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MEAT MARKETING AND PRICING -- AN EVALUATION
OF CURRENT AND PROPOSED SYSTEMS

By

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The history of allegations and inquiries into meat marketing and pricing predates this century (15).^{1/} This paper reviews some of the more recent studies, discusses the current system, and considers proposed changes.

Review of Recent Studies

National Commission on Food Marketing --

In 1966, the National Commission on Food Marketing (NCFM) (10) referred to the wholesale dressed meat market as the most significant and sensitive in the livestock-meat economy. Meatpackers determine live animal prices on the basis of expected prices for dressed meat and on projected margins. Thus live animal prices are closely related to dressed meat prices.

Respondent meatpackers reported using the National Provisioner Daily Market and News Service (the Yellow Sheet), and 53 percent considered it "very valuable" for fresh meat. Meatpackers also obtained information from telephone contacts and USDA's Market News reports.

The NCFM report discussed a geographic pricing pattern for dressed meat that was found. Base points were Omaha and other Missouri River markets. Price differentials increased as meat moved into cities East and West of those points.

An estimated 41 percent of beef and veal and fresh and frozen pork was sold on a formula-price basis to respondent meatpackers' "most important customers" in 1964-65. Formulas were based on the Yellow Sheet. Smaller meatpackers relied more on formula pricing than the largest firms.

^{1/}Numbers in parentheses refer to numbered references following the text of this paper.

In either case, formula pricing was used because of its convenience, time and cost savings, and the information derived about other buyers' and sellers' price base. The report raised the following questions about formula pricing:

"From the standpoint of an effective and efficiently functioning exchange system, fundamental issues at stake in widespread formula pricing include: (1) the accuracy with which the pricing base (the 'Yellow Sheet') reflects equilibrium supply and demand conditions for the many meat items for which prices are quoted, and whether it can be relied upon in the future (the more formula pricing, the fewer genuine negotiated prices to report); (2) whether quoted prices can be manipulated, or will become easier to manipulate, with further changes in the industrial organization of the livestock-meat economy; and (3) whether formula pricing helps perpetuate a geographic price pattern unrepresentative of changing supply and demand conditions in different areas, thus interfering with geographic resource adjustments toward overall efficient industry performance" (10, p. 58).

The NCFM also studied 2 related areas, structure and profitability of meatpackers. The report noted that national concentration in meatpacking declined over the period 1947-64. The 8 largest firms accounted for 45.6 percent of U.S. commercial meat production in 1947 and 37.1 percent in 1964.

Regarding meatpacker earnings, the NCFM report stated,

"Earning rates for large meatpackers have averaged lower than rates for leading firms in most other branches of the food industry since World War II" (10, p. 59).

After tax return on sales of the 8 largest firms between 1947 and 1964 ranged from .42 to 1.70 percent, while returns on net worth ranged from 3.3 to 15.7 percent.

House Agriculture Subcommittee Study --

The Subcommittee on Livestock and Grains of the House Committee on Agriculture published a report in 1972 entitled, Meat Prices and the Public Interest (1). While discussing fed cattle marketing, meatpacking,

and meat pricing, it contributed virtually nothing to the controversy surrounding meat marketing and pricing. Much of what was in the report on this topic came from the NCFM report.

General Accounting Office Study, 1977 --

The GAO was requested to study impediments to selling boxed beef and issued a report in 1977 entitled, Marketing Meat: Are There Any Impediments to Free Trade? (7). One major section in the report dealt with alleged fixing of meat prices. The section contained a brief discussion of the 3 market price reporting services (Yellow Sheet, Meat Sheet, and USDA Market News). The report summarized the allegations made by the Meat Price Investigators Association against 10 food chains, a supermarket trade association, the National Provisioner, and 4 meat-packers. Finally it described how industry sources allege Yellow Sheet price manipulation occurs, 3 methods previously described in a Wall Street Journal article (9). This report, also, contained nothing substantive regarding meat marketing and pricing.

General Accounting Office Study, 1978 --

Beef Marketing: Issues and Concerns (6) was published by the GAO in 1978 and dealt with several relevant topics: (1) market control and government oversight responsibilities; (2) pricing practices; and (3) the futures market.

(1) This GAO report found 4-firm concentration in meatpacking on a national basis declined between 1967 to 1976, from 22.21 to 19.57 percent. However, quoting Packers and Stockyards data, 4-firm concentration on a State level increased in 25 States from 1969 to 1973, from 56 to 64 percent.

The report stated that livestock buyers have more market power than

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sellers and that the decision of a single packer to buy or not buy could affect prices.

The report mentioned the Justice Department's investigations in the meat industries. Criminal indictments were levied against all major meatpackers in the Los Angeles area as a result of one investigation. The GAO report also mentioned that Justice Department investigations not resulting in criminal indictments are not announced publicly.

This section of the GAO report was concluded by raising some pertinent questions.

"Are certain segments of the beef industry exercising and extending undue market power and control over other segments? If so, how prevalent is the practice and what impact does it have on price? On other marketing segments?" (6, p. 21).

(2) The report also discussed market information sources and the evolution of the current livestock and meat marketing system. They stated that because direct sales of cattle to meatpackers are based on privately negotiated prices it has a serious impact on the availability of price information. The study stated,

"The system is further weakened because packers often determine direct purchase prices for cattle using percentages of the daily Yellow Sheet price. (The Yellow Sheet reports only a small part of the total meat transactions." (6, p. 24).

In discussing price information problems and specifically the quality of information, the system of collecting prices that are reported by the Yellow Sheet was cited as the apparent problem. Their discussion has merit.

This GAO report discussed the same potential methods of manipulating prices. Also, it repeated allegations in pending litigation producers have filed against meatpackers and retailers.

Potential market solutions are discussed by the GAO: (1) teleauctions;

(2) open market trading; and (3) other market alternatives. I wish to defer my discussion of potential solutions until later.

In concluding the section on pricing practices and problems the GAO report discussed issues and raised several questions. It stated,

"The beef marketing system information process is not adequate for orderly, competitive marketing because it may be open to manipulation and may not reflect selling prices for cattle under truly competitive conditions." (6, p. 30).

Questions raised in this section refer to whether an electronic exchange system and/or information system should be established, and if so, by whom.

(3) The third area discussed the futures market and the relationship between futures market prices and spot prices. The GAO repeated producer criticisms of the futures market and raised some pertinent questions.

--Do futures market prices adversely affect cash prices for purchases and sales of live cattle?

--Do packers, market speculators, or other groups have an influence on the futures market to the detriment of cattlemen and consumers?" (6, p. 57)

House Small Business Committee --

Beginning in October 1977, a Subcommittee of the House Committee on Small Business held a series of hearings on meat marketing. From those were published 2 reports, one on meat marketing (2), a record of the hearings, and one on meat pricing (3), the subcommittee report.

My comments will focus primarily on the testimony of 3 agricultural economists. Willard Williams identified the major problem with respect to meat marketing as being formula pricing, stating,

"As everyone with a knowledge of the meat industry is aware, adequate and accurate reporting on prices of meat, even under most advantageous conditions, is a most difficult and demanding task. The larger number of cuts and items involved, by itself is a serious complication as compared,

let us say, with corn or wheat. For each cut or item there are varying grades, weights, qualities within grades, chemical specifications, packaging and other detailed specifications. These, as well as the varying terms and conditions of trade, alternative transportation modes and rates, and tangled lines of communication within the industry, lead to a myriad of technical reporting problems.

While reporting and reported prices are affected, the central issue, as I see it, is not the 'Yellow Sheet', the 'Meat Sheet' or activities of the firms publishing these reports. Within the context of existing structural conditions of the industry and trading practices, both sheets, I am convinced, are reporting in a capable and highly conscientious manner. While there are some obvious differences in end results due in part to differing philosophies, pricing accuracy of each, under existing conditions, is about as high as can be expected. Coverage appears reasonably adequate.

The central pricing issue and problem of the meat industry is formula pricing on a forward basis." (2, p. 3).

He argued that formula pricing is potentially self-destructive, in that it destroys usable sources of information on sales prices because sales prices are not discovered until sometime after the trade is agreed upon. Williams raised questions whether reported wholesale prices truly reflect supply and demand conditions. Also he noted that formula pricing introduces added incentives for price manipulation.

Williams discussed why he believes formula pricing is widely used.

He stated,

"The attractions of operational efficiency in buying and pricing along with the goal of competitive pricing are primarily responsible for emergence of institutionalized pricing systems such as formula pricing. The system definitely is operationally efficient. It moves huge quantities of meat effectively and with relatively little input of skilled or unskilled labor. Under the 'system', it becomes possible for one or two employed buyers of a large retail food chain to buy all of the meat required by the chain or a major division of it. Control in this sense is centralized. Sales costs of packers and other suppliers also are reduced. It is difficult to conceive of a pricing system that, considered strictly from an operational viewpoint, would be more efficient.

Maximum operational efficiency of a pricing system is

is difficult to conceive of a pricing system that, considered

not always consistent with maximum accuracy of the system and with its effectiveness in allocating production and marketing resources. In fact, the twin goals of operational efficiency, on the one hand, and accuracy and effectiveness, on the other, seldom are achieved through the same system. One can be improved only at the expense of the other. This means that when distortions or extremes appear compromise solutions generally are necessary." (2, pp. 5-6).

Other key points Williams made were,

"1. Wholesale meat prices are and have been considerably more important pricing criteria than any reported live animal prices.

2. National Provisioner Yellow Sheet, assertions to the contrary, is the pricing 'bible' of nearly all packers. On the basis of closing prices on this sheet, packers issue instructions on buying prices to all packer buyers.

3. Changes in 'Sheet' prices govern trading on live cattle.

4. It is obvious, then, that accuracy and representativeness of the Yellow Sheet are critically important to producers.

5. Incidentally, live animal pricing without reference to wholesale values, as outlined by Breimyer, is a step back toward the 1920's." (2, p. 17).

Williams then discussed several alternatives, leaning toward:

(1) outright prohibition against formula trading on a forward basis; and (2) an electronic (computerized) trading system. In either case he advocated legislative action.

Harold Breimyer philosophized somewhat as to the direction the livestock-meat subsector is moving and what is required to maintain an economy resembling economists' purely competitive ideal. He observed,

"If the information that has reached me from several sources is correct, the managers of the Yellow Sheet year by year find themselves stuck with fewer good sound trading prices on which to base their price report. I have no reason whatever to say whether the managers of the Sheet are doing a good job. I feel no constraint whatever to say that basing the prices for the whole livestock and meat economy on one man's judgment, which in turn rests on an ever thinner volume of market trading, is so flimsy, so insubstantial, that it

simply cannot be regarded as satisfactory." (2, p. 30).

Then he stated,

"Furthermore, my main object is to propose that a comprehensive, in depth study of the whole marketing and pricing situation in livestock and meat be conducted." (2, p. 31).

Breimyer discussed 3 alternatives, favoring mandatory reporting with criminal penalties for misreporting. He also mentioned having Packers and Stockyards regulate private reporting services like the Yellow Sheet.

Breimyer mentioned shifting price making to live animals rather than meat. He also expressed concern about increased concentration in activities beyond cattle feeding, calling for an "in depth study of the whole situation."

James Cothern discussed changes which have occurred. Of particular concern was a trend toward fewer, larger firms with the potential for control over sources of information or the ability to have better information than competitors. Also of concern is integrated forms of vertical coordination. He observed.

"While most economists and analysts have a considerable amount of information available concerning marketing and pricing practices at the farm level, information becomes more scarce as we attempt to analyze what has happened at the wholesale and retail levels." (2, p. 49).

Cothern cited several perceived problems at the producer, wholesale, and retail level. At the producer level problems mentioned included structural differences between buyers and sellers, resulting in bargaining power differences, and an increasing tendency to price live animals on a formula basis from the wholesale market. At the wholesale level the basic problem cited was lack of day-to-day information with respect to regional prices and quantities. Lack of information was the primary problem at the retail level also. Cothern stated,

"We must remember that the demand for most agricultural products is a derived demand; and the ultimate consumer is in a very real sense the prime motivator in this process. Yet we know very little about the impact of advertising, in-store practices nor of retail firms' strategies in dealing with this facet of the market. In addition we know very little about firm inter-action between wholesale and retail levels in matters of pricing and purchasing policies, inventory policies, transportation policies and other matters of very distinct importance in today's sophisticated markets." (2, p. 50).

In discussing alternative solutions, Cothern favored elimination of formula pricing, mandatory price reporting, and electronic exchange systems. Referring to wholesale price reporting he concluded,

"I really believe that the improvement of the wholesale sample, both in terms of amount of product sampled and better daily reporting, would do a great deal to alleviate the present situation." (2, p. 44).

The subcommittee published a list of findings and conclusions resulting from the hearings and their investigation. Included were:

- (1) 70-90 percent of all meat sales are based on formula pricing tied to the Yellow Sheet and this type of pricing is increasing;
- (2) the "possibility" of misreporting to manipulate prices without criminal penalties for such activity;
- (3) that the "giants" in the industry are successful by using the present system of formula pricing based on the Yellow Sheet and are opposed to change;
- (4) that USDA has recognized the problems but has ineffectively dealt with them; and
- (5) that the U.S. and Canada operate an electronic exchange for cotton and slaughter hogs, respectively, and such a system might eliminate the serious problems inherent in U.S. markets.

USDA Packers and Stockyards Study --

The final government report I wish to discuss is a USDA study published in December 1978, entitled, Beef Pricing Report (11). The report stated,

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"A key element in livestock marketing is establishing prices for slaughter animals. Interviews conducted during the study confirmed that the wholesale beef price quotation published by the Yellow Sheet is the principal guide used by the selected packers in issuing daily price instructions to cattle buyers. Cattle buyers convert Yellow Sheet wholesale prices to live prices in determining the price to bid on fed cattle. Some additional considerations in arriving at the exact bid price are operating costs, kill costs, by-product values, and the estimated quality grade and yield grade for a particular lot of cattle. Thus, live cattle prices are greatly influenced by the wholesale beef market.

With the shift toward direct marketing, more cattle are being purchased on a dressed weight basis, or they are bought or sold 'in the beef.' Therefore, beef carcass prices published by the market reporting services can directly influence prices paid at the feedlot for live cattle purchased on a dressed weight basis." (11, pp. 8-9).

The analysis, based on carlot steer and heifer carcass sales during July 1977, found that 75.5 percent of cattle slaughtered were purchased on a live weight basis or transferred from meatpackers' feeding operations. Another 19.6 percent were bought on a dressed weight basis with price established at time of purchase. The remaining 4.9 percent were bought on a dressed weight basis with price discovered by a formula tied to a future Yellow Sheet reported price.

The report indicated 48.6 percent of all steers and heifers slaughtered were sold in carlot carcass loads. Of all carlot carcass sales, 70.0 percent were priced by formula tied to the Yellow Sheet. Thus 34.0 percent of all steer and heifer slaughter was priced by formula. Of all carlot carcass sales, 14.8 percent were reportable to the 3 market price reporting services.

Carlot purchases of carcasses varied by region, ranging from 11.7 percent in the West to 93.6 percent in the Southwest. Retailers in 10 major U.S. cities who purchased steer and heifer carcasses on a carlot basis from the 35 meatpacking plants bought 52.9 percent on a formula

basis.

Regarding the Yellow Sheet policy of basing price quotes on recorded transactions, the study found,

"No transactions were recorded in the Yellow Sheet daily logs for Choice Yield Grade 3 steers 500-600 on 17 of the trading days during July 1 through July 29, 1977. However, a price was published by the Yellow Sheet without showing either the symbol 'n' or 'unq' on each of the 17 days. The same was true on one trading day for Choice Yield Grade 3 steers 600-700, 700-800 and 800-900; on 7 days for Choice Yield Grade 4 steers 600-700, 700-800, 800-900; on 14 days for Choice Yield Grade 3 heifers 400-500; and on 10 days for Choice Yield Grade 4 heifers 500-600 and 600-700." (11, p. 24).

An estimated 1.7, 1.6, and 4.6 percent of total U.S. federally inspected steer and heifer slaughter was reported to the Yellow Sheet, Meat Sheet, and USDA Market News, respectively, during July 1977 (July 1978 for USDA Market News). The proportion of total carlot carcass sales that were reported was not estimated. If 48.6 percent of total U.S. federally inspected steer and heifer slaughter was sold in carlot carcass loads and 14.8 percent of those were reportable, then a much higher proportion of reportable carlot carcass sales were reported to the 3 reporting services during the months USDA reported.

The USDA study reported 8 firms held 50 or more August fed cattle futures contracts during July and August 1977. Short contracts held were "bona fide short hedges" and accounted for 15.4 percent of total short open interest on July 1, 1977. Over the period July 5 - August 19, 1977, 53.6 percent of Yellow Sheet logged-in prices for Choice grade, yield grade 1-3 steer carcasses weighing 500-900 pounds were reported by 7 of the 8 firms holding futures contracts.

Results of price analysis of the data were reported. Analysts found,

"The analysis revealed no strong evidence that the Yellow

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Sheet price quotes, on the average, failed to reflect the logged-in prices during the period studied (July 1977)."

"From price analysis, it could not be concluded that on the average, Yellow Sheet prices failed to reflect the sample of negotiated prices during July 1977."

"Overall, analytical results were inconclusive in determining differences between average prices when selling on a formula versus negotiated basis." (11, pp. 32-33).

The report failed to answer many questions, for example,

"Some questions -- possible price manipulation and 'too few' logged-in prices (thin market) -- cannot be adequately addressed from the available data." (11, p. 35).

It also raised one of the most nagging and significant questions.

"Further, the number of reported negotiated prices required to reflect economic conditions is unknown. Some market analysts suggest that it is sufficient to have data on as low as one percent of the total negotiated transactions from a large number of buyers and sellers. Others believe that 30 percent or more is necessary." (11, p. 35).

USDA Red Meats Task Force --

This is the first of 3 studies not initiated as a result of a Congressional or Administrative request or investigation. The first of these was a task force report on The Future Role of Cooperatives in the Red Meats Industry (4). While informative, much of the report deals with topics related to but not of primary interest to these hearings. In discussing the structure of the red-meats industry, however, the task force considered the profitability of the meatpacking industry.

"Forbes magazine's January 1 issue traditionally reviews and measures the management performance of about 1,000 public companies by comparing their profitability and growth. Sixteen companies are included in Forbes 'Meatpackers' industry group. The data in table 4 from Forbes provide some insight into the management performance of the meatpackers group. The meatpackers group is included with three other industry groups-- food distributors, agricultural commodities, and other wholesalers--in a broad classification identified as distribution wholesalers. The distribution wholesalers group is one of 30 broad industry categories.

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The distribution wholesalers group ranked at a very respectable seventh place among the 30 broad groups in return on equity, fourth place in both return on total capital and sales growth, and sixth place in earnings per share. The meatpackers group, however, seemed to be the laggard within the Distribution Wholesalers group in practically all these measures. Its 13.3 percent 5-year average rate of return on equity capital compared more closely with industry groups ranked in 12th place. Its 9.4 percent 5-year average return on total capital compared more closely with industry groups ranked in 13th place. And, its 8.5 percent 5-year average earnings per share compared more closely with the 18th ranked industry group. The meatpackers' 1.0 percent net profit margin was at about the 'bottom of the heap.' The meatpackers' 14.5 percent, 5-year average sales growth was the only Forbes measure that kept pace with other industries in the distribution wholesalers group.

What all this seems to say is that, for all their effort, meatpacking companies just manage to stay at about the median level of all-industry performance. The low net-profit margin very clearly indicates the fundamental requirement for a relatively large sales volume per dollar of total invested capital for a firm to operate successfully.

Entry by farmers into this industry is difficult to justify on the rationale that companies currently involved in meatpacking are 'making a killing' at farmers' expense. That does not appear to be the case." (4, p. 22).

NC-117 Beef Task Force --

A task force of agricultural economists have written 3 reports dealing with vertical coordination between various levels in the cattle-beef subsector. While it will not be discussed here the second report may be of interest to the task force (13). The third report in the series is most germane to these hearings, Vertical Coordination in the Beef Industry: Packer, Retailer and HRI Linkages (8). It focused on the extent of use and relative advantages/disadvantages of formula pricing versus other exchange mechanisms, and of carcass beef, boxed beef, or retail centralized cutting and fabrication systems. I recommend the study be read and thereby will skip the physical distribution section here.

Hayenga concluded that formula pricing for carcass beef is most used by small and medium sized retailers. Larger retailers arrive at prices prior to shipment, either using negotiated or offer-acceptance pricing. The report found,

"The predominant pricing system for boxed beef primals and subprimals was significantly different from carcass pricing systems." (8, p. 21).

An estimated 80-90 percent of boxed beef, or about one-half of all whole-sale beef volume, "moves with firm prices established" by negotiated or offer-acceptance pricing.

HRI pricing systems are varied. Pricing by institutions (schools, prisons, military, etc.) is typically based on suppliers' bids. The bulk of hotel and restaurant purchases of ground beef are based on a formula using the Yellow Sheet.

Firms interviewed were asked what advantages could be associated with formula pricing. Two primary advantages were mentioned.

"(1) Formula pricing facilitates long standing supplier-customer relationships, reducing the risk involved in shifting from supplier to supplier, or customer to customer, and ending up in a panic buying or selling situation. Customers may get more uniform cuts from a long standing supplier compared to many often changing suppliers, enhancing the efficiency of their in-store processing and merchandizing, while the supplier can be more sure of a base volume and lower operating costs. Both the customer and supplier require fewer people and less time for the transaction, and less market information to protect their interests in the price determination process."

"(2) The retail buyer feels that he is protected from paying more than his competitors, insuring against any competitive disadvantage. Some retailers insist on this pricing system, particularly those that are small and less well-informed than their suppliers or competitors." (8, pp. 22-23).

Disadvantages cited were similar to complaints and questions that have resulted in previous investigations and these hearings. They include: (1) whether Yellow Sheet prices are representative of market conditions; (2) the possibility of price manipulation; (3) many larger

retail chains do not report prices; and (4) "Midwest" reports are not representative of West Coast markets.

Regarding formula pricing of boxed beef, the report noted,

"Both packers and retailers expressed concern about basing their price or cost on a reported market exhibiting the large and frequent day to day fluctuations they observed in reported prices on fabricated cuts, and wide price ranges reported on individual cuts at the close of the day. Some of the possible reasons that were speculatively offered for the wide ranges and fluctuations were the possibility that the prices reported are sometimes based upon different product specifications (different trim, for example), on product shipped in less than truck load rather than truck load lots, or reflective of one to two packers or retailers being caught with excess inventories or insufficient supplies in one or a few local or regional markets, leading to a wide price range within a particular day, and corresponding large movements from day to day." (8, p. 25).

Other disadvantages included: (1) meatpackers' fear of locking in negative margins on their fabricating operation; (2) meatpackers were concerned that retailers who tied price to "past (not future) prices" shifted purchases to or from the formula, whichever was advantageous to the retailer; and (3) byproducts credit which are part of the formula are not based on reports of disinterested third parties.

Reasons offered for using offer-acceptance pricing were: (1) larger retailers might feel on safer legal ground because their buyers cannot be accused of using their market power to force prices down; (2) less negotiating skill and market expertise may be required of retail buyers; and (3) meatpackers may have a strong incentive to offer an attractive low price to insure they operate at near capacity. A disadvantage is that offer and acceptance prices may be higher for the retailer because they may have to purchase supplies from higher cost meatpackers if an insufficient volume was purchased from lower cost suppliers.

USDA ESCS Study --

The final study I will discuss is one I recently completed. The report, Slaughter Cattle Pricing and Procurement Practices of Meatpackers (12) is being reviewed for printing by the Economics, Statistics, and Cooperatives Service of USDA. A draft of the report will be made available to the task force. Here, I will discuss why the study was undertaken, how it was conducted, and some general findings relevant to these hearings.

Willard Williams observed that economists seem to have learned little about prices and pricing and that pricing systems remain intangible sources of mystery to many (14). Earlier I quoted James Cothern's testimony, that information about pricing at wholesale and retail levels is lacking. It was my belief that one reason for producer criticisms about livestock and meat pricing is a failure to understand the pricing process. This study was intended to better understand how meatpackers make pricing decisions for live cattle.

At least two days were spent interviewing and observing beef and byproducts salesmen, and the head buyer and salaried buyers in 5 meatpacking firms. All meatpackers are located in the High Plains and Midwest region, have a daily slaughter capacity exceeding 1,000 head of cattle per day, and combined, account for more than 10 percent of total U.S. commercial cattle slaughter. Four of the 5 firms are multi-plant firms and all 5 fabricate carcasses and market boxed beef.

In selling fabricated beef, it was found that meatpackers used the Yellow Sheet, Meat Sheet, and USDA Market News as a source of price information and as a pricing guide in negotiating sales prices. They used them relatively little as a pricing tool, in other words as a base

for formula pricing. All firms reported using the Yellow Sheet as a transfer price, an accounting price to transfer carcasses from slaughtering to processing operations. Not all firms interviewed were contacted regularly by or reported to reporting services, but market reporters are another source of current market information.

Greater reliance for current market conditions was placed on daily contacts, customers and brokers, rather than market reporting services. Salesmen contact many of the same people daily or weekly and regularly exchange information. Over time salesmen learn the reliability of various contacts and how to assess information received. Information sought includes: (1) demand for cuts by quality, quantity, time, and place; (2) merchandising or advertising plans of buyers; (3) how cuts are moving and at what prices; (4) supply and price position of customers and competitors; and (5) expected short-term price movements.

Considerable information that is used in the beef marketing and pricing process is exchanged with other operating divisions within the firm. For example, such information includes: (1) inventories; (2) forward sales; (3) slaughtering and processing costs; (4) byproducts values; (5) prices at which carcasses were bought or sold; (6) prices paid for live cattle; (7) slaughter volume; and (8) profitability by types of products.

Salesmen use information to develop offer prices for use in negotiating prices over the telephone. Salesmen indicated a negotiating range of 1/2 to 2 cents per pound, excluding price variations for quality and trim differences, transportation, and market power. Some fabricated beef was sold on a formula basis tied to the Yellow Sheet.

The Yellow Sheet was found to be more important in selling and

buying carcass beef than selling fabricated beef, as was also noted by Hayenga. It was used as a pricing tool rather than simply as a pricing guide. Another source of information was other meatpackers from which carcasses were bought. Other sources and types of information used in selling carcasses were similar to those for fabricated beef.

The head cattle buyer uses a specific sex-weight-grade-yield grade carcass price reported by the Yellow Sheet as a starting point in arriving at the buy order or pricing policy given to salaried buyers for their use in arriving at bid prices for live cattle. The Yellow Sheet is also used to learn of price differences between such carcass variables as sex, weight, grade, and yield grade. Other information on how cattle are moving; at what price, and to whom, comes to the head buyer from salaried buyers.

Head buyers stay abreast of USDA Market News reports on livestock receipts and prices, by type of livestock species, type of market, and geographic area. He watches weather conditions throughout the procurement area, level of federally inspected slaughter, and futures market prices. He also obtains considerable information from meat and byproducts salesmen and salaried buyers.

The collection and exchange of information results in a daily pricing policy or buy order, given to salaried buyers in terms of dressed price of the cattle. The following illustrates how a buy order is developed. The head buyer begins with a carcass price reported by the Yellow Sheet. Some meatpackers interviewed use that reported price as their base price, while others adjust it according to: (1) how their carcass sales compare to reported prices; (2) whether or not the dressed beef market has changed since the National Provisioner reported that

price; and (3) their estimate of expected changes in dressed beef prices.

Orders to salaried buyers also include price differences for different sex-weight-grade-yield grade carcasses. Price differences usually are taken from Yellow Sheet reported prices but some meatpackers interviewed adjusted those prices to reflect their specific supply and demand needs.

Meatpackers take their byproducts price or USDA Market News reported price and compute byproducts value per head. From that value, kill costs, and a profit target are subtracted. The remaining value is then converted to a carcass weight basis and represents the amount a meatpacker can pay over the reported carcass price and still meet slaughter costs and a targeted level of profit.

The buy order, then, consists of the base carcass price plus what the meatpacker can pay over the reported carcass price, and sex-weight-grade-yield grade price adjustments. Though referred to as a daily pricing policy, it may change one or more times as the day progresses due to changes in dressed beef prices or the firm's specific supply and demand conditions.

Salaried buyers attempt to buy cattle within the orders given them, and indicated the buy order is the most important information they receive. However, the study found that a number of variables besides those mentioned affect the final purchase price for cattle (for example, estimates of the percentage of cattle that are Choice grade, are yield grade 3 or above, are in various carcass weight classes, cooler shrink in the slaughtering plant, estimate of dressing percent, payment method, transportation and pencil shrink, and bargaining skills of buyer and seller).

Evaluation of Current System

This section considers selected aspects of the current marketing and pricing system. Concentration in meatpacking and retailing is relatively low by economists' standards on a national basis but considerably higher on a regional or local basis. Four-firm concentration ratios of meatpacking on a State basis provide an insight into regional or local concentration. Since the largest 4 firms in each State are not the same, and because data do not account for interstate competition or correspond to areas of concentrated cattle feeding, concentration ratios do not accurately indicate the level of competition among firms. If the current structure of meatpacking is believed to result in undue market power and control, research ought to be initiated to address the issue.

My research suggests individual meatpacker's supply and demand conditions and competitive pressure play a significant role in determining the price for cattle transactions. When there are 2-4 principal competitors in an area and one ceases bidding because of its supply and demand situation, prices paid in the area may be affected. Empirical research might shed light on the value of retaining or adding a competitor in a market area.

My research also suggests the importance of the Yellow Sheet in pricing slaughter cattle, but suggests that not all meatpackers use it in the same way. It tends to dispell the belief of many producers that meatpackers simply convert the reported carcass price to a live weight price by using a standard or estimated dressing percentage in order to arrive at a bid price. The pricing process is more complicated, consisting instead of collecting and evaluating many pieces of information.

While the Yellow Sheet's importance is clear, the importance of other sources of information in determining current market conditions should be noted.

Based on my research, I would hypothesize the expected relationship between carcass prices and live cattle prices increases as the period of analysis increases. Changes in reported prices may not be reflected immediately in meatpackers' pricing policy, depending on their supply, demand, and competitive position. Stated differently, the change in reported prices would be expected to be more closely correlated to aggregate changes in live cattle prices (daily, weekly, monthly, etc.) than to changes in individual cattle transactions. I would hypothesize a similar relationship between futures market prices and live cattle prices. Empirical research could prove or disprove these hypotheses.

Formula pricing of wholesale beef seems to be more important for carcass beef than either boxed beef or ground beef. With an increasing percentage of beef being sold in boxed form or as ground beef, how are the remaining carcass sales priced? Is formula pricing of carcass beef increasing and is it expected to increase further? Since the NCFM study and USDA's beef pricing study did not use comparable data, the extent of growth in formula pricing, if any, is unknown.

The NCFM and Hayenga studies found that smaller meatpackers and small and medium size retailers relied more on formula pricing than larger firms. Advantages cited included time and cost savings and reduced risk associated with more stable supplier-customer relationships and with the assurance of not being at a competitive disadvantage. What are the cost savings associated with formula pricing? What is the value of reduced risk? What are the costs of formula pricing in

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terms of pricing inefficiency? Efforts to drastically change the current system may harm some of the firms such change is intended to benefit.

The accuracy of reported Yellow Sheet prices is particularly important because of their use. USDA found no strong evidence that Yellow Sheet prices, on the average, failed to reflect logged in prices, though random differences were as much as \$.75 per hundredweight on either side of the average on some days. The study also stated that it could not be concluded that, on the average, Yellow Sheet prices failed to reflect the sample of negotiated prices, though random differences were as much as \$1.60 per hundredweight on either side of the average on some days. These results beg the question; how much more accurate could prices be with a larger reporting base? What level of pricing accuracy is acceptable? Who gains and loses from pricing accuracy errors?

The reportable carlot carcass market is relatively thin. We need to know if that market is getting thinner. If so, the possibility of pricing errors and price manipulation increases. USDA's findings that prices were reported by the Yellow Sheet in some cases without recorded transactions is a concern. While prices on as little as 1 percent of a market could accurately reflect supply and demand conditions, in my opinion reports based on a higher percentage of the market are preferable.

The House Small Business Committee report suggests meatpackers benefit at the expense of producers and consumers. Yet, USDA's Red Meats Task Force concluded otherwise, and their findings paralleled those of the NCFM report.

Previously discussed studies raise additional questions. Do geographic, dressed meat pricing patterns still exist and can they be

explained by studying transportation and regional supply-demand differences? Is there a trend toward formula pricing live cattle? What detrimental effects, if any, does it have? Is the current system "orderly and competitive"? What group currently benefits at the expense of other groups if our current system is inequitable? Is there evidence to support allegations of wrong-doing, or are they just allegations? What Justice Department, Federal Trade Commission, and USDA Packers and Stockyards investigations have not resulted in criminal indictments? Where are the inefficiencies in the current system? What are the trade-offs between operational and pricing efficiency? What groups stand to gain or lose from proposed changes?

It is clear our current meat marketing and pricing system moves large quantities of meat daily to meet consumers' time, form, and place demands. While my statement discusses only selected studies, it is not clear that sufficient information is available on which to conclude how well the current system performs in terms of operational and pricing efficiency.

Perceived Problems and Alternative Solutions

Because our current system is functioning at a reasonably high level and because research has not clearly identified major problems, I conclude there is little need for impulsive change. Any change, especially any administered by the Federal Government, must be assured of preserving or raising the efficiency level of the current system, because the reversibility of change many times is difficult and limited.

First, I would recommend developing a priority list of research to be funded over a five-year period that will result in a solid base of information on which to fully evaluate the current system and proposed

changes. Short-term Administrative and Congressional requests (e.g. for 90-day quick and dirty studies) is an unacceptable basis on which to make policy decisions regarding a topic as significant and complex as meat marketing and pricing. Some of the Congressional studies reviewed earlier illustrate the frequent inadequacies of such studies. There is no compelling evidence that the present system will experience significant deterioration over the next few years, thus allowing time to develop an information base that can lead to an accurate assessment of current and proposed systems.

While recommended studies are underway, certain measures could be taken to alleviate one perceived problem. My discussion of alternatives will be rather general and in the order of increasing complexity.

In my opinion one of the areas needing improvement is the method of reporting carcass beef prices. One alternative is for USDA to sponsor one or a series of conferences or hearings to determine the information users would like in daily market reports. Since cattle feeders, meatpackers, and retailers criticize Yellow Sheet reporting procedures and reported prices, they ought to be involved in suggesting specific changes. USDA might consider expanding Market News coverage in a way that makes Market News more usable to the meat trade and counter some of the criticism levied against the private reporting services. I recommend inviting Mr. Norton and Mr. Albanos to attend those conferences and hearings and provide them an opportunity to improve their services. Along the same line, I suggest USDA offer to work with the private reporting services to improve statistical procedures. Improvements in price reporting may reduce complaints about the current system at relatively small increases in public and private costs, and without disrupting the current system. Whether improved price reporting increases

or decreases the incidence of formula pricing is debatable.

I have mixed views concerning some form of licensing private reporting services. I prefer to have the Government help overcome criticisms of private reporting services by improving Market News reports and by working with private firms in upgrading their services. If no efforts are taken by private firms to improve their method of reporting prices, some form of licensing may be necessary.

Others have suggested banning formula pricing or making price reporting mandatory to improve day-to-day information. As has been mentioned, formula pricing has advantages for smaller firms. Until the effects of a ban on formula pricing are determined, such a ban is ill-advised in my opinion. History is replete with examples of well-intentioned legislation that proved to be detrimental to the group it was intended to aid.

Mandatory price reporting has the obvious advantage of producing a large amount of information. If improvements in price reporting cannot sufficiently reduce the potential for unrepresentative prices or price manipulation, mandatory reporting may be necessary. My bias is toward voluntary reporting, without involving additional bureaucracy. Would mandatory reporting include or exclude private reporting firms? What costs are involved? While I can visualize how sex, weight, grade, yield grade variables could be handled, what about types of slaughtering, e.g. Kosher, or cutting and trimming to customer specifications? Would mandatory price reporting infringe upon meatpackers' and retailers' ability to develop individualized merchandising programs? While mandatory price reporting may be technically feasible, I am unaware of any study discussing its feasibility in detail for meat marketing. Again,

maybe the Government's role should be to work with industry groups in studying the problems and opportunities from mandatory reporting.

Perhaps the most often discussed alternative is an electronic exchange system, probably a computerized system. Like many other economists, I believe this alternative has possibilities. From the standpoint of computer technology, a wide variety of electronic systems are feasible; however, the technical software problems for an electronic meat marketing system have yet to be overcome. While informative, the recently completed USDA report, The Feasibility of Electronic Marketing for the Wholesale Meat Trade (5), fails to address software problems and procedural questions of an electronic meat marketing system. In addition, it fails to adequately detail the impacts (i.e. estimated potential benefits and costs) of such a system on various segments of the livestock-meat subsector. How much will it benefit or cost the industry in terms of operational efficiency? What are the expected benefits in terms of pricing efficiency? I have written and discussed potential benefits of electronic exchange systems, but have felt rather uncomfortable that current systems had not been studied more thoroughly to confirm or deny the realization of those potential benefits. More research on economic impacts of electronic exchange systems is needed. In my opinion USDA's role regarding electronic exchange systems should be to work with industry groups in studying the possibility of implementing such a system, but my bias is to have such a system operated by one or more private firms rather than the Federal Government.

Conclusions

I conclude that too little is known about the conduct and performance of the current meat marketing and pricing system for policymakers to

recommend major changes. Additional research is clearly recommended. Similarly, I conclude that too little analysis has been made of proposed alternatives to suggest which alternatives ought to be implemented immediately. Additional study of economic impacts also should be initiated.

Though not flawless, our current meat marketing and pricing system is effective. I recommend cautiously moving forward to improve the system, insuring that changes result in a system more efficient than the current one -- rather than hastily implementing changes which may have unintended detrimental effects.

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