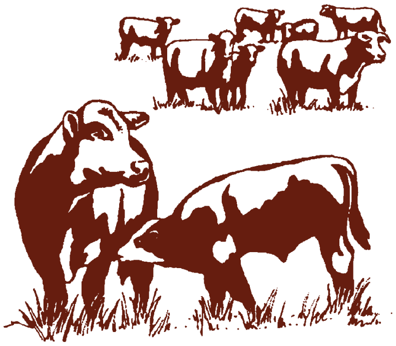

Beef Cattle Handbook

BCH-8510 Product of Extension Beef Cattle Resource Committee

Forward Marketing Fed Cattle: The Impact of Selected Market Conditions on Fed Cattle Prices

James Mintert, Ag Economist, Kansas State University
Martin Albright, Ag Economist, Kansas State University
Frank Brazle, Animal Scientist, Kansas State University
Ted Schroeder, Ag Economist, Kansas State University
Rodney Jones, Ag Economist, Kansas State University

A variety of factors can influence fed cattle transaction prices. Growth in forward contracting of fed cattle in recent years has led many cattle feeders to question the impact of forward contracting on fed cattle prices. The purpose of this Kansas State University study was to investigate the effects of various market conditions, including forward contracting, on fed cattle transaction prices in southwestern Kansas.

Results indicated fed cattle transaction prices were affected as market conditions varied. The percentage of Kansas steer and heifer processing that consisted of forward-contracted cattle during delivery week; the day of the week the cattle were sold; the number of bids received by each pen; the number of days between sale date and delivery and the distance from the feedyard to the packer all had an impact on fed cattle transaction prices(1). However, the impact of changes in these factors was generally small.

About the Study

Data was collected on 810 pens of steers (99,219 head) and 566 pens of heifers (67,119 head) marketed during May 21, 1990 through November 24, 1990, from 13 feedyards in southwestern Kansas. For each pen of cattle sold, a record was made of the feedyard's asking price, individual packer bids, sale date, transaction price, and cattle delivery date. Other data included: the number of days on feed; the packer that purchased the cattle; the feedyard and the distance from the feedyard to the buying packer; the number of bids made per pen; the day of the week the cattle were sold; and the number of days between the sale date and the packer delivery date. Daily live cattle futures prices were also employed to account for changes in expected wholesale beef prices.

Summary statistics of selected prices and market conditions are reported in Table 1. Average transaction prices were $77.32/cwt. for steers and $76.94/cwt. for heifers. Transaction prices averaged $0.16/cwt. and $0.18/cwt. below feedyards' asking prices for steers and heifers, respectively. The average number of cattle per pen was approximately 120 head. Prior to sale each pen received an average of 1.7 to 1.8 bids from packers with the number of bids ranging from 1 to 9. The number of days each pen was held after the sale date until delivery averaged between 4.4 (steers) and 5.4 (heifers) days with a range of 0 to 17 days.

The Effects of Market Conditions on Price

The price impacts of different market conditions were analyzed statistically across all pens of cattle (steers and heifers combined) in the study.

Several factors had significant effects on fed cattle transaction prices. The estimated premiums and discounts for each of these factors are reported in Table 2. Each reported premium or discount is the isolated effect on fed cattle transaction price from changing that specific factor while holding all other factors constant.

The percentage of Kansas' cattle processing delivered under forward contract to packers had a negative impact on cash-fed cattle transaction prices. A

Table 1. Summary Statistics of Prices and Selected Market Conditions for Fed Cattle in Western Kansas, May-November, 1990.

Variable	Average	Standard Deviation	Minimum Value	Maximum Value
Steers				
Transaction Price ($/cwt.)	77.32	1.86	72.50	82.00
Asking Price ($/cwt.)	77.48	1.84	72.50	82.00
Cattle per pen (hd)	122.5	62.8	29	792
Number of bids per pen	1.8	1.3	1	9
Number of days cattle were held after sale date	4.4	2.2	0	17
Heifers				
Transaction Price ($/cwt.)	76.94	1.91	71.00	82.00
Asking Price ($/cwt.)	77.12	1.85	72.00	82.00
Cattle per pen (hd)	118.7	61.6	23	780
Number of bids per pen	1.7	1.1	1	9
Number of days cattle were held after sale date	5.4	2.2	0	12

one percent increase in forward-contracted cattle shipments decreased the cash transaction price by $0.026 cwt. as reported in Table 2. Through forward contracting, packers were able to increase their control over a portion of supply, which, on average, led to a slightly lower cash market price. However, the impact of forward contracting on the total market for processed cattle remains unresolved because no information was available on forward contract prices.

Approximately 70 percent of the pens in this study were sold on Monday or Tuesday. Cattle marketed early in the week received $0.31/cwt. to $0.49/cwt. higher prices, relative to live cattle futures prices, than cattle sold later in the week. This means that fed cattle basis (where basis equals cash transaction price minus the nearby live cattle futures price) was weakening as the week progressed. For example, cattle marketed on Thursday received an average of $0.37/cwt. weaker basis than cattle sold on Monday, as seen in Table 2. Stronger demand early in the week, and feedyard managers lowering asking prices late in the week to keep showlists current, may account for the downward pressure on basis.

The number of bids received on each pen during the week of sale had a positive impact on transaction prices. Each additional bid increased fed cattle transaction prices by $0.07/cwt. due to the increased competition for the cattle. However, over 60 percent of the pens in this study were sold on the first bid.

The number of days between the sale date and delivery to the packer also had a small positive impact on fed cattle transaction prices. Each additional day cattle remained on feed after being sold resulted in a $0.01/cwt. price increase. This reflects packers' apparent willingness to pay for the right to take delivery at a later date. Finally, distance from the packer to the feedyard had a modest negative impact on transaction price. Fed cattle price declined by approximately $0.0013/cwt. for each additional mile from the feedyard to the packer, reflecting transportation costs of shipping cattle (Figure 1).

Table 2. Premiums and Discounts Associated with Various Market Conditions and Pen Traits in Western Kansas, May-November, 1990.

Pen trait	Estimated Fed Price Impact ($/cwt.)
Forward contracted or formula priced	-0.026
Day of the week cattle were sold:	
Monday	Base
Tuesday	-0.04
Wednesday	-0.31
Thursday	-0.37
Friday	-0.49
Additional Bid	+0.07
Additional day between sale and delivery	+0.01
Distance from feedyard to packer	-0.0013

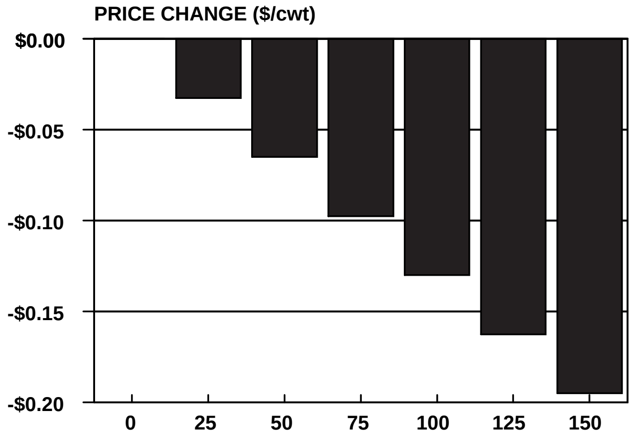

Figure 1. Estimated Fed Cattle Price Changes Associated with Distance from Feedyard to Buying Packer.

Conclusions

Fed cattle transaction prices change as market conditions vary. Information collected on over 160,000 head of cattle marketed in May through November of 1990 in southwestern Kansas indicated cattle sold earlier in the week received higher prices relative to live cattle futures prices, than cattle sold late in the week; and that pens of cattle receiving more bids tended to receive higher prices. Additionally, increasing the number of days between sale date and cattle delivery resulted in higher sale prices, whereas increasing the distance from the feedyard to the buying packer reduced fed cattle transaction prices. Finally, increases in the percentage of Kansas cattle processing delivered under forward contract had a small negative impact on cash fed cattle prices. However, the actual reduction in per head revenues attributable to increases in forward contracting was quite small.

Cattle feeders can use the information from this study in several ways. First, consider marketing cattle early in the week. Cattle feeders will generally find that marketing cattle early in the week is preferable to making sales late in the week, when basis tends to be weaker. Second, attracting additional bids on cattle ready for sale can improve competition and improve the final sale price. However, if securing additional bids pushes the sale date into the latter part of the week, the negative effect of selling cattle late in the week can outweigh the expected gain from additional bids. Finally, although increases in the level of forward contracting had a small negative impact on cash fed cattle prices, the cash price impact does not appear to be large enough to warrant changing cash cattle-sales management practices.

References

1. Schroeder, T.C., R. Jones, J. Mintert, and A. Barkley. 1993. “The Impact of Forward Contracting on Fed Cattle Transaction Prices.” *Review of Agricultural Economics*, 15:325-337.

Authors:
James Mintert, Ag Economist, Kansas State University
Martin Albright, Ag Economist, Kansas State University
Frank Brazle, Animal Scientist, Kansas State University
Ted Schroeder, Ag Economist, Kansas State University
Rodney Jones, Ag Economist, Kansas State University

This publication was prepared in cooperation with the Extension Beef Cattle Resource Committee and its member states and produced in an electronic format by the University of Wisconsin-Extension, Cooperative Extension. Issued in furtherance of Cooperative Extension work, ACTS of May 8 and June 30, 1914.

BCH-8510 Forward Marketing Fed Cattle: The Impact of Selected Market Conditions on Fed Cattle Prices