CFLAG Pasture School - May 28-29th, 2025



# The "Real" Cost of an Animal Per Acre

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Cattle Rancher = **Grass Farmer FIRST** no forage = more feed more costs!

no forage = poor BCS

less revenue!



# Cattle Rancher = Grass Farmer FIRST

• Know the nutritional requirements of your cows

throughout the year.

 Know the nutritional value of your forages

#### throughout the year.

- Don't forget to soil test as well!
- Knowing both of these will allow you to figure out how you need to supplement your cows.
  - Don't forget about your mineral program as well!

Basic Nutrient Requirements of Beef Cows



# Cattle Rancher = Grass Farmer FIRST

"More cows = more calves = more money" "We have always had this many cows"

We have to look past the "face-value" of these statements...

- Our cows are MUCH bigger than they were "back in the day"
  - Average cow size: 1,400 pounds
- Bigger cows need more groceries, whether that's forage or feed
- Cows in poor body condition can't focus on raising a heavy calf

"Too many cows = less forage, more feed/poorer condition, smaller calves = not as much money as we think"



# Cattle Rancher = Grass Farmer FIRST

- Stocking rate should not exceed carrying capacity.
  - Carrying capacity: number of animals a pasture can handle for a certain amount of time
  - Stocking rate: number of animals grazing a pasture for a certain time
- Ways to avoid overgrazing...
  - Destock -> good news though...cull cows are worth almost gold in the current market!
  - Rotational grazing/stockpiling -> may can have more cattle on a smaller pasture for a certain amount of time to give another pasture time to rest



## Stocking Rate: Continuous Grazing Example

	Data	Units
Total acreage	100	acres
Grazing Animal	1,200 lb cow with calf	
Forage Production per Acre (Bahiagrass)	6,000	lbs
Utilization Factor	50%	
Available Forage	300000	lbs
Grazing period	365	days
Dry Matter Intake (DMI) per day	26	lbs
Carrying Capacity of Acreage (# of head the pasture can support)	32	pairs
Stocking Rate	3.16	acres per pair
Number of Head Owned (based on forage availability)	32	pairs

#### **2025 Average Cow Costs** Cash Costs & Pasture Rent

#### ESTIMATED AVERAGE COW CALF COSTS



Livestock Marketing Information Center

2025

But what costs make up that \$334 per acre or \$1,045 per head?





### What do those 32 head need?

- Forage Management
  - Fertilization
  - Weed Control
  - Grazing Management
- Nutrition
  - Meeting requirements throughout the year
    - Gestation, lactation/breeding season, dry
  - Maintaining BCS of 5 year-round
  - Minerals & Water
- Health & Breeding
  - Vaccinations, medications, dewormers, fly/pest control, preg check, bull costs or AI costs



### Disclaimer

The example scenario/case study being presented is not representative of any specific operation. It is intended to be a guide on where to start when organizing operating costs for a cow-calf operation. It is important to work with your veterinarian, nutritionist, feed reps, Extension agents/specialists, and/or any other industry professionals who can provide specific guidelines for **your** operation.

### What do those 32 head need? (Sample Budget)

#### Forage Management

- Fertilization: ~\$82/acre
  - (2 applications of 50 lbs of N per acre per year) (Ammonium Nitrate, 34-0-0 at \$555/ton); \*P and K should be applied based on results from soil and tissue samples
- Weed Control ~\$3/acre
  - (1 application of Roundup PowerMax at 11 oz/acre, \$30/gallon = \$0.23/oz)
- Grazing Management 32 head (~3 acres per cow)

Expenses	unit	quantity/co w	\$/unit	\$/cow
Grazing (pasture costs)	acre	3.16	\$ 85.00	\$ 268.60

### What do those 32 head need? (Sample Budget)

#### Nutrition

- Meeting requirements throughout the year \$443.50
  - 26 lbs of DMI/cow/day \* 150 days = 3,900 pounds of hay/2,000 = 2 tons of hay x 140/ton = 280 per cow
    - Hay should be tested in order to know the nutritional value
  - 2 lbs of 32% CP feed/cow/day \* 210 days = 420 lbs or .21 tons @ \$350/ton = \$73.50 per cow
    - This will be based off of forage nutritive value and recommendations
- Minerals \$90.00
  - 4 oz/cow/day \* 356 days = 1,460 oz or 91.25 pounds per cow = ~2, 50 lb bags @ \$45/bag = \$90/cow

Expenses	unit	quantity/co w	\$/unit	\$/cow
Hay	ton	2	\$ 140.00	\$ 280.00
Supplement	ton	0.21	\$350.00	\$73.50
Mineral	bags	2	\$45	\$90.00

### What do those 32 head need? (Sample Budget)

#### • Health & Breeding - \$106.00

• will vary based on vaccination protocols, medications, dewormers, fly/pest control, vet visits, preg check, AI protocols etc.

Expenses	unit	quantity/co w	\$/unit	\$/cow
Vet, Meds, Vaccines, etc.	head	1	\$ 50.00	\$ 50.00
Breeding (NS, bull cost)	Head	1	\$56.00	\$56.00

#### Annual Sample Budget

Expenses	unit	quantity/cow	\$/unit			\$/cow
Grazing (pasture costs)	acre	3.16	\$	85.00	\$	268.60
Нау	Tons	2	\$	140.00	\$	280.00
Supplemental Feed	ton	0.21	\$	350.00	\$	73.50
Mineral	bags	2	\$	45.00	\$	90.00
Health (vet & meds)	head	1	\$	50.00	\$	50.00
Breeding (NS, bull cost)	head	1	\$	\$ 56.00		56.00
Total						818.10
Interest	dollars	\$ 818.10	8.50%		\$	69.50
Total Variable Expenses				\$	88	87.60
Land Rent (fixed expense)	acres	3.16		\$25.00		\$79.00
TOTAL				\$	966	5.60

### Cost per Acre

- 32 cows on 100 acres
- 3.16 acres per cow
- Cow cost: \$966.60
- Total Cow Cost: \$30,931.20

\$30,931.20 / 100 acres \$309.31/acre \$966.60 / 3.16 acres \$305.87/acre

### "I think I can have more cows than that"

- You might! But...
- Is it worth risking overgrazing and having to compensate for limited forages with more hay?
- Is it worth it to decrease the body condition of cows which is costly to bring back up and affects calf performance?

### **Compensating Example**

Total Hay Costs almost doubled when only increasing feeding days by 30 days. Per cow costs increased by \$47 per cow.

#### Table 2. Feeding Days and Hay Costs Based on Stocking Rate

\**Cow Requirement:* 1,200-*pound cow,* 20 *lbs peak milk, average of* 26 *lbs of DMI/day* \**Hay costs:* \$140/*ton* **Hay Feeding Days only increase by 30 Days** 

Cow Herd	Acres Per Cow	Hay Feeding Days	Hay/Cow (tons)	Hay Costs/Cow	Total Hay Costs
50	2	180	2.34	\$327.60	\$16,380
32	3.16	150	2	\$280.00	\$8,960

It is always better to **start with a lower stocking rate and work up to an optimal one** rather than starting with what we think may be optimal but is really too high.

### Cost per Acre

- 50 cows on 100 acres
- 2 acres per cow
- Cow cost: \$989.28
- Total Cow Cost: \$49,464

\$49,464.00 / 100 acres \$494.64/acre \$989.28/2 acres \$494.64/acre

### "But more cows = more calves = more money"

Maybe, but what do your pregnancy rates and weaning rates/weights look like?

"...a reduction in cow BCS from calving until the start of breeding season further reduced pregnancy percentage, calving percentage, and calving distribution during the first 30 days of calving in cows calving with when cow BCS < 5;..." (Moriel, 2024)

	Cows	PR%	CR%	<b>CD%</b> (1 <sup>st</sup> 30 days*)	# of calves	WW (lbs)	Calf Revenue
BCS < 5	50	85%	81%	57%	41	400	\$54,120
<i>BCS</i> ≥ 5	32	90%	87%	68%	28	425	\$39,270

#### "Too many cows= more feed/poorer condition= not as much money as we think"

Increasing our stocking rate resulted in higher calf revenue, but also in higher costs. In this example, total profits were ~\$3,600 higher when an optimal stocking rate was implemented, and cows maintained a BCS of 5 or greater.

Having cows in good body condition year-round plays a big role in production and profitability. In years where calf prices are not as high as they are now, that extra \$18,000 to maintain the herd is a big risk.

CALF PRICE: \$3.30 PER POUND

	Cows	Calf Revenue	Cow Cost	Total Returns	Returns per Cow	Returns per Acre
BCS < 5	50	\$54,120	\$49 <b>,</b> 464	\$4,656	\$93.12	\$46.56
<i>BCS</i> ≥ 5	50	\$61,710	\$49 <b>,</b> 464	\$12,246	\$244.92	\$122.46
<i>BCS</i> ≥ 5	32	\$39,270	\$30,931	\$8,33 <b>9</b>	\$260.59	\$82.46

#### "Too many cows= more feed/poorer condition= not as much money as we think"

Increasing our stocking rate resulted in higher calf revenue, but also in higher costs. In this example, total profits were ~\$3,600 higher when an optimal stocking rate was implemented, and cows maintained a BCS of 5 or greater.

Having cows in good body condition year-round plays a big role in production and profitability. In unprofitable years where calf prices are not as high as they are now, that extra \$18,000 to maintain the herd is a big expense.

CALF PRICE: \$1.90 PER POUND

	Cows	Calf Revenue	Cow Cost	Total Returns	Returns per Cow	Returns per Acre
<i>BCS</i> ≥ 5	50	\$35,530	\$49,464	-\$13,934	-\$278	-\$139.34
<i>BCS</i> ≥ 5	32	\$22 <i>,</i> 610	\$30,931	-\$8,321	-\$260	-\$83.21

### TAKE HOME MESSAGE

- Feeding cows involves costs no matter what way you look at it.
- So, let's make sure we are doing it in the most economical and efficient way possible to maximize production and profitability.
- Work up to and maintain an optimal stocking rate so you don't have to compensate for limited forages to maintain body condition of cows, which is expensive.



# Intentional forage & grazing management

to

efficiently & economically maintaining BCS

and

#### positively influence cow & calf performance

aids in

improve profitability.

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## QUESTIONS???

#### MAY GOD BLESS YOUR STEWARDSHIP!

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SCAN FOR RESOURCES ON THE RCREC WEBSITE!

