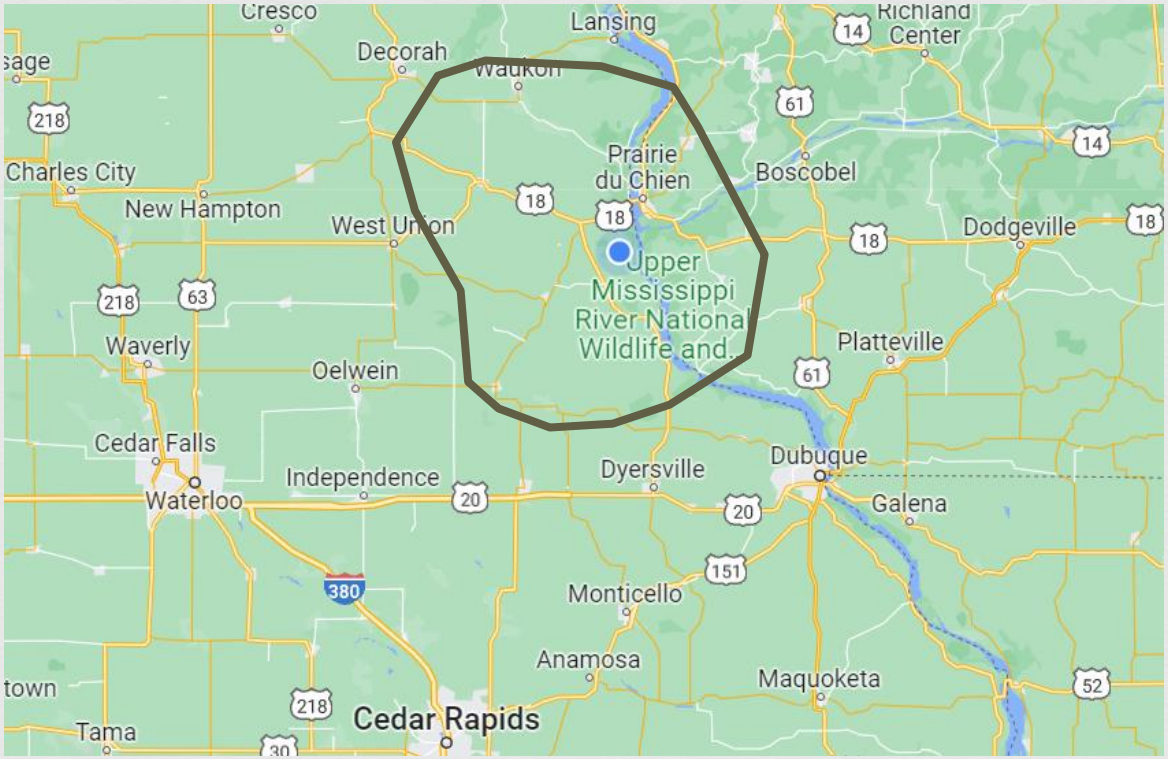
Grazing and Small Grains in NE Iowa

Amos Troester, T-A Cattle and Covers

Who is T-A Cattle and Covers?

Where are we?


Cresco
Lansing
Richland Center
Decorah
Waukon
Charles City
New Hampton
West Union
Prairie du Chien
Boscobel
Dodgeville
Upper Mississippi River National Wildlife and...
Platteville
Waverly
Oelwein
Cedar Falls
Waterloo
Independence
Dyersville
Dubuque
Galena
Monticello
Anamosa
Maquoketa
Tama
Cedar Rapids
218
63
18
20
380
151
61
14
52

Our Vision.

"To produce a high quality of life through unwavering faith, hands on education, respectful, impactful and honest people, a regenerating natural environment, consistently growing financial security, and influential adaptable businesses."

Our Mission.

"To improve family time and experience through health, financial security, community involvement, and enhanced environmental viability. To provide first-hand education and experience to create physically, mentally, emotionally, spiritually, and financially secure family devoted to one another, passion, and growth."

The Background.

- Born and raised on a dairy farm, surrounded ourselves with agriculture our entire life
- Amos and Tina both attended University of Wisconsin-Platteville for agriculture studies
- Tina has worked with DuPont, Corteva, and now Wilbur-Ellis(various roles), also manages T-A Family Premium Meats
- Amos started selling Pioneer Hi-Bred seed for 11 years as an associate seller starting at age 18, now manages T-A Cattle and Covers

The Mindset.

We are owners.

"Owners focus on what they want. Victims focus on what they fear. And both positions are pure internal inventions." - Steve Chandler, author and coach

We live comfortably being uncomfortable.

A quote to live by.

"Good decisions come from experience and experience comes from bad decisions." – Mark Twain

Things to remember.

- Stay Educated.
- Grow Community interactions and involvement.
- It's a "systems" approach.

At the end of the day, FAMILY is all that matters.

The overview.

- Farm operation growing corn, soybeans, rye, triticale, oats, and cover crops.
  - Studying the possibility of growing winter camelina, buckwheat, black beans, faba beans…. Just to name a few.
- Most of the small grain grown in farm operation gets sold into the cover crop and application business.
- Up until recently, ran cow-calf pairs now transitioning into stocker enterprise.
  - Liquid cattle using sell-buy marketing technique.

"Did he just say they look at cover crops as actual crops?"

"I'm just concerned about turning to liquid."

"Yes Clyde, now get to grazing."

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The cover crop business.











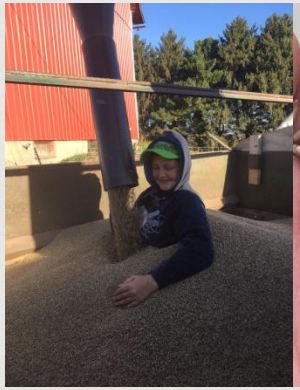


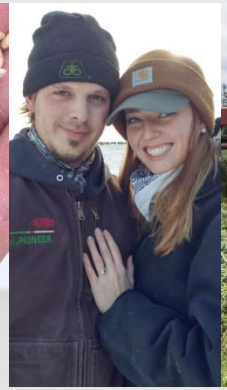
The why.

- Our people, land, and livestock need improvement in overall health and it all starts with the soil
- If the next generation chooses to farm we need to leave the business in the best shape possible, risk is already high enough
- Increase profitability and awareness for other producers in which we work with
- Hands-off, second to no one service for our customers
- We just like seeing those green fields!!

How we got here.

- 2014 – started farming first 100 acres independently
- 2015 – "T-A Cattle Co." was born, cattle added
- 2016 – jumped to 250 acres, no-till 50/50 corn-soy rotation started, started using rye on original 100 acres and sold some procured rye seed for first time
- 2017 – Amos and Tina engaged, cover crop derived forages utilized for cattle feed, all acres covered using cereal rye, drilled in fall
- 2018 – Amos and Tina married, started "planting green" into cereal rye cover crop





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How we got here(cont.).

Bad Decisions = Experience = Good Decisions!

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How we got here(cont.)

- 2018 – harvested first cereal rye crop for seed, bought first 25ft drill and started custom seeding
- 2019 – Junette Ethelyn Troester born, started rotationally grazing cow/calf pairs, production cereal rye acres expanded, cooperation with neighbors on summer manure application ahead of first used multi-species cover crop following the rye, expanded drilling acres

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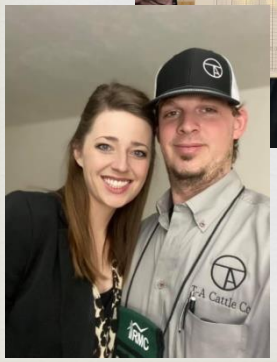
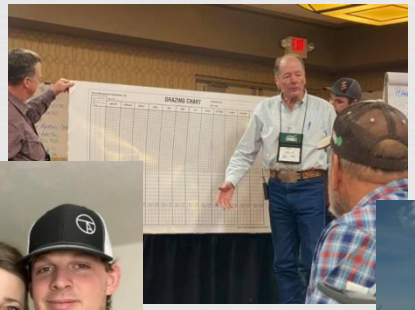
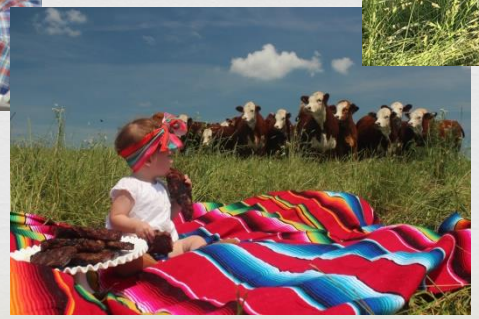
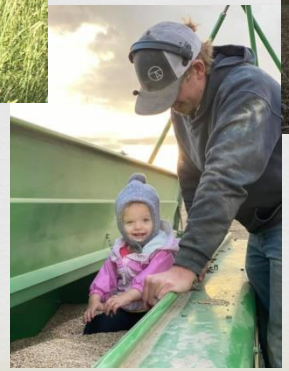
How we got here. 2020

- Amos and Tina attended “Ranching for Profit” school
- “T-A Family Premium Meats” was born to complete the farm to table
- Grazing system further intensified from three paddocks to seven, started inter-seeding pastures with cereal rye
- Partnered with a couple local producers to grow more cereal rye to meet local needs
- Expanded drilling acres, first 40ft Great Plains No-Till drill









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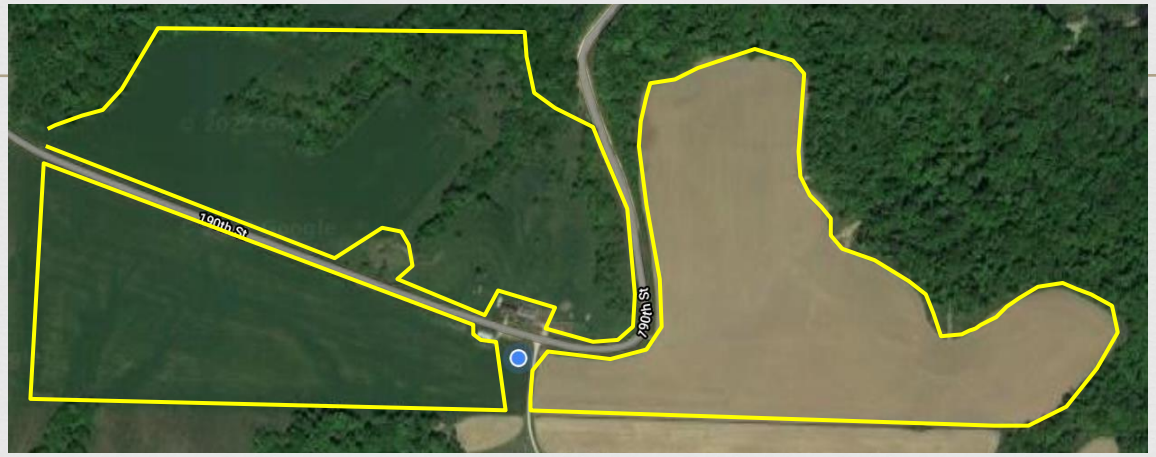
How we got here. 2020



2019

2020

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How we got here. 2021

- Started planting 10 inch soybeans with GP 4010 drill
- Planted first relay crop of soybeans into cereal rye, 45bpa rye, 26bpa soybeans
- Customer base started to gain confidence “planting green”





How we got here. 2021

- Planted corn and forage sorghum on 10 inch rows following first crop hay, planted June 3, harvested October 17th

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How we got here. 2021






Yield approx. 20 Wet Ton @ 68% moisture, 6.4T of DM, 7.69CP, 30.57 Starch, 3.54 Sugar(ESC), ADF 24.01, aNDF 41.02, Neg 45.67Mcal/cwt

…some quick math.

1st Crop Alfalfa & Summer Annual Forage

$565/AC Total Input(does not include harvest costs)

9.1T of total DM(2.7T 1st crop alfalfa and 6.4T summer annual forage)

$62.08/T of DM

Corn Silage Forage

$850/AC Total Input(does not include harvest costs, approx. 2021 numbers)

9.6T of total DM(30T wet @ 68% moisture)

$88.54/T of DM

$26.46/T of DM difference, favor of summer annual w/1st crop hay

How we got here. 2021

- Intensified grazing system from seven to 26 paddocks, went to daily moves

How we got here. 2021

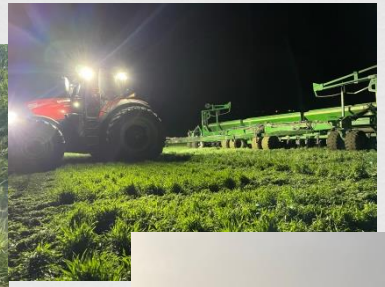
- Added grain cleaner, Clipper TTR 868D, to clean production seed
- Added drill in summer, 35ft Great Plains NTA 3510
- Added drill in late fall, 40ft Great Plains 3N-4010F
- Expanded drilling acres

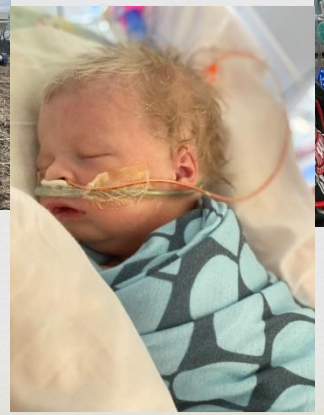


Action.

How we got here. 2022

- Acquired first full-time employee in January, David
- Expanded spring drilling applications; soybeans, small grains, and grass mixes
- 1st year for planting non-gmo soybeans into a thick cereal rye cover crop
- Sage Russell Troester arrived on June 11!


How we got here. 2022

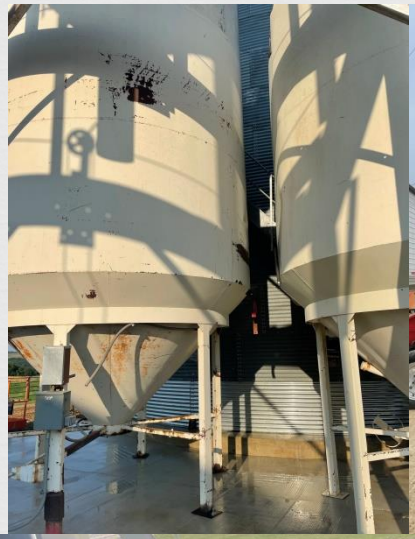
- On-farm seed cleaning facility built throughout summer

How we got here. 2022

- Grain/Seed handling equipment added(mostly used):
  - Two grain bins, 30k and 12k
  - Two grain tanks, 1800bu and 2400bu
  - 90ft and 20ft grain leg
  - Overhead bin
  - Conveying systems, both portable and permanent
  - Seed shed
    - Seed cleaner placed in permanent location
  - Scale
  - Several buckthorn pro-boxes for handling seed

The system.

The System.



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The System.

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The Service.

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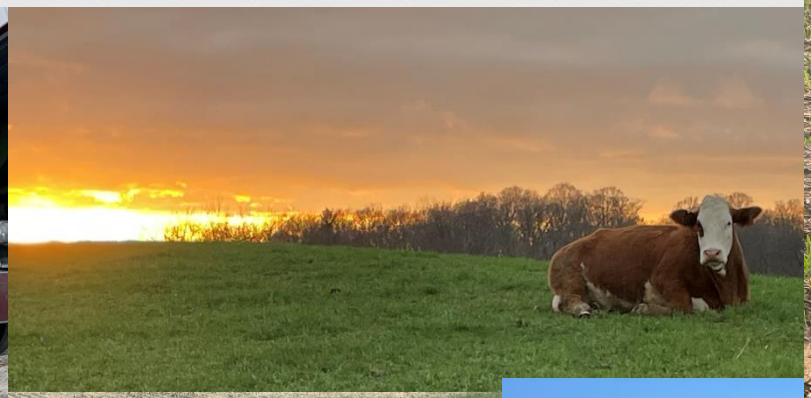
The community.

The farming operation.



Our focus today.

The plan.

- Create a crop rotation that allows for grazing of cattle in the fall/winter every year
- Introduce a small grain onto every farm whether it will be grazed or not and sell that seed into the cover crop business
- Figure out the best cover crop mix to follow the small grain crop of which maximum grazing efficiency can be achieved
- Discover which class of cattle are the best fit for the grazing model

The plan put into action.

2022: 54 acres, Soybeans, following heavy seeding rate of cereal rye from fall of 2021

2022: 50 acres, Cereal Rye for seed production, multi-species cover crop applied and grazed

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Action.

Action.

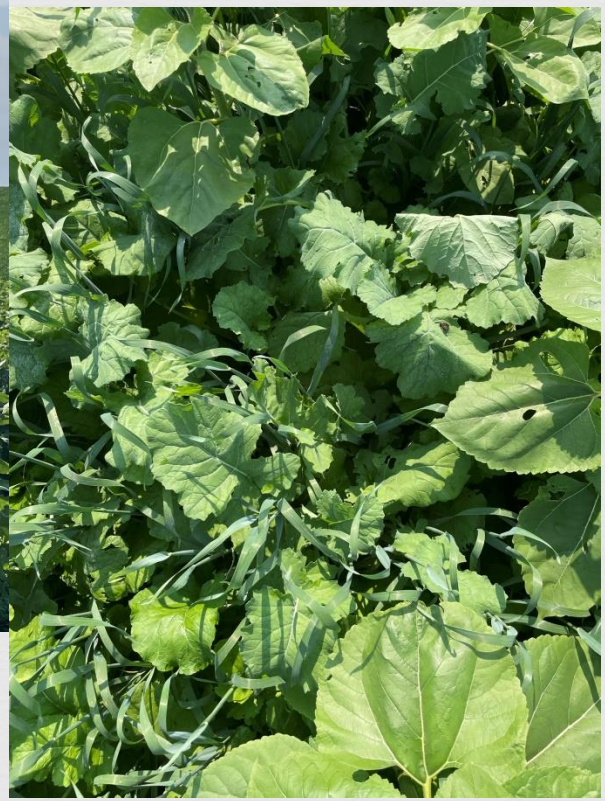
The multi-species mix. Seeded 8/5/22

- Oats – 16#
- Crimson Clover – 3#
- Balansa Clover - 1#
- Winter Lentil – 4#
- Yellow Blossom Clover – 2#
- Sunflowers – 2#
- Turnips – 1#
- Radishes – 1.25#
- Hairy Vetch – 3#
- Mung Beans – 3#
- Phacelia – 3#
- Volunteer Cereal Rye
- **All rates are in pounds per acre

C:N Ratio estimated: 54:1 (considering 30lbs of volunteer cereal rye grew)

The growth. 8/26/22

The growth. 9/16/22



The growth. 10/12/22

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The growth. 10/24/22



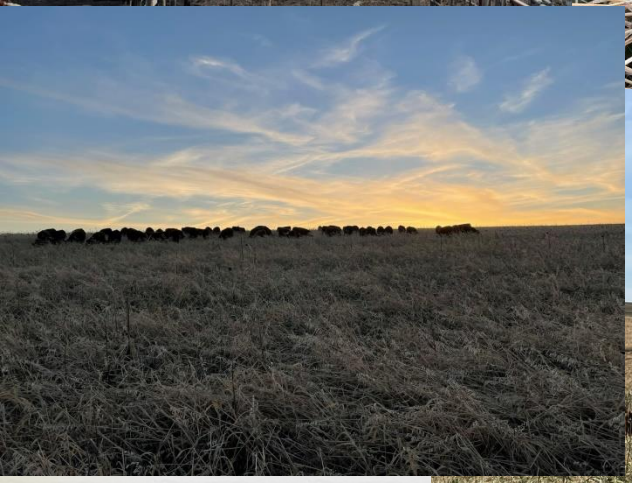




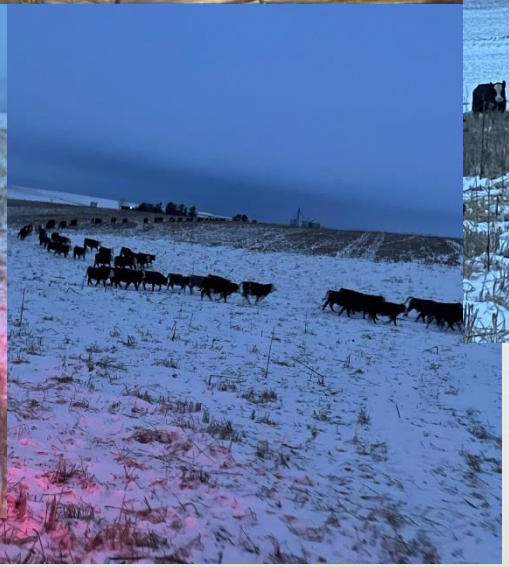

The graze.

- 74 head of calves released on 11/14/22
- Average weight 435#, mix steers and heifers
- Strip grazing implemented, approximately 6 acres per strip for 10 days.
- Single strand hotwire used to split farm and for strip

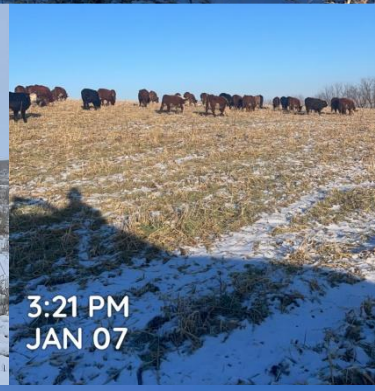
The graze. Action. November.



The graze…. Action. December



The graze……. Action. January.



The math.

- Cattle were sold on February 17th, 2023, average weight was 586 pounds raw.
  - Recall at start cattle averaged 435 pounds raw.
  - Difference of 151 pounds, total gross group gained 11,174 pounds
- Days grazing on cover crop, 94 days.
- Equates to 1.61 lb/day gain(151lbs/94days).

The math continued..

- Total costs associated with grazing:
  - Seed and application - $48.20/ac
  - Supplemental Hay - $28.80/ac (48 bales x $30/bale = $1440/50 acres)
  - Protein tubs - $20.80/ac ($1080 total/50 ac)
  - Hot wire fence - $4.00/ac ($200 total/50 ac)
  - Permanent fence - $19.50/ac
    - $39k total cost(doesn't include self observed interest or opportunity cost) over 20 year depreciation = $1950 per year/100 acre farm = $19.50/ac
  - Time - $37.60/ac (30 min/day avg., $20 x 94 days = $1880 total/50 ac).
  - Fuel - $7/ac ($350 total/50 acres)
  - **Total Cost Per Acre - $165.90**
  - Total Gross Costs - $8295
  - **Cost/LB of Gain - $0.74** ($8295 total gross costs/11,174lbs of total gain)

**Did not charge opportunity cost on direct/fixed costs for duration of grazing

The math finalized.

- 151 lb gain paid at $1.865 = $281.62 gross/hd
- $281.62 x 74 head = $20839.88 total gross
- $20839.88/50 acres = $416.80/ac gross
- $416.80/ac gross - $165.90/ac costs = $250.90/ac net

- $250.90/ac net profit over 94 days from November 14th – February 16th.

The scaling.

We will assume some of the same details, 74 head, 94 days grazed, 50 acres, and the paid price will remain at $1.865

Rate of Gain	1.61#/day	1.75#/day	2.00#/day	2.25#/day
Total # Gain	11174	12173	13912	15651
Total $ Gross	$20839	$22703	$25946	$29189
Gross $/HD	$281	$306	$350	$394
Gross $/AC	$416	$454	$519	$584
Net $/AC	$250	$288	$353	$418
Total Net $	$12544	$14408	$17651	$20894
Cost/LB/Gain	$0.74	$0.68	$0.59	$0.52

**Assuming direct and fixed costs remain relative, $8295.

The graze changes.

- Start the graze earlier in the calendar to capture more effective biomass.
- Get the class of cattle right, determine weight class that will have best efficiency and conversion
- Continue to study the multi-species mix and determine if there are better options for the end goal, tweak the rates

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The revenue.

- 50 acres of small grain, cereal rye, followed by grazing 74 head of cattle for 94 days
- Total Gross Revenue
  - Rye : 92 bushels x $9.00/bu = $828/ac
  - LBs of cattle weight gain: 11174lb x $1.865/lb /50 acres = $416.79/ac
- Total Costs
  - Rye: $520/ac (includes land cost, direct costs, overhead, interest, harvest costs, etc.)
  - Grazing: $165.90/ac (includes all direct and fixed costs to implement grazing on the acre)
- Total Profit
  - Rye - $308
  - Grazing - $250.90
  - Total Combined Profit - $558.90/ac

The current unknown.

- Value of the nitrogen grown by using legumes.
- Value of integrated livestock back onto the acre.
- Value of extended microbiological activity.
- Value of added carbon.
- Value of the effects on organic matter.
- Value of the positive effects on the following cash crop.
- …….

The final WHY.

- Increased soil health and longevity of the land we care for
- Reduced overheads in cattle production
- Higher potential profits for both cattle and crops
- More time to spend with FAMILY

The take-aways.

- Good Decisions from Experiences from Bad Decisions
- Challenge to try something out of your comfort zone.
- Stay educated, continue learning new ways to scale
- Cooperate with fellow producers and community
- Use the “systems approach”
- Keep the future generation in mind, leave it better than you found it
- Spend time with your FAMILY!

Contact.

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