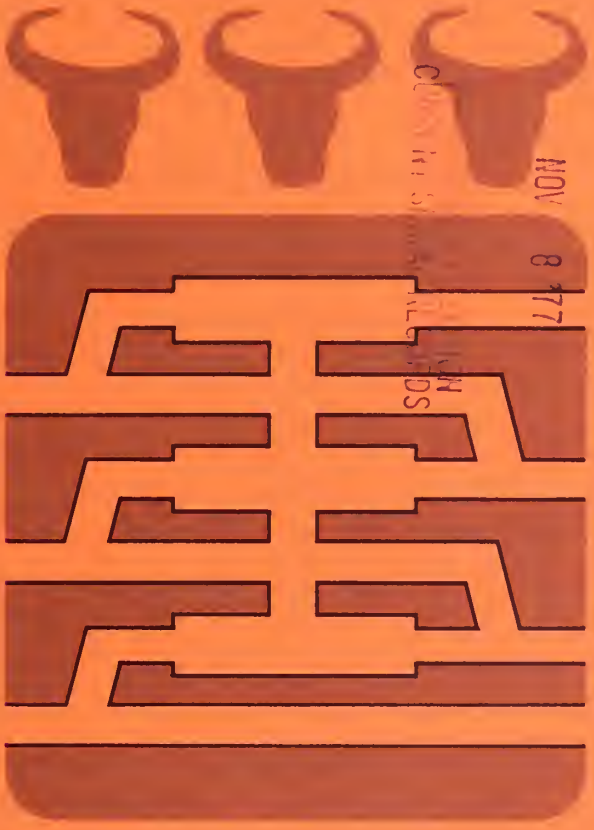
CONTRACT INTEGRATED, COOPERATIVE CATTLE MARKETING SYSTEM



U.S. DEPARTMENT OF AGRICULTURE

FARMER COOPERATIVE SERVICE

MARKETING RESEARCH REPORT NO. 1078

PREFACE

Considerable effort has been devoted to identifying trends in agriculture, analyzing trend implications, and developing production and marketing alternatives. Cattlemen are especially concerned and in discussing marketing alternatives find integration a popular topic. They view integration in the context of purchasing or constructing large feedlots, meat packing plants, and retail meat stores. The concept is appealing but often the cost is not.

Purpose of this study was to develop the concept of a contract integrated marketing system organized around a producer-owned cooperative. A contract integrated cooperative cattle marketing system offers many of the advantages associated with integration without many of the disadvantages.

Several sources of information were used in this study and included: (1) cattlemen in several States; (2) several marketing cooperatives; (3) State University and Federal Extension Service staffs; (4) Farmer Cooperative Service staff; and (5) professional and trade publications.

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HIGHLIGHTS

This report explores a contract integrated cattle marketing system organized around a producer-owned and producer-controlled cooperative. The cooperative performs two interrelated functions: (1) assists cattlemen who want to integrate forward as far as feeder cattle growing, cattle feeding, or cattle slaughtering; and (2) markets cattle and beef for its members.

The cooperative coordinates forward integration activities by identifying, selecting, and negotiating contracts with feeder cattle growers, cattle feeders, and meat packers who are willing to perform growing, feeding, and slaughtering services on a custom or fee basis. The cooperative also monitors contracts in force and evaluates contract provisions and contract operators. Cattlemen retain ownership and risk of loss, though not physical possession of cattle. Cattlemen retain the decisionmaking freedom and flexibility to determine whether, when, and how far to integrate forward. In this form, integration is relatively low cost because contract integration does not require the cooperative or its members to invest in additional land and facilities to grow, feed, and slaughter cattle.

The cooperative may decide to carry integration further. It purchases all whole carcasses from producers who integrate through slaughtering, and it can have carcasses further processed into a variety of beef products. Further, the cooperative can decide whether to market beef itself or contract with others to market it on a custom or fee basis.

Whether or not cattlemen decide to integrate forward via contracts, the cooperative markets all cattle for its members. Cattlemen and their cooperative formalize the marketing commitment by signing and executing a marketing agreement. Members agree to market all their cattle through the cooperative, and the cooperative agrees to market all cattle its members produce.

The cooperative explained in this study markets cattle via a telephone auction exchange system. Auctioning cattle via a conference telephone call expands the market area on both the buying and selling side. On the buying side, buyers from a wider market area can be attracted to the auction; and on the selling side, producers from a wider market area can market cattle at a single auction. Teleauctions allow marketing cattle on a description or specification basis. Cattle can be pooled on paper prior to the auction and shipped from farms or ranches to assembly sites for

physical pooling, or shipped directly to buyers after the auction.

As part of marketing and contract integration programs, an information system is developed by the cooperative. The cooperative compiles data from members and other sources concerning cattle performance and teleauction results (prices); analyzes and interprets data; and distributes information to cattlemen and other information users. With this information producers can become more market-oriented and produce cattle that match the preferences of buyers.

CONTRACT INTEGRATED, COOPERATIVE CATTLE MARKETING SYSTEM

Clement E. Ward
Agricultural Economist

VERTICAL COORDINATION PRESSURES

Cattle producers are increasingly pressured to improve production and marketing coordination. Vertical coordination is the process of synchronizing or harmonizing flows of production inputs and outputs between successive stages in the production-marketing system, vertically from producers to consumers. Methods of coordination range from an open, purely competitive market price system to a closed, ownership integrated system encompassing all stages from producers to consumers.

Coordination pressures stem partially from structural changes in cattle production. Cow-calf and feeder cattle growing operations are becoming larger and more specialized; however, the trend is more dramatic and more evident in cattle feeding, which has experienced rapid growth of large, specialized operations. Between 1962 and 1975, the number of large feedlots (1,000 head capacity or more) increased 22 percent in 23 cattle feeding States, while the number of small feedlots (under 1,000 head capacity) decreased 40 percent.[1] More importantly, while large feedlots comprised only 1 percent of all feedlots, they marketed 64 percent of total fed cattle in 1975. These large cattle feeding operations require a nearly continuous flow of cattle into and from their lots for maximum efficiency. This compels assembling feeder cattle from smaller, more numerous, and widely dispersed feeder cattle producers whose operations tend to be more seasonal. Therefore, coordinating the quantity and quality of uniform lots of cattle at the time and place demanded by cattle feeders is a sizable task.

Marketing changes also increase the pressure to improve coordination. Producers require accurate and timely information to make intelligent production and marketing decisions, and mar-

[1]Statistical Reporting Service, U.S. Dept. of Agri., *Number of Cattle Feedlots by Size Groups and Number of Cattle Marketed, 1962-1967*, July 1968; *Cattle on Feed*, Jan. 1976.

ket prices are a major component of that information. But at some exchange points in the production-marketing system, public markets are declining in importance as a marketing or procurement method. Thus, producers find available price information to be inaccessible or inadequate. To illustrate, cattle purchased by meat packers from public markets dropped from 61 to 30 percent between 1960 and 1974; and correspondingly, the proportion purchased by direct methods increased from 39 to 70 percent.[2] Yet, public markets are primary sources for reporting prices, and publicly-reported prices often serve as base prices when negotiating direct sales. When base prices for transactions involving an increasing number of cattle are determined by transactions involving a declining number of cattle, market prices are strained to transmit accurate signals between buyers and sellers.

Cattlemen are pressured to increase coordination in order to compete with large noncooperative agribusiness firms who are developing complex and tightly coordinated production-marketing systems. For example, one of the largest cattle feeding firms is a subsidiary of one of the nation's three largest grain marketing firms. The multinational grain firm is also a major feed manufacturer. Recently, that cattle feeding subsidiary negotiated a contract with a subsidiary of another agribusiness firm to purchase 50,000 head of cattle over an 18-month period, feed them to specifications developed by the subsidiary of the second firm, and sell most of them to a second subsidiary of the second firm. That subsidiary processes meat, and supplies both food and nonfood items to the nation's largest fast food chain. Other noncooperative agribusiness firms have purchased large cattle feedlots, and some have integrated into feeder cattle growing, cattle slaughtering, beef processing, and retailing. Five of the 10 largest meat packers are part of conglomerate corporations, and 3 of the largest have announced plans to establish or expand their cattle feeding activities.

[2]Packers and Stockyards Administration, U.S. Dept. of Agr., *Packers and Stockyards Administration Resume'*, Dec. 1975.

PRODUCER-BASED ALTERNATIVES

Cattle producers face a challenge: Either develop more tightly coordinated production-marketing systems or be prepared to accept systems noncooperative agribusiness firms develop.

Producers may develop coordinated systems through producer-based cooperative organizations. For producer-owned and producer-controlled cooperatives to be efficient and competitive, members must exercise a three-way involvement in cooperative operations. First, as owners, they provide all or a portion of investment and operating capital required to finance cooperative activities. Second, members themselves elect a board of directors to establish operating policies and to select a chief executive officer who is in charge of ordinary and usual business operations. Third, because members provide the products marketed by the cooperative, they must be willing to commit all their marketing volume to the cooperative.

In considering production-marketing alternatives producers are attracted to vertical integration. Vertical integration combines two or more successive production and marketing stages under the ownership or control of one firm. Integration is of two types: forward, toward consumers; or backward, toward raw materials suppliers. Vertically integrated cooperative systems may be ownership integrated or contract integrated, depending on the extent the cooperative owns facilities and equipment. In an ownership integrated cooperative system, the cooperative owns most or all land, facilities, and equipment for feeder cattle growing, cattle feeding, cattle slaughtering-beef processing, and beef distribution, including retailing. In a contract integrated cooperative system, the cooperative contracts with firms willing to perform specific growing, feeding, slaughtering-processing, and beef distribution services on a fee basis—rather than owns the facilities required to perform those functions. Because the capital and management requirements in an ownership integrated cooperative system are prohibitively high for many groups of producers, a contract integrated cooperative system may be a reasonable alternative.

This report discusses such a cattle marketing system. A separate supplement to this report contains additional detail, including statistical examples and sample documents.[3]

[3]Supplement to a Contract Integrated, Cooperative Cattle Marketing System, Marketing Research Report 1078 may be obtained from: Farmer Cooperative Service, U.S. Department of Agriculture, Washington, D.C. 20250.

SYSTEM OVERVIEW

Two factors affecting a firm's market power are its decision position relative to final demand (usually consumers) and its size of operation. Producers integrate forward to move to a decision position nearer to final demand. They increase their market power while also sharing in margins of successive production-marketing stages and reducing intermediary costs. Through marketing cooperatives they jointly market the combined volume of several producers. That increases producers' market power by enlarging the operation of their off-farm business, the marketing cooperative.

In this report's contract integrated cooperative marketing system, the cooperative performs two major functions for its owner-patrons: (1) negotiates contracts requiring the performance of specific services on a custom or fee basis, enabling producers to integrate forward; and (2) markets cattle and beef for members.

Cattlemen have different types of operations. Some cattlemen specialize in cow-calf production, some in growing feeder cattle, and some in cattle feeding, while others operate two or more enterprises simultaneously. Some cattlemen may not want to integrate forward; and of those that do, some will want to integrate forward to different stages in the production-marketing system. This contract integrated system enables producers to decide whether, when, and how far to integrate forward.

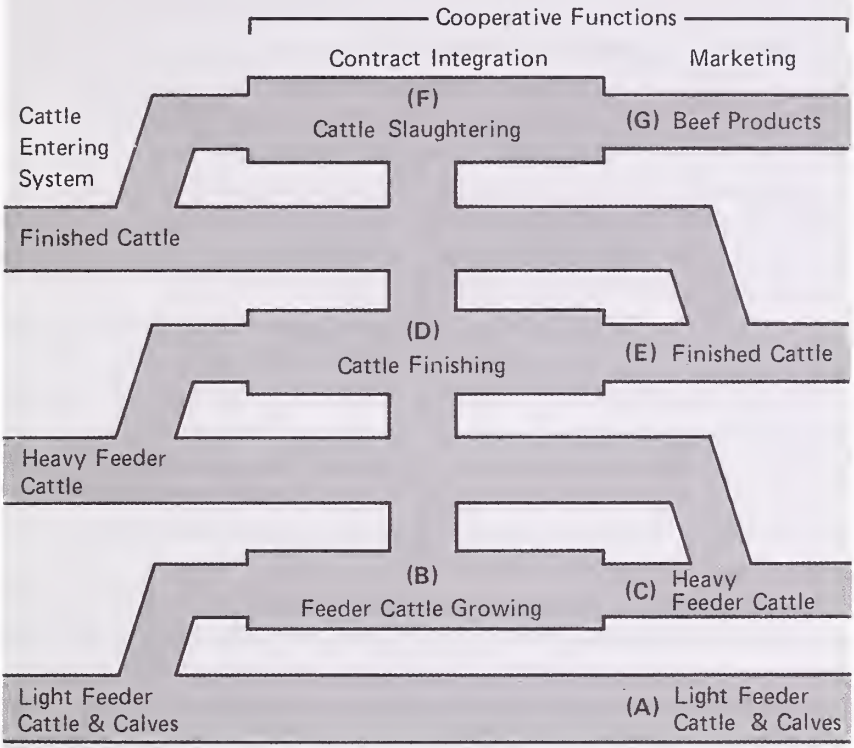
Figure 1 indicates the options available to producers and illustrates the flexibility this system offers. Cattlemen specializing in producing and marketing light feeder cattle and calves (approximately 400 to 600 pounds) may market them through the cooperative (A); or may retain ownership of them through feeder cattle growing (B), and market them as heavy feeder cattle or yearlings (approximately 600 to 800 pounds)(C).[4] Producers may choose to have cattle fed or finished (D) and marketed as fed or finished cattle (approximately 900 pounds or more)(E). Others may have cattle slaughtered (F) and marketed as fresh or frozen beef (G).

Options for cattlemen already producing heavy feeder cattle include marketing them through the cooperative (C) or retaining ownership of those cattle through finishing (D) and marketing them as finished cattle (E). Producers also may retain ownership of cattle through slaughtering (F) and market beef (G).

Cattlemen already feeding cattle may market them through the cooperative (E); or retain ownership of them through slaugh-

[4]Letters in parentheses correspond to letters in fig. 1.

Figure 1: Marketing and contracting options for producers in a contract integrated cooperative cattle marketing system.



tering (F) and market beef (G).

To integrate forward, the cooperative identifies, selects, and negotiates with feeder cattle growers, cattle feeders, and meat packers who will perform growing, feeding, and meat packing services on a contract or custom basis. The cooperative establishes guidelines for custom or contract operators to follow, monitors contracts in force, and maintains control over integration activities.

Contract integration enables producers to retain ownership and control of cattle through feeder cattle growing, cattle feeding, or cattle slaughtering-beef processing and beef distribution stages; and allows them the flexibility to enter and exit the system whenever they wish. Capital requirements for the cooperative are relatively low because it does not own land, facilities, and equipment at each production and marketing stage and because producers provide most of the operating capital for those activities.

An effective marketing program is an integral part of this

marketing system because contract integration and marketing are interrelated. Potential gains from forward integration may be greatly reduced if integration is not accompanied by an effective marketing program. Because cooperatives are producer-owned and producer-controlled, they are sometimes referred to as producer-oriented. However, it is imperative cooperatives be market-oriented or customer-oriented. They must identify potential customers and their needs, and orient the entire cooperative marketing program towards satisfying those needs. Marketing concentrates on the needs of buyers; selling, on the needs of sellers. Market-oriented cooperatives strive to provide maximum buyer satisfaction at minimum cost to producers.

Cattlemen and their cooperative must clearly identify customer or buyer demands first; then satisfy those demands. Market prices transmit demand signals from buyers to sellers. Therefore, market-oriented cooperatives are concerned with pricing accuracy, whether prices accurately reflect buyer preferences. Pricing accuracy is influenced by the type of exchange system; number, size, and location of buyers and sellers; and quantity and quality of information available.

An exchange system that can improve pricing accuracy for live cattle is auction pricing conducted via electronic equipment and based on product specifications. In this cooperative system, cattlemen produce cattle according to self-imposed quality standards and management guidelines to aid cooperative marketing specialists merchandise uniformly and consistently described cattle. Specification or description marketing enables using modern communication and electronic technology in the marketing effort. Cattle may be paper pooled with computer assistance and priced by auction via telephone or teletype. Such an exchange system can attract more buyers from a wider market area, and it permits producers to market cattle through larger auctions because cattle are produced over a wider area.

Producers need information to produce and market cattle that match buyers' demands. They need cattle performance and price analysis information as well as current market price and outlook information. As a part of its marketing program, the cooperative develops an information system to aid producers and itself in making intelligent and timely production-marketing decisions. The cooperative receives data and information from several sources, analyzes it, interprets the results for its members, and distributes information to the users.

MARKETING AGREEMENTS PROGRAM

Owner-patrons benefit from their cooperative in direct proportion to the extent they do business with it. In cattle marketing cooperatives, that means members can expect to maximize returns from their cooperative when they market all their cattle through the cooperative.

Members and their cooperative often formalize a mutual marketing commitment through a marketing agreements program. Marketing agreements are written statements of contractual rights and responsibilities of producers and the cooperative in marketing producers' products. The marketing commitment is bidirectional: (1) producers are committed to market cattle through their cooperative; and (2) the cooperative is committed to market those cattle as effectively as possible for its members. Marketing agreements enable cooperatives to more effectively merchandise available products and improve coordination between production-marketing stages.

Many cooperatives using marketing agreements require all members to enter into a marketing agreement with the cooperative. Because of mutual rights and obligations, both the member (or applicant) and cooperative representative, usually the president of the board of directors, must sign the agreement.

Members agree to market all cattle (except cattle sold for breeding purposes) through the cooperative. Producers describe cattle in an appendix to the marketing agreement, indicate current cattle inventory, estimate increases in cattle numbers, and detail marketing and contract integration plans. The cooperative agrees to market cattle for its members.

Both the advance commitment to market all cattle through the cooperative and the information in the marketing agreement appendix enable the marketing staff to better plan the marketing effort for a longer time period. The staff has an estimate of the quality and quantity of cattle available for market. With this and knowledge of buyer preferences, the marketing staff is in a better position to coordinate the flow of cattle between buyer and seller. Cooperative management has an indication of the need to contact custom or contract operators, and can predict costs so that maximum service is obtained at minimum cost. A volume commitment in advance improves the cooperative's bargaining position with contract operators and attracts potential buyers, especially large-volume buyers.

Grades and standards that accurately reflect product quality contribute to an effective marketing program. As a means of moving towards differentiated or identifiable products, members authorize cooperative management to develop standards, rules, and regulations governing activities related to cattle production and marketing. Members, through their board of directors, approve and agree to abide by those guidelines. It is advisable for the cooperative to attach a detailed list of all standards, rules, and regulations to the marketing agreement, insuring that all producers are informed of them.

Producers appoint the cooperative their sole and exclusive agent in negotiating contracts with third parties, primarily custom or contract operators. Cooperative management identifies and screens contract operators and negotiates all aspects of contracts with them on behalf of members. Contract provisions that will be negotiated include: (1) guidelines in producing and slaughtering cattle; (2) transportation and delivery of cattle and beef; (3) recordkeeping requirements and other services; and (4) custom service rates. Custom contracts are three-way contractual agreements and must be signed by the contracting member, contract operator, and cooperative representative. Signed contracts then become part of the marketing agreement.

The cooperative pays producers their proportionate share of total marketing proceeds, less four types of authorized deductions: (1) any advance payments made prior to a final payment; (2) deductions for operating and maintenance costs of the cooperative; (3) capital retained in the cooperative for its use and later distribution to members; and (4) any liens against cattle marketed, which will be paid to lienholders prior to making any payment to the producer.

The cooperative agrees to market producers' cattle for a 3-year period plus the remainder of the calendar year in which the marketing agreement is signed. After the initial 3 years, the marketing agreement may be canceled in writing during the last 60 days of the calendar year, effective the first day of the subsequent calendar year. Each year members complete the appendix portion of the marketing agreement or a comparable form to renew the agreement.

An effective marketing agreements program depends in part on compliance with all agreements between producers and the cooperative. Should any producer breach the agreement, damage to other producers is difficult or impossible to compute. There-

fore, to protect the members and cooperative who uphold their contractual obligations, and to encourage compliance, money damages for noncompliance are stiff. For example, money damages for cattle not marketed according to marketing agreement provisions might be $20 per hundredweight or $100 per head—whichever is greater. Members breaching the contract pay all costs of litigation that arise from the breach, and the board of directors may elect to revoke violators' membership for 2 years.

CONTRACT INTEGRATION PROGRAM

As noted previously, cattlemen have several options in this contract integrated system. This section discusses the operation of the following three options: (1) custom growing light feeder cattle; (2) custom feeding heavy feeder cattle; and (3) custom slaughtering fed cattle. It also discusses the cooperative's option to have carcasses further processed.

Feeder Cattle Growing

Cattlemen marketing light feeder cattle often allow others to put low-cost gains on them during the growing stage. Integrating forward through feeder cattle growing enables producers to retain ownership of cattle and share in any profitability resulting from growing cattle and marketing heavy feeder cattle.

Cattlemen with light feeder cattle must decide to integrate through the growing stage 60 days or more prior to the earliest date those cattle can be delivered to a custom or contract grower. The cooperative selects a custom feeder cattle grower and negotiates a contract to grow feeder cattle. Feeder cattle growing contracts are three-way agreements between a cattleman, his cooperative, and a contract grower. Because of contractual rights and obligations, the contract should be signed by all three participants. The cooperative representative is usually the manager or president of the board of directors.

Cattle to be custom grown are described in an appendix to the contract, and producers indicate the general period when they prefer to deliver cattle; during the first, second, or last one-third of a specific month. They indicate a preference ordering for delivery so cooperative management can negotiate delivery dates with contract growers, and better coordinate the transportation and delivery of cattle. Cattle are pooled whenever possible into larger and more uniform lots to increase the efficiency of handling, transporting, and growing cattle. The cooperative notifies contract growers of the exact delivery date at least 30 days in advance of delivery.

The cooperative develops standards, rules, and regulations for contract growers to follow. In developing those guidelines, the cooperative should contact custom growers and learn what their preferences are, what capabilities they have, and the trade-offs in costs when custom growers provide specific services versus having

members provide the services. For example, it may be that custom growers prefer to have cattle weaned at least 3 weeks prior to delivery and to worm cattle themselves. The cooperative must weigh those preferences against those of its members in negotiating contracts. Cooperative management is encouraged to compile all guidelines for custom growers and incorporate them into the growing contract or distribute them separately to each custom grower.

Developing specific guidelines is important to the process of continually screening potential custom growers, and monitoring and evaluating contract provisions and contract growers. Contract growers agree to allow cooperative employees to enter the grower's premises and inspect and grade cattle, or conduct other business the cooperative believes necessary or desirable. Regular visits contribute to a business relationship promoting cooperation and understanding, and develop a line of communication that may reduce or eliminate potential problems. Further, it enables the cooperative to monitor contracts in force and evaluate contract growers.

Accurate records provide important information to cattle owners and the cooperative. Records kept by contract growers should cover: (1) beginning, ending, and periodic weights; (2) a chronological record of rations fed and length of time on each ration; (3) animal health care; (4) death loss reports, including veterinary statements; and (5) complete accounting records of billings and payments.

Contract growers assume responsibility for the care and maintenance of cattle. They provide facilities, feed, and water, necessary veterinary and animal health care, and other services agreed to by contract participants. Contracts should specify services provided by the contract grower and the cost for each. For example, cattlemen might pay a pasture or yardage fee based on the number of head of cattle and number of days in the growing program or pay a fee based on total pounds of gain. Feed costs might be based on the quantity and price of specific feeds, with price determined by prices of specific feeds at a predetermined time and place. Veterinary and animal health care may be based on actual cost to the contract grower. Other services should be listed and priced separately. The cooperative is responsible for comparing services provided and their cost with those of other custom growers.

The cooperative provides an accounting service for producers. This also aids in monitoring contracts in force. All billings are sent to the cooperative and forwarded to the producer. Similarly, producers send payments to the cooperative and the cooperative pays contract growers. To better monitor production costs, producers are billed twice each month, but contract growers are paid once each month.

Members own and retain risk of loss of cattle while they are in possession of contract growers, but contract growers are liable for losses resulting from their negligence.

The cooperative may market cattle from the contract growing program without the owner's consent if monthly payments to contract grower are more than 30 days in arrears. Then, a contract grower is paid from the proceeds prior to making any payment to the member.

Contracts terminate when cattle have been transported from the contract grower's premises and final payment has been made to him. The cooperative notifies a contract grower at least 7 days prior to the date cattle are to be transported elsewhere. In this contract integrated system, cattlemen must decide either to place cattle into another contract integration option or to market them 60 days prior to terminating the custom growing contract. Therefore, a preliminary notice of an expected delivery and contract termination date would be a service to contract growers.

Cattle Finishing

Cattle finishing or feeding has been either highly profitable or unprofitable in recent years. At times, cattlemen market feeder cattle and allow others to feed them to slaughter weight. Integrating forward through cattle finishing enables producers to retain ownership of cattle and share in any profitability resulting from feeding cattle and marketing fed cattle.

Contract integration through cattle finishing is very similar to integrating through feeder cattle growing. Therefore, much of the preceding section of this report is applicable and will not be repeated, but major points will be mentioned.

(1) Cattlemen owning heavy feeder cattle, either in their possession or in the possession of a contract grower, must decide to integrate through cattle feeding at least 60 days prior to the earliest date cattle can be delivered to a custom or contract feeder. The cooperative negotiates a three-way contract, which must be

signed by all three participants. Producers describe cattle to be custom fed and state a delivery date preference in an appendix to the contract.

(2) The cooperative develops standards, rules, and regulations for contract feeders to follow.

(3) The cooperative monitors and evaluates contract provisions and contract feeders by visiting custom feedlots to inspect cattle and facilities, and by requiring that records be kept on each lot of cattle.

(4) Contract finishers assume responsibility for the care and maintenance of cattle delivered.

(5) Contracts specify services provided and the cost for each. For example, cattlemen might pay the following: (1) a yardage fee based on the number of head of cattle and number of days in the finishing program; (2) feed costs based on the quantity of specific feeds and their prices at a predetermined time and place, (3) feed processing fee; and (4) cost of veterinary and animal health care products based on actual cost to the contract feeder.

(6) All billings and payments are made through the cooperative.

(7) Producers own and retain risk of loss of their cattle while they are in possession of contract finishers, but contract finishers are liable for losses resulting from their negligence.

(8) The cooperative may market cattle from the contract finishing program without the owner's consent if monthly payments are more than 30 days delinquent.

(9) Contracts terminate when cattle are transported from the contract finisher's premises and he has received his final payment.

(10) Cattlemen must decide to place cattle into the succeeding contract integration option or to market them through the cooperative 60 days prior to terminating the custom feeding contract.

Cattle Slaughtering

Integrating forward through cattle slaughtering allows cattlemen to share in any margins resulting from slaughtering cattle and marketing beef. In the previous two contract integration options, feeder cattle growing and cattle finishing, maintenance of an identifying link between cattle and their owners is accomplished by using eartags, freeze or hot brands, or other methods.

After cattle are slaughtered, however, the difficulty and cost of maintaining that identifying link increase. Therefore, cattle-to-owner identification is maintained up to the time whole carcasses are purchased by the cooperative from cattle owners.

The cattle slaughtering option in this system is similar to the previous two options. Major points of similarity and a few differences are:

(1) Cattlemen with fed cattle, either in their possession or in the possession of a contract finisher, must decide to integrate through cattle slaughtering at least 60 days prior to the earliest date those cattle can be delivered to a custom or contract meat packer. The cooperative negotiates a three-way contract which must be signed by all three participants. Producers describe cattle to be slaughtered and indicate the earliest date those cattle can be delivered for slaughter in an appendix to the contract. The cooperative notifies the contract packer of that date 30 days in advance of delivery. The contract packer then schedules delivery within 7 days after that earliest date and notifies the cooperative of the exact delivery time and date 15 days in advance. That enables contract packers to schedule procurement and facilities because they know how many cattle of a specific description will be delivered for slaughter at a given time.

(2) The cooperative develops standards, rules, and regulations for contract packers to follow. Points include maximum holding time between delivery and slaughter, extent of trim, and grading and weighing procedures. The cooperative should ensure that it and producers receive carcass performance data (quality grade, warm carcass weight, marbling, adjusted fat thickness, rib-eye area, yield grade, etc.) from contract packers. Many packers already provide such data to producers and groups participating in the carcass data service program of the Agricultural Marketing Service, U.S. Department of Agriculture.

(3) The cooperative monitors and evaluates slaughtering contract provisions and contract packers by inspecting facilities, the slaughtering operation, and beef.

(4) Contract packers assume responsibility for the care and maintenance of cattle between delivery and slaughter.

(5) Contracts specify services provided and the cost for each. For example, cattlemen might pay a base slaughtering fee less the value of the drop (hide, offal, edible and inedible fats, bone scraps, and blood). Drop value is based on a mutually acceptable price quotation. If drop value exceeds the base slaugh-

tering fee, the contract packer pays or credits the producer the difference. That arrangement enables the base slaughtering fee to more closely reflect slaughtering costs, and producers benefit from any value of the drop. Contract packers market the drop and benefit from any drop marketing margin. Cattlemen also might pay a per head per day yardage charge for the holding period.

(6) All billings and payments are made through the cooperative.

(7) Cattlemen own and retain risk of loss of cattle through the slaughtering process and until the cooperative purchases whole carcasses, unless death during the holding period results from negligence of contract packers. Cattle delivered for slaughter must be in such condition that meat produced is safe for human consumption. Among other things, that means medication and growth stimulants have been removed from rations sufficiently early to meet State and Federal requirements.

(8) Contracts terminate when cattle have been slaughtered as specified in the contract and the contract packer has received final payment.

Beef Processing and Marketing

As indicated, the cooperative purchases whole carcasses from cattlemen integrating through slaughtering. Carcasses are purchased on carcass weight and grade with price determined by formula, based on a predetermined published price quotation. The cooperative board of directors and management decide on any further processing of whole carcasses and on the beef marketing program. The cooperative assumes all costs and risks of further processing and marketing beef. If the cooperative chooses to have carcasses further processed, arrangements must be made with a meat packer willing to process carcasses on a contract or custom basis.

The decision to further process carcasses and market beef products depends on many factors and must be made after thorough analysis and planning. Even the least complex combination of processing and marketing requires some knowledge of consumer demand, markets and marketing channels, market entry and penetration strategies, specifications for beef products, and promotion and advertising.

There are several processing and marketing options. For this report, it is assumed processing produces the following types

of beef products: (1) whole carcasses, halves or sides, and quarters or split sides; (2) primal or wholesale cuts; (3) subprimal or retail, specialized, fabricated, or portion-controlled cuts; and (4) cured and smoked meats, luncheon meats, and convenience foods (soups, stews, casseroles, etc.) For each group of products, the cooperative has two alternatives, either market products itself or have others market them on a contract basis.

The cooperative needs less staff and marketing expertise to have beef marketed by others—for example, food brokers or meat packers. Brokers perform an agency function, marketing products for others on a commission basis without taking title to them. Meat packers also might market beef products owned by the cooperative on a fee or commission basis in conjunction with their normal beef marketing operation.

The cooperative may choose to hire marketing specialists and market beef products to retail outlets, HRI (hotels, restaurants, and institutions) outlets, or other firms at the intermediate demand level; or may market them direct to consumers, the final demand. In either case, products are marketed on a spot or cash basis or under a longer-term supply contract.

Intermediate demand level firms are varied. Retail markets include: (1) independent and cooperative grocers and supermarket chains; and (2) independent or producer-owned specialty (meat, fish, and cheese) stores. HRI outlets include: (1) hotels and convention centers; (2) commercial eating establishments, fast food chains, restaurants, and airlines; and (3) government eating facilities, armed forces installations, hospitals and nursing homes, and correctional facilities. Jobbers are firms purchasing beef for resale, and they often perform some additional processing. Central warehouses further process beef for several retail and HRI outlets in a limited geographic area. Food manufacturers combine beef with vegetables or other items to make convenience foods such as ready-to-eat frozen, canned, or dried products. Direct-to-consumer marketing refers to selling fresh or frozen beef from trucks, through roadside markets, or through catalog orders.

In this contract integrated cooperative system, integration is voluntary. Producers decide whether and when to integrate forward and when to market cattle. At times, many producers may decide to integrate through slaughtering; while at other times, very few may make that decision. Therefore, the cooperative is faced with a fluctuating beef supply, which presents problems. Most importantly, prospective customers cannot be guaranteed a consis-

tent quantity and quality of beef over a given period of time. In addition, the number of cattlemen integrating through slaughtering may increase gradually but remain at a relatively low-volume level for some time, eliminating the opportunity to serve large-volume customers.

Any beef marketed by the cooperative, a new competitor in that area, means an equivalent amount of beef has been diverted from other marketing channels; and established firms will attempt to bar market penetration efforts of the cooperative. Therefore, a potentially viable strategy is to concentrate on serving smaller accounts; for example, independent grocers, local restaurants, and specialized meat markets. Another alternative is to open a cooperative-owned specialty store.

CATTLE MARKETING PROGRAM

The cooperative in this contract integrated system markets all classes of cattle regardless of how far forward cattlemen integrate via contracts. Therefore, an effective marketing program is essential. The marketing program consists of: (1) an exchange system which can improve pricing accuracy and operational efficiency; and (2) an information system that enables cattlemen and their cooperative to make intelligent and market-oriented production-marketing decisions.

Exchange System

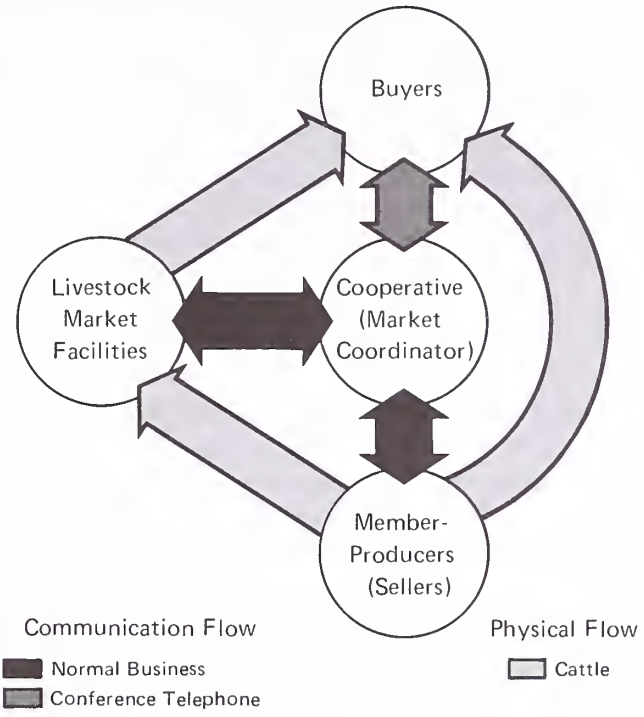
Several alternative exchange systems for agricultural commodities have been proposed. Most use modern communication and computer technology to allow centralized trading with access to the system from widely dispersed buyer and seller locations. For livestock, a relatively low cost and simple exchange system is a telephone auction, commonly referred to as a teleauction. A teleauction is an auction conducted over a conference telephone call. The conference telephone call connects widely dispersed buyers with the cooperative, which represents widely dispersed sellers (fig. 2).

The cooperative coordinates the auction by: (1) setting an auction date and handling promotion and advertising; (2) inspecting, describing, and grading cattle on the farm or ranch; (3) physically pooling or paper pooling cattle into larger and more uniform sale lots; (4) notifying prospective buyers of sale lots prior to the auction; (5) hiring an auctioneer; (6) arranging transportation and delivery of cattle, either directly from farms or ranches to buyer locations or through an assembly site (for example, livestock market facilities); and (7) approving credit applications for prospective buyers and handling payments.

Teleauctions expand the market area in two ways. The buying area is expanded because more buyers can participate in each auction.[5] Buyers need not be physically present at the auction site but still can bid for cattle marketed, saving them time and travel costs. The selling area is expanded because teleauctions can market cattle from several assembly sites and farms or ranches at the

[5]One telephone company (Chesapeake and Potomac Telephone Company) can connect up to 58 parties or telephone sites with a single conference call. Additional parties are possible at each telephone site by using sound amplification and microphone equipment.

Figure 2: **Communication and physical product (cattle) flows in a teleauction marketing system.**



same auction. Whenever possible, cattle are assembled or transported after—rather than prior to—the auction. Even when assembly is required before the auction, cattlemen may market cattle from a wider area without having to transport cattle any farther than if an auction were held at each assembly site.

Cattle sold directly from farms or ranches are transported and delivered within a given period (for example, 7 days) after the auction, enabling buyers to coordinate delivery with availability of their facilities. Transportation and handling costs are reduced along with cattle shrink and exposure to bruising and disease when cattle move directly to buyers from farms or ranches. Teleauctions sell cattle in less time because cattle do not physically pass through a sale ring. Therefore, teleauctions enable buyers to purchase a larger number of cattle in less time and for less cost

than conventional auctions, and to coordinate delivery of cattle after the auction.

Cattle are sold on a specification or description basis, rather than by visual inspection. Consequently, specific guidelines for describing and grading cattle and procedures for conducting teleauctions must be developed, used consistently, and clearly communicated to buyers and sellers. Marketing cattle on a specification or description basis can improve pricing accuracy and benefit both buyers and sellers.

Buyers benefit by better coordinating their preferences for cattle having a specific combination of descriptive traits (sex, weight, grade, condition, etc.) with the price they believe accurately reflects the value of those cattle. Buyers assess expected economic trade-offs of cattle having various combinations of traits and compute the price they are willing to pay for cattle with different combinations.

Cattle owners benefit because prices they receive more accurately reflect buyer preferences. Market-oriented producers are rewarded for producing and marketing cattle with descriptive traits valued most highly by buyers. Producers also benefit because their cooperative ensures that potential buyers who have indicated a preference for cattle with a given combination of traits are notified when cattle with those traits are available for market.

An example of how a cooperative might develop its own set of criteria for grading and describing cattle was developed. It illustrated how such a set of criteria could enable the cooperative to paper pool cattle with computer assistance prior to marketing them by teleauction.

Research results indicate that buyers pay premiums for larger sale lots and cattle with certain descriptive traits.[6] Pooling or commingling cattle is practiced by many cooperatives and enables marketing cattle in larger and more uniform lots. Pooling can be accomplished on paper without physically assembling cattle prior to the auction, allowing physical pooling and delivery of cattle after the auction. Paper pooling does not require a computer, but computer assistance may save time and costs.

In the pooling example, 50 hypothetical producers consigned 1,172 head of cattle. Each uniform lot of cattle was key-

[6]Albert G. Madsen and Zeng Rung Liu, *Pricing Feeder Cattle at Colorado Auctions*, Colo. Agr. Expt. Sta. Tech. Bul. 114, June 1971; and John H. McCoy, et.al., *Feeder Cattle Pricing at Kansas and Nebraska Auctions*, Kansas Agr. Expt. Sta. Bul. 582, Jan. 1975.

punched on a computer card. There were 276 small but uniform lots. Then, with computer assistance, the 276 uniform lots were sorted by 5 descriptive traits (sex, weight, grade, herd class, and condition) into 106 uniform lots. Using past price analysis results as a guide, prices were assigned to each of the 276 consigned lots and, later, to the 106 pooled lots. After pooling, 213 lots or 77 percent of the consigned lots received a higher price; 54 lots or 20 percent received the same price; and 9 lots or 3 percent received a lower price. Of the 50 hypothetical producers, 49 earned higher gross returns; and one, the same returns. Average gross revenue increase per head was $4.93. Pooling was found to benefit large producers as well as small ones, though small ones benefited more.

Information System

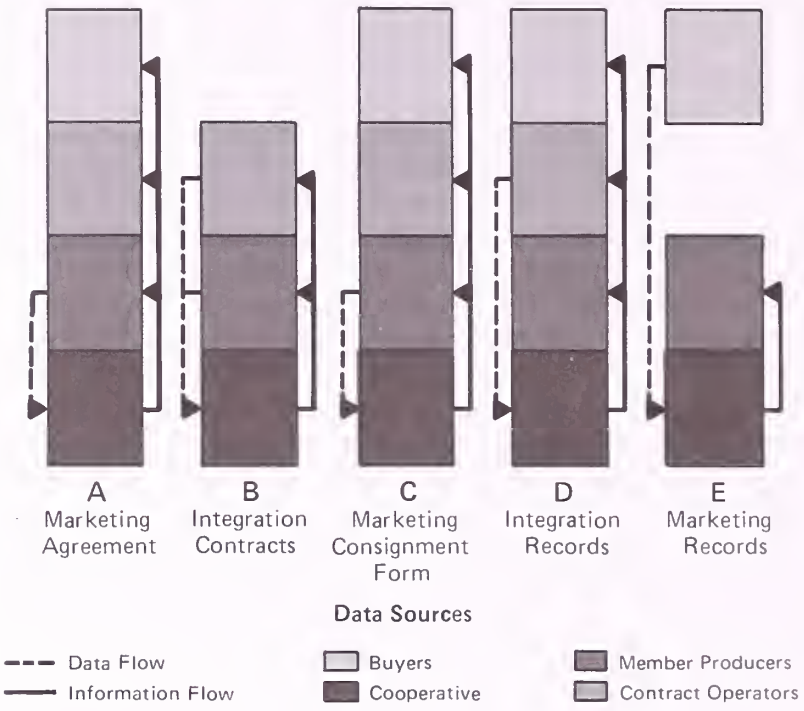
An information system has three interrelated components: (1) production of data; (2) analysis of data; and (3) interpretation of analytical results. Decisionmakers rarely use raw data. Therefore, generation of data is only the first phase of an information system. The cooperative then compiles and analyzes data, and interprets and distributes resulting information to decisionmakers. In this contract integrated system, data originate from three groups and flow into the cooperative via five types of documents or records (fig. 3).

Members provide the following data to the cooperative in an appendix to the marketing agreement (A), or on a similar form each year: (1) current cattle inventory; (2) estimated increase in cattle numbers; and (3) monthly marketing and contract integration plans.[7] Those data are used by the cooperative to better understand its members' operations and needs. The cooperative compiles a profile of its membership: the members' cattle enterprises, size of operations, expansion or contraction plans, monthly marketing pattern, description of cattle marketed, monthly pattern of forward integration, and the potential of members being buyers as well as sellers for various classes of cattle. A comparison over time indicates how the profile changes and enables the cooperative to assess producers' response to changing buyer preferences.

The marketing and integration plans of cattlemen are a use-

[7]Letters in parentheses correspond to letters in fig. 3.

Figure 3: Data and information flows among major participants of a cooperative information system.



ful planning tool for the cooperative, contract operators (feeder cattle growers, cattle feeders, and meat packers), buyers, and cattlemen themselves. Marketing and forward integration decisions are dependent on variables that are unknown at the time marketing agreements are signed. However, the cooperative develops a tentative picture of the marketing and contracting efforts required of it throughout the year.

Data in the marketing agreement enable the cooperative to plan auction schedules, promotion and advertising; facilities, labor, and transportation; and contract negotiations. Cattle merchandising begins by providing potential buyers advance notice of auction schedules and cattle supplies. Buyers then are able to coordinate cattle supplies with their needs. Forward contracting

begins by identifying contract operators willing and capable of providing services for the number of cattle expected to be placed in each integration option at the time those services are required. Contract operators have an indication when cattle will be placed and for how long. The cooperative also may contact beef customers and plan the beef marketing program.

Marketing data from producers are combined with regional and national data to identify similarities or differences that might lead to unique marketing opportunities. Cattlemen receive a summary of marketing and integration plans and other analyses, enabling them to reassess their plans and make adjustments prior to making a firm commitment to integrate through a specific option or to market cattle through a specific auction.

When cattle are consigned to a specific contract integration option, cattlemen provide the cooperative with useful data in the appendix to each forward integration contract (B). Producers state a delivery preference, and the number and description of cattle committed to that integration option. Contract operators and the cooperative jointly produce data on the price or cost of contracted services. The cooperative uses the data to coordinate pooling and delivery of cattle with contract operators and producers, transportation scheduling with shipping firms, and to provide marketing management advice to producers.

Producers make a firm commitment to market cattle through a specific auction by completing a consignment form (C), indicating the number and description of cattle to be marketed. Those data are required to paper pool cattle into larger and more uniform sale lots. The cooperative uses the data in its promotion and advertising program and provides prospective buyers with a list of sale lots prior to the auction, including the number and description of cattle in each lot. Contract operators are notified when cattle will be shipped from their premises and when integration contracts terminate. Data from integration contracts, consignment forms, and the annual inventory summary enable the cooperative to compare marketing and integration plans with actual marketing and integration decisions and adjust its programs accordingly.

Records kept by contract operators on cattle placed in each integration option provide financial and cattle performance data to the cooperative (D). The cooperative uses the data to evaluate contract operators on points such as services, prices, and cattle performance. The data are also useful for producers as they plan

production and marketing changes. Performance data on cattle have been used primarily as an input into subsequent production-marketing decisions. However, the cooperative may use it as market information to buyers. Just as cattle are marketed on the basis of description (for example: sex, age, weight, grade, herd class, and condition) they also might be marketed on the basis of their actual or expected performance (for example: rate of gain, feed conversion efficiency, and carcass quality and yield grade). Over time the cooperative develops a data base to convert performance data of cattle to be marketed or those previously marketed into market information. Such data may be included as separate descriptive traits, incorporated into the quality grade and herd class, or combined into an index of performance potential. Knowing the performance potential as well as physical attributes could further improve pricing accuracy and reward market-oriented producers for coordinating the production of cattle with buyer preferences.

Note that, regardless of the data source or participant supplying data in figure 3, there is a feedback of information to producers. Perhaps the most important information to them is an analysis and interpretation of marketing results (E). Combined with data already retained in the cooperative, buyers' purchase price for cattle enables it to analyze prices and buyer preferences. Two examples of how auction results can be analyzed for producers were developed using the hypothetical consignment and price data in the description marketing and pooling example. The first example does not require a computer but would be time-consuming without one; the second example does require access to a computer.

The first example was a simple summary of sale lots and number of head sold by descriptive trait, with a weighted average price for each trait. It provides an indication of the relative value buyers placed on each descriptive trait; however, it shows general relationships only. Over time it could provide reasonably clear buyer preferences, but not specific price differences for those preferences.

The second example used a more refined analytical technique that considers interrelationships among descriptive traits. A multiple linear regression analysis yields specific price differences among traits and is a more useful method of analyzing auction results.

Whichever method is followed, the cooperative marketing staff must further analyze and interpret statistical results for producers. Analysis and interpretation of auction results, combined with current and historical data from other sources, are useful to producers and their cooperative. Producers make production-marketing decisions with the additional information about buyer preferences and can become more market-oriented. The cooperative assesses its marketing program and compares results with other markets over time as well as assists producers to make market-oriented decisions.

REVENUES AND COSTS

Revenue and cost estimates for implementing a contract integrated cooperative system depend in part on whether such a system is implemented by an existing cooperative or by a newly organized cooperative. Implementing a contract integrated system by an existing cooperative might be organizationally simpler because it already has facilities and staff—for example, auction or assembly sites, office space, computer equipment, and management and support staff. A new organization has the advantage of being able to organize around the specific details of the system being implemented. In either case, revenues and costs depend on how many producers are served, the geographic area served, number of cattle marketed, services provided, and whether a contract integrated system is implemented in phases or in its entirety at one time. Financing is discussed here in general terms because specific revenue and cost estimates must be computed for each interested group of cattlemen and specific situation.

In this contract integrated system, the cooperative maintains two departments for accounting purposes; one for cattle marketing and one for beef marketing. Members who market cattle share in net margins resulting from the cattle marketing program. Cattlemen integrating through slaughtering share in net margins earned by marketing beef products. In either case, costs are allocated to the appropriate department and net margins are allocated on the basis of the proportionate share of gross revenue accounted for by each producer. A producer's patronage refund is based on his contribution (member's gross revenue) to total dollar volume of each department. Gross revuenue takes into account the number of head sold, size (weight) of cattle, and quality. Quality is determined by price, emphasizing the importance of pricing accuracy. Therefore, competitive pricing and marketing cattle and beef on a description basis become especially important.

Revenues for the cooperative are generated from cattle and beef marketing and contract integration. Producers pay a per head marketing fee for all cattle marketed through their cooperative, similar to the marketing fee paid to any public marketing firm. A different fee may be charged for marketing cattle than for marketing beef because of cost differences associated with each marketing program. Similarly, a charge is made for performing services in conjunction with each contract integration option.

Members pay a per head integration fee for each integration option. Fees may vary among options because of cost differences associated with different services.

Cattle marketing fees are expected to be slightly higher than those charged by public marketing firms because of additional services provided for members by the cooperative. The potential gains from pooling may offset any higher marketing charges, without even considering potential gains from other services. Contributing to slightly higher marketing fees are costs associated with the following: (1) farm or ranch visits to inspect, grade, and describe cattle; (2) legal services required for the marketing agreements program; and (3) compiling and analyzing data and distributing information to members. Beef marketing fees are dependent on the following: (1) whether the cooperative hires its own beef marketing staff; (2) the types of beef products marketed; and (3) the types of customer outlets.

Contract integration fees are expected to be relatively low but must cover the following costs: (1) legal services required in conjunction with contracting; (2) identifying, selecting, and negotiating with contract operators; and (3) a portion of the information system costs mentioned above. The opportunity to integrate forward through successive production-marketing stages and share in the profitability of these activities when the situation is favorable more than offsets contracting costs.

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