AGENDA

- Who we are
- Why we do what we do
- Soil health principles
- Fertilizer & Planting methods
- Cover crop integration
**Who We Are**

- Family farming operation since 1902
- Farm in EC Iowa ~800 ac
- Custom farming business
Who We Are

- Graduated from Iowa State University
  - B.S. Ag Systems Technology
- Worked at Kinze Mfg.
  - Engineering Dept.
- Opportunity to transition back to farm in 2007
What We Do

- No-till/strip-till, cover crops
- Crops: corn, seed corn, seed beans, Hay
- Cow/calf herd
Why We Do What We Do

- Minimize nutrient loss
- Reduce soil erosion
- Improve soil health
- Improve efficiency & productivity
Why We Do What We Do
Why We Do What We Do

Oct 2018, 6+ inches of rain in a week
Why We Do What We Do

Soil quality is the capacity of a soil to function (in a farm or ecosystem) and thereby sustain productivity, maintain environmental quality, and promote plant and animal health.

Aim is to manage for "balance" between all three soil components.
Soil Health Principles

- Soil Armor
- Minimize Soil Disturbance
- Plant Diversity
- Continual Live Plant/Root
- Livestock Integration
As to methods there may be a million and then some, but the principles are few. The man who grasps the principles can successfully select his own methods. The man who tries methods, ignoring the principles, is sure to have trouble.

- Harrington Emerson
Strip-till

- Started in 2010
- Bought an “affordable” bar
- Rebuilt to improve functionality
Strip-till

- 2013: 16R Progressive Bar w/ Remlinger units
- 2018: 16R Krause Gladiator
Planter

- Graham electric drives
- Precision Planting:
  - eSet meters
  - WaveVision seed tubes
  - Clean Sweep
  - Yetter Sharktooth trash whippers

- Mudsmith gauge wheels
- Furrow Cruiser closing wheels
- Kinze downpressure air bags
SIDEDRESS

Nitrogen bar w/coulters
Cover Crops

- Started in 2014
  - Interseeded ryegrass around V5
  - Aerial seeded cereal rye in Sept
Cover Crops - interseeded

July 25, 2014
Cover Crops - Aerial

Sept 15, 2014

Nov 3, 2014
Cover crops - 2014 fall

- Drilled cereal rye on 50 acres of bean stubble
  - Used IH 5100 conventional drill

- Cereal rye broadcast on 80 acres of cornstalks (seed corn)
  - Spread with fertilizer, disked in

- Curious about soil temps with & w/out cover crops
Cover crops - soil temps

- Checked soil temps April 22, 2015
  - With cover 46.4°*
  - Without cover 46°*
Planting “green” - 2015
Planting “green” - 2015

Everything went as planned
Cover crops - 2015 fall

- Seeded wheat with Kinze 2600 planter
- Made backing plates for brush meters
Cover crops - 2016
Cover crops - 2016

Great root mass, even at 2-3” tall
Cover crops - 2016

Indexed cover crop to work with strip-till
Cover crops - 2016

May 11, 2016.. Not like I planned...
Cover crops - 2016 fall

A low buck operation!
Cover crops - soil temps

- Checked soil temps
  May 1, 2017

46.6*

45.2*
Cover crops - 2017

- Harvested June 1
- Planted June 5
Cover crops

June, 9 2017: variability?
Cover crops - 2017 fall
Cover crops - 2018

Set up the Hiniker for twin-row
Cover crops - 2018

- Harvested 7 ton/ac
- Planted May 24
Hagie cover crop interseeder
Harvest - 11/1/2018
Harvest - 11/1
2019 Plans

- 60” Corn
- Interseed ~ v4
- 97RM Corn
“The real winners are the people who look at every situation with an expectation that they can make it work or make it better.”

- Barbara Pletcher