2019-2020 Winter Grazing Projection - CVRS
(Based on SP Bermudagrass yield of 3,199 lbs/A, 39 acres fertilized and 41 cows)
65% utilization - 61 days of SP Bermuda available = Nov 3 – Jan 3
~ 30 days of limit graze small grain (hay needed) = Jan 3 – Feb 3
Hay + Supplement = ???
Spring small grain, brome – continuous graze = Mar 15 – May 1

40/73 Days of supp/hay required?

Positive Outcomes
- 128 day reduction in winter supplement requirements
- 91 day reduction in winter hay requirements
- This equated to a savings of over $100 per cow ($4,245 total)
- These savings were leveraged into new forage improvements for 2019-2020
- Significant reduction in labor and machinery use
- Improved calving distribution, moving ~80% of herd in first 30 days of calving
- Forage Budgets for Bermuda accurately predicted grazing days
- Intensive management through strip grazing showed economical improvements in utilization
- Electronic gate cut labor in half for limit grazing small grains

Areas of Needed Improvement
- Logistics of fertility applications, planting and harvest
- Water supply issues

Questions About Today’s Topics?
Contact your local County Extension Educator

Special Thanks:
- Chris Stansberry
- Matt Sparks
- Josh Massey
- Jordan Green
- Dr. Chris Richards

Identified Issues and Priorities
- Make systematic improvements in forage management, and in turn improve cow productivity and economic efficiency.
- Demonstrate a system with minimal purchased feed at a moderately high stocking rate.
- Demonstrate effective use of rotational grazing strategy.
- Illustrate that proper forage management can make a difference anywhere in Oklahoma!
Economics Overview – The Significance of Feed and Pasture Costs

47% The percentage of Total Cost that is attributed to TOTAL FEED COST. Combines feed and pasture, raised and purchased.

68% The percentage of Total Variable Cost that is attributed to TOTAL FEED COST.

63.1% Of the difference in net returns to management between the high profit 1/3 and low profit 1/3 operators is due to COST differences.

Weak correlation between Pasture Feed Cost and Total Feed Cost (r = 0.24)
Investments in pasture related inputs do not have a significant correlation to Total Feed Costs.

Negative relationship between Pasture and Non Pasture Feed Costs (r = -0.38)
Investments in pasture related inputs tend to be offset by some reduction in Non Pasture Feed Costs.

Cowherd Nutrition Overview

600 vs 132 Pounds of supplement per cow fed to the Traditional herd compared to the Progressive forager cows.

4.1 vs 1.6 Bales of hay fed per cow to the Traditional herd compared to the Progressive herd.

What did high profit operators do vs. low profit operators? (value/cow)
• Higher weaning percentage (+ 4%)
• Higher weaning weights (+ 8%)
• Higher price/lb. (+ 3%)
• Lower feed cost (-28% or -$107.23)
• HIGHER pasture cost (5% or $9.27)

Change In Cow Bodyweight On Different Forages - CVRS

Daily Nutrient Requirements of Beef Cows

1200 lb. cow 20 lb. milk prod. CP (lbs.) TDN (lbs.)
Gestation, middle 1/3 1.5 10.3
Gestation, late 1/3 1.9 12.9
Early Lactation 3.0 17.6

Do I need a set of scales?
Bodyweight data allows us to identify nutritional bottlenecks throughout the year and correct our management approach.

Cowherd Fertility & Performance Overview

- Research has shown that maintaining an adequate body condition score of 5-6 after calving is important for herd fertility.
- Also, having cows on an increasing plane of nutrition postpartum through the onset of breeding can hasten the return to estrous.

49% Percentage of herd moved into conceiving during 1st round of AI.

21% Increase in cows conceiving in the first 30 days of the breeding season.

78% Percentage of CVRS cowherd moving forward one cycle in the 2019 breeding season. Equates to a captured value of $2,016.

Economics Overview - The Impact of Cow Fertility

- What does it cost if a cow misses a cycle?

\[
\text{What does it cost if a cow misses a cycle?} = \frac{\text{Number of females diagnosed as bred}}{\text{Number of females exposed}} \times 100
\]

- $63/cow

Preg. % Target = 95%

- How big of difference can Weaning % make?

\[
\text{Weaning % Target} = \frac{\text{Number of calves weaned}}{\text{Number of females exposed}} \times 100
\]

- Calculated on a sample 100 cowherd including price slide for additional weight

- 601 Adjusted 205 day Weaning Weight in 2018

- 578 Adjusted 205 day Weaning Weight in 2019

Feed Cost
$220/ton – Traditionally fed 600 lbs/cow for 150 days. 2019 feed use was 132 lbs/cow over 22 days (only fed during calving).

Hay Cost
$35/bale – Traditionally fed 4.1 bales (1200 lb) over 150 days. 2019 hay use was 1.62 bales of grass hay per cow over 59 days.

Pasture Cost
Traditionally no fall fertility or seed was used. In 2019, 32 acres of SP Bermuda at $27.75/A. 9 acres of CT small grains + DAP fertilizer at $75/A.

Total Cost
$209.50

$101.07/cow winter cost savings

- Small changes in forage production/acre or utilization of that forage make much larger changes in reduced feed/hay, amplifying the savings of a winter forage system!
Grazing Season Extension Overview

128/91 Days supplement/hay reduction compared to traditional method. $1 Expected savings per cow per day when grazing fertilized winter forages vs hay and feed

Young growth + fertility = High Quality Stockpile
Properly stockpiled Bermudagrass is essentially a standing hay crop that does not require machine harvest!

CVRS Bermuda Hay SP Bermuda 2018 SP Bermuda 2019

<table>
<thead>
<tr>
<th>Crude Protein (CP)</th>
<th>11.1</th>
<th>12.4</th>
<th>12.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (TDN)</td>
<td>61.3</td>
<td>60.4</td>
<td>59.4</td>
</tr>
<tr>
<td>Yield (lb DM/A) – Graze Days</td>
<td>3,829 lb – 57 days</td>
<td>3,199 lb – 61 days?</td>
<td></td>
</tr>
</tbody>
</table>

"Feeding" Cost/C/D (utilization) $0.97 (90%) $0.35 (67%) $0.43 (65%)

Grazing Season Extension Overview - Continued

Strip Grazing Small Grains

$75/Acre

Conventionally tilled small grains at just ¼ acre per cow offset 58 days of supplement and 17 days of hay!

Cool season forages are a high quality supplement/hay reduction strategy.

Continuous Graze vs Strip Grazing?

CVRS – Perkins, OK 2018

42 Head Continuous 4 5 Day Strip

<table>
<thead>
<tr>
<th>Utilization (%)</th>
<th>57%</th>
<th>71%</th>
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</thead>
<tbody>
<tr>
<td>Time - Time/Day</td>
<td>20 min – 1.2 m/d</td>
<td>2.8 hrs – 4.1 m/d</td>
</tr>
<tr>
<td>Efficiency Change</td>
<td>-</td>
<td>+8 days</td>
</tr>
<tr>
<td>Total Value ($)</td>
<td>-</td>
<td>$522</td>
</tr>
<tr>
<td>Equip Costs ($)</td>
<td>$336.50</td>
<td></td>
</tr>
</tbody>
</table>

Even weekly fence moves improve utilization compared to continuous grazing.

Continuous Grazing vs Strip Grazing?

If you are not managing your Bermudagrass after September 1st, you are missing a great resource!

The single biggest mistake in rotational grazing is allowing forage to get too mature ahead of the cowherd!