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## Have You Considered Culling Pairs?

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# CORNHUSKER ECONOMICS

UNIVERSITY OF  
**Nebraska**  
Lincoln

December 5, 2007

University of Nebraska–Lincoln Extension

Institute of Agriculture & Natural Resources  
Department of Agricultural Economics  
<http://www.agecon.unl.edu/Cornhuskereconomics.html>

## Have You Considered Culling Pairs?

Market Report	Yr Ago	4 Wks Ago	11/30/07
<b><u>Livestock and Products,</u></b>			
<b><u>Weekly Average</u></b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$85.85	\$91.57	\$95.39
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.....	114.81	117.21	117.25
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.....	107.50	112.57	*
Choice Boxed Beef, 600-750 lb. Carcass.....	140.96	140.03	150.65
Western Corn Belt Base Hog Price Carcass, Negotiated.....	59.87	50.91	51.36
Feeder Pigs, National Direct 50 lbs, FOB.....	56.56	37.72	47.62
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	65.60	57.48	59.57
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct.....	*	91.25	90.13
National Carcass Lamb Cutout, FOB.....	254.73	265.02	263.47
<b><u>Crops,</u></b>			
<b><u>Daily Spot Prices</u></b>			
Wheat, No. 1, H.W. Imperial, bu.....	4.79	7.17	8.31
Corn, No. 2, Yellow Omaha, bu.....	3.39	3.53	3.74
Soybeans, No. 1, Yellow Omaha, bu.....	6.25	9.41	10.22
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	5.46	6.50	6.71
Oats, No. 2, Heavy Minneapolis, MN , bu.....	2.77	*	2.83
<b><u>Hay</u></b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	135.00	*	135.00
Alfalfa, Large Rounds, Good Platte Valley, ton.....	87.50	97.50	*
Grass Hay, Large Rounds, Good Northeast Nebraska, ton.....	82.50	*	85.00
* No market.			

Cow-calf producers, like many agricultural producers, make many current decisions that ultimately affect subsequent seasons' production and income. These decisions not only affect production quantity, but involve cash flow and resource allocation constraints. One of the most difficult and complicated choices ranchers face is the rate and timing of replacing and removing brood cows from the herd. This sentiment was reflected in the statement by B. E. Melton in his December, 1980 article in the *Western Journal of Agricultural Economics*, "Economics of Beef Cow Culling and Replacement Decisions Under Genetic Progress." He wrote, "Probably no single aspect of modern beef herd management is as complicated, or has potentially greater economic impact, as the cow culling and replacement decision."

Nebraska beef calf production is predominantly based on an early spring calving regime. This regime lends itself to late fall, November, cow culling. In the Sandhills, cows are typically brought in from summer range and separated from the seven month old calf. Cows, which have been exposed to breeding bulls starting sometime in May or June for 60 days, should be pregnant more than 90 days. Cows are then pregnancy checked. Those discovered to be open, not pregnant, as well as other problem cows, aged or otherwise non-desirable, are generally removed from the herd as culls.

Once the cows are removed from the herd, many producers simply haul them to the local auction market where they are sold. These cull cows may go directly to slaughter, feed yards for fattening, or be rebred and used in another part of the country. Interestingly, in one study more than 22 percent of the cows sold at a local auction as culls and presumed to be open were pregnant (South Dakota Beef Report CATTLE 93-20:101-107), indicating that either they were misdiagnosed, never pregnancy checked, or culled despite the pregnancy, with no thought by the seller of obtaining a premium available from their condition.

Many producers cull a certain number of cows annually, replacing cows that may remain productive for one or more seasons. This fact appears to be widely recognized by cattle buyers, who buy and assemble groups of pregnant cows which are then kept and resold as pairs, cows with a calf at their sides.

It seems apparent from the behavior of cattle buyers that the opportunity might exist for producers to capture the value of the



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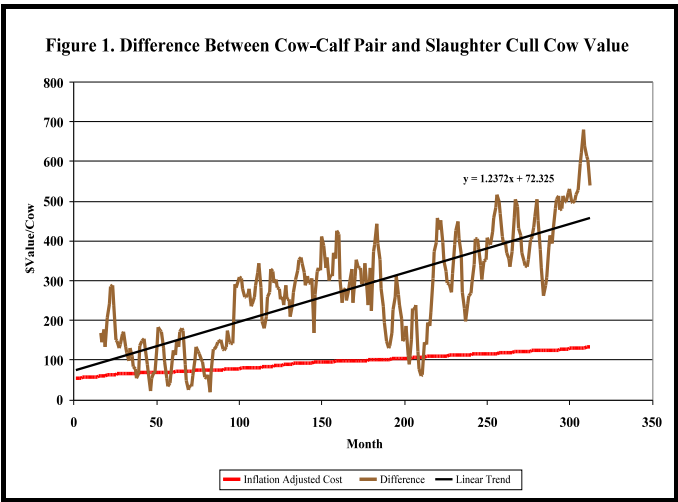
pregnant cows which are to be culled by retaining ownership until these animals could be sold as pairs.

Several facts support this idea for producers in Nebraska; the seasonal nature of the slaughter cow market, and the value difference between slaughter cows and pairs. Looking at the nominal monthly slaughter prices from August of 1979 to July of 2004 (as reported in *Crop and Livestock Prices for Nebraska Producers EC883* <http://www.ianrpubs.unl.edu/epublic/live/ec883/build/ec883.pdf>), the months of October, November, December and January account for 88 percent of the marketing year lows (Table 1), with November having the largest number of lows at 50 percent. This indicates that for 12 of the 24 market years, November monthly average slaughter cow prices were the lowest for that year. Again, looking at Table 1, the months of July and August captured 54 percent of the market years high, with February, March and April capturing 39 percent of the highs. These percentages emphasize how seasonal the cull cow market has traditionally been.

The difference between the seasonal minimum value and maximum value of an 1100 pound cull cow grading utility for the 24 market years studied averaged \$90.43, with a high of \$155.10 and a low of \$39.16.

The second factor to consider when determining when and how to sell pregnant cull cows, is the value difference between that of the cull cow as a slaughter animal compared to her value as a cow and calf pair. This price spread between cull animal value in the Nebraska markets in November and pair value in April as reported by Cattle-Fax, has widened over time (Figure 1). From November of 1996 to 2004 the nominal value difference between November's cull utility cow value verses April's pair values ranged from a low of \$404.22 to a high of \$517.28, with the 2006 market year difference of \$759.80. If it is assumed that retention of the pregnant cull cow cost \$150.00 (five months retention at a cost of \$30.00 per month), \$759.80 is more than adequate to cover the cost. However, as attractive as this appears, considerations should be made for risk, differences in added cost of retention and individual firms' limiting resources.

The prices used in this analysis are average prices, which indicate that the actual revenue received for an individual pair or cull animal may be higher or lower than the monthly average, depending on the location of the market and intermittent price variations. It should also be recognized that the value of the pair/cull animal may be less or more than average, depending on the quality of the individual pair/animal. Historical information shows that values differ from year to year, making it impossible to guarantee that the revenue gain will exceed the cost incurred in any given year.



Production risk should also be considered. There are some risks in transforming the single pregnant cow into a sellable pair. These risks include unretained pregnancies, complications resulting from parturition, death loss of the cow or calf as result of weather or disease, to name a few.

Other considerations include, but are not limited to, available feed and labor resources needed to maintain and care for the retained cows. A very small firm with only one or two retained cull cows may find that the extra trouble of keeping them may outweigh the benefit. It is important to remember your operation is unique, and what may work for others will not work for you. As with any change in management, careful thought and consideration should precede any change. But, given the magnitude of the difference in value, it may well be worth considering this as an option.

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**Table 1. Monthly Slaughter Cow Prices Ranked as Minimum or Maximum for the Marketing Year (August to July)**

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Minimum	8%	0%	4%	0%	0%	4%	8%	0%	0%	17%	50%	13%
Maximum	0%	13%	13%	13%	0%	8%	29%	25%	4%	0%	0%	0%