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Abstract

Pricing fed cattle on a value-based quality and yield grade grid provides the best opportunity for cattle producers to receive premiums associated with high quality cattle. However, grid discounts for cattle not desired by the particular packer are often quite substantial. Thus, cattle producers targeting cattle for specific grids need to have considerable knowledge regarding the quality attributes of their cattle. This study compared pricing of 202 pens of fed cattle on a live basis, a carcass (dressed) basis, and using four different packer grids. Results indicate that no single pricing method is optimal for all cattle. Producers need to know the quality of cattle they have, be willing and able to sort those cattle, and compare the various selling options and grids before deciding upon the pricing method that generates the highest revenue.

Keywords

Kansas Agricultural Experiment Station contribution; no. 97-309-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 804; Cattlemen's Day, 1998; Beef; Grid pricing; Value-based pricing; Fed cattle prices

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GRID PRICING OF FED CATTLE

*T. C. Schroeder*¹

Summary

Pricing fed cattle on a value-based quality and yield grade grid provides the best opportunity for cattle producers to receive premiums associated with high quality cattle. However, grid discounts for cattle not desired by the particular packer are often quite substantial. Thus, cattle producers targeting cattle for specific grids need to have considerable knowledge regarding the quality attributes of their cattle. This study compared pricing of 202 pens of fed cattle on a live basis, a carcass (dressed) basis, and using four different packer grids. Results indicate that no single pricing method is optimal for all cattle. Producers need to know the quality of cattle they have, be willing and able to sort those cattle, and compare the various selling options and grids before deciding upon the pricing method that generates the highest revenue.

(Key Words: Grid Pricing, Value-Based Pricing, Fed Cattle Prices.)

Introduction

Value-based marketing refers to pricing cattle on an individual animal basis with prices differing according to the underlying value of beef and by-products produced from each animal. Achieving value-based marketing of fed cattle has been difficult. Incentives to sell cattle on averages and problems asso-

ciated with identifying beef quality have inhibited development of value-based pricing. Recently, several value-based, fed cattle, pricing systems have become more prominent, including formula pricing, price grids, and alliances. Is there one "best" pricing method? How are live weight, dressed weight, and grid or formula prices related? The purpose of this report is to assist producers in evaluating which form of fed cattle pricing may be most profitable for them.

Should you market your cattle on a carcass merit basis? If so, does it matter which pricing system or packer you sell to? The answer to both questions is, "it depends." It depends on several things, but the most critical factors that influence the profitability of these decisions include: 1) the quality grade, yield grade, and dressing percent of the cattle you produce; 2) the price spread between Choice and Select; 3) the particular packer or alliance premium/discount price grid for which you target your cattle; 4) production and feeding cost differences associated with targeting your cattle to a particular price grid or packer; and 5) most importantly, your knowledge about the price/quality distribution of your cattle.

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Experimental Procedures

To compare price grids across packers, grids were obtained from four different Mid-western packers during the week of July 8, 1997. To evaluate how these grids compared with live and dressed basis pricing, 202 pens of fed steers were priced under each of the four packers grids, as well as live and dressed prices. The live and dressed cattle prices were quotes for Wednesday November 6, 1997 from the five-region daily weighted average reported by the USDA. The prices were as follows: \$68.65/cwt for 80-100% Choice live steers; \$68.07/cwt for 65-80% Choice live steers; \$67.00/cwt for 35-65% Choice live steers; \$109.28 for 80-100% Choice dressed steers; \$108.12/cwt for 35-80% Choice dressed steers.

Steers in the 202 pens were predominantly English and English-Exotic cross breeds. The cattle had varied quality, with pens ranging from largely Choice and higher to largely Select and lower. Hot yield dressing percentage averaged from as high as 65.6% to as low as 61.2% with an overall average of 63.8%. Under assumptions that the four packers used a \$109.28/cwt Choice yield grade 3 base price and the Choice to Select price spread was \$6.25/cwt, the average revenue per head was calculated for live basis, dressed basis, and each of the four grids.

Results and Discussion

Most packer grids are based price on a Choice, yield grade 3, 550-950 lb, steer carcass. An example of a typical price grid offered by beef packers is presented in Table 1. The price received for each carcass is the base price plus the particular premiums and discounts. For example, assume a Choice yield grade 3, 550-950 lb carcass would

receive the base price of \$105/cwt. A Select yield grade 4 carcass would receive a price of \$78.75/cwt ($\$105.00/\text{cwt} - \$26.25/\text{cwt}$).

The USDA reports a weekly survey summarizing seven beef packer, grid, premium and discount schedules in the publication NW LS195 *National Carcass Premiums and Discounts for Slaughter Steers and Heifers*. This report is available and updated weekly on the internet at http://www.ams.usda.gov/mncs/mn_reports/NW_LS195.txt.

The average revenues per head under the alternative selling methods are reported in Table 2. Given the prices and spreads used in this simulation, live pricing had the lowest overall mean revenue per head, and dressed pricing had the highest average price.

The implied dressing percentage between the live price (\$68.65/cwt) and the dressed price (\$109.28/cwt) is 62.8% ($((68.65/109.28) \times 100)$). This suggests that cattle with a dressing percentage greater than 62.8% will net a higher revenue per head when sold on a dressed basis than live basis. Depending upon the distribution of the remaining quality traits, and the particular packer grid, selling on a grid can result in higher or lower revenue than either live or dressed pricing. Although the average revenues across all 202 pens were a little lower with the grids than with dressed selling, some pens received higher prices when sold using a grid.

Overall, 2.5% of the pens would have had the highest price by being sold on a live basis, whereas 58.9% would have secured the highest price when sold on a dressed basis (Table 2). The remaining 38.6% would have received the highest price if sold using a grid. This is an important result because it indicates that there is no single best pricing

method. Which method results in the highest price depends upon the type of cattle. In addition, only two of the individual packer grids (among four) had any pens in which that bid resulted in the highest price. Of course, this result would change as premiums and discounts for specific traits change or base prices differ. For pens in which live price resulted in the highest revenue, this was the best pricing method on average by \$8/head or more compared to the others. However, for pens in which dressed pricing resulted in the highest price, on average, it was best by \$15/head or more. For pens in which grid pricing was best, this method was

considerably better than live pricing but similar to dressed pricing.

Pens that received the highest price on a live basis were those with the lowest average dressing percentage. Quality traits were less important in distinguishing between live and dressed or grid net revenues. In fact, pens receiving the highest price on a live basis were on average 69% Choice or higher quality grade compared to 57% for cattle in which dressed pricing resulted in the highest price. Cattle that received the highest price under packer grids tended to have a lot of yield grade 3 or better and Choice and CAB (Certified Angus Beef) type cattle.

Table 1. Example Premium and Discount Schedule for Grid Pricing^a

Quality Grade	Yield Grade				
	1	2	3	4	5
	(Carcass \$/cwt)				
Prime	8.00	7.00	6.00	-14.00	-19.00
CAB	3.00	2.00	1.00		
Choice	2.00	1.00	Base	-20.00	-25.00
Select	-4.25	-5.25	-6.25	-26.25	-31.25
Standard	-24.50	-25.50	-26.50	-46.50	-51.50
Dark cutters, stags, etc.		-20.00			
Greater than 950 lb.		-25.00			
Less than 550 lb.		-25.00			

^aPremiums and discounts are all adjustments to the Choice, Yield Grade 3 base price.

Table 2. Comparison of Average Revenues per Head for Various Pricing Methods

Selling Method	Overall	Pricing Method Offering Highest Revenue			
		Live	Dressed	Packer 1 Grid	Packer 2 Grid
		Average Revenue (\$/head)			
Live	841.73	834.31	854.90	816.96	840.62
Dressed	862.22	826.34	880.50	830.55	858.46
Packer 1 Grid	856.10	825.84	865.69	839.35	857.97
Packer 2 Grid	856.14	824.71	867.87	834.36	861.40
Packer 3 Grid	846.17	817.21	856.21	829.84	843.02
Packer 4 Grid	850.46	820.07	863.32	827.83	850.55
Pens (number)	202	5	119	61	17
Pens (% of 202)	100	2.5	58.9	30.2	8.4