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## Perspectives of Cow/Calf Producers in the Dakotas on the Price Discovery Process

by

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### The Price Discovery Process

Price discovery is the process buyers and sellers use to estimate the bid and ask price before they enter into a market transaction. The price discovery process requires buyers and sellers to investigate current market conditions; such as volume, number of buyers and sellers in the market, and current market price being reported, etc. Price discovery allows market participants to estimate the current market price of cattle they are interested in buying or selling. Market price, on the other hand, is determined by supply and demand conditions. Market price determination and price discovery are related but different concepts. The price discovery behavior of Dakota cow/calf producers is the focus of our discussion.

This is the second in a series of articles on the marketing behavior of cow/calf producers in the Dakotas. We highlight results of a survey questionnaire sent to 814 cow/calf producers in North and South Dakota.

### What Others Have Found

Surprisingly, there has been little work on producer price discovery behavior. One interesting study, Lawrence et al. (1996), reported that when Iowa producers sell feeder calves to a private party, the information sources used by producers in the price discovery process are feeder cattle market price

(53 percent of respondents), fed cattle market price (39 percent of respondents), and feeder cattle futures market price (8 percent of respondents). With respect to auction market price reports, Lawrence et al. reported that 72 percent of Iowa producers surveyed consider auction market prices when making marketing decisions. When selling feeder cattle, 87 percent of Iowa producers indicate that auction market price reports were at least of moderate importance to the price discovery process for estimating the market price of their animals.

### Questions Asked of Dakota Producers

We asked Dakota producers their view on the reliability of market price information sources during their price discovery search process when marketing feeder and stocker cattle. They were then asked to rank from 1 to 8 the reliability of their sources of market information for price discovery (a ranking of 1 being the most reliable source and 8 the least). The respondents were asked to only rank information sources that they had used in the past. The sources of marketing information they were asked about included:

1. USDA price reports published by the Agricultural Marketing News Service.
2. Price reporting by local auction managers or reporters in a public medium (newspapers, radio, etc.).
3. Price reporting by fee based electronic data service (DTN, Cattle Fax, etc.).
4. Information from neighbors and friends.
5. Futures market.
6. Quotes from buyer.
7. Satellite auction market.
8. Other.

Of the 199 respondents who returned completed questionnaires, 191 answered this question. The structure of the question allows us to calculate the proportion of respondents that have used each of the information sources in the past as part of their price discovery process.

### Responses from Dakota Producers

The summary statistics in Table 1 reveal an interesting pattern of producer preferences across information sources used in the price discovery process. Local sources of price information are preferred to general sources of price information when producers engage in the price discovery process. With respect to usage, 98 percent of producers look to local auction market prices as reported in the local media as a source of information in their price discovery process. After local auction market information, producers look to local contacts (80 percent), and quotes from buyers (75 percent).

General sources of price information are less popular among Dakota cow/calf producers such as USDA market reports (73 percent) and fee based market information (65 percent). The exception is satellite auctions as a source of price information (78 percent).

Another producer perception issue is the reliability of an information source. Dakota producers again view local sources of market information as being more reliable than general sources of information as an input into their price discovery process. Table 1 provides the statistical measures of location (mode and median) for producer responses concerning the reliability of price discovery information sources. The location measures were used to generate an ordinal ranking of information sources. Survey respondents ranked auction market reports in local media outlets to be the most reliable source of information for price discovery, followed by

**Table 1. Information Sources for Feeder Cattle Price Discovery**

<u>Statistics<sup>a/</sup></u> Information Sources	No. & % of usage N=191	Usage Ranking	Reliability Ranking: Mode	Reliability Ranking: Median	Ordinal Reliability Rankings <sup>b</sup>
USDA Price Reports	N=138 (73%)	5	7	5	7
Public Medium Auction Reports	N=188 (98%)	1	1	1	1
Fee Based Info Sources	N=124 (65%)	7	5	5	5.5
Local Contacts	N=153 (80%)	2	2	3	2.5
Futures Markets	N=137 (72%)	6	5	5	5.5
Quotes from Buyers	N=143 (75%)	4	3	4	4
Satellite Auction Prices	N=148 (78%)	3	2	3	2.5
Other Source of Information	N=36 (18%)	8	8	7.5	8

- a. Statistical measures of location (mode and median) are based on the number of respondents who ranked a particular information source. A rank of 1 indicates the most reliable and a rank of 8 the least reliable.
- b. Ordinal rankings are based on median rank. In case of median rank ties, the ordinal rankings are based on mode rank.

local contacts and satellite auction prices. The source of information considered to be the least reliable was the “other sources,” followed by USDA price reports, fee based information sources, and futures markets. One interesting fact gleaned from the data is that with respect to usage, USDA price reports ranked higher than fee based or futures market, but fee based reports and futures market reports ranked higher than USDA price reports on the reliability scale; implying a “you get what you pay for” attitude.

The price discovery question was repeated for marketing stocker cattle. Of the 199 respondents who returned completed questionnaires, 148 answered this question. The analysis of producer responses is provided in Table 2. Producer preferences for information sources to facilitate the price discovery process when selling stocker cattle is very similar to the feeder cattle price discovery process reported. Local sources of information have a higher percentage of usage than general sources. The same

pattern also continues to hold when information sources are ranked based on reliability scores and whether each source is seen by producers as a whole to be more or less reliable on its own.

### Summary

These survey results on producer preference on price discovery information source alternatives add another dimension to the growing literature on cow/calf producer behavior. Our study clearly indicates that Dakota producers prefer local market information sources over more general market information sources. These findings suggest that the recent trend in public price reporting toward aggregate reports on market conditions in livestock markets and less coverage of local market conditions may be less desirable from the viewpoint of small producers, because they value local information sources over general information sources.

**Table 2. Information Sources for Stocker Cattle Price Discovery**

<u>Statistics<sup>a</sup>/</u> Information Sources	No. & % of usage N=148	Usage Ranking	Reliability Ranking: Mode	Reliability Ranking: Median	Ordinal Reliability Rankings <sup>b</sup>
USDA Price Reports	N=93 65%	6	4	5	7
Public Medium Auction Reports	N=144 99%	1	1	1	1
Fee Based Info Sources	N=88 61%	7	3	5	6
Local Contacts	N=113 78%	2	2	4	4
Futures Markets <sup>c</sup>	N=99 70%	4.5	3, 5	4	5
Quotes from Buyers	N=100 70%	3	3	3	3
Satellite Auction Prices	N=99 68%	4.5	2	3	2
Other Sources of Information	N=22 15%	8	8	8	8

- a. Statistical measures of location (mode and median) are based on the number of respondents who ranked a particular information source.
- b. Ordinal rankings are based on median rank. In case of median rank ties, ordinal rankings are based on mode rank.
- c. The futures market distribution is bimodal.

**Reference:**

Production Systems that Enhance Profitability and Support Rural Economies.”

Lawrence, J.D., J.A. Shaffer, and M. L. Hayenga.,  
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**2007 VALUE-ADDED CONFERENCE**

Please make plans to attend the **2007 South Dakota Value-Added Agriculture Conference**, set for **Tuesday, March 20, 2007**, in the **Days Inn** (formerly the Brookings Inn) in **Brookings** (at the intersection of I-29 Exit 132 and Highway 14).

This year, one of the topics will be “terroir” – linking high-quality products with a state or a region of the country in marketing the product. Afternoon breakout sessions will cover product branding, promotion, and marketing, and organic farming.

For further details contact Bill Gibbons 605-688-5499



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