GRAZING MANAGEMENT

REDWING RESOURCE

Grazing Plans + Custom Grazing

Key Concepts + Vocab

WSS: Web Soil Survey, which is interactive mapping tool provided by the USDA that provides access to soil data. This soil data is associated with productivity which ultimately doesn't show the species or quality of forage, but can be a useful starting point for grazing planning.

SDA: Stock Days per Acre is the amount of 1000# animal days on a single acre. For example: 12 SDA means that 12 1000# animals can graze one acre for one day. It also means that one 1000# animal could graze for 12 days on one acre. This value ultimately informs your grazing plan by determining how much stock and for how long they can graze in a pasture to meet appropriate utilization.

Total Stock Days (SD): This is your SDA value over multiple acres, a pasture, or even your entire ranch.

HE: Harvest Efficiency looks at the productivity of land and graze period (assuming that plants have full opportunity for recovery following the grazing) and gives an approximate utilization percentage. Ranching for Profit (RFP) has a simple chart on the following page to help determine utilization rate.

HU: A Historically Underserved (HU) farmer is someone who has not operated a farm or ranch, or who has operated a farm or ranch for not more than 10 consecutive years or is considered socially disadvantaged, veterans, has limited resources, and more.

Redwing Reflection #1: Remember, this is a starting point, and ultimately this HE might be different on your operation due to a differing context. It is better to be conservative in your estimations as you learn the land, rather than taking your ground, and potentially animal performance, in the wrong situation.

Grazing Planning: How-To

Collecting Data from WSS

1. Go to the USDA website and Start Web Soil Survey (WSS) https://websoilsurvey.nrcs.usda.gov/app/
2. Click the large, green button “Start WSS”
3. In the "Quick Navigation" tab, filter by State and County
4. Then use the two magnifying glasses and hand to navigate to your Area of Interest (AOI) more zoomed-in
5. Once you have navigated to the correct area, next you will snap out a polygon for your AOI. Start by clicking "Define AOI by Polygon" first.
6. Snap out the polygon for your AOI by double clicking to end.
7. Now select the "Soil Data Explorer" tab at the top
8. Drop down the "Vegetative Productivity" tab and select “Range Production (Normal Year)”

RFP Harvest Efficiency Chart

Approximate seasonal utilization rates based off of land productivity and average graze period. These HE utilization rates assume plants have full opportunity for recovery following the grazing.

Graze period (days)	Irrigated	Improved	Native Range
30 or +	60%	40%	25%
15	65%	45%	30%
10	70%	50%	35%
5	75%	55%	40%
3	80%	60%	45%
1	85%	65%	50%

Additional information on calculating Range Productivity on WSS from Oklahoma State University. https://extension.okstate.edu/fact-sheets/print-publications/cr/assessing-potential-forage-production-using-the-nrcs-web-soil-survey-cr-2597.pdf

Grazing Planning: Template

YOU WILL NEED TO KNOW:

- forage productivity (#/acre) from WSS
- size and number of animals you plan to graze
- harvest efficiency (HE) which uses land productivity and graze period

Stock Day Calculator

1,250	Pounds (weight of your livestock)
2.50%	Intake of total body weight (3% for gaining stockers and 2.5% for maintaining breeding stock)
31.25	lbs of forage a day consumed
35%	Harvest Efficiency / Utilization
250	# of Head
337.5	# of Standard Animal Units (1000# animals)

$$SDA = \frac{\#}{acre} \times (HE) \div \left(\frac{lbs}{day}\right)$$

*this is the amount of forage consumed

Example	Pasture Name
347	Acres
964	#/acre
10.8	SDA
3,746	Total Stock Days

This is the forage productivity found from the WSS data (weighted average)

YOUR TURN!

	Pasture Name or #
	Acres
	#/acre (productivity from WSS)
	Harvest Efficency
	Animal Weight in lbs (#)
	% intake of total body weight
	lbs/day consumed (Animal Weight * % intake)
	SDA (#/acre * HE / lbs/day consumed)
	Total Stock Days (SDA * Total Pasture Acreage)

$$SD = SDA \times acre$$

Owning vs Leasing Land

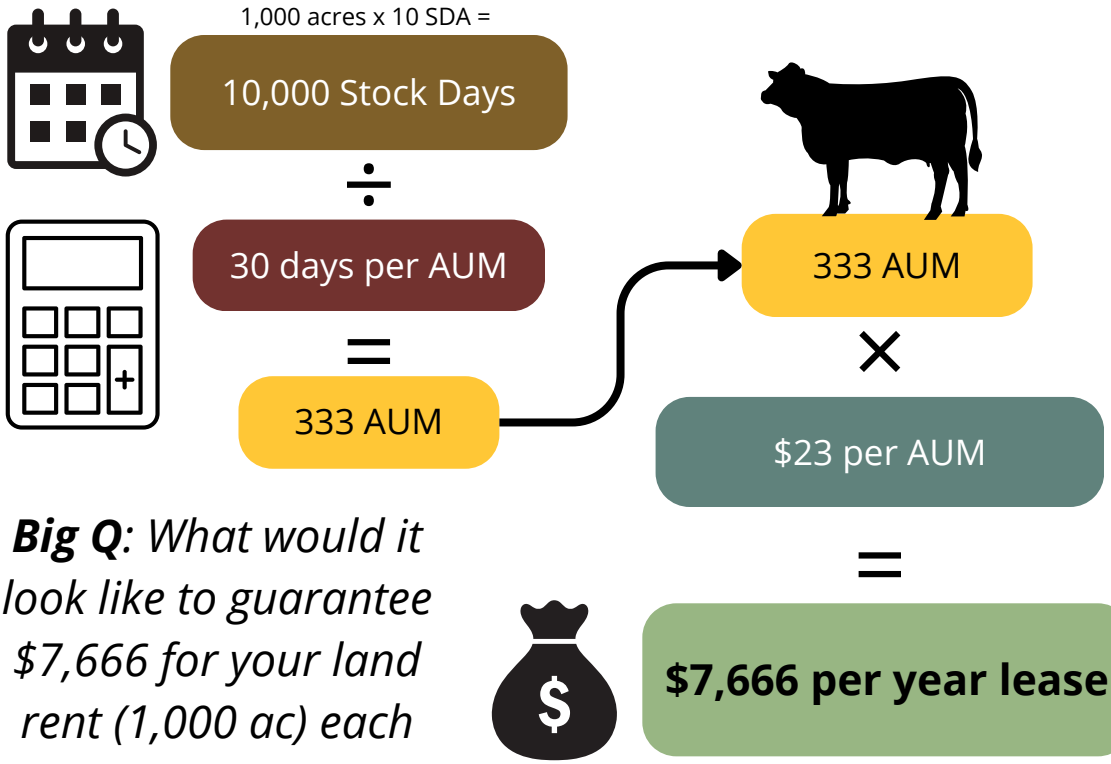
Redwing Reflection #2: Always charge yourself for grass, REGARDLESS of ownership status.

- You need to be able to understand if your livestock enterprises are truly profitable or if they are subsidized by 'free' land and/or labor
- Using USDA National Agricultural Statistics Service data, one can get average pricing for pasture rent by state

Should you run cattle on your place vs leasing your place out to a neighbor?

- In Colorado, $23 Animal Unit/Month (AUM) is the going rate for non-irrigated, leased land
  - $23/AUM is the cost of grass for one 1,000# animal for a month
  - On average, non-irrigated, leased land is aprx. 10SDA in CO

Land Carrying Capacity (total stock days) to Lease Value Conversion on a 1,000 Acre Ranch in CO



***Big Q**: What would it look like to guarantee $7,666 for your land rent (1,000 ac) each year? How could you earn that AND more?*

*USDA Grazing Fees - https://www.nass.usda.gov/Charts_and_Maps/Grazing_Fees/gf_hm.php

Profitability + Custom Grazing

But, what if I don't own livestock or land?

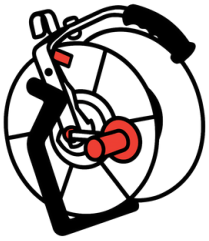
Don't fret, **there is a way!**

Custom Grazing (CG) is full-service grazing care. CG costs more than a straight lease rate because the custom grazier is responsible for livestock and water checks, fencing, and ultimately the grazing planning. CG can provide predictable cash flow each month, meaning you can generate revenue *even if you don't own cattle or land.*

Start up costs for your custom grazing business. These include:

- Fencing: Energizer, poly wire, reels, handles, posts, fence tester
- Water: Poly stock tanks, automatic floats, hoses

These cost could range from $1,000 - $2,500 depending on the size of your business.



Estimated Annual Direct Costs for Salt
Cost per SAU per Day for Salt = $0.01
125 day graze period * 337.5 SAU * $0.01 = $421.88

To have the best possible outcome, constant and clear communication with your CG partner/s is vital. This is a business, and treating it with the complexity and seriousness that it requires will result in the best possible outcome. CG is a powerful way to manage land, livestock, and profit. However, it requires knowledge, skill, and hard work.

Redwing Reflection #3: Lean on your community to learn, and don't be afraid to ask questions. The biggest mistake you can make is assuming you know it all already.

Interested in more?
No Risk Ranching: Custom Grazing on Leased Land by *Greg Judy*

EQIP Opportunities

Link to the USDA fact sheet about EQIP!

EQIP is the Environmental Quality Initiatives Program.

It is the NRCS' flagship conservation program that helps agricultural producers integrate conservation into working lands. It intends to offer financial, cost-share assistance to implement structural and management conservation practices that optimize environmental benefits on working agricultural lands.

Eligibility

- Ranchers, farmers, and foresters who own or rent agricultural land
- Comply with adjusted gross income (AGI) limitation of $900,000
- Be in compliance with the highly erodible land and wetland conservation requirements
- Develop an NRCS EQIP plan of operation

An example of an EQIP practice that can put money in your pocket:

2 strand hi-tensile fencing (practice code 382 for electric fence)

- CO 2024 Reimbursement Rates: $2.07/ft and HU Reimbursement Rate: $2.49/ft
- Materials = $1,017 (1 mile of 2 strand hi-tensile fence with pipe h-braces every 0.25 mi)
- Labor = $3,075 ($30/hr man hour * 40 hrs = $1,200, $55/hr welding hour * 5hrs = $275, $100/hr machine hour * 16 hrs = $1,600)
- CO Reimbursement Rate: $2.07/ft for 5,280ft = $10,930
- $10,930 - ($1,017 + $3,075) = **PAYS $6,838 per mile after all materials and labor are accounted for**

Redwing Reflection #4: A sustainable business relies on making sure you make the right choice, FOR YOU and your operation. Not every EQIP project is right just because it can put money in your pocket or be a breakeven. Think about what your land and team can handle.

2024 EQIP Reimbursement Rates for Colorado
https://www.nrcs.usda.gov/sites/default/files/2023-12/fy24-colorado-eqip.pdf