PRICING AND GRADING ISSUES IN LIVESTOCK AND MEATS: IMPLICATIONS TO EFFICIENCY AND INDUSTRY STRUCTURE

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Introduction

The issues and questions surrounding prices, pricing, grades, and grading in livestock and meats are not new. It may be appropriate that those issues be revisited, however. It is not difficult to formulate an hypothesis that the effectiveness of our pricing mechanism is a determinant of industry efficiency and of what type of industry structure will prevail later in the 1990s. In the livestock and meat sector, if there is a reason to continue the structure that features the individual producer as an entrepreneur, it may be the case that an effective pricing mechanism is a necessary condition for the long-term survival of that type of industry structure.

The objective here is to look at the economic issues surrounding pricing and grades at a very basic level. There is a lot of attention to price discovery and pricing efficiency, and there is discussion about what type of marketing infrastructure is required for effective pricing processes. Such terms as "price discovery" are economic jargon to an extent, and they are a bit abstract. These ideas don't need to be treated in a complicated and abstract manner. It is important to understand pricing efficiency and price discovery. Grades, grading, and product attribute identification will be critically important to those pricing processes.

Price Discovery

Price discovery refers to that dynamic process by which buyers and sellers analyze the available information and attempt to discover the price that is needed to balance supply and demand. It is truly a dynamic process; prices can and will change over time as the information base changes. Price movement over time is not of particular interest here, however. The intent here is to deal with how grades, grading, and product description enter that very important price discovery process and how the effectiveness of pricing processes is so important to the sector over time.

It is a tautology that the marketplace cannot price that which has not been identified. If there is a product attribute that should have value in the marketplace, then it has to be identified if it is to have a price attached to it. This is the very important role that grades play in the price discovery process. The market does not discover prices for cattle, hogs, or lambs. Rather, it discovers prices for a particular class and grade of cattle, hogs, or slaughter lambs.

There is, in early 1991, much discussion about value-based pricing. The National Cattlemen's Association formed a task force to look at what needs to be done move toward more effective value-based pricing. The hog sector has, on several occasions during the 1970s and 1980s, discussed or even tried a system of grading and descriptive terminology that would better allow pricing consistent with the final value of the product. In slaughter lambs, there is discussion about the fact that lamb prices tend to be tied to dressing percentage of the lambs. In other words, the lambs must dress a certain level, say 50 percent, or they will be discounted. Such pricing is perhaps inconsistent with today's need for attaching a price premium to the leaner product, the higher cutability product. Dressing percentage and cutability tend to be negatively correlated. The entire area becomes difficult, it becomes controversial, and it clearly is an area in which it is difficult to make progressive change. What is needed, in a very basic context, is a marketing mechanism that can identify the product attributes and, through the price discovery process, attach an appropriate price premium or price discount to that particular grade or category of product.

It is worth emphasizing that the marketplace cannot price an attribute that has not been identified and brought into the price negotiation process. For grades to work, both buyer and seller have to understand them, have to attach a common interpretation to the grade, and those grades have to be brought into the price discovery process.

In the beef sector, it is obvious that prices are discovered for different products and at different levels in the system. At retail, the retailer makes a price-product offering to the consumer and the consumer effectively makes a yes/no decision on that particular offering. If the product stays in the case and doesn't move, the retailer is inclined to cut price or do something to enhance movement. A price discovery process is involved. If it's a cut of beef that is full of seam fat and carrying a fairly heavy external fat cover, it may be that the consumer is saying, "That's not the product that we want in the 1990s," and the system discovers a lower price for that product. Over time, of course, that process of adjusting and changing prices and reflecting changes in supply and/or demand is very important part of the pricing mechanism.

Below the retail level, prices are being discovered for boxed beef as the packer buyer offers the product to the retail chain or to the hotel or restaurant in the HRI trade. The price is not independent of the retail price because the retail chain is going to try to buy boxed beef such that the stores can realize a desired margin per pound. There is thus an identifiable price discovery price process in boxed beef. There is also still some price discovery processes going on for carcass beef, although most beef in now moving in boxed form.

At the live animal level, it is immediately apparent that the process discovery process is charged with uncertainty. Most fed cattle in the country are sold on some type of liveweight basis. They may be formula priced or they may be sold for later delivery, but price is typically on a liveweight basis. The packer buyer comes to the feedlot with some guideline in mind in terms of where he needs to be able to buy cattle on this particular day to realize a gross margin per head. Once again, price discovery at one level is tied to what's going on at another level in the system. The initial basis for determining the bid by the packer buyer will be a function of the carcass or boxed beef market and the hide and offal credit. It is then easy to calculate a price at which the cattle have to be bought if the packing firm is to realize the desired gross margin per head.

It is abundantly clear that it is going to be difficult to discover a price at the live-animal level that truly reflects final value when the fed steer or heifer is sold on a liveweight basis. Buyers and sellers become quite proficient in estimating dressing percentage, quality grade, and yield grade, but they don't know the true value of cattle in terms of final performance on the breaking table. The result has been continuation of a system of pricing that is not highly conducive to the elusive target of value-based pricing. It is appropriate at this point to suggest that the barriers associated with moving toward carcass-based selling, whether it be in cattle, hogs, or slaughter lambs, are probably going to have to be overcome before the exchange system can discover a price that is truly a value-based price.

Pricing Efficiency

The concept of pricing efficiency is a reflection of how effective the communication processes in the system are at any point in time. Higher up in the system at the consumer level, prices should be discovered such that a premium is attached to the high-value product, given the consumer's desires at that particular point in time, and a discount should be attached to the low-value product. In a very general sense, of course, this would mean that any product that has a high fat content should have a discount associated with it. Conversely, any product that is high in lean, 96 percent fat-free, for example, should have a premium attached to it. The idea is that the price signals will be passed back down through the system and eventually reach the producer. This is the way, theoretically at least, that the marketing system discourages production of beef, pork, or lamb that is too high in fat and encourages the production of leaner products.

Grades are extremely important to a high level of pricing efficiency. To be able to communicate effectively down through the system from the top, where the consumers reveal their preference pattern by their purchase decisions, all the way back down to the producer requires grades or some way of identifying product attributes to which a price signal can be attached. This is part of the reasoning behind the move in the late 1970s, for example, to mandatory yield grading in cattle. If the beef carcass was to be graded it all, it would be graded for both quality and yield. Yield grades 1 through 5 categorize the beef carcass in terms of its cutout of lean cuts. Since a yield grade 2 would yield or cutout a higher percentage of total carcass weight in the form of lean boneless or semi-boneless cuts than would a yield grade 4, a yield grade 2 carcass should have had a substantial premium attached to it compared to the yield grade 4 carcass.

In fact, the system was never effective in identifying the yield grade 2 carcasses and attaching a price premium to them. What evolved was a system that treats the yield grade 3 beef carcass as par and then attaches discounts to the yield grade 4's and the occasional yield grade 5's. There have been periods in which cattle have been held in the feedlots too long and were too heavy. Yield grade 4 carcasses moved as much as $20 per hundredweight below yield grade 3 carcasses. But there has been no visible pricing mechanism and consistent reporting in terms of attaching a premium to the yield grade 2. Everyone who has worked in this area knows the yield grade 2 carcass of the same weight, as compared to a yield grade 3, will cut out more poundage in lean cuts. There is, as the packer buyer bids on a pen of cattle, some perception of what yield grade the cattle will be. But, trade is in terms of estimates and broad averages. The system is not identifying and focusing in on the high-value animal and pricing that animal at a premium. This is not likely to change so long as trade on a liveweight basis. There are major barriers to moving toward carcass evaluation selling. It is, nonetheless, a worthy objective that needs to be examined by producers and producer groups.

Implications to Industry Structure

In the current livestock and poultry industries, there exists the polar extremes in terms of industry structure. Structure ranges from a system largely characterized by separate ownership of the economic activity at various identifiable levels in the system (hogs, cattle, lambs) to a totally integrated system in which all levels of economic activity are owned by the same management center (broilers, turkeys). Historically, the cattle market has been an open exchange system characterized by separate ownership at the cow-calf, stocker, feedlot, and packer/fabricator levels. It is the poultry industry that has long been integrated. The integrator makes decisions on how many birds to place, on rations, on medication, and on all of the dimensions of the program that would have an impact on its overall profitability.

It is interesting to reflect on the inherent difference in these types of system. In the open exchange system in cattle and hogs and lambs--at least the majority of the cattle, hogs, and lambs are still sold that way--it is the price mechanism that is relied upon to bring the needed interlevel coordination. What goes on from the original point of production up to the final point of consumption in the meat production-marketing systems can be thought of as an assembly line. Every station in an assembly line adds value to the product and sends it on up the line. That is the way automobiles are made, that is the way most things are assembled, and in a very realistic sense, that is what is going on in the beef industry. The calf goes through some type of stocker or background program, to the feedlot, and on to the packer as a fed steer. The packer, increasingly the same firm that does the fabricating, moves the boxed beef to the retail outlet or to the restaurant and the point of final consumption.

In the assembly line there are different stations, but there is someone watching over the entire process that makes sure those stations work together. In the open marketing systems in cattle, hogs, and lambs, there is no entity that is overseeing this situation and making sure the various levels of economic activity work together and are effectively coordinated. It is the price mechanism that's supposed to bring the coordination. It should encourage timely flow by paying premiums to the producer for time-related coordination of activity. It is supposed to use an identification system like grades, attach price premiums and discounts as appropriate, and transmit those price signals down through the system to the producer to control the type of product offered in terms of quality.

It is relatively obvious that those price signals in a production-marketing system in cattle, hogs, or lambs will have a tough path to follow. The top end, the retailer, has to decipher all of the consumer decisions, figure out what they're saying, and then reflect that message in terms of bids on beef, pork, or lamb that have different attributes such as fat level, bone-in/bone-out, internal versus external fat, etc. If all that gets done effectively, then the retailer will bring the packer/fabricator into the process by adjusting bids for the meat they buy. They may turn increasingly to a box that is trimmed more closely or has other characteristics that would suggest it more nearly fits the emerging desires of the consumer and pay a premium for that particular grade. They would take other boxed alternatives at a price discount since those alternatives would not fit consumer preferences as well.

The packer/fabricator has to read all this and reflect it in terms of bids for cattle, hogs, or slaughter lambs. The big barrier that is present here has already been discussed. With most everything being traded on a liveweight basis, it is very difficult to attach price premiums and price discounts correctly to the live animal. That is especially true in the 1990s when we see a need for numbers to keep the high speed lines running. By the time it gets back down to the original producer, only the most obvious and basic messages are going to emerge. And the industry <u>has</u> picked up those messages. The cattleman and the hog producer and the lamb producer know that, in the 1990s, it is not fat that the consumer wants to buy. But that message is so general and so lacking in terms of economic incentive in the form of price premiums that the producer has been confused and has been understandably slow to change.

It is clear that an exchange system that relies on prices and pricing to accomplish the needed coordination of the various levels of activity will need grades and a highly effective description terminology to identify the value-related attributes. The system will also need enough competition at each level to make sure that those premiums and discounts get transmitted back through to their raw material supplier. If a packer, for example, clearly sees that he can sell what are yield grade 2 carcasses when they go in the box at a premium to yield grade 3's, there is no guarantee that the increased value in that yield grade 2 carcass will take the form of a higher bid for cattle that would grade yield grade 2. Once again, there is the problem of liveweight selling. There is the obvious possibility that the packer may just try to buy yield grade 2 cattle at the same price and sell the carcasses or the box at a premium and keep the differential. A high level of competition at any level in the system is required if those price signals are to be transmitted, even if they are identified.

The poultry sector, on the other end of the continuum, offers some useful contrasts. Examining the poultry sector also suggests some of the reasons that the cattle, hog, and lamb sectors are changing. In the poultry sector, there is control and close coordination. The integrators go to great effort to decipher what is needed, what is in demand, and what consumers will pay for at the consumer level. They then proceed to organize and coordinate the activities all the way from the genetic decisions up through the packaging decisions of a final product to make sure that the consumer level demand is met. The broiler, for example, has changed dramatically in terms of dark versus white meat composition. There have been rapid strides in feeding efficiency and in conversions. Moves to value-added further-processing have brought tremendous growth to the poultry sector. In 1991, if you measure in retail weight equivalent, per capita offerings and therefore per capita consumption of broilers alone will pass per capita consumption of beef. Broilers passed pork several years ago.

The message coming from the integrated systems is clear. The ability to coordinate the activities is extremely important and can be extremely profitable. If a change is needed in terms of timing of flows or in the product offered to the consumer, that change is made and there are assurances that necessary adjustments will be made all the way back down through the system. The result has been an impressive ability to cater to a changing consumer and to become a growth industry in the way the beef sector was a growth industry back in the 1960s.

It is interesting to consider an hypothesis that suggests that if the open exchange systems are not effectively coordinated via the price mechanism, that some other type of industry structure will evolve. It was not necessarily the pressing need for high levels of coordination that brought consolidation to the beef industry during the 1980s, but there is little doubt that the need for better coordination was one of the catalysts.

In the late 1970s, beef, pork, and lamb encountered major demand-side problems. Consumers were increasing concerned about cholesterol, about fat levels, about what they were eating. Their lifestyles were changing and they started to move to different products. The price of Choice beef at retail, if you remove the influence of overall price inflation so that you can legitimately compare the various years, had to decline by over 30 percent between 1979 and 1986 to get the consumer to continue to take what was essentially a constant per capita offering. There were economic pressures on everybody in the system that came with those demand problems. The consumer would not pay any of the inflated costs of producing and processing the product, and much of the pressure was passed back down to the producer in the form of lower cattle prices. But there was also tremendous pressure on the middleman, the packer/processor, to get more efficient. One of the ways the packers did that was to consolidate, move to larger size operations, and reap the economies that large-scale, large-size operations provide. But there was another very important change that came with the consolidation.

The packers in the beef, pork, and lamb sectors are now aggressively pursuing what the industries have come to call "captive supplies." The packers are feeding cattle, hogs, or lambs themselves, they are entering into business arrangements with feeders so that the livestock move directly into the packing plant on a control-flow basis, they are contracting with producers for forward delivery, and they are making other efforts to control and coordinate what comes into the packing plant.

The changes in the exchange systems in beef, pork and lambs are efforts to provide the same type of coordination that the integrated poultry firm has attained. If the price mechanism is not effective in its role of communicating and coordinating, in terms of quantity flows and quality, then it is likely to be replaced. In the move to captive supplies, the traditional cash-based price discovery process in cattle, hogs, and lambs is being eliminated or circumvented.

This all goes back to the earlier suggestion that the effectiveness of the pricing mechanism will have a great deal of influence on overall efficiency and on what type of organizational structure can be sustained over time. It is increasingly clear that if the pricing mechanism cannot overcome the often adversarial relationships between the cattle feeder and the packer or between the hog and lamb producer and the feeders and the packers, then those individual producers are somewhat at risk. The moves toward more consolidated and more concentrated industries that realize the needed coordination by management directive rather than by a price mechanism means that the individual producer loses independence and a much-needed economic base.

Thus, it is not just the legitimate desire to move toward value-based pricing that is at issue. The very survival of the independent producer, especially the relatively small independent producer, may be at stake in cattle, hogs, and lambs. If there are reasons to value an industry that is characterized by relatively small producers and a reason to value the type of industry that allows the independent entrepreneur to function, then there is reason to be concerned about our grading, pricing, and price discovery mechanisms. At a minimum, what type of industry structure evolves should be by choice and not by default due to the failure of the open exchange pricing systems.

Some Possible Solutions

A two-fold attack on the problem is needed. On the one hand, there is the need for realization that the feelings run deep and that livestock will continue to be sold on a liveweight basis. This suggests the need for progress in a technical domain in the terms of the sensors, the probes, and other types of electronic approaches that will give reliable estimates of the lean content of the steer or the hog or the lamb. There must be techniques and devices that will not be major problems in the high-speed lines of the large packers that feature 350 head of cattle per hour and higher levels than that in hogs and lambs. The larger packers are not going to accept technology to identify value if it slows their lines and if it interferes significantly with their operation.

A critic would suggest the large packer is not going to be interested in such technology in any form. After all, if they can buy cattle or hogs or lambs on the basis of estimates and if their bargaining position and estimates of value are better than those of the seller, why would the packers want to go to an approach that truly identifies value in an objective manner? The answer is competition. There is a time window of a few years in duration here that will give an opportunity even in the already highly concentrated cattle sector.

In early 1991, there are fewer than 100 million head of cattle, all cattle and calves in the U.S. In 1975, that number was in excess of 132 million. There is excess capacity in the slaughtering and fabricating functions of beef, and we have some excess capacity at the same levels in hogs and in lambs. When a packer acquires or builds a large plant that is driven by volume, the packer must have those numbers in a consistent way. Across the next few years, therefore, it may well be that the packers are not going to be in a position to be picky about whether or not they accept some new approach to pricing that is tied to value. If there is going to ever be an opportunity to put that type of system into place, it is probably going to come during a period when numbers are tight, especially cattle. It is also especially important during a period like this. With the overriding need for numbers, the buyer of cattle is going to try to buy numbers across the next few years and not worry a great deal about being very discriminating in terms of price premiums for the high-value animals and price discounts for the low-value animals. The packers are going to buy cattle to keep the line going and then try to deal with the heterogeneous population of carcasses and products they produce. There is an opportunity and a related need in 1991 that will not last forever.

The second and related dimension comes more nearly on the behavioral side. It doesn't do much good to have technology that allows you to estimate cutability accurately if producers, producer groups, and feeders are diagrammatically opposed to using the technology because there is such an adversarial relationship between the producer and the packer. After all, cattle, hogs, and lambs could be sold on carcass grade and yield or other types of carcass evaluation basis now, and it is not being widely done. Producers and leaders in producer groups refer to grade and yield selling as "grade and steal," testimony to the continuing adversarial relationship between the feeder and the packer. It may require a change in attitude, some effective and aggressive leadership in the producer organizations, and progressive moves by packers before anything can be accomplished to move to value-based pricing and to a system that involves more coordination, less uncertainty, less guessing, and that ensures a place for individual entrepreneurs at various levels of the system.

Economics Will Dictate

It is important to recognize that, over time, economic forces will have their way in the livestock and meat systems. During the 1980s, the major demand side problems brought an astounding consolidation in beef as there was a race to "get big and get cheap or get out." Economic pressure brought the change. With that change is coming an increasing inclination on the part of the packers to impose their conditions on what they buy. They are tying up the captive supplies. They are trying to set up business arrangements with large feedlots, and those business arrangements have some value and price ramifications in the sense that there are premiums for the cattle that do well on the breaking table. But such approaches mean increased disappearance of the open exchange system. It is the case, then, that it is important to take a look at the economic pressures that are present and are likely to materialize during the 1990s.

One economic force that will continue to be important is consolidation. The four-firm concentration ratio is currently at 80 or higher in boxed beef. That means that four firms do 80 percent or more of the boxed beef activity. Actually, much of that is done by three firms. There is a highly consolidated lamb industry with four firms doing 75 to 80 percent of the business. The pork industry is not highly consolidated as yet with the four-firm concentration ratio around 35 to 40, but there are widespread expectations that consolidation will occur in pork across the next few years.

This is important. In a highly concentrated industry, there are a few large firms that have enough market power to essentially impose the types of conditions and terms of trade they want. In such circumstances, the need for and the use of grades changes. If packers have a substantial part of their livestock needs met by a feeding program or business arrangements with feedlots or by contracted cattle, those cattle don't go through a price negotiation process. Therefore, any identification of value-related attributes that are involved is internalized and is not publicly available and publicly visible as public and private agencies seek to report prices and report market activity. All this suggests that things are going to get more and more difficult for the relatively small producer. There is a "loop" of high-volume activity in cattle, cattle feeding, and beef packing. It is there to an extent in lambs and it's probably coming in hogs. A small independent operator who would prefer not to get involved in those contractual programs with the packer or, in other ways, wants to protect an individual identity, may be outside that loop and struggling to find a market outlet for cattle, lambs, or hogs. As the base of negotiated activity declines and the opportunity to report prices and market activity declines, the role of grades and related descriptions of livestock and meats changes and diminishes over time.

The second economic force that is going to very important is the continuing and intensified struggle for market share. When you are in the growth phase of an industry like beef and pork back in the 1960s and up into the mid- 1970s, the notion of value-based pricing, effective pricing mechanisms, and high levels of pricing efficiency and effective price discovery processes are not really all that important. There is less reason to worry about grades and grading to get a really effective categorization or segmentation of the value continuum because everything is being helped by the fact that demand is growing and people are willing to pay a higher price for an increased quantity of product. There are no big concerns. "Growth covers up a lot of inefficiencies" is another way to put it. But that is not the current case in beef, pork, or lamb, and it's not likely to be the case during the 1990s. The demand problems that hit the industries in the late 1970s and continued through much of the 1980s have not been overcome. There is some progress in demand for pork and there are aggressive promotion programs in beef and pork. But, the data show that the sectors are still on a much lower demand surface than was the case in 1979 or 1980. That's true for any of the three commodities. It is the poultry sector now that is the growth sector, and what used to be called the red meats--beef, pork, and lamb--are going to have to struggle for market share.

As that struggle goes on and intensifies, there will be a parallel struggle over what type of industry will emerge and prevail. The battle for market share may move us to the point that more vertical integration and more contractual activity will develop so that the packer/processor in beef or pork or lambs can control the situation better and do a better job of aligning offerings with changing and developing consumer demands. With more control over the flow of raw materials, the integrated firm might be able to do a better job of merchandising value-added and further-processed product. It may be that the pressures to survive and keep some reasonable level of capacity in the industry will bring with them pressures to move even further toward the highly consolidated, vertically integrated industry that we saw start to emerge during the 1980s, especially in beef.

All this says something about private and public activities in grades, grading, and pricing. Those activities span the continuum from the meat scientist who works on cutability studies in the lab to the public agencies in Washington that provide support for the reporting of market news and generate our price and market news reports. There have been periodic battles over what the grades should be and the grades have been changed on occasion. It is a complicated process. Often, different segments of the same industry differ on the issues. Those adversarial relationships that characterize the livestock sector crop up and are accentuated during such periods.

If the more nearly privately owned, private entrepreneur approach to an industry structure is going to survive during this battle for market share, the open exchange type of system simply has to get more efficient and be more effective. The cattle sector cannot continue to have a relatively high percentage of calves as small-frame calves in a era when there is little or no demand for, or need for, a fed steer or heifer that comes from that small-frame calf. Yet, there are small-frame calves around the country and in every state in substantial numbers. There has been no grading system and related price discovery systems in the stocker and feeder cattle markets that has done anything approaching an adequate job of penalizing and discounting the producer of the small-frame calf and rewarding the producer of the medium-frame calf and the workable large-frame calves. It takes competition, awareness, and knowledge that does not now exist. If that situation continues, the segment of industry that is getting control over livestock flows because it has integrated vertically, will start to specify quantity, quality, and value-related dimensions and will start to dominate. It appears that the choice is rather clear in the cattle and beef sector and increasingly it is becoming clear in hogs and in lambs. Either move toward a better research base, a better knowledge base, a better intelligence base in the grades, grading, pricing, and price discovery dimensions so that the industry can continue to operate with separate ownerships at the various levels, but be efficient and be coordinated, or expect a move toward integrated activity. Management directive then replaces the price mechanism as the coordinating mechanism and the need for publicly supported, publicly visible, publicly established grades and grade standards largely disappears.

A third and related economic force that will be there during this decade is the growing realization that the consumer will be served. For a long time in the 1960s and up into the 1970s, the red meat sectors were too complacent where the consumer was concerned. Every basic marketing book, especially the ones written two or three decades ago, talks about the consumer being "king" or "queen." What that means is that, in the final analysis, the industry must meet the needs of that consumer or ultimately the economic base for the industry is going to start to erode and disappear. Across the past 15 years, the consumer has changed dramatically in the United States. Over 70 percent of the households now have a microwave. Over 50 percent of the households have at least two wage earners. The moves toward a somewhat different lifestyle, a more mobile, on- the-go lifestyle, and toward increased awareness of our diets, mean the consumer has changed dramatically. But the products, in many respects, have not changed. Beef and pork and lamb will have to meet emerging desires for convenience and for the type of product that provides the nutritive value that the modern consumer wants.

This relates back to the market share issue. In many respects, the type of industry, the type of grading system, and how much it will get used in the pricing process and reporting process, is going to be determined by how well the industry adjusts to meet those changing consumer demands. The poultry sector, the integrated sector, has had no basic problem with adapting. When the consumer started saying, "I want white," because white meat was preferred over dark meat, they bred turkeys that were so large that often, as they approach market weights, they can no longer stand. They bred broilers that give a much higher percentage of white breast meat than was the case just 10 years ago. When the consumer was saying, "I'm willing to pay for convenience, for precooking, for a microwavable product that meets the type of lifestyle I want to follow," the industry responded. The percentage of total chicken, for example, that's value-added and further-processed is three to four times what it was just 15 years ago.

These same types of adjustments are going to be needed in beef, pork, and lamb. It remains to be seen whether those adjustments can be made with separate ownership at the retail level, at the packer/fabricator level, at the feedlot level, at the stocker level, and at the cow/calf level. In that type of structure, there is a tendency for all of those operators below the packer/fabricator to think that worrying about the consumer is not their problem. Why, the producer will ask, should we be concerned about product development and getting more convenience in our product and getting something offered to the consumer when we're livestock producers? It's not our problem, is it? But it is the producer's problem, in the final analysis, if the consumer continues to walk away from the product and the industry has to continue to downsize to maintain prices and maintain an acceptable margin for the remaining operators.

It may be that the beef industry will integrate further, that pork and lambs will integrate further, and that all will become more concentrated and consolidated precisely because that is the only way the changing needs and the changing demands of the consumer will be met. If that hypothesis has any merit, it has several things to say about these broad issues of grading and pricing. However the industry is structured and however it operates in terms of whether it's an integrated firm or a coalition of independent entrepreneurs, grades in the future will have to identify any product attributes that are important to consumers. Those product attributes will need to be identified all the way down through the system to the producer. It is not as simple as just saying consumers want lean beef. Consumers really want a product that looks lean and red and shows little fat, but has the taste of a Choice grade cut with some marbling and the palatability and taste appeal that the Choice grade of beef apparently brings.

It is not apparent what type of grades or other descriptive terminology are needed in beef, pork, and lamb. It is important that they be related to what is seen to be important by the consumer, and they must be then related to product attributes back down through the system. It may well be that there is reason to think about publicly supported and publicly offered grades or other descriptive terminology that extends beyond what now exists. There is no obvious answer to the dilemma that is present when consumers choose Select grade beef in a visual preference test and choose Choice grade beef in a blindfolded taste test.

The fourth economic issue, one that is related to the market share dimension, and to the notion that in the final analysis the consumer will be served, is the area of quality control. If it is the case that there is a substantial quality variation within the existing grades for beef, pork, and lamb, then it is important to reflect upon how much damage that variability has done to acceptability at the consumer level. If it is in fact the case that a sirloin from the same store one week can be significantly different from a sirloin from that store the previous week, then there is a problem of quality control. Before that problem and that dilemma is going to be resolved, somebody in the system has to see it as important.

Continuing this line of thought with regard to how the industry might be structured, it is a bit more difficult to see how quality control will be accomplished in the open exchange system. One of the consistent comments that consumers have offered with regard to Excel's line of retail packaged beef is that it is consistent. It is perhaps the case that when Excel puts its brand on the product, the company is more interested in consistency and quality control. An ugly dilemma rears its head again. Can the industry characterized by separate ownership at the various levels and relying upon the pricing mechanism to bring the needed coordination and cooperation do anything effectively about quality control? Or is this another dimension along which we will see pressures for even further moves toward consolidation and integration continue to grow?

It goes without saying that grades and grading are critically important in issues of quality control. If a grade categorization is sufficiently broad that there is a significant and recognizable variation within that grade, then a problem exists. Is it possible that if beef grades, for example, are changed in the future, that they should be changed toward increased refinement and increased specification rather than moving toward broader categories? Is there a grade that the restaurant can use when they want to buy a product that will essentially guarantee satisfaction from their consumers? What do they buy today? Do they buy Prime? Do they buy Choice? And what type of experience do they have in terms of consistency?

Interaction with people in the HRI trade suggests that they do have a problem with consistency. A friend who was a consultant with a restaurant chain in the western part of the country that specialized in steaks once observed that the management of that chain and of those restaurants felt like things were okay if they had a complaint rate from the customers that was below five percent. If they had three to four percent verbal complaint rate, they probably had at least five times or maybe ten times that many customers that were not really satisfied but who were just reluctant to offer any verbal complaint. Over time, that type of variation would be extremely negative at the consumer level.

In pork, lamb, and beef, the answers as to what needs to be done to refine descriptions at the consumer level, so that there is little discernable quality difference remaining, are not apparent. Perhaps the need is nutrient labeling within the existing Choice or Select beef grades. Perhaps the need is to add another dimension to our existing grades. It is an issue and it deserves thought and attention. Some resolution about what it is that needs to be done at the consumer end to help the consumer make the more informed choice, one that is less likely to turn out to be viewed as a mistake, is needed. Then, there must be a way to grade the boxes or the carcasses or the live animals and get that message back down through the system to the producer in the form of a price differential. Anything less than effective price signals puts the current industry structure that is built around separate ownership at the various levels at risk.

Some Closing Observations

Grades, grading, and pricing processes in the livestock and meats have a long history. They have been roundly discussed, grades have been changed over time, there has been change in the way they've been used, and pricing processes have definitely changed. It could be that it is time for a new and intensive round of discussions with regard to grades and the related pricing and price discovery functions. The efficiency of the systems is at stake and what happens in the pricing mechanism could determine what type of industry structure will prevail in the 1990s.

It would be unfortunate if there is further consolidation and further concentration in beef, pork, and lamb because we do not have an adequate grading or descriptive system and an adequate pricing mechanism to give us the type of coordinated activity that the industry simply must have. Without taking a pro or con viewpoint about consolidation and high levels of concentration, it would appear that it would be unfortunate if the only reason we see moves toward vertical integration is because that is the only way that effective quality control and effective interlevel coordination of activity can be accomplished in beef, pork, or lamb.

In a very realistic sense, therefore, what happens in grades and pricing and reporting of that activity will determine in a substantial way where the industry goes in terms of how it is structured and how it operates. If there is reason to value the continued long-term existence and survival of the independent entrepreneur, the type of individual who has characterized the livestock industry for decades, then there is definitely reason to be concerned about whether there currently exists effective pricing processes. A continued dialogue, a resurgence of attention and interest in this area may be needed. The university people who are interested in and concerned about this area may need to establish a more effective dialogue with the commodity groups, trade groups, and the producer groups to see what, if any, changes might need to be made or proposed.

It is the case that economic forces that are going to prevail in the 1990s are going to intensify the importance of this issue and this discussion. Few would doubt that the consolidation and integration and the moving toward something other than open market and open exchange processes, with "prices" being internalized, has implications to grades and grading. Few would doubt that the move away from the open exchange systems was a response to the need for more effective interlevel coordination in cattle, hogs, and lambs during the 1980s. All would agree that if a market share issue is still present, then the need to adjust to a changing consumer is still present. Those forces will be felt and they will determine what type of industry evolves during the 1990s. Those interested in this area would not like to see the continued and growing demise of the open-market exchange system if the only reason was that the pricing mechanism just could not give the type of coordination that was needed or because the grades and standards were not what was needed for effective open-market pricing processes.

The critic and the cynic might argue that no matter what is done, in a consolidated industry with four firms dominating in terms of importance and power, there are no guarantees that price signals are going to get transmitted. That is true. There are reasons to be concerned about how effective the competition will be in a highly consolidated industry that currently exsits in beef and in lamb and the type that is probably going to emerge in pork. But that type of discussion is for another forum, and hopefully it will be conducted and the needed dialogue will be carried forth. The interest here is more nearly with grades, grading, and pricing processes. The emphasis here is on the notion that effective grading is a necessary condition for an effective marketing mechanism. If price and the pricing system are to achieve the needed coordination in the industry, the grades have to be aligned with the needs of the 1990s. If that is not done, then there will be moves toward an industry structure that mitigates the problems associated with imprecise pricing and the lack of coordination in open exchange systems.