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## **BEEF PACKING AND ANTITRUST: A CASE STUDY IN PUBLIC POLICY EDUCATION**

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Challenging times have confronted the beef industry during the past decade. Rapid changes in the number, size and makeup of industry firms and shifts from traditional ownership and marketing patterns have raised questions about its future structure. What will the competitive position of beef be relative to other meat sources domestically and internationally? How will individual producers adapt and fit into the evolving structure?

I will discuss those changes plus some of the basic underlying economic factors. Hopefully, developing a better understanding among producers, educators and policy makers about the economic forces driving industry change will lead to a rational policy response consistent with increased competitiveness for beef relative to the other meats.

### **Task Force Addresses Producer Concerns**

The National Cattlemen's Association (NCA) Beef Industry Concentration/Integration Task Force, appointed October, 1988, addressed producer concerns about ongoing changes in the industry. The fifteen task force members represented all geographic areas, segments of beef cattle production, age groups and degrees of business experience. The task force worked together for thirteen months and solicited input from a wide range of resources. It was my privilege to serve as the primary staff person for the task force during the course of its deliberations.

The task force solicited input in a variety of ways:

1. More than 215 written requests for input were distributed to state and breed organizations; economists in academia, government and industry; feeders; packers; marketing analysts/consultants; leadership of other commodity and general farm organizations; and members of the agricultural press.
2. The task force had the unique opportunity to meet and converse openly and candidly with representatives of the meat industry. More than 150 hours of direct personal interviews were conducted between October, 1988, and October, 1989, with: (a) representatives of all segments of the beef industry — from cow-calf

- through retail; (b) policy makers in Congress and the regulatory agencies; (c) representatives of the pork, poultry and sheep industries; and (d) extension and research economists and legal advisors. These hearings were conducted with the full task force and staff present and, in aggregate, accounted for nearly 3,000 manhours.
3. An ongoing literature review of research and agricultural and related publications was conducted by NCA staff. Copies of relevant articles and editorials were distributed to the task force on a regular basis.

In addition to meeting with major players from all sectors of the meat industry, the task force identified the need for an independent, objective analysis by individuals not involved with the industry on a day-to-day basis. Dr. Ed Schuh, Dean, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, headed the research team that conducted the independent analysis (Johnson, et al.).

### **Task Force Report**

The task force final report (National Cattlemen's Association) has been circulated widely across the industry and the process of discussion and consensus building is currently under way.

### **Problem Definition**

The task force identified eight issue areas for evaluation and analysis: (1) concentration; (2) integration (by contract or ownership); (3) packer control of inventory; (4) price discovery/reporting; (5) competitiveness; (6) availability of credit (including foreign investment); (7) government regulations, and (8) international developments.

### **Industry Structure**

The following snapshot of the industry as of 1989-90 summarizes producer concerns about the cattle industry's changing structure:

The January 1, 1990, U.S. Department of Agriculture (USDA) inventory report estimated approximately 950,000 operations with beef cows. Of those, 92.6 percent have fewer than 100 beef cows (83 percent will have fewer than 50 head and 10 percent have 50-100); 4.7 percent have 100-199 cows; 2.2 percent with 200-499 beef cows and .5 percent of the operations with beef cows (about 4,750 operations) have more than 500 cows. At the large end of the spectrum, the top 20 cow-calf operations listed in the 1990 issue of *Directions* averaged 14,670 cows. That means a national beef herd of 34 million could be managed by 2,300 operations of that size.

On January 1, 1990, the United States had approximately 34 million beef cows. Of those, 52.5 percent were on farms with fewer than 100 cows. (About 35 percent were on farms with fewer than 50 cows and 16.4 percent were on farms with 100 to 199 cows), 16.6 percent were

on farms with 200 to 499 cows, and 14.5 percent of all beef cows were on operations with more than 500 beef cows. Thus, .5 percent of the beef cow operations (4,750) manage 14.5 percent of the beef cows.

Eleven states reported more than 1 million beef cows on January 1, 1990. That's 58 percent of the total beef cows. At the same time, another five states reported between 750,000 and 1 million beef cows. Together these 16 states accounted for over 70 percent of the U.S. beef cow herd.

In fed cattle, thirteen states accounted for about 87.5 percent (or 23 million) of the total 26.2 million fed cattle marketed in 1989. A total of 46,883 feedlots was reported in those thirteen states as of 1989. Of those, 96.5 percent had less than 1,000 head capacity, 3 percent had capacities of 1,000 to 15,999 and .4 percent had more than 16,000 capacity. (79 feedlots, or less than .2 percent of the total, had more than 32,000 capacity).

Of the 23 million fed cattle marketed in the thirteen largest feeding states, 16.4 percent was marketed by feedlots with less than 1,000 capacity, 32.5 percent was marketed by feedlots with 1,000 to 15,999 capacity and 51 percent was marketed by 198 feedlots with over 16,000 capacity. (30.3 percent of the total fed cattle was marketed by 79 feedlots with more than 32,000 capacity).

During the past ten years cattle feeding continued to shift from traditional Corn Belt and Sun Belt states to the Central Plains. The task force predicted that, in the future, cattle feeding will be determined by the availability and cost of water. State regulations (environmental, antitrust, antitechnology, protectionist, etc.) often override the natural competitive position of states as determined by the resource base.

Packer concentration increased dramatically during the 1980s. As recently as 1980 the four largest packers slaughtered 36 percent of the fed cattle and marketed 53 percent of the boxed beef. By 1989 four packers slaughtered and processed approximately 69 percent of the fed cattle and marketed more than 80 percent of the boxed beef. Of those, IBP accounted for about 28.5 percent of the total, ConAgra 21 percent, Excel 14.5 percent and Beef America 5 percent.

These four packers contracted, fed, or formula priced approximately 25 percent of their fed cattle needs on average. However, the percentage ranges to over 50 percent at some times of the year in some regions. (The industry has coined the term "captive supplies" to represent the aggregate of these methods of acquiring supplies by means other than direct cash negotiations).

By comparison the pork industry is less concentrated and less contractually integrated (a four-firm concentration ratio in pork packing of 37 percent and about 11 to 13 percent of the market hogs fed on contract). Recent trends in the pork industry have been to more contract production with Purcell predicting that pork packing will be as concentrated as beef by the end of the decade (Purcell). The broiler industry four-firm concentration ratio stands between the ratios for beef

and pork, but nearly 100 percent are produced either on contract or in integrator owned facilities. The four-firm concentration ratio for lamb packers is nearly 80 percent and the largest lamb packer is the largest lamb feeder. Beef producers are, therefore, competing in an overall animal protein market constituted of relatively large, sophisticated, multispecies firms.

ConAgra's recent acquisition of Beatrice and activities by Tyson and Cargill (Excel) indicate that the traditional meat packers may evolve as full line food companies. If this is the case, then beef will be increasingly forced to compete for resources (research and development, marketing, promotion, etc.) within multi-species companies as well as at the retail meat case and food service counter.

### **Factors Driving Change**

The trend toward fewer and larger firms has prevailed throughout agriculture. In the beef industry it has been more obvious at the packer level, but has occurred at all levels. These changes in the industry were largely driven by economic factors and are generally expected to continue.

*Overcapacity.* Beef cow numbers increased 35 million from 1930 to 1975. Ten year cycles of expansion and liquidation occurred during that time frame, but the general overall trend in cow numbers was increasing. Since 1975 the ten-year cyclical expansion and liquidation of the beef herd has continued. However, the overall trend in beef cow numbers has declined. On January 1, 1990, the beef cow herd was less than 34 million head — about one million more than it was two years ago, but still at approximately 1965 levels.

The decline in numbers at all levels of the industry left excess capacity in the feedlot and packing sectors — a factor closely related to contractual alignment as those sectors attempted to assure supplies and compete for dwindling numbers. Productivity increased while numbers declined largely due to improved management and increased use of new technology (larger breeds with higher yields of lean meat and reduced slaughter of nonfed cattle). Today, approximately 2 percent less beef is produced with 27 percent fewer cattle.

*Declining Demand.* During the 1970s, beef demand remained relatively stable. As supplies increased, as in 1976-77, price declined. As supplies were reduced, as in 1973 or 1979, price increased. Most price changes during the 1970s were due to shifts in supply rather than shifts in demand. Starting in 1980, however, demand began declining. Consumers would purchase the same quantity only at a lower inflation-adjusted price. This loss of demand continued until 1986. During the 1980 to 1986 period nearly the same quantities were produced and consumed — approximately 75 to 78 pounds per capita. However, consumers would purchase that quantity only at a lower inflation adjusted price.

Beginning in 1986, beef demand started to stabilize. Although consumption declined, prices increased. Price changes were again a reflection of shifts in supply similar to the 1970s.

Relative price increases for beef have contributed to declining demand and lost market shares. In 1970, the price relationship of beef to broilers was 2 to 1. Beef was twice the price of broilers. During the late 1970s the price difference widened to more than 4 to 1 and the relationship between beef and broiler prices has remained at approximately 3 to 1 during most of the 1980s. With the exception of a brief period in 1975 to 1976, pork has generally been priced somewhere midway between beef and broilers, with minor cycling up and down.

In 1970 beef enjoyed a 42 percent market share of 201 pounds per capita total meat consumption. By 1989 consumers purchased a record 220.5 pounds of total meat but the market share for beef declined to 31.2 percent. Projected figures for 1990 indicate a 30.5 percent market share for beef.

*Cost Reduction.* Much of the changing price relationship between beef and the other meats can be explained by changing costs throughout the production/processing/marketing chain. The competing meats have been more aggressive than beef in reducing production costs and processing/marketing margins. Cost reductions are, in part, related to the natural biological advantages of other species. Shorter generation length and multiple births result in faster genetic change and adaptation to consumer preferences. Concentration at the beef packer/processor level has provided economies of scale and multiplant efficiencies leading to reduced real margins and improved competitiveness in developing international markets.

In a competitive commodity business, low-cost producers have positive cash flows for a longer period of time than higher-cost producers. Consequently low-cost producers are in a healthier financial position to expand during the good times and suffer for a shorter period — or even have financial reserves to expand — during the bad times. Much of the 1980s consolidation came as a result of inefficient, poorly capitalized or negative cash flow operators going out of business or being acquired by financially stronger players. Regardless of size, low-cost producers survive in a competitive open market system.

Reducing production costs was not a popular theme in the industry. However, costs at the cow-calf level vary by as much as 100 percent compared to 45 to 50 percent for all feedlots. Commercial feedlot costs vary approximately 20 to 25 percent from low- to high-cost producers, while pork costs vary by about 30 percent and broiler costs by less than 20 percent.

What most industry media and producers missed was that the task force did not focus only on costs at the producer level. Rather, costs of marketing, transportation, processing, packaging, spoilage, multiple vaccinations — and the list goes on and on — were included.

Some cost differences relate to the makeup or structure of the industries. Beef is produced and consumed in a dispersed and segmented industry consisting of seedstock, cow-calf, stocker/grower, feedlot, packer/fabricator, breaker/distributer, retailer and consumer segments. On the other hand, poultry (and increasingly pork) is produced and consumed in a system with relatively fewer steps — integrator/grower, retailer and consumer segments. An integrated system means lower cost because fewer middlemen make a margin off the product.

Imagine a beef system without stocker/grower operations, no auctions or order buyers, no purveyors/meat brokers, very few feed dealers, only a handful of genetic companies and possibly no futures market. Now the picture is clearer and you can see that a lot of overhead currently paid by someone in the beef industry is eliminated. That is basically the system employed by the integrated poultry industry today and it's increasingly being adopted by the pork industry. It's efficient and low-cost but not real popular with segments or producers that may not have a role (or whose role might be significantly altered) in a functionally integrated beef production system.

*Capital Availability.* Coordinated production or contractual integration also may be driven by individual producer business decisions to reduce costs or to assure access to capital. While the beef business is still largely a segmented industry, the more integrated competing meats are not so concerned with profitability at each production stage. As long as the bottom line for the entire production/marketing process is in the black, the industry or individual firm will survive. The task force did not advocate integration. Firms that integrate, reduce risk, become low-cost producers and have access to capital, however, will be survivors at the end of the evolution.

*Predictable Products.* The need for predictable, uniform quality products could continue the contractual alignment trend even if cattle numbers expand. One major packer is testing for residues in feed supplies as well as fed cattle delivered to the plant. Feedlot operators with a history of problems will be crossed off the acceptable supplier list in the future.

The task force determined that cattlemen make individual business decisions to enter into marketing agreements, to contract cattle for future delivery and to feed packer-owned cattle on a contract basis. These decisions reduce risk for both parties by reducing capital requirements for cattlemen, and they increase efficiency by reducing marketing and transportation costs and increasing assurance of predictable, uniform quality supplies. The beef industry in total is competing in a mature market for meat animal protein against poultry and pork producers who have achieved or are achieving greater efficiencies and reduced margins.

*Export Demand.* Export demand will continue to play an increasing role in the beef industry's overall financial position. Some economists have pointed to the possibility of an 80 yen dollar to achieve the net

trade surplus required to pay interest costs on U.S. debt held by foreign creditors. An 80 yen dollar could substantially increase export demand for U.S. beef.

The flip side of the exchange rate issue is that U.S. production and processing assets also become relatively less costly in terms of foreign currency as the dollar declines in value. Recent media articles have discussed Japanese purchases of some Western ranches and packing facilities. This trend will accelerate if devaluation of the dollar occurs. The task force report reflected the belief that, if packers or cattlemen become noncompetitive, open capital markets and avoidance of protectionist legislation would provide new players and restore competition.

## **Policy Alternatives**

Alternatives evaluated by the task force fall into five general categories: (1) Do nothing. Let economic forces and individual business decisions continue to shape the structure of the industry. (2) Fine tune the present system, primarily by increasing information availability and flow through the industry. (3) Coordinate producer actions, primarily in marketing. Group marketing efforts and pooled auctions are examples of group action that could be pursued. (4) Delegate marketing responsibilities to some type of exclusive exchange — central electronic markets, exclusive bargaining agencies or a marketing board. Or, (5) Request government or legal intervention including increased antitrust enforcement, stronger regulation of livestock procurement practices, or private lawsuits.

## **Recommendations**

The task force made its strongest recommendation after a thorough evaluation of factors driving change in the industry, the competitive position of beef in the overall meat market, and analysis of the policy alternatives — “That the nation and the beef industry are best served by the capitalistic, competitive free market system.”

Recommendations specific to the eight issue areas include:

1. *Concentration.* The task force recommends no more mergers or acquisitions of beef slaughter facilities be allowed by the Big Three packers.
2. *Integration.* The task force recommends that no action be taken to alter or halt current trends toward contractual integration among operators in the beef industry's various sectors.
3. *Pack and Feeder Control of Inventory.* The task force strongly recommends voluntary reporting of controlled or “captive” fed cattle inventories (including numbers and days to delivery) by all packers, for each plant, and by all feedlots to the Market News Service of the Agricultural Marketing Service/USDA and/or cooperating private market reporting services.

*4. Price Discovery and Reporting.*

- a. The task force recommends development of boxed beef and retail price indexes and their use, along with live cattle prices, in developing price indexes for fed cattle and feeder cattle.
- b. The task force strongly encourages voluntary price reporting by all cattle buyers and sellers to the Market News Service of the Agricultural Marketing Service/USDA and/or cooperating private market reporting services.

*5. Competitiveness.*

- a. The task force encourages research to develop new technologies that will lower costs of production, processing and marketing, thus improving overall industry efficiency.
- b. The task force recognizes the need to improve technology transfer systems, and it endorses the Integrated Resource Management concept.
- c. The task force encourages producers — individually and through cooperative efforts — to take advantage of opportunities to increase profits through new marketing strategies, coordination, integration, risk management and retained ownership.
- d. The task force supports check-off and other industry efforts in advertising, research, industry information, new product development, education and information programs.

*6. Credit and Finance.*

The task force encourages development of new credit sources for agriculture.

*7. Government Regulation.*

- a. Because of increased potential for antitrust violations, the task force requests that the federal government more closely monitor mergers and acquisitions in the packing and processing industries.
- b. The task force encourages the government to move toward a market-oriented agriculture rather than programs involving government controls and subsidies.

*8. International Developments.*

- a. The task force recommends that the government continue to pursue a policy of reduced trade barriers and encouragement of fair and open international markets.
- b. The task force supports programs to expand international markets for American beef and beef products.
- c. The task force supports open international capital markets.

The future of the beef industry remains optimistic. Many efficiencies achieved by competing meats lie ahead for the beef industry. Gains

from biotechnology and other emerging technologies can, and will, improve our competitiveness. Innovations in packaging, processing and product development will further beef's gains relative to the competition. And the real plus is that the primary advantage of cattle and other ruminants cannot be duplicated by our main competitors — converting otherwise wasted roughage and forages to high quality protein.

### **Implications of Beef Industry Structural Change**

Agriculture in general is becoming more concentrated. A challenge for extension will be to overcome the mindset that the current institutional structure is sacred. For extension to be an effective information conduit it will have to differentiate the market and provide cutting edge material to sophisticated commercial producers or be faced with servicing part-time producers more reliant on off-farm income than agricultural production.

At the institution and organization level, we'll see increased specialization and consolidation. The industry probably doesn't need an animal science department or livestock marketing specialist at every land grant institution. Witness poultry science departments at institutions in a few key poultry states. At least five national organizations represent different sectors of the beef industry. The role and membership participation of these organizations will change as industry structure continues to evolve.

The Integrated Resource Management (IRM) concept will see increased practical application. An advisory team including a banker, marketing specialist, nutritionist, veterinarian, soil or range scientist and maybe an environmental ecologist will coordinate with the producer to maximize returns. With producers tailoring a team of specialists to fit their individual management situations the role of extension will be redefined. Industry concentration will result in most producers and managers being comparably or better educated than many of those serving them. Institutions must identify their role in the evolving system and provide top notch people for the team. Competition will increase for a declining number of increasingly sophisticated clientele (producers).

A declining population will result in a changing political support base. Instead of serving 950,000 individual producers, can institutions and organizations justify serving or representing 2,300 or 4,750 beef cow companies? How about serving 500 commercial feedlots instead of 46,000?

Statistics show U.S. beef cow numbers at 34 million producing only 2 percent less beef than in 1975 when we had 45.7 million. In the future approximately the same amount of beef will be produced with a national beef cow herd of 20 million. The beef industry will become bimodal (small part-time or large commercial operations) at the cow-calf level. We will see more contractual integration, more retained ownership and cattle sold fewer times during the production cycle. Cow-calf producers will produce specification cattle using genetics with consistent, predictable

end points. Producers not utilizing specification genetics (including cloned embryos) will sell at a deep discount. If producers can retain positive cash flows without specification production (because of off-farm income, inherited land base, etc.) they will remain in business; otherwise the outlook is dim.

Overcapacity will continue at the feedlot and packing sectors and become more prominent at the cow-calf level. More than one-half of all fed cattle were marketed by 200 feedlots with one-time capacities of 16,000 or more in 1989. The trend toward fewer and larger well-capitalized feedlots that can assume and manage risk will continue. Feedlots will feed to designated endpoints consistent with packer or retailer branded beef specifications.

Direct marketing by specification, increased coordination of production and blurring of lines between traditional beef industry sectors will continue. Producers will tend to become contractual input suppliers, with "marketing" in the traditional sense taking place between processors and the end consumers (either at the retail grocery or away-from-home food service store in the domestic market) or between processors and exporters (in the international market). Current extension personnel focusing on traditional "marketing" issues (selling feeder or fed cattle, for example) will need to adapt so they can address issues of importance in the evolving system.

Changing the number and size of producers has implications for rural communities. The rural infrastructure — primarily built in the mid to late 1800s when the Homestead Act and railroads were populating the Great Plains — may have outlived its economic justification. Modern production technologies, communications and transportation have made the existing infrastructure obsolete in some regions. Some communities have lost the critical population mass necessary to sustain services and quality life.

Environmental and water quality issues will remain on the policy agenda and will contribute to regional production shifts. These are emotional, social and political issues with economic implications. Urbanites are willing and able to pay more for water for every day uses than agriculture can pay for irrigation. Erosion of public support and increasing demand for water by the growing urban population make this a difficult issue for agriculture. The task force predicted that water availability and cost will determine the location of cattle feeding in the future. The same will be true for cow-calf production. Marginally productive grazing regions will decline in value or revert to other uses. Institutions depending on defense of water intensive production practices in water deficit regions had better prepare to adjust.

Productivity is geared to technology application. The Catch-22 is that technology application often hastens the trend to fewer and larger firms. Early adopters of technology gain and producers who can't or won't adapt eventually go out of business. Their assets are absorbed by their more efficient neighbors and the "size" of the average operation ex-

pands. If institutions adequately handle technology development (research) and application (extension) they hasten the trend to fewer and larger firms. Cochrane's technological treadmill continues, and technology application forces producers to run faster just to keep up (Cochrane).

Some states have attempted to slow evolution in the structure of agriculture by passing legislation to restrict technology application. The effect of these efforts ultimately will drive production to regions with more friendly regulatory climates. National technology restriction will lead to international production shifts.

Limited resources are a reality with the trend increasing. It is time to see some concentration of effort, integration of resources, and consolidation across traditional turf lines at institutions and organizations. When these changes are happening in the industries serviced by the institutions why should institutions expect to be exempt?

The beef industry asks that as public policy educators you help increase beef producers' understanding about their competitive business. The competition is not the next sector in the production/processing/marketing chain. The competition is producers in highly sophisticated production systems for poultry and, increasingly, pork. The competition is beef producers in other countries with adequate resources to produce beef for the expanding, globalized export market.

The beef industry cannot afford to unilaterally regulate its evolving structure while the competition continues to adapt structures and adopt technology to become increasingly lower cost producers. By increasing producer understanding, you, as public policy educators, can help prevent the beef industry from pursuing policy alternatives that will ultimately place it at a further competitive disadvantage. At a minimum, better understanding of potential consequences will lead to policy decisions based on improved knowledge of the alternatives rather than knee-jerk emotionalism.

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