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Perspectives of Cow/Calf Producers in the Dakotas - Marketing Channel Selection

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PERSPECTIVES OF COW/ CALF PRODUCERS IN THE DAKOTAS – MARKETING CHANNEL SELECTION

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Collecting information on pricing alternatives for selling cattle and selecting a livestock marketing channel has always been an important component of a livestock producer's marketing plan. Of equal importance to others working in the livestock industry is determining how producers choose to market their livestock. This article looks at the livestock marketing preferences of cow/calf producers in North and South Dakota.

A survey questionnaire about perspectives on public price reporting, marketing channel selection and price discovery was sent to 814 cow/calf producers in North and South Dakota.[1] The questionnaire was mailed during the fall of 2005, and 199 completed surveys were returned, a response rate of 24.5 percent. All completed surveys were from the western parts of the Dakotas, commonly referred to as "West River."

Background

The cow/calf industry is the only segment of the beef industry that has not succumbed to the forces of increased market concentration and vertical integration. In 2005, there were approximately 770,000 beef cow operations in the United States and 85 percent of the beef cow inventory in the United States was located on beef cow operations of less than 500 head (USDA/NASS 2006). Market concentration is minimal in the cow/calf industry relative to the feedlot and packing industries. Agricultural economists believe the environmental requirements needed to efficiently operate a beef cow operation preclude the cow/calf industry from yielding to the forces of market concentration that have drastically reduced the number of producers in the poultry and pork industries. However, increased concentration in the feeding and packing industries has affected market behavior and market information sources upon which cow/calf producers depend for price discovery and the timing of marketing decisions.

What Others Have Found

Schmitz et al. (2003) reported that 60.8 percent of the nation's calf crop is sold through local auction barns. The residual is marketed via video auctions (11.4 percent), internet sales (5.1 percent), and private sales (22.7 percent). In the Dakotas, Schmitz et al. estimate 72.5 percent of the calf crop is sold via local auction barns. Private sales account for 15 percent in North Dakota and 20 percent in South Dakota. Video and internet sales account for 12.1 percent and 7.5 percent of total sales, respectively. The national study by Schmitz et al. suggests that calf sales in the United States are dominated by local auction markets. This implies that both public and private price reporting on local auction market activity with respect to price, volume, and quality is an important conduit for the transmission of market information to buyers and sellers participating in those local markets.

Schmitz et al. also provided a breakdown across marketing alternatives based on a simple weighted average by number of beef cow operations across

[1] Financial support for this study was provided by a Four State Ruminant Consortium grant, titled "Beef Production Systems that Enhance Profitability and Support Rural Economies."

15 states. Given that small operations dominate the national population of beef cow operations, and small scale operations prefer local auction markets when selling calves, the percentage of beef cow operations selecting local auction barns when selling calves increases to 65.8% for small producers.

Lawrence et al. (1996) also report on producer preference for marketing through the public auction channel. From a survey of Iowa producers who sell feeder cattle, Lawrence et al. report that 88.5 percent of producers indicate the most common method of marketing their animals is by public auction. Lawrence et al. describes Iowa's feeder cattle market as being dominated by small producers. The importance of the public auction marketing channel among small producers was also verified in a recent study of Louisiana cow/calf producers by Gillespie et al. (2004). They also find a positive relationship between size of operation and the use of private party sales and video auction.

Survey of Dakota Cow/Calf Producers

In our survey, we asked producers about their preferences among four alternative marketing channels. We developed two sets of questions concerning the marketing of feeder and stocker cattle; as it is not unusual for cow/calf producers in the Dakotas to sell light-weight weaned calves that need additional background feeding before placement in a feedlot. Animals sold as stockers for background feeding may be marketed differently than animals sold directly to feedlots. Specific questions or statements for cow/calf producers are listed in Box 1.

BOX 1: Likert Scale Questions on Market Selection

I sell my feeder cattle at a local auction market.
I sell my feeder cattle to a feedlot operator.
I sell my feeder cattle in a satellite auction market.
I sell my feeder cattle to an order buyer/dealer.

I sell my stocker cattle at a local auction market.
I sell my stocker cattle to another rancher.
I sell my stocker cattle in a satellite auction market.
I sell my stocker cattle to an order buyer/dealer.

The Likert scale is 1=always, 2= frequently, 3=occasionally, 4= rarely, and 5=never.

Producer responses to the questions in Box 1 indicated a strong preference for selling feeder and stocker cattle through the auction barn marketing channel. The majority of producers selling stocker cattle never use the other marketing channels listed in Box 1. The majority of producers selling feeders have never used a satellite auction service. Approximately half of the producers surveyed at least occasionally sell feeders to feedlots and order buyers. These results are consistent with the national survey, conducted by Schmitz et al.

The data collected in the survey also enable us to test a proposition proposed by Schmitz et al. They suggest that marketing channel selection by cow/calf producers is influenced by herd size. The link they develop is that as herd size increases, direct and indirect transaction cost for electronic marketing of livestock declines.[2] Schmitz et al. propose that small producers do not have calf lot sizes that are large enough to economically justify the use of non-traditional marketing channels. We tested this proposition using the survey data from questions relating to cow/calf producers' preferences for market channels. Because the data is ordinal in nature, a nonparametric correlation analysis was selected. Accordingly, we used the Spearman correlation procedure to test for association between herd size and preference for marketing channel for selling feeder (Table 1) and stocker cattle (Table 2).

The correlation analysis, presented in Tables 1 and 2, indicates that as herd size increases, producer preference for selling calves (feeders or stockers) through local auction markets decreases. The analysis also indicates that as herd size increases, a producer's propensity to sell calves (stockers or feeders) to either a private party or satellite auction increases.[3] The correlation results reveal an inverse association between producer preference for selling calves through a local auction and producer preference for selling via satellite or private party. These findings are

[2] Indirect cost is the cost associated with market size and the decline in price efficiency as markets thin. Direct marketing cost includes transportation and commission fees.
[3] The relationship between herd size and private sales was insignificant in the Schmitz et al. and Gillespie et al. papers.

consistent with the discussion by Schmitz et al. and lend support to their explanation of these relationships within the scope of "New Institutional Economics (NIE)." NIE refers to the relationship between market structure, transactions cost, and market behavior.

Table 1. Spearman Correlation Coefficients for Market Channel and Herd Size: Feeder Cattle[a]

	Herd Size	Auction	Order Buyer	Satellite Auction	Feedlot Operator
Herd Size	1.00	0.33*	-0.15*	-0.20*	-0.27*
Auction		1.00	-0.53*	-0.34*	-0.45*
Order Buyer			1.00	0.21*	0.46*
Satellite Auction				1.00	0.26*
Feedlot Operator					1.00

a. An asterisk indicates a correlation coefficient is significant at the 5% level. The sample had 189 observations.

Table 2. Spearman Correlation Coefficients for Market Channel and Herd Size: Stocker Cattle[a]

	Herd Size	Auction	Order Buyer	Satellite Auction	Rancher
Herd Size	1.00	0.32*	-0.15*	-0.18*	-0.04
Auction		1.00	-0.21*	-0.17*	-0.23*
Order Buyer			1.00	0.24*	0.26*
Satellite Auction				1.00	0.17*
Rancher					1.00

a. An asterisk indicates a correlation coefficient is significant at the 5% level. The sample had 189 observations.

Conclusion

The results of the survey indicate that producers in the western Dakotas strongly prefer to sell feeder and stocker cattle at local auctions rather than selling to a private party. However, there is a positive association between herd size and a producer's preference to sell to a private party. Evidently, as herd size increases the costs per head decrease with respect to selling directly to a feedlot, order buyer, or through satellite auctions making those options more favorable to producers. For further discussion please contact the SDSU Department of Economics and request Staff Paper 2006-1 (Fausti, et.al.).

References

Fausti S.W., B.A. Qasmi, D.G. Landblom, M. Beutler, P. Johnson, R. Gates, H. Patterson, and R. Salverson, "Public Price Reporting, Marketing Channel Selection, and Price Discovery: The Perspective of Cow/Calf Producers in the Dakotas." Staff Paper 2006-1, Department of Economics, South Dakota State University, (2006).

Gillespie, J., A. Basarir, and A. Schupp., " Beef Producer Choice in Cattle Marketing", *Journal of Agribusiness*, Vol. 22, No. 2 (Fall 2004): pp. 149-161.

Lawrence, J.D., J.A. Shaffer, and M. L. Hayenga., "Valuing Public Price Reporting: The Iowa Experience", *Journal of Agribusiness*, Vol. 14, No. 1 (Spring 1996): pp. 15-32.

Schmitz T.G., C.B. Moss, and A. Schmitz., "Marketing Channels Compete for U.S. Stocker Cattle", *Journal of Agribusiness*, Vol. 21, No. 2 (Fall 2003): pp. 131-148.

USDA/NASS, "Farms, Land in Farms, and Livestock Operations: 2005 Summary", Report No. Sp Sy 4, January 2006.

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