

# The Changing Market Structure for the American Beef Industry

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## Introduction

Change is now a common everyday word in beef marketing. Change spells out “Cattlemen Have A New Great Encore.” You and I are witnessing this encore as the beef industry divides into two distinctly different marketing systems based on two distinctly different production systems.

First, we have the traditional beef system producing and marketing commodity beef. Second, we have a value-based beef system producing and marketing high quality beef designed to meet tight consumer specifications. A critical decision that today’s beef cow producers have to make is to decide which system – commodity beef or value-based beef – they are going to target their production towards. The beef industry’s transition into value-based marketing is generating rapid change in today’s beef industry.

Today’s beef industry has roughly 800,000 beef cow producers marketing to 2,100 feedlots; who in turn, are marketing to four major beef packers who are marketing to 250 million plus domestic consumers.<sup>2</sup> In spite of the wide spread belief that agriculture in general, and the beef industry in particular, are different from other U.S. industries, today’s beef industry is also caught up in the U.S. economy’s overall drive for efficiency. Consumers are demanding value in anything and everything they purchase. He who can produce the beef that consumers want, in the form that they want it, when they want it, at the lowest price, wins.

## **Commodity Beef**

By definition, commodity beef is a homogeneous product with little or no product differentiation and there are no brand names associated with commodity beef. Commodity beef is priced based on averages. Average beef prices are public information reported daily by the USDA Agricultural Marketing Service. Since one beef producer’s commodity beef is about the same as another beef producer’s commodity beef, the primary way that commodity beef producers compete is through being a lower-cost producer.

Traditionally, research and extension educational programs have targeted their research and educational programs towards increased production efficiency of commodity beef. The operational assumption has been that the increased production efficiency implies lower costs of production, which in turn, implies higher profits. Research, however, is changing. Using this conference as a specific example, current research and extension programs are changing to a focus on the production and marketing of consumer determined value-added production. Change is everywhere.

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<sup>2</sup>Topper Thorp, CattleFax, NCBA Annual Meeting, San Antonio, Texas, February 2001.

Commodity beef producers are trying to lower costs of production by adopting new genetics, new production practices, and new management tools that will increase their individual herd's production efficiency. Producers generally perceive that production efficiency is sufficient condition for profitability (economic efficiency). This certainly has been true in past decades; but, once again, things are changing.

IRM (integrated Resource Management) data suggests that production efficiency is a necessary condition but production efficiency is not now a sufficient to guarantee economic efficiency. Since the mid 1980s, financial management has increased in importance in beef production. In today's profitable beef production, economic efficiency now also requires financial efficiency.<sup>3</sup> I find that some beef producers have made this transition to financial efficiency very well while others are still struggling.

The traditional business model followed by most commodity beef producers is to produce commodity beef during those time periods that best fit their production resources. There is little or no focus in the typical commodity business model on year-around supply, seasonal production patterns, or season market price patterns. Consumers are expected to consume whatever is the easiest for beef producers to produce; in fact, consumer demand is ignored in the commodity beef business model.

The rest of the marketing chain is considered the enemy. The enemy's fight with ever decreasing beef demand is frequently interpreted as the enemy attempting to take advantage of beef cow producers. If prices are low, it must be the fault of the next participant in the marketing chain.

Commodity beef producers typically are going it alone and often view their neighbor as their competitors. The general practice in the commodity beef business model is to not share any production or financial performance data with other participants in the marketing chain and there even is a general reluctance towards sharing with fellow beef cow producers. The management power of sharing and benchmarking to increase beef cow profits is not possible due to non-standardized accounting systems and the reluctance to share.<sup>4</sup>

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<sup>3</sup>I have had senior ranchers talk to me about why the current generation "can not survive on the ranch that momma and I lived on for 40 years." What these senior ranchers have not recognized is the change that has occurred in the ranching business. For the last 30 years, profit margins have decreased with each and every added cattle cycle. This drop in profit margins has been heavily related to the 30 year decrease in beef demand. I really think that most ranchers have no concept of what 30 years of decreasing beef demand had done to them and to their neighbors. The good news, today, is that demand is increasing (see section in this paper on changing demand).

<sup>4</sup>Out of North Dakota's 12,000 operations with beef cattle, 250 participate in CHAPS Herd Performance System, share data, and benchmark against each other. Another 180 participated in the North Dakota Farm Business Management System, share data, and benchmark against each other. The other 11,570 do not share data and can not practice benchmarking.

## **Change Came Out of the Financial Crisis of the 1980s**

Change came out of the agricultural financial crisis in the 1980s when many beef producers found out that high production, in itself, did not guarantee financial survival. In addition, most beef producers were let down by their on-farm, production and financial management information systems; in fact, bankers were called upon to determine when a business failed. By that time all equity had been used up.<sup>5</sup>

In the late 1980s, a group of NCBA cattlemen came to the Cooperative Extension Service and requested help in designing a new management information system for commodity beef producers that integrated financial management and production management into a single management information system. This new management information system was called IRM, Integrated Resource Management. IRM was conceived and driven by grassroots NCBA cattlemen who witnessed neighbors forced out of business during the financial crisis of the 1980s. These grassroots producers wanted to make sure that their ranch did not succumb to the next financial crisis in the 1990s.

Over the last 10-12 years a completely new IRM educational program has been launched by State Cooperative Extension Services, NCBA, and state cattlemen's associations to change how ranchers and beef farmers manage their commodity beef production. NCBA launched its cattlemen's colleges, state cattlemen associations launched their cattlemen's colleges, and State Extension Services launched intensive IRM educational programs all based around one common set of Standardized Performance Analysis (SPA) Guidelines. Ranchers were taught the IRM way of integrating financial management into the production management of their beef cow businesses. Since IRM's conception, almost every state in the nation has launched an IRM educational program for their beef producers.

Profits can and are being made from producing commodity beef. In fact, low-cost commodity beef producers are currently making good profits. My IRM work identified the key Critical Control Points (CCP) for running a profitable beef cow herd is intensified management.

My Northern Plains IRM Database clearly indicates that the economic rewards from commodity beef production through intensified management are going to those that have the lowest unit costs of producing a hundredweight of calf (see Figure 1). For example, the average net income per cow for all IRM cooperators in 1999 was \$129 per cow. My highest profit herd in 1999 generated \$281 net returns to unpaid labor, management, and equity capital per cow with his 1999 calves. My low-cost IRM cooperators have made a profit each and every year of the cattle cycle. Yes, IRM is changing the economics of producing commodity beef.

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<sup>5</sup>A favorable observation in the 1990s is that some farmers and ranchers decided to get out of farming while there was still some equity left in the business. In the 1980s, if you had equity, you farmed or ranched one more year. There is nothing wrong with selling the business while you still have equity but you need the financial records to know how much equity you have and how fast it is changing.

## Value-Based Beef

Value-based beef, the newer production and marketing system, is being marketed based on selected quality factors targeted towards consumers' expressed wants and desires. Value-based prices are based on a specific set of quality specifications implemented through some form of a grid pricing system. The largest example of value-based beef is Certified Angus Beef (CAB).<sup>6</sup> CAB is one of the oldest (founded in 1978) and perhaps the best-known of all beef carcass alliances.<sup>7</sup>

Today there are many alliances being offered to beef producers. As early as 1996, Kansas State University (Sartwell, Marston and Bolze) listed and described 13 alliances in a paper.<sup>8</sup> Each different value-based marketing program focuses on a different set of quality specifications. New value-based marketing programs are starting up every year. The challenge for today's value-based beef cow producers is to match their herd's genetic characteristics to a specific value-based marketing program.

CattleFax reported that 40-50 percent of the beef produced is now or soon will be marketed on some contract, grid, or formula price structure.<sup>9</sup> While costs of production are still important in value-based beef production, value-based beef producers spend considerable management energy focusing on adding value to their beef production.

Value-based beef producers are recognizing that consumers have specific quality specifications for what they consume and that consumers will reward quality through paying a premium for that quality product. On the other hand, consumers will pay a discount through reduced consumption of those products that do not meet consumers' quality specifications. In addition, consumers demand a year-around supply of that quality product leading producers to the recognition that producers have to band together in business relationships to meet year-around consumer demand.

Value-based beef is characterized by the fact that value is linked to the production practices at each and every level of the supply chain. As a result, a value-based marketing system has to focus on all producers in the supply chain. The marketing challenge is to make sure that the marketing program recognizes these linkages equitably. The marketing system needs to make sure that what one producer does in the supply chain directly impacts other producers in that supply chain. Fellow participants in the total value-based beef supply chain are business partners – not their competitors.

Retail value is the collective sum of all "value added" actions taken in the total supply chain. How the complete value-based beef supply chain is managed determines the overall marketing success of any value-based beef marketing program. Value-based beef producers need to carefully select their

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<sup>6</sup>I once mentioned to an Angus breeder that CAB was really taking off. His response was: "Well, it is about time! We have been working on this for over 20 years." The message is that developing an effective alliance takes years.

<sup>7</sup>James Sartwell, Twig Marson, and Ron Bolze, Jr. "Marketing and Informational Alliances in the Fed Cattle Sector." Paper presented at AAEA-LMIC Commodity Outlook Conference, Sand Antonio, Texas, July 26, 1996.

<sup>8</sup>See previous footnote.

<sup>9</sup>Topper Thorp. Presentation made at NCBA Annual Conference, San Antonio, Texas, February 2001.

value-based marketing program with care as not all value-based beef marketing programs will survive.

The logical next step in value-based beef marketing will be the move to branded beef; but, that is a subject of another complete paper.

### **Key Factors Underpinning Change in the Market Structure**

Key production, economic, and financial factors are underpinning the change in the beef marketing system. My goal in this section of this paper is to briefly discuss six of the key underpinnings. The six key underpinnings causing change are:

1. Cattle cycle and its resulting beef price cycles
2. Economic hurt in the mid-1990s
3. Increasing production per cow
4. Long-term decreasing demand for beef
5. The good news on the recent up-turn in beef demand
6. Ranchers are currently marketing on an up-market

#### **1. Cattle Cycle and its Resulting Beef Price Cycle**

The single most important economic underpinning of the beef marketing system is the cattle cycle and its resulting beef price cycle. Beef cattle prices tend to go in 10-year cycles that correspond to each decade.

History demonstrates that we can expect a “U” or “V” beef price cycle during each decade. Cattle prices typically start the decade with high prices, move to low prices in the mid-decade, and increase again towards the end of the decade.

Figure 2 illustrates the “V” shaped price cycle generated in the decade of the 1990s. Price spreads between feeder calves, feeder cattle, and slaughter cattle started out the decade wide but narrowed in the mid-1990s. The magnitude of the price depression in 1996 is best illustrated by the fact that feeder calf prices per hundredweight went below the per hundredweight price of slaughter steers.<sup>10</sup> Since 1996, the price spreads have been widening. This is the typical price pattern during a typical cattle cycle. Price spreads start out the decade wide, narrow in mid-decade, and widen again towards the end of the decade. Where, then, are we in the current cattle cycle.

#### **A. Current Cattle Cycle Implications.**

Cattle cycles can be divided into three phases – contraction, expansion and turn-around. We have completed the 1996 to 2000 contraction phase, now have completed the turn-around phase and are just now entering into the expansion phase. The expansion phase peaked in year 2000 and is

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<sup>10</sup>For 22 years and two complete cattle cycles I had talked about 1974 being an unique time in history when calf prices per hundredweight averaged below slaughter cattle prices per hundredweight. Twenty-two years and two cattle cycles later it happened again. In 1996, the average price of feeder calves went below the average price of slaughter cattle. Both record lows – the 1974 and 1996 lows – were accentuated by record feed grain prices.

projected to decrease in 2001-2003 time period. As the increased heifer retention materializes in the expansion phase, beef production should start increasing once again in year 2004. This cycle's peak beef prices are currently projected for year 2003. The next downturn in market prices is projected for 2004 through 2007. Prices are projected to increase towards the end of the decade (see Figure 3).

As beef cow producers decide to divert heifers from feeding to breeding, the supply of feeder cattle will be reduced. The expansion phase is characterized by a smaller supply of feeder cattle, excess feedlot capacity, excess packer capacity and by overall industry consolidations.<sup>11</sup>

CattleFax reports a 15 percent increase in feedlot capacity in the last 15 years.<sup>12</sup> Feedlots, trying to utilize their excess feedlot capacity, will increase their competitive bid for feeder cattle. Existing feedlots will turn to added imported Mexican feeder cattle to try and utilize existing feedlot capacity. Due to higher feeder cattle prices, some feedlots will feed cattle to minimize feedlot losses rather than to maximize profits.

All of this suggests that the beef industry will see the cow calf producer move into the drivers seat with respect to feeder cattle sales. They will decide when they want to market their calf production – at weaning after backgrounding, or through retained ownership. As more beef cow producers sell at weaning, the popularity of retained ownership will decline. Reduced retained ownership will lead to more cattle owned directly by the feedlots.

Feedlots, trying to ensure a feeder cattle supply for their feedlot, will strive to develop and expand business relationships directly with beef cow producers. Reduced feeder cattle supplies will change how beef cow producers interact with cattle feeders.

## **2. The Economic Hurt During the Last Cattle Cycle**

The economic impact of the mid-1990s price depression was devastating for many beef cow producers. Figure 4 presents the average profit per cow earned by North Dakota's Farm Business Management Association members during the 1990s.<sup>13</sup>

Profit per cow was high in the early part of the decade averaging \$152 to \$192 per cow. The year 1994 signaled the beginning of the market downturn with a 74 percent drop in beef cow profits in that one year. Average profits went negative in 1995 and went even more negative in 1996. Average profits again turned positive in 1997, 1998 and 1999. Profits continued increasing in 2000 to \$124 per cow. Clearly, better times are returning for cow calf producers.

An important point for this conference is that we recognized the fact that over the five-year period, 1994 through 1998, producers earned an average annual profit of only \$3 per cow for this

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<sup>11</sup>Topper Thorp, CattleFax at NCBA Annual Meeting, San Antonio, Texas, February 2001.

<sup>12</sup>Dave Weber, CattleFax presentation to NCBA Annual Conference, San Antonio, Texas, February 2001.

<sup>13</sup>Profit here is defined as the earned returns to unpaid family and operator labor, management, and equity capital. These are the three resources that a ranch family contributes to the ranch business.

five-year period. It appears that profit margins are getting smaller for each progressive cattle cycle.

A signal that beef cow profit margins are getting smaller and smaller is the fact that this 5-year \$3 average in the decade of the 1990s compares to the 5-year average low of a positive \$33 for the decade of the 1980s. In fact, none of the 1980 years averaged below zero while two years in the 1990s averaged below zero. Clearly, something was raising havoc with the beef industry! Research now suggests that something was decreasing consumer demand for beef. More on this in a later section of this paper.

### 3. Increased Beef Produced Per Cow

While the cattle cycle's influence on cattle numbers is a primary factor determining beef supply, it certainly does not explain the total beef supply picture. Figure 5 illustrates the USDA All-Cattle Inventory numbers from 1960 through year 2000 via the dashed line measured on the right axis. You can see that cattle numbers peaked in the mid-1970s, again in the mid-1980s, and once again in the mid-1990s. You also see that the long run trend in cattle numbers from 1975 through year 2000 has been downward.

The dark line in Figure 5 presents beef production measured on the left axis. While beef production varies during each cattle cycle, the long-term trend in beef production since 1965 has been upward. I particularly call your attention to the 1980 through year 2000 time period. While the all-inventory numbers trended downward over this 20-year period, beef production trended upward over this same time period. In fact, beef production in 1998 exceeded the record beef production in 1975. How could this be? The beef industry has 34 million less cattle in year 2000 as compared to 1975.

One key reason for the upward trending beef production from less and less cattle is "increasing beef production per cow." Over the last 30 years, beef production per cow has trended upward (see Figure 6.) In 1980, each cow produced approximately 450 pounds of carcass beef per year. By 2000, production had risen to 620 pounds of carcass beef per cow per year. This 170 pound increase in a 20 year time span represents an average annual productivity gain of 1.8 percent.<sup>14</sup>

Several factors are responsible for this production increase including weaning weights. Figure 7 confirms that in the decade of the 1980s, North Dakota beef cow producers added an average of 10 pounds per calf weaned per year. This totals to 100 pounds added to weaning weights in the decade of the 1980s. I fully believe that this North Dakota increase in weaning weights is indicative of the U.S. beef industry in general. Canada, on the other hand, shifted to a higher percentage exotic breeding programs and, as a result, increased weaning weights even more than the US. Certainly, genetic improvements in both countries have resulted in bigger and bigger carcass weights making carcass weight a major component of the increased beef production per cow. Adding 100 pounds to carcass weight results in an additional 3.6 billion pounds of beef.<sup>15</sup>

Another primary source of productivity gains is heavier carcass weights (see Figure 8). Over the past 20 years, while annual productivity gains have averaged 1.8 percent, weight gain has

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<sup>14</sup>Ibid.

<sup>15</sup>Assumed 36 million head slaughtered annually; 36 million times 100 pound increase comes to 3.6 billions added pounds of beef. Carcass weights have continued to increase for the last 30 years.

accounted for 1.1 percent of the total 1.8 percent growth per year. All other productivity increases have accounted for about 0.7 percent per year.<sup>16</sup> These other productivity increases involve the ability to produce more calves from a given number of brood cows and include fewer non-productive cow days and higher calving rates.

Better husbandry practices have certainly contributed to this higher beef cow production as have improved health programs. The popularity of slaughtering veal calves has decreased so today the beef industry is taking a higher percentage of all calves to slaughter weights.

Finally, imports have also contributed to this increased production (see Figure 9). Cattle imports are made up of all types of cattle – breeding, feeders, and slaughter. Most Mexican exports into the U.S. are feeder cattle while Canadian exports to the U.S. are processed meats, slaughter cattle, cull cows, and feeder cattle. In any case, U.S. imports add to the total beef supply produced in the US.

While the amount of beef produced per cow is rising at the rate of about 1.8 percent per year, domestic and foreign demand is only increasing at about 1.3 percent per year. This suggests that productivity growth will likely outpace demand growth, and as a consequence, brood cow numbers over the long-run will likely decrease over time.<sup>17</sup>

Current beef cow numbers have also been dropping since 1995 and yet total beef production has continued to rise. This short-run increase in production primarily due again to short-run increases in carcass weights, increased feeder cattle imports, and lower veal calf slaughter.

#### **4. Decreasing Demand for Beef**

During the 1980s beef consumption in North America declined, in part, due to concerns about human health and grazing pressures on public lands. At the same time, poultry and fish enjoyed increases in consumption due to lower prices and alleged health advantages. With real incomes also declining in the 1980s, consumers became more cost conscious and began to pay more attention to the quality of meat obtained per dollar spent.

Decreasing demand for beef led to continual decrease in the real price of beef. While nominal steer prices trended upward since the early 1960s (see Figure 10), inflation drove the real price of slaughter steers ever downward (Figure 11). By 1995, the real steer price was one-half of the real steer price in 1979.

Most cattlemen do not appreciate the impact that 25 years of decreasing demand for beef and the continued drop in the real price of beef was having on the ranching industry. Over the last 25 years, ranch after ranch has been forced out of business by decreasing demand. Let's look at some ranching changes driven by decreasing demand.

##### A. Producers Turn to Exotics – Consumers Heighten Demand for Quality Information

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<sup>16</sup>Ibid.

<sup>17</sup>Kris Hurt, "Cycle Nears End of Contraction." Livestock Outlook Web Page, [http://web.aces.uiuc.edu/farm.doc/marketing/livestockoutlook/0700cattle\\_text.html](http://web.aces.uiuc.edu/farm.doc/marketing/livestockoutlook/0700cattle_text.html).

Generating the family living draw from beef cows was one of the more challenging implications of reduced real prices of beef. To remain in business, beef cow producers had to increase production efficiency in an attempt to maintain family living draw during these times of reducing real market prices. Increased production efficiency became about the only way for a ranch business to survive.

Consolidation of smaller beef ranches into larger, more efficient ranches was one way to reduce family living draw per cow. Ranch after ranch was sold and consolidated into a neighboring ranch operation. Each ranch consolidation meant one less family's living draw had to be generated from beef cows.

Producers looked to the introduction of Continental European Breeds (exotics) for significant increases in size and cutability as a means of increasing production efficiency. The genetic drive of the 1970s and 1980s was to increase weaning weights, carcass weights and to produce beef more efficiently. Figure 7 illustrates the dramatic increases in weaning weights and Figure 8 illustrates the dramatic increase in carcass weights. Carcass weights are still trending upward.

### B. More Select Beef and Less Choice Beef

This focus on increasing weaning weights and the larger carcass weights led to the rise in popularity of producing USDA Select quality grade beef. In 1986, USDA, under pressure from the cattlemen, changed the name of existing beef quality grade from Good to Select. The amount of beef graded Select has increased markedly since that time. For example, in 1986 only 1.3 million pounds per month of Select beef were graded as compared to 30.2 million pounds per month in 1999.<sup>18</sup> During this time period, the production of Choice beef has remained relatively stable at around 46 million pounds per month.

In a market of increasing differentiation, USDA beef quality grades played an important role in distributing quality throughout the marketing chain and should have provided signals to cattle producers of consumer desires at the retail level. Increased use of the USDA beef quality grading system reflected heightened consumer demand for quality information and segregation at the retail level. According to USDA data, over 90 percent of beef from steer and heifer slaughter was quality graded in 1999 as compare to just 67 percent in 1986. Consumers wanted quality information and quality segregation at the market.

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<sup>18</sup>Jayson L. Lusk and Thomas L. Marsh. "Wholesale Demand for USDA Quality Graded Boxed Beef and Effects on Seasonality." Selected paper, Western Agricultural Economics Association Annual Meeting. Vancouver, British Columbia, June 29 - July 1, 2000.

### C. Beef Demand Research Tells More of the Story

Although the amount of beef graded has increased markedly, not much is known about the price sensitivity of the USDA beef quality grades or the substitutability between grades and other meat products. Recently published research has shed some added light on beef demand.<sup>19</sup> For example, chicken is only a substitute for Select beef, not Choice beef. Thus, chicken may be substituted for low quality, but not high quality beef.

Research shows that the two beef quality grades are good substitutes for one another during the fall and winter; however, during the summer Select beef is not a substitute for Choice beef. Apparently, retailer demand for Choice beef cannot be met by changes in relative prices of lower quality beef during the cookout season. In addition, demand for both Choice and Select beef becomes much more inelastic (% change in quantity demanded verses % change in price in less than 1.0) during the spring and summer than during the fall and winter.

Increases in retail beef prices increases the amount of wholesale port and poultry demanded by meat retailers. Increases in retail beef prices have as much, if not more, of an impact on wholesale pork and chicken demand than equivalent changes in wholesale pork and poultry prices.

A previously unreported result, presented in the above study, is the cross price elasticity between Choice and Select beef. Results indicate that a 1 percent increase in the price of Choice beef is associated with a 0.28 percent increase in the quantity of Select beef demanded. One the other hand, a 1 percent increase in the price of Select is associated with a 0.19 percent increase in the quantity of Choice beef demanded by meat retailers. Price changes in Choice have a larger impact on the quantity of Select demanded than the reverse.

The same pattern of beef demand may apply to producers marketing fed cattle. If these same seasonal fluctuations in beef demand are transmitted tot he farm level, cattle producers, as a whole, may be able to benefit from timing the feeding of cattle. Feeding cattle to heavier weights during the summer and fall to achieve the Choice quality grade may prove to be a profitable strategy. However, if the seasonal pattern of beef demand is not transmitted to the farm level, packers may be capturing this economic surplus. Packers may be able to take advantage of changes in retailers' demand for quality graded beef by increasing its margins through strategic seasonal cattle purchasing.

### D. Market is Demanding More Choice Cattle and the Beef Industry is Producing More Select

It appears that today's beef industry is currently living with the genetics brought on board in the 1970s and 1980s. During the 1990s, the percent of the carcasses grading Choice went down (see Figure 12) while the percent of the carcasses grading Select went up. The net result of all of this is that the market is demanding more choice cattle and producers are producing more Select cattle.

This is further demonstrated by looking at Kansas State University's Choice/Select Price Spread Index (Figure 13). A large index suggest a larger Choice/Select price spread. The Choice/Select price spread has followed a distinct pattern. The Choice/Select price index is low during the first four months of the year. By May, the index gets large and stays large the rest of the

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<sup>19</sup>Ibid.

year peaking in November.<sup>20</sup> The price spread tends to be widest in the fall months.

This Kansas research suggests that during 8 out of the 12 months the premium for Choice cattle is large. Once again, the market is signaling that it wants Choice cattle. The Choice-Select price spread averaged \$15.09 per hundredweight in October 1999. This Choice/Select price spread is the fundamental source of premiums paid for value-based beef.

#### D. National Beef Quality Audit

The 1995 National Beef Quality Audit (NBQA) suggested that currently USDA quality grading system segregates carcasses into: 1 percent Prime, 47 percent Choice (11 percent upper 2/3 Choice and 36 percent Low Choice), 47 percent Select, and 5 percent Standard.<sup>21</sup> Slaughter quality in the 1995 audit quality actually decreased from the earlier 1991 NQBA. Based on USDA 1974 data, the percent cattle grading prime and choice decreased 36 percent from 1975 to 1995. Decreasing demand since 1975 has paralleled this beef quality decrease since 1975.

The 2000 National Beef Quality Audit showed some improvement over the 1995 audit. The 2000 survey showed that U.S. cattle producers have responded to the market place, delivering higher quality product to consumers than they did in the mid-1990s.<sup>22</sup> The percentage of Choice and Prime carcasses went from 48 percent in 1995 to 51 percent in 2000. Prime percentages went from 1.3 percent to 2 percent in 2000.<sup>23</sup> Clearly, the beef industry is moving in the right direction but progress is slow.

Retailers indicate that 50 percent of the beef marketed through their stores must be Select to meet consumer demands. Exporters, on the other hand, say they need 30 percent prime, 42 percent upper 2/3 Choice and 28 percent low Choice with no Select to satisfy their customers. Food service representatives need another product mix different yet from retailers and exporters.

To adequately meet the needs of all customers, the U.S. beef industry should produce cattle grading 7 percent prime, 21 percent upper 2/3 choice, 34 percent Low Choice, and 38 percent Select carcasses.<sup>24</sup> Ranchers will increase market segmentation and targeting will be necessary to efficiently match production resources to consumer demand specifications.

#### E. Increased Demand for Value-Based Beef

Increased demand for quality graded beef at the retail level has resulted in beef packers offering cattle producers premiums and discounts based upon the quality and yield grades of their

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<sup>21</sup>Kenneth Eng. "Conference Focuses on Optimizing Performance, Improving Feeding Efficiency." Feedstuffs, pg 16, April 15, 1996.

<sup>22</sup>"NBQA 2000 Gaining Ground. NCBA, pg 1, 2001.

<sup>23</sup>Ibid.

<sup>24</sup>Warren Kester. "Consistency's the Quest." Beef, pg 46-47, November 1996.

cattle. With the current flurry of marketing alliances, it behooves alliance participants to understand how the market's increased demand for Choice beef is in direct conflict with the past genetic trend in the beef industry. This all suggests that, as the quantity of Choice slaughter cattle goes down, price premiums for Choice cattle will go upward. In the meantime, meeting consumer demand for Choice beef necessitates the importance of Choice beef and cattle from Canada.

## **5. The Good News Is That Demand May Have Changed Upward**

The most exciting news impacting the beef industry in years is the recent change in beef demand. Kansas State University researchers have documented (1) the magnitude in the drop in demand during the 1990s, and (2) the apparent turnaround in demand towards the end of the decade (see Figure 14).<sup>25</sup>

Figure 14 illustrates the decrease in demand during the 1990s where 1990 was set as the base of 100. By 1997, retail beef price was down to 83 percent of what it would have been if demand had stayed at the 1990 level. This represents a 13 percent drop in demand over the 7-year 1990 to 1997 period.

Beef cutout demand went down 30 percent over this same 7-year period and live slaughter steer demand also went down 30 percent over this same 7-year period. All three demand values went down even more in 1998.

The apparent turnaround in demand is illustrated in the 1999 data and preliminary year 2000 data as both years generated increases in all three values (again see Figure 15). By June 2000, the retail beef index went up to 91, beef cutout was up to 83 and the live steer price index went up to 76. While two years do not make a trend, this apparent increase in demand is the best news that the beef industry has received in many, many years. Increasing demand changes the dynamics of marketing beef.

### **Ranchers Are Now Marketing Beef Cattle on an Up Market**

Figure 16 presents the opening slide that I have used over the past year in my beef producer conferences and meetings. Note the champagne bottle on the slide. Also, note the fist of money on the other side of Figure 16. Why would I begin my beef presentations with a bottle of champagne and a fist full of money? After showing the bottle of champagne and the fist of money to last year's audiences, I have asked the question: "ARE YOU READY TO MAKE SOME MONEY??"

At this point in my introduction, I then draw the conference participants attention to the relative profitability of beef by asking, "What other commodity group could I stand in front of in year 2001 and ask if they are ready to make some money?"

It is interesting to see the response that this discussion gets from beef producers. Ten to twenty percent respond by vigorously shaking their head yes and immediately echoing, "You bet we are ready to make some money!" The rest are either in shock that I would ask such a question or in complete disbelief of the whole situation.

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<sup>25</sup>Source: Jim Minterts's Kansas State University Monthly Beef Newsletter.

I certainly would not do this in front of wheat producers. I assure you that I would not do it with corn producers. I would not do it with swine producers nor dairy producers. My whole point with all of this is that the beef cow industry is currently positioned in the cattle cycle to have several very favorable years. Let me summarize all of this by stating that the beef business goes in 10-year cycles and we are in the upward phase of the current beef price cycle.

Figure 17 presents my current planning prices for North Dakota beef cow producers. These are October's average monthly prices for 500-600 pound steer calves marketed in Western North Dakota. The left-hand side presents historical prices from 1990 through year 2000. The right-hand side presents my projected planning prices for years 2001 through 2009. These projections suggest that we will see steer calf prices trend upward for the next 2-plus years with the projected price peak in year 2003.

Let's take a more in-depth look at short-run feeder calf planning prices. The Extension Economics Section, Department of Agribusiness and Applied Economics, North Dakota State University, posts weekly my Futures based planning prices generated from the weight/price spreads of last week's feeder cattle auction sales and the futures market.<sup>26</sup> Figure 18, prepared from May 23, 2001 Western North Dakota sale barn prices and May 30, 2001 feeder cattle Futures prices, compares October 2001 projections with historical prices for three previous Octobers. Prices are presented for steer calves weights ranging from 400 to 925 pound feeders.

Two price trends are evident in Figure 18. First, feeder steer prices for all feeder weights have trended upward from 1998 through 2000 and are projected to continue this trend into the Fall 2001. Second, cheap feed grains, and the resulting low-cost gains, are driving the price of lightweight feeder calves up relatively more than the price for heavier-weight feeders. This is evident by the clockwise rotation of the price lines in Figure 18.

In summary, this section has highlighted one more change for ranchers. Ranchers are now marketing beef cattle on an up market.

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<sup>26</sup>The web page is [www.ag.ndsu.nodak.edu/cow](http://www.ag.ndsu.nodak.edu/cow) under the "weekly prices" hot button.

## Summary

Change is now a common everyday word in beef marketing and change is the central theme of this paper. Today's beef industry is also caught up in the U.S. economy's overall drive for efficiency. Consumers are demanding value in everything they purchase and beef purchases are no exception. Changes in beef marketing are in the works.

The beef industry is changing into two distinctly different marketing systems based on two distinct production systems – one production system for commodity beef and one production system for value-based beef. By definition, commodity beef is a homogenous product with little or no product differentiation. Without product differentiation, commodity beef producers compete by being the lowest cost producer.

In order to increase economic efficiency, reduce production costs and increase overall beef cow profits, the beef industry has developed and implemented the Integrated Resource Management (IRM) and the Standardized Performance Analysis (SPA) Systems. The key focus of IRM is on integrating financial management and production management into a single management information system that sends integrated management signals for enhancing beef cow profits. Today's leading IRM cooperators are generating profits of over \$200 per cow producing commodity beef.

Value-based beef is the newer beef marketing system and is being marketed and priced based on selected quality factors targeted toward consumers' expressed wants and desires. Value-based beef producers are recognizing that consumers have specific quality specifications for what they consume and consumers are willing to pay a premium price for that quality product.

Consumers demand for year around supply necessitates value-based producers banding together to meet this year around demand. Certified Angus Beef is the best known example of value-based beef alliance. Today, there are many different beef alliances and new ones are forming each year. The logical next step in value-based marketing will be branded beef.

There are six fundamental factors underpinning the change in the current beef marketing system. These six factors are:

1. Cattle cycle and its resulting beef price cycles
2. Economic hurt in the mid-1980s
3. Increasing production per cow
4. Decreasing demand for beef
5. The good news is that consumer demand has turned up
6. Ranchers are marketing on an up market

The single most important factor impacting beef marketing is the cattle cycle and its resulting beef price cycle. Beef prices go in 10-year cycles that correspond to the decades. Market prices are typically high in the beginning and ending years of the decade. Producers can expect the cycle low in beef prices to occur in the mid-part of each decade. Farm Business Management data also suggests that beef cow profit margins are getting smaller and smaller with each progressing cattle cycle.

Change is again impacting feeder cattle marketings. As beef cow producers now decide to divert heifers from feeding to breeding, the supply of feeder cattle will decrease. This reduction in feeder cattle supply over the next 2 years will put beef cow producers in the drivers seat with respect to feeder cattle sales.

Over the past 30 years, beef cow numbers have trended downward and total beef production

has trended upward. Beef production per cow has increased over the years due to increased carcass weights, increased feeder cattle imports, and reduced veal calf slaughter. Beef production per cow has been increasing at such a rapid pace that lagging beef demand has led to reduced beef cow numbers.

While the amount of beef per cow is rising at a rate of 1.8 percent per year, domestic and foreign demand is only increasing at about 1.3 percent per year. This means that the production increases per cow will continue to decrease brook cow numbers over time.

Long-term decreasing demand for beef led to a long-term decrease in the real price of beef. While nominal steer prices trended upward since the early 1960x, inflation has driven the real (inflation adjusted price) ever downward. By 1995, the real steer price was only one-half of the real steer price in 1979.

To remain competitive during times of decreasing demand, beef producers have had to increase production efficiency. This was the only way that they could even begin to maintain the family living draw from the ranch in times of reducing real market prices. Over the last 25 years, ranch after ranch has been forced out of business by decreasing demand. This pressure for generating family living led to the general consolidation of smaller ranches into larger, more efficient ranches as a way of reducing family living draw per cow.

Producers feeling continued pressures to increase production efficiency, looked to the exotic breeds for significant increases in size and cutability as another means of increasing production efficiency. This industry wide focus on increasing weaning weights lead to the rise in the production of USDA Select grade beef. At the same time, meat retailers turned to increased use of USDA beef quality grading systems in response to the heightened consumer demand for quality information and segregation at the retail level.

It appears that today's beef industry is currently living with its focus on weaning weights in the 1970s and 1980s. During the 1990s, the percent of the carcasses grading Choice went down while the percent of the carcasses grading Select went up. The net result of all of this is that the market is demanding more Choice cattle and producers are producing more Select cattle. Quality price premiums are now being established in the market.

Increased demand for quality beef at the retail level has resulted in beef packers offering value-based cattle producers premiums based upon the quality and yield grades of their cattle. Today, meeting the demand for Choice cattle includes importing Choice cattle from Canada.

Changes spells out "Cattlemen Have A New Great Encore" and the most exciting encore is that beef demand may have turned upward for the first time in 25 years. This is the best news that the beef industry has received in many, many years. Increasing demand changes the dynamics of beef marketing.

Ranchers are once again marketing in an up market. Part of this up market is due to the cattle cycle and part of this up market is due to increased demand. Yes, change is here – "Cattlemen should Have A New Great Encore."