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ECONOMICS COMMENTATOR

SOUTH DAKOTA STATE UNIVERSITY

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INTRODUCTION TO VALUE BASED MARKETING FOR FED CATTLE



by

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The issue of improving beef's competitiveness against other domestic meat products and foreign imports has been discussed widely by groups associated with the beef industry. One possible strategy that has been considered seriously is a Value Based Marketing System (VBMS) for finished cattle beyond dressed weight & grade. This strategy is articulated in the Value Based Marketing Task Force final report (1990), published by the National Cattlemen's Beef Association (NCBA). Based on findings in the report, the task force gave a strong recommendation for the development of a new marketing system (application of discounts and premiums beyond dressed weight & grade). The system would be designed to encourage producers to raise leaner cattle that still will grade USDA low choice or higher. In turn, leaner cattle will reduce revenue loss due to fat (estimated at \$2 billion per year) and increase consumption of leaner beef by fat conscious consumers.

The NCBA support for the value based marketing concept is due to the perceived failure of the current cash marketing system to transfer information on consumer preference, through price, to the producer. The NCBA report and recent articles in the animal science literature clearly implicate current cash marketing alternatives for fed cattle as a major obstacle to improving beef's competitive position in the domestic market. This view is articulated in the NCBA report
(Continued on p.2)

HAY PRICES EXPECTED TO HOLD INTO EARLY SUMMER



by

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Hay prices in the upper Midwest should remain strong into early summer as a result of the smallest carry-out in the area since 1989, winter kill, and a cold, late spring. Cold weather is retarding pasture and hay growth, forcing the feeding of hay later into the spring than normal. So far this spring, growing degrees are behind normal at every reporting station in South Dakota.

Ending Hay Stocks Down

U.S. hay stocks of all hay on May 1, 1997 totaled 17.4 million tons, down 16% compared to May 1, 1996. This is the lowest ending inventory since 1970. The low ending inventory can be attributed, in part, to a smaller hay harvest in 1996 and to a long and very harsh winter. The smaller hay harvest in 1996 caused the hay inventory in December 1996 to be down 3.9% compared to a year earlier. The long, cold winter forced the feeding of more hay per day for a longer period of time.

In the upper Midwest, the ending hay inventory on May 1, 1997 totaled 8.537 million tons, down 31.2% from May 1, 1995. This is the smallest ending inventory for the area since May 1989 when it totaled 7.911 million tons.

The December 1 inventory for 1996 was 51.743 million tons, down 4% from December 1995, but up
(Continued on p.3)

(Consensus point 7): "Fed cattle should be valued on an individual carcass basis rather than an average live price." Proponents of a new VBMS argue that the current multiple alternative cash marketing system for fed cattle (live; dressed weight; dressed weight & grade) is a barrier to the transmission of consumer preferences for a particular type of beef product to the fed cattle producer. The barrier arises because cattle are sold on a lot basis, and this implies that above-average cattle in the lot are paid less than their market value and below-average cattle in the lot are paid more than their market value. Thus, it is argued that the price discovery mechanism fails because information to the producer on individual animal market value is not provided or is distorted.

The Concept of VBM

Currently, the USDA beef grading system is two dimensional: quality grade and yield grade. Carcass quality grades of finished cattle are divided into four categories: *prime*, *choice*, *select*, and *standard*, determined by animal maturity and degree of marbling (percentage fat content). Marbling is the primary factor determining quality grade: the higher the intramuscular fat content, the higher the quality grade. Carcass yield grades of finished cattle are divided into five categories:

yield grade 1 to yield grade 5. Yield grade refers to the percentage of the carcass suitable for boneless retail cuts. The higher the percentage, the lower the numeric value assigned as the yield grade.

In the cash market for fed cattle, the dressed weight & grade system is the only widely used value based system. Under the current grading system, there are 20 possible outcomes for a particular animal's grade (see Table 1). The dressed weight & grade base price, premiums, and discounts were estimated from data collected from the USDA Agricultural Marketing Service.

Table 1. Dressed Weight and Grade System

Quality Grade	Yield Grade				
	1	2	3	4	5
Prime	110	110	110	87.50	87.50
Choice	110	110	110	87.50	87.50
Select	106	106	106	83.50	83.50
Standard	100	100	100	77.50	77.50

When cattle are marketed under the dressed weight & grade system, packers set a base price. That base price is determined by market forces for cattle that meet minimum yield and quality grades. In South Dakota, the

Table 2. Prices from AMS Grid System

QUALITY GRADE	YIELD GRADE							CARCASS WEIGHT
	Less than YG 2.0	Equal to or Greater than YG 2.0	Greater than YG 2.5	Greater than YG 3.0	Greater than YG 3.5	Greater than YG 4.0	Greater than YG 5.0	
Prime	\$119	\$118	\$117	\$116	\$115	\$ 95	\$ 90	Less than 900 lbs.
Choice	\$114	\$113	\$112	\$111	\$110	\$ 90	\$ 85	
Select	\$110	\$109	\$108	\$107	\$106	\$ 86	\$ 81	
Standard	\$104	\$103	\$102	\$101	\$100	\$ 80	\$ 75	
Choice	\$111	\$110	\$109	\$108	\$107	\$ 87	\$ 82	900-950 lbs.
Select	\$107	\$106	\$105	\$104	\$103	\$ 83	\$ 78	
Standard	\$101	\$100	\$ 99	\$ 98	\$ 97	\$ 77	\$ 72	
Choice	\$ 96	\$ 95	\$ 94	\$ 93	\$ 92	\$ 72	\$ 67	Greater than 950 lbs.
Select	\$ 92	\$ 91	\$ 90	\$ 89	\$ 88	\$ 68	\$ 63	
Standard	\$ 86	\$ 85	\$ 84	\$ 83	\$ 82	\$ 62	\$ 57	

base price is calculated by adding approximately half the choice-select price spread to the Nebraska hot carcass weight price.

Table 1 reflects the assumption that in the cash market for finished cattle, the minimum standard for receiving the base price is quality grade *choice* and yield grade 3 when animals are sold dressed weight & grade. For all practical purposes, all animals that meet the minimum grade receive the base price and no premium is given when animals exceed the minimum.¹ For those animals that fail to meet the minimum, discounts are applied. For a majority of animals marketed dressed weight & grade, the system is a value based system of discounts only. This particular characteristic of the dressed weight & grade system is considered a serious deficiency by many producers.

The explicit goal of the VBM initiative is to develop a marketing system that incorporates a greater range of premiums and discounts than what currently exists under the dressed weight & grade system. There have been several designs proposed, commonly referred to as grid systems.² The grid system discussed here is three-dimensional and was developed by the Agricultural Marketing Service (AMS 1996) division of the USDA.³ The proposed AMS grid system is based on the current grid system used in the hog industry. This proposed system expands the yield categories from five under the dressed weight & grade system to seven. It also adds an additional dimension: weight class, divided into three weight class categories.

An example of the AMS grid pricing system is presented in Table 2. The base price of the AMS grid system is set at \$110.00 (consistent with Table 1). Premiums and discounts are incorporated according to an animal's yield, quality, and weight classification. There are 70 possible outcomes for a particular animal's grid rating, as shown in Table 2.

In comparing Table 1 to Table 2, it is clear that the AMS system differentiates with respect to price to a much greater degree than the dressed weight & grade system. For those producers who produce above average cattle, marketing their animals on a grid pricing system will increase their revenues relative to the other cash marketing alternatives. However, for those producers who produce below average cattle, marketing their animals on a grid pricing system will decrease their revenues relative to the other cash marketing alternatives.

In the next issue of the Economics Commentator, a comparative revenue analysis between the AMS grid pricing system and the dressed weight & grade pricing

system using SDSU slaughter data will be discussed.

Footnotes:

¹ In Table 1, the base price is set at \$110.00. This base price was arbitrarily selected for this example. There are exceptions to this rule of thumb. Some packers will negotiate with producers to incorporate premiums into a formula-based sales agreement. However, it is not common practice.

² At the present time, grid pricing arrangements are being offered to slaughter cattle suppliers by Beef America, Monfort, and Excel Co. The common link between these systems is the addition of premiums and a disaggregation of the discounts as compared to the dressed weight & grade system. However, there is no industry standard in place at this time.

³ Currently, the AMS is publishing grid pricing information on a weekly basis. The AMS reports the price range and the average price for packer discounts and premiums. The grid pricing data is collected from seven packers.

(Hay Prices cont'd from p.1)

3.1% from December 1994. The difference between the December 1996 and May 1997 inventory numbers implies that 43.206 million tons of hay were consumed in the region. This is the largest use since the winter of 1986-87 when 47.533 million tons were fed. (That winter there were 680,000 more head of cattle in the region.) Comparing hay fed with cattle inventory numbers on the first of January, 1.06 tons per head were fed this winter. This is the heaviest feeding since 1987 when 1.15 tons were fed. This year's use of hay would have been higher but continued drifting snow prevented many livestock owners from getting feed to animals. Also, large numbers of livestock perished in the blizzards that occurred after the first of the year.

Looking at South Dakota numbers, ending stocks on May 1 totaled 1.570 million tons, down 49% from 1996 and the smallest carry-out since 1990 when only 1.287 million tons were left. Nevertheless, South Dakota had the largest carry-out of any state in the nation. It also started the winter feeding period with more hay--8.530 million tons--than any other state. This was down 4.8% from December 1995 but up 14% from December 1994.

Early Intentions

The USDA planting intentions report released in March indicated farmers in South Dakota, North Dakota, Nebraska, Iowa and Wisconsin planned to hold hay acreage constant with last year. Minnesota intended to increase acreage 1%; Missouri, 5%; and Kansas, 10%. But, winter kill in the area will reduce the actual amount from intentions, at least until the new seeding is in production.



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It looks like producers growing for the cash market should strongly consider selling their first cutting from the field as soon as harvested. The demand is strong, and prices are good and should remain so into early summer. About the only negative aspect for sellers is the declining price of milk which will limit the amount that dairy farmers can afford to pay. If weather improves, holding later cuttings for sale next fall and winter may be considered if good storage is available and production conditions become more favorable.

Conclusion

Grass hay prices are remaining strong as well. Premium grass in small square bales is in the \$100 to \$150 per ton range, and large rounds are between \$95 to \$130 per ton. There seems to be a good supply of grass hay in large round bales with prices between \$52 and \$90 per ton.

Current Market Movement

As a result of the winter kill and slow spring, alfalfa prices at the Rock Valley Hay Auction moved up \$5 to \$10 per ton in early May after leveling off in April. Premium alfalfa is in the \$130 to \$190 per ton range for small square bales and \$112 to \$135 for large round bales. Good alfalfa is between \$110 to \$135 for small square bales and \$62 to \$105 for large round bales.

There was severe winter kill of alfalfa in the southeastern part of South Dakota. One estimate puts alfalfa winter kill at 30% to 40% for southeast South Dakota, southwest Minnesota, northwest Iowa and northeast Nebraska. Only about one-third of the alfalfa survived the winter in the Gayville-Meckling area. In some places the mortality rate was 80% to 90%. Much of the alfalfa looked good at the end of March, but the April blizzard and single digit temperatures were more than the plants could take. As a result, both new and old stands perished. Farther north in South Dakota, alfalfa survived much better. Heavy snow on top of ice last fall allowed the ice to melt and avoid suffocation of the plants. The snow was late in melting, so plants were dormant when the weather turned cold in April. However, continued cool weather is retarding spring growth. With the good moisture, a good warm up in the weather could promote rapid alfalfa growth and good yields in east central and northeast South Dakota.

Winter Kill