

ALTERNATIVE MARKETING METHODS FOR LIVESTOCK

by

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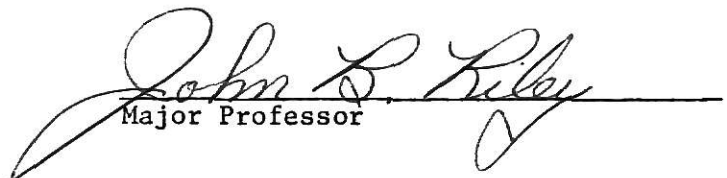
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CHAPTER I

CHANGES IN THE STRUCTURE AND ENVIRONMENT OF THE MARKETING SYSTEM

The traditional system of marketing livestock has been of long standing. It was built on the concept that production of livestock was to a degree fortuitous, and that marketing began when the producer decided his work was done [Breimyer, p. 3]. Livestock are produced, then marketed. In the traditional system the common denominator was price, and price was determined in a competitive environment.

Price functioned as a means of allocating a given supply of a product among claimants. Price determined how much and what kind of product each potential buyer would get. At medieval town fairs or open markets, numerous buyers inspected products brought together and by their price bids on lots of differing quality, performed a sorting function. This sorting function was made easier by the development of central assembly markets that brought together products produced within wider geographic areas. In fact price may not have acquired its crucial functional role had it not been associated with markets where farm products were collected for sale [Breimyer, p. 4].

The traditional concept of marketing as separate from production relieved the producers of much responsibility in marketing. However, it also denied him much power. The individual producer was at the mercy of the competitive make-up of that market. The philosophy, however

was that of safety in large numbers. If there were enough buyers and sellers in the market, neither buyer or seller could exert unwarranted influence. The competitive marketing system protected both parties in a transaction as well as accurately reflected supply and demand for the product. In the traditional system the marketing system for live-stock and meat stood as the clearest example of a system composed of many individual, independent units that was both self-sustaining and self-regulating and that determined price competitively after the product was produced.

Changing technology is the root of what we observe today. Competition does not necessarily prevail in the price determination process. Buyer or seller may dominate a market transaction. Buyer's or seller's knowledge of total supply and demand conditions may be limited to, at best, be based on limited information.

A trend toward urbanization and the technological growth in transportation and communications have enabled the marketing system to "telescope" some marketing functions, thus by-passing some marketing functions that were once vital links in the traditional marketing chain [Goodwin, p. 3]. In addition, rapid technological development in meat production and meat processing has also increased the direct selling of livestock from a producer to a processor as well as the decentralized location of slaughter plants. Through technological growth, both producer and processor have been forced to grow in order to efficiently utilize the improved technology. Many have achieved sufficient size to individually influence the market functions.

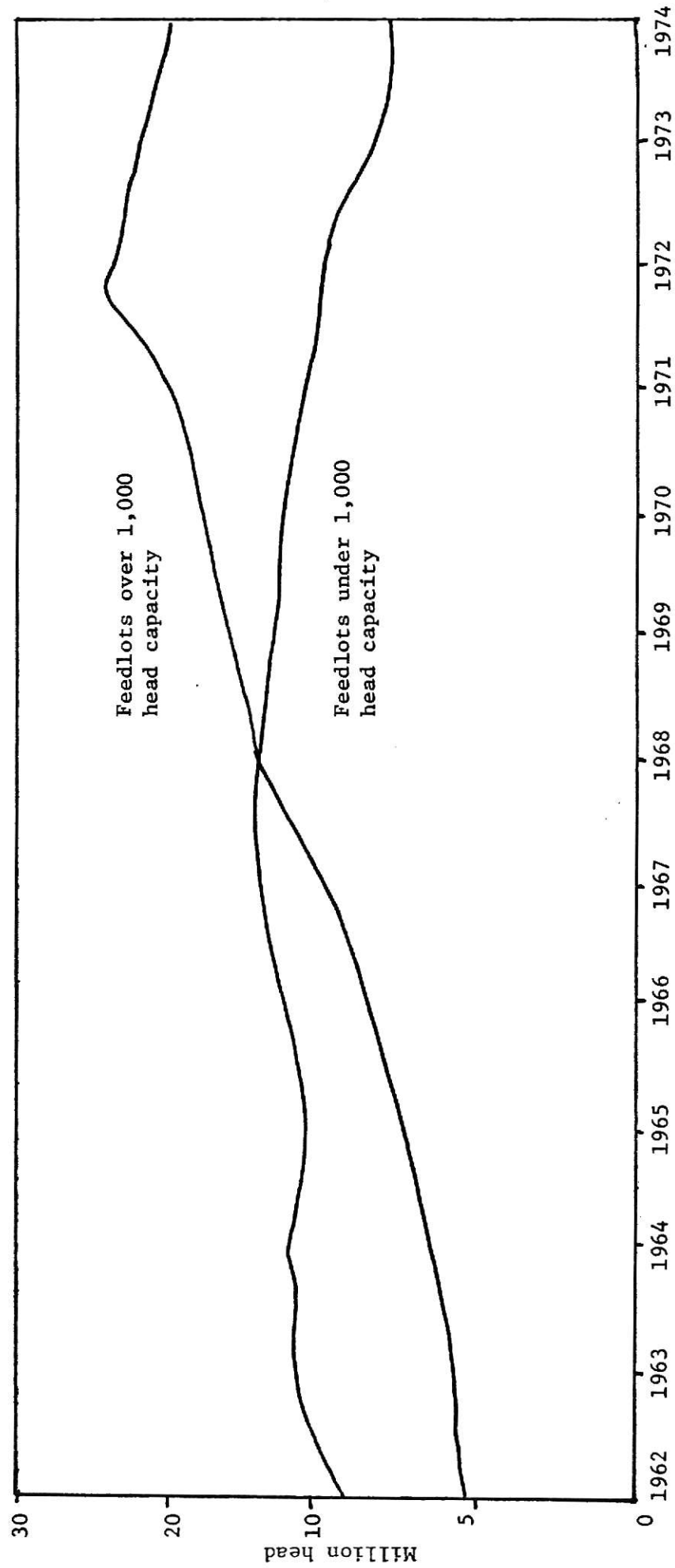
A major trend in cattle feeding is the movement from small feedlots (under 1,000 head capacity) to large capacity units.

Between 1962 and 1975, in 23 leading cattle feeding states, the number of small feedlots decreased by 93,103 from 229,365 to 136,262, while the number of large feedlots increased by 325 from 1,439 to 1,764 [Ward, p. 18]. Large feedlots increased their proportion of total fed cattle marketed during that period from 36 to 64 percent (Figure 1).

There has been a decentralization of slaughter as slaughter-processors have built plants closer to the source of cattle supply rather than near large beef consumption centers. Development of truck transportation and construction of all-weather highways probably were the greatest factors in decentralization of the packing industry [McCoy, p. 163]. With increased usage of trucks, need for water and rail transportation declined, as have terminal public markets.

A total of 938 annual reports of slaughtering firms were filed with Packers and Stockyards Administration for the 1974 reporting year [USDA(a), p. 1]. Of the 938 firms there were 41 multiple plant firms and 897 single plant firms. The 41 multiple plant firms had 188 slaughter plants which, along with the 897 plants of single plant firms, gave a total of 1,085 slaughter plants covered by 1974 reports (Table 1).

Services such as organized selling facilities and an assembly point provided by the competitive livestock marketing agencies are of little demand to the buyer and seller of slaughter cattle today. Technological developments in transportation and communication have made obsolete the idea that space is an important element in the definition of a market. Buyers and sellers today can be in instant communication with each other through telephone, radio, or television. In short, there is less need for large centralized markets to serve as



SOURCE: [Ward.]

Figure 1. Fed Cattle Marketings by Feedlot Size, 1962-74.

TABLE 1

NUMBER OF SLAUGHTER PLANTS REPORTING LIVESTOCK PURCHASES,
 BY SPECIES AND TYPE OF MARKET OUTLET, AND TOTAL NUMBER
 OF FIRMS REPORTING PURCHASES FOR SLAUGHTER, BY
 SPECIES AND TYPE OF FIRM, ALL REPORTING
 PACKERS IN THE UNITED STATES--1974^{1/}

Species	Direct County Dealers etc.	Terminal Markets	Auction Markets	Total Plants Reporting Slaughter of Species	Single Plant	Multiple Plant	Total
- - - - - No. of Plants - - - - - - - No. of Firms - - -							
Steers & Heifers	570	265	470	767	651	34	685
Cows & Bulls	495	212	519	719	632	28	660
All Cattle	640	305	605	873	748	36	784
Calves	212	70	253	360	340	14	354
Hogs	393	196	366	556	463	29	492
Sheep & Lambs	115	41	140	213	191	11	202
Total (No. Reports)	805	429	753	1,085	897	41	938

^{1/} Summarized from annual reports of packers filed with the Packers and Stockyards Administration, U.S. Department of Agriculture.

SOURCE: [USDA(a).]

collection points for livestock and there is less need for buyers and sellers to be in close physical proximity to have keen competition in a market system [Powers and Bendt]. Consequently, since the 1920's, the number of terminal markets has declined from 78 in 1922, to 35 in 1974 (Table 2). During the 1930's and 1940's, the number of local auction markets increased rapidly from 200 in 1930 to approximately 2,470 markets in 1949. The number of auctions in the early 1960's remained fairly steady at about 2,200 markets with a gradual decrease in number beginning in about 1965. There were 2,006 local auction markets in the U.S. in 1974.

Large scale commercial feedlots have consolidated large enough numbers of fat cattle to make it economically feasible for packers to send cattle buyers directly into the feedlot for live cattle procurement, by-passing the public markets [Goodwin, p. 3]. Likewise, the decentralization of slaughter and changes in communications systems have brought a shift in livestock marketing from the public markets to more direct marketing methods. In 1974 more slaughter plants purchased steers and heifers, and hogs direct than through terminal or auction type markets (Table 1). The percentage of cattle purchased by packers at public markets between 1965 and 1974, dropped from 54.9 percent to 30.4 percent (Figure 2). Purchases of hogs and sheep followed the same declining trend. Calves purchased through public markets, however, increased from 65.7 percent to 69.6 percent. The trend towards decreased public market purchases has been more pronounced for cattle and for sheep and lambs than for hogs.

Cattle receipts from farm marketings of meat, in the U.S., show cattle and calves lead hogs and sheep with \$17,482.1 million as compared to

TABLE 2

NUMBER OF STOCKYARDS IN THE UNITED STATES POSTED UNDER THE
PACKERS AND STOCKYARDS ACT, BY TYPE, SELECTED YEARS, 1922-1974

Year	Terminals	Auctions ^{1/}	Total
1922	78		78
1927	80		80
1930	72	1 (200)	73
1937	80	24 (1,345)	104
1947	65	136	201
1949	67	207 (2,472)	274
1950	68	240	308
1952	67	260	327
1955 ^{2/}	66	269 (2,372)	335
1958 ^{2/}	60	540	600
1959	50	1,478	1,528
1960	50	2,065	2,115
1961	50	2,167	2,217
1962	50	2,222	2,272
1963	49	2,201	2,250
1964	49	2,210	2,259
1965	48	2,207	2,255
1966	41	2,196	2,243
1967	43	2,204	2,247
1968	40	2,167	2,207
1969	39	2,165	2,204
1970	36	2,171	2,207
1971	36	2,069	2,105
1972	36	1,982	2,108
1973	36	2,000	2,036
1974	35	2,006	2,041

^{1/}The numbers of auction markets enclosed by parenthesis for the years 1930, 1937, 1949, and 1955 are based upon surveys reported in USDA Marketing Research Report No. 223, Livestock Auction Markets in the United States, by Gerald Engelman and Betty Sue Pence.

^{2/}In 1958, The Packers and Stockyards Act was amended providing jurisdiction over all stockyards in commerce. Before this amendment, markets with less than 20,000 square feet of pen space were not subject to the Act, and many of those were not posted.

SOURCE: [USDA(a).]

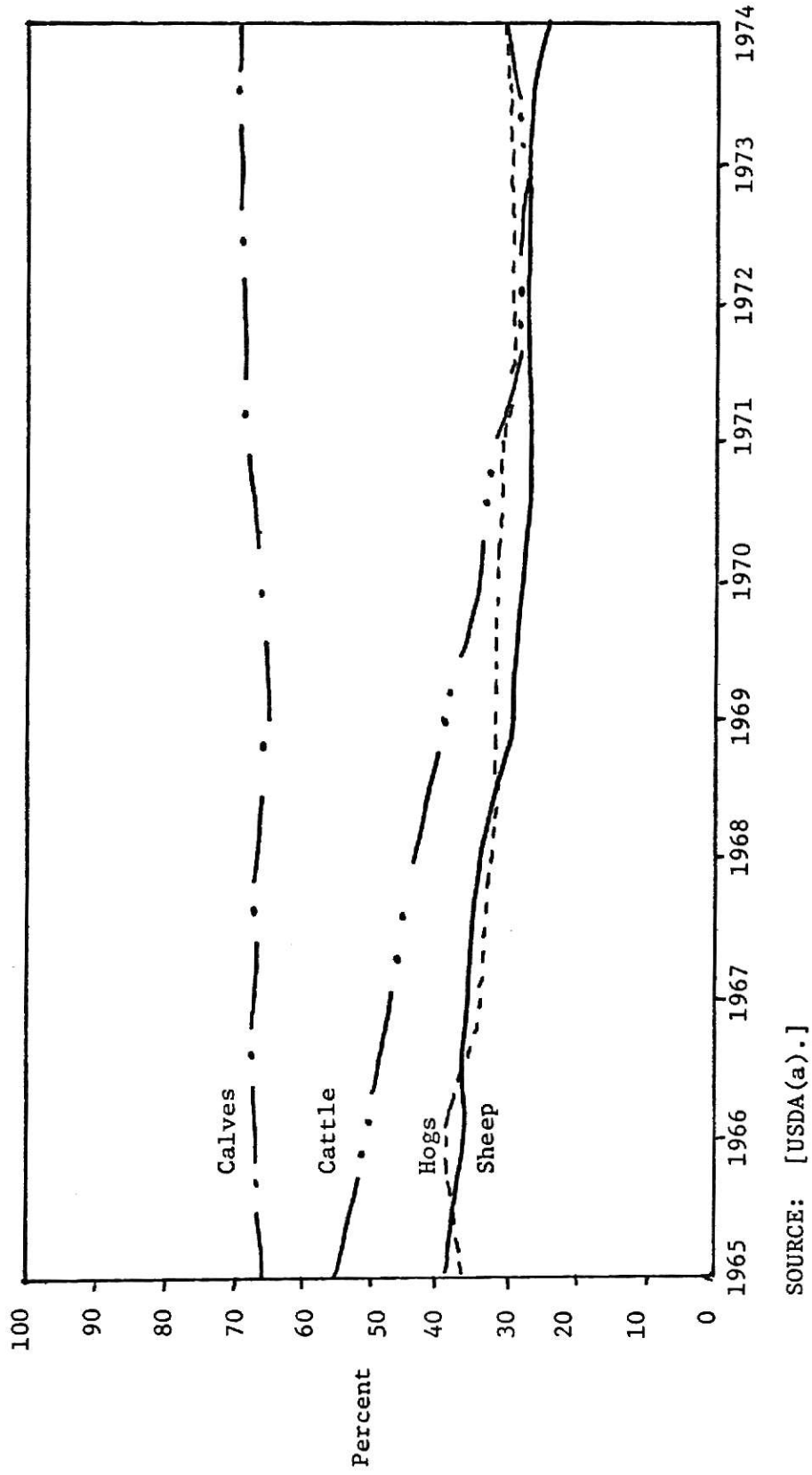


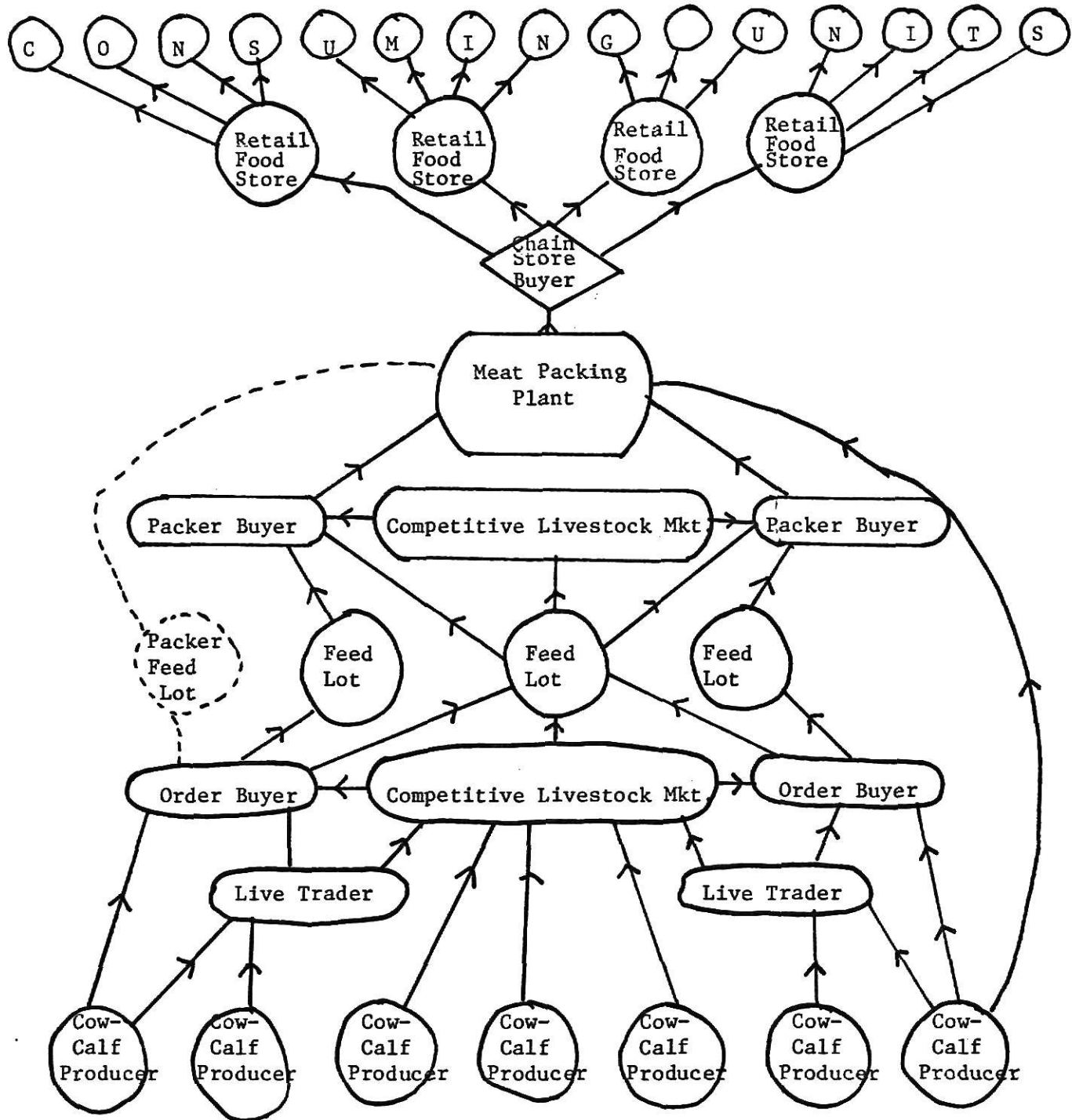
Figure 2. Packer Purchases of Livestock at Public Markets 1965-1974.

\$7,878.8 million for hogs and \$380.4 million for sheep in the U.S. [American Meat Institute, p. 6]. While the beef cattle sector is by no means all of the livestock and meat business, it plays a major role in determining the sequential levels of operations observed in the business. For this reason, an examination of the beef sector gives clues as to where the opportunities for by-passing competitive markets lie. Figure 3 illustrates the structure of the beef industry indicating the flow of products through the productive, marketing, processing, and distributive activities. It is apparent that channels have been established for by-passing the competitive livestock markets not only between the feedlot and the packer but between the cow-calf producer and the packer [Goodwin, p. 6]. The matter of concern is that these direct marketing channels have grown at an accelerating rate and may continue to grow unless the marketing agencies make adjustments that make the competitive markets more valuable to at least one of the two agencies involved in any given exchange of livestock.

Impact of the Current Marketing System on Producers

Producers are facing an evolving marketing system where production and marketing have become increasingly concentrated in fewer, larger firms. As size increases a need arises for improved coordination among production marketing stages.

While the rest of the economy is centralizing, livestock marketing is decentralizing. The terminal markets are continuing to decline with no new central system for determining price. Questions arise as to what underlies the traditional pricing system. Do the base prices quoted at major markets truly represent supply and demand conditions?



SOURCE: [Goodwin.]

Figure 3. Patterns of Transactions and Product Flows in the Beef Industry.

If these are inaccurate, the effect will be magnified when local prices are determined.

When a producer's animals are ready for market he will sell to whomever he believes to be the highest bidder. Some sales are contracted in advance, but generally the producer sells his livestock through a spot market. The producer must accept the highest price he can get--he is inevitably a price taker. He has no means of establishing his own pricing policies.

Producers are faced with adjusting production to preferences of large volume feedlots, packers and consumers. Producers find it more difficult to sell small lots of livestock which vary in class, weight or quality at prices they consider reasonable [Williams and Stout, p. 203]. Feedlots and packers prefer large lots of livestock with uniform weight and quality.

Conflicts in goals of operation are encountered by livestock producers. Feeder pig, lamb, or cow-calf producers must decide if their products are the final output, or inputs to a feeding or finishing phase. If they continue through successive stages of production, they may need to alter their mode of operation, acquire new management skills and forego incomes to a later time period.

Problem

The production, marketing, and distribution of livestock and meat is fundamental to the farm economy, foundation to the food industry, and of outstanding importance to consumers. The marketing system is built on the principle of independent producers selling their products in competitive markets. Yet the environment surrounding the marketing system for livestock and meat is a curious

blend of ceaseless tradition and relentless progress that has given rise to a series of adjustments and oppositions to adjustment at all levels in the industry. The trends observed in the competitive livestock markets are not encouraging to producers. Part of the problem has been outside their control as technology seems to have conspired against them. A large part of the problem, however, has resulted from refusal of competitively oriented individuals to accept the economic facts of life. They have been caught up in a dynamic industry to which adjustment must be made. They do not need a definition of their problems but rather suggested ways for adjusting to economic realities. The marketing functions that have always been performed in the livestock and meat business are still being performed. Only the agencies, environment and methods in which they are performed have changed and are changing.

Study Objectives

Producers, packers, and others interested in improving the present system are considering alternatives such as forward contracting, commingling or pooling and tel-o-auctions. The kind of marketing system which will prevail will reflect the character of all farm marketing in the future and, indeed, the make-up of all agriculture. Thus the primary objective of this study was to discuss producer marketing alternatives for livestock.

The specific objectives of this study were:

- (1) To describe marketing and pricing alternatives for livestock producers that can occur within the current legal and social structure of the industry.
- (2) To discuss marketing and pricing alternatives for livestock producers that can occur only with changes in the legislation governing the producer marketing environment.

- (3) To enumerate examples of marketing systems illustrating marketing alternatives.
- (4) To describe conditions necessary for successful operation of alternative producer marketing alternatives.
- (5) To briefly evaluate the economic impact of adopting each marketing alternative.

Information relating to producer marketing alternatives was gained through various studies, reports, and publications describing existing methods as well as possible future alternatives. Producer marketing alternatives evaluated were contracts, pools, electronic based markets, vertical integration, market orders, market boards, and centralized exchange.

CHAPTER II

ALTERNATIVES WITHIN THE PRESENT SYSTEM

As technological development continues through communications and transportation, coupled with concentration in production and marketing, producers face a changing environment that is not always in their favor. Conflicts may arise in goals of operation, quantity and quality of production, production timing, location of population, value determination, and price and information flows. If producers do not adjust to the current economic realities, they are actually leaving the decision-making process to others. The importance of acquiring a steady supply of meat will be expressed through increased direct marketing, creating a continual decline in transactions through competitive markets. Feedlots will continue to grow in number and scale while small farms continue to dwindle in number and importance as individual units. Market competition among both buyers and sellers will give way to market power.

Livestock producers, packers, consumers, and many others are interested in the future of the livestock industry. Each level of the industry is competing for a margin of profit. Beef steak, typically passes through at least four profit-taking management centers--the cow-calf operation, the feedlot, the packing plant, and the retail food store. At the base of this collage of sectors and subsectors, the producer continues to supply the product. The consumer

is the ultimate recipient, yet it is up to the producer how his product is marketed.

Producers have opportunities available and adjustments that can be made within the present livestock industry. Alternatives include contractual arrangements, pooling, electronic based marketing, or vertical integration of production and processing operations. All producer alternatives have different features, yet none are mutually exclusive. These alternatives vary in scope and application and may not apply to all sectors of the industry but should be considered by producers seeking pricing and marketing options.

Contracts

With modern technologies in production, processing and distribution of livestock and meat, firms are requiring coordination of activities to obtain efficiencies. As a result, many agricultural firms are turning from traditional spot-market transactions to contracts as a means of buying and selling. Contracting is a form of pricing through private negotiation made prior to delivery and often before production begins. Contracts may specify factors of quality, quantity, and time of delivery. Its potential is to improve coordination of activities for producers and packers.

Contracts designed for physical delivery or actual fulfillment can be grouped into four categories [Aspelin, Arnold and Engleman, pp. 40-1]:

- (1) Marketing service contracts
- (2) Market specification contracts
- (3) Resource providing contracts
- (4) Production management contracts.

Futures contracts, basically used as a risk aversion method or for speculation, differ in that rarely is delivery of raw products made.

Marketing Service Contracts

A marketing service contract involves agreement between a producer and a marketing agency under which the marketing agency provides specified services in return for a fee [Aspelin, Arnold and Engleman, p. 40]. Marketing services may include providing producers current market information, helping producers select the livestock to be sold, and selling the livestock. A country commission firm or agency would fit this type of classification. The contract formalizes an agreement between the producer and the marketing agency.

Interstate Producers Livestock Association. Farm Bureau affiliated organizations are offering marketing services for livestock, primarily cattle and hogs, in several north central states. As an example, The Interstate Producers Livestock Association (I.P.L.A.) in Northern Illinois, acts as the exclusive marketing agent for hog producers. Under this system an I.P.L.A. representative evaluates a producer's hogs on the farm and puts them on the market by a phone call from his car. The operation proceeds in the following manner:

- (1) The initial contract commits a producer's slaughter hogs for 60 days. A 30 day automatically renewable contract follows the initial contract. Breeding stock can be sold "outside" the contract.
- (2) The producer may receive an "outside" bid on butchers but he must make this known to the I.P.L.A. representative who helps the producer decide which bid will net the most dollars. Also, I.P.L.A. must decide on the ability of each prospective buyer to pay since I.P.L.A. guarantees payment. Violations of the contract release I.P.L.A. from financial obligations.

- (3) The producer has the final say about how the hogs sell. I.P.L.A. has no authority to settle for less than the producer's specified price.
- (4) Only Farm Bureau members in good standing may hold I.P.L.A. contracts.
- (5) Producers pay I.P.L.A. 35¢ per cwt., plus transit insurance to the packing plant for contracted hogs.
- (6) I.P.L.A. tattoos all hogs on the program, identifying each animal with the number assigned the producer of the hog.

Similar marketing service contracts for finished cattle, organized through Farm Bureau affiliates, are being used in Illinois, Indiana, Ohio, Iowa and Missouri. The contracts specify all services offered by the agency and responsibilities of producers.

Market Specification Contracts

A market specification contract is an agreement between a producer or a group of producers and a packer whereby the producer promises to deliver a specified number and quality of livestock to the packer at specified intervals [Holder(b), p. 92]. Other provisions such as production practices are left up to the producer.

When a group of producers is involved, a cooperative usually represents producers. The cooperative negotiates terms of the contract with the packer to establish operating procedures and prices. The cooperative assumes the role of coordinating the flow of livestock to the packer and the flow of funds back to the producer. If carcass trading is used, the cooperative assures adequate grading and weighing for its members.

Pricing procedures usually follow some type of formula based on one or more live market quotations on the day or week of delivery.

Most individual producer-packer contracts have been priced in advance in relationship to a live hog or cattle futures contract.

Maurer-Neuer. Maurer-Neuer at Arkansas City, Kansas offers a contract program for the delivery of market-weight hogs (220-240 lb.). Each contract is for 135 head with delivery to begin no sooner than the 20th day of the month previous to the designated marketing month and to be completed by the 20th day of the marketing month. When a producer wishes to sell a contract, the price he receives is from the commodity market on live hog futures for the month the producer wishes to contract. The price is adjusted for freight cost to Peoria, Illinois, brokerage fee, interest for use of margin money and differential for No. 3 grade hogs.

For hogs delivered under 220 lb. and over 240 lb. prices are at the contract base price with the same differential for hogs that grade above or below base, but discounted for weight according to the buyer's guide¹ in effect at the time of delivery.

National Farmers Organization. NFO has established "cost-plus" contracts with sheepmen in Colorado, Utah and California. These contracts are based on the cost of production plus a reasonable profit needed by sheepmen to continue their operations.

Organizing several years ago, San Luis NFO members slowly but steadily established a bargaining block. The growers presented NFO bargainers with the average of what they determined to be their cost of production plus what they decided to be a reasonable margin of profit. Bargainers negotiated contracts with various packers on a

¹A base schedule with break points at 10 pound intervals developed by the company.

variety of live weight, grade and yield, and carcass rail agreements.

A cost-plus contract was negotiated with a Denver packer.

Cost-plus contracts have been successful according to Dick Hammond, head of NFO's Sheep Division, for three reasons [The NFO Reporter, pp. 8-9]:

- (1) Producers are willing to work together to get contracts and have consistently delivered on those contracts,
- (2) Producers realize the value of getting cost of production rather than top market prices, and
- (3) The sheepmen members commit all of their production on contracts for sale early in the season, giving the bargainer a good bargaining tool with which to work and the time to use it efficiently.

Resource-Providing Contracts

In resource-providing contracts the party contracting (contractor) with the producer provides some of the resources needed in producing livestock. These inputs may include feed, breeding stock or feeder animals, veterinary service, medicine or others. The producer usually supplies feeding and handling facilities, labor, and the management of the resources combined to carry out the production function or operation. The contractor decides when the livestock will be sold.

Resource-providing contracts are primarily used to help the contractor move a greater volume of breeding stock or feed. The contractors method of selling could be by contract with a local dealer, teleauction or contract with a packer.

Producers Livestock Marketing Association. P.L.M.A. in Ohio is piloting a project in cooperation with the feed division of Landmark to provide producers with feed and feeder pigs. P.L.M.A. then markets the slaughter hogs to packers. The individual producers receive quality inputs, a line of credit, and expert purchasing and marketing services.

This program provides P.L.M.A. members a sufficient supply of hogs to merchandise in an orderly fashion.

A similar contract program is underway between the Indiana Farm Bureau Cooperative and Indiana Producers Marketing Association. The individual producer in this program shares some of the price risks with the association and is protected from total loss, whereas producers in Ohio bear all price risks.

Dubov-Couvillion Study. In 1970 a study was conducted in Tennessee to determine the trade channels Tennessee packers use in procuring supplies of slaughter cattle and hogs [Dubov and Couvillion, pp. 8-10]. Forty-one packers who reported annual kill rates of 1,000 head or more supplied data for the study. Ten packers reported written or verbal contracts with producers and other agencies (feed dealers) (Table 3).

TABLE 3
AGENCIES WITH WHOM 10 OF 41 PACKERS REPORTED HAVING
CONTRACTS OR VERBAL AGREEMENTS, TENNESSEE, 1970

Agency	Formal Written	Verbal
	Agreements	Agreements
	Number	
Breeding Stock Producer	2	1
Swine Finishers	3	5
Feeder Pig Producers	1	1
Feeder Cattle Producers	1	1
Cattle Feeders	2	2
Feed Dealers	2	1
Packers	3	2

SOURCE: [Dubov and Couvillion.]

The main reason for making agreements or contracts was to assure regular supplies of slaughter animals or dressed carcasses. Acquiring a quality product delivered directly to the plant was also a consideration for contracts.

Three types of contracts were used by producers and agencies. The first was with cattle feeders and packers. The cattle feeders provided facilities, labor, utilities, and feed while the packer provided feeder animals, market outlet, and transportation of animals to the processing plant. The cattle feeder was paid on a monthly basis. Provisions were made for variations in size and quality of the finished animals. This type of resource-providing contract has been used by one packer for five years.

The second contract was with swine finishers and included a feed dealer arrangement. Physical facilities, utilities, transportation, and veterinary expenses were provided by the producer. The feed dealer provided feeder pigs, feed, and credit, and the packer provided a market outlet. Payment was based on market price at time of delivery to the packer. The producer split profits with the feed dealer.

The third type of contract was a sow-leasing program. The producer provided facilities, utilities, labor, veterinary expenses, and transportation. The contractor provided breeding stock, feed, and a market outlet. A specified amount was paid by the producer for use of the sows. Cost of gain for pigs produced served as a basis for payment to producers.

Production-Management Contracts

The production-management contract is similar to the resource-providing contract, only the contractor provides the management

decision-making function along with the resources. In this contract the producer provides labor and facilities and is paid on a piece-work basis, usually related to efficiency of gain. The contractor retains ownership of the livestock and makes all decisions. The contractor could be a feeder pig producer, packer or anyone interested in having his livestock custom fed.

Gold Kist, Inc. Gold Kist, a Georgia based cooperative, is working on a hog-pork complex in Atlanta. The company is developing foundation herds, placing sows and boars on farms to produce feeder pigs. Feeder pigs are then placed with finishers. Providing feed, slaughtering and processing hogs, and merchandising products are also part of the total program [Holder(b), p. 95].

Futures Contracts

Unlike contracts that require delivery of a product or service, futures contracts serve basically as a risk aversion alternative to producers. Even though delivery conditions are specified, few futures contracts are actually delivered. Organized futures trading developed directly as an extension of existing marketing practices, namely the transition from time or forward delivery contracts [Leuthold, p. 137]. These were contracts that specified delivery of a certain commodity at a deferred date.

Futures contracts are contracts in which a seller agrees to deliver and a buyer agrees to accept a specified commodity at a future time [McCoy, p. 234]. Contracts specify (1) commodity being traded, (2) price, (3) quantity, (4) quality, (5) place, and (6) time of delivery. Through the use of the futures market a buyer of a contract

may choose to sell the contract to another buyer thus canceling out his obligation to accept delivery of the product.

Trades made in the future market can only be made by members of the organized exchange. Memberships to the exchange are limited in two ways [McCoy, p. 234]:

- (1) Only a stated number are made available, and
- (2) Ethical and financial standards must be met.

Memberships are held by brokerage firms. Non-members may have members trade for them for a fee. The market exchanges, along with being self-regulated, are regulated by the Commodities Futures Trading Commission.

There are a number of futures markets in operation and trading is carried on in various commodities such as: live slaughter cattle, live feeder cattle, live hogs, frozen pork bellies, most grains, boneless beef, carcass beef, eggs, sugar, coffee, copper, potatoes, platinum, and other commodities. The major organization that specializes in trading livestock or meat futures is the Chicago Mercantile Exchange.

Only a small fraction of futures contracts constitute delivery of a commodity. The market, however, serves two other basic functions: price setting through speculative activity [Tomek and Gray] and hedging [Working].

Speculation is the acceptance of risk in hopes of securing a profit. A speculator may assume prices will rise in the next few weeks or months for a specific commodity. Based on this assumption, the speculator would buy futures contracts in hopes of selling them later for a profitable return. Likewise, the speculator can sell futures contracts, anticipating the repurchase of the contracts at a

lower price. The futures market provides a mechanism for trading of futures contracts but does not guarantee the trader a profit. If the speculator's analysis is incorrect, he would suffer a loss. The key to active trading is fluctuating prices. Speculators anticipate potential profits as prices remain flexible.

Hedging in the futures market is the use of futures market transactions in such a way as to offset the effects of adverse price movements in the cash market [McCoy, p. 240]. A hedge is accomplished by taking opposite positions in the cash and futures markets. A cattle producer for instance who is in possession of live cattle would sell futures contracts for the nearest trading month he expects to sell his cattle. When he sells live cattle, he would then buy back futures minimizing his risk against price movement and closing out his position. The success of the hedger being able to buy and sell contracts is dependent upon the presence of the speculator. A Kansas study provides a more complete discussion of alternative hedging strategies [McCoy and Price].

Summary Evaluation

Contracting assures producers an outlet for livestock and assures the marketing organization or packer a supply of livestock. A large volume marketing organization may be able to fill the needs of large volume commercial feeders better than can small auctions or private treaty dealers. As a result, they sometimes obtain higher prices for livestock. The contracting marketing organizations may furnish resources at charges less than could be obtained by an individual producer. Specialized credit or financial advice may also be available to producers. Through extension of credit, resources, or

livestock, producers are able to continue through production-marketing stages. The use of futures contracts allows producers, by means of hedging, to shift price risks of a fluctuating market.

By contracting future production, the producer may lose some management decisions. If good sales service is not rendered a producer may receive less income for his livestock than he could get by other methods. Frequently contractual prices are based on or derived from systems that do not accurately reflect supply and demand conditions for the industry or product. If the marketing organization is inefficient, the cost of selling livestock may be more than the sales service is worth. Using futures contracts protects the producer from adversity in the market system but does little to improve market power.

Livestock Pools

Selling livestock in commingled lots or pools is a relatively new idea in marketing. Pooling arrangements may range from two producers combining their livestock for sale to a marketing agency contracting homogeneous lots of cattle to sell directly to a packer. In essence pooling is the combining of several producer's livestock into a single market offering. These lots would combine animals in the same grade and weight class and of the same sex and breed. The livestock may be pooled on paper and sold through a teleauction² or consignment, or physically pooled and sold through auctions, tele-auctions, or by contract.

Several livestock pools using telephone or teletype connections are currently in operation in the United States and Canada. Even

²Pooling on paper is discussed in a following section.

though cattle pools are relatively new, lamb pools have been in operation throughout the United States for several years. The most successful pooling arrangement for lambs is the Tel-o-auction system located in Virginia. There are also tel-o-auctions in Oregon and Idaho.

In some cases a pool manager is hired to seek out buyers and negotiate the actual sale on behalf of the pool members. The manager is allowed to offer buyers large truckload lots of livestock that are relatively uniform in weight, condition and quality. This simplifies the buying function, reduces transaction costs and can facilitate more efficient assembly and delivery to a previously determined destination.

Impact of Pooling

The effects of pooling feeder cattle sold through an auction market were examined in Virginia in 1973 [Chambliss and Bell]. Data were collected over six sale days on feeder heifers sold through a local auction market located at Roanoke-Hollis, Virginia. Only feeder heifers grading good or choice were commingled. To create better comparisons control groups of animals were sold conventionally. Those heifers sold in control groups were classified as choice or good by a grader but sold as singles or in lots from one consigner and without official grade designation. The results indicated increased efficiency, higher prices, and favorable attitudes on the part of both buyers and sellers when livestock were sold in homogeneous lots.

Increased Efficiency. The selling time of feeder cattle was recorded as that period of time between the opening of the auctioneer's announcement and his "knocking down" of the sale. Generally, selling time per head for larger lots was lower in both conventional and commingled

lots. The average size of sale lot was 5.9 head for commingled lots versus 1.4 head for conventional lots [Chambliss and Bell, p. 4]. Yet, the selling time per head was one-fourth as great in commingled lots as in conventional lots. Figure 4 shows relative selling times per head in conventional and commingled sales.

Price Comparison. As noted, some feeder heifers were assigned informal grades by a state grader and sold as singles or in small single-cosignor groups to provide more precise price comparisons with commingled lots than would be the case using ungraded heifers sold conventionally. A direct comparison is shown by breed between average prices recieved for the control heifers and average prices for the commingled heifers using only those animals which were graded choice (Figure 5). Based on these observations the pooled heifers sold for an average premium of \$1.40 per hundredweight. Figure 5 shows that choice heifers sold in commingled lots consistently commanded higher prices than prices realized for choice heifers sold by individual consignors in the smaller control lots.

Feeder heifers were classified not only by grade and breed but also by weight. With six weight classes ranging from 301 pounds to 600 pounds, Table 4 indicates the number of head in each weight class and weekly prices received in commingled sales and conventional sales. The average price for all cattle sold in commingled lots was \$43.34 per hundredweight as compared to \$39.55 per hundredweight for those sold conventionally.

Attitudes of Market Users. Thirty users, six order buyers and twenty-four farm producers from the Roanoke-Hollins market were interviewed concerning their attitudes toward pooled sales of feeder cattle.

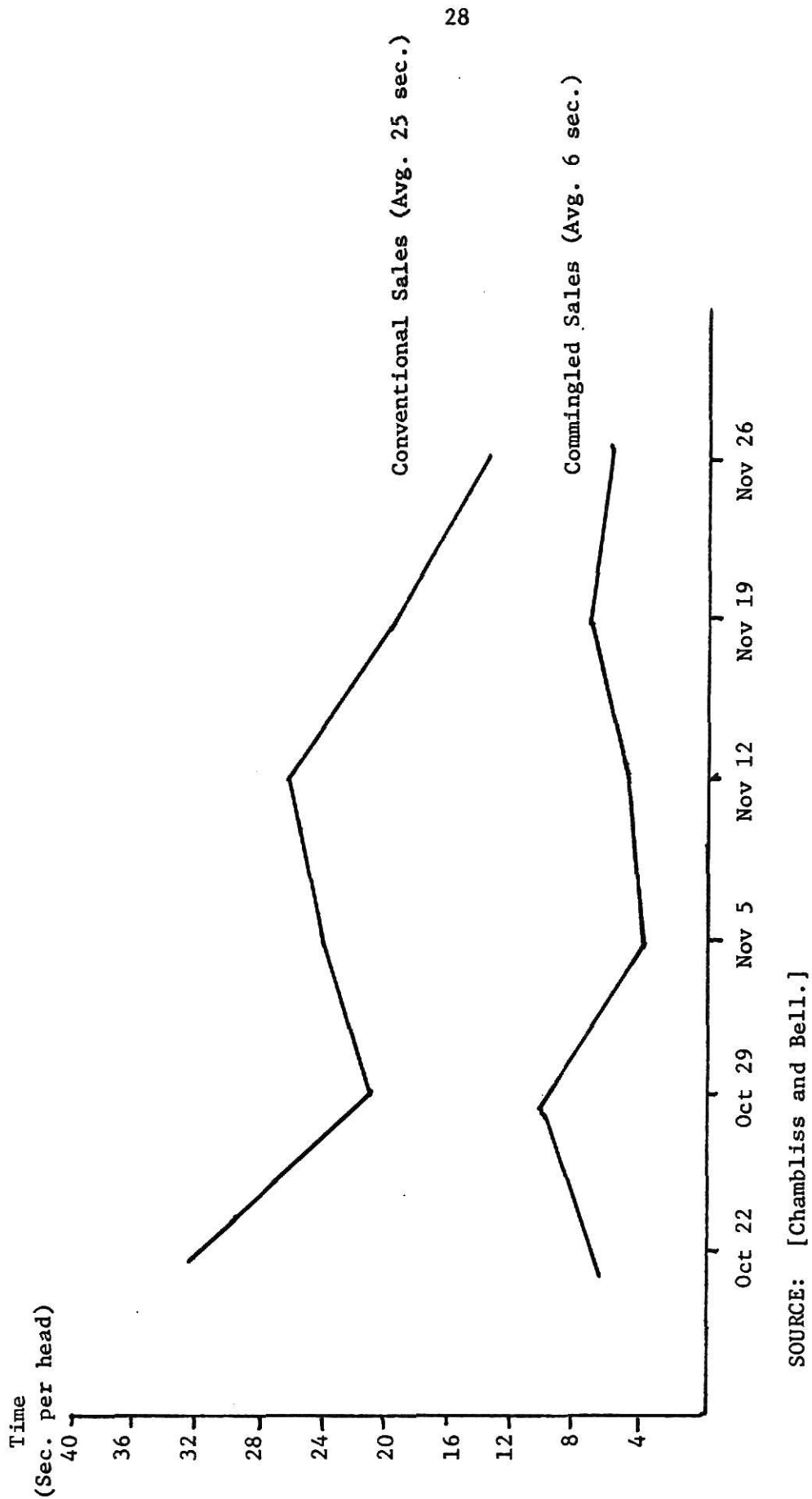
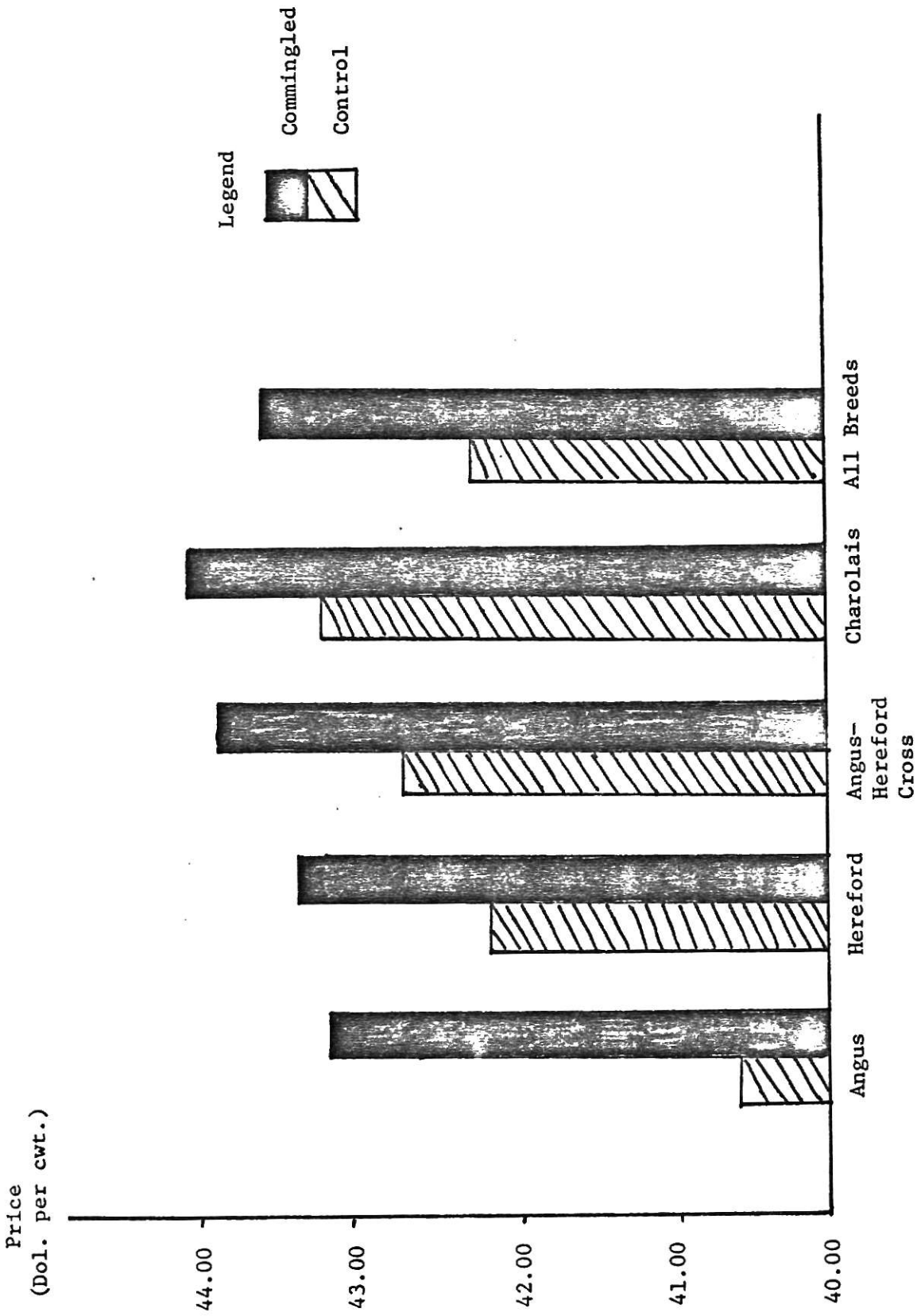


Figure 4. Selling Time Per Head of Feeder Heifers in Conventional and Commingled Sales, by Date of Sale, Roanoke-Hollins Livestock Market, Fall 1973.



SOURCE: [Chambliss and Bell.]

Figure 5. Average Prices Received for Choice Grade Feeder Heifers in "Control" and Commingled Lots, by Breed, Roanoke-Hollins Livestock Market, Fall 1973.

Over two-thirds of those interviewed had favorable attitudes toward commingled sales. Reasons attributed to favorable responses were: producers felt they received a higher price than by selling their livestock conventionally; less selling time was required which increased the operational efficiency of the market; the homogeneous lots of graded cattle were an important factor in order buyer's and producer's procurement of cattle. Others felt the stress factor on cattle sold in commingled lots was less than those sold conventionally.

Summary Evaluation

Pooling of livestock for sale in homogeneous lots is a relatively new concept in marketing. The impact of pooling on the competitive market is not known, yet, initial studies indicate it does increase the operational efficiency of auction markets, yields higher prices to producers, and creates favorable attitudes among buyers and sellers. Producers feel they receive higher prices through pooling livestock in uniform lots. Order buyers prefer procurement of a quality product in large, uniform lots.

Commingling arrangements made through a marketing agency or pool manager require a firm commitment by pool members to consign and deliver their livestock once a sale has been arranged. Producers thus are committed to the sale of their consignment before the settlement price and terms of trade are known. This commitment, either by contract or verbal agreement, however, permits a single seller to market large numbers of livestock and, perhaps, gain some bargaining power with buyers as a result of the number of animals in the pool or the uniformity of quality assembled in the pool.

Electronic Markets

Livestock auction markets are facing low volume in areas, lack of competition among bidders, inadequate information, inaccessibility to traders, and potential for price manipulation. Prices in such markets often do not reflect accurate product value. Electronic markets offer the potential to centralize the price negotiation process on a large volume of trading without requiring the assembly of either products or traders at a common location [Henderson, Schrader and Turner, p. 2]. Thus, the advantage of direct buying with decentralized markets are combined to reflect pricing accuracy associated with larger open markets.

The key functions associated with electronic markets are negotiating the trade and the physical transfer of products from seller to buyer. Through electronic technology, the former is centralized and the latter decentralized. Centralizing the pricing process creates a competitive environment for buyers and sellers to accurately determine price, while decentralizing physical exchange reduces inefficiencies associated with assembling buyers, sellers, and products at a single location. This is done by describing or grading the product in a way meaningful to both buyers and sellers. Trading occurs without personal inspection. Modern communication and computer technology assume the role of centralizing the selling process, making bidding access readily available to all potential traders, regardless of their location.

Electronic markets may vary, yet they all operate in a similar manner. Sellers' livestock are graded or described according to standards. This is often done by a product specialist or inspector.

Grading may occur on the farm or at a local assembly point with several producers' livestock pooled prior to the sale. Commingling may occur physically prior to the sale or on paper following the sale but prior to delivery.

Offers to sell are transmitted to traders at various locations by way of telecommunications. Buyers may bid against each other to determine a sale. Offers to sell can be negotiated with buyers auction style, with or without a minimum "No Sale" price being established by the seller, or can be offered at firm prices, with the buyers selecting among available offers. Buyers may present orders to be filled and sellers offer products to fill orders. Delivery of products is negotiated after the sale either directly from the farm or through a local assembly point.

As previously noted, variations may occur in method of sales, frequency of sales, type of communications equipment or organizations providing an electronic based marketing system. There are basically four types of electronic based sales: (1) manual trading houses, (2) telephone auctions, (3) teletype auctions, and (4) computerized trading houses.

Manual Trading Houses

In manual trading houses market personnel accept bids of buyers and offers of sellers, generally communicated by telephone to the trading house. A trade is consummated when a bid and offer can be matched. All transactions are matched manually by personnel of the trading house.

Egg Clearing House. The best example of manual trading houses is the Egg Clearing House, Inc. (ECI) of Durham, New Hampshire. This organization was established primarily for egg producers as a means of competitively determining price. The manually operated market matches

bids and offers between members anywhere in the 48 states. Trades are made on gradable nest-run eggs, with quality and weight specified for each lot. Once a trade is completed, direct delivery is arranged. Trading on the present basis began in 1971. During 1975 an average of 30,000 cases per month were traded [Henderson, Schrader and Turner, p. 11].

Telephone Auctions

The telephone auction or teleauction is quite similar to a conventional auction with an auctioneer calling out successively higher prices as long as buyers continue to bid. The auction itself is conducted over a conference telephone call with as many as 15 to 20 bidding locations. The auctioneer, each buyer, and each load of livestock may all be at separate locations whereas with a conventional auction all are centrally located.

Virginia Tel-O-Auction. The teleauction is probably the most popular form of electronic selling used in the United States. The Virginia Tel-O-Auction, developed in 1962, is the oldest. It was originally established for marketing slaughter hogs and feeder pigs, but has been used for slaughter cattle, feeder cattle, market lambs and feeder lambs.

The local feeder cattle association sponsors the yearling feeder cattle sales with the cattle remaining on the farm until a delivery date and time has been selected. Prior to the sale the cattle are graded on the farm by a representative of the Livestock Grading Section, Virginia Department of Agriculture and Commerce.

The cattle are sold in semi-trailer load lots on dates selected by the Dublin Feeder Cattle Association. If a single producer has

less than a load, the cattle will be pooled with another producer's consignment to make a load. Yearlings weighing between 500-1000 pounds, are acceptable provided the weight spread per load does not exceed 150 pounds. Mixing of breeds within each sale lot will be at the discretion of the consignor. Consignors deliver cattle to a local livestock market or weighing station at a time established by the sales association.

The Virginia Slaughter Cattle Marketing Association in cooperation with the Pulaski Livestock Market conducts a teleauction for selling slaughter cattle. Slaughter cattle are sold from the feedlot in groups of 25 head or more. Bidding is based on carcass grade and weight. Carcass price published in the Yellow Sheet detailing current market price differentials between grades provides guidelines for bidding. Prices received by producers are based on hot carcass weight with the final grade being determined by U.S.D.A. Meat Graders.

Eastern Lamb Producers Cooperative, Inc. Market and feeder lamb producers in Virginia can participate in a cooperative—Eastern Lamb Producers—which operates the teleauction. Prior to the sale, the state grader visits the farms, inspects the lambs and notes the number of lambs to be sold in each grade. At that time a consignment form describing the lambs is filled out by the producer binding his lambs to the sale. This consignment form is forwarded to the cooperative manager who assigns the lambs in truckload lots. The lambs remain on the farm until after the sale.

On sale day the conference telephone operator opens all conference lines with the cooperative manager. The manager calls roll and lists all lots to be auctioned, giving the number of lambs, grade, approximate

weight, and location. Bids are opened with each buyer being identified by a preassigned number. All lots are sold to the highest bidder.

The manager arranges pickup of the lambs with each buyer following the sale. Trucking arrangements may be made by the manager, if necessary. Buyers have seven days to pick up the lambs.

MFA Livestock Association. The MFA Livestock Association in Marshall, Missouri, with some 1,250 producers, holds regular feeder pig sales through the teleauction marketing method. This quality feeder pig program was started in 1963 with several major objectives in mind [M.F.A., p. 1]:

- (1) Provide member pig producers that want to specialize in the production and marketing of quality pigs, a dependable, competitive, year round market
- (2) Make available to buyers a dependable source of quality, healthy pigs
- (3) By continual emphasis on quality, improve the demand for "Missouri feeder pigs."

Production advisors help producers select brood sows according to genetic ability or background to produce healthy pigs. Sows are classified into three groups: select, choice, or good. Pigs sold from these herds are grouped according to sow classification. Each group, however, is graded again according to conformation and condition on sale day.

A typical sale day includes the producers delivery of pigs to one of the eleven concentration points located in Missouri. The pigs are inspected by a veterinarian and production supervisor. Any pigs that are rejected are sent back to the farm. All pigs to be sold are ear tagged, sorted for size and quality, weighed, and grouped into lots with similar weights and grades. Following sorting and penning, a sale order is made up at each concentration point. All sale orders

are combined on a master sale order at Marshall, Missouri. The master sale order contains a list of pigs at each concentration point, their lot number, predominant breeds, grade, number of head per lot, average weight of pigs per lot, and the total weight.

The conference line is opened and all buyers are identified by a code number. Only 14 locations on the conference call can be used for any given sale. These are located primarily in Missouri, Kansas, Iowa, Nebraska, and Illinois. A description of all lots plus an explanation of payment, vaccination charges, and other miscellaneous charges are given by the Feeder Pig Division Manager before bidding begins. The auctioneer opens bidding on each lot giving all buyers at the locations an opportunity to bid. The highest bid is accepted. Following the sale, MFA schedules trucks to deliver pigs the following day. Producers are paid cash on delivery for their pigs and buyers are billed for the trucking fee.

Other Teleauctions. Teleauctions are currently being used in Wisconsin, Illinois, and Ohio. The Iowa Farm Bureau, cooperating with two commission firms at Webster City, Iowa, has begun selling slaughter hogs by teleauction. A pilot project for hogs has also been started in North Carolina. Like the Virginia Tel-O-Auction, the Oregon-Idaho area is selling slaughter sheep and lambs through tele-auctions.

Teleauction Price Impact. Teleauctions have been most successful in areas with little competition for livestock. Producers felt they were not getting a "fair" price for producing quality livestock. By increasing the number of buyers and sellers, competition is enhanced.

Operating efficiency is improved through the use of telephone auctions. Teleauctions save travel time for buyers and make it possible to sell from several locations in the same sale.

A study [Holder (a)] comparing prices of slaughter lambs in the Virginia-West Virginia area with a nationwide base before and after the beginning of the teleauction in 1971, showed a net gain to tele-auction farmers of \$2.50 per hundredweight and a net gain to farmers using conventional auctions of \$2.00 per hundredweight. Since selling charges to farmers were about the same in both systems, the benefits were net increases. The \$2.00 per hundredweight price increase in the conventional system resulted from increased competition for lambs. The \$.50 increase for teleauction farmers was due to increased operating efficiency for packers using the teleauction.

Teletype Auctions

The teletype auction is the most used of the electronic selling methods to date. Teletype auctions are very similar to the telephone auctions except for differences in the telecommunications equipment used, that is, each buyer has his own direct teletype connection. This greatly expands trading capacity. The Canadians use a Dutch or regressive bidding process rather than a progressive or English auction, thus accelerating the selling process.

Canadian Teletype Auctions. The first teletype auction market was formed in Ontario, Canada in 1961 and is exclusively used for marketing butcher hogs in Canada. Its development occurred because of a lack of concentration among sellers of live hogs but a considerable degree of concentration among the buyers at both the processor and retailer

buying levels. Since the development of the Ontario Producers Marketing Board, six other provinces³ have established marketing boards with four requiring teletype auctioning of hogs.

Some of the features obtained through the present boards' selling systems in Canada are [Wood, pp. 15-16]:

- (1) The sales of all hogs from all producers are centralized through one agency so that every potential buyer is able to bid on every lot and no buyer is able through persuasive powers, special bargaining skills, bribery or otherwise to buy hogs at a lower price than his competitors.
- (2) Some or all of the functions of the assembly, transportation and settlements are centralized with a potential increase in efficiency and reduction in marketing costs charged to the producer.
- (3) The teletype system permits the openly competitive sale of large numbers of hogs with a minimal input of man hours on the part of both buyers and sellers. Even the largest sale is completed in seconds of actual "negotiating" time and the mechanism permits a larger volume to be sold per hour or per day than any system yet devised for the competitive sale of product from a large number of producers.
- (4) The teletype mechanism minimized the possibility of buyers attempting to agree among themselves on pricing strategies, of one buyer influencing or intimidating another, or of the majority of buyers taking a lead from a dominant buyer. Each buyer bids in isolation and cannot be observed by other buyers. No buyer knows who the successful bidder is. Each buyer has only one chance to bid on each sale. Starting above the current market price as estimated by the board staff, the bid price is incrementally reduced. The first buyer to make a bid, by pressing a button, gets the lot of hogs at the last price registered on the teletype at the time of his bid. Any bids made later are not registered. Therefore, no buyer knows what the second highest bid would have been and is not influenced thereby.

The Canadian mechanism consists of a master teletype that sends simultaneous messages to all buyers and receives bids from them through a teletype machine at each location. These buying machines are sensitive

³The six provinces with marketing boards are: New Brunswick, Nova Scotia, Manitoba, Alberta, Prince Edward Island, Saskatchewan.

enough (1/1,000 second) to prevent two buyers from bidding at the same time. When a buyer decides to bid, he pushes a button on his teletype machine and the following sequence occurs:

- (a) The descending price is stopped instantaneously.
- (b) All other buyers' machines are disconnected.
- (c) The buyers' code number is automatically printed on both the message sheet of the master teletype and the buyers' teletype.
- (d) The buyer confirms the sale by typing "OK" with his initials.
- (e) The operator of the selling mechanism then types the lot description.
- (f) The operator resets the broadcast to all buyers. The name of the buyer and selling price is not disclosed to other buyers.

An example of a complete message printed to buyers is illustrated in Figure 6.

Even though Canadian teletype auctions physically assemble hogs at concentration yards prior to sale and use the Dutch type (regressive) bidding, a similar teletype system could work in the United States. By making participation voluntary, competition among alternative exchange mechanisms would encourage efficiency in the exchange process. The use of quality and weight control factors along with provisions for selling on the farm rather than assembling livestock make teletype selling a potential alternative.

The teletype auction has some advantages over the telephone auction that should be considered. Teletype auctions can handle a larger number of buyers, it produces a written record of bids and confirmations and regressive bidding is more efficient than progressive bidding.

2:45 p.m., 13/11/70, 43 HG 2 SW FOB CGY/RD, NOON/13,

[Offering time, date, lot description
(43 hogs, 2 sows), f.o.b. points
(Calgary/Red Deer), expected delivery
time and date]

30.00 29.95 .90 .85 .80 .75 .70 .65

[Price descents until a buyer bids or
the tape ends]

04 XYZ

[Number and initials of buying firm]

30.65

[Confirmation of exact selling price]

OK TH

[Buyer's representative confirms sale
with "OK" and his initials]

SUBLOT 2151 20 HG 1 SW BROWN

SUBLOT 2152 23 HG 1 SW JONES [Operator gives lot description]

444

[Rebroadcast signal]

[Next Sale Begins]

Note: When more than one party participates in a lot, each is given a subplot number. Thus in the above example Messrs. Brown and Jones receive subplot numbers 2151 and 2152 respectively. If only one producer or assembler were represented in this lot the number would be 2150. A maximum of nine parties or sublots can participate in each master lot.

Source: [Hawkins, et. al.]

Figure 6. Message Printed to Buyers on Teletype Machines.

Computerized Trading Houses

Computerized trading houses as a form of electronic marketing is an innovative method that allows computers to handle a vast amount of information rapidly. It permits direct trader interaction with conventional teletype terminals, TV-like cathode ray terminals, and verbal telephone responses through "talking computers" [Henderson, Schrader and Turner, p. 12]. These markets operate similar to manual trading houses but with greater trading capacity.

Plains Cotton Cooperative Association. TELCOT, operated by Plains Cotton Cooperative Association (PCCA) has been recently developed for the use of cotton producers. Sellers place offers and a minimum acceptable price on the market by contacting PCCA through a WATS telephone call. The offers enter the TELCOT computer and are disseminated to buyers' cathode-ray terminals. Buyers submit bids to the computer via their terminals, and the computer accepts the highest bid submitted within a specified bidding period--usually 15 to 30 minutes--depending on the volume of trading [Henderson, Schrader and Turner, p. 12]. When bids and offers are matched, a transaction or sale occurs and delivery is arranged through the computer. Buyers and sellers have access to trade and price information.

Summary Evaluation

Electronic markets have taken a foothold in the Canadian marketing of hogs. They are being used extensively in lamb marketing in the United States. Electronic marketing appears to be well suited for marketing situations where there is an imbalance of market power between buyers and sellers. However, a competitive bidding potential must exist.

There must also be trader interest in selling and buying on a description basis. Products must be accurately described or graded to ensure a quality product. To achieve accurate pricing and efficient trading, commodities must be produced and marketed in large quantities and traded frequently.

A successful electronic market creates more efficient use of resources by lowering the costs of buying, selling, and transportation. An equalizing of the traders' power by increasing the number of buyers creates a more competitive market.

Vertical Integration Through Ownership

Early agriculture was representative of vertical integration in that settlers produced, processed, and consumed agricultural products to maintain subsistence. As technological advances were made, specialization emerged and more functions were transferred off the farm. Businesses began specializing in certain phases of processing and marketing agricultural products as well as manufacturing inputs in the production process. Yet, to reach economies of scale, businesses later controlled more stages of the production process.

To integrate means to combine two or more stages of production or processing under one firm. Vertical integration is defined as control (through ownership, lease or contract) in two or more steps in the total production-processing-servicing-marketing complex by a single business organization [U.S. Congress(b), p. 49]. From the producer's viewpoint, vertical integration is the financial participation in facilities and operations through successive stages of production, processing or marketing of products.

Vertical integration through ownership will be classified into two categories: (1) individual integration and (2) group integration. Representative examples and degrees of vertical integration are cited for each form. In each case the integrated process or processes involve physical changes in product form.

Individual Integration

Producers can and have integrated their own businesses by adding steps to the production process. An example would be a cow-calf producer maintaining ownership of calves past the weaning stage. The producer may wish to continue to feed the livestock himself or have them custom fed while still retaining ownership.

It must be recognized that by encompassing more stages of production, producers may need to change their mode of operation. Capital requirements increase to purchase machinery and supplies for additional functions. Management decisions become more complex with an integrated, production oriented operation. Different management functions or skills must be learned. Producers' incomes will be postponed with an integrated system. Benefits do not occur immediately due to the time and money it takes to develop a profitable system.

Integrated vs. Open Market Returns. A 1973 Texas study [Farris and Williams] explained potential efficiencies of integrated cattle operations compared with the open market system. Eight cattle growing and feeding systems were budgeted from weaning phase through the feedlot for both open market and vertical integration. Net returns per head for each cattle feeding system were used to evaluate the relative profitability of each marketing system. In budgeting costs and returns, five production-marketing phases were used. Budgets estimated

the costs incurred from the time the calf was weaned until it was sold from the feedlot. Specific assumptions were made regarding weaning weights, pasture expenses, interest expenses, rates of gain, conversion ratios, death loss, and prices of feed and cattle.

The eight feeding systems were based on livestock sex, grade, and type (Table 5). The five production phases were: (1) the weaning phase, (2) the first marketing phase, (3) the growing phase, (4) the second marketing phase, and (5) the finishing phase (Table 6). The cattle represented by the budgets were weaned during the weaning phase; transferred from the ranch to a pasture in the first marketing phase; grazed on native grassland pasture during the growing phase; transferred from pasture to a feedlot during the second marketing phase; and finally fed to specified finished weight during the finishing phase.

Total production and marketing costs per pound of gain were consistently lower for livestock in the integrated marketing system (Table 5). Net returns per head were higher for the integrated system than for the open market system for all cattle systems budgeted. For the systems representing light weaned calves, the advantages ranged from \$8.75 to \$11.03 per head (Table 5). The advantage for the choice steer, 350/600/1050 system was \$10.16 per head (Tables 6 and 7).

These estimates demonstrate that the cost of producing and marketing fed cattle can be reduced in situations where it is feasible to have tighter market coordination from weaning through finishing. Most of the savings were due to reductions in marketing costs, death loss and medication costs (Table 7).

Monfort of Colorado Corporation. Monfort of Colorado began feeding cattle in 1927. The feeding operation continued to grow and

TABLE 5

TOTAL PRODUCTION AND MARKETING COSTS PER POUND OF NET GAIN FOR ALL PRODUCTION--
MARKETING PHASES, OPEN MARKET AND INTEGRATED MARKETING SYSTEMS¹
ESTIMATES OF NET PROFIT² ADVANTAGE TO INTEGRATED CATTLE SYSTEM, TEXAS, 1966-70³

System		Open		Integrated		Open		Integrated		Advantage to	
		Market	System	Market	System	Market	System	Market	System	Integrated	System
STEERS											
		-- cents per pound--		Marketing Costs		-- dollars per head --		Estimates of Net Profit		--	
Choice Okie-Eng.	350/600/1050 ⁴	.2389		.2234		13.55		23.71		10.16	
Choice X-bred	375/625/1075	.2399		.2248		11.89		21.84		9.95	
Good Okie-Eng.	300/500/1100	.2210		.2058		24.51		34.50		9.99	
Good X-Bred	400/650/1100	.2378		.2234		12.73		22.22		9.49	
HEIFERS											
Choice Okie-Eng.	300/525/875	.2448		.2265		8.25		18.90		9.74	
Choice X-bred	325/550/900	.2452		.2276		8.29		17.74		9.45	
Good Okie-Eng.	225/450/725	.2161		.1975		22.99		31.74		8.75	
Good X-bred	325/550/825	.2455		.2219		10.98		22.01		11.03	

¹This system represents USDA Good and USDA Choice steers and heifers. For each grade 2 different breed types were used. The English and Okie classifications represent Angus and Hereford calves of similar quality. The crossbred subclassification represents a cross between an Angus and a Hereford.

²Net profit is defined as profit after normal return to capital and management is covered.

³Details of budgets available in Williams and Farris, 1973.

⁴Numbers refer to weaning weights, feedlot starting and finishing weights respectively.

SOURCE: [Williams and Farris.]

TABLE 6

SUMMARY OF PRODUCTION AND MARKETING COSTS FOR THE
CHOICE STEER 350/600/1050 CATTLE FEEDING SYSTEM, 1966-70¹

Production-Marketing Phase ²	Open Market System	Integrated Marketing System	Difference ⁴
- - - - - Dollars/head - - - - -			
Weaning Phase		8.80	(8.80)
First marketing phase	7.82	3.70	4.12
Growing phase	38.87	30.70	8.17
Second marketing phase	4.51	2.05	2.46
Finishing phase	89.88	87.33	2.55
Interest expense	16.10	14.44	1.66
Total	157.18	147.87	10.16
Cost of feeder	114.87	114.87	
Value of fat steer	285.60	285.60	
Net returns per head ³	13.50	23.71	10.16

¹This system presents a choice steer that is grazed on rented grassland pasture and fattened in a commercial feedlot to a slaughter weight. The numbers 350, 600 and 1,050 refer to the weaning weight and the feedlot starting and finishing weights, respectively.

²Details of budgets in Williams and Farris (1973). Procedures for conditioning calves are consistent with those outlined by Gill (1967).

³Net returns after all costs including a return to management and labor and a 7 percent annual return on fixed investments.

⁴Advantage to the integrated marketing system.

SOURCE: [Williams and Farris.]

TABLE 7

SUMMARY OF COST DIFFERENCES BETWEEN
INTEGRATED AND OPEN MARKET SYSTEMS FOR FEEDING¹
CHOICE STEERS FROM 350 TO 1,050 POUNDS, 1966-70¹

Type of Expense	Open Market System	Integrated Marketing System	Advantage (Disadvantage) to the Integrated System
- - - - - Dollars/head - - - - -			
Auction market fees	5.18		5.18
Feed for regaining shrinkage	4.83	2.90	1.93
Medication	4.34	2.49	1.85
Order buyer's fee	1.75		1.75
Interest ²	16.10	14.44	1.66
Pasture expense ³	15.91	14.41	1.50
Death loss	5.19	4.18	1.01
Trucking expense	5.40	4.75	.65
Variable labor	10.84	10.29	.55
Subtotal			16.08
Feed for maintenance and growth ³	82.86	87.28	(4.42)
Business trips		1.00	(1.00)
Fixed costs	3.47	3.97	(.50)
Subtotal			(5.92)
Total advantage to integrated system			10.16

¹Figures based on straight English beef breeds or Okie No. 1 type calves being moved from East Texas at 350 pounds to West Texas for grazing to 600 pounds before moving to the feedlot. Details of budgets in William and Farris (1973).

²Interest at 8 percent charged on cost from 350 pounds. The open market price of the 600 pound feeder was about \$10 more than the cost of the calf in the integrated system, hence a higher interest charge.

³Integrated system calf gained faster on pasture, but was fed during weaning phase.

⁴Assumes calf taken from cow and sold at auction, moved to West Texas and grazed to 600 pounds.

⁵Assumes that the rancher, stocker operator owns or controls the calf from the time it is 350 pounds on the ranch through the feedlot.

SOURCE: [Williams and Farris.]

in the 1960's it integrated backward into feed grains by acquiring elevators in Kansas and Nebraska. A packing plant was established in 1960. Feedlot capacity increased steadily until it reached 110,000 head in early 1970 when a second feedlot of equal capacity was built, boosting total feeding capacity to 220,000 head at one time [U.S. Congress(b), p. 51]. As the packing plant also increased, Monfort began selling meat. With its feed-procurement and meat-processing, Monfort became a vertically integrated operation.

The nature of Monfort's vertically-integrated-through-ownership operation was described in 1970 by under-writers of Monfort's public stock offerings [U.S. Congress, p. 51]:

"The company principally engages in purchasing feeder or young cattle, feeding them until they are ready for slaughter, slaughtering, breaking, fabricating and portioning cattle and lambs and selling individual serving cuts, fabricated cuts, primal cuts and dressed carcasses of beef and lamb and their by-products to wholesalers, retailers, and others throughout the country and in foreign markets."

Group Integration

Producers are often able to integrate forward more easily as a group rather than as an individual. Producers may become members of an integrated cooperative, combine resources and finances to organize a corporation or enter an existing vertically integrated corporation.³ Several reasons are cited for producers joining together in an integrated system rather than trying to integrate as individuals [U.S. Congress(b), p. 56]: they can probably achieve efficiencies in economies of scale; they can hire expert management; marketing decisions can be moved up to more appropriate levels; large capital investments

³ Any organization must check with their respective state laws to see if combination activities are legal.

for physical facilities can more easily be made; members have the opportunity to share in marketing profits; and participants are protected, to some extent, from price fluctuations for their particular commodity.

Farmers Cooperative at Sioux Center. The Farmers Cooperative of Sioux Center, Iowa has developed a cooperative feedlot in Iowa. Ownership of the 10,000 head feedlot is divided between the cooperative and the feeder. Facilities such as land, lagoon, feed mixing equipment, silos, wells, half of the scale, and half of the office building are provided by the cooperative. The cattle feeders own one or more pens and a proportionate share of the rest of the facilities. Management is supplied by the cooperative, yet, each feeder has the responsibility of buying and selling his animals. The feeder must also assume veterinarian expenses and death losses. Producers pay the cooperative a service and management fee along with a monthly feed bill. The cattle feeder can vertically integrate his operation off the farm and take advantage of investment credit and depreciation.

Georgia Farm Bureau Marketing Association. Livestock producers in Georgia are utilizing the farmer-to-consumer marketing concept by vertically integrating into the retailing of meat. Development has occurred partly from consumers' dissatisfaction with receiving poor quality meat at quality prices and producers' concern over the widening farm-retail price spreads.

The retail outlet, set up by the Georgia Farm Bureau, offers fresh beef, pork, and poultry produced by Georgia Farm Bureau members. A beef cattle specialist works with the Georgia Farm Bureau member producers to select and place in their own feedlots desirable cattle to go in the program. The beef cattle specialist selects the cattle

to be slaughtered from these feedlots after 90-120 days on grain feed. The cattle are custom slaughtered and delivered to the retail outlet in Macon, Georgia. Only high good and choice grade cattle are marketed. The producer is paid on a yield grade basis.

Within the first six weeks of its opening in March 1976, the Georgia Farm Bureau Meat Market sold over 200 head of cattle in the form of processed meat. Approximately 15,000 head are expected to be sold through the program this year.

Iowa Marketing Plan. Iowa beef producers are launching a new marketing plan to aid feeders and consumers. The plan is designed to provide quality meat to consumers and better returns to producers. The producer-owned Tama County Marketing Association has based the program on three concepts [Anderson, p. 60]: (1) produce quality beef at a minimum cost, (2) process and distribute beef in the most efficient way possible, and (3) identify that beef in the market place.

To consistently produce high quality beef, a strict quality control program is set up. Livestock must meet association standards, both before and after slaughter. Only meat grading choice with a yield grade of two or three is acceptable. Lot numbers are assigned to livestock for identification prior to slaughter. Producers receive a base price related to the current live market price,⁴ and a premium or discount based on retail sales and cost savings.

The animals are slaughtered, fabricated, vacuum packed, labeled, boxed, and frozen by Iowa packers and fabricators on a custom basis.

⁴Current live market price is based on Yellow Sheet quotations.

The meat is shipped to various warehouses. Cost savings through this system allows a substantial premium to be paid to the feeder and provides competitive meat prices to the consumer.⁵

The third concept--to identify the product in the market place--benefits both the consumer and feeder. The label "Tama Beef" along with a lot number allows the consumer to find out who fed the animal producing a particular cut of meat. Feedback permits the producer to improve any problem areas in the production of a quality product.

The goal of the program is to market 500 head of cattle per week. Tama county feeders finish approximately 25,000 head of cattle yearly, so an adequate supply of cattle should be no problem in establishing the program.

Other Retail Programs. Other group integrated programs are expected to begin in Texas and Oklahoma as several cattle feeders have joined together to open ten retail meat markets in five major cities. The proposed cities for the markets are Dallas, Tulsa, Kansas City, Lubbock, and Oklahoma City. The stores will operate under the name of Producers Choice Meat Markets. They will carry a full line of meat products, including pork and poultry products along with spices and sauces. Frozen meat will also be sold, featuring family packs.

Summary Evaluation

Vertical integration through ownership allows the individual producer to coordinate activities of the production-marketing process. This requires changes in a producer's mode of operation. By vertically integrating capital requirements increase and management decisions become

⁵ Under given circumstances, cost savings with this new form of processing compared with the normal procedure amounted to \$179.07 per head.

more complex. Producers may need to forego incomes to a later date, however, reduced costs arise through tighter coordination of successive production stages.

Producers may vertically integrate through a group easier than as an individual but may lose some management perogatives. Benefits received through participation in vertically integrated firms, however, may compensate for the loss of marketing freedom. A transfer of risk from some price fluctuations away from producers is a benefit of group integration. Management could provide data on stages of production to aid producers in improving a quality product. Through programs such as Georgia Farm Bureau and the Iowa Marketing Plan, producers receive benefits from producing efficient, quality products. Producers increase their market power base through their ownership control of assets and other products. There is more efficient allocation of resources, reduction in costs, and incentives for technological advance through a vertically integrated system.

CHAPTER III

ALTERNATIVES REQUIRING LEGISLATIVE ACTION

With the livestock industry undergoing constant changes, legislative changes are frequently needed to permit marketing arrangements necessary to meet changing economic situations. Current legislation does not allow the enactment of producer alternatives such as market orders, marketing boards, or a centralized exchange system. Market orders are currently being used in the United States for milk and specialty crops, however, livestock are excluded. Marketing boards are extensively used in many foreign countries. Canada has established provincial producer marketing boards for marketing hogs.

Legislative action is required to initiate similar marketing programs for livestock in the United States. Amendments to current legislation or new legislation would be required to allow expansion of market orders for livestock. Government programs may need to be established to permit regional or national organization of producers. Anti-trust laws may need to be examined and perhaps restructured. Attempts have been made to secure National Farmers Bargaining Boards⁶ to improve the marketing and bargaining powers of farmers. That legislation, however, has not been passed.

⁶ Commonly referred to as the Sisk Bill (Tunney-Sisk S. 1775-H.R. 7597) and the Mondale Bill (Mondale-Bergland S. 726-H.R. 8886) and (Mondale-Bergland S. 727-H.R. 8887).

Market Orders

The 1930's represented a period of fluctuating prices, quantity variability of agricultural products, relatively low farm income, and weak farmer bargaining power. As a result, state and federal market order programs were established in an attempt to bring orderly conditions to chaotic markets. These orders are a unique type of program designed to coordinate agricultural marketing activities at the producer and first handler stages of the marketing process [USDA(b), p. 1].

Market orders are sometimes referred to as farmer self-help programs. Through the regulatory powers of government and self-administered actions of producers, farmers can exercise some degree of control of quality and quantity in marketing their products.

The economic rationale underlying the market order concept is basic to the structure of agriculture. Farming is still a small scale activity relative to other sectors of the economy. Individual farmer's independent actions have little effect on the supply or price of the commodities they produce. However, there is substantial concentration of the decision-making process in the advanced stages of the marketing system into which raw farm products flow [USDA(b), p. 1]. Those in charge of the final marketing activity control the movement of products to consumers. These marketing firms can adjust operations to the needs of the consumer.

The producer must coordinate the production and marketing activities to meet the needs of the market. This becomes difficult when uncertainties in weather, pests, disease, and numerous other natural forces that may bring about variability in the quantity and quality of a particular commodity that may be available at a certain

time. The structure of agriculture combined with the nature of production leave the farmer in a vulnerable position in the economic system.

The primary objective of market orders is to achieve orderly marketing of commodities. This is obtained through regulating the flow of agricultural products into advanced stages of the marketing system in a manner consistent with requirements and capabilities of the system. In more specific terms, orderly marketing may be achieved through one or more of the following [USDA(b), p. 1]:

- (a) stabilizing the flow of commodities to market to avoid gluts and shortages within a season for the entire season;
- (b) maintaining the quality of commodities at some minimal level;
- (c) standardizing quality designations, including size and package types.

A marketing order is a legal instrument authorized by Congress in the Marketing Agreement Act of 1937 and numerous subsequent amendments [USDA(b), p. 1]. The Secretary of Agriculture has the power to issue market orders for eligible commodities if a required majority (usually two-thirds) of producers are in favor. After a market order is issued by the Secretary it is binding on all handlers and producers of the specified commodity within the designated production or marketing area.

Under the legislation of the Agricultural Marketing Agreement Act of 1937, market orders have been developed for fruits, vegetables, hops, tobacco, nuts, and milk. The concept of milk market orders is somewhat different from fruits, vegetables, and specialty crops. In the case of milk orders, attention is primarily focused on the function of setting price. Market orders for fruits, vegetables, and specialty

crops are designed to control quality, market flow and volume. Commodities such as wheat, corn, oats, sugar beets, livestock, and others are excluded.

States may enact market orders which contain provisions comparable to the enabling powers of the Marketing Agreement Act of 1937. These orders focus primarily on advertising and promotion, research, mandatory inspection, disease control, and other activities. The potential exists for states to either use existing orders or enact additional enabling legislation that might supplant the Federal order program should such action appear necessary to serve their farmer interests [USDA(b), p. 33].

A state lamb market order was established in Colorado in 1969. The order provided a broad description of activities which could be performed, however the main feature of the order consisted of "price posting."⁷ The lamb marketing order was quite successful in achieving relatively higher prices than those in surrounding markets. However, lamb feeders (particularly large feeders) objected to paying high prices for lambs. Consequently, the order was eliminated by a petition of fifty percent of the lamb producers [Witte].

Summary Evaluation

Market orders provide a mandatory approach to coordinating the production-marketing sequence of those commodities under which certain conditions are favorable. To establish successful market order programs there must be: (1) a concentrated region of production of a certain commodity, (2) different uses and prices for the commodity,

⁷ All producers selling through the market order would post a price which was acceptable to them.

(3) competent leadership to acquire goals of producer groups, (4) a relatively perishable product, and (5) control over the flow of products to create orderly marketing.

Market order programs represent an approach to the price-income problems producers face but must be tailored to particular situations. The livestock industry represents a diverse conglomerate of large and small producers with no real geographically concentrated regions. With respect to the different uses and prices of the commodity, livestock is transformed into edible meat, whereas milk may take the form of a fluid product or manufactured product such as cheese, ice cream, butter, and others, each with different prices. To establish successful leadership would require many producers with the same goals in mind committing production. Livestock is not a perishable product therefore storage or delay of marketing only adds to an increased supply entering the market at a later time. Control of livestock to be funneled through few outlets would require a decrease in markets available to livestock producers. Lastly, legislative action would be required to enable market orders for livestock.

Marketing Boards

The use of marketing boards as marketing instruments for agricultural commodities has been in existence in Australia, New Zealand, Canada, the United Kingdom, and many other foreign countries [Chaudhry]. Despite differences in framework, producers, and commodities being marketed, one common feature of all marketing boards is that they are compulsory bodies, set up under government legislation to perform specific marketing functions. These functions may include collection

and dissemination of market information, product promotion, establishment of grading standards, operation of selling facilities, bargaining, and marketing of products. Unlike market orders that facilitate marketing of products through producers and handlers, marketing boards have the legal status and power to enforce uniform compliance by all producers, handlers, and marketing agencies as well as control entry into a regulated commodity.

Marketing boards may vary widely in regard to objectives, organization and scope. Boards could represent producers only, producers and purchasers, or include consumer and public representation [Fletcher, p. 125]. Public or quasi-governmental bodies consisting largely of government representatives are considered to be marketing boards in some countries. Other countries may consider these government agencies and refer to marketing boards as producer-controlled bodies.

With the primary objective of improving the price and income situation of agricultural producers, marketing boards may also focus on reducing variability in agricultural prices or on producing a degree of equity of market opportunities among different producers.

Marketing boards were generally established in times of depressed and uncertain prices of commodities along with producers' discontent with the structure and functioning of the agricultural marketing system. Some of the earliest boards were established in Queensland, Australia, and New Zealand in the 1920's. These and others grew out of unsuccessful attempts by producers to seek market power through the use of cooperatives. In the United States, the passage of the Agricultural Marketing Act of 1929 created the legislative basis for the Federal Farm Board.

The Federal Farm Board, composed of eight members, representative of the major agricultural commodities, was set up for farmers, with a view of improving marketing organization and bargaining power, and controlling surpluses through stabilization corporations. The Farm Board's efforts to stop the decline in farm prices failed. The Board recommended a system for regulating acreage or quantities sold. In one of the few detailed studies which was made of the Board, Benedict concluded, "That improved marketing mechanisms alone cannot make major changes in the return to agriculture has been amply demonstrated both in theory and in practice" [Benedict, p. 257].

Establishing Market Boards

Marketing boards may be established through specific legislation for a certain commodity, specifying the boards' functions, membership and powers, or as in many countries, by general enabling legislation, permitting marketing boards. In either case, producers' approval is required and is determined by a vote or referendum prior to establishment.

With many marketing boards now in existence throughout the world, many vary in the functions performed. Most boards perform some combination of the following functions, though few perform all these functions [U.S. Congress(a), p. 75]:

- (1) Collection and dissemination of market information.
- (2) Product promotion.
- (3) Research and dissemination of information.
- (4) Establishment and implementation of grading standards.
- (5) Operation or supervision of selling facilities.

(6) Collective bargaining and price negotiation.

(7) Purchase, storage, and sale of product.

The first five functions are referred to as "facilitating functions," which may lead to reduced costs and improved marketing margins which in turn may benefit both producers and consumers. Some controversy has arisen over functions involving price discrimination and production or marketing quotas. Particularly in inflationary periods, adverse comments have been made with respect to distortion of efficiency in resource allocation, capitalization of quota benefits into quota values and restriction of entry of new producers into quota-controlled areas.

Promotion and Advisory Boards

The New Zealand Wool Board is an example of a promotion and advisory board. The Board consists of a government representative and several wool grower representatives. The Board's activities consist of local promotion and research with a provision for technical advisory services to local manufacturers. The Wool Board is also in collaboration with the Meat Board in conducting economic research.

Export Trading Boards

The Australian Wheat Board is an example of an export trading board. As with the Wool Board, most members are elected producers along with three government appointees. The Board has authority to market wheat in Australia and overseas. The Board operates a stabilization plan which involves administration of the government's guaranteed price for wheat for a specified quantity of exports and the local sale of wheat at prices determined on the basis of a measure of cost of production [U.S. Congress(a), p. 78]. When export prices exceed the guaranteed

price, a portion of the excess is put into the stabilization fund and drawn on when export prices are below the guaranteed price. The Board controls handling, storage, and shipment of wheat, it pools producer payments on an annual basis, and it engages in promotional activities. It has entered into long-term sales agreements with a number of importing countries [U.S. Congress(a), p. 78].

Domestic Trading Boards

There are numerous examples of domestic trading boards. The Milk Marketing Board of the United Kingdom is one such example. A farmer wishing to produce milk for sale must obtain government authority to do so and register with the Milk Marketing Board in his region. All registered producers must sell milk through their regional boards.

The regional boards sell milk under annual contract to processors and distributors [Sorenson, p. 99]. The boards organize collection and transportation of milk to processors. At the time of collection, ownership transfers from the farmer to the board. Through control of supplies the board allocates milk among uses, as appears desirable, and prices milk to processors according to the use made of it [Sorenson, p. 99]. Along with providing the functions of buying, selling, controlling the use of milk, and distributing payments to producers, the Board provides a consulting service that assists producers with production and management problems.

Regulatory and Facilitating Boards

The primary function of regulatory and facilitating boards is the regulation of products and the facilitating of sale mechanisms but not

performing the selling function itself. The Australian Meat Board and the Alberta Hog Producers' Marketing Board are two somewhat different examples of this type of board.

The Australian Meat Board is a federal board with producer representatives, a government representative and two meat exporter representatives. The Board's activities, including market development and promotion, domestically and abroad, are funded through a levy on slaughtered livestock. Its major function is that of regulating export meat by issuing licenses to exporters and approving North American importers. These controls are used in compliance with U.S. import quotas. Other activities of the Board include participation on the Australian Shippers Council, which negotiates freight rates, and participation in developing a carcass grading system.

The Alberta Hog Producers Marketing Board was established under legislation of the Province of Alberta in Canada. Elected producers serve as Board members. Funds are acquired through a levy on slaughter hogs. Along with carrying out promotional activities and export marketing of hogs by contract to Japan, its major function is operating the sale mechanism of all slaughter hogs produced in the province. With a dwindling of terminal markets and deterioration of the pricing mechanism, the Board established the teletype auction system to restore competition.

Seven provinces in Canada have established marketing boards with four using the teletype system of marketing hogs. These are Ontario, New Brunswick, Manitoba, and Alberta. Nova Scotia, Prince Edward Island and Saskatchewan use a formula pricing mechanism to base payments to hog producers on a certain day.

Impact of Marketing Boards

The degree of success or failure of marketing boards depends upon its organization and functions, the degree of control it has over producers, and the market structure in which it operates. Quota policies in many boards have been reasonably successful in achieving the stability for which they were primarily adopted. They have served to stabilize several factors of production such as real estate and supplies of particular products. Their stabilization effects are also reflected in prices of farm commodities and incomes to producers.

By gaining short-run economic security through market power, marketing boards have contributed to the welfare of only those producing a particular commodity. Due to the barriers of entry, many producers and consumers do not receive benefits generated through marketing boards.

In instances where the demands for particular commodities are inelastic, the use of quotas has incited conflicting opinions over the impacts on prices. Monopoly pricing by farmers has raised issues about (1) the regressive effects on consumers, (2) the inefficiency of resource use in the particular sector of agriculture where quotas are used, (3) the incidence of capitalization of quota rights into the value of unique factors such as real estate, and (4) barriers to the entry of new producers into the industry [Walker, p. 114].

Summary Evaluation

While marketing boards have not been an element in marketing agricultural products in the United States, they do represent a marketing option. National legislation, however, would be required to

initiate the use of such boards. This legislation would give the boards exclusive authority to perform specific marketing functions. Functions carried out would depend on the type of board established.

A promotion and advisory board could be set up with representatives from the livestock industry to conduct research and provide technical assistance to livestock producers. However, many private concerns and universities are currently performing these functions.

Producer marketing boards could be established on a state or regional basis similar to the Canadian Provincial Boards. These boards could be producer-oriented and could facilitate the marketing and pricing mechanism.

Marketing boards are established through producer interest. This interest is expressed when current situations look dismal. The prospects for gains to producers as well as impact on efficiency and growth objectives, probably vary directly with the degree of monopoly product allocation and supply control involved. Gains may be significant in the short run but unstable in the long run. Marketing boards may or may not achieve success in the complex, commercial, industrialized agriculture of the United States.

Centralized Exchange System

A centralized exchange system would be a mandatory system for central exchange of specified commodities or products at certain points in the production-marketing system. By means of telephone, teletype, and computers a centralized exchange system would resemble the terminal market for hogs in the early 1920's when better than 75 percent of packer purchases were at terminals [Armstrong, p. 9]. This system

would link together sellers and buyers all over the country at a central market, or regional locations for hogs, cattle, or sheep.

Development of a Centralized Exchange System

Probably the most important function to be performed in the planning stages of a centralized exchange system is that of determining general operating policy and guidelines for the system along with who would operate such a system. An advisory board, that being existing producer organizations, a regional or national cooperative, an industry-wide marketing board, a private corporation, or the government, would perform these planning and operating functions. This advisory board should include representatives of all major groups of participants involved in the electronic market--sellers, buyers, market agents, owners and operators of livestock yards, and others. This group would set market policy and is key to its performance.

Many decisions must be made early in the stage of development of such a system. These may include:

- (1) When would sales be held? When would the greatest number of potential buyers and sellers be attracted?
- (2) How many head of cattle, hogs, or sheep could be sold at one time? This would affect the marketing costs as well as amount of space needed for sales.
- (3) Would livestock be graded on the farm or at the central assembly point?
- (4) Would livestock be pooled in uniform lots or in several sizes of lots? Uniform lots could create competitive bidding among small and large operators.
- (5) What marketing fees need to be assessed? This would include grading fees, administrative costs, and inspection costs on the farm or at the central assembly point. Probably a selling fee would be levied on all livestock sold. This would cover actual marketing costs in addition to on-farm grading.

- (6) What is required to maintain producer commitment? Consignment contracts could be established with producers with penalties assessed to those breaking contracts. The advisory board or agency would assume responsibility of fiscal payments.
- (7) How would the settlement price be determined? Price differentials could enter into determining the value of the animal with respect to weight or carcass grade.

The list of policy decisions the advisory board will face is complex. Management decisions, operation of the selling mechanism, and quality control are only a few additional considerations that need be examined.

Proposed Exchanges

Centralized Hog Exchange. A hog marketing system under consideration includes a series of regional markets tied together by communication hookups to a national market. All hogs would be sold through the regional-national system and all buyers would be required to buy hogs through this system. Iowa State Economist, J. Marvin Skadberg's proposal is aimed at reducing daily price variations, increasing the competition in purchasing hogs and improving price premiums between grades with all firms competing for hogs.

Centralized Sheep Exchange. The American Sheep Marketing Cooperative has plans drawn up for a four region exchange system with the use of teleauctions as a selling mechanism. There would be a domestic and foreign division. The foreign division would handle markets outside the United States and provide various services such as locating breeding stock, making arrangements for fulfilling special orders, analyzing problems, formulating and operating training programs, etc. [Johnson, p. 3]. The domestic division, along with handling domestic sales, would have a national and regional level of operation. The national

level would be in charge of the selling activity and overall operation. The regional operation will be a producer service operation and would serve as a communication link between producers and buyers and the national office.

Summary Evaluation

The establishment of a centralized exchange system would require legislative action. A government program or a corporation could control the system. A regional or national cooperative could be established to perform the same functions providing there was mandatory participation. To develop such a system, there must be expressed producer concern over current marketing and pricing techniques. If producers feel these mechanisms are failing, perhaps a centralization of the pricing, assembling, sorting, and evaluating functions is needed.

A central system would enhance competition through an increase of participants in the market. Prices would be competitively determined by true supply and demand. The total supply of livestock would be available to all buyers. Market supervision, procedures, and market reporting would be simplified.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Summary

In the trading system of marketing livestock the common denominator was price, and price was determined competitively. Not only did price provide for the exchange of products but performed a sorting function as well. This function was enhanced through the development of central assembly markets that brought together agricultural products from wide geographic areas.

The competitive market consisted of a large number of buyers and sellers none of which exerted unwarranted influence in the market place. This competitive market was a self-sustaining, self-regulating system.

Over time technological developments in communications and transportation enabled the marketing system to telescope some marketing functions, thus bypassing marketing functions that were once vital links in the traditional marketing chain. Due to technological advances, increases in direct selling of livestock and decentralization of slaughter plants reduced reliance on the use of terminal markets. Services provided by central assembly markets were no longer in demand.

While the rest of the economy is centralizing, livestock marketing is breaking up into smaller individualized operations. With terminal markets continually declining, no new system has been established for determining price that accurately reflects conditions of supply and

demand. Prices quoted at "major" markets do not truly represent economic conditions, consequently, inaccuracies are magnified when local prices are based on major market prices.

Technology has seemingly placed the solution to part of the problem producers face outside their control. A large part of the problem, however, has resulted from refusal of competitively oriented individuals to accept the economic facts of life. Adjustment must be made to a dynamic industry.

The primary objective of this study was to examine producer marketing alternatives that can occur (1) within the current legal and social structure of the industry, and (2) with changes in the legislation governing the producer marketing environment.

Alternatives Within the Present System

Viable marketing and pricing mechanisms are available to producers within the current legal and social structure. The degree of adaptability of various alternatives may depend on the degree of competition in a specified area, supply conditions of a commodity in a geographic area, or marketing skills of producers.

With technological growth in production, processing and distribution of livestock and meat, firms require coordination of activities to obtain efficiencies. As a result, many firms are turning to contracts as a means of buying and selling. Contracts designed for physical delivery or actual fulfillment can be grouped into four categories: (1) market service contracts, (2) market specification contracts, (3) resource providing contracts, and (4) production management contracts. These contracts involve agreements between producers, and a marketing

agency, packer, or another producer. Each form of contract varies with respect to services rendered, resources provided and the extent to which management decisions are made. Unlike contracts that require delivery of a product or service, another type of contract, futures contracts serve basically as a risk aversion or speculative alternative to producers.

Selling livestock in commingled lots or pools is a relatively new idea in marketing. Pooling is the combining of several producers' livestock into a single market offering. Animals are combined in lots according to grade, weight, sex, and breed. Pooling of livestock in auction markets results in increased efficiency, higher prices, and creates favorable attitudes among buyers and sellers.

Electronic markets provide a means of centralizing the price negotiation process through the use of modern telecommunications. While pricing is centralized, the physical exchange of products is decentralized, thereby reducing inefficiencies associated with assembling buyers, sellers, and products at a single location. Electronic markets may vary in method of sales, frequency of sales, types of communications equipment, and organizations providing the electronic marketing system. There are basically four types of electronic based sales: (1) manual trading houses, (2) telephone auctions, (3) teletype auctions, and (4) computerized trading houses.

Feeder pig, lamb, or cow-calf producers must decide if their products are the final output of their operation or are intermediate products which they use as inputs into a feeding or finishing phase. By vertically integrating, producers are combining two or more stages of production to obtain efficiency, product control, and increased

market power. Vertical integration may be accomplished in two ways:

(1) individual integration, and (2) group integration.

Alternatives Requiring Legislative Action

As the livestock industry continues to undergo changes in technology, communications, and management, legislative changes are frequently needed to permit marketing arrangements necessary to meet changing economic situations. Market orders, marketing boards and a centralized exchange system represent producer marketing alternatives requiring change in the legal or social environment of the livestock industry.

Federal market order programs were established in the 1930's in an attempt to bring orderly conditions of chaotic markets. Market orders, as a legal instrument, are issued by the Secretary of Agriculture, and are binding on all handlers and producers of specified commodities within a designated production or marketing area. Under the legislation of the Agricultural Marketing Agreement Act of 1937, market orders have been developed for fruits, vegetables, hops, tobacco, nuts, milk, and other specialty crops. Current legislation does not permit federal market orders for livestock.

The use of marketing boards as marketing instruments for agricultural commodities has been in existence in foreign countries for some time. Marketing boards are compulsory bodies set up under government legislation to perform specific marketing functions. With the primary objective of improving the price and income situation of agricultural producers, marketing boards may also focus on reducing variability in agricultural prices or on maintaining equity of market opportunities between different producers. Four general types of marketing boards

in existence today are: (1) promotion and advisory boards, (2) export trading boards, (3) domestic trading boards, and (4) regulatory and facilitating boards. While many functions performed by marketing boards are similar, differences arise with respect to the type of board established, and control of the board.

A centralized exchange system would be a mandatory system for central exchange of all commodities or products at certain points in the production-marketing system. This system would link together sellers and buyers all over the country at a central market or regional locations for hogs, cattle, or sheep. The operation of such a system could be handled by existing producer organizations, a regional or national cooperative, a private corporation, or the government. Legislative action would be required to initiate this type of system.

Conclusions

The impacts of a constantly changing livestock industry are being felt particularly by those individuals at the base of this collage of sectors and subsectors--the producers. The individual producer may be described as an unorganized man in a semi-organized world. Producers must make adjustments in production, marketing, and management to survive in this dynamic industry. If adjustment cannot be made within the current legal and social structure of the industry, perhaps legislation is needed to enhance the producer marketing environment.

Contracting assures producers an outlet for livestock and assures the marketing organization or packer a supply of livestock. This marketing or pricing technique does not necessarily enhance the competitiveness of the market. Prices established under contracts may take advantage

of prices established under more conventional selling methods. If contracting becomes a major pricing mechanism for livestock, preservation of the competitive pricing system will become endangered. The use of futures contracts allows producers to shift price risks of a fluctuating market. Some commodities (lambs) are not included in futures trading and at certain times, the volume of contracts traded may not be significant to adequately perform the risk shifting function.

Results indicate that pooling or commingling of livestock into uniform lots enhances marketing efficiency of auction markets by reducing the selling time. Selling time per head may be as much as one-fourth as great in commingled lots as in conventional lots of feeder cattle. Producers feel they receive higher prices through pooling livestock in uniform lots. Pooling in conjunction with electronic markets more accurately reflects the price/value determination process.

Electronic markets, extensively used in Canada and being initiated in the United States, are probably the most innovative form of livestock marketing and pricing techniques to date. Modern telecommunications permit large quantities of livestock to be sold in a relatively short time. By centralizing the pricing process the competitive environment is enhanced for buyers and sellers to accurately determine price. Thus, operating efficiency is increased. A successful electronic market creates more efficient use of resources by lowering the costs of marketing, handling, and physical transfer of products. Further use of electronic marketing depends on the acceptance of traders to buy and sell livestock on a grade or description basis. Electronic markets will strengthen the competitive price determination mechanism and give

all producers equal bargaining power. This truly represents a marketing alternative for the future.

Through vertical integration producers are able to coordinate activities of the production-marketing process. Capital requirements may increase, however, reduced costs arise through tighter coordination of successive production stages. Producers integrating through group action may lose some management perogatives. Benefits received through participation in vertically integrated firms, however, may compensate for the loss of marketing freedom. There is more efficient allocation of resources, reduction in costs, and incentives for technological advance through a vertically integrated system. Consideration must be given, however, to the impact a vertically integrated system has on marketing. If producers integrate vertically through successive production stages, markets for feeder livestock may dwindle. A combination of vertical integration and contracts would virtually eliminate the competitive pricing mechanism. However, vertical integration combined with electronic markets would stimulate the competitive pricing mechanism.

Market orders and marketing boards represent alternatives that provide a degree of control over the production, processing, marketing, and distribution of products. Market orders have created more orderly marketing of specific commodities. Some feel they have improved prices. Producers acquired increased prices for lambs through a previously established state lamb order, but lamb feeders consequently paid higher prices for lambs. Common features of commodities produced under market orders (concentrated region of production, relatively perishable product, and control over the flow of product) must exist for market orders to be successful. Livestock, perhaps with the exception of sheep, does not contain these common features.

Marketing boards have placed control of specific functions in the hands of a compulsory body. Marketing boards have legal status and power to enforce uniform compliance by all producers and marketing agencies as well as control entry into a regulated commodity. This type of system linked with teletype auctions has proven successful in Canada in restoring competition to the hog industry. The prospects for gains to producers as well as impact on efficiency and growth objectives, varies directly with the degree of control involved.

The entire livestock industry and its sectors exhibit a most diverse conglomeration of progress and stagnation. While technological growth continues in transportation and communications, the competitive pricing mechanism appears to be deteriorating. Producers continue to supply products to meet consumer preferences. They only ask for a fair and equitable price in return.

The objective of this report was to examine possible marketing alternatives available to producers in their attempt to adjust to the economic situations they face. Some alternatives may be accomplished within the current structure of the industry. Others require new or amended legislation to be carried out. No alternatives solve all the problems producers face. As producers vary in modes of operation, management skills and individual initiative, no single solution can be offered to accommodate all producers. Further analysis and examination of potential benefits and costs is needed in an attempt to help solve the marketing problems of livestock producers.

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ALTERNATIVE MARKETING METHODS FOR LIVESTOCK

by

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AN ABSTRACT OF A MASTER'S REPORT

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The primary objective of this study was to discuss producer marketing alternatives for livestock. More specifically, this study encompassed a description of marketing alternatives for livestock producers that can occur within the current legal and social structure of the industry, and a discussion of marketing and pricing alternatives for livestock producers that can occur only with changes in the legislation governing the producer marketing environment.

Those alternatives examined within the present system were contracts, livestock pools, electronic markets and vertical integration through ownership. Alternatives evaluated that require legislative action include market orders, market boards, and centralized exchange system.

Examples of each alternative were briefly described and discussed with respect to their operation, the conditions necessary for success, and their economic impact on the buyers and sellers involved.