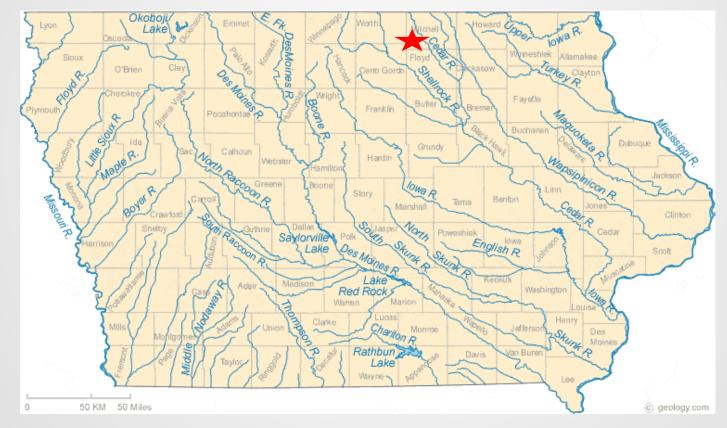




Located in Nora Springs, IA



7 + years of Cover Crop Experience

Sponheim SALES & SERVICES

• Specialize in

- Locally Grown Cereal Rye/Oats
- Custom Cleaning
- Cover Crop Mixes
- o Aerial, Drilling, Inter-seeding
- One Stop Shop







History

• 2012

- planted cover crops for the first time
- Approximately 500 ac. in Osage area aerial seeded
- 2013
 - ~750 ac. aerial seeded

• 2014

- Sponheim Sales and Services was formed
- Purchased 40 ac. of locally grown cereal rye
- ~1200 ac. aerial seeded

• 2015

- 4 local cereal rye producers (70 ac.)
- o 3800 ac. aerial seeded





• 2016

- 7 local cereal rye producers (250 ac.)
- 5500 ac. aerial seeded
- Custom No-till drilling was offered
- o 3100 ac. custom drilled

• 2017

- 7 local cereal rye producers (300 ac.)
- 6 local oat producers (80 ac.)
- 12,000 ac. aerial seeded
- o 4500 ac. custom drilled







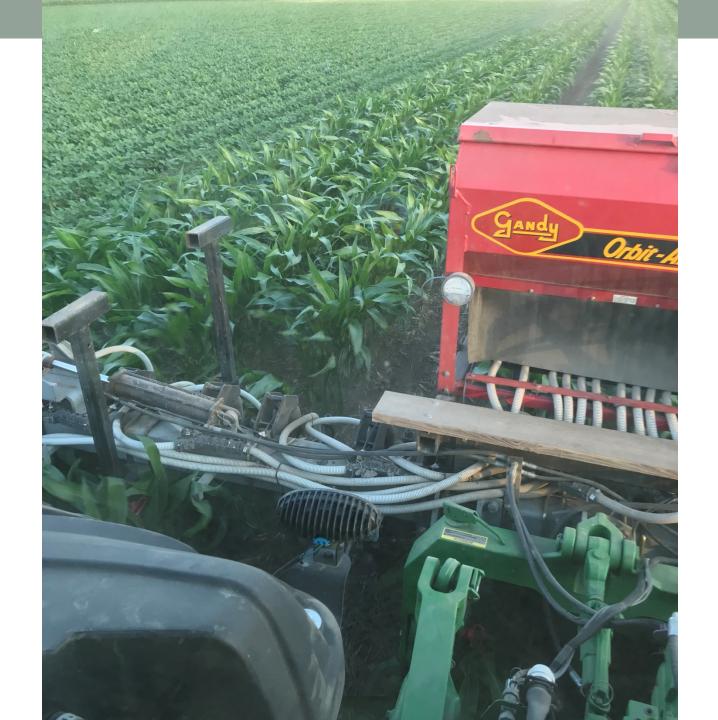
• 2018

- 18 local cereal rye producers (750 ac.)
- 9 local oat producers (200 ac.)
- o 17,000 ac. aerial seeded
- o 3500 ac. custom drilled
- Custom inter-seeding was offered
- o 300 ac. inter-seeded

• 2019

o 20 local cereal rye producers (1050 ac.)





FYI

- In 2018 locally produced cereal rye only covered 48% of total volume sold
- In 2018 55% of total rye sales was marketed through our custom applicators, 17% to seed customers, and 28% to our dealer network.

ONE STOP SHOP

Meet with Producer

- Develop producer's cover crop plan
- Work with NRCS

Schedule Application

- Flight Plan-Aerial
- Field Maps-Drilling

Supply Product to Applicators

- Deliver to Airports
- Deliver to Drills
- Deliver to Customers(own application)

Supply Needed Info to Producers

- Seed Tags
- Invoice both seed & application
- Coverage Maps

SEED PRODUCTION CHALLENGES

Timely Planting

- Following normal cropping practices
- Weather Issues
- Must Germinate!!

Overwintering Success

- Fall Growth
- Freezing/Thawing

Spring Conditions

- Final Dormancy Break
- Final Stands
- # of Tillers/plant
- Temperature

Harvest

- Quality
- Moisture
- Weather



SEED BUSINESS CHALLENGES

Keep up with Seed Laws

- Yearly Contact with IDALS
- Certified vs. VNS
- Royalties

Germination & Purity Tests

- Lack of convenient Labs
- Turn Around Time
- Cost
- Storage
 - Dirty
 - Clean
 - Scale
- Cleaning Equipment







SEED BUSINESS CHALLENGES(con)

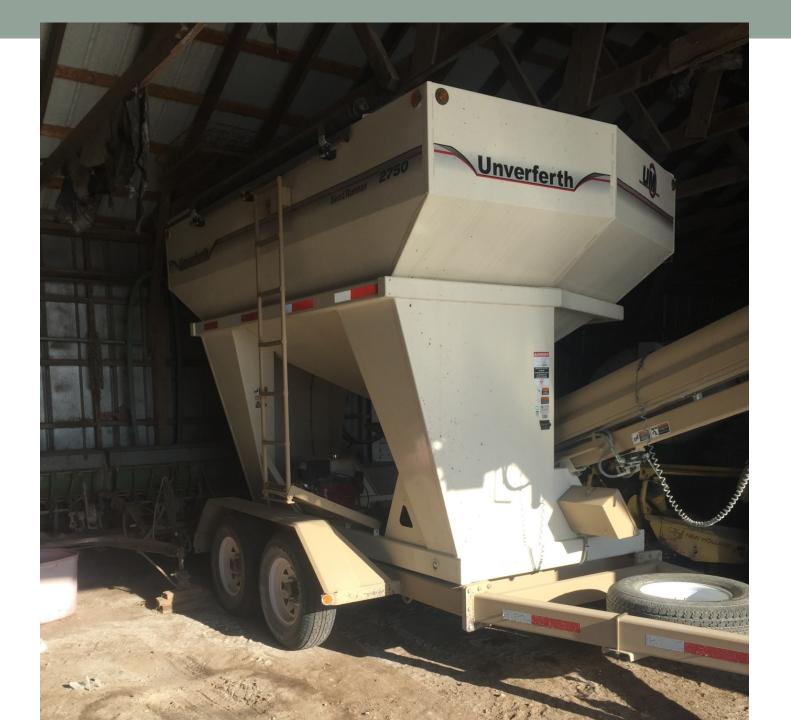
Transportation

- Trucks
- Conveyors
- Tenders
- Application
 - Planes
 - Drills
 - Other (Inter-seeders, Air-seeders, and future ways)
- Pricing
 - Seed acres income competitive with corn/soybeans
 - Rye is not a traded commodity
 - There is no industry-wide pricing structure









MISSION STATEMENT

Sponheim Sales and Services strives to promote the adaptation of conservation practices: cover crop and strip/no tillage, by providing individualized customer service, knowledge, and products for farmers, growers, and retailers.



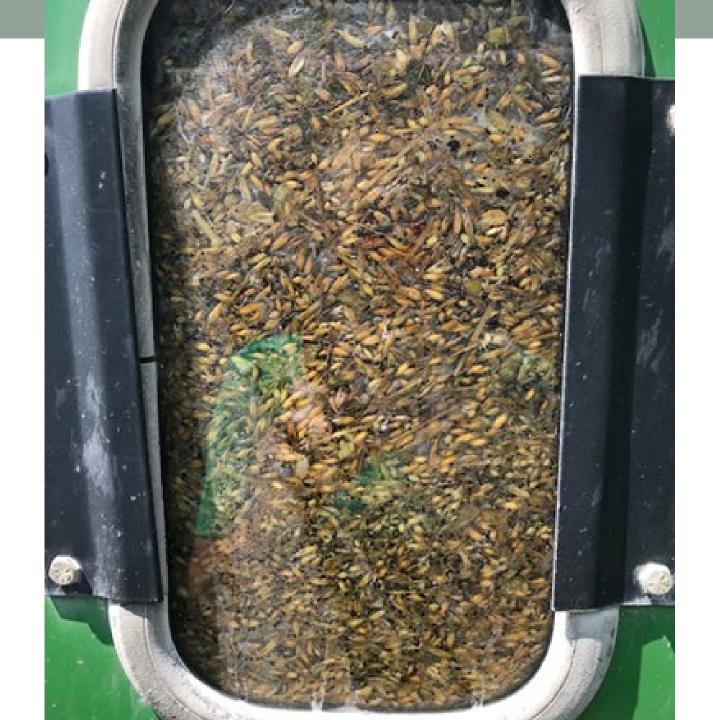
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ROCK CREEK WATERSHED PROJECT

MARCH, 2014

Rock Creek Watershed:

- 1. Part of the Upper Cedar River Watershed
- 2. Flows in Floyd, Mitchell, and Worth counties
- 3. 87.9 miles long
- 4. 70 square miles
- 5. 44,787 total acres
- 6. 38,964 row crop acres (87%)
- 7. 242+ landowners

GOALS & OBJECTIVES

- 1. Reduce in stream nitrogen loading by 41% from 2010 levels.
- 2. Reduce in stream phosphorus loading by 29% from 2010 levels.
- 3. Increase soil organic matter by 1%.
- 4. Maintain or increase agricultural productivity and profitability.
- 5. Reduce flood risk.
- 6. Maintain or increase upland wildlife habitats.
- 7. Maintain or improve aquatic life.

WHAT NEEDS TO HAPPEN TO MEET GOALS BY 2034:

- 1. All cropland acres must be no-till or strip tilled.
- 2. All cropland acres must be seeded to cover crops.
- 3. All cropland acres must be following 4R Nutrient Management recommendations.
- 4. 25 Bioreactors / Saturated Buffers.
- 5. 7 Nitrate Removal Wetlands (1000 acres or more of drainage area).
- 6. 3,000 acres of Control Drainage.

WHERE WE STARTED AND WHERE WE ARE NOW:

No-till / Strip Till Acres	<u>2013 </u> 7600	<u>2015</u> 9200	
Cover Crop Acres	500	2700	
Nutrient Management Acres	?	?	
Bioreactors	0	0	25(2018)
Nitrate Removal Wetlands	0	1	
Controlled Drainage Acres	0	0	