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Cornhusker Economics

Representative Economic Budgets for Nebraska Cow Herds

10-4-19 Market Report	Year Ago	4 Wks Ago	12-13-19
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.	*	115.00	*
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	70.02	158.53	163.20
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	154.14	150.79	148.29
Choice Boxed Beef, 600-750 lb. Carcass.	213.11	237.08	219.14
Western Corn Belt Base Hog Price Carcass, Negotiated	45.74	*	*
Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean.	71.01	81.04	81.06
Slaughter Lambs, woolled and shorn, 135-165 lb. National.	132.55	153.15	153.31
National Carcass Lamb Cutout FOB.	380.67	402.45	398.95
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	4.72	3.70	4.05
Corn, No. 2, Yellow Columbus, bu.	3.52	3.60	3.70
Soybeans, No. 1, Yellow Columbus, bu.	8.07	8.32	8.50
Grain Sorghum, No.2, Yellow Dorchester, cwt.	5.70	5.93	5.95
Oats, No. 2, Heavy Minneapolis, Mn, bu.	3.35	3.27	3.29
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	*	127.13	*
Alfalfa, Large Rounds, Good Platte Valley, ton.	110.00	107.50	107.50
Grass Hay, Large Rounds, Good Nebraska, ton.	87.50	95.00	95.00
Dried Distillers Grains, 10% Moisture Nebraska Average.	160.00	149.50	160.50
Wet Distillers Grains, 65-70% Moisture Nebraska Average.	50.50	51.50	50.00
* No Market			

In 2017, the University of Nebraska-Lincoln Institute of Agricultural and Natural Resources (IANR) and Nebraska Extension made a commitment to implement a multidisciplinary Beef Systems Initiative (BSI). BSI is administered by the Center for Grassland Studies and is comprised of six projects designed to develop and support implementation of beef production systems that optimize feed resource use, natural resource conservation, and producer success in Nebraska through improved management of perennial grasslands and systems of integrated crop-beef cattle production. In addition to BSI, a parallel project funded by the Foundation for Food and Agriculture Research (FFAR) is studying the best practices for incorporating beef cattle onto cropping systems while improving ecosystem services to ensure sustainability. Both of these efforts include components focused on producer and community outreach through Nebraska Extension. To this end, five geographically identified producer panels and an agricultural lenders panel were formed to provide input and feedback on the project results as they become available.

One of the key points noted from the lenders panel was that producers need to understand their cost of production and their operation's costs per cow on an annual basis. When the five producer panel groups met to learn about the initiative, they were introduced to the UNL Cow Herd System Budget program, an Excel-based cost of production template. The producer panel members participated in a discussion to describe

a typical cow-calf operation for their particular geographic region of Nebraska. During the summer of 2019, three of the producer panels met again to review draft budgets for their area and provide further input.

With the input received from the cow-calf producer panels, five representative budgets have been completed to date. The background stories that accompany the budget template files are designed to assist producers in using the program to determine their own cost of production and cow costs. The five budgets vary by cow herd size and utilize various management practices, e.g. growing replacement heifers or purchasing bred cows, selling calves at weaning or backgrounding to add extra weight before selling. The budgets are available online at go.unl.edu/cow-calfbudgets along with the Excel livestock budget template for producers to download and use.

The completed representative cow-calf budgets include two from the Nebraska Panhandle region, two from the northeast/north-central area of Nebraska, and one budget that is typical of a cow herd in south-

east Nebraska. Herd sizes for these budgets range from a 400-cow herd in the panhandle to a 50-cow herd for the southeast and northeast regions. Producers can modify the example budget in the templates to estimate their own economic costs and net returns for a production season by entering information that would closely resemble their herd size and production practices.

With a wide range of production and management practices throughout Nebraska for cow-calf enterprises reflected in these representative budgets, total annual economic costs per cow range from \$999 for the 400-cow herd in the panhandle to \$1,554 per cow for a 50-cow herd in northeast Nebraska (Table 1). Annual breeding costs varied considerably depending upon whether replacement heifers were assumed to be purchased or raised. The northern panhandle 400-cow herd has considerably higher labor costs included in the estimate of other variable costs compared to the other herds.

Table 1: Revenue and cost estimates for five representative Nebraska cow-calf enterprises

Cow-Calf Budgets	SE Neb 50		NE Neb 50		NE Neb 200		Panhandle 75		Panhandle 400	
	Herd	Per Cow	Herd	Per Cow	Herd	Per Cow	Herd	Per Cow	Herd	Per Cow
Total Revenue	\$ 42,874	\$ 857	\$ 44,824	\$ 896	\$ 196,822	\$ 984	\$ 62,631	\$ 835	\$ 316,915	\$ 792
Breeding Costs	\$ 2,437	\$ 49	\$ 17,899	\$ 358	\$ 53,889	\$ 269	\$ 3,519	\$ 47	\$ 15,870	\$ 40
Feed Costs	\$ 34,826	\$ 697	\$ 21,720	\$ 434	\$ 140,054	\$ 700	\$ 40,325	\$ 538	\$ 267,464	\$ 669
Other Variable Costs	\$ 4,468	\$ 89	\$ 5,252	\$ 105	\$ 21,973	\$ 110	\$ 7,879	\$ 105	\$ 74,514	\$ 186
Fixed Cash Costs	\$ 6,047	\$ 121	\$ 6,290	\$ 126	\$ 7,782	\$ 39	\$ 8,650	\$ 115	\$ 9,543	\$ 24
Total Cash Costs	\$ 47,778	\$ 956	\$ 51,160	\$ 1,023	\$ 223,699	\$ 1,118	\$ 60,373	\$ 805	\$ 367,390	\$ 918
Net Cash Income	\$ (4,904)	\$ (98)	\$ (6,336)	\$ (127)	\$ (26,877)	\$ (134)	\$ 2,258	\$ 30	\$ (50,475)	\$ (126)
Non-Cash Costs	\$ 7,918	\$ 158	\$ 7,890	\$ 158	\$ 16,156	\$ 81	\$ 16,182	\$ 216	\$ 32,016	\$ 80
Total Costs	\$ 55,697	\$ 1,114	\$ 77,717	\$ 1,554	\$ 239,855	\$ 1,199	\$ 76,554	\$ 1,021	\$ 399,406	\$ 999
Net Income	\$ (12,823)	\$ (256)	\$ (32,893)	\$ (658)	\$ (43,033)	\$ (215)	\$ (13,923)	\$ (186)	\$ (82,491)	\$ (206)
Assumptions:										
<i>weaning rate</i>	92%		87%		93%		90%		90%	
<i>replacements</i>	raised		purchased		purchased		raised		raised	
<i>calves sold</i>	39		44		184		54		276	

It is important to note that prices for cattle, feed, hay, and other expenses are figured into the budgets using values as of September 2019. Pasture and corn stalk rent expenses are included as cash costs in each budget. In many cases, cattle producers own at least a portion of their own hay and pasture ground, raise their own crops for feed and have crop residue (corn stalks) available for utilization by the cow-calf herd. However, for the purpose of presenting a cow-calf enterprise budget, raised feed, hay, and pasture are treated as separate enterprises from the cow herd enterprise, with current market rates charged to the cow-calf enterprise. Pasture rents range widely across the budgets from \$1.17 per day per cow-calf pair for summer pasture in the southern panhandle to \$2.67 per day per pair noted in the northeast Nebraska 200-cow herd. An alternative to charging the cow-calf enterprise for pasture in this manner would be to enter opportunity cost and real estate taxes on owned land utilized by the cow-calf enterprise.

The representative budgets were prepared using the UNL System Budgets for a Cow Herd and were done to provide a guide for producers using the program to calculate their own cost of production. Accurate production, feed and financial records are a first step and foundational basis for information used in livestock budgeting. With this program, costs and returns for a cow-calf operation can be analyzed. In addition to the breeding herd enterprise, the template contains budget sheets to analyze calves that are retained past weaning. These include the enterprises of wintering calves, grazing stockers, and feedlot placement. The 400-cow herd in the panhandle and the 200-cow herd in the northeast each include wintering calves as an enterprise in the representative budget. However, the numbers presented here include only the cow-calf enterprise for each of them. The spreadsheet program also has a budget template that analyzes feeding cull cows prior to their sale.

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