Feedlot Split Session

Moderator - Dale Grotelueschen

Understanding and Improving Carcass Quality

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If we expect to increase the consistency and competitiveness of beef, all sectors of the beef industry must strive to eliminate inefficiencies and quality losses that increase the price at which we must sell beef, in comparison to the price at which pork and poultry can be sold. Important in this effort will be the bovine practitioner; there are inefficiencies and quality losses in beef production that can be minimized or eliminated if the bovine practitioner works closely—in partnership—with the cattle producer.

In 1982, beef's share of U.S. consumer meat expenditures (average consumer spending for beef, compared to that for pork plus poultry) was 59%; in 1992, beef's share of U.S. consumer meat expenditures was 49%. Tom Brink of *Cattle•FAX* said, in November 1993, that "Beef's market share—earned, originally, with quality—is being eroded—stolen, with consistency and price—by poultry and pork." John Stowell of National Cattlemen's Association said, in January 1994, that "A decline of 1% in market share equals a $28 per head decrease in the value of a market steer; since 1982, beef's market share has declined by 10 percentage points....that's a loss of $280 per steer!"

InFo Meat (the newsletter of the Southwestern Meat Association), in May 1994, described beef's decline in popularity as follows: "Since 1976, (a) Beef's market **share of total meat consumption** has declined by 34%; (b) Beef's **retail price** has increased by 100% while that of chicken has increased by 30%; (c) Beef's **share of total meat expenditures** has declined by 14% while that of chicken has increased by 13%; and (d) Simply stated, the demand for beef has dramatically eroded over the past 17 years." From 1980 to 1992, U.S. per capita consumption of poultry **increased 41%** (from 59.7 to 84.3 pounds) while that for beef **decreased 12%** (from 76.4 to 67.2 pounds). Per capita consumption is not a measure of demand *per se*; rather it is—in the short-term— a measure of the amount of a commodity that is available (domestic production plus amount imported minus amount exported) and—in the long-term—a measure of the relative profitability of producing that commodity. Nevertheless, per capita consumption is a generally useful measure of relative popularity of a commodity.

Experts disagree as to why beef—in 1995—is less popular, has lower per capita consumption and has a smaller market share than was the case in the 1970's. Some experts argue that beef is less popular because its price is too high; other experts believe that the lessened popularity of beef is largely due to its low and inconsistent quality and palatability. The National Cattlemen's Association commissioned the Schuh/Johnson Report which, in 1989, concluded that "The **price** of beef, relative to the prices of alternative meats, and low, real (inflation-adjusted), **consumer incomes** account for 97% of the decline in beef demand." The Cattlemen's Beef Board, in 1991, asked Dr. Ron Ward (University of Florida) to verify or to refute the latter conclusion; the Ward Analysis determined that 93% of the decline in beef demand could be explained by comparative prices of beef, pork and poultry. In 1991, Dr. Chuck Lambert of National Cattlemen's Association said, "Beef is 32% higher priced than pork, 184% higher priced than turkey and 212% higher priced than chicken; simply put, the price of beef is greater than many consumers are willing to pay."

Dr. Chuck Lambert has, in a 1990 paper, identified $11.999 billion in "Lost Opportunities In Beef Production." The total cost of these beef industry inefficiencies amounted to nearly **$458 per head** (for each fed-cattle). If even one-half of these total lost opportunities could be addressed, gross industry returns would increase by **$229 per head** (per fed steer/heifer) or, alternatively, industry margins could be maintained at current levels and retail beef prices could be reduced by over **$229 per head** (per fed steer/heifer). Of the $11.999 billion of losses, $5.037 billion was due to factors that are associated with production of slaughter steers and heifers. Of the $5.037 billion, which amounts to **$192.36 per head** (per slaughter steer/heifer), $0.180 billion was due to Hot-Iron Branding, $0.304 billion was for Outlier Cattle, $4.410 billion was for Excess Fat, and $0.143 billion was for Management Losses. It is in the area of Management Losses that the bovine practitioner can be of greatest assistance in reducing the cost of beef production and, thereby, in increasing the competitiveness of beef. The Management Losses identified by Lambert (1990) were Carcass/Offal Condemnations (($.047 billion) and Bruises; Injection-Sites; Abscesses ($.096 billion).

The goal of the National Beef Quality Audit—1991 was "to conduct a quality audit of slaughter steers/heifers (their carcasses, cuts and dress-off/offal items) for the U.S. beef industry in 1991, establishing baselines for present quality shortfalls and identifying targets for desired quality levels by the year 2001." The NBQA—1991 concluded that—To Increase The Consistency And Competitiveness Of Fed Beef—those in the industry need to (a) **Attack Waste,** (b) **Enhance Taste,** (c) ***Improve Management,*** and (d) ***Control Weight.*** Because of quality defects, $279.82 were being lost for every steer and heifer slaughtered in the US. in 1991. The $279.82 represents potential revenue gains if all steers and heifers had no defects, and—of that—$219.25 were due to Excess Waste, $28.81 were because of Inadequate Taste, $27.26 were due to Improper Management, and $4.50 were because of Inappropriate Weight.

One aspect of implementing the improvement process for beef relates to integrated herd- health programs and management practices. Numerous quality defects are associated with the health/management sector: hide defects ($16.88), carcass pathology ($1.35), liver pathology ($.56), tongue infection ($.35), injection-site lesions ($1.74), dark-cutters ($5.00), bruises ($1.00), and grubs/blood-splash/calloused-ribeyes/yellow-fat ($0.38). Obviously, these quality losses are related to herd-health programs and management practices and can be lessened or prevented by joint activities of cattle producers, livestock handlers and bovine practitioners. An interesting aspect of the conclusions from the National Beef Quality Audit—1991 was that the *price* of beef could be lowered if we could **Attack Waste, Enhance Taste, Improve Management,** and **Control Weight;** bovine practitioners can help lower the price of beef by helping producers "Improve Management."

In November 1993, The Industrywide Long Range Plan Task Force identified eight "Leverage Points" (places where those in the beef industry can enter and make some progress); those Leverage Points were: (1) Quality and Consistency, (2) Strategic Alliances, (3) Domestic Marketing, (4) International Market Development, (5) Public Relations, (6) Production Efficiency, (7) Issues Management and (8) Producer/Packer Alliance. The Industrywide Long Range Plan Task Force, in November 1993, said that "Value" of beef was determined by the interactions of "Benefits" and "Costs"; of the eight "Leverage Points" the one that best defines Benefits is Leverage Point Number 1—Quality And Consistency—and the one that best speaks to Costs is Leverage Point Number 6—Production Efficiency. Value of beef is thus best defined as the interaction of Quality and Consistency and of Production Efficiency.

In May 1994, the Quality/Consistency, Leverage Point Panel (meeting in Dallas, TX) confirmed nine "Outcomes" that should be achieved to assure the "Quality And Consistency" of beef; those Outcomes were: (1) Reduce The Toughness Of Beef 50% By 1997; (2) Control Pathogens; (3) Keep Beef Free Of Violative Residues; (4) Reduce Carcass Defects 50% By 1997; (5) Achieve 100% Quarter-Inch Trim, Boxed Beef By 1997; (6) Extend The Shelf-Life Of Beef By 7 Days By 1997; (7) Produce 730 Pound Carcasses With Minimum Fat Trim; (8) Achieve 15% Of Beef Sales As Branded/Case-Ready Beef by 1997; and (9) Increase Eating-Quality Consistency Of Beef In All Quality Grades by 1997. Bovine practitioners can be of immense assistance to the beef industry as attempts are made to accomplish outcomes 2, 3 and 4; the special training, knowledge and experience of veterinarians are needed to assist producers in attempts to "control pathogens," "keep beef free of violative residues," and "reduce carcass defects 50% by 1997."

Later in May 1994, the Production Efficiency, Leverage Point Panel (meeting in Kansas City, MO) confirmed two "Outcomes" that should be accomplished to improve "Production Efficiency" in the beef industry; those Outcomes were: (1) Reduce Average Production Costs—Farm To Table—By 15% (Goals for reduction, by sector, are 15% for seedstock, 15% for cow/calf, 10% for stocker, 20% for feeder, 10% for packer, 10% for retailer and 10% for purveyor), and (2) Improve Product Value By Recovering $150 of the $280 Loss Quantified By The National Beef Quality Audit—1991 (Goals for recovery, by target, are $105 for Attack Waste, $20 for Enhance Taste, $20 for Improve Management and $5 for Control Weight). Again, the special talents and training of bovine practitioners are needed to assist beef producers to "reduce average production costs" and to "improve product value by....improving management."

Of the four targeted objectives from the National Beef Quality Audit—1991 (NBQA—1991), substantial progress was made in the Strategic Alliance Field Study

(SAFS), in "Attacking Waste" ($31.25 savings), "Improving Management" ($8.66 savings) and "Controlling Weight" ($3.66 savings) without losing sight of the need to "Enhance Taste." There was also a $20.29 credit per head for improved retail sales and caselife due to Vitamin E supplementation to the cattle while they were in the feedlot. But, the genius of the Strategic Alliance Field Study was not in the recovery of $63.79 of the $279.82 loss per steer/heifer due to quality defects. The genius was that—just in time—we (those in the beef industry) proved that by working together, nothing is impossible. Quality losses due to problems with management practices were lessened in the SAFS (as compared to those in the NBQA—1991) because of decreases in quality losses associated with carcass pathology, liver pathology, tongue infection, injection-site lesions, bruises, dark-cutters and grubs/blood-splash/calloused-ribeyes/yellow fat. By working together—and doing things right—the beef industry can reduce nonconformities and gain a competitive advantage. In reducing further the nonconformities in beef, bovine practitioners must play an integral role.

The Industrywide Long Range Plan Task Force, in November 1993, said that one of the eight "Leverage Points" was "International Market Development." Leverage Point Number 4—International Market Development—consists of three elements: (a) Enhance Profitability By Increasing Foreign Demand For U.S. Beef And Cattle, (b) Expand Exports To Existing Markets, and (c) Develop New Export Opportunities. In May 1994, the International Market Development, Leverage Point Panel (meeting in Dallas, TX) identified four "Outcomes" that should be accomplished to assure "International Market Development"; those Outcomes were: (1) Increase Beef Exports To $4 Billion By 1997; (2) Increase U.S. Beef Share From 9% to 18% By 1997; (3) Establish Presence In China, Latin America, Taiwan And The ASEAN, and (4) Expand Market Share In Japan (By 1 Percentage Point), Korea (By 2 Percentage Points), Mexico (By 2 Percentage Points) And Canada (By 1 Percentage Point).

Colorado State University conducted the International Beef Quality Audit in 1994 by interviewing 275 traders/wholesalers, retail operators, hotel and restaurant managers/chefs in 20 countries. The principal reasons foreign beef importers purchase U.S. beef are as follows: (1) Ability of the U.S. to supply individual beef cuts and offal items; (2) Tenderness and flavor of U.S. beef is exemplary; (3) High perception of value of U.S. beef; (4) High overall product quality; (5 tie) Image of the U.S. and its Beef Quality Grading System, and (5 tie) Confidence in the safety of U.S. beef. **Bovine practitioners are an important part of beef industry efforts to "assure the safety of U.S. beef" to our foreign customers.**

In 1994, Colorado State University conducted the National Non-Fed Beef Quality Audit. Included among the costs of non-conformance in non-fed cows and bulls were: whole cattle and/or carcass condemnation ($11.99), brands ($4.56), bruises ($3.91), latent-defects/insect-damage to hides ($2.36), yellow carcass fat ($2.27), carcasses passed with parts removed ($2.13), carcass weight lost to "zero tolerance" standards ($1.87), condemnation of edible offal ($3.99) handling of disabled cattle ($0.78), injection-site lesions ($0.66), dark-cutters ($0.06) and carcasses passed for cooking ($0.03). Again, these problems with herd-health programs and these errors in management practices increase the price of beef making it less competitive with pork and poultry. Producers need the assistance of bovine practitioners in reducing and/or eliminating these quality losses in cull cows and cull bulls.

Conclusion

Beef's share of U.S. consumer meat expenditures has declined 10% in the past decade. To recover market share, the beef industry of the U.S. must produce beef more efficiently and must change from a producer-driven, to a consumer-driven, industry so greater emphasis can be placed on increasing the quality and consistency of beef as a food. Beef production must become more completely customer-focused in the U.S. with impetus centering upon delivering beef of the desired specification to each target-market, niche-market and end-user. For both domestic and international markets, beef must be safe and competitive in price and must be of consistent quality and palatability. Improved production efficiency will allow beef to be more competitively priced. Careful study of results of the National Beef Quality Audit—1991, the Strategic Alliance Field Study, the International Beef Quality Audit and the National Non-Fed Beef Quality Audit, plus thorough consideration of the Leverage Points and Outcomes identified by The Industrywide Long Range Plan Task Force will allow cattle producers ample opportunity to have a part in determining the destiny of the beef industry. **To survive, beef producers must retain present market share and build toward increased share of both domestic and international markets. Bovine practitioners can, and will, be partners in the process of improving the consistency and competitiveness of beef.**