SYMPOSIUM PROCEEDINGS

STRUCTURAL CHANGE IN MEATPACKING: CAUSES AND IMPLICATIONS

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Symposium - Structural Change in Meatpacking: Causes and Implications

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The symposium was organized by the Research Institute on Livestock Pricing, department of Agricultural Economics, Virginia Tech. The Institute is funded by grants from the Chicago Mercantile Exchange and other private agencies and public entities. The mission of the Institute is to contribute to what we know about livestock pricing and related problems. The area of "structural change" is one that is currently receiving a great deal of attention, and the symposium was organized to provide a forum for discussion on the causes and implications of the observed structural change if the 1980s.

Participants in the symposium were as follows:

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Overview: Wayne Purcell, Director, Research Institute on Livestock Pricing

From 1979 through 1986, the nominal price for Choice beef at retail was essentially flat. The inflation-adjusted price from 1979 through 1986 had to decline by over 30 percent to get the consumer to take essentially a constant per capita supply. There has been some debate about whether there has been a change in demand for beef, but I question how one can examine the data and conclude that no decrease in demand has occurred (Exhibit).[1] This decline in demand may have been the primary catalyst for much of the structural change we have seen. If the retail price is capped during a period in which rates of price inflation reach 10 percent, there is immense pressure for the middleman's cost to increase. The only way the pressure can be relieved is in the form of lower livestock prices or reduced margins at the middleman level. That suggests that the industry had to do something, had to make adjustments. One of the things the industry can do is get more efficient at the producer and processor levels.

At the producer level, in 1988, we were producing essentially the same quantity of beef from a herd under 100 million head as we produced in 1978 from a herd of over 116 million head (Exhibit). In an industry that people say is slow to change and in which rapid change is difficult, this is an impressive record of accomplishment. We have thus had a significant increase in per unit productivity if you measure output per January 1 animal unit across the past 10-11 years. There was comparable increased efficiency in hog production (Exhibit).

What happened at the processing level in the way of structural change, as we moved to fewer and larger firms, may have been motivated by pressure to gain efficiencies. Clement Ward's evidence supports the notion that up to yearly slaughter levels that translate to 300-350 head per hour in the killing and breaking function, there are significant economies of size in slaughtering and fabricating of fed cattle. One of the things that apparently happened was pressure to "get big and get cheap or get out". Prices were capped at the retail level with no willingness by the consumer to accept higher prices. There was therefore no relief for increased costs of processing, distribution, etc. except in the form of lower cattle prices at the bottom end, or adopting some technology at the processing level to get more efficient and to cut the costs.

During the period from the late 1970s until 1988 when the overall inflation rate periodically exceeded 10 percent, it is apparent that the deflated farm-to-retail price spread for beef trended lower (Exhibit). There is at least an association between the downward trending price spreads and the consolidation that we saw have seen during the period. It does appear that there were size economies during the 1979-88 period from some source. Packers were able to more than offset the implications of the overall price inflation and inflation-adjusted price spreads for beef decreased.

In the pork sector, there was less evidence of increased efficiency at the packer and processor levels. The farm-retail price spreads do not show the downward trend that was apparent in beef (Exhibit).

In the final analysis, however, what was done at the producer level and at the processor level was not sufficient to offset the major demand problems. In inflation-adjusted terms, the prices of both fed cattle and feeder cattle trended lower across the period (Exhibit). With a situation of capped prices at retail and pressures for increased packer costs, something had to give. What "gave" was the producer. From a herd in 1975 of 132 million head, we are now under 100 million head (Exhibit). Forced liquidation of over 32 million head is the only way you can describe it. A lot of economic pressure to make some adjustments and change was being exerted. One of the adjustments that was perhaps inevitable was a move toward fewer and larger packing and processing firms in an attempt to get per unit costs down.

In hogs, prices also worked lower after adjusting for inflation (Exhibit). Hog numbers are now well below the numbers around 1980 (Exhibit).

Consolidation, I would therefore suggest, was an inevitable result of the decreases in demand. The cattle industry is perhaps larger today than it would have been had the consolidation not occured.

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[1] Exhibits used in the presentations are shown at the end of the "Proceedings" and are listed by presenter.

Any reduction in costs in the middle, and inflated-adjusted price spreads for beef did move lower, means the pressure on the live cattle prices across that time period was mitigated a bit.

Research and development in marketing and product development may be greater today than it would have been without the consolidation. The large firms do have deep financial pockets. The coordination of vertical stages of activity may be greater today than it would have been in a less consolidated industry relying more heavily on price to effect interstage coordination. Perhaps we are getting to the point that the price mechanism is not effective as a coordinative mechanism and we are moving to integrated structures and contractual arrangements to realize some economies and efficiencies. It may be that consolidation at the packer level will force further consolidation at the cattle feeding levels.

It is possible, from all this, to glean positive implications of the massive consolidation we have seen, especially in cattle. The restructured industry could be, in an overall context, a more efficient industry.

On the other and less positive side of the issue, it just may be that these large firms with the deep financial pockets are going to be very slow to put much of the money in research and development. There is not much publicly available evidence of increased effort to date.

We are going to have less competition at the feedlot level due to the consolidation. There will be fewer buyers in many areas, and processors are moving aggressively to develop "captive supplies" of cattle and hogs. There is thus a potentially negative side of all that we have seen develop.

There may be a very uncertain future for the small producer in an industry that is going to be driven by the need for volume. Increased contracting could change the nature of demand for cattle on a day-to-day basis and the small producer will feel those changes if they are not involved in contracting.

It may be that we will see needs for new public and/or private information services. I suspect that we will hear dialogue that suggests that we may have to require the reporting of price as many of the prices get internalized in the emerging vertically integrated structures.

In summary, I think the primary catalyst for much of the structural change we have seen has been the problems on the demand side. In responding to those problems, the industry has made significant steps in technological development to increase efficiency. The increased efficiency did not offset all the price pressures from the demand side problems, however, and we have an industry that was forced to contract in a major way. The result is a highly concentrated processing sector, a much smaller cow herd, fewer hogs than we had 10 years ago, and a continuing process of adjustment throughout the system. In many important respects, the future of the industry is uncertain. Our objective here today is to discuss the implications of structural change and help establish the research and policy agendas for the 1990s.

A Producers' Viewpoint: Chuck Lambert, National Cattlemen's Assn.

This is the second year that the NCA has addressed the concentration/integration issue. A year ago, it became an emerging grassroots issue. A subcommittee of the NCA Marketing Committee evaluated some of the economic forces driving concentration and integration. Some of the resources we called on were Jens Knutson and Clem Ward. Member concerns continued and a concentration/integration task force was appointed on October 6, 1988. The task force is made up of 15 members -- mostly cattlemen from all sectors and geographic areas of the country, and a few livestock market representatives. One of the first things the task force did was to identify a set of issues or major concerns. I will lay out those issues and define them from the producer's perspective.

Since its inception, this task force has conducted over 130 hours of hearings. We have met with interested parties ranging from cow-calf producers to the chief operating executives of the three major packers. The task force met with executives of the two largest feeding companies that are selling cattle on a formula-pricing basis, farmer-feeders in the Midwest, some of the regulatory people -- Packers and Stockyards, Federal Trade Commission, Justice Department -- and people on the legislative side. We went to Atlanta and met with major poultry integrators, two of the largest pork integrators in the country, and with some of our members who are cattlemen but who are also contract growers for the major poultry integrators. Task force members came out of these activities with a much broader perspective than they had in October of 1988.

The eight issues that the task force identified as problem areas are:

1. Concentration: Three major packers are processing over 60 percent of the fed beef and merchandising nearly 80 percent of the boxed beef. The four-firm concentration ratio is up to somewhere around 65-67 percent for fed cattle slaughter.

2. Integration: Some of these same large packers have developed new means of procuring supplies. IBP has formula pricing arrangements with two of the larger feeders. Some of the major feeders have "backed" into the stocker operations and into intensive grazing programs. One major feeder also owns a video auction and has formed a 50-50 partnership with a major feed company. This organization will partner with cow-calf operators on a joint-venture basis where a calf-cow operator can retain a third or two-thirds of the calf crop. Those cattle will be fed at the feedlot and merchandised to IBP on a formula basis. Monfort, before their merger into ConAgra, was a large cattle feeder. ConAgra feeds a portion of their supplies, and Excel has used futures and basis contracts to assure themselves a portion of their supply through the year. The Agricultural Marketing Service of the USDA estimates that somewhere around 25 percent nationally of the cattle are currently priced on other than a negotiated cash basis. This varies by region and is up to 80-90 percent in the Northwest, is estimated at 33 percent in Texas, and 20-40 percent in Kansas. It also varies by season up to 40 percent in the spring and somewhat less in the winter months.

3. Packer Control of Supplies: This is an aggregation of the first two, mainly the fact that three packers process 60 percent of the fed cattle and control 15-40 percent of their supplies at any given time.

4. Price discovery: As we begin to price cattle more and more on other than a cash basis, what does this do to the cash price as we see a thinning of this market? Are the cattle that are cash priced in these markets truly representative of all cattle, especially if we are pricing the rest of the cattle basis using the publicly reported price? What does it all mean to price reporting? We have one packer that reports boxed-beef prices on a regular basis. We have one that sometimes does when it serves its advantage and one that never does. As we become more focused and consolidated, the need for additional information by producers will intensify. There is also very little publicly-recorded information on the formula pricing agreements -- information important to other producers who may or may not want to enter into similar agreements. The need for more information for producers to make rational economic decisions will increase.

5. Competitiveness: How does all this effect beef's ability to compete with pork and poultry? Wayne Purcell showed the decline of consumption of beef as beef production declined. That has been essentially offset by increases in poultry consumption. The poultry industry is much more integrated, and until at least lately, much less concentrated. The four-firm ratio in broilers is somewhere around 37 percent with the largest firm after the Tyson-Holly merger having around a 21 percent market share. Basically, two or three genetic firms produce all the breeding stock for broilers. The poultry sector has a much narrower genetic base, a much less diverse genetic population than beef, and that gives them a more consistently uniform product. Beef's problems in being competitive are compounded by the fact that chicken is basically a third the price of beef on a comparable type product. We thus have the price considerations plus the poultry firms have also been much more aggressive in product development. The trends in pork are similar to poultry but so far less pronounced. To what extent has the nature of the industry structure affected our ability to cope and compete?

6. Sources and Availability of Capital: The fact that the creditors are in the risk avoidance business and the fact that we have a lot of people operating on borrowed money has meant many producers have been forced to forward price, contract, or hedge in order to qualify for credit. To what extent has this financial requirement driven the industry toward more contractual arrangements?.

7. The Regulatory Dimension: Why were we allowed to get where we are given current antitrust laws? At what point will the regulators draw the line?

8. International Developments: With the opening of the Japanese market, we have seen increased export opportunities and we have seen Japanese firms investing primarily on the west coast in specialty niche operations. Typically, these have been more integrated operations where they are backing into feedlots and also the cow-calf operation, tailor-making products for that export market. The concern: Did we go through the negotiations only to have most of the product produced in the U.S. integrated Japanese firms? Can U.S. producers compete in the international market?

Those are the eight issue areas. A progress report from the task force was distributed at our convention on January 30. The final findings report of the task force with alternative policies and potential consequences will be completed by mid-October and circulated among our membership and state organizations. Any policy that is developed in this area will take place at our annual convention in Nashville during late January.

The task force also identified the need to have an objective, hands-off look at the industry. Ed Schuh, D. Gale Johnson, John Conner, Andy Schmitz, and Tim Josling were commissioned to look at different aspects of the industry. An executive summary is available (exhibit) and the full report will be available by November 1, 1989.

Regulatory Agency Viewpoint: Bill Jones, Administrator, Packers and Stockyards

Most of you realize that other agencies at the federal level are involved in the determination of whether a federal government challenges mergers or acquisitions. In addition, other agencies are involved in the regulation of the paper market (futures market), which is the only currently existing central market now for livestock and meat. In effect, P&SA often comes to this table, with the table already being set, complete sometimes with side dishes, and then we have the responsibility of maintaining law and order in the marketplace and the market (Exhibit).

On any given day we have a total supply of animals available for slaughter. A smaller and smaller portion is now available for negotiation. One person in the Texas panhandle summed up the producer's quandary by saying, "If I have empty pens, I certainly welcome feeding cattle for the packers, and if I have customers who want to forward contract cattle, I certainly want to be in a position to assist them in doing that, but I don't want those packers controlling the live inventory." At any one given time we have the available supplies then there are the people whose hands get into that free supply and pull numbers out of it. These are the "packer feds," out of their own lots or joint ventures or being custom fed for them, the cattle that are forward contracted on a basis contract, futures, or fixed price contracts, and then those cattle procured by marketing agreements such as that used by IBP. We talk a lot about the need for more market information, but I would submit to you that there is a fourth hand in that pot. Those cattle, hogs, or whatever are often sold strictly on the basis of market news reports. I would argue that if a cattle feeder sells to a packer, he merely calls the packer, and the packer says the market did so-and-so today and the feeder says "that's fine," those cattle really never enter the supply that is available for live negotiation. These cattle are pulled out just the same as if they had been forward contracted or marketed under some kind of agreement.

GAO uses a narrow definition for price discovery (the process by which prices are established), in the GAO futures report. I would argue with you that we often talk about what the market is doing today, but I would submit to you that you have multiple prices -- four or five prices, not just one. You have one on the free supply we see, one for the negotiation between buyer and seller, one for the intra-company transfer cost on the packer-fed cattle, one that is a price at some point in time on the forward contracted cattle, the formula price that comes out of the marketing agreement, and an after-the-fact price on those that are sold strictly on the basis of news reports. When you hear people talk about "what is the market doing today and what is price," I would submit to you that at any given point in time you can have four or five prices, not a price that is different only for grade, weight, etc. Then we have a third factor we just mentioned, and that is the linkage between the cash and the futures.

Wayne Purcell and Michael Hudson have indicated the linkage between cash and the futures market in some of the work they have done. But from a price discovery standpoint, the futures market is now the only central market or marketplace for livestock or meat. This market is certainly playing a function as far as price discovery is concerned with the live or cash market.

Given that we know the things we have just talked about, we know they are not neutral on price, regardless of what the GAO futures report said. Suppose you have in a given area a large volume of cattle that are moved out of that free supply and have moved via some other method to captive supply. By doing that, in effect, you may have taken two of the three buyers in the market out after a day and half or two days in a six day week. Then that market falls out of bed. The regulatory's quandary is: **Is that a violation of the P&SA act which says that packers are prohibited from manipulating or controlling prices or creating a monopoly in buying and selling? Is that a basis for a case, or isn't it?**

Implications at the Packer-Feeder Level: Clement Ward, Oklahoma State University

I broke the implications of structural change into looking at impacts relative to technical efficiency and pricing efficiency. We could hypothesize that there has been a net gain in technical efficiency. I would put a question mark on that assertion for the skeptics. In my opinion, there is no question that we have a much more efficient meatpacking industry now than a couple of decades ago. Larger firms suggest lower per unit slaughtering costs. Wayne Purcell mentioned the work we have done at Oklahoma State looking at economies of size. I think there are very real price implications of the move toward larger plants. Packers, with large plants, have paid higher prices for cattle as a result of having lower costs. I think they have passed some of those reduced costs along to cattle feeders. If you were a feeder, you would much rather sell to a large efficient packer than to a small inefficient packer. Some of these benefits have been passed back to feeders, but we have no idea how much. Certainly I don't think it has all been passed forward to the retail level and I don't think the packers have captured it all because profit rates in the meatpacking business don't indicate that.

Addressing the pricing efficiency side, I think there is some debate about the implications of structural change. There are lots of things we don't understand and don't know. Consolidation means fewer buyers. This is not necessarily an economic impact as much as it is a fact. Any time you have a merger of two firms, it reduces the number of buyers or sellers by one. As we have experienced increased consolidation, we have fewer buyers for livestock. The question is whether or not those fewer buyers have adversely affected competition and prices on a day-to-day basis. I think there is some debate about this.

From some of the previous work that has been done by myself and others, the literature would show that as you reduce number of buyers you do reduce prices paid to the livestock producer, and if you increase buyers -- which has happened in the case of electronic markets -- we show an increase in prices to producers. There is a positive relationship between number of buyers and prices.

Captive supplies (packer-fed cattle, either own their own feedlots or are feeding cattle in custom lots and forward contracting) are an outgrowth of a consolidated industry. A general practice in the Plains states has been to buy cattle and tell the feeder, "I will pick them up in a week." Some packers have extended that to two to three weeks, which is in essence a form of "captive supplies". It is a very loose form of vertical integration. I think as you increase these captive supplies, we may have less day-to-day competition for cattle, and this is what Bill Jones alluded to. The packer may buy heavily for a couple of days, and then sit back the rest of the week and watch what happens.

Vertical integration and forward contracting mean fewer reportable prices. Again, this is more a truism or a fact than an impact. If packers are procuring livestock from their own feedlots, forward contracting, or feeding in custom lots, these are potential transaction prices that are never reported. The only price that may exist is an accounting or transfer price.

Vertical integration and forward contracting allows a packer to be both long and short in the futures market. They have cattle on feed or hogs being produced by contract so they can offset those forward contracts in the futures market, by going short. They can act like they are hedging those cattle as any feeder would do. It gives them an opportunity for "cash-futures gaming". They may want to lay out of the cash market in order to let prices soften a bit, then go into the futures market and take a position which looks like a legitimate long or short move. Likewise, they can aggressively bid up cash prices and take a position in the futures market to offset that, so you have the potential for some "gaming" going on there. I don't know how much of that exists.

The whole issue of consolidation, concentration, and captive supplies, means we have a lot of additional gaming opportunities among the Big 3. I think this gaming does go on. I am certainly not convinced that we have collusion among the Big 3. They don't like each other, but when you only have three, each knows what the other is doing. Each has a feel for how many cattle the others have in the feedlot that are going to be ready for slaughter in a particular week. Each knows who has been buying cattle in which feedlots, and about how many cattle are forward contracted. Their buyers are out there circulating and often go to feedlots to pick up information, not to bid. The larger packers say they are in the market every day and that is probably true. Every day buyers have money to bid, but it may be $3 under the market and they don't really want cattle. They are in the feedlots to inventory cattle supplies and to gain information from the feeders about their competitors and about future supplies.

The larger firms do know, in my opinion, what the others are doing and they can react accordingly. They can exacerbate the problem if they want to. If two firms are laying out of the market, the third can back off too and let the market soften, then run in and buy as many cattle as it can in a two-hour or half-day period. On the other hand, if prices are softening, they may go into the market and bid a dollar or two over the current market price for a couple loads of cattle just to raise that price and make sure their competitors don't get the upper hand on any given day.

We are researching this area. We have collected daily data from feedlots for a month-long period. It is interesting that there are a lot of days in which feeders show there were no buyers in the lot (these are large lots for the most part) and, when they do have activity, they may have only one or two buyers. You have to have two buyers to really have competition to begin with, and three is a lot better. I don't know if you need four, five, six, etc.

There are some weaknesses to concentration ratios and Herfindahl indexes as measures of structure because they don't take into account captive supplies. I have developed something called a "competition index" which takes into account the percentage of cattle that a packer might have forward contracted or are on feed (for the packers) and it makes the nature of the competition process much different relative to looking at straight competition ratios or Herfindahl indexes. There are a lot of fertile research areas we need to address related to the consolidation issue.

Packer's Viewpoint: Jens Knutson, American Meat Institute

Our subject today is a relevant one. There has been a lot of pressure in recent months for congressional hearings on this topic. I expect we will have those hearings and proceedings from this symposium may be of some use when we do. Those hearings won't be our first, however. The first congressional investigation into this subject was in 1888, so we are in our second century of trying to figure out what the changing structure of the packing industry means. Change has been occurring for a hundred plus years, and it will continue in the futures. With any luck, tomorrow's industry that results from today's restructuring will be a successful one; I am hopeful about that. The industry will get from where it is to where it wants, or more correctly, has to go. And, if history is any guide, in another hundred years there will be another representative from the meat industry talking to a group like this about what the changes mean and where they're taking us.

I will focus on the beef-packing sector. We will see change in the pork sector, but not to the extent we have seen in beef, at least in terms of slaughter shares. Beef's changes haven't been limited to the packing sector. We've seen change in feedlots, cow-calf operations, and in beef retailing. Change that's paralleled what's happening in other food businesses.

The original title that Wayne Purcell asked me to talk about is why the structural change is necessary, and I told him I thought that was a little to defensive, and that I didn't want to be put in that position. But I have changed my thinking about that. Change is necessary and I shouldn't be too defensive or apologetic about it. Why? Because what we're trying to do in beef packing is make a penny on a buck. Typically, that is our margin and for the last several years, it has been considerably below that. But more importantly, change is necessary if the beef business in any fashion that we currently understand it is going to be around tomorrow.

What Has Caused the Change?

If you have been following the issue, you have heard reasons given for the changing structure. No one reason precipitated it; all of them acting together got us there.

- I identify the situation with cattle supplies as the number one reason that brought this thing to a head. Wayne Purcell referenced that, but it bears repeating: Our herd number is down 32 percent from its peak 15 years ago. We operate a volume business, we operate on the margin, and our margins suffer when the volume isn't there. It shouldn't be any surprise that we are where we are today. Back in the early part of the decade, 1981-82, packers talked about the "train wreck" that was going to happen in the late 80s. You could see the handwriting on the wall. We knew the supply-side numbers were going to be tight, but nobody knew how we were going to deal with it.

- The deep-pockets argument was referenced earlier. It takes big money to do what has got to be done to market beef in today's environment.

- The competitive nature of the business. That's so obvious that maybe we don't see it -- but it is a very competitive business both nationally and internationally. There is increasing competition for the consumers protein dollar and, at the same time, packers are having to compete even more intensely with each other for cattle supplies.

- And finally you have the economies of size argument. A lot of attention has been paid to the intra-plant economies and, indeed, that has fueled the surge toward bigger plants. Not so much attention has been paid to inter-plant economies, but there are real benefits to be realized when the packer has several different plants.

There are lots of other reasons for the change, but, like those already mentioned, they all fall under the category of market forces. What we have seen happen is in response to market forces, market realities. And we'd have ignored them at our peril.

What Are We Seeing?

I am a big believer in maxims, not necessarily the one **that nature seeks to destroy that which she first makes large.** I am sure that is true, but hope it is not relevant to our industry. Instead, I think the relevant one is **if you are not growing, not changing, not moving forward, not developing, you're dead.** We are changing, we are a dynamic industry. "Dynamic" is not a word used to often in characterizing our industry, but in the strucutral area, we are dynamic.

- This time last year, National Beef was the number four packer in the country. Since then, we have had a tussle between an expanded existing company and an entirely new company, and we have a new number four today and could see a new number four next year.

- We have heard from a potentially new and major player, Continental Grain. The Chairman of Continental Grain said earlier this year that he wants to move his company into value-added products and specifically referenced the meat industry. What does that mean for the future? I don't know, but I find it encouraging.

- We are seeing foreign investment in this industry increase. We have the Australians who bought into the U.S. beef industry and saying they want to be a major player; they've bought Tama and they are going to buy more. You have heard about the Japanese investing on the west coast; they will be a larger player in the U.S. beef industry in the future. And the Europeans are looking to invest in this country, too.

- At the same time, the U.S. is investing overseas. Cargill has built a plant in Canada and has one in South America. The globalization of the U.S. beef industry has arrived, with packers investing in overseas markets trying to grow the foreign trade in beef. Early indications are it will not be easy, but we will be successful.

- Wayne Purcell earlier questioned the level of commitment of the large firms to R&D. IBP is investing a hundred million dollars annually in growth and efficiency, and that doesn't count its 70 million-dollar investment in its new plant in Lexington, Nebraska, the first major plant to be constructed in this country in the last decade. This is not a dead industry. ConAgra is spending 40 million this year alone to expand and upgrade facilities and that doesn't count the major and expensive overhaul of the former ValAgra plant in Amarillo. That is going to be a state-of-the-art fabrication plant that is going to produce to specifications that are not currently being addressed, but will have to be addressed in the future. By restructuring, this industry is anticipating both the problems and the opportunities tomorrow will bring. ConAgra says they're doing things that only a company their size can afford to do but I'll add that they're doing what the rest of the industry has to do in the future if there is going to be a future. And the changes aren't just limited to large packers. Smaller packers are changing, investing, commiting to the future and to the efficiency and to the long-term viability of the beef sector.

These changes will give beef a fighting chance to stabilize its market share and that's something we haven't taken as seriously as we should. We are continuing to lose market share and if you find that painful, believe me, it's nothing compared to getting it back. These changes and the reasons behind them also point to the shake-out continuing, albeit at a much slower pace. Inefficient companies, most of them small, will continue to fall by the wayside. That shouldn't surprise us. More to the point, why should it surprise us? Why should inefficient businesses in the beef industry be any different than any inefficient businesses in other industries? Mid-size packers, if efficient -- and most of them are -- will remain doing business in geographical areas and in product lines that big packers cannot efficiently enter. There hasn't been any change in the status in mid-size packers in the last 20 years, and I don't expect there to be too much of a change down the road. Big packers are here to stay, though, and they will continue to duke it out every day. The top four packers in the next five years, in all likelihood, will not be the top four we have today.

What will Change Bring?

- Producers are going to get some of the things they need and many of the things they want, including several specifics they've already identified as necessary: better marketing mechanisms. An example is value-based pricing.

- Producers are going to lower their production costs as they form alliances and relationships with packers that benefit them.

- We are going to see an increased move toward contractual arrangements and other marketing mechanisms that will take some of today's risk and price variability out of the beef business.

- Most importantly for producers -- and for packers, retailers, and consumers as well -- the changes we have seen are going to mean that the beef industry has shown it can meet challenges and overcome obstacles. They're proof positive that the beef industry has a future.

There are no guarantees that beef will remain the pre-eminent meat protein in the American diet, and no guarantee of uninterrupted profits in this business. There are no guarantees that structural change will work to everyone's advantage, or that the transition from a troubled industry to a thriving one will be easy. The only thing certain is that the beef industry will continue to change. That's as it should be, the way we've chosen: capitalism, free enterprise, the American way.

There are challenges in today's beef business just as there always have been and always will be. At the same time, there are opportunities and profits for those who meet the challenges; that is the only thing I can guarantee, the only thing I'm certain won't change in the future.

Implications: Packer-Retailer Level: Michael Hudson, University of Illinois

My perspective is to look at research needs. You have heard a lot of things in terms of where the industry is going, and I agree with most of them. What are we seeing, where are we going, etc.

There are three primary dimensions of the consolidation we have seen to date and the consolidation we will continue to see in the 1990s.

1. **The implicit change in consumer demand and the need for coordination within the sector to get the right product to the consumer.** There are two primary issues here. First, we are going to see unprecedented change in the next decade in the consumer's demand for food safety, quality products, and foods offering different convenience levels. To meet those needs, we are going to find these packing and processing firms looking for new ways of risk reduction. On the demand and supply side we have factors which suggest we need to coordinate things within the production marketing continuum, and we are going to see more coordination.

2. The firms Jens Knutson alluded to are different. The number four meat processor is Sara Lee, not one we think of as a meat processor. **What we are seeing is a bimodal sector developing.** When we talk about the packing sector we have commodity processors out there, the IBP's of the world, and some competitive fringe firms. We also have value-added food firms playing an increasing role here. What does it mean? I don't know.

   What are the implications of having the deep-pockets that a ConAgra has? What are the implications and the possibilities surrounding the type of product development they can do? The fact that ConAgra is a food firm that has working relationships with the retailer and the wholesaler, relationships some other firms don't have because these other firms have traditionally been putting product only in the fresh meat case will be important. ConAgra is used to putting product into the processed meat case, and that is a major difference. I don't know where this is going to break out. Much of what we have heard this morning tends to focus on a particular set of these players, the commodity processors. When we say "packer," that is what we tend to be talking about. That definition is not going to hold any more. Historically, that is what we thought, but that is an irrelevant definition today. We have to recognize the food processors are there and where they may go.

3. The third driving force I will identify is **information technology.** In the next 20 years, information technology will greatly alter what we currently see in the sector. First, the scanner idea, getting a better handle on what the consumer wants. But at the same time, that technology gives us a potential to track product better, to determine what is needed in certain geographical areas, international markets, etc. We will see continued development of trading systems as we get more and more comfortable with technology, as the leadership in the industry changes, etc. The key here is that the information systems may allow control without ownership. Some of the vertical coordination issues may change, perhaps disappear, because we have the potential to control things through sharing information that comes about with the result of advancing technology.

The question is, "what does that mean to price?" At the packer-retailer level, what does it mean? Obviously, we have seen reduced competition from fewer and larger firms. The competitive fringe will continue, and it will continue for one primary reason. They will find product niches that they serve and serve very well. They can survive that way.

What are the pricing implications of this to researchers? We will have to start looking at different things. We will talk about how much of the supply is tied up. Packers will need to have supply tied up, to guarantee quality, and to stand behind the safety of the product. In the pork sector right now, there is a firm in Illinois called Hog Inc. As reported in **Feedstuffs**, Hog, Inc. is producing "verified production controlled pork," where they are controlling the product throughout the process so they can stand behind the product and say it's disease free, residue free, drug free, etc. Those kind of niches are going to be available.

We are also looking at a different product mix. Jens Knutson talks about us competing for the protein component on the plate. I agree, but as we find new technologies, we are adding storeability to the product. Excel branded products are a much different product than the traditional fresh meat, and so are the further-processed products. We may see a move toward less fresh meat to more convenience-oriented products and new forms of the fresh meat product in the market. As we move into that different product mix coupled with reduced competition, there are a number of implications for pricing.

What does it suggest for a research agenda for the 1990s? What do we need to address in this area? We keep talking about this issue as if we have already decided which side we are on, and as though we are saying that the packers are out there and the big 3 are sticking it to producers every day. We keep worrying about what is happening on a day-to-day basis. **The day-to-day interval is not relevant.** Bill Jones talked about that day-to-day available or "free" supply. That other supply, the "captive" supply, was certainly priced somewhere. It was priced a few days back. **We need to think about expanding how we look at this process, not just focus on the day-to-day process, but look at what types of lags there are and the resulting implications of having those supplies locked up.**

We need to pay attention to the behavioral dimensions of this market. We need to do two things; **(1) We need case study efforts.** Let's find out what these firms are doing. Let's use the case study as a research tool. Let's get a better understanding of firm behavior, how long the lags are. I'm not saying we don't do part of that now, but as we run our models looking at secondary data, trying to draw inferences on what is happening, we often aren't including that behavioral component -- and that is critical. **(2) Experimental methods.** Experimental economics can be employed. How do we know what the price impact is if there are two buyers versus three? We have the technology and ability. Let's get some decision-makers into a room around a set of computer terminals, set up an electronic trading system and see how price and the pricing process are affected when we pull a buyer out versus when we change the information so we can understand this pricing process better. We also need to look at empirical efforts and we need to push for better data and extend our methods. It is clear that the perfect competition model doesn't hold, so let's stop trying to apply it. We need to be focusing on assessing the impacts of all this change. Instead of looking at the prices on a day-to-day basis, we should ask "is anybody getting hurt?" What is the impact? What can we learn based on case study efforts, empirical research, experimental methods, and conceptual research? What can we learn about how to design a pricing system to deal with this industry, an industry that is not going to look the same in the year 2000 as it looks today?

Questions and Answers: Audience Participation

To Clement Ward: Please address the issue of regional competition. While we may have three buyers or three major firms at the national level, there may be only one if we look at things on a regional basis.

Clement Ward: I think that is a problem that Marvin Hayenga has addressed to some extent. We don't really know what the boundaries are for a so-called relevant market. This is an issue Bill Jones has to deal with. If P&SA gets to the point where they challenge some behavior in the marketplace, we don't know what the relevant market is. When you get down to the local feedlots, there are some of those guys that have two buyer alternatives within 100 miles. Does that mean that prices drop to a certain level before more distant buyers will come in? This is a Justice Department argument, that somebody 300 miles away will come in. I agree that the national concentration figures are handy, easy to calculate. When you get down to local market concentration ratios, it gets up into the 90s and it scares Bill Jones to death to put out that kind of information because it makes producers go bananas when they see it. We need to address that local or regional market issue. We don't know when a local market becomes a regional market or when a regional market becomes a national market.

To Any Member of the Panel: To what extent are the efficiencies gained from advertising, marketing and from the concentration distribution in this whole spectrum, providing the incentives for high levels of concentration?

Clement Ward: Did anyone go the industry outlook session when they were talking about leverage buyouts and the reasons for those? One of the speakers made the comment that it takes $30-50 million to develop a national brand name, and retailers are charging for space based on how well that brand does. If you have the leading brand in that market, you probably don't have to pay. If you're the second or third brand, you probably do have to pay. I think that answers that question to some extent. You are going to have a lot more leverage in getting your fresh meat in the market case if you're handling a national brand, a good solid brand of processed meats or poultry products, for example. I think there are some efficiencies like Jens Knutson said in the meats. We simply don't know all the answers.

Wayne Purcell: There was a clear message in a session here yesterday afternoon. It is often cheaper to buy the branded product than to develop it. A young man who had experience with Pillsbury and who is now with Pepsico says there is no question that it is cheaper to buy a recognized brand than to try to develop it.

Chuck Lambert: In a conversation with the poultry people, they said the price for Holly Farms was about 2 1/2 times what the production value was, but the glowing attraction was the brand name.

To Jens Knutson: To take it a step further, why are the packers especially the big 3, dragging their feet on product branding?

Jens Knutson: You need to look at what characterizes something that can be branded and probably the chief thing is that is must be a differentiated product. How can the big packers of beef differentiate their beef? You can do it with Oscar Myer and Hormel where processed and value-added products are the primary product line, and differentiation is possible. Until you get that differentiation, it is a hard sell to encourage movement to branded products. Wilson brands have been out there a long time. It would be a lot easier for a meat packer to pick up the value that goes with that name than to develop it all over again. It's a hard sell.

Wayne Purcell: If it is a hard sell at that level, and the large deep-pocket firms may not do it, there is a message here for many of us that work with the producer-level groups. We have to tell them it has to get done, and they need to help make sure it gets done by someone.

Clement Ward: One of the problems is that Excel started working with Kroger and Kroger carried Excel's product at a premium price and other non-branded meat at a lower price. That is a real problem. If you go back to the 1950s or 1960s when Holly Farm produced the branded chicken products, they had an exclusive agreement that the retailer would carry only Holly Farms chicken. If Kroger had done this, we would have seen a lot of different results in the branded-beef program.

Wayne Purcell: But the Kroger's of this world aren't going to do that.

To Any Panel Member: We have the "big three" packers and vertical integration and contracting is allowing them to go long and short in the futures market. You are concerned about futures-cash "gaming". Grain firms basically have been long and short for a long time. Is there any evidence from that market as to implications, or is that something you might want to look into? Is your concern a hypothetical concern or is it based on information you have heard or solid information?

Clement Ward: First, I said I haven't given it as much attention as I should. I mentioned it because I am hearing more about it from the feedlots. They seem to feel that what happened with the April and June contract with the cash prices and futures and the weak basis performance were related to packers being on both sides of the market.

Bill Jones: I think that when you get 3 major players out there and a couple of them have a great deal of expertise in the paper (futures) market, I think that one of them is going to be using that expertise in the paper market. There is a lot more concern about those 3 being able to bring pressures in both futures and cash markets. If you look at their positions, you see them long and short in the same delivery month. If you look back at the figures, you see opportunities where you are running a forward contracting program using the basis; there are opportunities oftentimes there for $4-6 per hundred. Given that the opportunities exist and it is public knowledge that they do take advantage, the question becomes, "Will top management focus on these types of opportunities or on doing value-added marketing on the live animals?"

Chuck Lambers: It seems like we have given packers a good excuse to get on the short side. They never traditionally have been players on the long side. That should be a concern.

Audience Comment: I want to clarify some things that were said. We talked about this industry being very complex, and about the economies of scale and plants. Someone mentioned there hadn't been a plant built in 10 years. Consolidation has been in putting plants together. There have been some economies of scale there. We said there are small, inefficient plants going under, but there have also been large plants such as Swift that went under. The answers are not easy or obvious. The reason for the consolidation is as much financial as anything. The industry has had great over-capacity. Plants were purchased at a fraction on the dollar by people who had the financial ability to buy them. Excess capacity, financial problems, relaxed Justice Department and P&SA activities have all allowed for the consolidations as in a lot of industries. The economies of scale from large plants and changes in the a number of plants have been taking place over a number of years, but has not been nearly as important as the antitrust posture.

Wayne Purcell: Consistent with this theme, I will ask Bill Jones an anonymous question. I had asked each presenter to prepare questions for other presenters if such was needed to stimulate discussion. "There is a feeling among some livestock producers that P&SA has not taken a strong stand on the consolidation issue at the packer level. Please respond on P&SA's actions and positions and tell us whether the existing legislative base is adequate for P&SA to be proactive in this area."

Bill Jones: We make a mistake. Small and inefficient aren't synonymous terms. The 10 largest steer and heifer slaughterers in 1985 were telescoped down by the end of 1987. You can go outside the 10 but it is the large taking over the large. The other thing is I would like to say to the research community is that you really have the responsibility to do exploratory research. We have left this to the research community, and we need models and information to monitor and to regulate the marketplace. We need to determine whether increased concentration leads to less competitive markets and illegal and unfair conduct in the exercise of market power. When you look back, have we been aggressive enough? I guess you could go back to two or three statements. Jens Knutson alluded to the fact that this was a question before the turn of the century. I would phrase this issue this way: The concern that the meatpackers would control the livestock and meat industry goes back to 1888 when the first five senators were grouped together to investigate the large 5 meatpackers. When the P&SA act was passed, it was the intent of Congress that it be more encompasssing than any antitrust statutes that had been passed at that time. Anderson, the floor manager of the bill that was eventually passed, said that heretofore we have allowed a monopoly to exist and then we have gone back and broken that monopoly up and tried to make the component parts compete again. Passing this statute (the P&SA Act) was supposed to end that. We come along to 1976 and the Hurt-Scott Redino merger and prudence act was passed. In essence, a requirement was put in place that the Justice Department and the Federal Trade Commission would be notified of intent prior to a merger or acquisition.

Thus, even though there is a great deal of antitrust authority in P&SA, and it was intended to be that way when it was passed, with the passage of the notification requirements, I guess you could say that the primary responsibility lies with Justice and the FTC. This does not change the Secretary's authority under P&SA as it was originally passed. The 1976 act did not amend that or decrease that authority in any way. Collusion is a black and white case, but if you're going to have three firms out there, they don't have to collude. They don't need to call each other up in the morning, so you don't have collusion. So that black and white challenge area is out. I am not convinced that there needs to be any changes in the existing acts or existing legislation. Perhaps there needs to be some recognition of the existing authority and some more exercise of that authority.

To Any Panel Member: Being somewhat of an outsider, I feel like I just transfered back to Sandra Batie's talk about sustainable development. You see lots of words being used to say we are worried about things because they are going to do things to the level of competition. That's bad, it is implied. Why is that? What you are talking about is the "perfect competition market," that is good. What if the cattle industry looked like the automobile industry with a few big firms and lots of little firms?

Wayne Purcell: Let's let the issue of why we should be worried about it register a little bit. As researchers, we ought to be saying who is going to be better off or worse off under those conditions. Let me briefly discuss what is happening in Virginia. We have the fourth largest hog killer in the nation in Virginia. There were never any incentives there, in my opinion, to encourage local production in the last 20 years. There was never any aggressive procurement program, never a progressive pricing program, and now the packer is in the process of putting in its own 100 thousand sows. You don't have to research this very deep to recognize that this is taking out of the individual entrepreneur sector an opportunity that might otherwise have been there. Should we be concerned about this change as to who is doing the production?

Clem Ward: I object very strongly to implications that I believe in the perfect competition model. I think the issue is that an imperfect competition model suggests there are imperfections. There is some degree of market power and there is concern about how much market power the large firms have and how they are using or will use it. Who is gaining at whose expense and is it necessary to do anything? I don't think it is a foregone conclusion that everything that is happening is bad. Jens Knutson pointed out the other side quite well. There are some potential positives in this structural change in the long-run sense. There are two sides to this, and that is why we are here.

To Any Panel Member: The government looks at the academic community to do the research. As a departmental administrator, where will the money come from? I don't believe the packing industry is going to be interested in building it up. I don't think NCA has the money to do this kind of research. Where will the money come from?

Wayne Purcell: We are public institutions to begin with. I don't think we should have to get paid from outside grants for everything we do. And to give credit where credit is due, Bill Jones from P&SA partially funded the work that Michael Hudson and I did several years ago on the causal flows in the cash-futures, and P&SA was the only entity in Washington willing to do it. Bill Jones has, over time, put his money where his mouth is. We are becoming like private research institutions, and we are starting to act as if we can't do anything unless we go outside and get funding. That is a sad state of affairs for the public Land Grant Universities.

Audience Comment: You are talking about the feeder-packer level and the packer-retailer level. You missed one sector in the equation, and that is the people who provide the technology. An issue has been raised: How do you get brands differentiated? Michael Hudson mentioned added storeability, radiation, branded products, fresh meat. The BST example. The people producing that technology have the idea that the end to consumption of their products is the producer. I disagree with that strongly. BST is just an example because that is the one I have been working with. The end consumer is the consumer in the retail store. I think there should be more of a coalition between the retailer, the packer, the producer, and the producer of the technology. In changing the industry, it's not just the consolidation of the packing firms, price changes, and how they do business. If you really want to change the industry, you must change the technology. I'm talking about the fact that BST will make a valuable difference in the product the consumer gets. A lot of companies, from the retailer to the technology producer, will get badly burned unless they do consolidate and get a message out to the consumer about what they produce and identify the risks, the benefits, and say, "Let's talk about it." The stage is being set by people I label as "one-day letterwriters," people who are against technology. Anybody on the panel, how do you get all your groups together and say let's work together and talk about changing the industry using the new technology?

Michael Hudson: It is a systems coordination issue. Who is going to develop that technology and how are you going to get it in the marketplace? Do you have to own it or are there other ways to get it there? Can you get it there by information technology or by contractual relationships? You have to take a different perspectives. I disagree with an earlier suggestion that we look at all this objectively. I think we all walk into this with a bias toward what is happening to the producer. Is the producer getting hurt? We don't really measure the benefits and costs to the whole system. If the producer is forced to change to satisfy the consumer, then we have to let things happen and make them happen to satisfy the consumer so the industry can survive.

Bill Jones: You have to realize that paying attention to the producer is something that has been ingrained in the regulatory and research area for many, many years. When our act was passed that was supposed to be the basic underpinning of it. When you get down to who worries and who benefits, take a look at the lamb industry today. For all practical purposes, if you define the independent producer segment, the feeding segment is not a part of that anymore. Packers and large feeders have taken over the lamb feeding segment in this nation. And you say who does this disturb and who is concerned? Well, this is certainly a big concern to the lamb people today. They are very, very aggressive in setting forth that concern. We are on our second go-around now on our lamb procurement on-site investigative studies. So, that's deeply ingrained and I don't think that is misplaced. Perhaps it is misused. But innovation and aggressiveness and individual ownership is what made our agriculture different from any in the rest of the world. That answers where part of the pressures that we feel come from and they are concerned about control. We are seeing a different philosophy, perhaps, in the poultry industry. But all my life has been in the red meat sector. I guess the greatest education I have was getting somewhat educated with poultry because it does come under us also. I cannot imagine some red meat producers accepting the same role poultry contract grower accept in that particular industry. Maybe I'm wrong.

Michael Hudson: But as a research community, shouldn't we broaden ourselves and not let the urgency of large numbers of people who are concerned drive out the important issue of how the system might work?

Bill Jones: I don't think in what I set forth that notion was omitted or ignored. The exploratory research is what we are talking about.

Chuck Lambert: Even if our producers don't want to accept that, if it is a necessarily evil to be competitive, provide the consistent quality, and consistent safety assurance that is needed to remain competitive, then it may behoove the people of the profession to help us do some education toward the acceptance of change. I don't want to be perceived as anti-change. I was laying out the concerns that were laid out by the industry. There are colleagues in the profession that have made a life-time profession of beating the drums of preventing the evils of corporate agriculture. At some stage, our industry and professional economists in the industry need to have the needed research and move toward the necessary informational system and cooperation to get education of our producers geared towards acceptance of change. The average cow-herd size is 34, and only 6.7 percent of the herds have more than 100 head. There are a lot of small producers out there that we need to reach either with the information or get effectively coordinated into this whole system.

Bill Jones: But you shouldn't name as your number one assumption that big is always better and small is inefficient. We have small firms involved in the international market, and so much of it hinges around management. All you have to do is look at National, a one-plant packing firm that has been very, very well managed over a period of years. That firm has been very competitive. Whether it remains so depends on the management.

Audience Comment: There seems to be a lot of efficiency in the feeder stage, to the packer stage, and to the retail stage. There is a lot of inefficiency back at the cow-calf and stocker stage. The cow-calf man still doesn't know what kind of meat to produce. What efficiencies can we gain if the market starts sending the signals back? As to consolidation, the key question is: Has competition increased or decreased? We need to form an hypothesis and test it. Wayne Purcell mentioned once in referring to consolidation that it led to decreased competition, referring probably back to the growers and farmer. Michael Hudson said that consolidation reduces competition, and I think he was referring to the packer-retailer level and said it as a fact rather than as an hypothesis. I question whether this was based on any research. I question it because our research, more in the other area of wholesaling and the food-retailing areas in the supermarket industry, found no correlation between the concentration ratio and pricing. I suggest this is an area we need to do a lot more research in, and not make assertions about reduced competition.

Michael Hudson: My intent was to say, that was a perception, not a fact.

Wayne Purcell: Unfortunately, it is time to end the session. There is no question that those of us in the research and education business have an important agenda in front of us in the 1990s. I think it is important to organize that agenda and get it clearly defined and we all have been helped by this session. And we need to recognize something else that I think is important. I think we have to find a way to give the people in our Universities who are involved in doing the research and education the incentive to get the coalitions formed with the Bill Jones', Jens Knutsons' and the Chuck

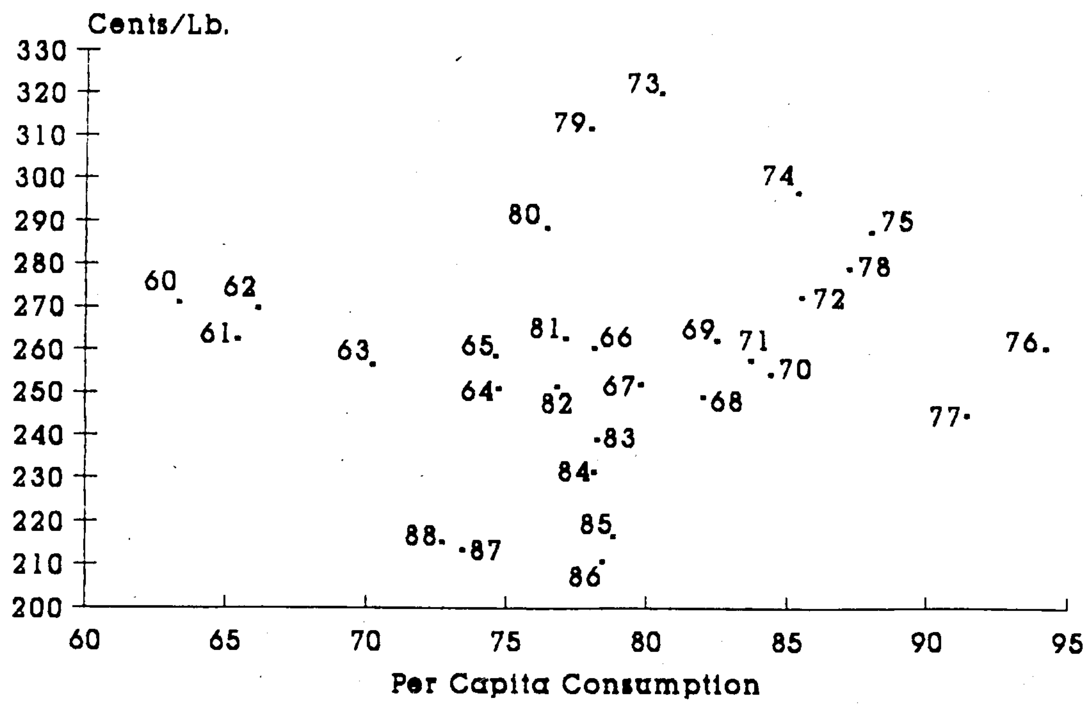
Lamberts' of the world if we are going to serve the needs of the much-discussed "real world". We all have a major challenge in front of us.

Exhibits: Wayne Purcell

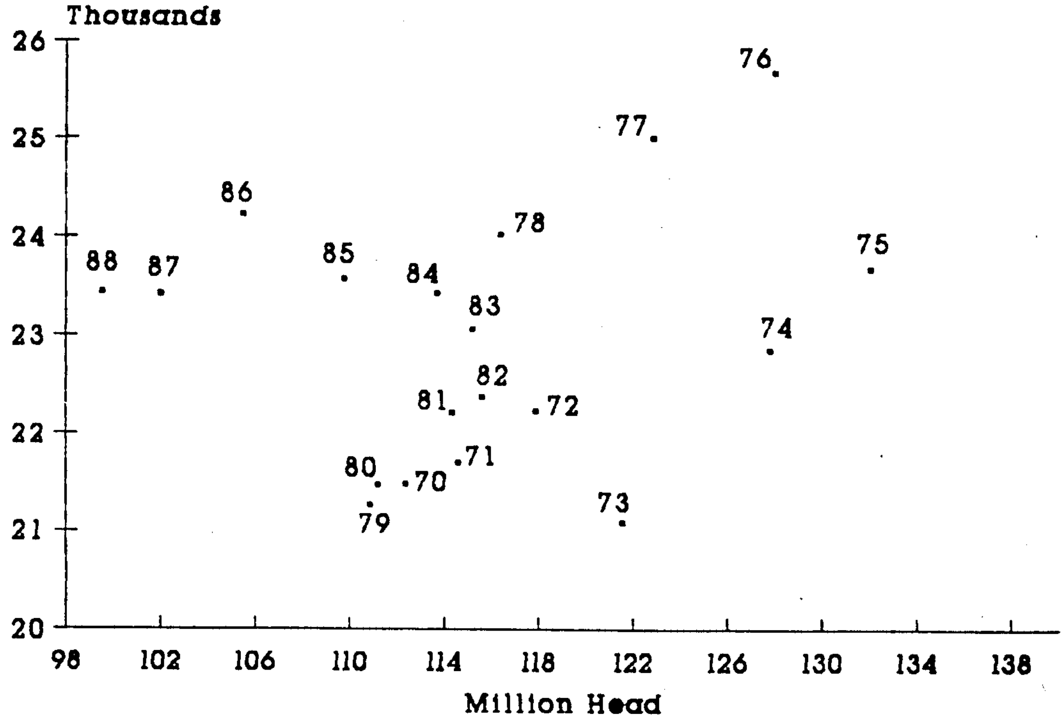
Per Capita Consumption and Price of Choice Beef at Retail, Actual and Deflated (CPI, 1982-84=100), 1970-1988

Year	Per Capita Consumption (lbs. retail weight)	Retail Price (cents/lb.)	Deflated Retail Price (cents/lb.)
1970	84.4	98.6	262.0
71	83.7	104.3	267.0
72	85.5	113.8	283.8
73	80.5	142.1	319.8
74	85.4	146.3	296.7
75	88.0	154.8	287.7
76	94.2	148.2	260.4
77	91.4	148.4	244.9
78	87.2	181.9	278.9
79	78.0	226.3	311.8
80	76.4	237.6	288.4
81	77.1	238.7	262.5
82	76.8	242.5	251.3
83	78.2	238.1	239.0
84	78.1	239.6	231.1
85	78.8	232.6	216.3
86	78.4	230.7	210.4
87	73.4	242.5	213.4
88	72.7	254.7	215.3

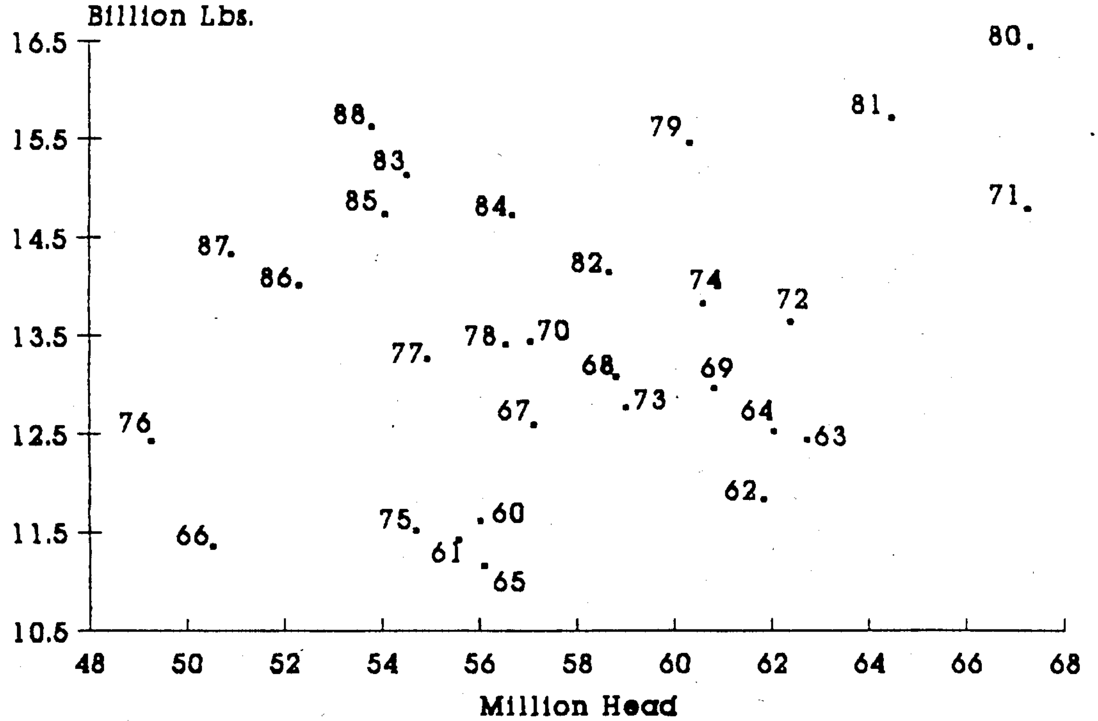
Per Capita Consumption and Deflated Retail Prices for Beef (1982-84=100), 1960-88



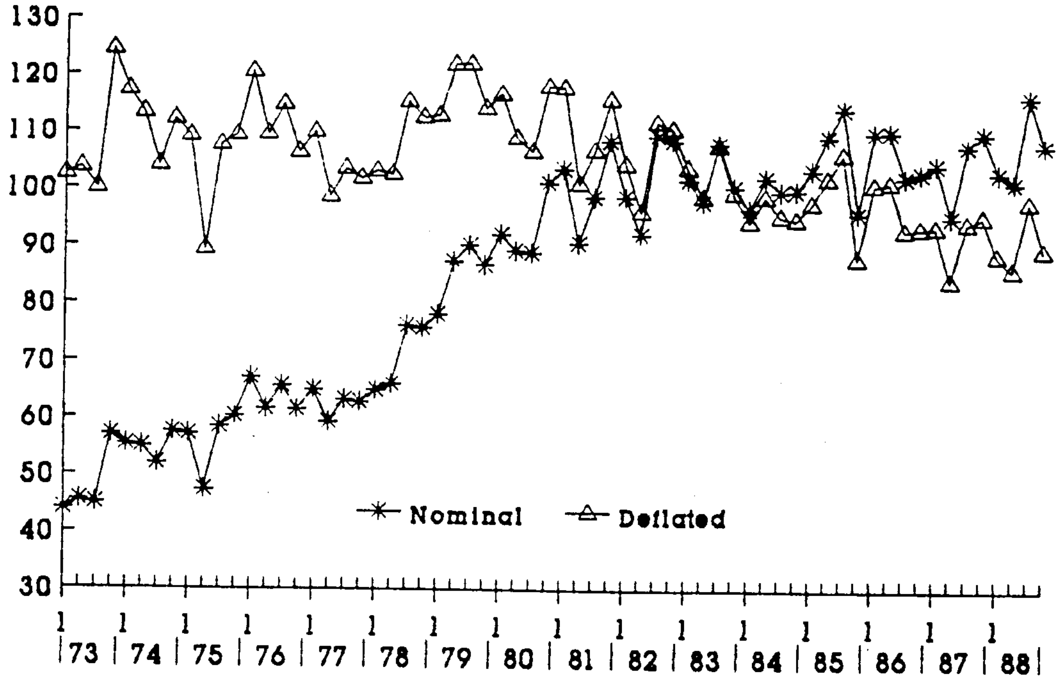
Commercial Beef Production Related to January 1 Inventories



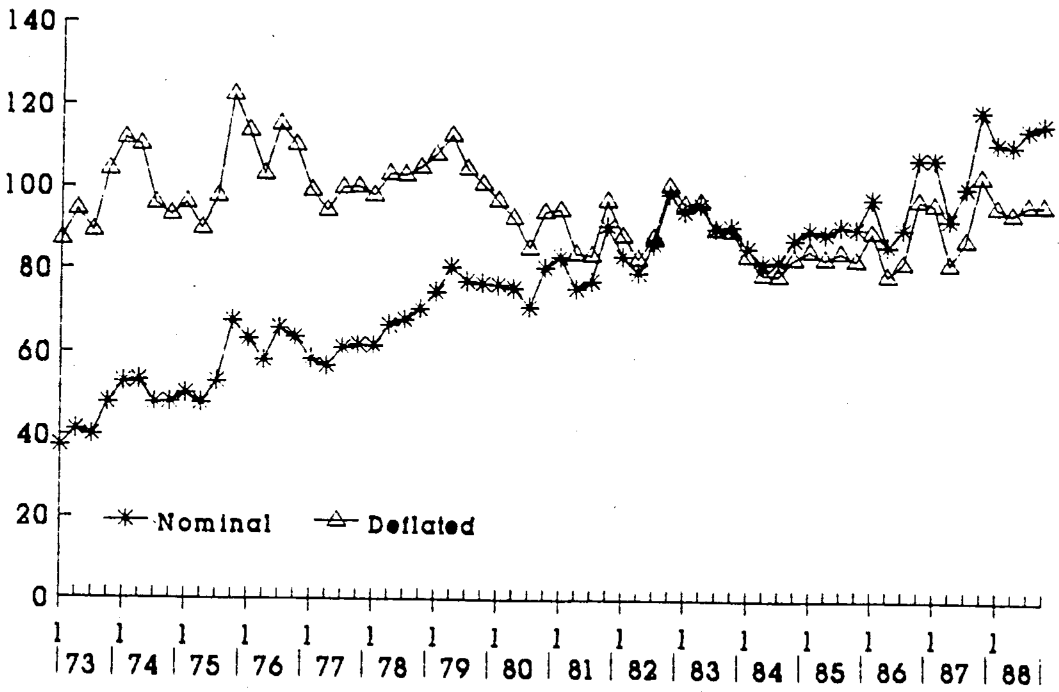
Commercial Pork Production Related to December 1 Inventories



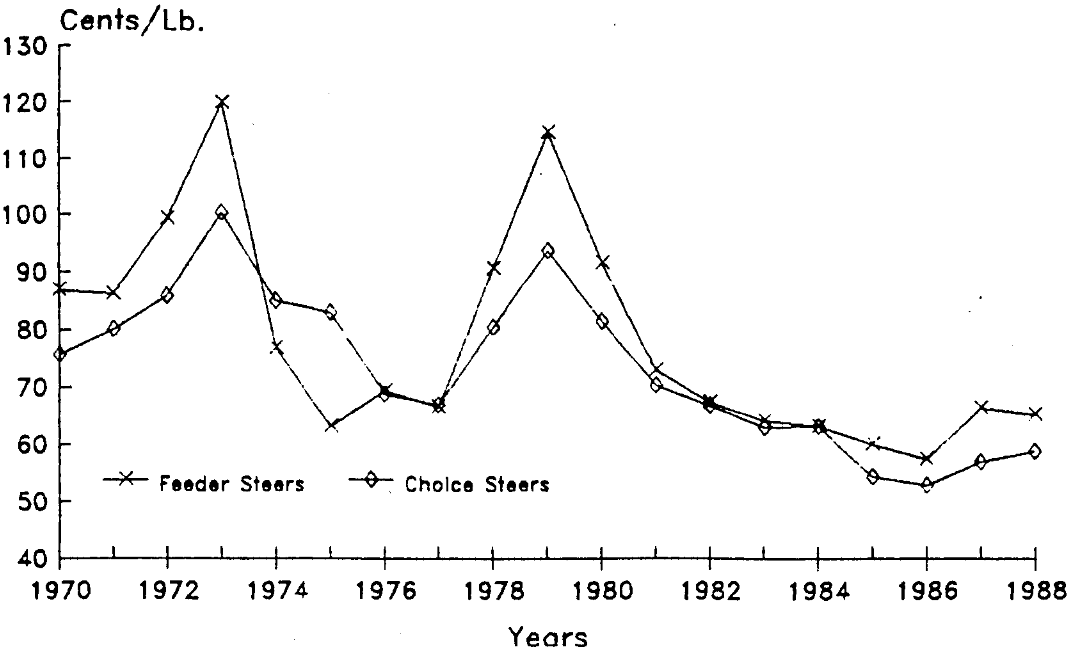
Nominal and Deflated Farm-Retail Price Spreads for Beef 1973-88



Nominal and Deflated Farm-Retail Price Spreads for Pork, 1973-88



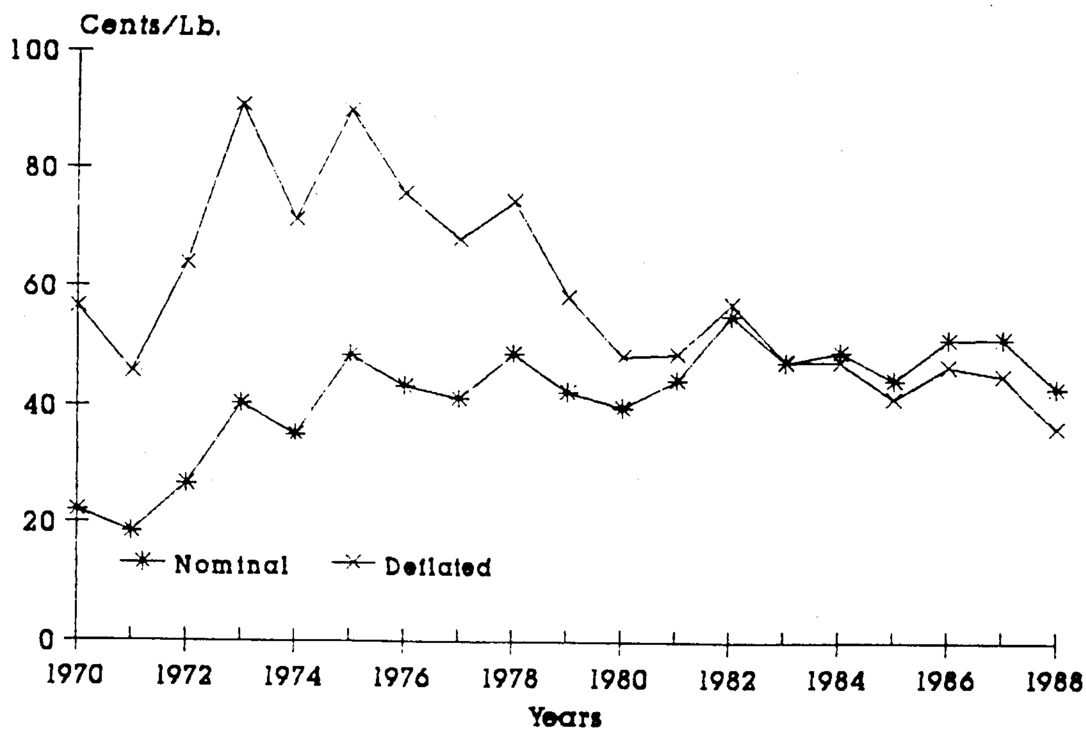
Deflated Prices (1982-84 = 100), Choice Steers, Omaha, and Feeder Steers, Kansas City, 1970-88



Cattle Inventory and the Cow Herd

YEAR	TOTAL CATTLE NUMBERS (1,000 Head)	BEEF COW HERD
1960	96,236	26,344
1961	97,700	27,327
1962	100,369	28,691
1963	104,488	30,589
1964	107,903	32,794
1965	109,000	34,238
1966	108,862	34,442
1967	108,783	34,708
1968	109,371	35,565
1969	110,015	36,511
1970	112,369	36,689
1971	114,578	37,878
1972	117,862	38,810
1973	121,539	40,932
1974	127,788	43,182
1975	132,028	45,712
1976	127,980	43,901
1977	122,810	41,443
1978	116,375	38,738
1979	110,864	37,062
1980	111,242	37,107
1981	114,351	38,773
1982	115,444	39,230
1983	115,001	37,940
1984	113,700	37,494
1985	109,801	35,393
1986	105,468	33,633
1987	102,000	33,779
1988	99,524	33,112
1989	99,484	33,669

Nominal and Deflated Hog Prices, 7-Markets, 1970-1988



TOTAL HOGS AND HOGS KEPT FOR BREEDING DECEMBER 1, 1970-1988

YEAR	TOTAL	BREEDING
	(1,000 Head)	
1970	67,285	9,645
1975	49,267	7,574
1976	54,934	8,011
1977	56,539	8,604
1978	60,356	9,605
1979	67,318	9,645
1980	64,462	9,118
1981	58,698	7,844
1982	54,534	7,475
1983	56,694	7,391
1984	54,073	6,933
1985	52,313	6,783
1986	50,920	6,671
1987	54,620	7,153
1988	55,499	7,057

Exhibits: Chuck Lambert

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NCA

Beef Industry Concentration/Integration Task Force

Progress Report

Introduction

The trend to larger and fewer operators in all parts of the beef business continued during 1988. Margins continued to narrow, and it was lower-cost producers who survived. These trends were consistent with expectations in a commodity business that is not expanding. By 1988, 6.7 percent of the beef cow operators owned 45 percent of the inventory; 1.4 percent of the feedlots fed 71 percent of the cattle; and the four largest packers slaughtered 69 percent of the fed cattle and merchandised 82 percent of the boxed beef.

There also is a trend to vertical integration in the beef industry, through ownership, contractual arrangements and formula pricing. Objectives of integrators include lowering costs and assuring supplies and quality of raw materials. Packers control a larger percent of their inventories into the future. Feedlots more frequently contract for feeder cattle, and packers more frequently contract or feed part of their cattle supplies. There also is horizontal integration across species. The largest beef processing companies also are major producers of pork and/or poultry.

These rapid changes in the number, size and make-up of firms in the beef industry and the shifts from traditional ownership and marketing patterns have caused many questions about the future structure of the beef industry. 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?

This progress report summarizes information and viewpoints of resource people presented to the Task Force to date. It should be emphasized that information gathering efforts are only partly complete, and additional information will be included in subsequent reports. Conclusions about alternative courses of action are not included in this report and should not be inferred.

Task Force Appointment

Appointment of the Beef Industry Concentration/Integration Task Force was announced by NCA President Dale Humphrey on October 6, 1988, to address these issues, questions and concerns. Task Force members are representatives of all geographic areas and segments of beef cattle production.

The Task Force is not a policy-making body. It will gather information about trends in industry structure and will project future changes under alternative macro-economic and policy scenarios. This information will be presented to the NCA membership, affiliates, Executive Committee and the Board. The Task Force will determine alternative courses of action and possible consequences under those scenarios, but it will not make conclusions about the desirability of any one alternative. The NCA membership and affiliates, as a policy-making body, will ultimately determine which of the alternatives are adopted as NCA policy and how they are pursued by the association.

Initial Task Force Activities

Issues Definition. The Task Force identified an overall issue as the degree of laissez-faire or free enterprise that will prevail in the beef industry versus increased control or regulation. The competitive free market system will continue to generate structural change. Will the industry, or some persons in it, seek government intervention to limit change?

Key Issues: (1) Concentration, with fewer and larger firms controlling larger percentages of production in all segments. (2) Vertical integration (by ownership or contract) across industry segments. (3) Packer control of inventory, including ownership of feedlots and cattle, forward contracting and formula pricing agreements. (4) Cattle and beef price discovery and price reporting, particularly as affected by structural change. (5) Relationship of beef to other meat sources and to competitive changes --- the ability of beef to compete. (6) Sources and availability of financing and the effects on structural change. (7) Government regulation of marketing and beef production. (8) International developments --- cattle and beef exports and foreign firms' investments in the U.S. beef business.

Anti-Trust Alternatives. An anti-trust attorney explained anti-trust laws. Even if it can be shown that a firm has "monopoly" power, it may be necessary to show that the firm followed illegal activities to obtain or maintain its market share. Firms in a concentrated business often say that market position evolves as a response to economic forces. Therefore, their status is "thrust upon" them. There must be collusive behavior among the players for activities to be illegal. Anti-trust court actions often cost at least $1 million to initiate and can last 5 to 7 years.

Price Discovery. A major concern is what will happen to price discovery if integration and contracting become more prevalent. Procurement of supplies through integrated arrangements leave fewer transactions in the daily cash market. Concerns arise as to how representative the daily market is of actual value and what alternative pricing methods are available if the cash market becomes unreliable.

Price Reporting. Some persons have said that disclosure of supplies controlled by packers and mandatory reporting of beef prices would level the playing field by providing cattlemen access to information that is currently available only to packers. This alternative might require legislative action, but it would not attempt to restrain the economic forces leading to change in the industry.

Meetings with Packers

The Task Force met with officials of five beef packing firms. Circumstances and opinions (of issues like government restrictions on integration) vary among the companies. Here are observations made by one or more packers:

Structure. Most changes already have occurred among the largest players in the packing business. The largest firms are not likely to acquire additional firms. There is little margin for error and if one firm becomes inefficient, others will take its place. Inefficient firms will continue to exit the business.

Size. The most important factor for production efficiency is plant size, not just company size. A company has to be relatively large to be competitive in a national or international market. Size also is needed in order to have the resources to withstand bad markets and bad margins. Firms which process more than one specie can compensate for losses in one with profits from another, but if losses persist, the company will exit the unprofitable business. Smaller firms can be very efficient in procurement and processing and can become important niche players.

Integration. Large, steady numbers of cattle are required in order to have competitive unit costs. There is 20-30 percent over-capacity in the industry now, which contributes to the intense scramble for cattle numbers. A major reason for packer feeding, contracting and formula pricing arrangements is to assure supplies of cattle. Another is to assure quality. Packers will not feed significantly more of their own cattle unless they are forced by competition to do it. Most packers feed less than 15-20 percent of their total slaughter requirement. They prefer that as many independent feeders as possible stay in business. Most packers view contracts as a customer service or as a necessary tool to compete with other packers offering contracts. Packers indicated they did not intend to become fully integrated and would prefer to procure a majority of inventory in the daily cash market. Capital requirements would make poultry-like integration unlikely.

Competitiveness. Some companies and plants which were not competitive enough would now not be operating had they not been acquired. Beef would be less competitive with pork and poultry if there were more packers and more plants. A fewer number of strong packers can offer better bids than a large number of weak packers. Slaughter costs are now lower than they were several years ago. Packer representatives say they do not particularly like each other (at least on a business basis) and they feel there is plenty of competition at this time. They admit that conditions could change, but they point to the cattle industry focus on their activities and to anti-trust laws as ways of addressing the situation if problems should develop.

Profits. Profits in beef packing now run at 1 percent or less on sales. The case against consolidation would be stronger if packer profits were higher and increased as a percentage of sales over time. Although packers typically point to return to sales as a measure of profitability, industry analysts say return to equity may be a more accurate measure of changes in profitability. Packers may offer to do more toll-processing for producers and others, in order to make more complete use of facilities and to help assure margins. Packers have operated at losses much of the time in recent months. Over the longer term, it might be more efficient for a packer to become similar to other industries and purchase raw material in advance and sell product in advance --- thereby assuring steadier operations, steadier margins and less swing between profit and loss.

Consumer Products. Packer-branded, retail-ready beef products, in volume, may be 10 years away. Packaging and other problems are slowing the trend. Consumer demands for convenience and competition from chicken are making beef's position in the marketplace more at risk.

Foreign Investment/Exports. Exports of fed beef from the U.S. to Japan in particular will expand significantly. Foreign investment in the U.S. livestock and meat business will be greatly influenced by exchange rates of foreign currencies relative to the dollar. Foreign firms do have the capital to purchase major U.S. packers.

Price Reporting. There still is a large volume of daily cattle trade, making cattle price reporting not yet a serious problem. There now is, however, so little carcass trade that carcass prices don't mean much. Boxed beef is more meaningful.

Government Intervention. Most of the packing industry would oppose government restrictions, although one or two suggested restricting cattle feeding or futures use. Nearly all would oppose mandatory price reporting.

Meetings with Feeders

Task Force members decided to meet with key members of the feedlot industry who were not on the Task Force in order to have a balanced perspective of changes taking place throughout the beef business.

Among observations made by those feeders:

Structure. The feeding industry will continue to consolidate and to change. Cattle feeding is a risky, capital-intensive business, and no one is assured of succeeding. Cattle feeding could increase in the Upper Midwest and Western Corn Belt.

Size. Smaller feeders can be very competitive niche players. They can utilize cattle that won't fit larger routine operations and can produce for speciality markets. Some feeders in all size categories contract, custom feed and use various formula pricing arrangements to some degree.

Integration. Many feeders have integrated backwards into stocker operations in order to assure some portion of needed supplies. A few feeders have integrated to the cow-calf level. Most are not integrated into the cow-calf sector, however, because of capital intensity and competition from part-time operators with off-farm income. Some feeders have grain or hay operations, and they view feedlots as a means of merchandising grain and under-utilized roughage.

Competitiveness. Most feeders felt they could compete with other feeders or packers on a procurement and cost-of-gain basis. Capital availability and hedging expertise were mentioned by some as areas of competitive disadvantage. Most feeders reported three to seven or more active packer outlets within a relevant radius of their operations. Most felt that competitive bids currently prevail. Several expressed concerns about the competitive situation as cattle numbers begin to increase.

Price Discovery. Several feeders agreed with the Task Force that price discovery may be a problem as the number of cattle traded on a daily basis declines. Others, however, stated that they could average \$1/cwt to \$1.50/cwt more through formula pricing. Some feeders listed the daily expenditures of time, effort and manpower to arrive at a cash price and the necessity to market large numbers of cattle on a weekly basis as reasons for entering into contractual or marketing agreements.

Government Intervention. There was no clear-cut consensus among feeders about government intervention. Suggestions varied from no intervention to limiting the use of futures by certain groups of individuals.

Objective Analysis of the Beef Industry

The Task Force determined that profit opportunities in all segments of the total beef industry could increase with further understanding of economic forces leading to change within the industry. The need for a comprehensive, objective analysis of these forces by the most able and credible analysts available was identified. This macro-analysis would be a "big picture" look at the industry. It would project where the industry might be by the 21st century under alternative macro-economic and government intervention policy scenarios. This macro-analysis would not preclude the need for additional micro- or topic-specific research into many topics closely related to the eight key issues identified by the Task Force. Producer understanding of impending change within the industry, strategic planning by individual producers and image enhancement of the beef industry within the research and policy-making communities would be enhanced by a professional, credible industry analysis of this magnitude and scope.

Task Force members unanimously agreed that only very credible analysts should be considered for the project. The names of several possible candidates were eliminated because of past research projects funded by various segments of the industry that could lead to a perceived bias in this analysis. It was agreed to go outside the conventional resources associated with beef industry research for a completely objective look at the industry.

Two individuals were selected after extensive screening as logical persons to head a research effort of this magnitude: D. Gale Johnson, University of Chicago, and G. Edward Schuh, Dean, Hubert Humphrey Institute of Public Affairs -- formerly with the Department of Agriculture and Rural

Development at the World Bank and on the Council of Economic Advisors headed by Alan Greenspan during the Ford administration. Other members of the research team will include John Connor, Purdue University; Richard Caves, Harvard University; and a price discovery analyst (not yet determined).

A comprehensive analysis of the beef industry by these individuals is planned to be available by July 1989.

Submitted by:

NCA Beef Industry Concentration/Integration Task Force
January 30, 1989

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Jack Maddux, Vice Chairman, Wauneta, Nebraska
Ed Bricker, Queen Creek, Arizona
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Duard Sullivan, Dickson, Tennessee
Leo Vermedahl, Dalhart, Texas
Warren Weibert, Oberlin, Kansas
Leonard Wulf, Morris, Minnesota
Chuck Lambert, NCA Staff

Executive Summary

COMPETITIVE ISSUES IN THE BEEF SECTOR: CAN BEEF COMPETE IN THE 1990s?

by

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The U.S. beef industry has experienced rapid and significant changes over the past quarter century. These changes have affected almost every facet of the sector. There was rapid growth in per capita consumption of beef from the mid-1960s to 1977 and then an equally sharp decline over the next decade. Starting in 1960 was the longest sustained growth in cattle numbers in this century, but this was followed by a nearly uninterrupted decline for the next decade. Added to this there have been substantial changes in the traditional ownership and marketing patterns in the industry, with notable changes occurring in beef processing, particularly in terms of concentration and merchandising methods.

A great deal of controversy surrounds the pricing of beef cattle. It is often implied that the pricing mechanisms are inefficient and market power is exercised by retailers and packers. This belief is strengthened by the increase in packer concentration throughout the 1980's. Some feel that futures markets, formula pricing, and methods of price reporting depress cash prices.

The price discovery process has changed markedly over the past decade as the structure of the industry has changed. Technological developments such as the emergence of boxed beef may lead to the development of new ways to price cattle.

Examples of how pricing in the sector has changed include: (1) only a small percentage of cattle are now sold through terminal and public auctions, (2) the Yellow Sheet which was an extensively used source of price information in the 1970's no longer plays a significant role, (3) trade in boxed beef has increased rapidly while trade in carcasses has decreased, and (4) a large number of transactions occur directly from feeder to packer.

The international setting in which the U.S. beef industry operates has also changed and will continue to change. Developments in the structure of the international economy have altered the way that monetary and fiscal policies affect the sector. There have been changes in protectionist policies in a number of countries and more may occur as a result of the current round of trade negotiations. Other countries have the capability to develop new production technologies and to adopt policies that are more conducive to an expansion of their beef sectors.

These developments have raised questions about the ability of the domestic beef industry to compete, both domestically for the consumer dollar and for the resources required for beef production, and internationally, with beef producers in other countries and with the potential increase in consumption of poultry and pork. As a consequence, questions are being raised about the future structure of the beef sector. What are appropriate domestic and international policies? How will the U.S. producers be affected by the changes that are underway, and what do individual producers need to do to adapt to changing conditions?

This study attempted to develop some answers to these questions. Important implications from the analysis are as follows:

For the Cattlemen

1. One of the strongest messages that comes from the analysis is the need for producers to lower their costs of production. The principal reason beef is losing out to other meats is that its cost is rising relative to the cost to consumers of other kinds of meat. Only about 3 percent of beef's recent loss in share of meat and poultry consumption can be accounted for by a change in consumer preference.

2. A reduction in costs of production will also enable U.S. beef producers to retain and increase their share of international markets. The United States is a net exporter of beef in value terms and foreign markets are an important source of income for U.S. cattlemen. The growing capacity for agricultural research and policy reforms in the developing countries will make it a competitive struggle to sustain and increase these markets.

3. Two factors are likely to be important in lowering the cost of production in the future. The first is the need to use the most efficient production technology available. The second is the need to consolidate production into even larger units so that all economies of size are realized. The fact that consolidation into larger units has been taking place at such a rapid rate in recent years suggests that there are real economies of size at the production level.

For Policy-Makers

4. Control of inventory by packers has raised questions about the pricing of the residual supplies. Thin markets generally tend to be more volatile than broader markets, thus leading to wider fluctuations in price. It is not clear, however, that the average price which prevails in such a market is any different than it would have been in a broader market.

5. The solution to imperfect and inefficient markets is to make more information available to potential and actual participants in those markets. A key issue identified in the study is the need for a price index for boxed beef. More generally, the USDA's Economic Research Service and the Marketing Service should determine whether the market information system can be strengthened and then seek the resources to bring about the needed changes.

6. The enforcement of anti-trust laws is another action policy-makers might take in the future. It is not clear that current levels of concentration have gone too far, since in part there is ample opportunity to enter the sector, especially into packing, if there should be excess profits. Capital markets are huge in this country and capable entrepreneurs will enter the sector if profits are attractive. Nevertheless, any further moves toward concentration should not be permitted without careful investigation.

7. The government needs to do more to encourage the reduction of barriers to trade in international markets. The potential for further expansion of these markets is great if cost of production can be reduced domestically and trade liberalized internationally. In exchange for trade liberalization by other countries, the United States should be willing to give up its present system of import quotas and voluntary export agreements, i.e., the meat import law.

8. Similarly, every effort should be made to sustain an open international capital market. The threat of foreign companies entering the domestic meat packing sector may be one of the most effective means of assuring competitive forces in this market.

9. A shift to more market oriented commodity programs would also help the beef sector by reducing instability in markets. The twists and turns in policy as the grain and other subsectors get out of line and eventually have to be brought back into adjustment impose instability on the beef sector, as illustrated by such things as the PIK program, the use of export subsidies, and the dairy buyout program.

10. An increase in support for research on the beef sector should have high priority. New production technology is needed for both the producer and processing sectors if the price of beef is to be lowered to the consumer. Such research will benefit both consumers and producers. It will also help the nation as a whole since it will contribute to a more competitive sector internationally and thus make it possible to earn more foreign exchange.

More research is also needed to identify and understand the changes taking place in this rapidly changing sector. Particular attention should be given to understanding the changing competitive forces in the sector and the means by which price discovery takes place.

Finally, there is an important need for research which identifies the means to address the serious adjustment problems the beef sector faces. Many small producers are bearing the consequences of the rapid changes that are taking place. The same applies to many medium-sized and large producers. New income and employment opportunities need to be identified for these dislocated producers and policies designed to facilitate the adjustment.

For Producer Organizations

11. There are a number of things producer organizations can do to help their producers. A very important need is educational programs which help their members better understand the role of futures markets, how they work, and their potential for risk management. Many producers tend to view futures markets as their enemy. The truth of the matter is that they may be the most important source of competitive pressures in the markets. Capital can flow into the sector fairly easily through futures markets without specialized knowledge on production processes and without the need to build physical facilities which takes so much time.

12. Similar educational programs are needed on how price discovery takes place in the sector. Still others are needed on the various means of risk management since risk is such an important feature of the sector.

13. Information and education programs which help clarify consumer misconceptions about the safety and wholesomeness of beef, and about other public issues, have considerable merit. Advertising designed to gain a shift in preferences without a reduction in the price of beef, however, appears to be of questionable value. The payoff from increasing the resources directed to productivity-enhancing research would appear to be much higher.

14. Producer organizations should also investigate the potential for developing new means of providing a broader access on the part of producers to future markets. Such markets are an important means of risk management, yet access to them is difficult for small producers. Producer organizations may be able to create a brokering function.

Exhibits: B. H. Jones

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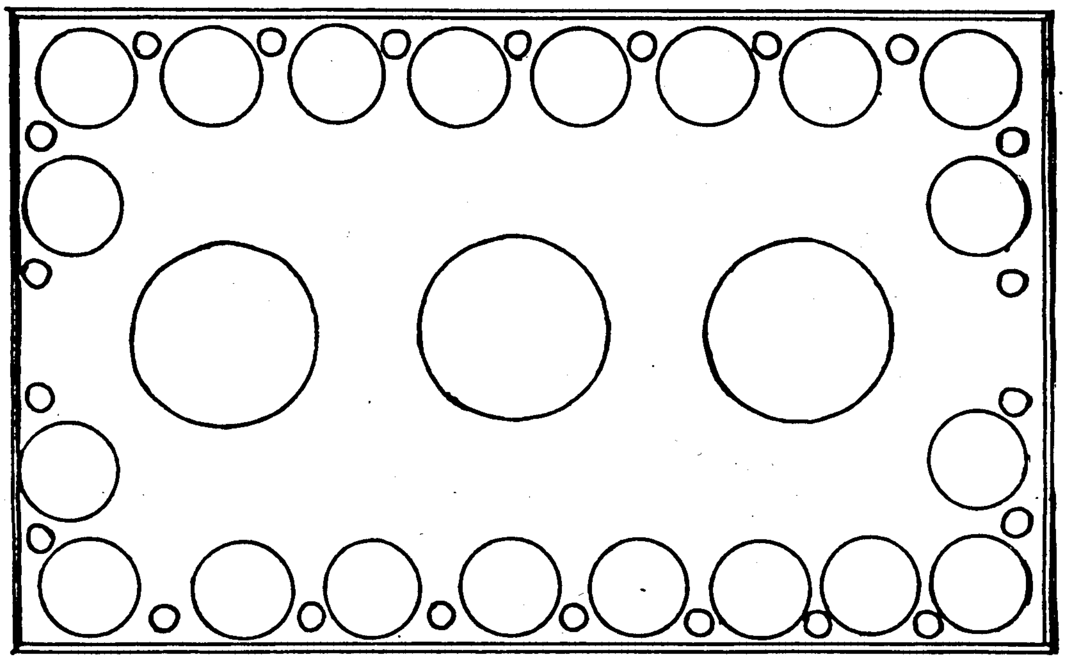
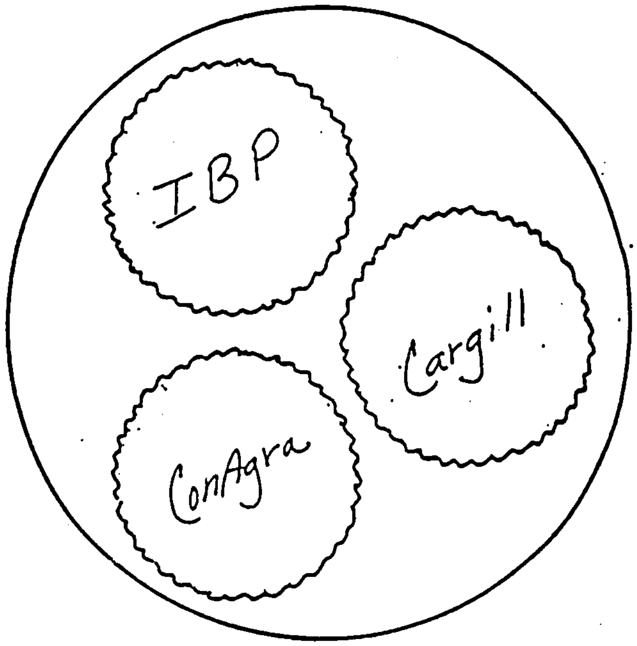
A REGULATOR'S QUANDARY

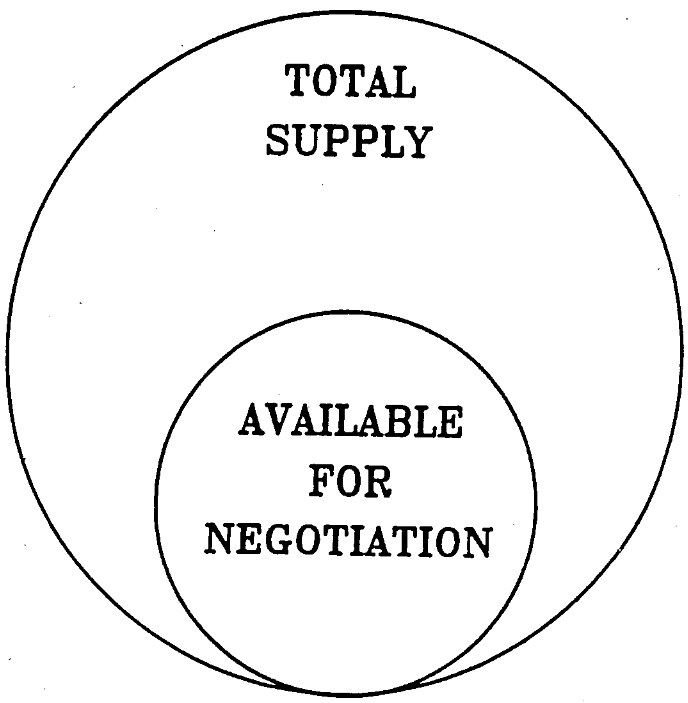
?

PRE-1987



POST-1987


IBP
Cargill
ConAgra


TOTAL
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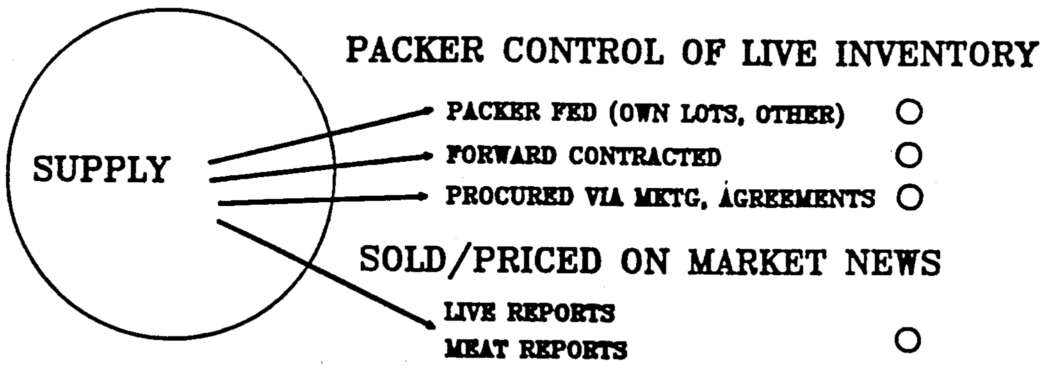
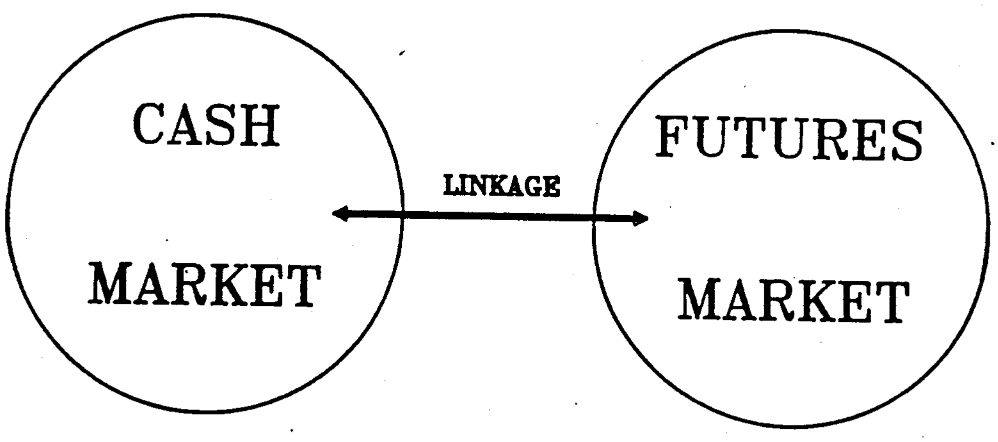

SUPPLY
PACKER CONTROL OF LIVE INVENTORY
PACKER FED (OWN LOTS, OTHER)
FORWARD CONTRACTED
PROCURED VIA MKTG. AGREEMENTS
SOLD/PRICED ON MARKET NEWS
LIVE REPORTS
MEAT REPORTS


CASH
MARKET
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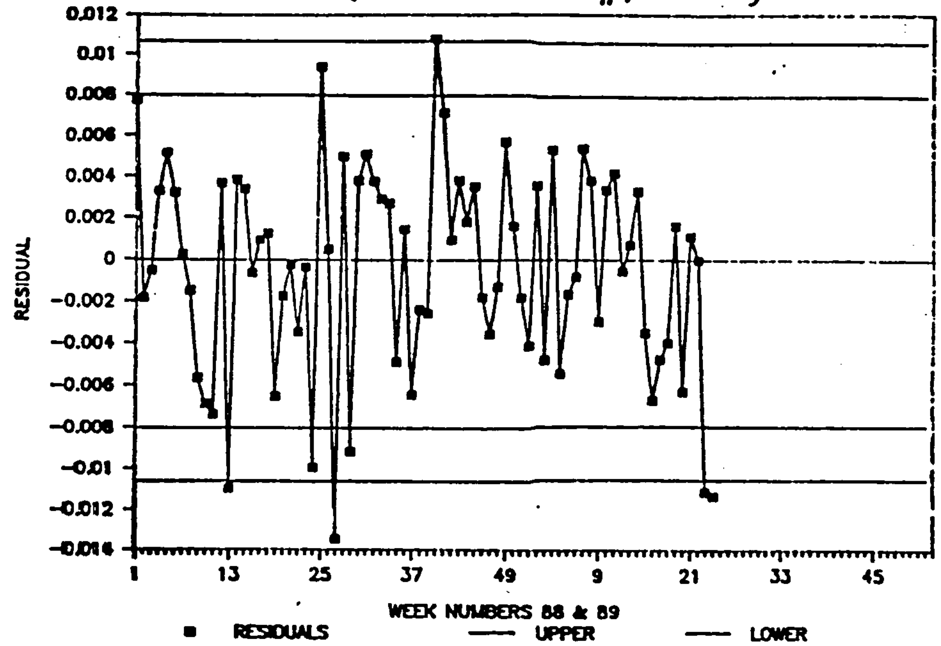
FUTURES
MARKET

Texas/Okla Panhandle Ch. Steer Price Residuals
Control Bands, 1000-1100#, Weekly 1988 - 89



Tex-Olka steer price has had an unusually large residual relative to the other markets for the past two weeks.

PRICE DISCOVERY -- NARROW

- <u>PROCESS</u> BY WHICH MARKET PRICES ARE "FOUND," ESTABLISHED

<u>P&S ACT</u>

SECTION 202(E) PROHIBITS MANIPULATING OR CONTROLLING PRICES OR CREATING MONOPOLY IN BUYING, SELLING...

Exhibits: Clement Ward

STRUCTURAL CHANGE IN MEATPACKING: IMPLICATIONS AT THE PACKER-FEEDER LEVEL

* Technical Efficiency: Net Gain (?)

  - Larger firms suggest lower per unit slaughtering/processing costs

  - Lower-cost processors suggest potentially higher livestock prices

* Pricing Efficiency: Net Loss (?)

  - Consolidation means fewer buyers

  - Fewer buyers suggest less day-to-day competition and lower livestock prices

  - Captive supplies suggest less day-to-day competition and lower livestock prices

  - Vertical integration and forward contracting mean fewer reportable cash market prices

  - Vertical integration and forward contracting mean packers can be long and short in the futures market, increasing potential cash-futures gaming

  - Consolidation, concentration, and captive supplies combined, suggest increased cash and futures market gaming among the Big 3, or increased potential for collusion

Exhibits: Michael Hudson

CONSOLIDATION IN THE 1990S

Driving Forces?

- Need for Coordination
  - *safety, quality, convenience (demand)*
  - *risk reduction (supply)*
- Firm Strategies
  - *commodity processors (e.g., IBP)*
  - *value-added food firms (e.g., ConAgra)*
- Information Technology
  - *scanners & trading systems*
  - *control versus ownership*

PACKER-RETAILER LEVEL

PRICING IMPLICATIONS?

- Reduced Competition
  - *fewer and larger firms*
  - *competitive fringe will continue*
  - *niches will provide competition*
- Different Product Mix
  - *added storability*
  - *branded products*
  - *less 'fresh' meat*

PACKER-RETAILER LEVEL

Research Agenda for the 1990s

- Behavioral Dimensions
  - *case study efforts*
  - *experimental efforts*
- Empirical Efforts
  - *data is critical*
  - *extend methods*
- Focus on
  - *assessment of impacts*
  - *pricing system design*