



The First Five Years

Joe Hamilton



Our Operation

- 2,500 acre corn & soybean operation
- Located in East-Central Indiana
- No-till since 2018
- Cover crops since 2019
- Poultry litter amendments



Operation Background

- Moved to Indiana in 1850s
- Both grandfathers operated small dairy & row crop farms
- Grew in the 1980s & 1990s to 2,000 acres of row crops
- 75% of land is leased



My Background

- Purdue University – Mechanical Engineering
- Detroit – Vehicle Design & Development
- Chicago – Aviation Electronics
- Cincinnati – Electronics Packaging



Return to the Farm

- 2015 – Quit my day job
- Tillage system
- Fuel, equipment, & fertilizer expenses
- Labor shortages
- Peer pressure



Necessary Changes

- New life, new wife
- 2013 projections were wrong
- Aging workforce
- Sustainability questions
- Searching for a better way



Restricting Flow – 2017

- Reduced tillage
- Better nitrogen timing
- Herbicide application efficiency
- Leverage existing equipment
- Cereal rye, the gateway drug



All in – 2018

- Committed to no-till
- Cereal rye cover crop worked
- Education, support, peers, & mentors
- Specialty soybeans
- Cost share applications



NRCS EQIP

- Spring, 2018 – application submitted for half of the farm
- Summer, 2018 – funding approved
- Fall, 2018 – cover crop seeding
- Seed mix error



Overcoming Obstacles - 2019

- Planting green, soybeans into cereal rye
- Equipment challenges
- Wet spring
- Delayed planting
- 400 acres not planted



The Radish Splash

- Unplanted acres brought additional cost share opportunities
- Modified planter to alternate daikon radishes & grass/legume blend
- Radishes do well in August



Increasing Notoriety

- Radishes
 - Sequestered nutrients
 - Penetrated deep into the soil
 - Froze in December
 - Thawed in December
 - Released odor
- Neighbors, travelers, & reporters noticed



New Ideas - 2020

- Roller crimping rye
- The grasshopper epidemic
- Increased nitrogen starter for corn
- Poultry litter



Livestock Grazing – 2021

- 60 inch spacing corn
- No residual herbicide
- Interseeded at V4
- Reduce expectations
- Harvest corn
- Introduce cattle
- Sell premium beef



Expansion – 2022

- 20 acres of farmland were seeded to monarch & pollinator habitat through NRCS CSP
- Grazing practices increased
- 100% of row crop acres planted to cover crops



Cover Crop Mix

Corn to Soybeans

Cereal Rye	11.53 PLS/ac
Barley	13.84 PLS/ac
Spring Oats	10.64 PLS/ac
Rapeseed	0.73 PLS/ac
Crimson Clover	0.98 PLS/ac

\$23.46 /ac seed

\$17.84 /ac aerial application

Seed by Sept. 15

EQIP Approved



Cover Crop Mix

Soybeans to Corn

Annual Ryegrass	8.42 PLS/ac
Spring Oats	13.30 PLS/ac
Rapeseed	0.73 PLS/ac
Crimson Clover	1.72 PLS/ac

\$23.64 /ac seed

\$16.63 /ac aerial application

Seed by Sept. 15

EQIP Approved



Litter Lessons

- Weed pressure in non-GMO soybeans
- Moisture content influences value
- Transportation is expensive
- Variable rate 1.5 to 3 ton/ac
- Neighborhood relations



Planting Equipment

- Cut through residue
- Disc opener bearing failures
- Spiked closing wheels
- 60 lb of nitrogen 4x2
- Hydraulic downforce



Nutrient Stratification

- ADD SLIDES – WAITING ON RESULTS

