26	2004 - Wheat w/ frost seeded alfalfa
Schwallenbach's 5		13	2005 - 1840 lbs Pelleted, cannulated chicken manure from midwest bio-ag.

CORN NITROGEN RECOMMENDATIONS BASED ON THE
PRE-SIDEDRESS SOIL NITRATE TEST (PSNT)

PSNT Result ppm N	Soil Yield Potential ¹	
	Very High/High ---N Application Rate, lb/a---	Medium/Low
≥21	0	0
18-20	60	40
15-17	100	40
13-14	125	80
11-12	150	80
≤10	160 ²	120 ²

The Jones field had good, loose soil. Other were somewhat hard, with the Schwallenbach field probably the hardest.

¹ To determine a soil's yield potential, consult UWEX publication Soil test recommendations for field, vegetable and fruit crops (A2809), or contact your agronomist or county agent.

² Unadjusted nitrogen application rate.

Note: For first year corn following alfalfa, the maximum N recommendation rate is 40 lb N/a for all PSNT results less than 21 ppm N.



Get your staff on board!



Get involved in the
community!

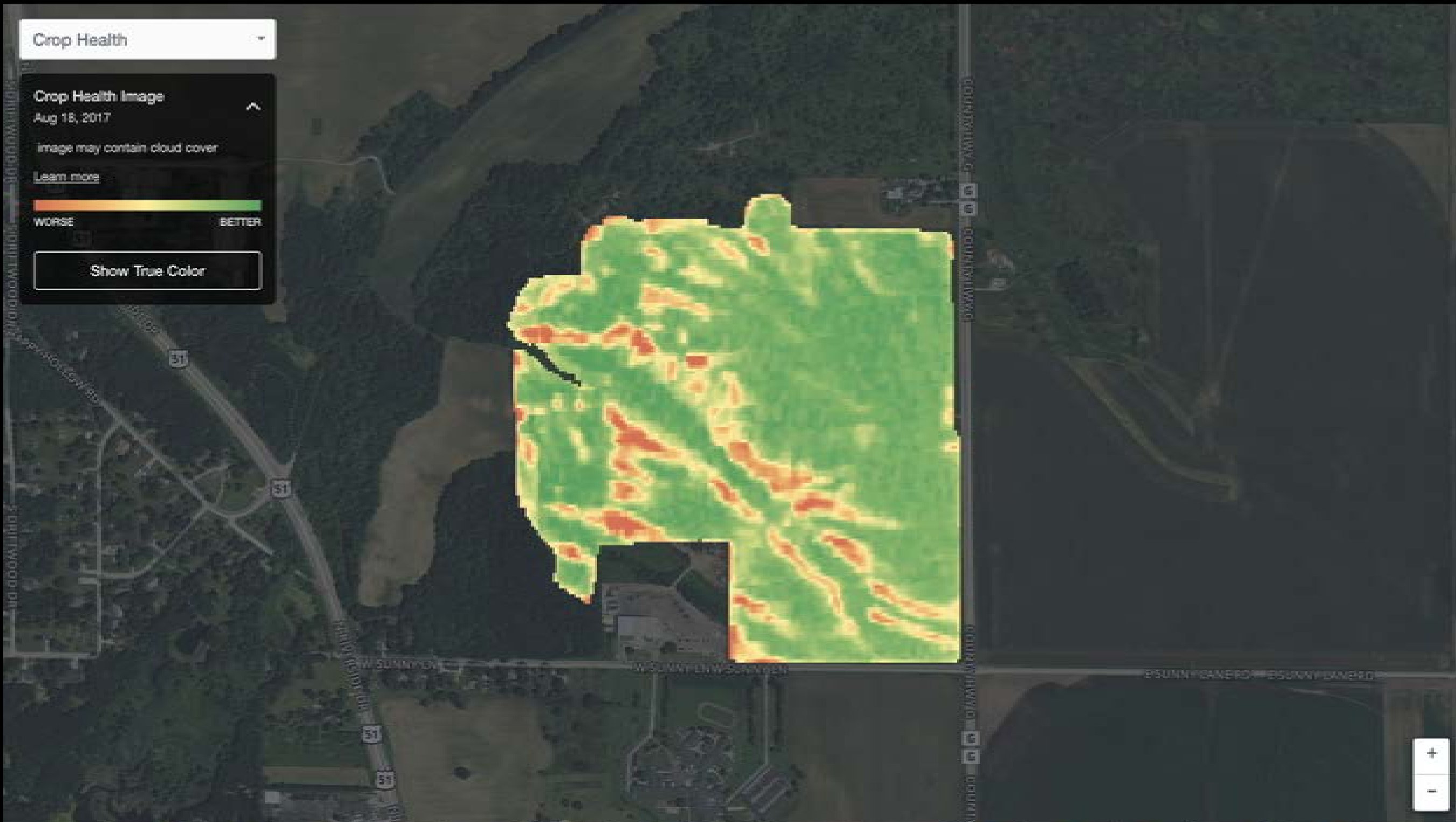














Take away

Know your cost of production

Locate and listen to your customer

Add value by Specializing and diversifying

Tell your story

Thank you!



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