The Strategic Marketing Institute
Working Paper

Some Alternative Marketing Strategies for Beef Producers

William A. Knudson

1-0904
September 2004

MSU
Product Center for Agriculture and Natural Resources
Room 80 Agriculture Hall, Michgan State University, East Lansing, MI 48824 (517) 432-4608

Envisioning, exploring and enpowering a profitable future for businesses and industries engaged in Michigan's agricultural, food and natural resource systems.

Introduction

In many respects the beef market is in a good position. Prices are relatively high and demand is strong. However, despite positive market fundamentals, beef producers in Michigan face serious difficulties. Access to slaughter facilities is constrained compared to other parts of the country. The fact that Michigan is comprised of two peninsulas increases transportation costs relative to other locations. As a result of these and other conditions there has been some interest expressed in alternative marketing strategies for cattle producers.

One aspect of developing an effective marketing strategy is determining what, if any, value added activities a cattle producer or group of cattle producers can undertake. Given the geographic location and the size of producers in the Michigan, competing on a cost basis will be difficult, if not impossible. A marketing strategy that focuses on providing product attributes that buyers will be willing to pay a premium for has more potential. In order to successfully carry out an effective marketing strategy, it is likely that the management practices of producers will have to change.

This paper provides a market analysis for smaller scale beef producers, particularly producers that may be interested in forming a cooperative or other type of marketing arrangement. This paper will look at several aspects of the beef market. It will analyze the current state of the beef industry. It will also analyze the consumer tastes and preferences, including those product attributes that consumers may be willing to pay a premium for. The state of the processing market will be discussed including the market for branded beef sold at the retail level. Another issue that will be analyzed is the profit potential for retained ownership of cattle. This includes finding a market for cattle and a firm willing to process cattle. Finally, the potential for profitably selling cattle on a grid will be analyzed; this includes the effective timing of selling cattle.

The Current State of the Beef Industry

As previously noted, the beef industry is in a good position to grow. Demand for beef products is strong. The interest in low carbohydrate diets has increased the demand for beef. Beef no longer has the negative connotations of being unhealthy that it once did (USDA, p.5). Also, the BSE cases in Canada, and the resulting closure of the U.S. border to Canadian cattle has reduced the supply of cattle in the U.S. which has put upward pressure on prices. It has been estimated that the closure of the U.S. border to Canadian cattle has increased the price of cattle by $7 to $8 a hundredweight (cwt.) (Sparks, p.6).

The boxed beef price in mid-April was $160 a cwt. The Choice/Select spread was about $20 a cwt (USDA, p.2). These prices are also reflected in the prices of live cattle. In April of 2004, prices for choice Texas steers was $85 a cwt., an increase of 7.6 percent from April of 2003 (USDA, p. 14). These high prices are likely to continue for the next few years as cattle breeding stock slowing increases.

While prices for cattle are relatively high, so is the cost of some types of feed. In fact the drought in several large cattle producing states has acted to restrict the supply of cattle. Forages are either not available or are of poor quality in several Western states. Other feed costs are beginning to decline. As a result of record harvests of corn and soybeans, the price of soybeans has declined by more than 50 percent from highs last spring, and corn prices have declined by more than 33 percent from the spring (Fitzgerald). The price of feed is an important consideration for producers interested in retaining ownership of their cattle and feeding them out. This is particularly the case for producers in feed deficit areas.

Consumer Tastes and Preferences

General Background

An important factor to remember when dealing with consumers is the difference between a product and a commodity. A product includes a number of distinguishing attributes that consumers may or may not be willing to pay a premium for. A critical aspect of a product is differentiation. In the eyes of a consumer, a product has something that is unique about it. This is very different from a commodity which is a good or service that in the mind of the consumer is identical no matter who the producer is. In the long run, a producer of a commodity can only be successful if he or she is the low cost producer of that commodity. In product markets, long term success arises from product uniqueness that is valued by the consumer.

As previously noted, there has been a change in consumer tastes and preferences towards beef. While this has a positive impact on the beef market in total, individual producers and cooperatives may be able to position their product to take advantage of selling their beef at a price premium by offering differentiated product characteristics that consumers desire.

An important relationship that producers interested in providing value added products need to consider is that between product characteristics and income. It has been hypothesized that as income increases the demand for high-quality products increases (Antle, p. 995). High-quality products could include those with any number of attributes, freshness, nutritional content, humane production practices, etc. Professor David

Hughes at the Imperial College of London has developed a generic hierarchy of consumer preferences. This hierarchy is shown below in figure 1. The pyramid is based on Maslow's hierarchy of needs. In this context, as a general rule, as affluence increases consumer demands become more refined. However, there may be a group of consumers that while being less affluent are willing to trade up for those products that have particular appeal to them. At the most basic level, consumers want food that preserves life. Taste and convenience are particularly important attributes to American consumers, but other attributes such as food items that improve health are becoming increasingly important.

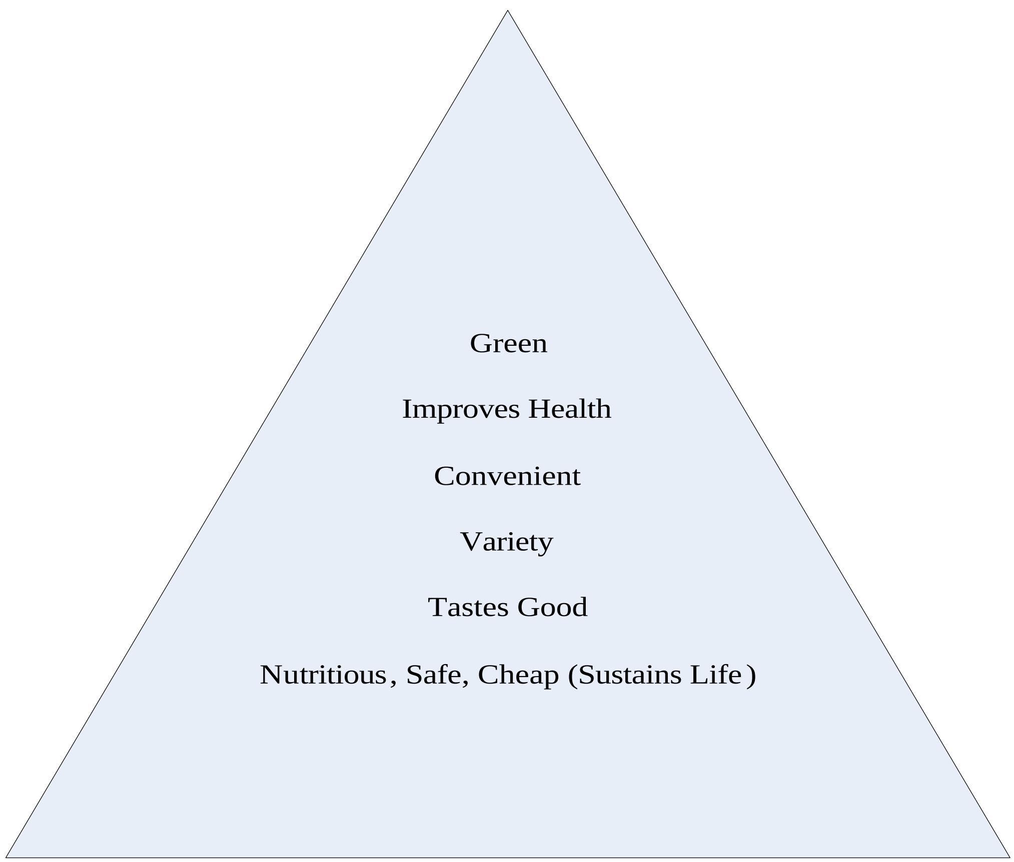

Figure 1: Hierarchy of Consumer Preferences (From Hughes)

It should be noted that as you move up the pyramid the size of the market segments gets smaller. However, as a general rule, affluence of the markets segments increases. This implies that a small group of producers that meets the needs of a small, demanding, affluent group of consumers can be very profitable.

Consumers in the U.S. have come to expect nutritious, safe and cheap as a given. It is expected that all food products possess these attributes. As a result, it is not possible to sell a product at a price premium if the product only possesses these attributes. Consumers expect more. Marketing on taste may be difficult as well. Government grades are used by customers to determine the taste characteristics of the product. In order to be successful, good taste needs to be combined with other attributes.

Two of these attributes could be variety and convenience. Some large beef processors are developing new products such as heat-and-eat roasts, meatloaves and other products (Mintel, p. 5). For example both ConAgra and Tyson sell a heat-and-eat pot roast that takes approximately 8 minutes to cook in a microwave (Mintel, p. 10). The growth in ethnic foods, such as Mexican heat-and-eat beef burritos, also provide examples of beef products that provide variety and convenience.

Two other factors also affect the drive for convenience. The first is the growth of two income households. Two earner households often do not have enough time to prepare meals. As a result, the demand for foods that require little or no preparation increases. Most people who live by themselves also prefer foods that require little or no preparation. Household size in the U.S has been declining since 1980 (Mintel, p. 10). This trend is likely to continue as the children of the baby-boom generation leave home, and the baby-boomers themselves begin to retire. The good news for firms interested in developing easy to prepare beef dishes is that consumers are willing to pay for added variety and convenience. One reason for this is that the baby-boom generation is the most affluent age group in the U.S.

There is also a group of consumers that see food as more than just maintaining their health but actually improving it. The interest in low carbohydrate diets is a driving force in the increased demand for meat products including beef. There is an increased interest as well in food that is free of hormones and antibiotics. According to Mint*e*l, 59 percent of consumers surveyed were concerned or very concerned about antibiotics or hormones in meat (Mint*e*l, p. 13) and 51 percent try to buy lower-fat, organic or hormone-free products (Mint*e*l, p. 67).

The interest in organic food also points to the interest some consumers have in purchasing goods that minimize adverse environmental impacts. This includes products that use little if any pesticides, range fed animals, and in a related topic, animals that are treated humanely. An example would be free-range chickens, and range fed cattle. These product attributes are preferred by consumers at the top of the pyramid. Small in number but able and perhaps willing to pay to have their preferences satisfied.

Specifics for the Beef Industry

A major question that beef producers must ask themselves when developing new products and markets is what specific product attributes do consumers want? It appears that price has become less important as a determinant of what consumers will buy (Hui *et al*., p. 636). Hui *et al.* conducted a survey of 1,002 households in Louisiana and Texas in 1993. Consumers in this study ranked the following attributes in order: freshness, taste, appearance, USDA label, no chemical additives, tenderness, low in fat, low in sodium, low in cholesterol and price (Hui *et al*., p. 640). This survey included all meat products not just beef. It is interesting to note that price ranked last in the list of attributes. Taste and attributes related to taste had the highest rankings, followed by health concerns.

A similar survey of 1,400 consumers living in Colorado, Utah and New Mexico was carried out in 1998. The attributes most preferred by consumers were: no small or crowded pens, no antibiotics, no growth hormones, grazing managed to protect streams, grazing managed to protect endangered species, animal born and raised within 250 miles, meat aged at 14 days, and grass fed (Grannis and Thilmany, p. 1). This list of attributes points out the desire of consumers in this part of the country to consume beef products that are healthy, and come from animals that were humanely raised in a manner that minimized the impacts on the environment. Most importantly consumers stated that they were willing to pay extra for products that had these attributes (Grannis and Thilmany, p. 2). The findings of this survey provide a good example of the hierarchy of consumer preferences, and shows that producers have the potential to obtain price premiums if they can provide these product attributes.

One major issue in increasing the demand for beef products is the need to address factors that concern women. Women do most of the shopping and much of meal preparation. Women also eat less red meat than men and are more concerned than men about health issues and are more likely to purchase lower-fat, organic, and beef from cattle not treated with hormones (Mintel, pp.68-69). The issue of meeting the concerns of women consumers is a major issue facing the beef industry. However, it also presents an opportunity for beef producers willing to tailor their products to meet these needs and concerns.

The Structure of the Beef Industry

Producers interested in developing new products and markets in the beef industry face sophisticated, well managed competitors that are amongst the largest firms in the world. The U.S. processes more than 35 million head of cattle a year (Clause *et al.*, p. v). Traditionally, to be successful in the beef industry, firms had to expand in order to take advantage of economies of scale in order to reduce costs and thereby sell at low prices.

Since the 1970s there has been consolidation in the beef industry, the best known example being Tyson's purchase of IBP. In 2002, Tyson, Cargill and Swift controlled almost 80 percent of the meat processing industry (Mint*e*l, p. 26) in the U.S. It has been estimated that Tyson alone controls 27 percent of the world's beef market (Mint*e*l, p. 33). In 1976, the four largest firms controlled only 25 percent of the entire market (Crespi and Sexton, p.660). There has been a dramatic change in the size and nature of the beef processing industry over the past three decades.

Increasing vertical integration is another factor influencing the structure of the beef industry. Beef processors are increasingly involved in feedlot ownership (backward integration), and are beginning to offer their own retail brands (forward integration). In 1999, 65 percent of the cattle were traded in the cash market (Lawrence *et al*. p. 370), and 35 percent were traded via marketing contracts and other methods. Beef processors have identified quality concerns as the primary reasons for using contracts or direct ownership of beef (Lawrence *et al*., p. 370). Producers that are able to provide high quality cattle in a timely manner may be able to enter into agreements with processors that insure a reasonable rate of return. It is likely that fewer and fewer cattle will be purchased via the cash market over time. The beef industry will increasingly look like the pork industry in terms of procurement and control of the product.

Branded Products

One manifestation of this trend in the beef industry is the movement towards branded products. A brand is a type of signal to consumers that the product offered possesses certain desirable characteristics. An effective brand provides information to consumers that the product will meet consumer expectations. The demand for quality attributes has increased (Spoleder and Goldsmith, p. 1). This demand for quality differentiated products creates a demand for information (Ante, p. 1002) that an effective brand can fulfill. If the brand is successful the firm may be able to sell the product at a higher price. This pricing power is often referred to as brand equity (Clause *et al*., p. 35), and should be the goal of any effort to by a cattle producer or group of producers interested in introducing a branded product.

Offering a branded product is not an easy thing to accomplish. In the beef industry it is likely that brands with name recognition or small brands that offer specific attributes that appeal to a select subset of consumers will be successful. Branded meats will also have more informative packaging that will likely include cooking instructions and nutritional labels (Mintel, p.6). A Michigan based firm, commodity or cooperative could work with the Michigan Department of Agriculture's *Select Michigan* program to develop an advertising campaign to help increase brand and product awareness to Michigan consumers. Advertising a product as Michigan produced would likely appeal to Michigan consumers. It would appeal to those consumers interested in supporting local agriculture, or who are interested in fresh product. In order to take advantage of this program, a firm or cooperative would need an actual product to promote.

Currently, less than 10 percent of beef is branded, however that figure may be 50 percent by 2007. One reason is the potential for higher profits. It is estimated that beef processors can charge 60 percent more for pre-packaged name brand beef (Mint*e*l, p. 42). A survey showed that 67 percent of consumers would feel more comfortable buying meat from a recognized brand name (Mint*e*l, p. 67).

Firms are moving quickly to meet this consumer preference. Tyson and Swift are producing branded heat-and-eat pot roasts (Mint*e*l, p. 81). Effective brands often include signals to consumers of additional product attributes such as hormone free or antibiotic free. An example is Laura's Lean Beef, a firm that sells a branded product that promotes itself as hormone free and antibiotic free. This firm sells beef in over 4,700 retail outlets (http://www.laurasleanbeef.com/companyInfo). There are also several smaller firms owned by cattle producers that offer characteristics that some consumers prefer.

Once such firm is B3R a firm that offers both organic and natural beef products. The natural products are derived from cattle that were fed a vegetarian diet with no hormones and no antibiotics. This Texas based firm also owns its own processing plant. The cattle for B3R all come from the U.S., the firm contracts with cattle producers.

One major difficulty in developing branded products, particularly for small entities such as a cooperative, is maintaining a year round supply of product. Retailers will not be willing to offer space in the meat case to firms that are unable to provide a consistent quality and quantity product in a timely manner throughout the year. To address this problem, a small firm or cooperative could try to form an alliance with another branded beef processing firm, or obtain cattle from other cow/calf operations. A partnership would give the organization market access and the potential for higher profits without altering their production practices to feed cattle throughout the year. Increasing the number of cattle on farms would require an alteration in production practices

Another issue with branded products is the issue of roasts. This has been a problem facing all Michigan beef producers when attempting to find buyers for their products. There are outlets for steaks and ground beef but it is more difficult to find markets for other cuts of meat. A firm interested in offering a branded product will have to address this issue.

Retained Ownership

Another marketing strategy is that of retained ownership. The cattle remain the property of the producer or the cooperative after they have left the farm. It is a type of vertical integration. There are advantages and disadvantages to retained ownership. One advantage is that some costs are reduced such as transportation and selling costs. Retained ownership can also be profitable during times of rising cattle prices. Retained ownership also improves a buyer's ability to trace cattle. Traceability is becoming an increasingly important product attribute (Sporleder and Goldsmith, p.3). This can be used as a selling point when dealing with meat buyers. Issues concerning food safety, animal welfare, how the animal is fed, etc. has made it more important to know the history of each head of cattle. Retained ownership, and Electronic Identification makes traceability easier thereby reducing costs.

Retained ownership would work well as a strategy if it were coupled with tighter vertical coordination. That is, if a firm or cooperative found a firm to process their cattle and retail outlets to sell their cattle. The firm or cooperative would have to create its own supply chain. In this case, the firm or cooperative would own the cattle from birth to the retail level. This would allow the firm to capture the value currently obtained by beef feedlots, processors and marketers. One other alternative to finding a retail buyer of feed is to offer the product directly to consumers through direct sales. This strategy would work well with a branded product and might capture the interest of a small specialty processor. Omaha Steaks is an example of direct retailing. However, a firm pursuing such a strategy might need a consistent level of output throughout the year.

However, the difficulties with this strategy are the similar to those of offering a branded product. If the firm or cooperative is not large, it may be difficult to find a processor willing to handle the cattle. Clearly, large processors will not be interested. The firm or cooperative would have to find a small, custom processor. Also, a firm or cooperative will have to find a retailer willing to sell their beef. Again, finding a buyer for roasts and other less desirable cuts is a constraint. While a cattle producer or cooperative may be able to capture the value resulting from vertical integration, it would also have to undertake activities that other firms currently carry out.

There are other potential pitfalls for retained ownership. Capital requirements are increased when a producer or cooperative retains ownership. Retained ownership may work against a farmer or cooperative during times of falling cattle prices. Producers also need to keep close track on rate of gain and feed prices. Effective retained ownership requires producers and cooperatives to manage cattle more intensively and use more advanced marketing techniques such as futures and options contracts in order to minimize risk.

Selling on a Grid

Another marketing strategy designed to increase producer profitability through producing cattle that have desirable characteristics is selling on a grid. Generally, selling on a grid requires producers and cooperatives to produce and market cattle that have high yields, are graded choice or higher, have high rib eye areas, and have little backfat. Segregating animals based on these characteristics can aid producers in determining when to sell individual animals. Selling on a grid has become increasingly common.

Several studies have been carried out on the profitability of selling on a grid. Norwood *et al.* showed that improving forecasts of fed-cattle quality grades could increase cattle marketing revenues (Norwood *et al.*, p.i). Lusk *et al.* analyzed the use of ultrasound technology in making marketing decisions. There are two rationales for using ultrasound: to place cattle into more homogenous groups that can be marketed on a grid, live weight or dressed weight basis, and to sorting cattle into more homogenous groups to sell animals at the optimal time or date (Lusk *et al.*, p. 205). Ultrasound measures marbling within the ribeye and backfat (Koontz *et al*., p.2). However, the study showed that in order for selling on a grid to be effective, some less valuable cattle would have to be sold either on a live weight or dressed weight basis (Lusk *et al*., p. 213). A study carried out in Canada showed the same result (Walburger and Crews, p. 1). The Lusk study showed that Angus cattle sold at a premium compared to other cattle (Lusk *et al.*, p. 212). Ultrasound technology was more effective the closer the animal was to slaughter and the technology also helps determine when to sell the animal (Lusk *et al*., p. 215).

Koontz *et al.* determined that sorting cattle allowed feeders to reduce meat quality discounts, increase meat quality premiums, increase beef carcass quality characteristics, and more efficiently utilize feed. These factors result in improved profits (Koontz *et al.*, p. 1). Table 1 shows the premiums and discounts on a typical price grid.

Table 1: Premiums and Discounts for a Fed Cattle Price Grid (Dollars per cwt.)		
Quality Grade	**Premium or Discount**	
Prime	6.00	
Certified (High Choice)	4.00	
Choice	0.00	
Select	-5.00	
Standard	-12.00	
Yield Grade		
YG 1	3.00	
YG 2	1.50	
YG 3	0.00	
YG 4 and 5	-20.00	
Weight		
Less than 550 lbs.	-20.00	
550-950 lbs.	0.00	
More than 950	-20.00	
Source: Koontz *et al* .		

Clearly quality has plays a major role in determining the value of a head of cattle. However, it is not the only consideration. Yield grades and weight are examples of other attributes that can affect the price a producer receives for an animal. These factors show the importance of managing individual animals effectively.

While it is true that longer feeding increases weight and marbling, it also increases backfat and reduces red meat yield (Koontz *et al.*, p.6). Sorting cattle through the use of ultrasound or other methods allows producers to feed those cattle that marble well without excessive backfat and sell those cattle that are inefficient users of feed (Koontz *et al.*, p.6).

The profitability of sorting is most impacted by the cost of gain (Koontz *et al.*, p. 7). This means that producers need to take the price of feed into account as well as the forgone revenue lost from keeping animals on feed. This research showed that sorting cattle prior to marketing increased returns to producers by $11 to $25 per head (Koontz *et al*., p. 8). To be effective, selling on a grid will require improvements in cattle management practices.

One consistent finding throughout the research is that in order to maximize profits producers should not sell all their cattle on a grid, only those that score high in terms of marbling and yield. Those cattle that do not score high on these attributes should not be kept on feed as long, and should be sold on a live or dressed weight basis. Sorting high performers from low performers is an important management activity.

One implication of grid based pricing is that over time as more and more producers and organizations engage in this type of activity, the quality and yield differentials will likely decline. As more and more producers breed, feed, and sort cattle that maximize yield and quality more and more high quality, high yield cattle will enter the market, reducing the premiums these cattle receive.

Conclusion

The cattle market, like much of the food system is being split into smaller and smaller markets as consumers become more sophisticated. As the result of supply constraints caused by drought and the BSE situation and the increased demand for beef products, prices are strong and are likely to remain so for the next year or two at least.

The changing nature of consumer preferences offers potential to cattle producers in Michigan interested in meeting these evolving preferences. Consumers are becoming more interested in how cattle are raised and what they are being fed. The use of Electronic Identification and other traceability methods can be used to assure consumers of product quality and management practices used to raise cattle. Furthermore, some consumers are willing to pay extra to have their specific needs met. It follows that successful producers or cooperatives have the potential to achieve price premiums.

This paper examined three methods to achieve price premiums, branded product, retained ownership and using grid pricing. It should be noted that these three methods are not mutually exclusive. Some combination of the three or the use of other marketing techniques could be used. For example, a firm can used retained ownership to offer a branded product to sell directly to consumers. However, to be successful in offering a branded product or selling directly to consumers, a producer or cooperative will have to offer a consistent supply of beef throughout the year. If that is not possible, a producer or cooperative interested in a branded product should look to form an alliance with a current provider of a branded product. Several firms in the beef industry are already working with producers and cooperatives to do this. Branded beef products will become more common with the passage of time, and may become the standard before the end of the decade. A brand can focus on a number of features, examples include how the animal was raised, how it was fed and where it was produced.

Retained ownership also has potential. This is primarily a marketing strategy and can work with beef as a commodity or beef as a product. Some costs are reduced with retained ownership. However, retained ownership does carry some risk. Feed costs need to be minimized. Also, effective use of futures, options, or forward contracts is necessary for retained ownership to be consistently profitable. Retained ownership is a form of vertical integration and can be used with brands or other forms of marketing.

A major issue with developing a brand or retained ownership is developing a supply chain that is profitable. It will be difficult to get the interest of a large beef processor. Working with a small custom processor has more potential. However, profit margins will have to be high. Also, finding an outlet whether through direct sales or through a retailer will also have be obtained.

Pricing on a grid is becoming more and more common. However, to be effective pricing on a grid has to be used with other pricing mechanisms such as live weight or dressed weight pricing. Not all cattle will qualify for a price premium. Good sorting practices need to be used and non cattle that do not qualify for premiums need to be sold using techniques other than grid pricing. It is likely that sorting and grid pricing will become more common in the future. This means that over time, price premiums will decline as the percentage of cattle that are choice or better and have high yields are produced and enter the market.

References

Antle, J.M. *The New Economics of Agriculture.* American Journal Of Agricultural Economics, 81(Number 5, 1999): 993-1010.

Clause, R. M. Holz-Clause, S. Durhkopf, A.S. Johnson, R. Parker, M Schultz, C. Tordsen. Co-Location of Industries with Small Livestock Slaughter Facilities in the Midwest. Ames: Iowa State University Extension, November 2003.

Crespi, J.M. and R.J. Sexton. *Bidding for Cattle in the Texas Panhandle*. American Journal of Agricultural Economics, 83 (Number 3, 2004): 660-674.

Fitzgerald, A. *Banner Harvest Threatens Prices*. Des Moines Register, September 26, 2004.

Grannis, J. and D. Thilmany. *Marketing Opportunities for Natural Beef Products in the Intermountain West,* http://dare.agsci.colostate.edu/extension/pubs.html

Hui, J., P.E. McLean-Meyinsse and D. Jones. *An Empirical Investigation of Importance Ratings of Meat Attributes by Louisiana and Texas Consumers.* Journal of Agricultural and Applied Economics, 27 (December 1995): 636-643.

Koontz, S.R., D.L. Hoag, J.L. Walker, J.R. Brethour. *Returns to Market Timing and Sorting of Fed Cattle*. Paper Presented at the NCR-134 Conference on Applied Price Analysis, Forecasting and Market Risk Management, Chicago, 2000.

J.D. Lawrence, T.C. Schroeder, and M.L. Hayenga. *Evolving Producer-Packer-Customer Linkages in the Beef and Pork Industries*. Review of Agricultural Economics, 23 (Number 2, 2001): 370-385.

Lusk, J.L., R. Little, A. Williams, J. Anderson, B. McKinley. *Utilizing Ultrasound Technology to Improve Livestock.* Review of Agricultural Economics, 25 (Number 1, 2003): 203-217.

Mintel. The Red Meat Market. Chicago: Mintel, September 2002.

Norwood, B., J. Lusk, and W. Brorsen. *Forecasing Limited Dependent Variables: Better Statistics for Better Steaks*. Selected Paper Southern Agricultural Economics Association Annual Meeting, Tulsa, Oklahoma, February 2004.

Sparks. *Cattle and Beef Outlook.* Memphis: Sparks, November 2003.

Sporleder, T.L. and P.D. Goldsmith. Alternative Firm Strategies for Signaling Quality in the Food System.

U.S. Department of Agriculture (USDA). *Livestock, Dairy and Poultry Outlook*, LDP-M-118. Washington: U.S. Department of Agriculture, April 2004.

Walberger, A.M. and D.H. Crews. *Improving Market Selection for Fed Beef Cattle: The Value of Real-Time Ultrasound and Relations Data*. Canadian Journal of Agricultural Economics, 52 (Number 1, 2004).