

Cornhusker Economics

Cooperative Extension

Institute of Agriculture & Natural Resources
Department of Agricultural Economics
University of Nebraska – Lincoln

Is Grass the Cheapest Feed?

Market Report	Yr Ago	4 Wks Ago	9/8/00
<u>Livestock and Products,</u>			
<u>Average Prices for Week Ending</u>			
Slaughter Steers, Ch. 204, 1100-1300 lb Omaha, cwt	\$65.91	\$64.06	\$63.89
Feeder Steers, Med. Frame, 600-650 lb Dodge City, KS, cwt	84.48	96.00	91.61
Feeder Steers, Med. Frame 600-650 lb, Nebraska Auction Wght. Avg	82.75	99.11	92.12
Carcass Price, Ch. 1-3, 550-700 lb Cent. US, Equiv. Index Value, cwt	102.15	99.89	98.02
Hogs, US 1-2, 220-230 lb Sioux Falls, SD, cwt	32.00	44.50	41.50
Feeder Pigs, US 1-2, 40-45 lb Sioux Falls, SD, hd	*	39.28	*
Vacuum Packed Pork Loins, Wholesale, 13-19 lb, 1/4" Trim, Cent. US, cwt	108.50	124.30	119.69
Slaughter Lambs, Ch. & Pr., 115-125 lb Sioux Falls, SD, cwt	74.18	82.75	*
Carcass Lambs, Ch. & Pr., 1-4, 55-65 lb FOB Midwest, cwt	174.00	173.00	163.00
<u>Crops,</u>			
<u>Cash Truck Prices for Date Shown</u>			
Wheat, No. 1, H.W. Omaha, bu	2.97	2.75	2.93
Corn, No. 2, Yellow Omaha, bu	1.66	1.41	1.54
Soybeans, No. 1, Yellow Omaha, bu	4.68	4.34	4.71
Grain Sorghum, No. 2, Yellow Kansas City, cwt	2.91	2.70	2.71
Oats, No. 2, Heavy Sioux City, IA, bu	1.11	1.18	1.20
<u>Hay,</u>			
<u>First Day of Week Pile Prices</u>			
Alfalfa, Sm. Square, RFV 150 or better Platte Valley, ton	90.00	115.00	105.00
Alfalfa, Lg. Round, Good Northeast Nebraska, ton	35.00	67.50	67.50
Prairie, Sm. Square, Good Northeast Nebraska, ton	*	75.00	82.50
* No market.			

There has been a correction in the September 13, 2000 issue "Is Grass the Cheapest Feed?" An important line was deleted in the text. The entire article is being rerun with the correction in bold. Our apologies for any confusion this might have caused to our readers and to Dick Clark our author.

Is Grass the Cheapest Feed?

A recent IRM meeting with cattle producers in Gering highlighted the fact that different producers have different approaches to answering this question. It was quite obvious that the answer is "it depends." It depends on the availability and cost of alternative sources of nutrition for the animal, labor costs and producer goals.

Goals and Grazing Costs

What do the goals of the producer have to do with an apparently empirical question such as the one asked? Goals relate to the method of analysis chosen and how resources are evaluated. Some producers are driven by financial analysis (primarily concerned with cash flow) while others are concerned about a full, economic accounting (consider opportunity cost for all resources). The producer driven by financial analysis will evaluate alternatives based on their costs and returns that primarily affect cash flow. Such producers will likely ignore the true opportunity cost of many of their owned resources. For example, instead of using the current cash rental rate for grass to evaluate a grazing enterprise, such producers will look only at the costs of conducting the grazing activity. These costs may include fuel for checking and moving cattle, repair and upkeep on equipment, fencing and water facilities and may or may not include labor costs. The land cost that may be considered is some return to service real estate debt. A producer who is driven by economic accounting will include the costs mentioned above but will also try in some way to account for the opportunity cost of the grazing resource itself instead of just allowing for interest on debt. The



financial analysis answers the question as to whether the producer can make the enterprise pay its way, but begs the question of whether it is the “best” return from this resource. Does that mean that only those who use full economic accounting are correct? No, it only means that they have a different set of goals. A producer that does a complete financial analysis and discovers that the operation “works” will be around in the future. But without question, the two types of analyses can lead to quite different answers. That is partly the reason that the Guidelines for conducting a Standardized Performance Analysis (SPA) for cow-calf operations use both an economic and financial analyses.

Goals are also important in determining how opportunity costs of alternative sources of nutrition are evaluated. A primarily crop producer with small, scattered areas of growing forage may view the opportunity value of such grass near zero. The producer may not even be interested in renting these areas to neighbors for various reasons. Contrast this view with a producer who believes that the return to land should be competitive with other investments. The opportunity cost of the grazing land may be the returns from investing dollars in other sectors of the economy if the land were sold. We have both extremes among our producers and their views of the opportunity costs could also lead to quite different answers to the question posed.

Example Cost Comparison with Yearling Steers

If one uses the opportunity cost approach for evaluating grazing land, it is very possible that cost of gain from grass may exceed cost of gain from more concentrated feed. Consider a producer who is deciding whether to graze yearling steers on grass or send them directly to the feedlot. If the steers do not utilize the grass the producer may be able to lease the grass to another producer or increase the number of cows thus reducing acres/cow. Important determinants of the cost of gain on grass for the steers are the value of the land, its productivity and how that translates into a cost per head per day. **Table 1 shows various costs per head per day for an operator who wishes a 6% rate of return on land value, has property taxes of 1.4% of land value and additional grazing costs of \$8/acre (checking cattle, upkeep and operating cost for water and fence, etc.).** Table 2 shows the cost per pound of gain for steers grazing grass with different daily grazing costs and gains. The gains shown are within reasonable expectations for yearling cattle grazing grass in Nebraska during the summer months.

The costs per pound of gain range from a low of \$0.20/pound to \$0.77/pound. Currently, some feed yard closeouts are showing costs per pound of gain from the low to mid thirty cents. Even with higher priced corn closeouts in the low to mid \$0.40/pound of gain were common. A producer expecting a six percent return on grass valued at \$200/acre and yielding 0.7 AUMs/acre (daily cost of \$0.68/head) will need calves gaining at 2 lbs/day or better on grass to find grazing an attractive alternative. If land is

valued at \$300/acre and yields 1 AUM/acre daily cost would be similar, so needed gain would also be in the 2 lbs/day range. On the other hand a producer who estimates the pasture cost is only \$0.40 per head per day will choose grazing over concentrated feeding. This discussion has been only from a cost standpoint. Other factors such as price and market timing are involved if we are talking about profit.

Conclusion

So what is the answer to our original question? The answer remains-- it depends. It depends on operator goals, how the operator values the resource, yield of the resource and the performance of the calves on grass or concentrated feed.

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Table 1. \$/Head/Day for 700-pound Yearlings with Various Pasture Yields and Land Values

AUMs per acre	Land Value \$/acre				
	\$150	\$200	\$250	\$300	\$350
.5	.70	.88	1.05	1.22	1.40
.6	.62	.76	.91	1.05	1.19
.7	.56	.68	.80	.93	1.05
.8	.51	.62	.73	.83	.94
.9	.47	.57	.67	.76	.86
1.0	.45	.53	.62	.70	.79

Table 2. \$/Pound of Gain for 700-pound Yearling Steers Grazing Grass—Alternate Costs/Day and Various Performance Levels

Gain/head per day (pounds)	Cost per head per day (\$)						
	.40	.50	.60	.70	.80	.90	1.00
1.3	.31	.38	.46	.54	.62	.69	.77
1.4	.29	.36	.43	.50	.57	.64	.71
1.5	.27	.33	.40	.47	.53	.60	.67
1.6	.25	.31	.38	.44	.50	.56	.63
1.7	.24	.29	.35	.41	.47	.53	.59
1.8	.22	.28	.33	.39	.44	.50	.56
1.9	.21	.26	.32	.37	.42	.47	.53
2.0	.20	.25	.30	.35	.40	.45	.50

