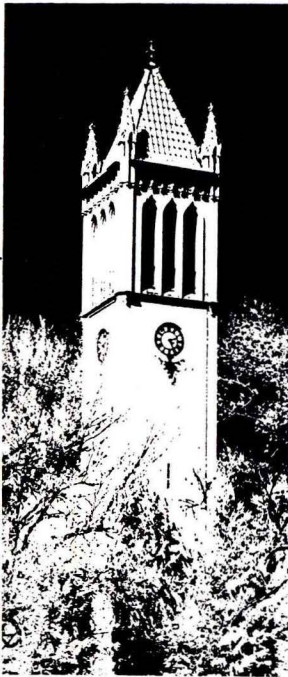


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Factors Affecting the Bargaining Power Of Some Dairy Bargaining Cooperatives

by **George W. Ladd and Milton C. Hallberg**



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SUMMARY

This report discusses some findings of a study dealing with the bargaining power of grade A milk cooperatives. These findings may be useful to members and boards of directors of dairy bargaining cooperatives and should contribute to a better understanding of bargaining power and factors affecting bargaining power. Also, these findings may help in assessing the consequences of cooperative bargaining activities and may suggest ways in which members and boards of directors can work toward improving their bargaining effectiveness.

Managers of 10 different grade A milk bargaining cooperatives located in the North Central Region were interviewed. The main things studied were: (a) factors influencing dairy cooperatives' bargaining power, (b) the objectives of dairy bargaining cooperatives and (c) ways dairy bargaining cooperatives try to achieve their objectives.

Several factors influence the bargaining power of dairy cooperatives. These include governmental regulations pertaining to cooperatives and milk distribution, characteristics of local markets, volume of milk marketed by the cooperative, bargaining activities of nearby cooperatives in dealing with milk distributors, alternative sources of milk for grade A milk handlers, alternative outlets for members' milk, growth in size of milk bottlers and mergers among bottlers, size of processing facilities owned by the cooperative, and extent to which cooperatives work together in adopting mutually beneficial policies.

Grade A dairy bargaining cooperatives provide a number of services for members, in addition to bargaining over the price of milk. They also provide services to milk bottlers. And in return for these services, the cooperatives obtain a higher price for their members' milk.

Dairy bargaining cooperatives have several different objectives. Maintaining a market for members' milk, obtaining high milk prices for members and maintaining Class I sales volume are generally considered the most important objectives. There is variation among cooperatives in the relative importance of various objectives. This variation is due, in part, to differences in the characteristics of individual cooperatives and of their markets.

Producers supplying milk to the Chicago and Detroit markets receive large premiums over federal-order prices—much larger premiums than producers in other markets studied receive. Our findings help to explain the existence of these premiums. Although Chicago and Detroit bottlers need their local cooperatives' milk, bottlers in other markets studied do not. For the other markets studied, there is more than enough surplus grade A milk available from alternative sources to replace the milk of the local cooperative if it withheld milk. But Chicago and Detroit are such big markets that bottlers there would find it virtually impossible to satisfy their current levels of consumption from alternative sources.

Factors Affecting The Bargaining Power of Some Dairy Bargaining Cooperatives¹

by George W. Ladd and Milton C. Hallberg

Individual farmers are unable to influence the prices they receive for their products, but the firms to which farmers sell their products are frequently price-setters. Consequently, there is widespread belief that the farmers' weak market-power position is a chief cause of their farm marketing and income problems. Reflecting this belief is an increasing interest in farmers' bargaining power as a means to improve their income.

Various national farm organizations have taken an interest in increasing farmers' bargaining power through collective action. And several individual farm commodity groups have also tried to increase farmers' bargaining power—most notably in the milk, fruit and vegetable industries—through the development and operation of bargaining cooperatives (see table 1).

One of the most important of this type of cooperative is the dairy bargaining cooperative. A 1957 survey by the Farmer Cooperative Service of the United States Department of Agriculture indicated that about 207 associations bargained over the price of 1.3 billion dollars worth of milk.² A major objective of these organizations is to increase prices received by members. They attempt to bargain for a price higher than the price the farmers would have obtained without the organization. Thus, cooperative bargaining associations are considered a partial solution to the complex farm problem. This study is concerned specifically with dairy bargaining cooperatives.

Our purpose was to determine factors influencing bargaining power of grade A milk bargaining cooperatives, to study objectives of such organizations, and to investigate various means at the cooperatives' disposal for achieving their objectives and the extent to which these means are used in bargaining with fluid milk distributors. This study did not deal with the legal issues relating to cooperative behavior.³

This report may provide members and boards of directors of dairy bargaining cooperatives with a better understanding of bargaining power and help them im-

prove the bargaining effectiveness of their cooperatives.

BARGAINING POWER

Two things are basic to a bargaining relationship: (a) a conflict of interest between the parties involved and (b) an attempt by each party to resolve the conflict as favorably as possible to himself. Almost every bargaining relationship also involves a community of interest. For example, grade A milk producers and bottlers want to sell large volumes of fluid milk products to consumers at satisfactory prices.

Bargaining may be viewed simply as the simultaneous effort by each party to win the consent of the others. That is, each party is trying to resolve the conflict and to convince the others that it should be resolved in his favor.

The outcome of the bargaining process depends on whether or not one or both parties will make some concession from their preferred position. The degree of influence one party has over another to force such concessions, or the ability to effect agreements on one's own terms, is referred to as *bargaining power*. One's bargaining power will be greater the more favorable he can make it for his opponent to accept his offer or the more unfavorable he can make it for his opponent to refuse to accept or to bargain further.

There are two different types of bargaining power. The first—type I power—stems from advantages that can be offered to the opponent in return for accepting one's terms. Such advantages may be savings that can be offered the opponent or extra services than can be provided.

The second kind of bargaining power—type II power—is the bargainer's ability to enforce unfavorable consequences upon his opponent if this opponent refuses to accept the stated terms. To exercise this type of bar-

Table 1. Estimated number of bargaining cooperatives in the United States, 1962.

Type of cooperative	Number	Percentage of total
Dairy ^a	207	59.5
Fruit and vegetable ^b	63	18.1
Sugar beets ^b	47	13.5
Egg ^b	30	8.6
Pulpwood ^b	1	0.3
Total	348	100.00

^a Source: Wendell M. McMillen, Assistant Director, Marketing Division, U. S. Dept. Agr. Data from cooperative study. (Private communication.) August 1963.

^b Source: J. Kenneth Samuels, Bargaining activities in other commodities. Fruit and Vegetable Bargaining Cooperatives Conf. Proc. 5:49-53. 1961.

¹ Project 1635 of the Iowa Agriculture and Home Economics Experiment Station. This bulletin is a contribution from the Iowa Agriculture and Home Economics Experiment Station as a collaborator under North Central Regional Cooperative Research Project NCM-38 "Dairy Market Adjustment Problems in the North Central Region." The authors are grateful to the cooperative managers who supplied information for this study.

² Wendell M. McMillen. Data from cooperative study. (Private communication.) 1963.

³ Cooperative legislation and the application of antitrust laws to cooperatives are discussed in: Joseph J. Saunders. The status of agricultural cooperatives under the antitrust laws. *Federal Bar Jour.* 20:35-55. 1960; Neil Brooks, Robert L. Clodius and Edwin G. Nourse. Lessons for farm economists from recent antitrust decisions. *Jour. Farm Econ.* 44:1589-1626. 1962; Stuart H. Russell. Application of antitrust laws to agricultural cooperatives. pp. 18-27; Proceedings of the 18th Annual Midwest Milk Marketing Conference. Iowa State University. 1963. (Copies of the proceedings are available from Sheldon W. Williams, Mumford Hall, University of Illinois, Urbana, Illinois 61801.)

gaining power, the bargainer must be able to subject the opponent to some added costs or losses for refusing to accept terms. The higher the costs or the larger the losses that can be imposed on an opponent, the greater is one's bargaining power. These two types may be used together by a bargainer.

The outcome of the bargaining process depends on the power of the individuals involved and on the strategy used during the bargaining process. In addition, the final outcome may affect one's bargaining power.⁴

FLUID MILK MARKETING SYSTEM

In discussions of milk marketing, certain common words have specific meanings. These terms and the fluid milk marketing system will be briefly discussed.

The term fluid milk includes such products as bottled or cartoned milk or cream, flavored milk drinks, half and half, etc. A firm that receives farm-produced milk and produces fluid milk products is a bottler or handler; its plant is a bottling plant. Butter, nonfat dry milk, ice cream, cheese, etc., are referred to as processed dairy products. A plant in which processed dairy products are produced is a processing plant.

Virtually all milk consumed as fluid milk in this country is grade A milk. To qualify as a grade A milk producer, or simply as a producer, a farmer must meet certain standards of sanitation and equipment on his farm. These sanitary regulations are prescribed and enforced by local or state health authorities. These authorities may charge each producer an inspection fee. Local or state health authorities require that milk used in fluid milk products be grade A milk. Normally, processed dairy products need not be made from grade A milk, although some local health authorities require certain processed products to be made from grade A milk.

Milk that is not grade A milk is referred to as manufacturing grade milk.

This study dealt with grade A milk bargaining cooperatives: bargaining cooperatives whose members are grade A milk producers. They will be referred to as bargaining cooperatives or simply as cooperatives.

About 60 percent of the nonfarm population of the United States lives in market areas where federal milk marketing orders are in effect. There are 76 such orders. Federal milk marketing orders are authorized by the Agricultural Marketing Agreement Act of 1937 (as amended). The declared purpose is to "establish and maintain such orderly marketing conditions . . . as will establish (prices that) are reasonable in view of the price of feeds, the available supplies of feeds and other economic conditions; (that will) insure a sufficient quantity of pure and wholesome milk; and be in the public interest."

⁴ More complete discussions of the definition of bargaining power, the factors that affect an organization's bargaining power and the determinants of the outcome of negotiations are presented in: George W. Ladd. Agricultural bargaining power. Iowa State University Press, Ames, Iowa, 1964.

Each order regulates a part of the operations of grade A milk bottlers who sell all or a substantial part of their fluid milk products in an area defined by the order. The market area defined by the order is an area in which handlers subject to the provisions of the order compete with each other in the sale of fluid milk products.

Each order has an administrator and administrator's staff. Each order provides the formulas the order administrator uses to compute the minimum prices a handler must pay for milk used in various products, provides a formula by which the minimum price to each producer is determined, requires each handler to supply the administrator reports on receipts of milk and on quantities used in various products, and provides auditing procedures to verify each handler's reports.

Most orders classify dairy products and milk into two classes. Fluid milk products are included in Class I, and milk used in these products is Class I milk. Class I products are those products the health authorities require to be made from grade A milk. All other products are Class II products; milk used in them is Class II milk.

In most federal order markets and in all markets in the North Central Region, the order prices for Class II milk (i.e., the minimum prices dealers must pay for Class II milk) are closely related to the farm price of manufacturing grade milk and to prices of processed dairy products. The order formulas provide that dealers pay a higher price for Class I milk than for Class II milk.

The order blend price (the minimum price to each producer, which is computed by a formula specified in the order) is a weighted average of the dealer prices for Class I and Class II milk, adjusted for the butterfat content of the farmer's milk and his distance from market. Before computing the blend price, deductions are made to pay cooperatives for services rendered members and to pay the expenses of the order administrator's office. As the proportion of grade A milk in a market that is used in Class I products (the Class I utilization ratio) rises the blend price rises. As this utilization ratio falls the blend price falls.

Some federal orders contain a supply-demand adjuster provision. Under this provision the current Class I utilization ratio is compared with an average or normal Class I utilization ratio. If the current ratio is above normal, the minimum order price for Class I milk is adjusted upward, raising the blend price. If the current ratio is below normal, the minimum order price for Class I milk is adjusted downward, lowering the blend price.⁵

All prices computed by the formulas in the orders are minimum prices. In many markets, bargaining co-

⁵ The operation of federal milk marketing orders is discussed in detail in: U.S. Agricultural Marketing Service. The federal milk marketing order program. U.S. Dept. Agr. Mktg. Bul. 27. 1963.

operatives have successfully bargained for higher Class I or Class II prices, resulting in higher blend prices for members. The difference between a negotiated price and an order price is referred to as a premium.

In most federal order markets, the producers supplying the market produce substantially more grade A milk than is required for Class I products. That is, more grade A milk is available than is used in those products that must be made from grade A milk. A market generally does need to receive somewhat more grade A milk than is actually used in Class I products. This extra milk is needed to meet (a) day-to-day fluctuations in volume of milk received by individual handlers, (b) seasonal fluctuations in milk production and (c) day-to-day and seasonal fluctuations in sales of Class I products. This grade A milk, which is required but is not used in Class I products, is referred to as operating reserve; the operating reserve runs about 15 percent of actual Class I use in most markets. Grade A milk production over and above the amount required for Class I products and necessary reserve is surplus. Most surplus goes to nearby processing plants for processing into Class II products; some is shipped to distant markets and used in Class I products in those markets. Bargaining cooperatives would ship more of their surplus to distant markets for Class I usage if they had the opportunity since Class I prices exceed Class II prices.

CHARACTERISTICS AND MARKET ENVIRONMENT OF COOPERATIVES STUDIED

Managers of 10 bargaining cooperatives were interviewed in mid-1964. Information was collected on their 1963 operations. The cooperatives studied and their membership and volume are listed in table 2.

Estimated membership as a percentage of total number of grade A milk producers and cooperative volume as a percentage of the estimated volume in the coopera-

tive's procurement area (the area in which cooperative members are located) vary considerably. This is because of variations in the volume of milk production of independent producers who do not belong to a cooperative and variations in the amount of overlapping in the procurement areas. For example, there is considerable overlapping of procurement areas in eastern Iowa but practically no overlapping in western Iowa.

External Factors Affecting the Cooperative's Bargaining Ability

Federal orders

Federal orders may be a substitute for a cooperative's bargaining power. A cooperative that is unable to negotiate and enforce a classified price plan with dealers can still operate under such a plan if located in a federal-order market.

Some producers object to joining bargaining cooperatives because of the deductions made to pay for cooperative services to members. Under a federal order, all producers are subject to deductions used to pay the market administrator or the cooperative for weighing, testing and sampling milk and providing market information. Since he pays for these services whether he is a member or not, a producer under a federal order may be less reluctant to join a bargaining cooperative. Thus, a federal order may increase cooperative membership.

Market changes

The cooperative managers interviewed listed several characteristics of their markets that they believed had an influence on the bargaining ability of their cooperatives. As indicated in table 3, growth in size of handlers and mergers of handlers were believed to have affected the bargaining ability of eight cooperatives. Managers

Table 2. Membership and volume of cooperatives studied, 1963.

Cooperatives	Membership		Volume of grade A milk as a percentage of total in the area ^a
	Total	Percentage of total producers in area ^a	
Burlington Cooperative Milk Producers Association, Burlington, Iowa	14	16	25
Cedar Valley Cooperative Milk Association, Waterloo, Iowa	320	54	54
Des Moines Cooperative Milk Marketing Association, Des Moines, Iowa ^b	912	70	70
Eastern Iowa Cooperative Dairy Producers Association, Cedar Rapids, Iowa ^b	430	55	55
Mississippi Valley Milk Producers Association, Moline, Illinois	540	50	50
Nebraska-Iowa Non-Stock Cooperative Milk Association, Omaha, Nebraska	1,489	97	95
North Iowa Cooperative Milk Marketing Association, Mason City, Iowa	62	51	60
Sioux City Milk Producers' Cooperative Association, Sioux City, Iowa	168	100	100
Pure Milk Association, Chicago, Illinois	12,000	40	40
Michigan Milk Producers Association Detroit, Michigan	11,917	79	57

^a The area referred to here is the cooperative's procurement area, which is the area in which the cooperative's members are located. The percentages are estimates provided by the respective cooperative managers. The exact numbers of grade A producers and volumes of grade A milk in these areas are unknown at present.

^b These two cooperatives have recently merged, but were in existence as individual cooperatives during 1963.

Table 3. Number of cooperative managers indicating that their bargaining ability was affected by various structural changes in the dairy industry.

Structural change	Number of cooperatives
Growth in size of handlers and handler mergers	8
Large-quantity buying by a single retail unit	6
Competition from handlers in other markets due to different federal-order prices	9
Competition from handlers in other markets due to a desire to expand total market area	9

believed that the ability of larger firms to survive at lower prices and to initiate price wars has a major impact on cooperatives' bargaining ability. Also, the desire and ability of larger handlers to sign up their own independent producers were considered hindrances to the cooperatives' bargaining ability.

One cooperative had worked out an agreement with local handlers whereby the cooperative would take as members farmers supplying milk to any bottling plant being acquired by a local handler (whether the bottling plant being acquired was located within or beyond the cooperative's procurement area).

Large-quantity buying by a single retail unit also affects a cooperative's bargaining power. The size of some retail accounts has grown so large in recent years that the handler cannot afford to lose these accounts. Such accounts may be national grocery chains or defense or school lunch contracts. The handler will typically contract with these outlets for a delivery date and price in advance of negotiations with the cooperative. The handler is then certain of the price he will get for his bottled milk and can use this as an argument for either paying no premium to the cooperative or for refusing to pay a higher premium. Three of the four managers indicating that this market characteristic had not affected them were located in small markets where handlers have few, if any, large retail outlets from which to secure such contracts.

Influence of nearby markets

Managers believed they would be in a strong position to negotiate a premium or a premium increase if one or more nearby cooperatives were able to do so. They believed that gains won by a nearby cooperative could be used as leverage against local handlers.

Although milk strikes are rarely used, they may be one method of securing gains for cooperative members. A successful strike may be beneficial to both the cooperative calling the strike and to cooperatives in nearby markets. It can make handlers in nearby markets aware of the possible success of a milk strike in their own markets and therefore, less reluctant to negotiate with their cooperatives.

The results of negotiations in nearby markets influence the premium a cooperative can negotiate and the amount of milk it can sell. The data in table 4 indicate that the handlers of all cooperatives studied

could have obtained milk in 6 or more months of 1963 at a lower price than they paid the local cooperative. The table shows, for example, that Detroit handlers could have obtained milk from a cooperative supplying the Duluth market during 8 months of 1963 at a lower total cost (Duluth price plus transportation to Detroit) than they actually paid for class I milk. Hence, if a cooperative in one of these 10 markets called a milk strike, its handlers could probably get milk from an alternative source for a net price no higher than the cooperative is presently getting.

If prices vary widely among markets, handlers may obtain milk from an alternative source even if the cooperative does not call a milk strike. Thus, there is good reason for cooperatives to attempt to keep price differences among markets in line with transportation costs.

Some managers interviewed do attempt to work together to keep dealers' price differences among markets in line with transportation costs. Also, some cooperatives refuse to ship milk into markets where an-

Table 4. Number of months during 1963 in which handlers in a given market could have obtained Class I milk cheaper from an alternative source.^a

Alternative market	Markets in which dealer's buying price was higher than dealer's buying price in the alternative market plus transportation cost from the alternative market to this market ^b									
	Burlington	Waterloo	Des Moines	Cedar Rapids	Moline	Omaha	Mason City	Sioux City	Chicago	Detroit
Duluth	—	—	—	—	—	—	—	—	—	8
Minneapolis	—	—	—	—	—	—	—	7	—	1
Winona	8	7	8	5	5	12	8	12	12	12
Eau Claire	12	12	12	11	11	12	12	12	12	12
Green Bay	6	—	1	—	—	4	—	4	12	12
Madison	4	—	1	—	1	—	—	—	12	8
Milwaukee	1	—	—	—	—	—	—	—	12	12
Beloit	9	—	8	1	9	5	—	5	12	12
Rockford	12	—	12	1	12	8	—	8	12	12
Mason City	—	—	—	—	—	4	—	8	—	—
Waterloo	12	—	12	—	—	8	—	8	12	7
Cedar Rapids	12	—	11	—	—	8	—	8	3	9
Moline	12	—	—	—	—	4	—	4	4	10
Des Moines	—	—	—	—	—	4	—	4	—	—
Sioux City	—	—	—	—	—	—	—	—	—	—
Omaha	—	—	—	—	—	—	—	—	—	—
Burlington	—	—	—	—	—	—	—	—	—	1
Chicago	—	—	—	—	—	—	—	—	—	8
South Bend	—	—	—	—	—	—	—	—	—	9
Fort Wayne	—	—	—	—	—	—	—	—	—	12
Toledo	—	—	—	—	—	—	—	—	—	12
Detroit	—	—	—	—	—	—	—	—	—	—

^a Source: U. S. Dept. Agr. Fluid milk and cream report, Jan. 1963-Dec. 1963 issues.

^b Transportation costs from the alternative source markets were assumed to be $(3.4 + 0.16X)$ cents per hundredweight, where $X =$ miles between markets. William T. Butz. Long-distance shipment of market milk. U. S. Dept. Agr. Mktg. Res. Rept. 648. 1964.

other cooperative is attempting to gain a reasonable premium by withholding milk. However, this spirit of cooperation does not exist among all bargaining cooperatives. In one instance, a cooperative, withholding milk from a handler who refused to pay the cooperative's asking price, was forced to lower its asking price when another cooperative agreed to ship milk to this handler at a lower price. In another case, a bargaining cooperative (call it A), not located in a federal-order market and not included in this study, is alleged to charge handlers in its market a price considerably below the federal-order price in two nearby federal-order markets. Cooperative A's action makes it nearly impossible for the two cooperatives (call them B and C) in the federal-order markets to negotiate a premium on Class I milk. Furthermore, cooperative A has refused to agree to expand the federal-order markets to include its marketing area even though such an expansion would make it easier to keep prices in line in these three markets. Actions by cooperatives such as A seriously restrict the bargaining effectiveness of nearby cooperatives such as B and C.

It is possible that the total receipts by members of cooperatives A, B and C would be higher if they cooperated with each other but that the members of cooperative A would receive less by working with B and C. The gain to the members of B and C would come at the expense of the members of A. But possibly these three cooperatives could cooperate with each other if A's members could be assured that they would share in the joint gain.

State and local regulations

Some state and local milk regulations may impede the flow of milk among markets. There are four primary ways that state and local sanitary regulations may restrict the movement of milk.⁶ First, they may prohibit certain activities, such as the distribution of milk pasteurized in a plant located beyond the city limits. Second, regulations of different localities may differ on details that have no public health significance but that tend to restrict the flow of milk between localities. Third, regulations may be discriminatorily applied and enforced. Finally, duplication of inspection with substantial inspection fees may limit the number of outlets one cooperative can supply with milk.

Restrictive regulation in any market may limit the number of potential milk sources for handlers located in the market. This tends to enhance the bargaining power of the cooperative whose members are regular suppliers to this market. It also tends to weaken the bargaining power of the cooperatives that might supply milk to the market in the absence of restrictive regulation.

There are at least two instances where this type of regulation may affect the cooperatives in this study. Before milk may be shipped to Burlington, Iowa, the

⁶ U.S. Department of Agriculture, Regulations affecting the movement and merchandising of milk. U.S. Dept. Agr. Mktg. Res. Rept. 98, 1955.

milk producer must receive a permit and pay an inspection fee of \$10 per year. To ship milk into St. Louis, Missouri, an inspection fee of 4 cents per hundredweight is required unless waived by the local authorities. Such fee requirements do not prevent the shipment of milk into Burlington and St. Louis—nevertheless, they mean an additional expense that may make these markets an uneconomic alternative outlet and thereby reduce a cooperative's type II bargaining power.

Information Secured by Cooperatives

Bargaining agents frequently emphasize the need for increasing their knowledge about market conditions, demand conditions, available supplies of farm products, industry developments, membership problems, etc., if they are to be successful in bargaining.

Demand for milk and milk products

Table 5 indicates the extent to which managers interviewed attempt to keep informed about the changing conditions of demand for milk and milk products. Keeping track of supply-demand adjustments, milk sales to handlers, reports from handlers on their sales and use of milk, and retail price changes keeps a manager informed of current conditions in his market.

Prices of Class II milk are closely related to the farm price of manufacturing grade milk and prices of processed dairy products. These prices, in turn, are affected by price support activities of the United States Department of Agriculture Commodity Credit Corporation (CCC). Six of the managers interviewed obtain information on support price levels and purchases of the CCC.

Most of the managers interviewed try to keep informed of the changing demand conditions for milk and milk products. Eight of the managers listed at least six of the sources shown in table 5. One manager listed one of the 10 sources, and a second listed four.

Alternative sources of milk for handlers

Every manager interviewed was aware of the existence and location of alternative milk supplies. The

Table 5. Number of managers securing various types of information on the demand for milk and milk products.

Information secured	Number of cooperatives
Size of supply-demand adjustment in effect in the federal order	3
Changes in price formulas of other federal orders	8
Sales to handlers	8
Reports from handlers on sales and utilization	7
Price changes at retail	6
Changes in CCC support purchases of surplus dairy products	6
Changes in CCC support price level for dairy products	6
Agricultural outlook information from state university	4
Success or failure of other cooperatives in negotiating with handlers	8
Farm or dairy newspapers and magazines	4

Table 6. Producer milk not used for Class I purposes by regulated handlers in several North Central federal-order markets, 1963.^a

Federal-order market	Pounds (000)
Chicago	3,596,662
South Bend-LaPorte-Elkhart	52,460
Rock River Valley	26,292
Milwaukee	127,615
Southern Michigan	1,527,003
Muskegon	43,112
Upstate Michigan	26,772
Michigan Upper Peninsula	33,266
Northeastern Wisconsin	196,699
Madison	64,661
Quad Cities-Dubuque	92,658
Nebraska-Western Iowa	105,754
Sioux City	19,154
Minneapolis-St. Paul	420,008
Duluth-Superior	69,049
Cedar Rapids-Iowa City	84,097
North Central Iowa	38,083
Des Moines	78,806

^a Source: U. S. Dept. Agr. Federal milk order market statistics, annual summary for 1963. U. S. Dept. Agr. Stat. Bul. 345. 1964.

principal alternative sources of milk mentioned were other cooperatives located in Minnesota, Wisconsin or Iowa, and most alternative sources were located within the milkshed of federal-order markets.

The cooperatives studied—with the exception of the Chicago and Detroit cooperatives—were also aware that their entire volume could easily be replaced by milk from these alternative sources. The amount of milk received by handlers in several federal-order markets in the North Central Region that was in excess of fluid milk or Class I sales in 1963 is shown in table 6. This milk could have been used as Class I milk in other markets.⁷ Data on the total 1963 volumes of the cooperatives listed in table 2 are available, but not published here. When we compared these volumes with the 1963 volumes listed in table 6, however, we found that sufficient milk was available to replace the entire volume of any of the cooperatives studied except Chicago and Detroit.

The Detroit cooperative controls practically all milk produced in Michigan through its own operations and through the operation of a federation of all Michigan dairy cooperatives. Thus, Detroit handlers would not be likely to secure milk from any other Michigan federal-order market during a milk withholding action. And the Chicago cooperative would probably not supply milk to Detroit handlers during an attempt by the Detroit cooperative to negotiate a premium. Also, Chicago handlers are not likely to get milk from other cooperatives in Chicago or Michigan during an attempt

⁷ This does not, of course, exhaust the entire supply of milk that could have been used for Class I milk in other markets. It is, however, believed to represent the major portion of the total since most of the major fluid milk markets are regulated by federal orders, even though much of the area in some states is not regulated by a federal order. Adequate data for estimating the total amount of surplus milk available from unregulated markets are not available.

by the Chicago cooperative to negotiate a higher price for its milk. There is a federation of Chicago area cooperatives. Furthermore, since the Chicago cooperative controls an estimated 40 percent of the total grade A milk production in its procurement area, which includes the entire market area of the Milwaukee, Rock River Valley and South Bend-LaPorte-Elkhart federal orders and about one-fourth of the Madison federal order, it may control as much as 125 million pounds of the milk listed in table 6 for these latter four federal orders.

Combining the remaining milk not used in Class I products in the Milwaukee, Rock River Valley, South Bend-LaPorte-Elkhart and Madison federal-order markets with that of the other Wisconsin, Minnesota and Iowa federal-order markets listed in table 6 yields slightly over 1.25 billion pounds of surplus milk. Assuming that 15 percent of this surplus is needed for operating reserve leaves 1.06 billion pounds of surplus milk available to Chicago and Detroit handlers—enough to replace about 40 percent of either the Chicago or the Detroit cooperative's volume.

These figures may underestimate the amount of milk that would be available to Chicago and Detroit handlers if cooperatives supplying these markets withheld milk. In 1963 in the 13-state area of the 12 North Central states plus Kentucky, 9.1 billion pounds of grade A milk were not used for Class I products in federal-order markets. If we deduct from this figure the grade A milk not used in Class I products in the markets listed in the two preceding paragraphs and in Fort Wayne, Toledo and in the northeastern Ohio order and then deduct 15 percent of the remainder, we obtain 3.4 billion pounds of milk. This represents the amount of milk that could have been available to Chicago and Detroit handlers from all federal-order markets in the region other than the excluded markets. Detroit and Chicago handlers would probably be unable to obtain milk from Fort Wayne, Toledo or northeastern Ohio because of the existence of the Great Lakes Milk Marketing Federation. This figure of 3.4 billion is only about 25 percent greater than the annual volume of the Chicago cooperative, 20 percent greater than the annual volume of the Detroit cooperative and about 60 percent of the volume of both cooperatives. Detroit and Chicago handlers would, therefore, be hard pressed to find milk if the cooperatives in these two markets called a milk strike.

Producers supplying these two markets receive substantial premiums over federal milk-marketing order prices—much larger premiums than producers in other markets receive. These findings on the scarcity of alternative sources of milk for these two markets and the abundance of alternative sources of milk for other markets help to explain the differences in premiums.

Alternative outlets for the cooperative's milk

Only two of the cooperatives studied—Waterloo and Cedar Rapids—shipped a substantial volume of milk

to fluid-milk markets in the South. The Omaha, Chicago and Detroit cooperatives shipped small amounts to some southern and western markets as requests came from cooperatives in these markets. The other cooperative managers listed processing plants owned by the cooperative or by nearby cooperatives as the only alternative markets for their milk. Most of the plants listed were butter and nonfat dry milk processing plants. If an alternative outlet was needed for milk now used in class I, most of the cooperatives studied would market this milk in lower-priced outlets.

Services for Members

One way for an organization to maintain membership support and loyalty is to effectively serve a number of its members' wants or needs rather than just one or two wants or needs. Dairy bargaining cooperatives can do this by: (a) keeping members informed of the activities of the cooperative through group membership meetings, monthly newsletters, market information letters, annual reports, etc.; (b) having fieldmen who make personal contacts with members; (c) distributing cooperative earnings; and (d) providing a variety of services for members.⁸ Table 7 lists services provided by cooperatives in this study.

The first three services constitute the cooperative's bargaining activities. The other services are aimed at expanding the demand for dairy products, at increasing members' production efficiency, at providing items used in milk production at a discount or at helping members in other ways.

COOPERATIVE OBJECTIVES

Information was collected from each cooperative manager on the objectives of his cooperative and the relative importance of each objective. From discussions with managers and with dairy marketing extension workers, a list of seven objectives was developed. Each

⁸ The maintenance of membership support and its relation to bargaining power is discussed in: Ladd, op. cit.

manager was given the list and asked to rank the objectives in order of importance to his own cooperative, assigning number one to the most important, number two to the second most important, etc. These objectives, with their ranking by each of nine different managers, are recorded in table 8 (one cooperative manager did not respond to this questionnaire). The fractions indicate ties. For example, cooperative 3 considered objectives 2 and 7 of equal importance and considered them more important (ranked them higher) than any of the other objectives. The last column of table 8 presents the pooled average rank for each objective.

Some of these objectives are interrelated. Objectives 4 and 5 both represent a desire of the cooperative to increase its size. The low ranks assigned objective 5 may be related to the high ranks assigned objectives 1, 2 and 3. The attainment of these latter three objectives may be more difficult if procurement area is enlarged. For example, if the cooperative enlarges its procurement area, its Class I utilization ratio will fall unless it finds a market for more Class I milk. There was also a tend-

Table 7. Services provided to members by the cooperatives studied.

Service provided to members	Number of cooperatives
Bargaining for the price of milk	10
Bargaining for a service charge premium	10
Bargaining for a bulk tank premium	9
Conduct quality improvement work for use by members	10
Conduct quality education programs for members	10
Conduct quality control and inspection programs	10
Test and weigh milk	9
Help members achieve production efficiency	7
Stock and distribute milk production supplies	10
Assemble market information for use by members	9
Pick up and deliver milk	6
Provide insurance policies for members	8
Provide credit for members	6
Acquire and maintain facilities for handling surplus milk	9
Engage in local promotional programs	10
Contribute to the promotional programs of the American Dairy Association	8

Table 8. Importance of various objectives to nine dairy bargaining cooperatives studied.^a

	Rankings by cooperatives numbered 1-9 ^b									Pooled average ranking
	1	2	3	4	5	6	7	8	9	
1—Negotiating a price that will give members the highest possible net return for milk	1	3	5	4	2.5	2.5	1	5	1	2
2—Maintaining a market for members' milk	2	1	1.5	1	2.5	1	2	3	2	1
3—Maintaining past highest percentage of Class I sales	5	2	3	3	2.5	4	3	4	4	3
4—Securing 100-percent control of milk produced in procurement area	4	4	4	6	5	7	6	1	6.5	5
5—Increasing the size of procurement area	7	7	7	7	7	6	7	7	6.5	7
6—Negotiating for the estimated value of services performed for handlers	3	6	6	5	6	5	5	6	3	6
7—Maintaining good relations with handlers	6	5	1.5	2	2.5	2.5	4	2	5	4

^a Cooperatives are numbered differently here than in table 2.

^b Tied rankings are each assigned the average of the ranks they would have been assigned had no ties occurred.

ency for cooperatives ranking objective 1 relatively high to rank objective 7 relatively high.

Each cooperative's rankings are also related to various factors peculiar to the individual cooperative. Cooperatives selling a high proportion of their 1963 volume to Class I outlets tended to rank the objectives similarly; cooperatives selling small proportions to Class I outlets also tended to rank the objectives similarly. Cooperatives who received relatively large Class I premiums in 1963 tended to rank the objectives similarly; but they ranked them differently from cooperatives who received small premiums. Cooperatives owning processing plants large enough to process much of their own milk ranked the objectives differently from cooperatives with relatively small or no processing facilities.

The three cooperatives whose managers assigned the first objective the highest rank had sufficient processing facilities to handle 60 percent or more of their entire milk volume. Thus, these three cooperatives would be assured of an outlet for most of their milk if they decided to withhold milk from handlers. The remaining six cooperatives either had no processing facilities or had facilities that could handle a smaller percentage of the cooperative's total volume. Managers of cooperatives close to Eau Claire, Wisconsin, (which is near the heart of the surplus grade A milk production region) generally ranked objective 1 lower than did managers distant from Eau Claire.

Cooperatives selling large proportions of their milk for Class I use ranked objectives 2 and 3 relatively high. Managers of cooperatives located in markets where the average handler is relatively large tended to rank objective 2 relatively low and objective 4 relatively high. If a large proportion of the cooperative's milk could be easily replaced from alternative sources, the manager ranked objective 4 relatively low. Managers in markets with large handlers ranked objective 6 lower than managers in markets with smaller handlers. On the average, objective 7 was ranked high if milk was easily available from alternative sources and was ranked low if either (a) a large number of handlers bargained with the cooperative in 1963 or (b) the cooperative could have processed much of its milk in its own processing plant.

MEANS OF SECURING BARGAINING GAINS

Recognition

Before an organization can effectively represent its members in bargaining with handlers, the handlers must recognize that the organization is the sole marketing agent for members' milk. An obvious measure of the organization's effectiveness in securing this recognition is the proportion of handlers who will bargain with the cooperative.

Each cooperative manager was asked: Of those processors and distributors with whom you attempted to bargain in 1963, how many would and how many would not bargain with you?

The percentage of the handlers who would bargain

with each cooperative is related to the average annual volume of milk processed per handler. This relation is shown in table 9. The average proportion of handlers willing to bargain is greater in markets with large handlers than in markets with small handlers. The table represents an average relation. For example, there are markets in which the average annual volume per handler is 8 million pounds and all handlers will bargain with the cooperative, and there are markets in which the average annual volume per handler is 8 million pounds and less than 90 percent of the handlers will bargain. On the average, in markets where the average annual volume per handler is 8 million pounds, about 90 percent of the handlers will bargain with the cooperative.

It is advantageous for a cooperative to control as much of the milk in its procurement area as possible to eliminate one alternative source of supply to handlers— independent producers. In addition, as exemplified by the Chicago and Detroit cooperatives, if the cooperative has a large volume, there may be insufficient surplus milk available from alternative sources to replace its milk. Then, all the cooperative's handlers could not get milk from an alternative source.

Cooperatives may benefit from economies of large-scale operations just as can processing firms; e.g., the average costs of office operations and route pickup and milk delivery may be lower for larger dairy cooperatives than for smaller ones. The 1963 annual operating costs per hundredweight of milk handled for six of the cooperatives studied, exclusive of pickup, delivery and processing costs, ranged from 3.06 to 6.00 cents. Analysis indicated that operating costs per hundredweight declined, on the average, by about 1 cent for every 1-billion-pound increase in annual cooperative volume. It takes a large increase in milk volume to have any appreciable effect on average cost.

Mergers and Federations

One way for a dairy cooperative to increase its volume is to sign up more producers in its procurement area—either independent producers or members of another cooperative. There are limitations to this type of

Table 9. Average relation between average annual volume of handlers served by a cooperative in a market and proportion of handlers in that market willing to bargain.

Av. annual volume of handlers served by cooperative	Percentage of handlers who would bargain with cooperative
(millions of pounds)	
1.....	28
2.....	55
3.....	69
4.....	77
5.....	82
6.....	86
7.....	89
8.....	91
9.....	92
10.....	94

activity, however. It may lead to poor relationships with other cooperatives; also, adding more members and increasing volume without increasing the number of fluid-milk outlets will result in a lower Class I utilization ratio and a lower net price to members. There was no evidence suggesting that any of the cooperatives studied do attempt to secure the members of other cooperatives. Most of them do, however, attempt to sign up independent producers.

Another method of increasing volume is by merger. Since individual cooperatives lose their previous identity and autonomy in a merger by combining membership, volume and resources and by sharing outlets for milk, both of the limitations mentioned for signing up independent producers or members of other cooperatives can be eliminated through a merger. There are, of course, problems that have to be worked out to eliminate or reduce conflict within the new organization (e.g., how many members shall each cooperative contribute to the board of directors, who shall pay the burden of the previous cooperatives' debts and how shall milk be pooled).⁹ There has been a number of dairy cooperative mergers in recent years. Several cooperatives visited in this study have recently been involved in mergers.

A cooperative federation, in contrast to a merger, involves a uniting of two or more cooperatives so that each of the participating cooperatives retains its local autonomy and identity. Thus, the problems of consolidating two or more cooperatives into one are eliminated. Competition among member cooperatives is still possible, however, even though one of the objectives of a federation is to coordinate the activities of all cooperatives in the group. Maintaining loyalty to the federation among member cooperatives may become difficult. A decision that is desirable from the standpoint of all farmers involved in the federation may not be desirable to the members of one or more individual cooperatives. Pooling arrangements are a problem to be worked out by the individual cooperatives in the federation.

Two different types of federations may be formed. One is the regional federation exemplified by: (a) United Dairy Producers Cooperative, organized in 1960 and consisting of the Des Moines, Cedar Rapids, Waterloo and Moline cooperatives; (b) Central Southwest Regional Stock Cooperative, organized in 1964 and consisting of the Omaha cooperative, the Denver Milk Producers Association, the Southwest Milk Producers Association in Wichita, the Central West Texas Milk Producers Association in Abilene and the Dairy Farmers Cooperative Association in Albuquerque; and (c) the Great Lakes Milk Marketing Federation, organized in 1960 and consisting of the Detroit cooperative, Northwest Cooperative Sales in Toledo, the Cleveland Milk Producers Federation, the Dairymen's Cooperative Sales Association in Pittsburgh, the Akron Milk Producers

Association and the Wayne Cooperative Milk Producers in Fort Wayne.

Federations such as these perform several valuable functions: (a) They can eliminate duplication of routes and capitalize on economies of large size in farm-to-market milk hauling when procurement areas overlap. (b) They may operate a central sales agency to coordinate off-the-market sales. (c) They can work to establish reasonable or proper price relationships between markets regulated by separate federal orders. (d) They may bargain jointly with several or all bottling plants of a regional or national firm to replace a situation in which each cooperative bargains with one or two plants of that firm. (e) They can coordinate the movement of Class II milk between markets served by member cooperatives. (f) They can undertake joint bargaining efforts to replace the individual bargaining efforts of member cooperatives. Successful performance of these functions increases the bargaining effectiveness of the cooperatives in the organization.

Additional advantages of a federation as listed by managers were: (a) It allows the people from one cooperative to become better acquainted with the people from other cooperatives and with their specific problems. (b) It allows the trading of valuable information concerning the operations in nearby markets and the influence of these operations on one's own market and bargaining ability. (c) It allows the exchange of valuable information on conditions in the industry in general. (d) It eliminates the problem of inheriting extra surplus milk as a result of a merger.

The disadvantage mentioned by all managers who had been involved in federations was the difficulty of reconciling differences of opinion among members of different cooperatives in the federation; i.e., what is good for the federation members as a whole is not necessarily equally good for the members of each cooperative. Personal problems between officials of different cooperatives in the federation are difficult to avoid and may become a threat to the effectiveness and existence of the federation.

A second type of federated activity is exemplified by superpools. These are strictly joint bargaining efforts among a number of local cooperatives, where the milk supply of all cooperatives is combined and the negotiated premium money is distributed to the members of these cooperatives on the basis of some predetermined pooling system. One superpool, in the Chicago market, contains the Pure Milk Association along with 23 other cooperatives. A second superpool, in southern Michigan, contains the Michigan Milk Producers Association along with eight other cooperatives. The characteristics and problems of these two superpools are similar to those of the federations previously discussed. The difference is primarily in the emphasis placed on joint bargaining and in the area covered.

Federations do not increase the volume of any cooperative involved. Nevertheless, they allow joint control over a larger volume of milk than the volume of any

⁹ Pooling refers to the procedures used to combine receipts from sales of milk to various handlers and processors, to determine the amount to be paid each cooperative for its services to members and to determine the price each farmer will receive.

one cooperative in the federation. For example, all cooperatives in the Chicago area bargain jointly with handlers, and if this group of cooperatives decided to withhold milk from a handler, the handler would have to go outside the local market to get milk unless local independent producers could provide enough milk to meet his needs. If the superpool were not in operation and one cooperative decided to withhold its milk from a handler, this handler could turn to other cooperatives in the Chicago market for milk.

Type I Bargaining Power

Type I bargaining power was defined as bargaining power stemming from advantages that can be offered to the opponent in return for accepting one's terms. Dairy bargaining cooperatives exercise this power through the performance of various services of benefit to milk dealers. One of the reasons dairy bargaining cooperatives are able to negotiate a price for members' milk in excess of the federal-order minimum price is the various services they offer to milk dealers. Table 10 contains a list of the services offered to dealers by each cooperative studied.

If a cooperative performs the service of producer check writing, a handler needs to write only one check, payable to the cooperative. The cooperative then writes checks to the individual members to pay them for their milk. If the cooperative does not perform this service, the handler must write the checks to each individual member.

Until recently grade A milk producers handled their milk in 10-gallon cans. If all producers serving a handler cool their milk in bulk tanks, the handler can reduce his costs of receiving milk. When a cooperative shifts to bulk handling of milk and helps members to shift, it performs a useful service for the handler.

Most managers believed that the cooperative's ability to full-supply handlers was the most important service they could offer. In full-supplying a handler, the cooperative agrees to provide exactly that quantity of milk needed by the handler. If assured of a full supply of milk, the handler bottling milk only 5 days per week

does not have to incur the costs of handling and storing milk received from producers the other 2 days of the week. Further, the handler need not worry about running short of milk any day since day-to-day variations in the handler's milk supply are eliminated. (The cooperative agrees to find an outlet for any excess milk and to find an extra supply if the handler's needs cannot be met with member milk.) A cooperative with a full-supply contract diverts milk of those producers who normally supply a handler from that handler's bottling plant to a processing plant if the handler does not need the milk. This saves the handler the cost of disposing of unneeded milk.

Every cooperative indicated that it full-supplied handlers; however, there were no legal instruments used in connection with this service.

The value of the services listed in table 10 for each cooperative is the manager's estimate of the average value of the services provided handlers. Five of the cooperatives negotiate a premium on Class I milk equal to the estimated value of the services they provide handlers.

The variation in the values of service may be due to several things. Different handlers do not place the same value on a given service. For example, two different handlers may realize quite different advantages from a full-supply arrangement, and different firms might realize different savings by converting from can to bulk handling of milk.

If there were no advantages other than price to purchasing milk locally, it seems reasonable to expect that a handler would purchase milk from an alternative source if he could get it at a lower price. Thus, if the price a handler pays the local cooperative exceeds the price he would have to pay to get milk from an alternative source, we take this excess to represent the value to handlers of obtaining milk from the local cooperative.

To determine the extent of this excess for each cooperative studied, we take Eau Claire, Wisconsin, to be the region of heavy surplus grade A production and the alternative source of milk for the handlers of these cooperatives. After deducting from the average annual

Table 10. Services offered handlers by dairy bargaining cooperatives interviewed.

Service offered	Cooperative ^a									
	1	2	3	4	5	6	7	8	9	10
Producer check writing	X	X	X	X	X	X	X		X	X
Bulk handling of milk	X	X	X	X	X	X	X	X	X	X
Maintaining high-quality milk	X	X	X	X	X	X	X	X		X
Product standardization			X		X	X		X		
Full-supply contracts	X	X	X	X	X	X	X	X	X	X
Wash handlers' tanks					X					
Diversion of milk other than Class I to:										
Own processing plant	X	X	X				X		X	X
Other processing plants		X	X	X	X	X	X	X		X
Pick up milk of producers supplying plants acquired by handlers			X							
Value of services offered ^b (cents per hundredweight)	34	17½	20	12½	29	7½	7	7½	30	10

^a Cooperative numbers correspond to the cooperative numbers shown in table 8.

^b Estimated by the respective cooperative managers.

dealer's buying price for fluid milk in a given market (a) the average annual dealer's buying price for fluid milk in Eau Claire and (b) the cost of transporting milk from Eau Claire to the given market, we arrive at the data presented in table 11.¹⁰ These data, then, are estimates of the value to handlers of securing milk from the local cooperative in preference to securing milk from Eau Claire sources. In only one case was the value to handlers of securing milk from the local cooperative, as calculated in table 11, lower than the cooperative's estimate of the value of services offered these handlers. For one cooperative, the value recorded in table 11 exceeded the cooperative's estimate of the value of services provided handlers by more than 20 cents per hundredweight.

The variation in the figures in table 11 indicates that handlers secure milk from the local source for other reasons than merely to obtain the benefit of the services provided by the local cooperative or the cooperatives studied underestimate the value of the services they provide handlers or both.

Values were computed for several additional markets in Michigan. These are also shown in table 11. The values in table 11 average higher for markets located a distance from the surplus production region than for markets located near to this region.

There are other reasons for the differences among the figures in table 11: (a) Sanitary requirements for milk production are not universally the same, and a price adjustment may be necessary in some markets to reflect the different costs associated with meeting these different requirements. (b) The transportation cost function used in this analysis is only an average relation. Transportation rates are a subject for bargaining just as are milk prices. (c) Some handlers may be willing to pay a higher price for locally produced milk for local consumption—for advertising purposes. And some handlers may be willing to pay a higher price for locally produced milk because a local cooperative is a more dependable source of supply in bad weather. (d) Some cooperatives have such a large volume that their milk could not be replaced from alternative sources either at the same or at a lower price. Hence, handlers in markets served by these large cooperatives may be more willing to pay a higher price than are handlers in other markets.

Type II Bargaining Power

Type II bargaining power consists of the bargainer's ability to enforce unfavorable consequences upon the opponent if he refuses to accept the stated terms. A cooperative may be able to exercise type II power by withholding milk from bottlers. Whether a cooperative can, in fact, subject handlers to losses by withholding milk depends upon the availability of alternative supplies of milk for the handlers. The only cooperatives studied that are in a position to subject handlers to

Table 11. Estimated average annual value to handlers of obtaining milk from the local cooperative, 1963.^a

Market	Cents per hundredweight ^b
Burlington, Iowa	23.0
Waterloo, Iowa	18.5
Cedar Rapids, Iowa	12.5
Des Moines, Iowa	27.0
Omaha, Nebraska	31.0
Moline, Illinois	13.0
Mason City, Iowa	24.5
Sioux City, Iowa	46.0
Chicago, Illinois	22.0
Detroit, Michigan	42.0
Kalamazoo, Michigan	45.0
Muskegon, Michigan	38.0
Traverse City, Michigan	34.0
Marquette, Michigan	10.0
Sault Sainte Marie, Michigan	12.0

^a Source: U. S. Dept. Agr. Federal milk order market statistics, annual summary for 1963. U. S. Dept. Agr. Stat. Bul. 345. 1964.

^b Computed by deducting from the average 1963 dealer's buying price in market indicated the sum of (a) average annual dealer's buying price for fluid milk in Eau Claire and (b) cost of transportation from Eau Claire to indicated market.

losses by withholding milk are cooperatives in the Chicago and Detroit markets.

Even if a cooperative is large, it may not be able to exercise type II power. Whether it can or not depends upon various internal and external factors.¹¹ Two of these factors are members' attitudes toward a milk strike and possible cost of the strike.

Attitude toward striking

Most of the cooperatives studied showed little interest in calling a milk strike under 1963-64 conditions. Seven of the 10 managers said that they would not call a milk strike under 1963-64 conditions to obtain a higher milk price. Three of these seven indicated that they would withhold milk from handlers only if one or more handlers became so antagonistic toward the cooperative that the cooperative preferred not to conduct any business with them. The principal reason given by these seven managers for not calling a strike was that there is too much surplus milk available. Each manager expressed fear that his cooperative would permanently lose an outlet for its milk.

In 1961, for example, one cooperative withheld milk from a handler who was taking nearly 60 percent of the cooperative's Class I milk. During some months of 1964 this same handler was taking less than 5 percent of the cooperative's Class I milk—the bulk of the handler's milk coming from independent producers. In 1952, a cooperative not covered in this study withheld milk from one handler. It is reported that this handler now obtains at least half of its milk from independent producers. Thus, the attempted strikes not only failed to achieve their objectives, but also encouraged the handlers to line up a permanent alternative source of milk.

¹⁰ The same transportation cost function used in table 4 is assumed to hold here.

¹¹ These factors are discussed in: Ladd, op. cit.

Other reasons given for not calling a milk strike were: (a) the cooperative and handlers have already agreed upon reasonable prices through the federal order, (b) a strike could bring on a lawsuit and (c) it is against the cooperative's belief to call a milk strike.

All seven cooperatives expressing reluctance at calling a milk strike were relatively small. The total volume of each could easily be replaced by alternative sources of milk in Wisconsin and Minnesota. Two of the three cooperatives who would call a milk strike—Chicago and Detroit—had volumes in 1963 of nearly 3 billion pounds—a volume that could not easily be replaced, as we have seen before. The three cooperatives who would call a milk strike under 1963-64 conditions had an outlet for much or all of their milk supply in their own processing plants. The other seven cooperatives could process little or none of their milk in their own processing plants.

Two of the three cooperative managers indicating that they would call a milk strike under 1963-64 conditions said they would prefer withholding milk from one or a few handlers to withholding from all handlers. One reason was that the cooperative might then use the whipsaw technique in negotiations. Gains acquired from one handler or a small group of handlers could be used as leverage in negotiations with other handlers. There was some reluctance to withhold milk from all handlers, because it would more than likely have to be diverted to lower-priced uses. (All managers interviewed believed that members would not consent to dumping milk.) One manager, however, indicated a preference for withholding milk from all handlers, since it would be more difficult for all handlers to obtain all the milk they need from alternative sources of milk than it would be for just one handler to obtain all the milk he needs from an alternative source.

Two important factors, then, determining whether or not a cooperative will strike are: (a) where the alternative sources of milk are located, the cost to handlers of securing this milk and the probability that the cooperative's handlers will be able to secure sufficient milk from these sources to replace the milk being withheld and (b) what the cooperative would do with its members' milk. Other factors suggested by the managers included: (a) whether the handler is a small independent firm or a national chain; (b) whether the resulting public reaction, if any, would be favorable or unfavorable to the cooperative, whether there might be pressure from newspaper editorials and city officials and what legal repercussions are likely to result; (c) whether the economic conditions justify the cooperative's demand; and (d) whether members will back the strike attempt. In determining how long the cooperative would withhold milk, the managers indicated that they would have to consider the expected public and legislative reaction, expectations of success or failure, availability of alternative sources of milk and member support.

Cost of a strike

Member support depends on the expected losses and the length of time necessary to recover the strike losses.

Table 12. Cooperative's total and Class I volume per week during each month and amount by which total revenue from the sale of Class I milk at negotiated premiums of 3 and 5 cents exceeds total revenue from the sale of Class I milk at the federal-order minimum price.*

Month	Total volume per week cwt.	Class I volume per week cwt.	Additional revenue per week from the sale of Class I milk at negotiated premiums of:	
			3 cents	5 cents
June	112,500	73,125	\$2,193.75	\$3,656.25
July	106,250	74,380	2,231.40	3,719.00
August	100,000	77,000	2,310.00	3,850.00
September	101,250	85,050	2,551.50	4,252.50
October	108,750	94,610	2,838.30	4,730.50
November	111,250	91,230	2,736.30	4,561.50
December	112,500	90,000	2,700.00	4,500.00
January	111,550	90,360	2,710.80	4,518.50
February	102,500	79,950	2,398.50	3,997.50
March	112,500	87,750	2,632.50	4,387.50
April	108,750	82,650	2,479.50	4,132.50
May	125,000	86,250	2,587.50	4,312.50

* The cooperative's annual total and Class I volume was allocated to each month on the basis of the actual monthly total and Class I volume distribution for the Des Moines federal order between June 1962 and May 1963.

Losses and recovery time vary from case to case.

As an example, let us look at a cooperative that has an annual volume of 525 million pounds of 3.5-percent grade A milk located in a federal-order market. Also, suppose that

- the cooperative's average weekly June volume is 11,250,000 pounds of 3.5-percent milk,
- its June Class I utilization percentage is 65,
- the June federal-order prices are \$3.96 and \$3.02 per hundredweight for 3.5-percent Class I and II milk, respectively, and
- total and Class I volumes for the remaining 11 months are as shown in table 12.

Cooperative gross income in June would be \$408,487.50 per week, as shown in the top three lines of table 13.

If this cooperative called a milk strike on all its handlers throughout the first week in June and could find a Class I outlet for only 6.5 percent of its milk at a net price of \$3.96 per hundredweight, with the remainder going into Class II outlets at \$3.02 per hundredweight, the top three lines of table 14 show that the cooperative's gross income in that week would be reduced by \$61,863.75. Table 12 shows that the cooperative would have recovered this amount by the end of the 16th week after the strike if a 5-cent per hundredweight premium on Class I milk were negotiated and by the end of the 25th week if only a 3-cent premium on Class I milk were negotiated. If the strike lasted 2 weeks, 29 weeks would be required to recover the lost gross income with a 5-cent negotiated premium and 49 weeks with a 3-cent premium.

Now, assume that as a result of a 1-week strike 10 percent of the cooperative's Class I sales has been permanently lost; i.e., weekly Class I volumes are 10 percent less than the weekly Class I volumes listed in table 12.

Under these conditions, the cooperative would have had to negotiate a premium of 10.4 cents per hundredweight during June on Class I milk to maintain the weekly gross income of \$408,487.50. Depending on the class prices in future months, this premium may be insufficient to maintain this weekly income. Furthermore, it will not allow the cooperative to recover any of the income lost during the strike.

This time, assume that the cooperative also owns a butter-powder processing plant with a weekly capacity of 87,500 hundredweight of 3.5-percent milk. Suppose it costs the cooperative an average of 58.5 cents to process one hundredweight of milk into butter and powder when processing 39,375 hundredweight of milk per week and it costs only 42 cents to process one hundredweight of milk into butter and powder when operating at capacity. Suppose the plant produces 1.125 pounds of butter per pound of butterfat and 8.6 pounds of nonfat dry milk per hundredweight of skim milk.¹² Combining these conditions, the total returns to be distributed to members for the first week in June are \$412,836.45 (see table 13). Class II milk sales are included in total revenue from the sale of milk, since members would receive this revenue even if the cooperative did not process surplus milk. Thus, it must also be included as a cost to the processing plant.

Now if this cooperative called a milk strike and could find a Class I outlet for only 6.5 percent of its milk at a price of \$3.96, with the remaining volume going to its processing plant and to other Class II outlets, the total cooperative returns distributed to members for the first week in June are computed in table 14.

The strike in this case would result in a reduction in the cooperative's net income per week of \$42,110.86. From the data in table 12, we find that the cooperative would have recovered the \$42,110.86 by the end of the 12th week if a 5-cent premium on Class I milk were negotiated and by the end of the 17th week if only a 3-cent premium on Class I milk were negotiated. If the strike lasted 2 weeks, 20 weeks would be required to recover the lost net income when a 5-cent premium was negotiated and 34 weeks with a 3-cent premium.

These results emphasize the possible cost of a strike. The cost is likely to be lower for members of a cooperative that has its own processing facilities than one that does not have these facilities. For example, if the strike lasts 1 week, in our hypothetical cases, the cooperative without processing facilities would incur a loss in income from the sale of milk of nearly 55 cents per hundredweight, while the cooperative with processing facilities would incur a loss in net income of 37 cents per hundredweight.

These losses are substantial and may not be recovered before 6 months have elapsed, even if the cooperative is successful in negotiating a premium with handlers. If members lack the financial resources to

withstand such losses, they are not likely to support the strike effort, and the cooperative may never recover the losses.

If the milk strike occurred during some other month having different total and Class I volumes, the milk strike losses and the time required to recover the strike losses would be different. If the strike occurred during a period of relatively low Class I volume, the strike losses would be less. If the strike were followed by a period of rising or high Class I volume, less time would be required to recover the strike losses than if the strike

Table 13. Calculation of member returns for first week of June if no strike were called.

Class I sales 73,125 cwt. @ \$3.96	\$289,575.00
Class II sales 39,375 cwt. @ \$3.02	118,912.50
TOTAL REVENUE FROM THE SALE OF MILK	\$408,487.50
BUTTER-POWDER PLANT OPERATIONS	
Butter sales	
@ 58c per pound	\$ 97,116.47
Dry milk sales	
@ 15.05c per pound	49,179.36
TOTAL REVENUE FROM PLANT SALES	\$146,295.83
Cost of raw milk	
39,375 cwt. @ \$3.02	\$118,912.50
Cost of processing	23,034.38
PROCESSING PLANT COSTS	\$141,946.88
PROFIT FROM PLANT OPERATIONS	4,348.95
RETURNS TO BE DISTRIBUTED TO MEMBERS	\$412,836.45

Table 14. Calculation of member returns for first week of June if a strike were called.

Class I sales 7,312.5 cwt. @ \$3.96	\$ 28,957.50
Class II sales 105,187.5 cwt. @ \$3.02	317,666.25
TOTAL REVENUE FROM THE SALE OF MILK	\$346,623.75
BUTTER-POWDER PLANT OPERATIONS	
Butter sales	
@ 58c per pound	\$215,814.38
Dry milk sales	
@ 15.05c per pound	109,287.46
TOTAL REVENUE FROM PLANT SALES	\$325,101.84
Cost of raw milk	
87,500 cwt. @ \$3.02	\$264,250.00
Cost of processing	36,750.00
PROCESSING PLANT COSTS	\$301,000.00
PROFIT FROM PLANT OPERATIONS	24,101.84
RETURNS TO BE DISTRIBUTED TO MEMBERS	\$370,725.59

¹² These average cost figures and these product yields are typical of well-managed butter-powder plants.

were followed by a period of falling or low Class I volume.

CONCLUSIONS

In this study the most important factor affecting a cooperative's bargaining power was the volume of milk the cooperative normally supplied to bottlers in relation to the amount bottlers could obtain from alternative sources. Of the markets studied, the two in which the cooperatives' members receive the largest premiums are the only two in which bottlers would find it virtually impossible to obtain sufficient milk from other sources if cooperatives normally serving these markets withheld their milk. For the other markets studied, if the local cooperative withheld its milk from the market, bottlers could obtain grade A milk from other sources. A large cooperative (or a large organization of several cooperatives) serving a large market, therefore, has greater bargaining power than a smaller organization serving a smaller market. Also, a large organization serving a large market has more bargaining power than several smaller cooperatives serving that same market, unless the smaller cooperatives work closely together.

The extent to which two or more dairy cooperatives are willing to cooperate with one another in adopting mutually beneficial policies can have a significant effect on their bargaining ability. By working together to keep prices in close alignment and by jointly agreeing not to ship milk into another market in which a cooperative is attempting to negotiate a higher price by withholding milk, each cooperative may be able to negotiate higher prices. Thus, the members of all cooperatives may benefit.

Adoption of such advantageous strategies, however, seems hindered by (a) each cooperative's fear that neighboring cooperatives will not adopt the same strategies, (b) each cooperative's desire to become larger, (c) each cooperative's ignorance of the advantages of such cooperation and (d) each cooperative's felt need to serve its own members.

Cooperation among cooperatives can be assured by a merger, since each cooperative involved in the merger

loses its previous identity and falls under the same management. A federation will not necessarily result in the cooperation required; nevertheless, it does provide the type of atmosphere where cooperatives can become more aware of the merits of cooperation. A merger reduces the number of alternative sources of milk to the cooperatives' handlers and thus, contributes to dairy farmers' bargaining power. Through closer coordination of the activities of several dairy cooperatives by joint bargaining programs or by various oral agreements among the cooperatives concerned, a federation attempts to enhance bargaining power.

The willingness of a dairy bargaining cooperative to withhold milk from handlers is greater the smaller the percentage of the cooperative's volume that can be replaced from alternative sources and the larger the cooperative's capacity to process milk. Other factors to consider before a milk strike is called may include (a) the number of handlers from which to withhold milk, (b) the characteristics of these handlers, (c) the effect of resulting public reaction, if any, (d) whether economic conditions justify the cooperatives' demands and (e) whether members will back the strike attempt.

A cooperative's bargaining ability is also affected by the number and kind of services it performs for bottlers. When a cooperative can perform some services for bottlers at a lower cost than the bottler's cost of performing these services for themselves the cooperative can bargain for a premium that increases net returns to members.

To maintain membership support and hence milk volume, dairy bargaining cooperatives rely on membership meetings, personal contacts with members and the provision of various member services in addition to bargaining for the price of milk.

Variation among cooperatives in the importance attached to various objectives is due, in part, to differences in the characteristics of the individual cooperatives and of their markets. As market or cooperative characteristics change, the cooperatives' members and boards of directors may wish to change their objectives or to change the relative importance of various objectives. This, in turn, may make it desirable to choose different methods of attaining their objectives.

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