

# BARNYARDS & BACKYARDS

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## Ranch example shows Forage Risk Analyzer Tool at work

The Forage Risk Analyzer (FRA) tool from RightRisk.org is a spreadsheet-based application that helps users accurately evaluate forage leases. Calculated values can be allocated to a single entity to help determine the value of a forage resource, or divided between two or more parties based on their contributions to the lease.

In a previous installment, we highlighted a lease involving case study Goshen County ranchers Hal and Merna Gall\*. The Galls have an opportunity to lease a neighboring property of 500 acres of cornstalks for their mature cows to graze.

The inputs for the FRA tool are grouped into land, livestock, housing, and stored feed sections. Users can also enter associated labor and machinery/equipment costs for each of the categories. The Galls assume the initial cost of the lease at \$30/acre (\$15,000 total), along with expenses for installing and removing electric fence, maintaining and providing stock water, and other minor costs for managing the cattle.

### Analysis

We will focus solely on the expenses associated with the cornstalk grazing for purposes of analysis. In the livestock section, we input 200 head of cows in the market livestock section with no changes or sales.

One important feature of the FRA tool is it allows for changes in numbers and value per head for listed livestock to account for changes in total value of the livestock. The

breeding livestock category also accounts for factors like depreciation.

Under the allocation tab of the tool, we allocate all of the expenses to the Galls, as they are using this analysis to determine an accurate total cost of the lease. The total land expenses, including fencing and providing water, total \$18,880. Total livestock expenses, including moving, care, veterinary, and other miscellaneous expenses, are \$2,713.

Selecting the Analysis tab, net returns are reported on a per-year, per-acre, per-animal, per-pound of available total digestible nutrients (TDN), per animal unit month (AUM), and per animal unit (AU) basis. Results in Table 1 show a total per acre cost of \$43.19 and a total cost per animal of \$107.97.

### Risk Analysis

The Galls can now analyze the risk associated with this lease – the stocking rate – as the costs could rise considerably if they are not able to utilize the stalks for the full three months.

Using the risk analysis section of the tool, we select

the user or supplier (in this case the Gall Ranch) and the risk factor from the list to analyze – AUMs per year. The Galls believe the worst-case scenario for using the stalks would be 400 and the best would be 700 AUMs.

After making the entries and clicking the Run button, the FRA tool generates a probability distribution showing, based on their assumptions, the Galls have a 60 percent chance of incurring a cost greater than \$35.90/AUM, a maximum cost of \$41.60/AUM, and a minimum cost of \$26.10/AUM.

\*The Gall family and their operation are a case study example created to demonstrate RightRisk tools and their application. No identification with actual persons (living or deceased), places, or agricultural operation is intended nor should be inferred.

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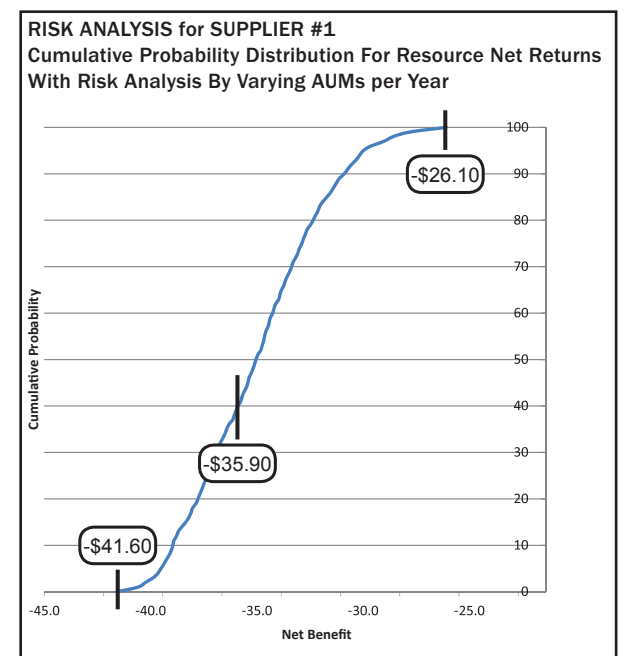
Table 1. Total Costs for Cornstalk Grazing Example

Resource Net Return Analysis Worksheet	
	<b>TOTAL</b>
LAND Resource Net Return:	-\$18,880
LIVESTOCK Resource Net Return:	-\$2,713
HOUSING Resource Net Return:	-
STORED FEED Resource Net Return:	-
<b>TOTAL Resource Net Return:</b>	<b>-\$21,593</b>
<b>Total Resource Net Return Allocation:</b>	<b>100%</b>

Net Return Analysis*	
Net Return per YEAR	-\$21,593
Net Return per ACRE	-\$43.19
Net Return per ANIMAL	-\$107.97
Net Return per POUND of AVAILABLE TDN	-\$0.07
Net Return per ANIMAL UNIT MONTH	-\$35.99
Net Return per ANIMAL UNIT	-\$431.86

### For more information

The Forage Risk Analyzer tool is just one of many useful means available at RightRisk.org. Producers can complete in-depth budget analysis on numerous levels, examine their risk exposure, and compare strategies or changes in their businesses with short- and long-term evaluations. Visit RightRisk.org for online courses, presentations, and other risk management resources.



## Supplementation options for Wyoming cow-calf producers

Wyoming cow-calf producers must make decisions on how to effectively supplement their herds when forage quality is low and requirements are elevated.

During crucial periods of the beef cow's production cycle (such as late gestation and early lactation), available forage is likely deficient in protein, energy, or both, while her nutrient requirements are at their peak. This critical time period commonly lasts from December-April for spring calving systems.

Supplementation can be fed directly to the animal (cake pellets) or to the animals as a free choice block or liquid. Supplement costs should be compared on a price-per-pound of crude protein



basis instead of their price tags. Although forage quality and supplement costs are the primary decision-making criteria, there are many other factors to consider such as regional availability of the supplement, frequency and amount of supplement offered to the animal, available labor, method of delivering the supplement, and associated costs with supplementation such as fuel and equipment usage.

If labor and equipment are available in an operation, hand feeding a supplement that allows for rapid consumption during short periods of time (cakes, soybean meal, distillers grains, etc.) is likely the most feasible option. Hand-fed supplements are typically affordable and are likely to be consistently consumed by each animal. Several studies have shown supplements can be offered as infrequently as once every four to seven days due to the ruminant animal's ability to recycle nitrogen to satisfy microbial requirements.

If labor and time is limited, large quantities of self-fed supplement options offered periodically (such as lick tubs, blocks) are likely the most feasible option. Self-fed supplements are convenient as they save labor and use of machinery. However, cost-per-pound of protein with self-fed options is usually higher when compared to hand-fed options. Not all cattle will consume controlled amounts of the supplement over extended periods of time. Several studies have noted significant variations in individual animal intake of self-fed supplements.

Complete a forage test to determine a viable supplementation strategy. Unless the base forage tests is equal to or greater than 10 percent crude protein and equal to or greater than 60 percent total digestible nutrients, the hay alone is not likely to contain enough protein and energy to meet nutritional needs during winter and early spring. A routine analysis on a hay sample typically costs less than \$20 and will provide the information needed to plan a supplementation program. A routine feed analysis can be completed by a number of laboratories (for example, Ward labs, Colorado State University lab), and the turnaround for results is usually a couple of days. Your local extension office is a good resource to help interpret results.

Whether self-fed or by hand, supplementation can be a great tool for improving grazing distribution. Strategically placing supplements in infrequently grazed areas of the pasture could increase total usable area and potentially increase animal units per month.

Supplementation during the late winter and early spring is especially important for spring-calving, cow-calf operations in Wyoming. An operation's ability to determine the most efficient way to deliver supplemental protein and energy will help with long-term sustainability.

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