

**USE OF ANNUAL FORAGES IN A
GRAZING LIVESTOCK SYSTEM**

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Our mission is to produce high quality cattle, forage, and grain with management practices that foster the best stewardship of our land, our livestock, our soil, and our human resources.

Human Resources

- I serve as General Manager.
- My husband and I manage the cattle.
- My son heads the farming operation and does most of the farming.
- My daughter-in-law is a large animal vet and is responsible for herd health.
- We hire two summer interns.

Available Resources

- 563 acres farm ground under pivot irrigation
- 1774 acres dry land farm ground
- 2230 acres deeded native pasture
- 1850 acres leased pasture
- 380 acres of corn stalks leased from neighbor

Cattle numbers in 2015

- 286 cow-calf pairs
- 99 yearling heifers
- Will background 143 steers until March 2016
- Will breed 139 yearling heifers in 2016
- Will develop 4 bull calves for use in 2016
- 17 bulls
- 499 stocker steers May 1 to July 27

Pasture is our most limiting factor

**Yet, we maintain an 11th month
grazing season.**

HOW???

We graze annual forages!

- Calve on rye in May
- Graze sorghum swathes in winter
- Utilize crop residue (mainly corn stalks)
- Graze cover crops following wheat, oats, or spring cocktails (if moisture is available)
- Mob graze dryland cool- and warm-season forage cocktails

Spring Rye

- Plant rye following irrigated pinto bean harvest (90 #/acre)
- Include 60 # rye in forage cocktail following irrigated wheat harvest
- New cultivar (Elbon Rye) breaks dormancy earlier
Available from Green Cover Seed
- Dryland rye following a spring crop

Grazing rye can be challenging

- It needs to be 8" tall before you start to graze.
- It is very reliable but grows fast and gets rank quickly.
- There is a very short window for grazing if you are grazing it before corn. Pinto beans go in a little later, so staggering use of pivots is helpful.
- It provides excellent cover for young crops.

Managing dryland rye for later use

- You can extend the grazing interval of rye by swathing it just as it starts to head.
- Swathe traps nutritional quality & palatability.
- You can hit the time you need to graze by choice of mowing height. Will get good regrowth from a short cut as well as leaving a stubble height of 4 to 5". There is about a week's difference between the two as to when it is ready to graze.
- We got 0.97 AUM/acre with sub-optimal management.
- You may be able to follow it with a warm-season CT.

Grazing sorghum swathes

- See proceedings from 2013 Nebraska Grazing Conference for details.
- Can count on 3 AUM/acre production.
- Works well for backgrounding calves if supplemented with DDG.
- Great for wintering cows.

Mob grazing forage cocktails

- **Not for the faint of heart!!**
- Must have a population that can flex because it is totally dependent on the weather.
- Yearling heifers offer the most flexibility.
- If you take in stockers, make sure your contract specifies their removal in case of drought, hail, fire (too much rain?!)

Cool-season Cocktails

- Plant end of March through first week of April
 - 60 # oats
 - 60 # bin run peas (Screen pods)
 - 2 # buckwheat
 - 2 # forage collards
- Fertilize 50 # N, P & K based on soil sample
 - Collards really respond to nitrogen

Why a forage cocktail?

- Multiple species crops are more drought tolerant, have mutually beneficial traits.
- Legumes fix nitrogen.
- Brassicas (turnips, collards, radishes, canola):
 - help make P more available
 - help feed soil bacteria & increase soil biomass
 - down side: increase cycling rate of residue
- Improve nutrient quality to grazing animal.
- You have to watch seed costs.

Grazing management of cool-season CT

- Do not turn in until oats are 12" tall.
- Do not take off more than 4" on your first trip.
 - Properly done, this will increase stooling.
- Keep your paddocks small enough so you can control rate of removal and move through them quickly.
- Stocking density is the hardest thing to figure out.
- Take forage down to 4" on your second trip through.
- Third graze is dependent on moisture and ambient temperature.
- In case of heavy precipitation, temporarily remove from paddock.

Cool-season Grazing Records*

	acres	Head #	AU	Cattle class	Date in	Date out	days	AUM	St. rate	cum. St rate
SW School O&P	80	290	0.57	Yearlin & steers	8-Jun	16-Jun	9	49.59	0.62	
Frohman 2 O&P	70	210	0.57	Steers	8-Jun	16-Jun	9	35.91	0.51	
Frohman 2 O&P	70	499	0.6	Steers	24-Jun	29-Jun	6	59.9	0.86	1.37
NE School Sxn swathes rye	80	201	1.29	Pairs	13-Jun	16-Jun	4	34.57	0.43	
Mid. School O&P	40	201	1.29	Pairs	17-Jun	19-Jun	3	25.93	0.65	
NE School Sxn swathes rye	80	201	1.29	Pairs	20-Jun	24-Jun	5	43.22	0.54	0.97
SW School Sxn O&P	80	200	1.49	Pairs	2-Jul	15-Jul	14	139.07	1.74	
SW School Sxn O&P	80	60	1.49	Pairs	16-Jul	16-Jul	1	2.98	0.04	
SW School Sxn O&P	80	143	1.49	Pairs	17-Jul	19-Jul	3	21.31	0.27	2.67

Cost of a Cool-season CT

- Land Costs \$26.00/acre
- Seed costs \$27.20
- Chemical \$12.77
- Fertilizer 25-50-0-10 \$60.89
- Total cost **\$126.86**

Return on investment

- SCA 2015 summer pasture avg. for NW NE (full care) \$76 per pair-month.
- 1300 # cow with March calf = 1.6 AU, so AUM is worth \$47.50.
- Crop pays \$126.82 per acre at 2.67 AUM/acre.
- No dryland crop is profitable this year.
- It allows you to rest native pasture during the critical June-August window. It is especially valuable during drought recovery.
- It is a good time to have lots of cattle.
- Saves labor, machinery wear, and fuel.
- Benefits you can't measure: you are building soil.
 - Mulch rich in manure
 - Symbiotic relationships created by diverse plant community
 - Increased biomass leading to increased organic matter