



Additional Information

2019 Winter Grazing Projection - MLRDF

(Based on SP Bermuda yield of 3,192 lbs/A, 258 acres fertilized and downsizing to 199 cows)
 65% utilization - 86 days of SP Bermuda available = Oct 31 – Jan 25
 ~ 14 days of ryegrass/oat fall growth= Jan 25 – Feb 8
 Hay + Supplement ??? ←
 Spring ryegrass, vetch, clovers Mar 20 – May 1

40

Days of feed/hay required?

Positive Outcomes

- 51 day reduction in winter hay and feed requirements (+\$15,240)
- This “saved” revenue was leveraged into new forage improvements for 2019-2020
- Significant reduction in labor and machinery use
- Able to stock more cows on less purchased feed
- Increased cow body condition and bodyweights through the year
- Improved conception rates by 13%, moved 11% more into first round of AI
- Forage Budgets for Bermuda accurately predicted grazing days
- Intensive management through strip grazing showed further improvements in utilization

Negative Outcomes

- Lost ground during the first two weeks of hay feeding due to insufficient space around alfalfa
- Calf weaning weights slipped through late summer (Drought induced?)

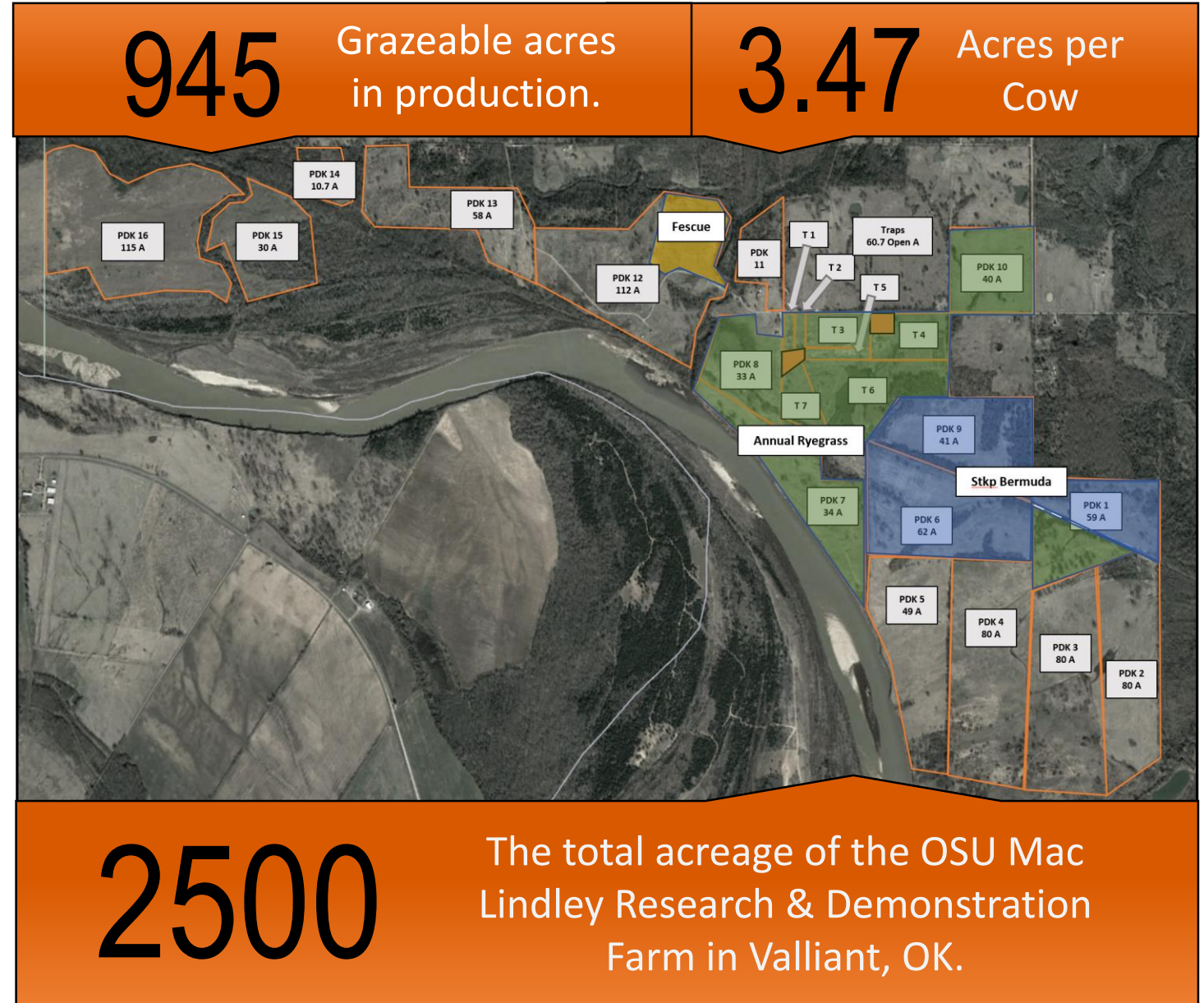
Questions About Today’s Topics?

Contact your local County Extension Educator

Special Thanks:

- Curtis Cowell
- Ryan Evans
- Bob Heineman
- Casey Meek
- Chris Stansberry
- Dr. Chris Richards
- Brad Bain
- Glenda Rankin
- Keith Anderson
- Randy Holeman
- Dennis Wilson

Station Overview



Identified Issues and Priorities

- Cowherd has remained fairly static in below average body condition.
- In theory, low BCS has depressed conception rates.
- Cow costs were much higher than desired, with feed costs making up a large portion of expenditures. In addition, low calf weaning weights reduce revenue.
- Goal: Make systematic improvements in forage management, and in turn improve cow productivity and economic efficiency.**
- 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= .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

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)

¹ Pendell and Herbel (2019) – “Differences Between High-, Medium-, and Low-Profit Cow-Calf Producers: An Analysis of 2014-2018 Kansas Farm Management Association Cow-Calf Enterprise.” Available at <https://www.agmanager.info/feed-costs-pasture-vs-non-pasture-costs>

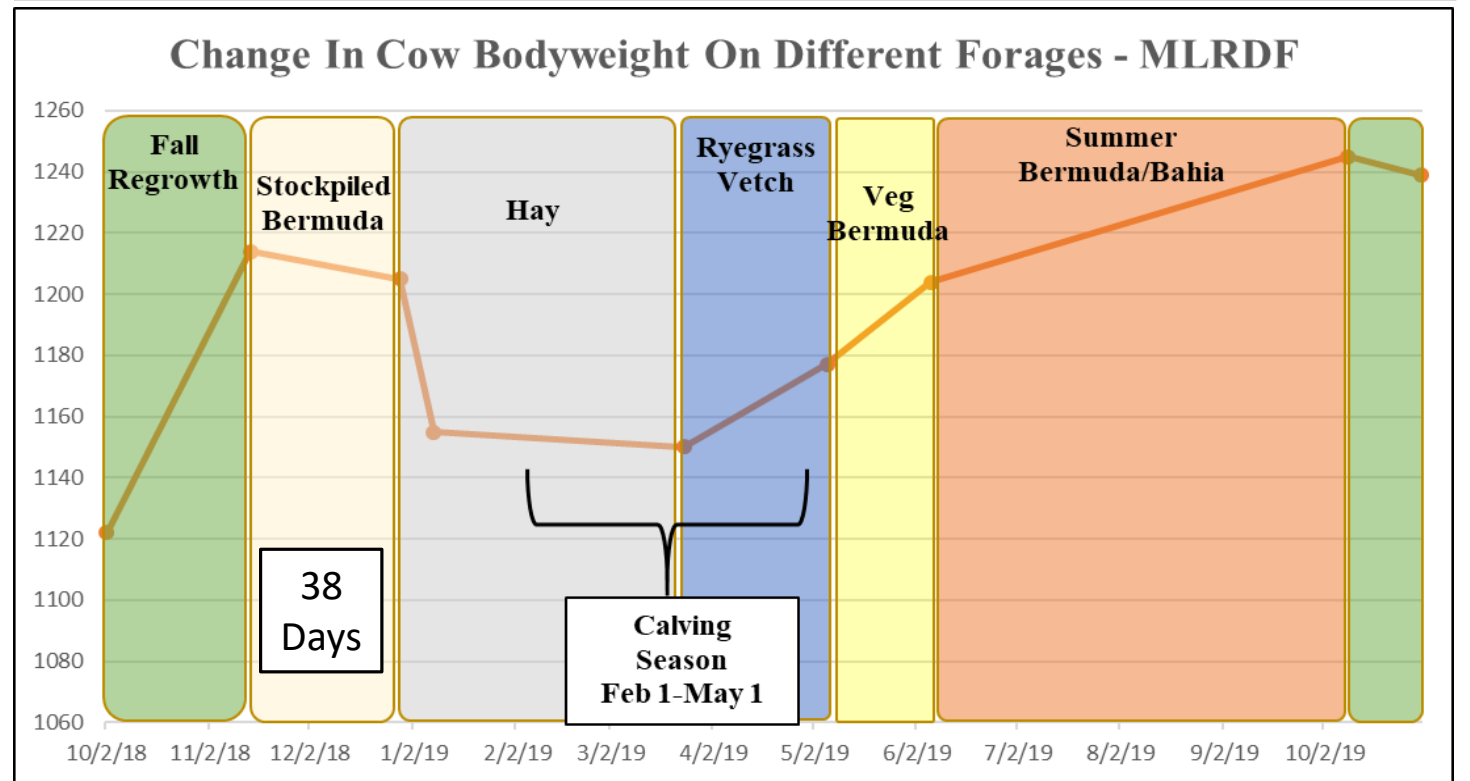


Cowherd Nutrition Overview

600 vs 204 vs 0 Pounds of supplement per cow fed to the Traditional herd, Progressive Young cows (3,4,5 yr) and Progressive Older Cows



3.3 vs 2.3 Bales of hay fed per cow to the Traditional herd compared to the Progressive herd



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

11%

Increase in cows calving in first 30 days of calving season.

120

Additional pounds cow bodyweight at fall weaning compared to 2018.



Drought

The largest variable factor affecting weaning weights of spring born beef calves. Dr. Stan Bevers, Texas A&M

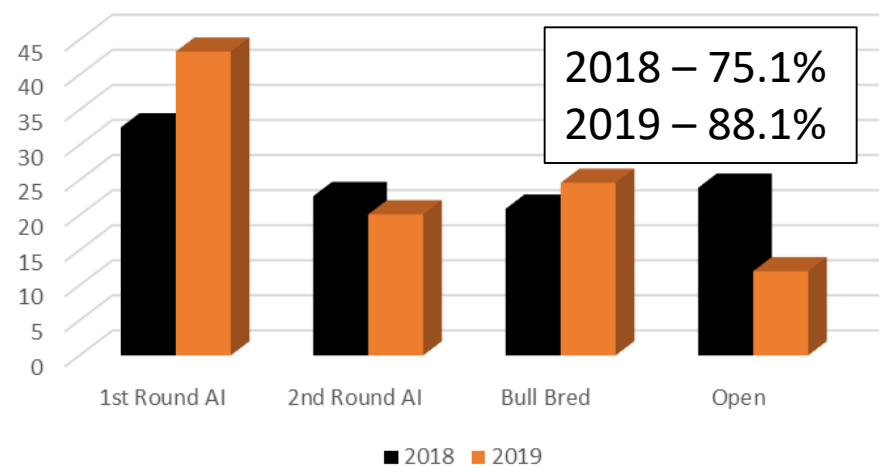


- Research has shown that maintaining an adequate body condition score of 5-6 after calving is important for herd fertility.
- Also, having cows on an increasing plane of nutrition postpartum through the onset of breeding can hasten the return to estrous.

501 Adjusted 205 day Weaning Weight in 2018

Adjusted 205 day Weaning Weight in 2019 469

Seasonal Distribution of Conception Timing (%)



Economics Overview - The Impact of Cow Fertility



21 days extra gain
2 lbs. / day ADG
\$1.50/lb. Value of Gain

\$63/cow

What does it cost if a cow misses a cycle?

$$= \frac{\text{Number of females diagnosed as bred}}{\text{Number of females exposed}} \times 100$$

Preg. % Target = 95%

How big of difference can Weaning % make?

$$= \frac{\text{Number of calves weaned}}{\text{Number of females exposed}} \times 100$$

Weaning % Target = 90%

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

Gross Revenue Comparison (WW vs W%)

		Weaning %			
		80%	85%	90%	95%
Avg. Weaning Weight	475	\$62,700	\$66,619	\$70,538	\$74,456
	500	\$64,000	\$68,000	\$72,000	\$76,000
	525	\$65,520	\$69,615	\$73,710	\$77,805
	550	\$66,440	\$70,593	\$74,745	\$78,898

Feed Cost

\$220/ton – Traditionally fed 600 lbs/cow for 150 days. 2019 feed use was 77 lbs/cow over 84 days (only used for 3-5 year olds).

Hay Cost

\$35/bale – Traditionally fed 3.33 bales over 125 days. 2019 hay use was 0.66 bales of alfalfa per cow (\$45/bale) and 1.63 bales of grass hay per cow over 84 days.

Pasture Cost

Traditionally no fall fertility or seed was used. In 2019, 133 acres of SP Bermuda at \$27.75/A. 107 acres of drilled ryegrass + DAP fertilizer at \$46/A.

	MLRDF 2018	Traditional	Progressive
Feed (\$/hd)		\$66.00	\$8.47
Hay (\$/hd)		\$116.55	\$86.75
Pasture (\$/hd)		\$0	\$31.30
Total Cost (\$/hd)		\$182.55	\$126.52

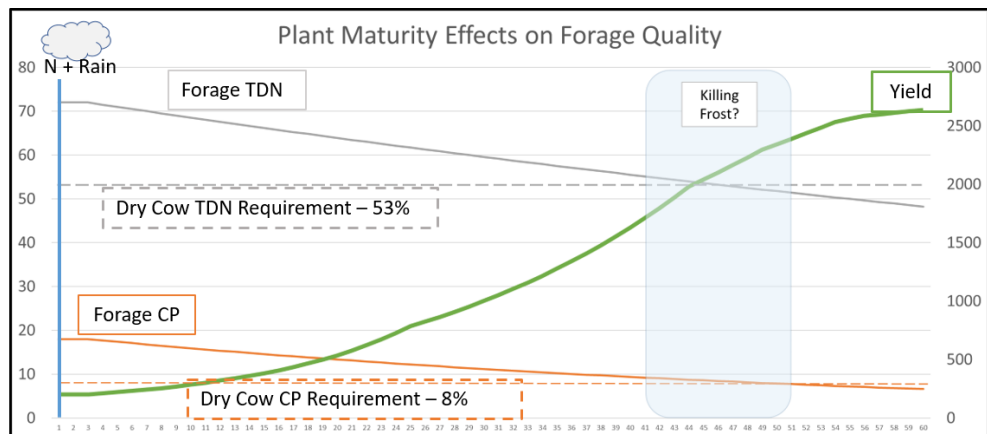
\$56.03/cow winter cost savings

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!

Make The Cow Do The Work!



Grazing Season Extension Overview



Stockpiling Bermudagrass is an effective way to feed the cowherd in November & December.

An application of 50 lbs. of actual N per acre from September 1st - 15th will typically yield around 2000 lbs./acre by frost, locking the nutrients within the leaf.

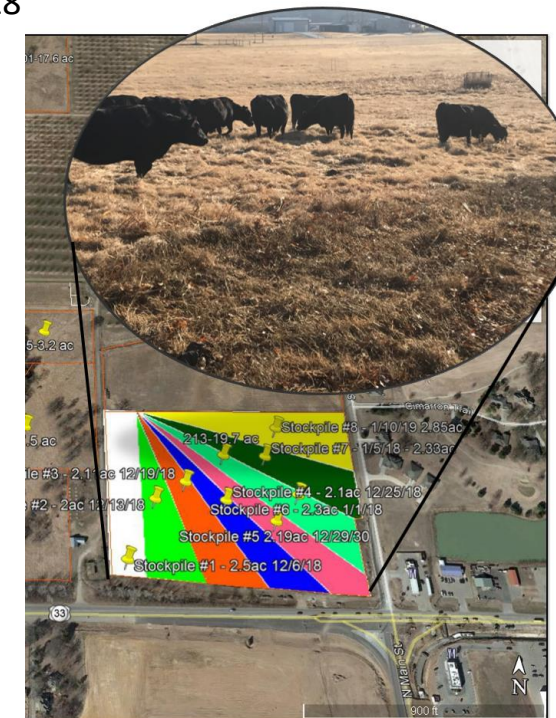
Young growth + fertility = High Quality Stockpile

Grazing Season Extension Overview - Continued

Continuous Graze vs Strip Grazing?

CVRS - Perkins, Ok 2018

42 Head	Continuous	4-5 Day Strip
Utilization (%)	57%	71%
Time - Time/Day	20 min - 1.2 m/d	2.8 hrs - 4.1 m/d
Efficiency Change	-	+8 days
Total Value (\$)	-	\$522
Equip Costs (\$)	-	\$336.50



- Weekly fence moves are still better than continuous grazing.
- Make the strip size fit your system!
- Don't worry about having the exact acreage during fence moves.
- Always overestimate available forage!

51

Days total hay and supplement reduction.

\$1

Expected savings per cow per day when grazing fertilized winter forages vs hay and feed

Properly Stockpiled Bermudagrass is essentially a standing hay crop that does not require machine harvest!



MLRDF	Bermuda Hay	SP Bermuda 2018	SP Bermuda 2019
Crude Protein (CP)	11.3	12.7	12.5
Energy (TDN)	62.1	59.3	58.2
Yield (lb DM/A) - Graze Days		2,249 - 38	3,192 - 86?
"Feeding" Cost (\$/C/D)	\$0.97 (90%)	\$0.38 (81%)	\$0.42 (65%)

Summer Forage Utilization Overview

0 vs 75%

Amount of rest given to forages with a continuous vs 4 paddock rotation.

2"

Minimum residue height for grazed Bermudagrass.



30

Days of new growth or regrowth where forage nutrient levels begin to decline rapidly.

3-5

Days after grazing before the plant begins to regrow and enters a vulnerable state.



Rotate based on forage maturity, not remaining forage!



135

 Average days of historically feeding hay/supplement

Days of winter feeding in 2018 - 2019

84

Hours Invested per Cow

