2014 Nebraska Grazing Conference

Mob Grazing Experiences
By Tyler W. Greer

About Rusty Star Cattle Co.

• Founded in 2006 by Rick and Dana Marshall
• Consists of 4600 grassland acres in the Nebraska Sandhills
• Consists of irregular dunes and upland, numerous small lakes, wetlands and sub-irrigated meadows
• Provide low-stress, year-round grazing for their grass-fed cattle herd
• Committed to a future of healthier land and healthier animals
• Pass the gift of knowledge on through internship opportunities, introducing willing minds to the art of old-fashioned stockmanship and stewardship of the land

Ranch Focus

Raise healthy cattle on native perennials year round, while improving the upland range and sub-irrigated meadows through managed intensive grazing.

Proposed Benefits of Mob Grazing

1. Reduced selective grazing
2. Increased harvest efficiency
3. Increased diversity of plant species
4. More uniform manure/urine deposition
5. Increased pasture productivity
6. Improved soil quality

1. Reduce Selective Grazing

Before

After
2. Increase Harvest Efficiency

3. Increase Diversity of Plants

4. More Uniform Manure & Urine Deposits

5. Increase Pasture Productivity

6. Improved Soil Quality

Before & After Grazing

- You can see the old growth that is providing protection to the emerging tillers, and is also helping to retain the soil moisture.

- After grazing, you can see the old growth was trampled and is still providing cover for the soil, as well as breaking down into organic matter.
Examples of Our Mobs

Taking down the electric fence

Moving

Enjoying new pasture!

Moving Our Mob Long Distance

We know the importance of low-stress management, so we handle the cattle on horseback and sometimes on foot.

Calve in Sync with Nature

• Started calving in 2014 in late May and finished up early July
• Allows the cows to calve when the green grass is on, which promotes a good milk supply
• No extra feed required to grow the calves

Body Condition at Calving Time

• Cows look a little rough in the winter, but pick up quickly when the grass turns green.
• Cows calve when they are at a 5 or better Body Condition Score (BCS).

Grass-raised Ranch Heifer

• Bottom left photo was taken 5 weeks after the one above it. You can see how this heifer has slicked off and how much the grass greened up.
• The photo above was taken just over 1 year after the photos on the left.
Our Mineral Program

- 16 different minerals/vitamins
- Buffet style

Benefits of Our Mineral Program

- Improves nutritional balance
- Maximizes animal performance
- Eliminates unnecessary mineral consumption
- Freedom to decide what it needs to thrive

Apple Cider Vinegar

- Increases feed efficiency
- Reduces internal and external parasites
- Contains probiotics
- Less biting insects
- Alkalizes rumen and overall blood pH

Pastures through the Year

- March
- July
- October
- December

Capturing Moisture

- Look where the dew is accumulating on the blades of grass.
- Capture moisture any way possible.

- 2012 we had 11.71 inches of rain, and normal rainfall is approximately 26 inches.
- Grateful for the morning dews!

Drought 2012

- In our worst drought year on record, we were able to continue to graze our cattle but did send our 700 yearlings home a month early.
- July 18th, 2012
- September 18th, 2012
- Our lake dried completely up in 2012 before it came back late that fall.
Drought 2013

- These pictures show what we had to work with in April of 2013.
- By the end of 2013, the grass situation was looking up and we ended the year just 4 inches short of the annual norm for the area.

UNL Research at RSCC

- Demonstrate the influence of mob grazing on rangeland vegetation composition and productivity, soil and water quality, and soil carbon sequestration, alongside typical rotational grazing systems currently used in the Sandhills.
- Document the effect of mob grazing systems on rangeland health on both upland and meadow sites at different stocking densities in the Sandhills.
Hypotheses

• Trampling of vegetation and incorporation of litter through hoof action, together with a uniform manure and urine distribution, promote microbial activity and the rapid recycling of nutrients, which can favor increases in soil organic matter and water infiltration.

• Pastures benefit from the recycling of nutrients and the incorporation of seeds into soil, resulting in more plant productivity and botanical diversity.

• The extended recovery period allows for deeper root development, resulting in drought resistance and improved wildlife habitat.

[Sedges, Rush 66%
Kentucky bluegrass 6%
Big bluestem 5%
Prairie cordgrass 4%
Quackgrass 3%
Reed canarygrass 3%
Timothy 2%
Red clover 4%
Other forbs 2%
Other grasses 3%
Red clover 4%
Other forbs 2%
Western wheatgrass 8%
Bluegrass 32%]

[Hay meadow]

[Meadow Moll]

[SDG meadow]

[SDG upland]
2013 End of Season Chart

<table>
<thead>
<tr>
<th>Forage Species</th>
<th>Sedges, Rush</th>
<th>Kentucky bluegrass</th>
<th>Blue grama</th>
<th>Scribner Panicum</th>
<th>Little bluestem</th>
<th>Needle and thread</th>
<th>Switchgrass</th>
<th>Prairie sandreed</th>
<th>Sand dropseed</th>
<th>Other grasses</th>
<th>Russian Thistle</th>
<th>Other forbs</th>
<th>Upland Mob</th>
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<tbody>
<tr>
<td>Percentage</td>
<td>17%</td>
<td>17%</td>
<td>13%</td>
<td>10%</td>
<td>10%</td>
<td>6%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>4%</td>
<td>8%</td>
<td>2%</td>
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Soil Analysis Chart

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<tr>
<th>Parameter</th>
<th>Soil type</th>
<th>Upland</th>
<th>Hay Meadow</th>
<th>Conventional Grains</th>
<th>Modern Grains</th>
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<tbody>
<tr>
<td>pH (4.0-6.5)</td>
<td>5.8</td>
<td>6.5</td>
<td>6.4</td>
<td>6.7</td>
<td>6.2</td>
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<tr>
<td>Available P</td>
<td>40</td>
<td>84</td>
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<td>265</td>
<td>22</td>
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<tr>
<td>Available K</td>
<td>100</td>
<td>50</td>
<td>30</td>
<td>80</td>
<td>15</td>
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<tr>
<td>Organic Matter</td>
<td>2.0</td>
<td>3.5</td>
<td>2.8</td>
<td>3.0</td>
<td>2.2</td>
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<tr>
<td>Humidity</td>
<td>20%</td>
<td>25%</td>
<td>20%</td>
<td>25%</td>
<td>20%</td>
</tr>
</tbody>
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The Next Generation

Wildlife
Questions? Comments?

Thank you!