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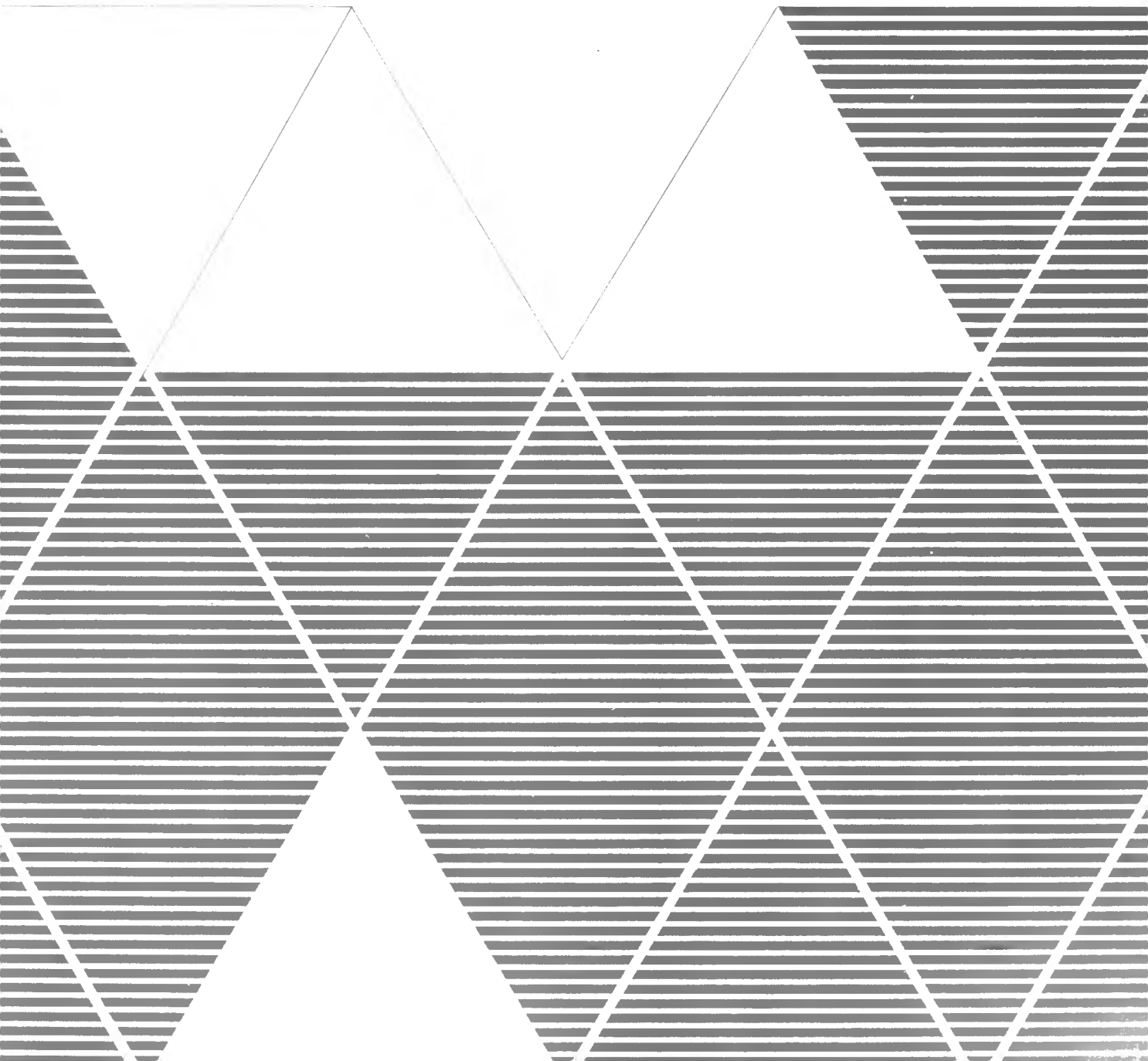
Services of Dairy Marketing Cooperatives in the North Central Region

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North Central Regional Research Publication No. 266
Illinois Bulletin 771

Agricultural Experiment Station
College of Agriculture
University of Illinois at Urbana-Champaign



ABSTRACT

Surveys of managers (1973) and of a sample of producers (1976) provided information about and evaluations of services performed by 40 fluid-milk marketing cooperatives with headquarters in the north central region. Analysis was by both type and size of cooperative. Information obtained included identification of services provided at both farm and market levels, their estimated costs, managerial and member evaluations of their importance, extent of producer knowledge about them, management and member reactions to services-related statements and issues, and relations to membership problems.

Keywords: Services, dairy cooperatives, north central region, survey, marketing

Services of Dairy Marketing Cooperatives in the North Central Region

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Agricultural Experiment Stations of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin, and the U.S. Department of Agriculture, cooperating.



North Central Regional Research Publication No. 266
Illinois Bulletin 771
March, 1981

The participating agricultural experiment stations provide equal opportunities in programs and employment.

Sponsored by the Agricultural Experiment Stations of Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Ohio, and Wisconsin and by the Economic Research Service (ERS) and the Cooperative State Research Service (CSRS), U.S. Department of Agriculture.

This report is based on a study carried out by North Central Regional Committee 101 on Alternative Solutions to New Problems of Dairy Marketing Cooperatives. Members of the committee were:

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This report is based on chapters 3 and 4 of a Ph.D. dissertation entitled "U.S. Dairy Cooperative Service Behavior: An Overview of the North Central Region and a Case Study of the Chicago Market," submitted by Ronald E. Deiter to the University of Illinois at Urbana-Champaign in 1979.

The committee and the authors are deeply indebted to the cooperatives' managers and members whose participation made this study possible.

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CONTENTS

Cooperatives Included in the Survey.....	1
Type and size classification.....	1
Milk receipts.....	2
Producers surveyed.....	3
Cooperative Services.....	3
Farm level services.....	4
Market level services.....	5
Summary: numbers of farm and market level services.....	6
Cost of Services.....	6
Sources of funds.....	6
Average costs.....	6
Ideal level of costs.....	7
Variation in costs.....	7
Costs per service.....	8
Changes in costs.....	9
Importance of Services.....	9
Farm level services.....	9
Market level services.....	10
Member Awareness of Services.....	12
Correct perceptions.....	12
Incorrect perceptions.....	13
Lack of opinions.....	13
Satisfaction with services.....	13
Implications.....	14
Assessments of Services-Related Issues.....	14
Opinions on statements related to services.....	14
Service charge policies.....	17
Additional services that could be provided.....	17
Sensitive legal issues.....	18
Effects of selected services.....	18
Member vs. nonmember blend prices.....	18
Reasons members join or quit.....	19
Equitable sharing of market service costs.....	19
Summary and Conclusions.....	19
Summary.....	19
Conclusions.....	22

TABLES

1.	Number of Cooperatives by Type and Size, 40 Dairy Marketing Cooperatives, North Central Region, 1973.	2
2.	Milk Receipts by Type and Size of Cooperative, 40 Dairy Marketing Cooperatives, North Central Region, 1973.	2
3.	Disposition of Milk, 40 Dairy Marketing Cooperatives, North Central Region, 1973.	2
4.	Members Surveyed by Type and Size of Cooperative, Dairy Marketing Cooperatives, North Central Region, 1976.	3
5.	Extent to which Various Farm Level Services Were Provided, 40 Dairy Marketing Cooperatives, North Central Region, 1973.	4
6.	Extent to which Various Market Level Services Were Provided, 40 Dairy Marketing Cooperatives, North Central Region, 1973.	5
7.	Average Number of Farm and Market Level Services Provided, 40 Dairy Marketing Cooperatives, North Central Region, 1973.	6
8.	Estimated Average Costs of Providing Services, by Type and by Source of Funds, Dairy Marketing Cooperatives, North Central Region, 1973.	7
9.	Average Cost Per Service, by Type, for Market Level, Farm Level, and All Services, 31 Dairy Marketing Cooperatives, North Central Region, 1973.	8
10.	Average Cost of Providing Some Individual Farm Level Services, 31 Dairy Marketing Cooperatives, North Central Region, 1973.	8
11.	Selected Price Indexes.	9
12.	Average Ratings of Importance to Producers of Farm Level Services as Evaluated by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region.	10
13.	Average Ratings of Importance to Farmers, Handlers, and Consumers of Market Level Services as Evaluated by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region.	11
14.	Members' Knowledge about Services Provided by Dairy Marketing Cooperatives, North Central Region, 1976.	12
15.	Presumed Extent of Member Satisfaction with Services Provided by Dairy Marketing Cooperatives, North Central Region, 1976.	14
16.	Average Scores of Responses to, and Degrees of Consensus about, Statements on Services-related Issues by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region.	15-16

MILK PRODUCTION IS A MAJOR FARM ENTERPRISE in the north central region of the United States, particularly in its northern extremities. A large proportion of the milk produced in the region is marketed by farmers' cooperatives. That is especially true of fluid-grade milk.

The structure of fluid-milk marketing cooperatives has changed drastically during the past quarter century, with large regional cooperatives becoming dominant. The growth of these large cooperatives has been accompanied by the charging of over-order premiums and has led to allegations of monopolization and predatory practices in some situations. An impartial appraisal of the situation necessitates additional information about what milk marketing cooperatives do, and why, and an economic appraisal of the consequences.

Milk marketing cooperatives provide a wide variety of services, including some formerly performed by fluid-milk processors, that affect the operating efficiency of marketing. Many market level services have marketwide benefits, yet their costs are borne solely by members of the cooperatives that provide them. Part of the over-order premiums represents compensation for these services.

Thus, this study of cooperatives' services is a basic step in any assessment of the activities of fluid-milk marketing cooperatives or justification of their pricing practices. The major objectives of this report are:

1. To identify services provided by milk marketing cooperatives and to obtain an indication of their costs.
2. To obtain management and member evaluations of the importance of services, their opinions on services-related issues, and information about member awareness of services.
3. To relate differences in services, and in management and member evaluations of them, to the size and type of the cooperative.

COOPERATIVES INCLUDED IN SURVEY

Data were obtained from 40 cooperatives with headquarters in the north central region that were extensively involved in handling fluid-grade milk. These comprised nearly the entire population of such organizations. Their aggregate milk receipts in 1973, approximately 47 billion pounds, were about 40 percent of the nation's milk supply.

The 40 cooperatives had members in all states from the Great Plains to the Atlantic Coast (except New England and Florida) and in New Mexico. Their membership was concentrated in the upper Midwest, with 70 percent reporting members in Wisconsin, 30

percent in Indiana, 20 percent in Illinois, 17 percent in Michigan, and 10 percent each in Iowa and Minnesota.

The information was obtained in personal interviews by committee members of states participating in North Central Regional Research Project NC-101, "Alternative Solutions to New Problems of Dairy Marketing Cooperatives." Most of the data were for fiscal year 1973.

Type and Size Classification

Cooperatives were classified into three groups on the basis of the proportions of their milk they processed and the proportions they sold to other handlers. Cooperatives that processed less than 10 percent of their total receipts of milk — or sold more than 90 percent to other handlers — were classified as *bargaining* cooperatives. These cooperatives served primarily as bargaining agents for their producer members. Their main goal was to raise milk prices through group bargaining.

In contrast, *operating* cooperatives processed more than 90 percent of their milk in their own manufacturing facilities. The primary objective of these cooperatives was to make money on their manufacturing operations. They devoted little effort to bargaining with fluid-milk processors.

Slightly more than one-half of the cooperatives were extensively involved in both processing and bargaining. These cooperatives, that either processed in their own facilities or sold to other plants between 10 and 90 percent of their total receipts, were classified as *combination* cooperatives. These cooperatives commonly operated manufacturing facilities to enhance their bargaining activities (p. 5). Their facilities provided outlets for seasonal and other surplus milk, as well as for milk not contracted for sale to fluid-milk processors.

The 40 cooperatives in the study included 10 in the bargaining category, 9 operating, and 21 of the combination type (Table 1). These three types differed in character and in operating philosophy, and, thus, in some aspects of their service programs, though it was hypothesized that they behaved similarly in providing certain basic services. Consequently, this classification should aid in describing and explaining variability among cooperatives in their service programs.

The cooperatives of each type were grouped into five size categories on the basis of annual receipts of milk. The size categories were denoted as follows: 2 billion pounds or more, 500 million to 2 billion pounds, 200 million to 500 million pounds, 100 million to 200 million pounds, less than 100 million pounds. Presumably, cooperatives within a given size group have some

Table 1. Number of Cooperatives by Type and Size, 40 Dairy Marketing Cooperatives, North Central Region, 1973

Annual receipts of milk <i>million pounds</i>	Type of cooperative			All types
	Bargaining	Operating	Combination	
	<i>number of cooperatives</i>			
2,000 or more.....	1	0	5	6
500 to 2,000.....	2	1	5	8
200 to 500.....	3	2	4	9
100 to 200.....	2	0	6	8
Less than 100.....	2	6	1	9
Totals	10	9	21	40

comparable features and similarity in operations. Because cooperatives of different size may differ in their service programs, classifying cooperatives by size as well as by type should aid in describing and accounting for those differences.

Milk Receipts

The milk receipts of individual cooperatives ranged from less than 75 million to more than 15 billion pounds. The group of largest cooperatives, 15 percent of the total number, marketed 78 percent of all milk receipts of the 40 cooperatives (Table 2). Correspondingly, combination cooperatives, which were slightly

Table 2. Milk Receipts by Type and Size of Cooperative, 40 Dairy Marketing Cooperatives, North Central Region, 1973

Category of cooperative	Receipts of milk		Proportion of all receipts ^a
	Total	Average	
	<i>million pounds</i>		<i>percent</i>
Type			
Bargaining	5,057	506	10.7
Operating.....	1,691	188	3.5
Combination	40,718	1,939	85.8
Annual receipts (million pounds)			
2,000 or more.....	36,913	6,152	77.8
500 to 2,000.....	5,627	703	11.9
200 to 500.....	3,044	338	6.4
100 to 200.....	1,230	154	2.6
Less than 100.....	653	73	1.4
All cooperatives....	47,467	1,187	100.0

^a May not total exactly 100.0 because of rounding.

more than one-half of the total number of cooperatives, marketed 86 percent of the milk.

These cooperatives received 95 percent of their milk from producers; 83 percent of it was grade A milk. Practically all of the milk marketed by bargaining cooperatives was grade A. Approximately 20 percent of the milk handled by the other two types of cooperatives was manufacturing-grade milk. Most of that milk was made into cheese or butter and nonfat dry milk in the cooperatives' own plants.

The cooperatives in the study processed in their own facilities approximately one-third of the milk they received (Table 3). The percentage of the milk processed ranged from practically zero by bargaining cooperatives to 96 by operating cooperatives. Over 85 percent of the milk processed by these organizations was made into non-class I products, but nearly 90 percent of the milk sold to other handlers apparently was used in class I products.

Table 3. Disposition of Milk, 40 Dairy Marketing Cooperatives, North Central Region, 1973

Category of cooperative	Percentage of milk	
	Processed in own facilities	Sold to other handlers
Type		
Bargaining.....	1.1	98.9
Operating	94.7	5.3
Combination.....	35.2	64.8
Annual receipts (million pounds)		
2,000 or more.....	29.3	70.7
500 to 2,000.....	46.5	53.5
200 to 500.....	48.0	52.0
100 to 200.....	53.7	46.3
Less than 100.....	68.1	31.9
All cooperatives	33.7	66.3

Producers Surveyed

To determine producers' knowledge of and attitudes about services, questionnaires were mailed (in 1976) to 1,000 members of the cooperatives included in the study. The producer questionnaire was similar to the questionnaire used in personal interviews with cooperative management. However, the questionnaire used with producers omitted some questions asked cooperative managers, lest excessive length reduce the response rate.

In a disproportionate stratified sampling procedure, 200 members were selected for the survey from each of the five size groups of cooperatives. Within each size stratum, a proportionate stratified sampling procedure was followed, with the number of producers surveyed from each cooperative being proportional to its share of the total number of producers of all cooperatives of that size. Likewise, total numbers of grade A and grade B producers surveyed in each cooperative were proportional to total numbers of each grade in the cooperative. In each cooperative, specific producers were selected by randomly picking a producer from the first sampling interval and systematically taking each *k*th producer from each subsequent interval.

Usable schedules were received from 302 producers, a response rate of 30 percent. The response rate was higher among members of large than among those of small cooperatives; 66 percent of the producers that responded were members of combination cooperatives (Table 4).

The herds of the producers that responded averaged 48 cows, with average annual production of 551,784

Table 4. Members Surveyed by Type and Size of Cooperative, Dairy Marketing Cooperatives, North Central Region, 1976

Category of cooperative	Members who returned questionnaires	Proportion of total
Type	<i>number</i>	<i>percent*</i>
Bargaining	63	20.9
Operating	39	12.9
Combination	200	66.2
Annual receipts (million pounds)		
2,000 or more	66	21.9
500 to 2,000	82	27.2
200 to 500	55	18.2
100 to 200	63	20.9
Less than 100	36	11.9
All cooperatives	302	100.0

* May not total exactly 100.0 because of rounding.

pounds of milk. For 56 percent, the dairy enterprise was the source of 90 percent or more of total cash farm receipts. Approximately two-thirds sold grade A milk.

COOPERATIVE SERVICES

The services provided by these cooperatives were categorized as being at the farm, market, or national level. For a few services the classification was somewhat arbitrary. For example, assuring an adequate supply of high quality milk may involve activities at both farm and market levels. Likewise, some services such as making full supply arrangements, balancing supplies among dealers, disposing of surplus milk at the highest possible prices, and making out-of-market sales may be closely interrelated.

Services performed at the farm level primarily benefit producer members of the cooperative. The benefits of these services usually are excludable; that is, they are available only to those that pay for the services. In general, the objectives of these services are to improve milk quality, represent producers' interests, reduce costs of production, or improve farmer decision making.

Market level services include activities associated with the assembly and transportation of raw milk and the processing and distribution of milk products. These services are intended to assure a market for the milk, to increase operational and pricing efficiency, and to maximize returns to members. Market level services include the development and implementation of plans to coordinate and strengthen bargaining and other marketing activities on a regional level. Unlike the benefits of farm level services, the benefits of market level services are largely nonexcludable. All milk producers, whether members or nonmembers of cooperatives, as well as milk processors and consumers, may benefit from many of these services.

As dairy marketing cooperatives increase in size, they perform a growing number of services at the national level. These services are directed primarily at improving the institutional environment in which dairy farmers operate, and so they benefit all producers. Individual services at this level were not identified in the survey. They would include services such as (1) promoting laws and regulations in the interest of dairy farmers, (2) engaging in public relations with governmental agencies, farm organizations, and the public at large, and (3) allocating funds to and coordinating the activities of the various cooperatively supported organizations that serve dairy farmers, such as the United Dairy Industry Association and the National Milk Producers' Federation.

The questionnaire used in the survey listed 18 farm level services, including "other," and 24 market level services. The representative that was interviewed from each cooperative indicated what services, whether listed or not, the cooperative provided at those levels and whether or not the cooperative provided services at the national level.

Farm Level Services

Ten of the 18 farm level services listed on the questionnaire were provided by 77 percent or more of the cooperatives. Two farm level services, checking weights and tests and providing field services, were provided by 97 percent of the cooperatives, though no service was provided by all of them (Table 5). Other frequently provided services included assisting with inspection problems (92 percent), making milk payments to producers (90 percent), guaranteeing a daily market outlet with participation in a federal order pool (87 percent), performing quality control work with bacteria, mastitis, and similar problems (87 percent), selling

milking supplies and equipment (85 percent), and establishing insurance programs (85 percent).

The most commonly provided farm level services were generally concerned with milk quality or with milk payments to producers. These included checking weights and tests (97 percent), performing field services (97 percent), assisting with inspection (92 percent), making payments to producers (90 percent), and performing quality control lab work (87 percent). Those farm level services provided least frequently were very specialized services such as assisting in finding and training labor (10 percent), conducting management training schools for producers (12 percent), and establishing retirement programs (27 percent). Most farm level services were oriented to the needs of individual producers. Consequently, the benefits of those services could be quite readily limited to those that paid for them and excluded from those who did not.

There was little difference among the various types and sizes of cooperatives in the provision of many farm level services. Nearly all services provided by 85 percent or more of the cooperatives may be regarded as the basic services that cooperatives furnish in patterning their services on those of other cooperatives or in meeting nonprice competition. The one exception was paying producers for their milk. All operating and combination cooperatives provided this service, but only 60 percent of the bargaining cooperatives did so. Since most bargaining cooperatives did not receive milk, it is understandable that they less commonly provided this service, which would have benefited processors of the milk as well as producers.

Providing marketing and outlook information and collecting and insuring payments from dealers were farm level services provided by all cooperatives of the two largest size categories but by only two-thirds of the smaller ones. The large cooperatives had more resources with which to provide these services and greater need than the smaller cooperatives of formal programs to improve communication with members. With these exceptions, however, there was no significant relationship between the size of the cooperative and the farm level services provided.

Rank order correlations indicated a significant degree of correlation between all types and sizes of cooperatives in the percentages offering various farm level services. That there are some services generally provided by all types and sizes of cooperatives while others are less commonly provided suggests that some basic marketing functions are performed by all types and sizes of cooperatives and that other services not as fundamental are provided less commonly.

Table 5. Extent to which Various Farm Level Services Were Provided, 40 Dairy Marketing Cooperatives, North Central Region, 1973

Farm level service	Percentage of cooperatives providing service
Check weights and tests.....	97
Provide field services.....	97
Assist with inspection problems.....	92
Make milk payments to producers.....	90 ^a
Guarantee daily market outlet.....	87
Perform quality work (bacteria, mastitis, etc.).....	87
Sell milking supplies and equipment.....	85
Establish insurance programs (life, health, disaster).....	85
Provide marketing and outlook information.....	77 ^b
Collect and insure payments from dealers.....	77 ^b
Negotiate hauling rates.....	60
Sell or purchase feed and other inputs.....	47
Assist in getting capital, credit, etc.....	40
Provide information on price, inputs, etc.....	30
Establish retirement programs.....	27
Operate management training schools.....	12
Assist in finding and training labor.....	10
Provide other services.....	7
Average	62

^a Significantly different among different types of cooperatives.

^b Significantly different among different size groups of cooperatives.

Market Level Services

Seventeen of the 24 market level services were provided by one-half or more of the cooperatives, though there was no service that was provided by all of them (Table 6). Market level services most commonly provided included stimulating demand (92 percent), providing public relations, including joint efforts with other agencies (92 percent), and coordinating bargaining and marketing activities, especially for class I milk, with other cooperatives (90 percent). Least common were such services to processors as delivering standardized milk or providing split loads (17 percent each).

In contrast to farm level services, many market level services can have marketwide effects. That is, benefits from these services cannot always be excluded from nonmembers, handlers, or consumers that may not help pay for their provision. In this regard, some market

Table 6. Extent to which Various Market Level Services Were Provided, 40 Dairy Marketing Cooperatives, North Central Region, 1973

Market level service	Percentage of cooperatives providing service
Provide demand stimulation, advertising, etc.....	92
Provide public relations and joint efforts.....	92 ^a
Coordinate activities with other cooperatives.....	90 ^b
Participate in federal order hearings.....	85 ^c
Pay haulers	80 ^c
Provide quality control and lab services.....	80
Direct farm to market movement of milk.....	72
Handle surpluses to maximize returns.....	70 ^a
Do market research.....	67 ^a
Negotiate prices and service charges.....	65 ^a
Make joint sales efforts with handlers.....	65 ^a
Maintain storage facilities.....	60 ^c
Balance supplies among dealers.....	57 ^a
Sell milk f.o.b. receiving plant.....	55 ^b
Provide full supply arrangements.....	52 ^a
Process surplus milk in the market.....	52 ^c
Allow for farm shrinkage.....	50
Make out-of-market sales.....	45 ^a
Tailor market supplies to market needs.....	42 ^a
Service distribution channels.....	35
Provide specialty products.....	32
Assure plant(s) pool qualification.....	32
Deliver standardized milk.....	17 ^a
Provide split loads to dealers.....	17
Average	58

^a Significantly different among different size groups of cooperatives.

^b Significantly different among different types of cooperatives.

^c Significantly different among different types and size groups of cooperatives.

level services are similar to public goods. It is left to future research to make cost-benefit analyses of these services and to determine whether, as seems logical, cooperatives can provide such services as effectively, if not more so, than any other agency.

On the other hand, a few market level services appeared to be specifically oriented to individual processors. Providing specialty products and delivering standardized milk and split loads are clear-cut examples of such services. Full supply arrangements may also be in that category. In like manner, assuring pool qualification benefits specific supply plants.

There was considerably more variation among the different types and sizes of cooperatives in the percentages providing various market level services than was true for farm level services. Considering all market level services, the average percentages of the cooperatives providing them were 69 percent for combination cooperatives, 49 percent for bargaining cooperatives, and 45 percent for operating cooperatives. All of the cooperatives with milk receipts of 2 billion pounds or more provided the 11 market level services that were most commonly provided, and, in large measure, the extent to which market level services were provided was directly related to the size of the cooperative. On the average, cooperatives in the largest size category provided 85 percent of these services, while the percentages in the successively smaller size categories were 72, 62, 55, and 30, respectively.

Provision of more services by the larger cooperatives mainly reflected that they were more deeply involved than the small cooperatives in marketing class I milk and in bargaining. Consequently, more commonly than the small cooperatives, they were engaged in market research, in price negotiations, in sales programs, and in full supply arrangements. They were also more involved with balancing supplies among dealers, handling surpluses, making out-of-market sales, and similar services. Because a majority of the larger cooperatives were of the combination type, this relationship between size of the organization and extent of market services provided was influenced by the diverse activities of cooperatives in that category. Other services provided more commonly by the combination cooperatives included coordinating activities with other cooperatives, participating in federal order hearings, maintaining storage facilities for milk, and processing surplus milk.

Rank order correlations showed a significant degree of correlation in the percentages of the cooperatives of all types and sizes providing various market level services, except between cooperatives in the smallest and largest size groups and between the group with annual receipts from 200 to 500 million pounds and the group

Table 7. Average Number of Farm and Market Level Services Provided, 40 Dairy Marketing Cooperatives, North Central Region, 1973

Category of cooperative	Average number of services		
	Farm	Market	Total
Type			
Bargaining.....	10.3	11.7	22.0
Operating.....	11.0	10.8	21.8
Combination.....	11.6	16.7	28.3
Annual receipts (million pounds)			
2,000 or more.....	11.8	20.3	32.1
500 to 2,000.....	12.2	17.2	29.4
200 to 500.....	10.3	14.8	25.1
100 to 200.....	11.6	13.1	24.7
Less than 100.....	10.1	7.3	17.4
All cooperatives.....	11.2	14.1	25.3

of smallest cooperatives (Table 7). Overall, however, differences in percentages of cooperatives of different sizes and types providing various market level services were sufficient to preclude concluding that they were similar in this respect, at least to the degree that existed for farm level services.

Summary: Numbers of Farm and Market Level Services

Differences among cooperatives in numbers of services provided were mainly in market level services, with numbers of farm level services exhibiting little variation among the various types and sizes of cooperatives (Table 7). For example, the average number of market level services provided was 20.3 for cooperatives with milk receipts of 2 billion pounds or more, as against 7.3 for cooperatives with receipts of less than 100 million pounds. The average numbers of farm level services provided by those two groups of cooperatives were 11.8 and 10.3, respectively. In line with these differences, the group of smallest cooperatives provided more farm level than market level services, while the group of largest cooperatives provided 72 percent more market level than farm level services. Overall, market level services were 56 percent of the total number of farm and market level services.

Statistical analysis supported these observations. Variation in the number of market level services accounted for 91 percent of the variation in the total number of farm and market level services. Ninety-three percent of the variation in number of services was associated with the providing, or not providing, of seven market level services involved with the marketing of

and the bargaining for the sale of class I milk. Moreover, two of those services, handling surplus so as to maximize returns and making out-of-market sales, explained 73 percent of the variation in the total number of services. The marketing services that explain much of the variation in the number of services provided are services by which the cooperatives, as representatives of dairy farmers, coordinate supplies of milk with processors' needs.

COST OF SERVICES

Cooperative managers estimated as accurately as they could the costs of providing the various services. In many cases costs were not known precisely because services were paid for from several different funds and costs of individual services were not set forth specifically in most organizations' accounting records. Moreover, changes in the number and character of the services that were provided compounded the difficulty of estimating costs.

Sources of Funds

Two general sources of funds were used in paying for services. For all cooperatives in the aggregate, roughly two-thirds of the cost of all services was paid for from cooperatives' marketing margins and represented part of the expenditures reported on cooperatives' income statements (Table 8). The other portion was paid for as deductions from superpool premiums or as deductions made under federal orders for advertising and promotion of milk. The latter source of funds represented reductions in net prices paid to producers for their milk. Among cooperatives that provided complete information on service costs and sources of funds from which they were paid, bargaining cooperatives financed 48 percent of their service costs through these deductions. At the other extreme, cooperatives with milk receipts of 2 billion pounds or more paid for 88 percent of their service costs from their operating funds.

Average Costs

Costs paid from cooperatives' operating funds were reported for each of the three different levels of services. Most of these costs, which for all cooperatives averaged 8.50 cents per 100 pounds of milk received, were for farm and market level services, for which costs were approximately equal. The cost of national level services was about 2 percent of the total, and in no cate-

Table 8. Estimated Average Costs of Providing Services, by Type and by Source of Funds, Dairy Marketing Cooperatives, North Central Region, 1973

Category of cooperative	Paid for by cooperative expenditures				Paid for by superpool or federal order deductions	Grand total ^a
	Farm level services	Market level services	National level services	Services at all levels ^a		
<i>average cost, cents per 100 pounds of milk^b</i>						
Type						
Bargaining	3.35(9)	2.80(8)	0.10(8)	5.86(8)	5.09(9)	10.67(8)
Operating	4.04(8)	3.10(5)	0.34(6)	7.24(5)	3.64(8)	8.20(5)
Combination.....	4.61(18)	5.22(18)	0.20(18)	10.03(18)	3.75(20)	13.39(18)
Annual receipts (million pounds)						
2,000 or more.....	5.21(5)	9.67(5)	0.22(5)	15.10(5)	2.86(6)	17.08(5)
500 to 2,000.....	5.08(7)	5.99(7)	0.19(7)	11.26(7)	4.75(7)	16.01(7)
200 to 500.....	3.15(7)	3.26(5)	0.29(5)	5.79(5)	5.76(8)	10.66(5)
100 to 200.....	4.47(7)	1.90(7)	0.11(7)	6.48(7)	3.80(7)	10.28(7)
Less than 100.....	3.39(9)	1.71(7)	0.22(8)	4.99(7)	2.97(9)	6.38(7)
All cooperatives	<u>4.16(35)</u>	<u>4.25(31)</u>	<u>0.20(32)</u>	<u>8.50(31)</u>	<u>4.05(37)</u>	<u>11.85(31)</u>

^a Totals are shown only for cooperatives that provided information on all categories of costs. These are not necessarily totals shown for the component costs, which are averages for all cooperatives providing data on that particular item.

^b Numbers in parentheses are numbers of reports on which the various averages are based.

gory amounted to more than 0.34 cent per hundred-weight of milk.

These service costs were higher per 100 pounds of milk for the two groups of larger cooperatives and for combination cooperatives than they were for the smaller cooperatives and for the bargaining and operating types. Although their costs of farm level services were somewhat higher, the major part of the higher costs of the large and combination cooperatives reflected larger expenditures on market level services. Small cooperatives and bargaining and operating types spent more on farm level services than on market level services. In contrast, the two largest categories and the combination cooperatives spent more on market level than on farm level services.

The total cost of all services, including those paid for by federal order and superpool deductions as well as those paid for out of cooperatives' operating funds, averaged 11.85 cents per hundredweight of milk received. Among categories by type of organization, the average was highest for combination cooperatives, which provided the most services, and least for operating cooperatives. Likewise, by size, total costs of all services were highest for the two groups of largest cooperatives, slightly below average for cooperatives with annual receipts between 100 and 500 million pounds of milk, and little more than one-half of the overall average among cooperatives with milk receipts of less than 100 million pounds annually.

Ideal Level of Costs

Managers were asked to estimate costs, not only of the services actually provided, but also of an ideal level of services. Ideal was defined by any criteria the managers cared to use; in most cases it appeared to be the amount managers believed cooperatives should be spending. Of the 31 managers that provided complete replies, only one indicated that the ideal level of expenditures should have been less than the actual. One-half of the 30 other managers indicated that more should be spent on services than was being spent. The other half indicated that the ideal amount to spend equaled or approximated the amount being spent. Eighty percent of the managers of the group of largest cooperatives believed more money should be spent on services, but no more than one-half of the managers of the other size groups, or of any type category, shared this view. Of the managers that indicated that expenditures on services should be increased, 43 percent stated that larger amounts should be spent on market level services, and 57 percent each on farm level and national services.

Variation in Costs

Least squares regression was used to analyze variations in cooperatives' total expenditures on services per hundredweight of milk. These conclusions were formed:

Table 9. Average Cost Per Service, by Type, for Market Level, Farm Level, and All Services, 31 Dairy Marketing Cooperatives, North Central Region, 1973

Category of cooperative ^a	Average cost per service ^b		
	Market level services	Farm level services	All services ^c
	<i>cents per 100 pounds of milk</i>		
Type			
Bargaining (8)	0.22	0.28	0.26
Operating (5) .....	.31	.33	.33
Combination (18) .....	.29	.41	.34
Annual receipts (million pounds)			
2,000 or more (5)	0.50	0.44	0.47
500 to 2,000 (7) .....	.35	.44	.39
200 to 500 (5) .....	.19	.21	.21
100 to 200 (7) .....	.15	.41	.26
Less than 100 (7) .....	.24	.30	.28
All cooperatives (31)	0.28	0.36	0.33

^a Numbers in parentheses are numbers of reports on which the various averages are based.

^b Total cost to cooperative of services of that type divided by total number of those services it provided. All averages are simple averages.

^c Including national services.

1. Eighty-seven percent of the variation in total cost of all services was associated with differences in the cost of market services.
2. The size of the cooperative was a significant factor in accounting for differences in service costs, but the type of cooperative was not.
3. Seventy-one percent of the variation in the cost of providing services was explained by whether or not the cooperative paid haulers, provided full supply arrangements, delivered standardized milk, and lost money in handling surplus.
4. Fifty-seven percent of the variation in costs was explained by whether or not the cooperative provided full supply arrangements and lost money in handling surplus.
5. Forty-seven percent of the variation in cooperatives' expenditures on services was accounted for by differences in the total number of services performed.

Costs per Service

Average costs per service at farm, market, and all levels were computed for the 31 cooperatives that provided complete information on costs. The average cost

Table 10. Average Cost of Providing Some Individual Farm Level Services, 31 Dairy Marketing Cooperatives, North Central Region, 1973

Service	Average cost
	<i>cents per 100 pounds of milk</i>
Provide field services	1.6
Perform quality control work	1.2
Make payments to producers	0.6
Check weights and tests	0.5
Sell milk	0.2
Provide marketing information	0.2
Provide insurance program	0.1

per service was 0.28 cent per 100 pounds of milk at the market level and 0.36 cent at the farm level (Table 9). The average cost per service was highest in cooperatives with annual milk receipts of 2 billion pounds or more. In general, these largest cooperatives provided larger numbers of the more costly services, and in some cases perhaps more complete or better quality services, than the small cooperatives.* Average cost per service also was relatively high in cooperatives with annual receipts of 500 million to 2 billion pounds, but it was higher in cooperatives with receipts of less than 100 million pounds than in those with receipts of 200 to 500 million pounds.

Average costs per service were lower for bargaining cooperatives than for the two other types. The average cost of farm level services was highest for combination cooperatives. Among all types of cooperatives and all but those of largest size, the average cost per service was higher at the farm level than at the market level.

Variations in the average cost per service were more difficult to explain than those in the total cost of services. However, analysis showed that variables such as whether or not the cooperative paid haulers, provided a full supply arrangement, delivered standardized milk, and sustained losses in handling surplus milk were significant in accounting for variation in the average cost of services as well as in explaining variation in the total cost of services.

Costs were determined for a number of individual farm level services (Table 10). The most costly were providing field services and performing quality control work. Little expense was involved in providing such

* An example of a relatively costly service that only large, combination cooperatives found it feasible to provide was a full supply arrangement. Under this arrangement the cooperative delivers to a processor whatever quantity of milk he requests at the time and place he specifies.

Table 11. Selected Price Indexes

Data for	Hourly earnings in manufacturing food and kindred products	Cost of private transportation (consumer price index)*	Specialized industrial machinery and equipment (producer price index)*
1973	\$3.82	121.5	130.1
July 1979	6.31	213.3	249.5
July 1979 in percent of 1973 value.....	165	176	192

* For price indexes, 1967 = 100.

Source: *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor.

services as selling milk, furnishing marketing information, and providing an insurance program.

Changes in Costs

The cost of services varies with the level of prices. Presumably, it has increased sharply since 1973. Because of the very limited data many cooperatives had about costs, it is not feasible to estimate present costs of individual services. However, a rough estimate may be made of the overall increase in factor prices of the major cost elements since 1973.

A service-by-service analysis suggests that the most important cost ingredient in services is human labor. Two other relatively important cost elements are those for the operation of motor vehicles and for dairy plant equipment. It is not practicable to determine the relative weighting that should be attached to these different elements, although labor cost evidently was by far the most important.

The best available indication of changes in costs is from price indexes of the Bureau of Labor Statistics, U.S. Department of Labor (Table 11).

These data suggest that for the average mix of farm and market level services reported by these cooperatives, factor costs perhaps were 70 to 80 percent higher in July 1979 than they were in 1973. Unless there was a change in the efficiency with which services were performed, the costs of providing services would have increased in the same proportion as factor costs. If so, the farm and market level services financed by these cooperatives, which cost an average of 8.5 cents per 100 pounds of milk in 1973, would have been expected to cost approximately 15 cents per 100 pounds of milk in July 1979.

For services involving mainly or only labor, the increase in cost from 1973 to late 1979 perhaps was nearer 70 percent than 80 percent. However, for services involving heavy use of motor vehicles or of dairy plant equipment, the increase in cost may have been 80 percent or more.

IMPORTANCE OF SERVICES

Each manager rated, in his judgment, the importance to producers of each farm level service the cooperative provided. Likewise, he rated the importance of the cooperative's market level services to producers, handlers, and consumers, respectively. Members also rated the importance to them of these farm and market level services. The rating scale used by both managers and producers was 1, very important; 2, fairly important; and 3, not very important.

Farm Level Services

Farm level services concerned with making and insuring fair payments to producers for milk, guaranteeing a market, and maintaining milk quality were considered most important to producers by the management of all types and sizes of cooperatives (Table 12). The average ratings of seven services with these objectives were below 1.25, indicating that more than 75 percent of the managers considered them to be very important to producers. Fourteen of the 18 farm level services received average ratings of between 1.0 and 2.0, which evaluated them as being in the range from very important to fairly important. The four farm level services with average ratings of 2.0 or more involved such services to producers as marketing or providing market information about production inputs, operating management training schools for producers, and assisting in finding and training labor.

On the average, the management of combination cooperatives did not rank farm level services as important as did the management of bargaining and operating cooperatives. Similarly, managers of the larger cooperatives ranked these services as somewhat less important than did managers of the smaller cooperatives.

There was considerable agreement between members' and managers' ratings of farm level services. Members, in much the same manner as management,

Table 12. Average Ratings of Importance to Producers of Farm Level Services as Evaluated by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region

Farm level service	Average rating ^a	
	By managers	By members
Make milk payments to producers.	1.06	1.20 ^b
Collect and insure payments from dealers	1.07	1.61
Check weights and tests.	1.13	1.20
Guarantee daily market outlet.	1.17	1.37
Provide field services.	1.18	1.61
Assist with inspection problems.	1.20	1.57
Perform quality work (bacteria, mastitis, etc.)	1.23	1.21
Establish retirement programs.	1.36	2.31
Establish insurance programs (life, health, disaster).	1.39	1.88
Negotiate hauling rates.	1.48	1.45 ^c
Other	1.50	— ^e
Provide marketing and outlook information	1.63	1.59 ^c
Assist in getting capital, credit.	1.69	2.44
Sell milking supplies and equipment.	1.85	1.79 ^d
Sell or purchase feed and other inputs.	2.00 ^e	2.47
Operate management training schools for producers	2.00	2.47
Provide information on price, inputs, etc.	2.36	2.47
Assist in finding and training labor.	2.50	2.64
All farm level services.	1.54	1.84

^a Ratings were 1, very important; 2, fairly important; and 3, not very important.

^b Significantly different among different types and sizes of cooperatives.

^c Significantly different among different sizes of cooperatives.

^d Significantly different among different types of cooperatives.

^e Not rated in producer survey.

rated highest those farm level services that involved quality control and price. The five services most highly rated by producers were in that category. Those five farm level services were among the ten rated most highly by managers. Moreover, producers and managers were in almost complete agreement in rating as least important farm level services that involved providing general assistance in farm operations. The rank order correlation between managers' and producers' ratings of farm level services was 0.85. This indicates a statistically significant correlation, at the 1 percent level, between the ranking in importance of farm level services as assigned by managers and by producers.

Producers, with an average rating of 1.85, did not value farm level services as highly as managers, whose average rating was 1.54. Producers did not rate any farm level services appreciably higher than managers did, though they rated some—such as performing quality work, negotiating hauling rates, providing marketing and outlook information, and selling milking equipment and supplies—equally high. On the other hand, producers rated some farm level services such as establishing a retirement program and assisting in getting capital and credit much lower than did managers. There were moderate differences in average ratings assigned to some farm level services by members of different types and sizes of cooperatives. Making payments to producers and selling them milking supplies and equipment were considered less important by members of bargaining cooperatives than by members of the other types of cooperatives, which more commonly provided those services. Providing marketing and outlook information, negotiating hauling rates, establishing retirement programs, and making payments to producers were rated more favorably by members of the larger cooperatives.

Rank order correlations showed significant degrees of correlation between rankings of farm level services in terms of their importance to producers, as evaluated both by managers and by members of the cooperatives, and percentages of the cooperatives providing those services. This conclusion was valid for nearly all type and size categories of cooperatives as well as for all cooperatives as a group. These findings support the logical conclusion that the farm level services considered to be most important to members are those most commonly provided.

Market Level Services

Overall, market level services were rated more important to producers than farm level services by both managers and cooperative members. The difference in managers' average ratings was slight: 1.50 for market level services as compared with 1.54 for farm level services (Table 13). Members made a greater distinction, with an average rating of 1.58 for market level services as against 1.88 for farm level services. Managers' average ratings of the importance to producers of 92 percent of the market level services were between very important and fairly important, as compared with 78 percent for farm level services. Correspondingly, members' average ratings of 83 percent of the market level services were between very important and fairly important, as compared with 65 percent of the farm level services.

Table 13. Average Ratings of Importance to Farmers, Handlers, and Consumers of Market Level Services as Evaluated by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region

Market level service	Average ratings ^a			
	By managers, importance to			By members, importance to farmers
	Farmers	Handlers	Consumers	
Negotiate prices and service charges.....	1.04	1.68	2.20 ^b	1.30
Participate in federal order hearings.....	1.12	1.78 ^b	2.12 ^c	1.31
Provide quality control and lab services.....	1.14	1.11 ^b	1.07	1.23 ^d
Handle surpluses to maximize returns.....	1.15 ^b	1.78	2.26	1.29 ^b
Direct farm to market movement of milk.....	1.18	1.21	1.71	1.42 ^c
Coordinate activities with other cooperatives.....	1.25	1.81 ^b	2.16	1.43
Provide demand stimulation, advertising, etc.....	1.29	1.41	1.65 ^b	1.38
Provide full supply arrangements.....	1.30	1.05	1.80	1.60 ^c
Service distribution channels.....	1.31	1.85 ^b	1.38	1.64 ^c
Balance supplies among dealers.....	1.36	1.32	2.00	1.69 ^b
Process surplus milk in the market.....	1.37	1.79 ^b	2.16	1.45 ^c
Provide specialty products.....	1.38	1.23	1.54 ^b	1.64 ^d
Provide public relations and joint efforts.....	1.44	2.03 ^c	2.19 ^b	1.43
Pay haulers	1.48	1.87 ^b	2.58 ^c	1.43 ^b
Tailor market supplies to market needs.....	1.53	1.33	1.87 ^b	1.59
Do market research and intelligence.....	1.54	1.85	2.04 ^b	1.45
Make joint sales efforts with handlers.....	1.54	1.58 ^b	2.23 ^b	1.44
Assure plant(s) pool qualification.....	1.60	1.90 ^d	2.50	1.51 ^d
Maintain storage facilities.....	1.61	1.39	2.17	1.66 ^c
Make out-of-market sales.....	1.65	2.41	2.59 ^d	1.66 ^b
Allow for farm shrinkage.....	1.84	1.63	2.42	1.86 ^c
Sell milk f.o.b. receiving plant.....	1.95	1.62	2.57 ^b	2.00 ^c
Deliver standardized milk.....	2.29 ^b	1.29 ^b	2.57 ^b	1.98 ^d
Provide split loads to dealers.....	2.83	1.67	2.33	2.17 ^b
All market level services.....	1.50	1.60	2.08	1.56

^a Ratings were 1, very important; 2, fairly important; and 3, not very important.

^b Significantly different among different sizes of cooperatives.

^c Significantly different among different types and sizes of cooperatives.

^d Significantly different among different types of cooperatives.

The seven of the 24 market level services that managers considered most important to producers, of which five had bargaining and pricing implications, also were considered most important by members, and in much the same order. Likewise, the four market level services, some of them highly specialized, considered to be of least value to producers by managers also were rated least important by members. Among market services considered to be of intermediate importance to producers, balancing supplies among dealers was rated considerably less important by members than by managers. Moreover, several other ways of servicing handlers were considered less important by members than by managers. These differences could reflect an inadequate understanding by many members of the importance of such services to effective bargaining by cooperatives.

In terms of managers' ratings of importance to handlers, the same proportion of market level services received average ratings between very important and fairly important, 92 percent, as received such ratings in terms of importance to farmers. However, the average rating of 1.60 indicated that, in general, managers considered these services somewhat less important to handlers than to producers. Moreover, they were considered much less important to consumers; the average rating was 2.08, and only 29 percent received average ratings between very important and fairly important for consumers.

One market level service rated as important to farmers, handlers, and consumers alike was providing quality control and laboratory services. Other services with average ratings between very important and fairly important for all these groups, and average ratings of im-

portance to both farmers and handlers below 1.5, were directing farm to market movement of milk, providing demand stimulation, advertising, etc., providing specialty products, and providing full supply arrangements. At the other extreme, such services as providing split loads to dealers and delivering standardized milk were considered to be relatively unimportant to farmers and consumers, and only moderately important to handlers.

Managers' ratings of the importance of market level services to farmers were quite uniform for different types and sizes of cooperatives. Their ratings of the importance of those services to handlers and to consumers were less uniform, especially among cooperatives in different size categories. Likewise, member ratings of the importance of market level services to producers were quite variable among the different groupings of cooperatives.

Although relationships were not as close as for farm level services, as indicated by rank correlation analysis, correlations between rankings of market level services in terms of their importance to producers, as evaluated both by managers and by members, and percentages of cooperatives providing those services were significant among all cooperatives as a group and in most categories by type and size. On the other hand, there was

no significant correlation between rankings of the importance of market level services, either to handlers or to consumers, and the extent to which they were provided. These findings indicate that, at the market level as well as at the farm level, cooperatives most commonly provided those services considered to be of greatest value to producers.

MEMBER AWARENESS OF SERVICES

The accuracy and extent of members' knowledge about services provided by their cooperatives affect their ability to evaluate the costs and benefits of cooperative membership and to communicate effectively to management their desires for changes in services. Consequently, members' understanding of their cooperatives' services was analyzed.

Correct Perceptions

Surveyed members correctly identified slightly more than one-half of both the farm and the market level services their cooperatives were providing (Table 14). Members that correctly identified those services rated approximately 85 percent of them as either very important or fairly important. In general, the services

Table 14. Members' Knowledge about Services Provided by Dairy Marketing Cooperatives, North Central Region, 1976

Members' knowledge about provision of the service	Members' evaluation of importance of service	Percentage* of members' perceptions about			
		Services provided		Services not provided	
		Farm level	Market level	Farm level	Market level
Correct	Very important	37.6	41.7	2.5	0.9
	Fairly important	11.5	6.3	5.8	1.5
	Not very important.....	4.7	1.1	18.2	4.8
	No evaluation	3.7	7.5	8.6	4.0
		<u>57.5</u>	<u>56.6</u>	<u>35.1</u>	<u>11.2</u>
Incorrect	Very important	2.2	0.8	18.8	22.0
	Fairly important	4.0	1.8	7.5	4.3
	Not very important.....	10.4	1.5	1.9	0.9
	No evaluation	4.9	2.0	3.5	4.4
		<u>21.5</u>	<u>6.1</u>	<u>31.7</u>	<u>31.6</u>
Did not know	Very important	1.7	3.1	2.6	4.2
	Fairly important	3.3	5.6	5.1	6.3
	Not very important.....	7.3	6.0	10.8	8.6
	No evaluation	8.7	23.6	14.9	38.0
		<u>21.0</u>	<u>38.3</u>	<u>33.4</u>	<u>57.1</u>

* May not total exactly 100.0 because of rounding.

that were correctly identified as being provided were basic services that were provided by a large proportion of all cooperatives. One may presume from members' knowledge about and ratings of the importance of those services that they are generally willing to bear the cost of providing them.

Members with accurate perceptions also included those that correctly identified services their cooperatives were *not* providing. The percentages in this category — 35 percent for farm level services and 11 percent for market level services — were much smaller than the percentages of those that correctly identified services their cooperatives were providing. More than 75 percent of these services either were rated not very important, or else members did not evaluate their importance. This suggests that most members that had reliable knowledge about services their cooperatives were *not* providing were not much concerned about the lack of those services.

Incorrect Perceptions

Incorrect information about services included the belief that cooperatives were *not* providing some services that, in reality, were provided. Members incorrectly categorized in this way 22 percent of the farm level services and 6 percent of the market level services their cooperatives provided. The services involved most commonly were farm level services used by only part of the members and market level services performed primarily for handlers or consumers. For the majority of these, members either considered the service not very important or else did not rate its importance. Consequently, it seems likely that if they had been correctly informed, members might not have strongly urged management to add these services.

On the other hand, members identified as being provided nearly one-third of the farm level and market level services their cooperatives did *not* perform. This misconception most commonly applied to such farm level services as checking weights and tests, assisting with inspection problems, and providing insurance programs and to such market level services as directing farm to market movement of milk, providing quality control, and providing specialty products. While apparently taken for granted as being provided, more than 80 percent of these incorrectly-identified services were evaluated as being either very important or fairly important. In part, this evaluation may have reflected a tendency to rate favorably services provided, or believed to be provided, by the cooperative. It is conceivable that if, without having full information about service costs, members that incorrectly categorized

those services realized they were *not* being performed, some of these members might have wanted those services provided.

Lack of Opinions

Members indicated that they did not know whether or not their cooperatives were providing 21 percent of the farm level services and 38 percent of the market level services that were being provided. The percentages were still larger — 33 percent for farm level services and 57 percent for market level services — for those services cooperatives were *not* providing. In 75 percent or more of these cases, the services either were not rated as to importance or else were considered not very important. Examples of services about which there was this lack of information included, at the farm level, assisting in obtaining capital and in finding and training farm labor, insuring payment from dealers, and guaranteeing a daily market outlet and, at the market level, delivering preconditioned milk, balancing supplies among dealers, and making out-of-market sales. One might conclude that much of the lack of knowledge about whether these services were being provided reflected little concern about them, and so the lack of these services would not be a major cause of dissatisfaction about cooperative performance.

Satisfaction with Services

In considering members' perceptions about services, we might assume that, since they apparently had little information about the cost of services, members' degree of satisfaction with the provision or nonprovision of a service by their cooperative depended largely on their belief as to whether or not the service was being provided and their evaluation of the importance of that service. Based on members' indicated perceptions and ratings of importance, it appears that a sizable majority may have been satisfied with the services provided by their cooperatives as they perceived them (Table 15). If, however, members had possessed full information as to what services were and were not provided, on the basis of these assumptions we could hypothesize that overall they might have been less well satisfied with their cooperatives' performance than they were while having incomplete information. Members were generally aware of services their cooperatives provided that they considered important. Consequently, their assumed degree of satisfaction about the services that were provided would not have been much different if they had possessed information about all services that were performed. However, with respect to services that were *not* performed, the differences could have

Table 15. Presumed Extent of Member Satisfaction with Services Provided by Dairy Marketing Cooperatives, North Central Region, 1976

Status of services	Percentage of members presumed to be satisfied ^a	
	With present knowledge ^b	If informed about services ^c
Services provided		
Farm level	85	73
Market level	93	87
Services not provided		
Farm level	81	42
Market level	90	27

^a Excludes responses that did not rate importance.

^b For services provided: the figure is the sum of percentages who correctly perceived that the service was provided and rated the service very important or fairly important, plus the percentage who incorrectly believed the service was *not* provided and rated it not very important. For services *not* provided: the figure is the sum of percentages who correctly believed service was *not* provided and rated it not very important and of those who incorrectly believed it was provided and rated it as either very or fairly important.

^c Assumes all members knew whether or not all services were provided. For services provided, it is the percentage of members who rated the services as very or fairly important. For services *not* provided, it is the percentage of the members who rated those services not very important.

been pronounced. Substantial proportions of the members erroneously believed their cooperatives were providing services they considered to be important. If they had realized their cooperatives were *not* providing those services, we assume they might have been much less satisfied than they were. We could believe that this dissatisfaction might have resulted in requests that more of those services be performed, concern because the price of milk was not higher, or, perhaps, both.

Implications

Overall, member knowledge of services provided by their cooperatives was low: 58 percent at the farm level and 56 percent at the market level. Members' perceptions were even more limited as to services that were *not* provided: 35 percent at the farm level and 12 percent at the market level. This low level of knowledge clearly indicates a need for more effective educational programs to improve member understanding of cooperative service programs. Members must be able to assess accurately the benefits and costs of cooperative membership if they are to draw informed conclusions and to express their true preferences to management.

In appraising the case for improved member education about services, we must recognize that members erroneously believed that a substantial number of services they rated as important were being performed, while, in reality, cooperatives were *not* providing those services. Because of this, it might be contended that, with complete knowledge, member satisfaction with the performance of their cooperatives would be reduced unless more services were provided. This contention overlooks the general belief that members are not fully aware of the costs of providing market services (p. 16) and that members would not pay the full cost of any additional farm level services their cooperatives might provide (p. 17). These opinions suggest that if, in furnishing members information about services, management impressed upon them the costs of providing services, member demands for additional services might be quite limited.

ASSESSMENTS OF SERVICES-RELATED ISSUES

Both management and members play important roles in determining the services provided by cooperatives. Consequently, information about their perceptions of various legal, institutional, and economic factors related to the provision of services should improve understanding of the current status of services and assist in anticipating future changes in them.

Opinions on Statements Related to Services

Managers reacted on a five-point scale (2, strongly agree; 1, agree; 0, undecided; -1, disagree; -2, strongly disagree) to 26 statements on issues related to cooperative services. Using the same scale, members reacted to 14 of those statements. Responses are discussed in four categories: (1) member awareness of services, (2) providing services, (3) financing services, and (4) nonmembers (Table 16).

To supplement the analysis based upon average scores, the degree of consensus was identified as high, medium, or low, defined as follows:

High (H): The majority opinion exceeded the minority opinion (agreement or disagreement) by a margin of at least 2 to 1, and less than 20 percent of respondents held the minority view.

Medium (M): The majority opinion exceeded the minority opinion by a margin of at least 2 to 1, but more than 20 percent of the respondents held the minority view.

Table 16. Average Scores of Responses to, and Degrees of Consensus about, Statements on Services-related Issues by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region

Category and statement	Managers		Members	
	Average score of responses ^a	Degree of consensus ^b	Average score of responses ^a	Degree of consensus ^b
Member awareness of services				
Members are not aware of the costs they bear in providing market services.	0.64	M	0.64 ^c	H
A member who fully understood the function of the standby pool would support it financially.	0.51	H	— ^f	— ^f
Members would be willing to pay higher costs if they better understood marketwide services being performed.	0.39	M	0.19	L
Providing services				
Significant cost savings could be made in hauling if milk routes were reorganized.	1.08	H	0.55	H
Demand stimulation programs should be given high priority.	1.05	H	0.77 ^d	H
In the future the producer will be willing to pay more for advertising and promoting dairy products.	0.38	H	— ^f	— ^f
Market level services should be expanded.	0.26	L	0.65	H
Farm level services should be expanded.	-0.03	L	0.34	L
Some form of class I base plan would be beneficial to producers in this area.	-0.64	H	— ^f	— ^f
We should reduce payments to organizations working at the national level.	-0.69	H	0.17 ^d	L
Financing services				
In the future it will become more important to find ways to equitably share market service costs than in the past.	0.95	H	— ^f	— ^f
Hauling rates should reflect differences in cost associated with volume.	0.90 ^e	H	0.41	M
The consumer should pay more of the cost of providing market services.	0.84	H	0.54	H
Charges for services to handlers are not adequate.	0.75	M	— ^f	— ^f
If a majority of producers voted in favor of contributing to milk promotion and advertising, all producers should have to contribute.	0.67 ^e	M	0.45 ^a	M
Cooperative payments under the federal order should be used to reimburse the cost of providing market services.	0.62	M	— ^f	— ^f
The USDA does not fully understand the problem of equitable cost sharing of market services.	0.33	M	— ^f	— ^f
Members generally feel the cost of marketwide services are equitably shared.	-0.15 ^d	L	0.07	L
The cooperative experiences a loss in handling or disposing of surplus milk in the market.	-0.39 ^d	M	-0.35	H

^a Responses were on a five-point scale: 2, strongly agree; 1, agree; 0, undecided; -1, disagree; -2, strongly disagree.

^b H, high; M, medium; L, low, as defined on pp. 14 and 16.

^c Responses significantly different among different types of cooperatives.

^d Responses significantly different among different sizes of cooperatives.

^e Responses significantly different among different types and sizes of cooperatives.

^f Statement not presented to members for responses.

Table 16. Average Scores of Responses to, and Degrees of Consensus about, Statements on Services-related Issues by Managers (1973) and Members (1976) of Dairy Marketing Cooperatives Surveyed, North Central Region (continued)

Category and statement	Managers		Members	
	Average score of responses ^a	Degree of consensus ^b	Average score of responses ^a	Degree of consensus ^b
Nonmembers				
Negotiation of premiums is hampered by the presence of nonmembers in this area.	0.34 ^c	L	— ^f	— ^f
Market level services would be expanded if there were no nonmember problem.	-0.05	L	— ^f	— ^f
Nonmembers do not join a cooperative because of the cost of being a member.	-0.24	L	0.26 ^d	L
The cooperative is willing to pick up and direct the milk of nonmembers.	-0.26	L	— ^f	— ^f
In this market the seasonality of nonmember production is greater than for members.	-0.35	H	— ^f	— ^f
Nonmembers present no problem in this market.	-0.51 ^c	M	— ^f	— ^f
Nonmembers are willing to pay for marketwide services that benefit them and all producers.	-0.68	H	-0.18 ^d	L

^a Responses were on a five-point scale: 2, strongly agree; 1, agree; 0, undecided; -1, disagree; -2, strongly disagree.

^b H, high; M, medium; L, low, as defined on pp. 14 and 16.

^c Responses significantly different among different types of cooperatives.

^d Responses significantly different among different sizes of cooperatives.

^e Responses significantly different among different types and sizes of cooperatives.

^f Statement not presented to members for responses.

Low (L): The majority opinion exceeded the minority opinion by a margin of less than 2 to 1.

Member Awareness of Services. Three statements were concerned with this topic. In the aggregate, managers agreed with all of them, though not emphatically, and members agreed with the two of the three statements to which they were asked to react. Both groups agreed quite strongly that members are not aware of the costs they bear in providing market services. Members of combination cooperatives were most positive about this, but some managers of combination cooperatives disagreed. Managers and members were in moderate agreement that producers would willingly pay higher costs for market level services if they understood them better. Managers felt similarly about support of the standby pool. Overall, these responses suggested that improved membership education was needed as to the nature and costs of market level services, though perhaps the need was less for members of combination cooperatives than for others.

Providing Services. Managers reacted to seven statements, and members to five of those statements, about

providing services. There was strong support from both groups for demand stimulation programs, and managers believed producers would be willing to spend more on them in the future. Managers and members also strongly agreed that significant savings could be made in hauling milk if routes were reorganized. But on other matters there was less agreement between the two groups. Members believed more strongly than managers that market level services should be expanded. Members also favored expansion of farm level services, about which managers on the average were noncommittal. On the other hand, except for members of bargaining associations, producers tended to favor reducing payments to organizations at the national level, a point of view with which managers quite strongly disagreed. Managers also emphatically disagreed with the idea that a class I base plan would benefit producers.

Financing Services. Managers responded to nine statements about financing services, and members responded to five of them. Managers agreed quite strongly with six of those statements, which dealt with the need for more equitable sharing of service costs. Members agreed, though less strongly, with three of

those statements to which they were asked to react. Managers also agreed moderately that the U.S. Department of Agriculture did not fully understand the problem of equitable sharing of costs of market services. Managers disagreed weakly, while members agreed weakly, that members generally believe the costs of market level services are equitably shared. Except for managers of the largest cooperatives, who agreed, both managers and members disagreed with the idea that cooperatives experience losses in disposing of surplus milk. These responses indicate much concern about the equitable sharing of costs of market level services, especially by large combination cooperatives, which were most involved in providing such services.

Nonmembers. There were generally weak responses by both managers and members, and little consensus in the answers of managers, to the statements about nonmembers. These reflected differences of opinion about the seriousness of the problem. In general, managers of small and operating cooperatives expressed relatively little concern about nonmembers. But managers of the largest and combination cooperatives, which were most extensively involved in marketing class I milk, considered nonmembers to be a serious problem. Despite these differences, there was a strong belief and high degree of consensus among managers that nonmembers were unwilling to help pay for marketwide services that benefited all producers. However, the concern about nonmembers did not reflect a belief that seasonal variation in their production was greater than that of members. The majority of managers were unwilling to pick up and direct nonmember milk because of legal issues that might be involved.

Extent of Agreement. Overall, there was an appreciable amount of agreement in responses to these services-related statements. Analysis of variance showed significant differences in average managerial responses among different types of cooperatives for only 4 of the 26 statements, and among different size cooperatives for only 2 of the 26 (Table 16). Such differences were a little more common in members' reactions, applying to 6 of the 14 statements to which they responded. In addition, rank correlation analysis likewise indicated a substantial amount of agreement in the responses both of managers and members of the different types and sizes of cooperatives. What differences there were most commonly were between personnel of small operating cooperatives, which processed nearly all of their members' milk, and personnel of the largest bargaining and combination cooperatives, which were much more heavily involved in marketing class I milk and in pro-

viding related services to handlers, and so more supportive of market level services. In general, members appeared to be more inclined than managers to expand both farm and market level services, but they were less favorable to services at the national level.

Service Charge Policies

The degree to which costs of services are being recovered through appropriate service charges is a major issue confronting dairy marketing cooperatives. Without examining service charge policies in detail, this section presents an overview of them.

Seventy percent of the cooperatives provided services to handlers, relying on service charges to some extent to pay for them. Cost, competition, handler location, and profit were considered in establishing those charges. Specifically, 64 percent allowed handlers to accept or to decline particular services; 61 percent announced, 29 percent negotiated, and 11 percent both announced and negotiated the level of service charges; 61 percent established a schedule of charges for individual services; and 36 percent made special, above normal charges for certain services such as delivering preconditioned milk, selling milk f.o.b., performing quality control work, and allowing for farm shrink.

Fixed charges for full supply arrangements by cooperatives making such charges ranged from 0 to 25 cents per hundredweight. But 55 percent of the cooperatives that sold milk under full supply arrangements reported that their service charges varied, perhaps because of differences in arrangements and in the services that were rendered.

Among cooperatives selling milk without full supply arrangements, 35 percent made no service charge for it. Among those making a fixed charge, it ranged from 3 cents to as much as \$1.50 per 100 pounds, but 45 percent reported that the charge was variable.

Because a majority of managers believe service charges to handlers are not adequate, in the future cooperatives may restrict the number of services performed for handlers. That could be most likely among cooperatives experiencing nonmember problems.

Additional Services that Could Be Provided

Sixty-eight percent of the managers believed their members would not pay the full cost of any additional farm level services their cooperatives might provide. Among those who disagreed, 46 percent suggested providing one or more kinds of insurance. Other possible farm level services suggested included providing disaster funds, guaranteeing payments, making weekly quality checks, making payroll deductions, providing

barn shavings, disposing of cull cows, and performing laboratory tests for individual farmers.

Seventy-two percent of the managers suggested no additional market level services. The others suggested such services as handling of excess supplies, servicing small accounts, diversifying products, providing public relations, advertising, and improved communications, negotiating over-order prices, balancing supplies among dealers, and pooling more cheese plants along with qualifying milk that converted to grade A.

Only 20 percent of the managers believed their cooperatives could provide additional services to handlers at service charges that would cover costs. Services suggested included delivering standardized and other preconditioned milk, providing specialty products and private label products, handling last-minute orders, making a commitment to a standby pool, providing full supply arrangements, and providing bottled milk for small volume dealers. No services to handlers were provided by 30 percent of the cooperatives, and 50 percent of the managers believed handlers would not pay all the cost of any additional services.

Although cooperative members responded positively to statements indicating that cooperatives should expand services, only 6 percent identified specific additional services they believed their cooperatives should provide. The majority of these were farm level services. Consequently, while members appeared to support the idea that their cooperatives should add more services, they did not have many specific suggestions for change. Particularly for market level services, this lack of suggestions could have reflected a lack of ideas by members as to other services that might be provided.

Sensitive Legal Issues

Fifty-five percent of the managers were sensitive to some legal considerations, generally regarding nonmembers. Issues included the payment of patronage dividends, lawsuits against certain dairy cooperatives, the comingling of nonmember milk with member milk without a contract, the enforcement of member contracts, price competition, antitrust, the hauling of milk and the provision of subsidies, equitable provision of services to members and nonmembers, direction of the movement of milk, and Internal Revenue Service regulations. The proportions of the managers with these concerns was 67 percent for the combination, 62 percent for operating, and 33 percent for bargaining cooperatives. By size, the proportions were 83 percent for managers of the largest cooperatives and 62, 56, 50, and 33 percent, respectively, for those in the successively smaller size categories.

These legal concerns are examples of institutional factors that affect cooperative services. For example, concern over the legal aspects of comingling member and nonmember milk may explain why more than one-half of these cooperatives were unwilling to pick up and direct nonmember milk (p. 17). Legal aspects may also affect the means by which services are performed. For example, antitrust concerns may hinder the development of federations and common marketing agencies among cooperatives as well as joint ventures between cooperatives and noncooperative firms.

Likewise, legal concerns may affect the kind of services performed. Doubts over the legality of some types of price competition may result in nonprice competition. Concern over legal issues may help to explain why providing public relations and joint efforts with various institutional agencies is one of the two market level services most commonly provided.

Effects of Selected Services

Seventy-five percent of the cooperatives had been involved in efforts to balance milk supplies among markets. When asked about the effects of those efforts on class I utilization, 23 percent of the managers of those cooperatives were uncertain, but the others reported increases ranging from 0 to 10 points and averaging 4.6 points.

Among the 71 percent of the cooperatives that had participated in the standby pool, 28 percent believed that participation had no appreciable effect on the cost of acquiring supplemental milk in their markets. However, 40 percent suggested that in some cases savings were 50 cents or more per 100 pounds. Only 16 percent of the managers believed that participation in the standby pool had substantial influence in maintaining or improving class I premiums.

Member vs. Nonmember Blend Prices

When asked about differences between member and nonmember net farm blend prices in their marketing areas, 27 percent of the managers reported essentially no difference. Five percent reported that their members always received a higher price, while 14 percent reported prices to members sometimes were higher and sometimes lower. However, a slight majority indicated that prices to their members usually were lower than prices to nonmembers: 30 percent by 1 to 5 cents per hundredweight, 19 percent by 6 to 10 cents, and 5 percent by more than 10 cents. Managers of two combination cooperatives of the largest size and one bargaining cooperative of next to the largest size stated that in some areas nonmember blend prices were as much as

50 cents per hundredweight above member prices.

Managers of the cooperatives whose members received lower prices than nonmembers considered their members quite sensitive to the differences in price. Overall, these managers believed they would lose 18 percent of their members if the price difference doubled, while their membership would increase 2 percent if the difference was reduced by one-half.

Despite this concern about members' price sensitivity, 48 percent of the managers reported that their members did not discuss these price differences with the management of the cooperative. Most of the others indicated their members brought up these price differences only infrequently and for clarification.

These price differences evidently did not cause cooperatives to reduce the level of services they provided. However, concern about these price differences may limit the provision of additional market services.

Reasons Members Join or Quit

Reasons members gave for joining their cooperatives emphasized that producers' decisions as to where to market their milk were based primarily on nonservice factors. Less than 5 percent of the members joined their cooperatives because of services they offered; for those that did, the service named most commonly was guaranteeing a market outlet.

Approximately 25 percent of the members identified price, in most cases explicitly, as the chief factor in their decision to join the cooperative. In a few cases price was expressed implicitly as a concern over such things as dues, dividends, payroll deductions, hauling charges, and costs. Proximity to their farms was a factor in choice of the cooperative by nearly 10 percent.

The choices of approximately 25 percent of the members were influenced by their attitudes toward that particular cooperative, or cooperatives in general. These attitudes included: "this cooperative is strong financially," "this cooperative has sound management," "this cooperative is fair on tests," "producers must join together for bargaining purposes," and "producers have more control of cooperative firms."

Miscellaneous factors were cited by about 40 percent of the producers as influencing their decisions. These included: "my previous buyer and this cooperative merged," "my hauler switched to this cooperative," "my dad sold here," "the previous owner of the farm was a member," and "I switched to grade A."

Factors other than services also were the basis of most decisions to discontinue membership. The nine surveyed members who planned to leave their cooperatives were doing so because of price or price-related fac-

tors. This suggested that, to satisfy some members, cooperatives may have to restrict services to be competitive with other firms' prices. Because of this concern about price, it is important for cooperative leaders to inform members fully about cooperative services and their role in accounting for differences in prices paid for milk.

Equitable Sharing of Market Service Costs

Managers did not provide a consensus as to how an equitable sharing of market level service costs between members and nonmembers might be achieved. Of 37 who offered suggestions, 35 percent stated that federal order checkoffs or deductions would be the best approach. Checkoffs are direct assessments on nonmembers of the type now used to charge them for verifying weights, checking the testing of their milk, and providing them with market information.

Twenty-four percent favored deductions from producer settlement funds to pay qualified cooperatives for performing services that benefit all producers. Eleven percent believed market level services could be paid for most equitably through deductions from superpool premiums, 5 percent through higher federal order prices, and 5 percent through voluntary cooperative arrangements with handlers.

Eleven percent of the managers believed that equitable sharing of these costs is not a problem. Another 11 percent had no suggestions as to how they might be shared equitably. In general, however, managers believed that inequitable sharing of these costs was a problem that might restrict market services in the future as they became more costly. A few more than one-half suggested that the solution might lie in changing provisions of federal orders so nonmembers would participate in paying for them. However, there was no other strong measure of agreement as to how the problem should be solved.

SUMMARY AND CONCLUSIONS

Summary

This study described and analyzed the services of 40 dairy marketing cooperatives with headquarters in the north central region that handled fluid-grade milk. These cooperatives constituted nearly the entire population of such organizations in the region. They had members in most of the eastern United States, and their 1973 receipts were approximately 40 percent of the nation's milk supply.

Information about services was obtained by personal interviews with managers of these organizations in fis-

cal 1973. Producer attitudes were determined by questionnaires mailed to a sample of members in 1976, with 302 usable replies.

The cooperatives included 10 bargaining organizations, which ranged widely in size, marketed practically nothing but grade A milk, and sold more than 90 percent of their receipts to fluid-milk handlers or others. Nine were operating cooperatives, two-thirds with annual receipts of less than 100 million pounds. These cooperatives processed more than 90 percent of their milk, of which approximately 80 percent was grade A. The other 21 cooperatives were combination organizations that sold 65 percent and processed 35 percent of their milk, of which approximately 80 percent was grade A. Five of the six cooperatives with annual receipts of 2 billion pounds or more and five of the eight with receipts of 500 million to 2 billion pounds were of this type.

Ten of the 18 farm level services identified were provided by three-fourths or more of the cooperatives. Those provided most commonly were concerned with maintaining milk quality or making payments to producers; those provided least commonly involved assisting in obtaining inputs and providing information and management training. In general, benefits of farm level services could be limited to members. Many were basic services provided as means of nonprice competition. There was little difference among the various types and sizes of cooperatives in farm level services provided.

Seventeen of the 24 market level services identified were performed by one-half or more of the cooperatives. Most common were stimulating demand, performing public relations operations, and coordinating services with other cooperatives. Least common was providing specialized services to dealers. Many of the market level services benefited handlers, consumers, and nonmember producers as well as members. There was much more variation among types and sizes of cooperatives in the number of and expenditures on market level services than for farm level services. In general, the largest and combination cooperatives provided more market level services, and had higher costs for those services, than small cooperatives and the other types. The differences among cooperatives in market level services were particularly in those that implemented vertical coordination, that is, in those that synchronized, harmonized, coordinated, or facilitated movement of milk through the marketing channel.

The cooperatives in the study performed promotional services costing roughly 4.0 cents per 100 pounds of milk, which were paid for by superpool and federal

order deductions. The aggregate cost of all their other services, which the cooperatives financed from their own funds, averaged 8.5 cents per hundredweight. Most of this expense was for farm and market level services, for which costs were approximately equal. Average service costs per 100 pounds of milk and per service were higher for the two groups of largest cooperatives and for combination cooperatives than for the others, mainly because of larger expenditures on market level services. Approximately one-half of the managers believed the amount spent on services was at an optimum level, while most others believed that ideally it should be increased.

Factor prices of the major cost elements involved in providing farm and market level services were some 70 to 80 percent higher in July 1979 than in 1973 when the study was made. Unless the effectiveness with which services were provided had changed appreciably, it seems likely that costs of providing services had increased in approximately that proportion.

There was much agreement between managers' and members' order of ranking of farm level services in terms of importance, though members did not rate those services as important as did managers. Both groups rated as most important to producers those farm level services concerned with making and insuring fair payments to producers for milk, guaranteeing a market, and maintaining milk quality. They rated as least important those farm level services that involved providing general assistance in farm business operations.

Managers of large and combination cooperatives commonly rated farm level services as less important than did managers of the other sizes and types of cooperatives. For some services, members' ratings of importance tended to vary with the extent to which their cooperative provided that service. Nevertheless, in nearly all type and size categories, there were high levels of correlation between managers' and members' ratings of the importance of farm level services to producers and the proportion of the cooperatives providing those services.

On the whole, market level services were rated more important to producers than farm level services by both managers and members. There also was a large measure of agreement that bargaining and pricing services were the market level services most important to producers. Several services to handlers were considered less important by members than by managers, perhaps reflecting inadequate appreciation by many members of the importance of those services in marketing milk. Though many members seemed agreeable to providing more services, responses of both members

and managers indicated that producer support of market level services would be stronger if they knew more about those services (Table 16).

Managers considered market level services to be less important to handlers than to producers, and still less important to consumers. There also was less uniformity among different types and sizes of cooperatives in rating the importance of market level services to handlers and consumers than in evaluating their importance to farmers.

One market level service rated as important to all three groups was providing quality control and laboratory services. A few specialized services to processors were evaluated as more important to them than to farmers or consumers. Nevertheless, correlations between rankings of market level services in terms of their importance to producers, by both managers and members, and the percentage of cooperatives providing those services were highly significant among all cooperatives as a group and in most categories by type and size. Thus, at the market level as well as at the farm level, cooperatives most commonly provided those services considered to be of greatest importance to producers, and vice versa.

Members' knowledge about services of their cooperatives was limited and showed some tendency to vary directly with their evaluation of the importance of the services. They correctly identified slightly more than one-half of the farm and market level services their cooperatives provided, many of them basic services, and all of them rated by members as very or fairly important. Much smaller percentages of the services that cooperatives did *not* provide were correctly identified by members; these generally were not considered important. Similarly, small percentages of the services cooperatives provided, mostly not rated important, were incorrectly categorized by members as *not* provided. On the other hand, members mistakenly categorized as provided approximately one-third of the farm and market level services that cooperatives did *not* provide, with the majority evaluated as important. They claimed no knowledge about substantial proportions both of the services cooperatives provided and of those they did *not* provide, of which only a small portion were rated important.

Judging from indicated perceptions and ratings of importance, a sizable majority of the members apparently were satisfied with their cooperatives' services. If, without having been provided adequate information about costs, members had known what services were and were not provided, they might have been less well satisfied than they seemingly were. That is so particu-

larly because members mistakenly believed cooperatives were providing an appreciable number of services that they considered important. The low overall level of member knowledge about services indicated the need for more effective education programs, though it was evidently due in part to the fact that members considered some services to be unimportant. Educational programs need to furnish information about costs of services so members will understand how demands for more services may affect the price they receive for milk.

Using a five-point scale, managers reacted to 26 statements on issues related to cooperative services, and members reacted to 14 of them. Analysis was based both on average scores and on the degree of consensus among replies. Reactions to three statements about awareness of services indicated general belief that members were not aware of the costs of market services, but that they would bear the costs of more such services, including support of the standby pool, if they understood them better. Responses to seven statements about providing services suggested strong support for demand stimulation programs and for reorganization of milk collection routes. Members were more favorable than management to expansion of farm and market level services, but they were less favorable to support of national dairy organizations.

Reactions to statements about the financing of services indicated much concern, especially by managers of large combination cooperatives, about the need for more equitable sharing of the costs of market level services. Generally weak responses by both managers and members, and little consensus among the answers of managers, to statements about nonmembers reflected differences in opinions about the seriousness of the problem. These differences, like the differences in statements about financing services, reflected little concern about nonmembers by managers of small and operating cooperatives, but much concern by managers of the largest and combination types. Despite these differences, both analysis of variance and rank order correlation indicated a substantial amount of agreement in the responses of managers and members of the different types and sizes of cooperatives to the statements about services-related issues.

Seventy percent of the cooperatives provided services to handlers, relying on service charges established in various ways, and often at more than one level, to help pay for them. Many managers believed service charges to handlers were not adequate, a consideration that could limit future services to them.

Likewise, a majority of managers felt that neither cooperative members nor handlers would pay the full

cost of any additional services their cooperatives might provide for them. Moreover, though members responded positively to statements about expanding services, very few suggested specific additional services.

More than one-half of the managers were sensitive to legal considerations, particularly regarding nonmembers, that affected the kinds of services performed and the means of providing them. This concern was greatest among managers of large combination and bargaining cooperatives.

The general belief of managers of cooperatives that had been involved in efforts to balance milk supplies among markets was that those efforts had moderately increased class I utilization. The benefit most commonly cited by managers whose cooperatives had participated in the standby pool was a reduction in costs of acquiring supplemental milk.

Perhaps partly because benefits of market level services were nonexcludable, a slight majority of managers stated that prices to member producers usually were lower than prices to nonmembers. Though most members were not vocal about the price differences, they were believed to be quite sensitive to them. Concern about these price differences apparently had not yet caused cooperatives to reduce the level of services provided, but it could restrict provision of additional market level services.

Reasons members gave for joining or leaving their cooperatives emphasized nonservice factors, with price being one of the most important. To insure continued provision of needed market level services and maintenance of cooperative membership, finding means of achieving a more equitable sharing of market service costs is of much importance. Though there was no strong consensus among managers as to how to do this, a few more than one-half of them suggested that the solution might lie in changing provisions of federal orders in some manner so that nonmembers would share in the cost of market level services.

Conclusions

1. Cooperatives most commonly provided those services that were considered to be most important to producers, and vice versa. This was indicated by the close correlations between manager and member ratings of the importance of both farm and market level services and the percentages of the cooperatives that provided those services. There were not similar relationships between managers' evaluations of the importance of market level services to either handlers or consumers and the percentage of the cooperatives providing those services. Because cooperatives are oper-

ated in the interest of their producer members, it is logical for them to emphasize those services believed to be most beneficial to their members. Also, since members consider services to be important, a cooperative may strengthen members' support by insuring that they are fully informed about the services the organization provides, including market level services, which members generally consider to be more important than farm level services.

2. The similarity of services of the various types and sizes of cooperatives at the farm level may have reflected similar goals among cooperatives, emphasis by cooperatives on nonprice competition in providing services rather than price competition in procuring milk, or both. If services performed by cooperatives are considered to be goals and if cooperatives have similar goals in dealing with members, a common pattern of services would emerge. If cooperatives emphasize service competition in procurement, similarity in farm level services may result from cooperatives patterning their behavior on that of comparable organizations.

3. Variations among cooperatives in numbers of services provided and in expenditures on services were mostly on market level services. In general, the larger and combination cooperatives provided more market level services than did the other types and sizes of cooperatives. A major factor in differences in number and costs of market level services was whether or not the cooperative provided a full supply contract and disposed of surplus milk. These services were costly, but they were considered essential to effective bargaining and marketing of class I milk. In performing these services, cooperatives played an important role in planning and synchronizing the movement of milk from producers to consumers. In this process cooperatives also strengthened their bargaining power by reducing the costs, risks, and responsibilities of fluid-milk processors in obtaining milk and by limiting processors' access to alternative supplies of milk.

4. The higher cost of services in large and combination cooperatives may have been due in part to such factors as differences in the quality of the services they provided and in the frequency with which those services were performed. One of the limitations of the study was that it was not feasible to measure qualitative factors such as these. That is an area left for future research. Also, since there may be some overlapping among different services, it is conceivable that definitions of certain services may not have been absolutely identical among all cooperatives.

5. Because the benefits of market level services commonly could not be limited to those who paid for them, the equitable sharing of the costs of those services was a serious concern, especially to the largest and combination cooperatives, which were most involved in providing market level services. Nonmembers, who benefited from these services without sharing in the costs of providing them, were an important element of this problem. One apparent consequence of this situation was that slightly more than one-half of the managers reported that prices to their members generally were below prices to nonmembers. Moreover, members indicated that price was an important consideration to them in making decisions whether to join or leave a cooperative. There was no strong consensus among managers on how to deal with the problems of inequitable sharing of market service costs and of the resulting disparities in prices to producers. There was concern that these problems might lead to restrictions in market services in the future as they become more costly. A few more than one-half of the managers suggested that a possible solution might lie in changing the provisions of federal orders in some manner so nonmembers would participate in paying for market level services. It appeared to be an unquestioned assumption that cooperatives were the most logical agency to provide these market level services.

6. A majority of the managers believed that service charges to handlers were not adequate. Similarly, only a minority considered it likely that either members or handlers would be willing to pay the full cost of any additional services their cooperatives might provide. Though many members seemed agreeable to providing more services, responses of both members and managers indicated that producer support of market level services would be stronger if they understood them better.

7. There are several limitations to the data on costs of services. Costs of performing individual services

could not be determined precisely because they were not specifically set forth in cooperatives' accounting records and, in some cases, may have been paid for from more than one fund. Moreover, the average cost per unit for any service performed by a cooperative was expressed as the average cost per hundred weight of all milk handled by the cooperative, even though that service may have applied to only part of the cooperative's milk. Most important, costs of services are affected by inflation. They have increased sharply since 1973, when the estimates reported in this publication were made. Whether they have increased as much as factor prices, which apparently were some 70 to 80 percent higher by July 1979 than they were in 1973, depends on whether or not efficiency in providing those services had improved.

8. The survey of members showed a widespread need for more effective membership education about services. Education programs need to provide producers with information not only about what services the cooperative does and does not provide and their benefits, but also about the costs of services. Members' attitudes about providing services will be most meaningful if they are developed with a clear understanding of the costs of providing services and, consequently, of their effect on the price they receive for milk.

9. In evaluating the performance of cooperatives, interested parties should recognize that they provide, at the expense of their members, services at the market level that benefit all segments of the fluid-milk industry, including consumers. These activities should be considered in evaluating the justification for the over-order prices charged by many cooperatives. This study did not provide the information needed to determine the extent to which the costs or benefits of those services compensated for the premiums cooperatives had been charging, but it did show that cooperatives provided services that compensated at least in part for their over-order premiums.



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