Nebraska Grazing Conference 2016
Kearney, NE

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Rancher and Grassfed Finisher
from : Plainview, Nebraska

Grazing Diversity with Annuals and Cover Crops

Our Operation
- Consists of two main locations in Nebraska
- Upland pasture E and S of Verdigre
- Irrigated cropland & wet meadows, Plainview
- We raise & sell All Natural Grass finished cattle
- 450 hd spring herd and 200 hd fall herd
- 3000 acres upland pasture, 220 wet meadow
- 165 acres irrigated crop ground for annuals

This is the Land we have been given to Steward

How Blessed We All Are

The previous two slides are scenes of our Upland pastures at the Verdigre ranch.

Wet Meadow
The two preceding slides are pictures of our wet meadows and irrigated pastures in the Plainview area.

Forage wheat pasture at the home location planted in the fall and grazed in April and May.

Oat, Pea, and Triticale planted late March or early April.
Oats, Peas and Vetch planted early spring used to build soil fertility and provide winter feed needs.

Think about the great strides in production that we have made with the R & D that has gone toward crop production in the last 60 years. We have had an almost 500% increase in production. What if we would have put a similar amount of research into grasslands. Could we have possibly increased production of our grasslands by a similar amount?

Some Things We Are Doing

• Managed Intensive Grazing
• Windrow Grazing
• Mob Grazing as a system and (as a tool)
• Grazing of annuals & cover crops
• Harvesting annuals for stored feed
• Extending our grazing season from 5 to 9 months
• Extended grazing season for cows from 5.5 to 11 months

Windrow Grazing
Previous three slides are of windrow grazing of BMR forage sorghum and the residue left after grazing. We use this from late September to January and beyond. We consider we get 80% utilization.
The preceding three slides are examples of mob grazing. A little over a million lbs of beef per acre. 250 cow-calf pairs and 250 yearlings in this mob in August post breeding.

I Need High Quality Forages

It all starts with taking care of the SOIL.

- Time graze to highest quality of forage
- Use annuals to provide consistent supply of nutrient-dense forages
- Grow forages for winter feed needs
- Supplement forages with energy sources
- Harvest the SUNLIGHT

Maximize Sunlight Harvest

Summer annuals at 35 days

Summer annuals at 42 days

Summer annuals at 53 days
Previous five slides show the different stages of growth of the summer annuals that were harvested at 53 days. Varieties used are: BMR forage sorghum, pearl millet, flax, soybeans, cow peas, foxtail millet, and sunflowers.

Benefits of Grazing Annuals

- Lower harvest charge
- Manure is already in the field
- Grow your nitrogen
- Increased soil health
- Less need for additional fertilizer
- This ends up with Greater Profitability

Lower Harvest Charge

- Harvest as silage
- Windrow $14/a
- Silage cutting $550/hr 7.5 a/hr $73/a
- Hauling $225/hr $30/a
- Bagging $10/t $125/a
- Total harvest cost: $242/a
- Grazing forage
- Electric fencer
- Posts
- Wire
- Labor $20/hr.
- Total Cost: approx $22/a
- Difference of $220/a.
  I can leave 30% or 6.75 t/a on the ground for cover.

Showing amount of nitrogen fixation on a vetch plant roots – part of growing our own nitrogen.
How to Maintain a Consistent Feed Supply

- Through the use of annuals and cover crops
- Native, wet meadows, & irrigated pasture
- Use of various grazing systems
- Growing & harvesting stored forages
- Diversity of livestock groups
- Reduces our need to buy feed
- Thus increasing our bottom line

Fall Brassica Mix Oct. 20th

Grass Fed Steers Mob Grazing Fall Mix Oct. 27th
Pearl Millet, Oats, Soybeans, Turnips, Foxtail Millet

Late November Grazing

Oats, Wheat, Pearl Millet, Turnips, Kale, BMR

December 14, 2014
With the preceding six slides I am trying to show how we graze our fall and winter cover crops. Mixture in crop is oats, pearl millet, BMR sorghum, corn, purple top turnips, rape, and hybrid kale.

**Do Annual Cover Crops Compete?**

- 220 bu Irrig Corn
- Gross return $7 1540
- Gross return $6 1320
- Gross return $5 1100
- Gross return $4 880
- Gross return $3 660
- Return to invest & labor
  - At $7 933.18
  - At $6 713.05
  - At $5 493.25
  - At $4 273.18
  - At $3 53.11
- 70 bu Irrig Soybeans
- Gross return $15 1050
- Gross return $13 910
- Gross return $11 770
- Gross return $ 9 630
- Gross return $ 7 490
- Return to invest & labor
  - At $15 693.38
  - At $13 553.16
  - At $11 413.62
  - At $9 273.60
  - At $7 133.98

**Comparison of Corn/Soybeans to Forages and Grazing Systems**

**Irrigated ground produces winter feed for calves and finishing animals**

- Needs to compete with 220 bu irrig corn
- 70% of feed for 600 calves 5½ months 1,871,000 m lbs
- 50% of feed for 600 finishing cattle 4,914,000 m lbs
- Total needed 6,785,000 m lbs
- 165 at 30 t/a production = 9.9 m lbs - 15% waste = 8.415 m lbs
- Plus early spring graze of rye and triticale

**Pounds of beef produced/acre**

- 600 calves Nov 15th to May 1st = 165 days x 1.2 lbs/day x 70% = 83,160 lbs beef produced
- 600 finishing cattle Oct 1 to May 1 = 210 days x 2.14 lbs/day x 50% = 194,220 lbs beef prod.
- Total lbs beef produced from 165 acres 271,380 lbs/165 acres = **1645 lbs beef/acre**
- At $1.30/lbs = **$2138**/acre gross return
Comparison of Corn/Soybeans to Forages when Harvested as Forage

Silage Bale $15/ton, More Time, Very Good Feed

Sealed Bags $10/ton, Great Feed

Summer Mix

Sugar beet pulp

Covered Open Pile $3/ton
The previous five slides show you the various ways that we store our forages for use in the non-traditional grazing season.

The next slide shows oat pea silage after fermented.

**Benefits to the Environment**
- Escalation of microbial action
- Increased presence of earthworms
- Very little (or no) need for herbicide
- Incredible change in organic matter
- Greater water & nutrient holding capacity
- Enhanced symbiotic reaction (plant diversity)
- Multiplied benefits to insects and pollinators
- Phenomenal increase in carbon sequestration

**Annuals and Cover Crops ARE a Viable Option**
- Alternate feed source in years of drought
- Gives more flexible grazing options
- They work with a livestock program
- They can build organic matter
- Can work well with a no-till program
- Reduces use of insecticides and herbicides
- Competitive with corn and soy on profit
- They are environmentally friendly

**The US Consists of 2.33 Billion Acres**

<table>
<thead>
<tr>
<th>Special uses</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cropland</td>
<td>408 Million Acres</td>
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<tr>
<td>Forest land</td>
<td>671 Million Acres</td>
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<tr>
<td>Grassland</td>
<td>614 Million Acres</td>
</tr>
<tr>
<td>Parks &amp; wildlife areas</td>
<td>313 Million Acres</td>
</tr>
<tr>
<td>Swamps, lakes, &amp; misc areas</td>
<td>197 Million Acres</td>
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<tr>
<td>Urban and rural residential</td>
<td>103 Million Acres</td>
</tr>
<tr>
<td>Roads and highways</td>
<td>24 Million Acres</td>
</tr>
</tbody>
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* Samuel Nobel Foundation

**Nebraska Grazing Lands Coalition Project**
- NGLC has received a three-year grant from the Nebraska Environmental Trust
- 8 private landowners from across the state to do a three-year cover crop trial
- Grant covers cost of seed for up to 130 acres
- Cover crops to be planted will be unique to that part of the state
- Irrigated and non-irrigated sites
How will the sites be monitored?

- Working with UNL Range Mgt Ext Specialist Mitch Stephenson
- Also UNL Agronomy graduate Nate Pflueger to collect data: production, composition, quality, soil analysis, water absorption, root depth, compaction, N, P & K, animal weight gain, and following crop year yields
- Eight educational field days while grazing

Contact Information

- May each of us use the gifts GOD has given us to restore the Land and our environment to the way He had created for us to use it.

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