

Triticale Before Corn

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The Setup

Farm in north central Iowa with Dad and 2 Brothers, about 1.5 hours NW of Des Moines

Home farm is along Des Moines River valley

Childhood farm was corn, beans, pasture, hay, cows, pigs

- Farm transitioned to reduced tillage around 2003
- Current farm is strip-till corn, no-till beans, cover crops, hay, CRP, waterways, terraces
 - Roughly 900 – 1000 acres
 - CSR2 varies widely
 - Soils vary from wet sloughs to high knobs

The Transition

- Early 2000's, Ray Rawson promoted vertical tillage, zone tillage, or strip tillage to reduce compaction and help roots get down deeper
- 4-shank zone commander to fracture compaction layers
- Strip-tilled with rented machines
 - Then bought Yetter Maverick row units on a John Deere bar
- Switched to current Sukup strip-till rig 15 years ago
- Add technology and planter upgrades along the way
- Started drilling soybeans about 15 years ago
- Started cover crops about 13 years ago

The Iron



Strip-Till Rig

Modified Sukup 9400 High-Residue Cultivator



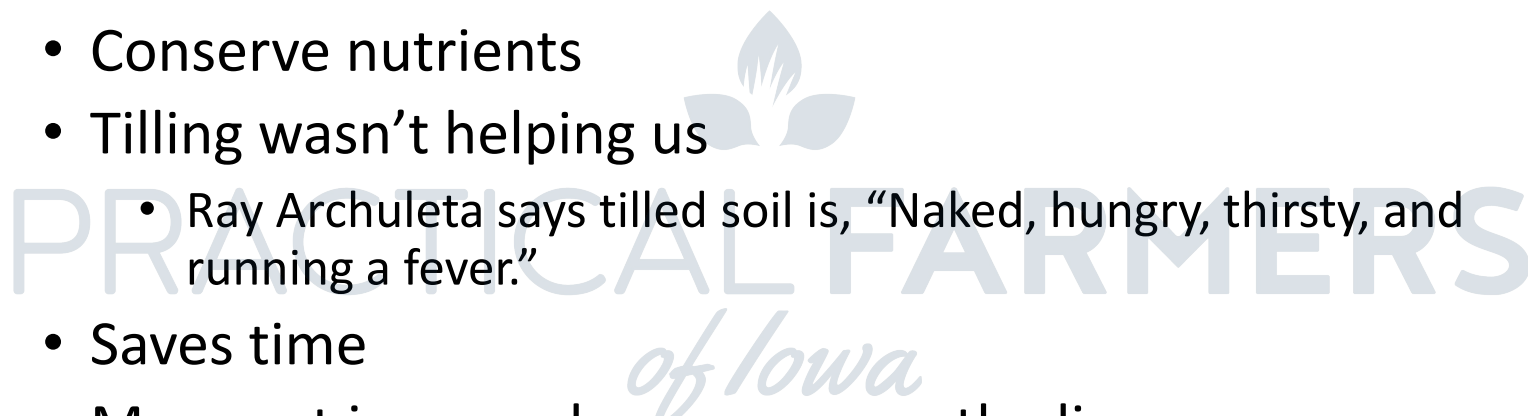


JD 750 Drill, 20' wide, 7.5" spacing



Why Did We Change?

- Reasons we chose strip-till, no-till, & cover crops
 - Process improvement
 - Less erosion
 - Conserve nutrients
 - Tilling wasn't helping us
 - Ray Archuleta says tilled soil is, "Naked, hungry, thirsty, and running a fever."
 - Saves time
 - More net income, less money on the line
 - Lower equipment costs
 - Lower fuel costs
 - Government incentives
 - Improves soil structure & drainage
 - Improves nutrient cycling with more microbial activity



The Playbook

- Planting corn into cover crops
 - Half of nitrogen is applied with the planter
 - Need a strip to plant corn into
 - GPS guidance really helps
 - Spray cover crops in non-GMO corn before corn emerges

The Playbook

- Drilling soybeans into cereal rye
 - Ensure good seed to soil contact
 - Keep drill well-maintained
- Use clethodim (generic Select) to kill triticale in non-GMO beans

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Cover Crop Specifics

- Mixes and cover crop cocktails with winter grains, summer grains, clover, broadleaves, brassicas
 - Not enough time to establish in corn/bean rotation
 - Could work after seed corn and small grains
 - Graeme Sait's 5-way mix (Nutrition Farming podcast) grass, cereal, brassica, chenopod, legume
- Winter hardy species work best at my latitude
 - Cereal rye, winter wheat, triticale (cross of durum wheat and cereal rye)
 - 50 lb/ac triticale ($\$0.45/\text{lb} = \$22.50/\text{ac}$)
 - Some success with hairy vetch (1 to 5 lb/ac)
 - Tried winter camelina in fall of 2023 (2 lb/ac)



JD 1760 Planter Setup

- 400 gallon liquid system to put liquid fertilizer in the furrow under the seed
 - Mounted on the planter
 - Ground driven pump, about 7.5 gallons per acre
- Mixture
 - 16oz/ac Environoc 401
 - 10oz/ac Fulvic 20%
 - 12oz/ac BW SeaAmino Biostimulant
 - 2oz/ac BW Fusion Root Stimulant
 - 16oz/ac BW Bio Zinc 9%
 - The balance of the 7.5 gallons is reverse osmosis filtered water since well water is too hard



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JD 1760 Planter Setup

- 550 gallon liquid system to put liquid fertilizer in a band behind the planter in a 2 x 0 x 2 setup. 2" to the side of the row, on the surface, on both sides of the row
 - Stainless steel tanks are on the tractor
 - Hydraulic pump, Raven 440 controller, 15 – 50 gallons/acre
- Mixture
 - 21 gal/ac 32% UAN for about 74 units/ac of N
 - 4 gal/ac ATS (12-0-0-26), 5 units/ac N, 11 units/ac S
 - Boron
 - Copper
 - Environoc 401

Rye killed with glyphosate
20 days ago

Rye killed with clethodim
20 days ago





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