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## **THE FUTURE OF THE BEEF INDUSTRY**

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### **INTRODUCTION**

Weaber and Miller (2004) said “The structure of the cattle industry has changed dramatically over time, particularly in the packing and feeding segments. It’s a change driven by market dynamics that require participants to minimize production costs while at the same time, maintaining or improving quality. Producers that have met these two demands have remained in business through the various ‘boom or bust’ cycles in the beef industry.”

### **CONSOLIDATION/CONCENTRATION IN THE FOOD AND BEEF INDUSTRIES**

The largest 9% of cow/calf producers generate 51% of weanling calves while the largest 2% of feedlot operators produce 85% of finished steers/heifers (Cattle•FAX, 2005). The Top Five packing companies, the Top Ten supermarket chains, the Top Ten foodservice distributors and the Top Ten restaurants have market shares of 78%, 55%, 45% and 30%, respectively, of beef or food sales (Cattle•FAX, 2005). Drovers Alert (2005) reported that, “On average, large farms/ranches have lower production costs and realize higher commodity prices; because large family farms/ranches tend to be more profitable, their share of production is expected to continue to increase.” Beef packers are continuing to consolidate; for example, Cargill Meat Solutions purchased Better Beef Packers in Guelph, Ontario as well as Beef Packers, Inc. in Fresno, California in 2005.

The “driver” for consolidation and use of captive supplies of harvest cattle in the beef industry is concentration in the supermarket industry and the need for guaranteed supplies of beef products...365 days of each year. According to Cattle•FAX (2005): (1) The Top Seven supermarket chains control 65% of food sales in 2005 and are expected to control 75% by 2010. (2) The implications of such consolidation, to beef packers and producers, are that: (a) it is more efficient for supermarket executives to work with fewer beef suppliers (packers), (b) beef suppliers (packers) become responsible for “Just In Time” (JIT) inventory management, (c) beef suppliers (packers and producers) must assure safety and consistency, and (d) beef suppliers (packers and producers) must provide quantity and quality of products (Cattle•FAX, 2005).

### **THE CHANGING RETAIL MARKET**

Historically, fresh beef has been merchandised using the USDA Quality Grades (Prime, Choice, Select, Standard). Quality Grades effectively sort beef according to expected palatability; the odds of having an unpleasant eating experience are 1 in 33, 1 in 10, 1 in 6, 1 in 4, and 1 in 2 for beef of Prime, Upper Two-Thirds Choice, Lower One-Third Choice,

Select and Standard, respectively (Smith, 2005). NAMP (2005) reported that six, high-end steakhouse chains that sell Prime beef are primed for 10% growth this year. The retail market for beef started to change in 1978 with the introduction of two “brands” of beef—Certified Angus Beef™ and Coleman Natural Beef™. Since 1978, numerous other brands of beef have been developed; Gerken (2005) reported that USDA has “certified” 52 brands, “process-verified” 2 brands and “brandname validated” 2 brands. There are approximately 50 more brands—in industry branded programs, not approved by USDA—of conventional, natural, grass-fed and organic beef.

Brands offer opportunities to consistently deliver tenderness and convenience, leading to increased sales because such beef satisfies consumer needs (Cattle•FAX, 2005). Smith (2003a) said ‘Brands link the consumer to the retailer (supermarket/restaurant) but also to the supplier (producer/packer/purveyor); brands shift responsibilities to the retailer and also to the supplier, for safety, wholesomeness, quality, palatability, consistency, and how the animal was handled and raised.’ “Quality,” “price,” and “image” combine to create “value,” and—inasmuch as “brand image” translates to “brand equity”—market-share, customer loyalty and profitability accompany “brand equity” (Salter, 1998). And, the firm that controls the brand controls the brand equity.

Ritchey (2004) reported that branded beef currently is estimated to be 20% of the market...by the next decade that could be 60%...and, today, most branded beef carries a national brand...in the future, supermarkets will want more products to carry their own, private, store brand. Cargill Meat Solutions (CMS), the nation’s second largest beef packer, harvests 28,500 cattle each week because through its “Rancher’s Registry™” division, CMS supplies store-branded beef to five supermarket chains; cattle to fill those needs are from five CMS owned feedlots, three alliances, and field-purchases by 45 CMS cattle buyers in North America (Dolezal, 2005).

## METHODS OF MARKETING U.S. FED-CATTLE

The “cash market” is defined as cattle transactions where price or base price is negotiated at the time of sale, and where the cattle are delivered within seven days of the sale; “captive supply” is defined as cattle purchased by the packer through marketing agreements or alliances, formula sales, forward contracts, or joint ventures, and which do not constitute “cash market” transactions (TCFA, 2004). “Cash market” purchases are usually based on live-buyer estimates of Quality Grade, Yield Grade and dressing percentage, and presently represent about 30 to 40% of fed-cattle sales (Cattle•FAX, 2005). The percentage of fed cattle movement from formula, contract, alliance and packer-fed cattle was about 40% in 2004 (Cattle•FAX, 2005).

Grid-marketing of cattle is based upon understanding that the elements of the “packer target” are Quality Grade, Yield Grade, carcass weight, ribeye area and percentage of outlier cattle (those with defects, like “hardbones,” bruises, dark-cutting meat, and injection-site blemishes). Once the packer identifies the “expected minimum percentage of Choice” (e.g., 60%), the “acceptable carcass weight range” (e.g., 550 to 950 lb), the “Choice/Select carcass price-spread” (e.g., \$12/cwt) and the “base price” (e.g., last week’s Omaha top), carcasses

obtain premiums if they qualify for Prime, Certified Angus Beef, and/or Yield Grades 1 or 2, or receive discounts if they are Select, Standard, Yield Grades 4 or 5, and/or outliers (i.e., those with defects). Stalcup (2004) said “Breed association alliances plus those of Tyson, Excel, National, Laura’s Lean Beef, Consolidated Beef Producers, and U.S. Premium Beef are among the grids attracting more and more producers.”

Scientists at Kansas State University surveyed feedlot operators in KS, OK, IA and TX, and reported (Gelbvieh World, 2004) that percentages of fed cattle sold by marketing agreement, cash market and grid market were 23%, 82% and 16%, respectively, in 1996 and were expected to be 65%, 33% and 62%, respectively, in 2006. Gelbvieh World (2004) further stated that “Cattle feeders expressed a strong desire to have grid base-prices related to boxed beef or retail market prices”; Ritchey (2004) said “Eventually, cattle prices will be based on products further down the value chain...first boxed-beef cutout, later case-ready beef products.” Stalcup (2004) described ‘Forty Years Of Cattle Marketing,’ including discussions of futures, options, formula pricing, grid pricing and cyber trading. Weaber and Miller (2004) said “Due to the advent of value-based marketing systems, cow/calf operators now can be rewarded for doing the right things” and quoted Jay O’Brien (a Texas cattle feeder) as stating “We are the closest we have even been to having a system of marketing cattle that pays the producer the exact value of his cattle.”

Not everyone agrees that captive-cattle supplies are best for US cattle producers. An Alabama jury awarded \$1.28 billion to a group of cattle producers who sued Tyson, Inc. because they believed their cattle transactions had been compromised by that company’s reliance on captive supplies of harvest cattle. But, in April, 2004, a federal judge ruled that Tyson, Inc. did not violate the law, and he refused to approve the jury’s judgment; U.S. District Judge Lyle Strom said “The evidence reveals that captive supply transactions permit the defendant (Tyson, Inc.) to achieve a reliable and consistent supply of fed cattle...allowing it to operate its plants in an efficient manner” (Drovers Alert, 2004). Later, the US 11<sup>th</sup> Circuit Court of Appeals supported District Judge Strom’s decision and even required the plaintiffs (the group of cattle producers) to pay \$70,000 to Tyson, Inc. for its court costs (Watt Publishing Company, 2005). Nevertheless, Senators Salazar (D-CO) and Grassley (R-IA) recently introduced a bill that would “prohibit packers from owning, feeding or controlling livestock for more than seven business days prior to slaughter” (Henderson, 2005), and Senator Enzi (R-WY) introduced a “Captive Supply Reform Act” to amend the Packers & Stockyards Act to prohibit or restrict use of forward contracts and formula pricing (Cow/Calf Weekly, 2005a). Since then, Inside AMI (2005) reported that the Grain Inspection, Packers & Stockyards Administration (GIPSA) told the US Congress that “Alternative Marketing Arrangements (AMAs) allow market participants to improve information sharing and supply chain management in the beef industry” and “Meat packers are able to secure slaughter needs, and to ensure cattle-and-beef quality control through a combination of AMAs and the cash market.”

## HOW PRODUCERS AND SMALL/MEDIUM-SIZED PACKERS CAN REACT TO BEEF INDUSTRY CONSOLIDATION/CONCENTRATION

Smith (2005) reported that producers can react to beef industry consolidation/concentration by: (a) owning a packing plant (e.g., National Beef Company, Brawley Beef Company, Washington Beef Company, Creekstone Farms Beef Company, Harris Ranch Beef Company), (b) joining a partnership (e.g., Harris Ranch Beef Partnership For Quality), (c) joining an alliance (e.g., Rancher's Renaissance, MFA Health Track Beef Alliance, GeneNet, Angus Beef LLC, Certified Hereford Beef LLC, Western Grasslands Beef, Oregon Country Beef), or (d) supplying cattle to a producer-owned brand (e.g., Nebraska Corn-Fed Beef, Nolan Ryan All Natural Tender Aged Beef).

Smith (2005) reported that small/medium-sized packers can react to beef industry consolidation/concentration by: (a) producing for regional supermarkets (e.g., Kane Packing Company, producing for Publix Supermarkets and HEB Supermarkets; Harris Ranch Beef Company, producing for Nugget's Supermarkets), (b) producing "story beef" (e.g., PM Beef Group, producing for Ukrop's Supermarkets and Heinen's Supermarkets) and, (c) producing "natural beef" (e.g., Kane Packing Company, producing for Nolan Ryan All Natural Tender Aged Beef; Harris Ranch Beef Company, generating Harris Ranch All Natural Guaranteed Tender Beef; Brawley Beef Company, generating Southwest Rancher's Pride Natural Beef; Creekstone Farms Beef Company, generating Creekstone Farms Natural Beef). Relative to generating a "true" brand of beef, Saunders (2003) said it must involve: (a) traceability—source verification, (b) a story—a set of value propositions, and (c) quality control—process verification.

Tatum (2003) described an entrepreneurial feeder/packer in Colorado (Jay Hasbrouck; Double J Feedyard—6,000 head/year; Double J Packing company—120 head/day) who uses no growth promotants or antibiotics during finishing and, when carcasses are graded, supplies natural beef to Laura's Lean, Maverick Ranch Beef, Coleman Natural Beef and Niman Ranch Beef (depending on Quality Grade/Yield Grade of specific carcasses).

## GETTING WHAT'S DUE YOU: COW/CALF PRODUCERS

Historically, there was a wide range in cattle production costs and a narrow range in cattle values; as a result, the only real opportunity to make a profit was to be a low-cost producer. Currently, there is both a wide range in cattle production costs and a wide range in cattle values; consequently, one can be both a low-cost and a high-value producer. Marshall (2004) said "While becoming a low-cost producer is essential to survival, focusing on the value side is the key to profitability."

Smith (2003b) said "Small-scale cow/calf producers can control their own destiny by: (a) changing their genetics and/or management practices to improve sales value of their calves, or (b) developing their own markets for beef." Howell (2003) said "Weanling calves: (a) for which producers have herd-health and carcass data to accurately predict calf performance (in the feedlot) will have high value, (b) that are committed (transactionally) to

a marketing alliance and which will perform well (in the feedlot) and yield a desirable endproduct (carcass; meat) will have high value, (c) that are “commodity cattle” will have a low value, and (d) that no one knows anything about (from a health, performance or carcass/meat standpoint) will have to be sold at a cheap enough price to avoid any losses that may result from poorly immunized, poor performing and/or poor endproduct (carcass/meat).

Help is on the way for genetic improvement. Dolezal (2005) reported that Metamorphix/Cargill Meat Solutions will soon sell Single Nucleotide Polymorphisms (“SNiPs”), as gene markers, for average daily gain, marbling, red meat yield and tenderness. Cattle Business (2005) reported that prices of feeder steers were most seriously affected by two of the genetic factors—light muscling (-\$15/cwt) and small frame (-\$9/CWT)—and by two of the management factors—sick (-\$18/cwt) and lame (-\$14/cwt). And, improving management of calves already pays dividends. Drovers (2003) described results of a Colorado State University analysis of data collected on calves sold through Superior Livestock Auctions (1996 through 2002) revealing that premiums/head for 550 lb calves given VAC-34 or VAC-45 preconditioning treatments ranged from \$18.31 (in 1999) to \$27.56 (in 2002). Smith (2003c) said ‘Beef producers can share in the 81% added value (from farm gate to retail counter) if: (a) they are part of a vertically aligned beef supply chain, or (b) they own their own products through retail sale.’”

#### TYPES OF BEEF MARKETING PROGRAMS

Consumers have a variety of products from which to choose—including conventional, natural, grass-fed and organic beef; these four types of beef are defined by marketing distinctions, not by nutritional or safety differences (NCBA/CBB, 2004; Smith *et al.*, 2005). Examples of beef marketing programs developed by single, or groups of, producers include: (a) Oregon Country Beef, (b) Maverick Ranch NaturalLite Beef, (c) Lasater Grasslands Beef, (d) Prather Ranch Certified Organic Beef, (e) South Dakota Certified Beef, and (f) Yampa Valley Beef.

It is in the best interest of the US beef industry to generate products that appeal to the wants and wishes of every potential customer and consumer. The industry is accomplishing that by offering fresh beef identified by USDA quality grades, brands and kinds (natural, grass-fed and organic). Because there are customers who will not purchase, and consumers who will not eat, conventional beef, the US beef industry should embrace production/marketing of different “kinds” of beef that are perceived (by certain customers/consumers) to be superior (in things that were, or were not, done in producing harvest cattle) to conventional beef. It is important, though, that overzealous proponents and promoters of other “kinds” of beef not denigrate “conventional” beef in the process. To claim that conventional beef is inferior because it contains minute additional quantities of certain chemicals (e.g., hormones or pesticides), when it is not reasonably possible to eat enough beef of that kind to endanger personal health, is not appropriate. To say that grass-fed beef is superior because it contains minute additional quantities of certain chemicals (e.g., conjugated linoleic acid or vitamin E) when it is not reasonably possible to eat enough beef of that kind to improve personal health, is also not appropriate. Remember, conventional,

natural, grass-fed and organic kinds of beef are defined by marketing distinctions, not by nutritional or safety differences (NCBA/CBB, 2004; Smith *et al.*, 2005).

## MAJOR TRENDS AND OPPORTUNITIES IN THE U.S. BEEF INDUSTRY

Cattle•FAX (2005) believes the major trends and opportunities in the US beef industry are: (a) globalization—increased competition, (b) domestic market opportunities, (c) retail and food service consolidation, (d) increased product branding, differentiation and accountability, and (e) market access, animal identification and source verification. Seng (2005) said ‘The US is in a strong position to capitalize on increasing world meat demand (the developing world will consume 42% more meat by 2030), but vigilance is needed to overcome trade barriers and settle sanitary and disease issues; in future negotiations, true science and scientists must take a lead role.’ To assure market access (e.g., to countries like Japan and South Korea), we must have age-verification for cattle that produce the beef we wish to export. Requirements for cow/calf producers to participate in the age-verified Japanese market were outlined by Cow/Calf Weekly (2005b) and include: (a) documented and filed calving records, (b) unique animal ID numbers, (c) transfer (cattle movements from premises to premises and/or sales of cattle) data, and (d) defined calving season.

Ritchey (2004), discussing ‘‘What’s Ahead For The Beef Industry?’’, concluded that: (1) Today, demand for well-marbled beef (Upper Two-Thirds Choice; Prime) accounts for 25 to 30% of the market...this won’t likely change. (2) The value of ‘‘Guaranteed Tender’’ USDA Select beef (identified at line-speed by instrumentation) will increase. (3) Once dismissed as a fad, the ‘‘Natural/Organic’’ beef market is growing at a 20% annual rate...increasingly, producers will ally in partnerships, alliances and cooperatives to produce beef for these specialty markets. (4) Contractual agreements between feedyards and cow/calf producers, and between feedyards and packers, will continue to grow. (5) Such contracts are needed to ensure that retail and foodservice clients consistently meet their customer’s needs...failure to deliver the specified supply—on time, every time—is a sure way to lose business (Ritchey, 2004).

Food Production Daily (2005) identified ten mega-trends (i.e., convenience food and health concerns likely to impact/shape new product development in the EU and US); among those, Number 2 is ‘‘Health—weight loss, natural and organic are important to 90% of customers’’ and Numbers 3, 4, 5 and 6 are ‘‘Age, Gender, Lifestyle And Income Complexities—food brands will be required to satisfy these needs.’’ Western Livestock Journal (2004) described the ‘‘Dakota Beef—100% Organic’’ branded-beef program as having a traceability system to tell customers and consumers where an animal was raised, what it was fed, when it was processed, and its breed history. Meat News (2005) reported that a coalition of cattlemen and businessmen (Farm To Fork, Inc.) is building a harvesting/processing plant in Park County, WY, ‘‘to allow cattlemen to share in the profits (expected to be double the profit margins normally experienced) of the beef sold to the organic market.’’

## TOP FUTURE BEEF-INDUSTRY QUALITY CHALLENGES

Drovers (2004) surveyed cow/calf producers and reported that the “Top Beef Challenges In The Next 2 To 3 Years” were: (a) assuring beef quality and safety, (b) consumer demand and perceptions, (c) improved efficiency and productivity, (d) improved animal productivity, (e) financial management, and (f) staying current with technology.

At the Strategy Workshop of the National Beef Quality Audit (in Oklahoma City, OK) in October, 2005, the “Top Ten Beef Quality Challenges” (Roeber, 2005) were: (1) Lack of traceability/IAID/source & age verification/chronological age. (2) Low uniformity of cattle, carcasses and cuts. (3) Need to implement instrument grading. (4) Inappropriate market signals. (5) Segmentation within and among industry sectors. (6) Too heavy carcasses and cuts. (7) Too high USDA Yield Grades (low cutability because of excess fat and inadequate muscling). (8) Inappropriate ribeye size. (9) Reduced USDA Quality Grades and tenderness due to use of growth-promoting implants. (10) Insufficient marbling (Roeber, 2005).

Tatum (2005) identified “Key Messages From The NBQA—2005 Strategy Workshop” as: (1) Deliver product attributes that meet consumer needs and expectations. (2) Improve the cattle supply. (3) Expand marketing opportunities in domestic and global markets. (4) Strengthen connection among segments of the beef chain via communication and targeted educational programs (Tatum, 2005).

Field (2005), also at the Strategy Workshop of the National Beef Quality Audit—2005, identified three “Goals” and fourteen “Strategies” as means by which the US beef industry can respond to its “Top Ten Beef Quality Challenges” and the “Key Messages.” Those were: Goal (1)—Deliver product attributes that meet consumer needs, expectations, and build global beef demand. Strategies: beef safety, taste/tenderness, nutritious, versatility. Goal (2)—Improve the market cattle supply. Strategies: instrument grading, YG 4 & 5, weights, marbling, health, injection-sites, bruising, profit. Goal (3)—Expand market opportunities for US beef. Strategies: traceability, age/source/process verification, costs/waste, new products, marketing (Field, 2005).

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