

COOPERATIVE  
FLUID-MILK  
ASSOCIATIONS  
IN IOWA.

By PAUL E. QUINTUS and  
T. G. STITTS.

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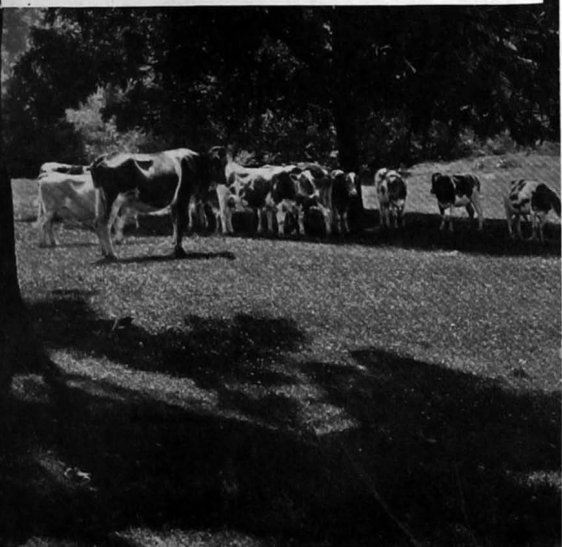


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# COOPERATIVE FLUID-MILK ASSOCIATIONS IN IOWA

by PAUL E. QUINTUS  
and T. G. STITTS



*Iowa Agricultural Experiment Station*  
in cooperation with the *Cooperative Division*

**FARM CREDIT ADMINISTRATION**

WASHINGTON, D. C.

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# Contents

	Page
Purpose of the study . . . . .	3
Special problems of milk marketing in Iowa . . . . .	3
Relatively small population centers . . . . .	4
Relatively heavy milk production . . . . .	4
Little overlapping of milksheds . . . . .	6
Early cooperative efforts . . . . .	8
First State-wide marketing agency . . . . .	9
Formation of local cooperatives . . . . .	9
Distributing associations . . . . .	12
Present cooperative milk-producers' organizations . . . . .	13
Organization types . . . . .	14
Operating associations . . . . .	16
Bargaining associations . . . . .	28
A milk-distributing cooperative . . . . .	39
Mid-West Non-stock Cooperative Dairies . . . . .	40
Corporate and cooperative features of Iowa milk-marketing associations . . . . .	40
Voting and membership requirements . . . . .	41
Distribution of income . . . . .	41
Financial history . . . . .	43
Operating practices . . . . .	44
Price negotiations . . . . .	44
Sales of surplus milk . . . . .	44
Checking of weights and tests . . . . .	46
Handling the producer pay roll . . . . .	46
Promotion of sales . . . . .	47
Quality improvement . . . . .	47
Compilation of market data . . . . .	48
Other services . . . . .	48
Cost of services . . . . .	48
Management and accounting . . . . .	49
Comparison of sales plans . . . . .	50
Payments to producers . . . . .	53
Butterfat-test differentials . . . . .	55
Base-surplus plans . . . . .	56
Membership policies . . . . .	58
Features of contracts . . . . .	58
Expansion of membership . . . . .	59
Procurement of milk and cream . . . . .	60
Number of routes . . . . .	62
Hauling rates . . . . .	62
Ownership and control of routes . . . . .	63
Trucking contracts . . . . .	65
Appendix . . . . .	67

# *Cooperative* Fluid-Milk Associations In Iowa

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COOPERATIVE associations of fluid-milk producers have been active in the United States since pre-war days and since 1925 have increased greatly in economic importance through their leadership in attempts to solve the complex problems associated with the marketing of milk to urban consumers. Milk marketing has long been a subject of special interest, since it involves many problems not characteristic of the marketing of other farm products. The recent economic depression with the seriously demoralized markets in 1932 and 1933 brought numerous State and Federal agencies into the field to assist in stabilizing marketing conditions. In Iowa, as in other dairy States, cooperatives were severely tested during this period, and some found it necessary to make significant readjustments in their plans of operation.

Most of the marketing problems peculiar to fluid milk arise from the characteristics of the commodity itself. Fluid milk is an important food, yet it is highly perishable and presents an ideal medium for the growth of harmful bacteria. For these reasons and because of its great bulk relative to its value, the fluid-milk supply of each metropolitan center is ordinarily obtained from the immediately surrounding territory. Quality is so important that no large municipalities entrust sanitation entirely to private initiative. Many different sanitary codes have been enacted. These have been a factor in further isolating

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It is desired to acknowledge the assistance of Gordon C. Laughlin, associate agricultural economist, Farm Credit Administration, and Joseph H. Shaw, of the Iowa State College, who assisted in the collection of records for this study.

For purposes of identification with the Iowa Agricultural Experiment Station records, this circular may be referred to as project no. 456 of Iowa Agricultural Experiment Station, in cooperation with the Farm Credit Administration.

each city as a market center, in contrast with the national market for most other important agricultural commodities.

Because it cannot be stored, the supply of fresh milk must be continuous and ample to meet the varying requirements of urban consumers. The supply of milk is characterized, however, by wide variations in seasonal production. Producers who deliver sufficient milk to meet the needs of a market in the months of flush production seldom can provide an adequate quantity in the period of low production. For this reason the producers included in the milkshed must be able to supply the market during the season of low production. This means that there will be surplus milk at times by reason of seasonal variations in production. Variation in sales to consumers from day to day is another factor contributing to surplus. Since milk used for fluid-milk and fluid-cream consumption normally has a greater value than that which is manufactured, there is frequently pressure from more and more producers to participate in the milk market, and this further increases the surplus. Such pressure becomes more acute when the price for fluid milk is relatively high in comparison with manufactured dairy products. The adjustment of the prices that will be paid for milk in accordance with its several uses is one of the most delicate problems influencing the quantity of surplus in any milk market.

The quantity of surplus relative to sales of fluid milk and cream has a direct bearing upon the operations and business policies of the cooperative association, as it influences the bargaining power of the producers through their cooperative. The satisfactory disposition of surplus always has been and continues to be a major problem of milk producers' cooperative associations.

The marketing of fluid milk differs from that of most other farm products in that there is no common place where buyers and sellers ordinarily meet and establish prices from day to day. Milk pasteurization and distribution lend themselves to large-scale operations, so that in any market a few buyers usually handle the supplies of numerous producers. Under such a system the bargaining power of the producer (seller) is relatively weak. Thus, producers' associations were organized primarily for collective bargaining with regard to milk prices. Through these groups numerous price plans have been evolved, notable among which is the selling of milk by organized producers for different prices according to the purpose for which the milk is to be used. This has come to be known as the "use" or "classification" plan of selling milk as compared with the old "flat price" system.<sup>1</sup> Most associations, in addition to negotiating the terms of sale to distributors, perform numerous other functions, such as handling the producers' pay roll, controlling procurement, and improving quality. Some have expanded their activities to include the operation

<sup>1</sup> Metzger, H. COOPERATIVE MARKETING OF FLUID MILK, U. S. Dept. Agr. Tech. Bull. 179, 91 pp. 1930.

of a manufacturing plant or plants, to provide an outlet for surplus milk, and to facilitate more systematic and orderly marketing of the milk produced within the milkshed.

## PURPOSE OF THE STUDY

**M**ANY of the problems of milk marketing in Iowa are similar to those found in other areas. Likewise, Iowa cooperatives engaged in the marketing of fluid milk have many of the features characteristic of cooperatives in other States. Those interested in dairy marketing, however, find it necessary to study the cooperatives in a particular area in order to understand how they have adjusted their operations to production, demand, and changes in economic conditions.

This circular is based on a study made by the Cooperative Division of the Farm Credit Administration in cooperation with the Agricultural Economics Section of the Iowa Agricultural Experiment Station. An effort was made to analyze some of the problems of milk marketing peculiar to the State of Iowa, to discover the types of organizations functioning in the principal markets, and to study historically the efforts that have led to the present status of cooperation among milk producers. Specifically, the study covers: (1) A description of supply and market conditions within the State; (2) organization histories that contributed to the present cooperative organizations; (3) description of the more fundamental cooperative features of these associations; (4) their methods of financing; (5) functions performed; (6) producer and dealer relations; (7) price plans; and other related and pertinent facts.

While much of the information contained herein is based on surveys of the cooperatives made in the summers of 1935 and 1936, considerable additional material was obtained from interviews with cooperative and other leaders in dairying. Broadly, the purpose of the study is to present a general picture of the cooperative movement as related to the production and marketing of fluid milk in Iowa. Other workers may find it profitable to undertake a more detailed analysis of particular associations and of special problems.

## SPECIAL PROBLEMS OF MILK MARKETING IN IOWA

**T**HREE unique features of conditions in Iowa have influenced the type of cooperative found there and its general operating and price policies. These characteristics are: (1) The relatively small size of the markets; (2) the relatively heavy production of butterfat in the State; and (3) the isolated character of the milksheds, which has prevented overlapping of fluid-milk supply areas.



## RELATIVELY SMALL POPULATION CENTERS

In 1930 Iowa had a total population of 2,470,939, of which 979,292 were classified as urban. There were 21 population centers of 10,000 or over, with an aggregate population of 716,469. With few exceptions, it is in these 21 cities that cooperative organizations of fluid-milk producers have developed. Thirty-five cities had a population of 5,000 or over, but only 4 exceeded 50,000. A frequency distribution of cities on the basis of the 1930 population appears in table 1.

TABLE 1.—IOWA CITIES GROUPED ACCORDING TO POPULATION, 1930

Population group	Number of cities		Average population of cities
	In group	Cumulative	
100,000 and over.....	1	1	142,559
50,000-99,999.....	3	4	65,343
25,000-49,999.....	6	10	35,079
10,000-24,999.....	11	21	15,219
5,000-9,999.....	14	35	6,727

The larger cities usually have some suburban population which is given a separate census classification, but which enters into the fluid-milk marketing area. For example, the survey includes the Omaha area, with a population of 214,006, since one producers' organization operates there and in Council Bluffs, Iowa. The combined population of this market is nearly 260,000. Also, the "Quad Cities", including Moline, East Moline, and Rock Island, Ill.; and Davenport, Iowa, have been included as one market area. There are 130,000 consumers in these four cities. The Omaha market is larger than any single population center wholly within the State of Iowa, and the "Quad Cities" market is nearly as large.<sup>2</sup>

## RELATIVELY HEAVY MILK PRODUCTION

Milk production in Iowa is relatively large considering its small urban population. The result is a heavy surplus of milk over fluid-milk and fluid-cream requirements. Any reference to fluid-milk marketing in the State is likely to be misleading unless this fact is borne in mind. Figure 1 shows the density of Iowa milk production on a county basis. In 1934, six counties produced more than 20,000 gallons per square mile, and nearly half the counties produced more than 11,000 gallons per square mile. The concentration of dairying

<sup>2</sup> Des Moines, the largest city in Iowa, had a population of 142,560 in 1930.

in the northeastern quarter of the State is apparent. There are no large fluid-milk consuming centers in this district, however, and the outlet is mainly for butter.

GALLONS OF MILK PRODUCED PER SQUARE MILE IN IOWA COUNTIES, 1934

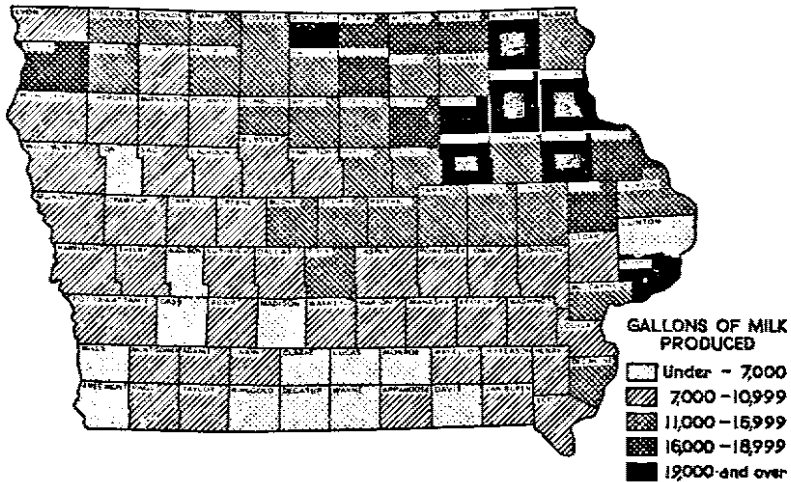


FIGURE 1.—The concentration of dairying in the northeastern part of the State is apparent. (Based on the 1935 Census of Agriculture.)

The sale of milk and milk products represents about 14 percent of the total Iowa farm income. While there are many outstanding dairy herds in the State, particularly in the northeastern dairy section and among those supplying milk for fluid consumption in all the towns and cities, it appears that most Iowa farmers do not specialize in dairying. Yet it is significant that in 1934 the estimated milk production for the State was more than 6 billion pounds; a production exceeded only in the three States of Wisconsin, New York, and Minnesota.

Because of the heavy milk production in relation to population, considerably less than 10 percent of all milk produced in Iowa is sold from the farm for fluid consumption, as milk or cream. While the two items, milk retailed by producers and milk sold at wholesale, make up approximately 10 percent of the total quantity of milk produced (table 2), not all of the milk wholesaled is used for bottling purposes. The quantity diverted to other purposes in commercial channels cannot be measured exactly, but a small part does go to cheese factories, creameries, and condenseries, and some is manufactured by milk distributors into milk products. Thus it is probable that only 6 or 7 percent of all milk produced is actually consumed in fluid form off the farm.

TABLE 2.—DISPOSITION OF MILK PRODUCED IN IOWA, 1934<sup>1</sup>

Disposition	Quantity of milk disposed of as indicated	Percentage of State production
	<i>Million pounds</i>	<i>Percent</i>
Used as whole milk or cream on farms.....	607	9.94
Made into butter on the farm.....	297	4.86
Whole milk fed to calves.....	177	2.90
Separated for sale of butterfat.....	4,423	72.40
Fluid milk retailed by producer.....	167	2.73
Fluid milk sold at wholesale.....	438	7.17
Total.....	6,109	100.00

<sup>1</sup> Compiled from reports of the Bureau of Agricultural Economics, U. S. Department of Agriculture.

Nearly every city in Iowa is located in a heavy-surplus area, in the sense that only the milk of the nearby producers is needed to meet fluid-milk requirements. Even at Des Moines, the largest city, most of the fluid-milk supply comes from within a radius of 25 miles. Since milk for fluid purposes can now be shipped several hundred miles when required, it is apparent that the potential milk supply for Iowa cities is almost unlimited. This has an important bearing on the history and present status of milk producers' organizations operating in these cities. When the available milk supply is large, the spread between the price of milk for fluid consumption and for lower-valued uses must be narrow. If not, new producers or those outside the organization will exert pressure to come into the fluid market to obtain some premium over the price paid for milk sold for manufacturing purposes. This means lower average prices and a loss of part of the fluid-milk market for the organized producers. The only effective way for the associations to hold the fluid-milk market is to keep prices in line with the manufactured value of milk plus the additional costs incurred. Improved roads and new transportation facilities have played an important part in expanding available milk supplies. Health regulations, however, may affect the source of supply and, therefore, exert an important influence on milk prices.

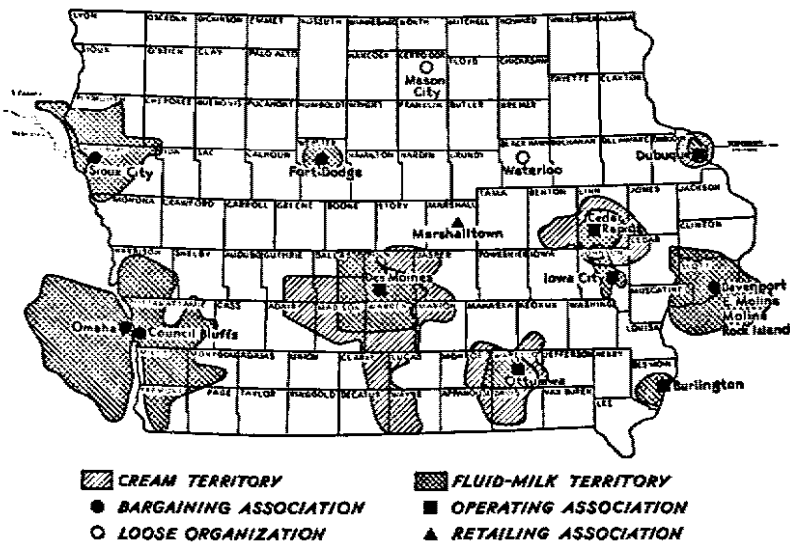
#### LITTLE OVERLAPPING OF MILKSHEDS

It is significant that none of the fluid-milk territories of the major Iowa cities overlap or even come within close proximity of each other, except those of Iowa City and Cedar Rapids, where there is some

overlapping.<sup>3</sup> Each area is independent of all others. This is true even though there are no natural barriers, such as large bodies of water or mountain ranges, and political boundaries have not limited expansion except in minor instances. This fact emphasizes both the availability of fluid milk in the immediate vicinity of each market center and the possibilities of great expansion, should any city require more milk or wish to tap new sources of supply for any reason. Under these conditions the organized fluid-milk producers in a given territory may encounter problems not common to associations serving a well-defined area with a rather limited supply.

While there is no overlapping between the territories of milk associations, cooperative creameries with established truck routes covering large areas may also serve milk producers. There are also in Iowa a large number of independent milk and cream buyers.<sup>4</sup> However,

**TERRITORIES\* SERVED BY 10 FLUID-MILK PRODUCERS' ORGANIZATIONS OPERATING IN IOWA AND ADJOINING STATES**



\*Cream territory refers to farm-separated cream gathered primarily for manufacture into butter.

FIGURE 2.—The areas from which the larger cooperatives obtain their milk supplies do not overlap. The cream territory of an association, however, or the area from which farm-separated cream is gathered primarily for manufacture into butter, extends beyond the fluid milkshed.

<sup>3</sup> Figure 2 is not complete in this respect, since the fluid-milk supply areas of several of the larger cities are not shown. Waterloo, Mason City, and Marshalltown are examples. However, the inclusion of all cities of 10,000 population or over would not result in overlapping milk territories. The further assumption is made that the territories of the organized fluid-milk producers coincide with those of all shippers in the market. This assumption is substantially correct.

<sup>4</sup> A further description of the cooperative-creamery territories in Iowa may be found in Robotka, F., and Laughlin, G. C., COOPERATIVE ORGANIZATION OF IOWA FARMERS' CREAMERIES. Farm Credit Administration Bull. 14, 92 pp., illus. 1937.

the milk territories are predominantly made up of whole-milk shippers selling milk for fluid consumption.

The location of each organization and the milkshed from which milk (and farm-separated cream, if any) is drawn, are shown graphically in figure 2. As might be expected, there is a noticeable relationship between the size of the milkshed and the population of the market. The largest market is Omaha-Council Bluffs; Quad Cities, Des Moines, and Sioux City follow in the order named. The density of milk production and the proportion of farmers selling through the various organizations also affect the size of the milksheds.

Four associations maintain truck routes for gathering farm-separated cream. The cream territories, although overlapping the milk territories on the outer fringes, for the most part, lie beyond the fluid-milk zone.

## EARLY COOPERATIVE EFFORTS

**C**OLLECTIVE bargaining for the sale of milk through cooperative associations was introduced into Iowa in 1916 when the fluid-milk producers around Des Moines joined together in a voluntary association, with the intent of improving prices and marketing conditions in general. The association was financed by an annual membership fee of \$1.50. Nearly all of the approximately 1,000 fluid-milk producers in the territory joined the organization. These early cooperative efforts undoubtedly had a marked influence on the present cooperative set-up.

In the period from 1916 to 1920 collective-bargaining associations had a widespread growth throughout the United States, particularly in the supply areas of the larger cities.<sup>5</sup> Pasteurization and centralized distribution had become general. The individual farmers found themselves dealing with commercial units that held more or less of a monopoly on the purchase of milk for fluid use. The bargaining position of any individual farmer was essentially nil, especially in areas of heavy surplus such as those supplying the markets in Iowa. The milk dealers were charged with playing one producer against another, or even one group or district against another, and buying on their own terms. This resulted in (1) low prices to producers, (2) dissatisfaction with weights and tests, and (3) loss of market for many producers during the season of heavy production.

In general, the cooperative organizations of fluid-milk producers in Iowa were formed because the producers felt that the dealers were taking advantage of them on one or all of these three points. Hence,

<sup>5</sup> The oldest association reporting to the U. S. Department of Agriculture was formed in 1882. Four other associations formed before 1900 are recorded. Of those established between 1900 and 1915, 10 were still operating in 1920. Metzger, H., *COOPERATIVE MARKETING OF FLUID MILK*. U. S. Dept. Agr. Tech. Bull. 179, 91 pp., illus. 1920. See p. 8.

the early collective bargaining associations were essentially a joining of producer forces to "fight" the dealers. The expression, "We had the dealers licked," or, "We almost had the dealers licked," was frequently heard from managers or previous managers of milk producers' associations. Strikes have been resorted to in many cases and some of the existing organizations grew out of or were related to a producers' milk strike.

### FIRST STATE-WIDE MARKETING AGENCY

The first real difficulty of the early association at Des Moines, called the Des Moines Milk Producers' Association, came in the summer of 1917 when the dealers would not accept the terms offered regarding the price of July milk. The producers refused to deliver on any other terms and called a strike. From the standpoint of the producers, this strike was effective in one sense, because it forced the dealers to ship in milk from distant sources at great expense. While the producers also lost by withholding sales, they were determined to stand by their policy and force the dealers to the association's terms. In response to this opposition, the dealers resorted to legal means and charged the directors of the cooperative with a combination in restraint of trade.<sup>6</sup>

The association, finding itself confronted with these legal difficulties, immediately set out to incorporate as a capital-stock cooperative. This was the only legal means by which a collective-bargaining association might be organized in Iowa at that time. The new organization was incorporated on August 15, 1917, as the Iowa Dairy Marketing Association. It had an authorized capital stock of \$25,000 divided into shares of \$1 par value. No one individual could own more than 50 shares of stock. Stock was sold without regard to eligibility for membership, and the association lacked many other features now considered essential in a sound cooperative marketing enterprise. The court subsequently dismissed the indictments against the directors, and the strike ended with assurance to the producers of recognition by the dealers. As a result, the milk producers' movement received considerable impetus in other markets of the State.

### FORMATION OF LOCAL COOPERATIVES

As the name implies, the Iowa Dairy Marketing Association was not set up to limit its activities to the Des Moines market. It was intended, rather, to establish local associations (to be affiliated with

<sup>6</sup> The passage in 1914 of the Clayton Act (38 Stat. 730, U. S. Comp. Stat. sec. 1243a), amending the Sherman antitrust law, defined a distinctive type of agricultural association which would not be regarded as a combination in restraint of trade. However, at this early date the exact legal status of such a case had not been determined. The Capper-Volstead Act of 1922 (42 Stat. at Large 368) clarified the exemptions by specifying definite requirements for cooperative associations.

the central association at Des Moines) in each of the milk markets in the State where centralized distribution had developed. The eventual plan was the organization of a State federation of locals which would control such matters as intercity shipments of milk. It was recognized that each association would be more effective if dealers could not resort to other areas for their milk supplies during local disputes or apparent shortages.

A vigorous membership campaign was carried on, and by 1921 locals had been established in 10 of the more important Iowa markets. The number of members and date of organization for each of these locals appear in table 3.

TABLE 3.—MEMBERSHIP OF IOWA DAIRY MARKETING ASSOCIATION, 1922

Location of member-association	Year organized	Approximate number of members
Des Moines.....	1917	1,050
Charles City.....	1918	50
Mason City.....	1918	100
Waterloo.....	1918	75
Waverly.....	1918	150
Marshalltown.....	1919	50
Dubuque.....	1920	250
Oskaloosa.....	1920	75
Ottumwa.....	1921	100
Sioux City.....	1921	400
Total.....		2,300

The State-wide association did not hold together after 1922. Over 50 percent of the stock was held in Des Moines and the method of proxy voting favored the Des Moines stockholders so that control was assured them. Moreover, the original enthusiasm for organization was of the promotional rather than the cooperative type. The cooperatives possessed no clear-cut objectives upon which to build a permanent and constructive milk-marketing program. The subsequent break-down was a natural consequence. Lack of interest, inefficient management, petty jealousy, unfair business practices, constant "warfare" with the milk dealers, and a general lack of understanding of cooperative principles and practices were the important contributing factors. Of the 10 local associations, only the one at Ottumwa is now operating under the original charter. Of the remainder, six have been reorganized one or more times, and three have never attempted reorganization.<sup>7</sup>

<sup>7</sup> Available records show that the associations at Charles City, Waverly, and Oskaloosa were discontinued and never reorganized.

In March 1922 a second attempt was made to organize a State-wide association of fluid-milk producers on a nonstock, nonprofit basis as provided by the Iowa nonstock cooperative law of 1921 (ch. 390, Iowa code of 1935).<sup>2</sup> It was intended that each member association should be reorganized according to a standard plan and that each should be locally independent. Proxy voting was eliminated. Service to members at the lowest practicable cost was contemplated and, again, the ultimate intent was to organize a State federation.

The local association in Des Moines, where the leadership was centered, was the first to complete reorganization—May 8, 1922. In this second reorganization the association was given its present name, Des Moines Cooperative Dairy Marketing Association. Several other cooperatives were organized or reorganized under the new plan.

Because of legal difficulties, general lack of interest, and the financial failure of several associations, this new attempt to organize a State federation never proceeded beyond the preliminary stages. Such interest as there was on the part of a few leaders apparently faded in the course of years. However, the Mid-West Non-Stock Cooperative Dairies, which was organized in 1933 under Nebraska law (ch. 24, art. 14 compiled Statutes of Nebraska, 1935), is directly traceable to these earlier activities and may be considered an outgrowth of the original Iowa Dairy Marketing Association of 1917. This organization of 1933 and the service aspect of a State-wide or regional federation are discussed in a later section of this circular.

Before the Iowa Dairy Marketing Association had been completely disbanded, 7 other nonaffiliated milk-producer cooperatives had been organized within the State, bringing the total number to 17 (table 4).

TABLE 4.—MILK PRODUCERS' ASSOCIATIONS IN IOWA NOT AFFILIATED WITH THE IOWA DAIRY MARKETING ASSOCIATION

Name of organization	Location	Year organized
Clinton Milk Producers' Association.....	Clinton.....	1917
Linn County Milk Producers' Association.....	Cedar Rapids....	1918
Burlington Milk Producers' Association.....	Burlington.....	1921
Boone Dairy Marketing Association.....	Boone.....	1922
Fort Dodge Cooperative Dairy Marketing Association.	Fort Dodge.....	1922
Scott County Milk Producers' Association.....	Davenport.....	1922
Ames Milk Producers' Association.....	Ames.....	1923

The association at Fort Dodge is the only one of this group that has not been discontinued or reorganized. At present no association

<sup>2</sup> For a discussion of this law see Robotka, F. COOPERATING UNDER IOWA COOPERATIVE LAWS. Iowa Agr. Expt. Sta. Circ. 95, 16 pp. 1924.



operates in Clinton, Boone, or Ames. New associations were formed at Cedar Rapids, Burlington, and Davenport.

### DISTRIBUTING ASSOCIATIONS

Milk producers have undertaken cooperative distribution of milk and cream at retail and wholesale from time to time in several of the Iowa fluid-milk markets appearing in tables 3 and 4.<sup>2</sup> Most of the distributing activities began in the early twenties when the associations were new. All except the one located at Marshalltown subsequently discontinued business. Many were completely dissolved and, in most cases, producers incurred heavy financial losses. Few new bargaining associations were formed in these markets, since a natural consequence of financial loss on the part of producers is skepticism toward any form of cooperative organization.

It is not known whether some of the incentive for retailing milk was afforded by the leadership of the Iowa Dairy Marketing Association or whether the choice was entirely a local one. Many of the cooperative distributing associations which have been formed throughout the United States had retail distribution of milk as an objective at the outset. Some producers felt that the dealers were receiving an undue proportion of the consumer's dollar and reasoned that by retailing milk used in fluid consumption and processing the remainder they would receive the same wholesale price as formerly, plus the distributors' profits. However, only two associations in Iowa were formed with the express purpose of going into the retail distributing business. These were in relatively small markets of some 10,000 population each and the ventures were generally unsuccessful.

With the exceptions just noted, all other distributing associations arose out of earlier bargaining associations. There was usually some special circumstance in the market which brought about the change. In at least three cases bargaining associations decided to acquire facilities for processing and retailing milk on routes when milk strikes failed to bring about satisfactory outlets through the established dealers. In two markets, organized producers began retailing milk when previously important outlets for part of their milk were shut off.

Whatever the circumstances leading to cooperative distribution were, they did not, in Iowa, lead to commercial success. All these associations were inadequately financed and did not avail themselves of experienced managerial ability. Many were ill conceived in the first instance, since they went into retailing when marketing conditions were unsettled and often with excessive supplies of milk relative to the portion of the market they could hope to obtain. Probably the

<sup>2</sup> Available information shows that producers' organizations operated retail businesses in Oskaloosa, Des Moines, Sioux City, Boone, Ames, Waterloo, Mason City, Clinton and Marshalltown. This list does not include those operated in connection with a cooperative creamery.

most serious error was the failure to recognize the problems to be faced by a cooperative of this type.

### PRESENT COOPERATIVE MILK-PRODUCERS' ORGANIZATIONS

THE names, locations, and dates of organization of all the 13<sup>10</sup> fluid-milk associations operating in Iowa for which records are available are recorded in table 5. The major part of the discussion relates to 10 associations, since 2, the associations at Mason City and Waterloo, are very loosely organized and 1 is a small distributing association.

TABLE 5.—COOPERATIVE MILK PRODUCERS' ASSOCIATIONS IN IOWA, 1936

Name of organization	Location	Market population, 1930	Year organized	Previous organization
Ottumwa Cooperative Dairy Marketing Association.	Ottumwa.....	28, 075	1921	None
Dubuque Cooperative Dairy Marketing Association.	Dubuque.....	41, 679	1922	1920
Fort Dodge Cooperative Dairy Marketing Association.	Fort Dodge....	21, 895	1922	None
Marshalltown Cooperative Dairy Marketing Association.	Marshalltown..	17, 373	1923	1919
Des Moines Cooperative Dairy Marketing Association.	Des Moines....	142, 599	1925	1917
Burlington Cooperative Milk Producers Association.	Burlington.....	26, 755	1926	1921
Cedar Rapids Cooperative Dairy Company.	Cedar Rapids..	56, 097	1926	1918
Dairymen's Cooperative Service League.	Mason City....	23, 304	1932	1918
Nebraska-Iowa Non-Stock Cooperative Milk Association.	Omaha.....	1 256,054	1932	None
Sioux City Milk Producers' Association.	Sioux City....	79, 183	1932	1921
Cedar Valley Producers' Association.	Waterloo.....	2 53, 553	1933	1918
Illinois-Iowa Milk Producers' Association.	Davenport....	3 130,904	1933	1922
Johnson County Dairy Marketing Association.	Iowa City....	15, 340	1933	None

<sup>1</sup> Includes Council Bluffs, Iowa.

<sup>2</sup> Includes the adjacent town of Cedar Falls, Iowa.

<sup>3</sup> Includes the Quad-Cities market area. The Quality Milk Producers Association with headquarters at Rock Island, Ill., also operates in this area and has approximately the same membership as the Illinois-Iowa Association.

<sup>10</sup> This number would be increased to 14 if the survey had included both of the associations operating in the Quad Cities market area.

It will be recalled that there are 21 cities in Iowa with a population of 10,000 or over. None of the present organizations is located outside this group of cities. Of the eight remaining population centers in this size classification, four (Muscatine, Keokuk, Fort Madison, and Newton) have never had an incorporated organization of this kind, and in the remaining four (Clinton, Boone, Ames, and Oskaloosa) milk producers' associations once existed but subsequently discontinued operations. Two of the organizations referred to earlier as among those ceasing operations were in Charles City and Waverly—cities of less than 10,000 population.

Six of the associations operating in 1935 were organized in 1932 and 1933. This group includes the associations in Omaha, Council Bluffs, and Iowa City, representing in each case the first attempt at organization in these markets.

### ORGANIZATION TYPES

Cooperative organizations of fluid-milk producers are arbitrarily classified in this report according to three distinct types, depending upon the nature and extent of the functions performed; namely, (1) operating associations, (2) bargaining associations, and (3) distributing associations. Distributing associations, as the name implies, include all those which bottle and deliver milk and cream direct to the consumer. The distinction between distributing and bargaining associations is clear, since producers who have provided an organization for retailing purposes are not primarily engaged in negotiating the terms and conditions of the sale of milk to existing distributors in the market. The operation of a distributing association seldom involves bargaining with regard to conditions of sale because other distributors are unlikely to buy milk from an organization which is a competitor in the retail business.

Actually, however, all associations not delivering part of their milk direct to the consumer and processing the remainder in their own plants are properly called bargaining associations. Yet it is convenient to divide the bargaining associations into two groups. Those that control and operate physical facilities for manufacturing milk in excess of fluid sales through established distributors are called "operating" associations and those without such facilities are called "bargaining" or "strictly bargaining" associations.

It should not be implied that the strictly bargaining associations do not perform numerous functions. In Iowa they ordinarily negotiate for the sale of their members' milk, check weights and tests, handle the producer pay roll, guarantee payments and market outlets, operate a pool for their members according to the straight-pool or base-surplus plan, carry on quality-improvement work, and provide other services

TABLE 6.—PRINCIPAL FUNCTIONS PERFORMED BY 10 MILK PRODUCERS' ASSOCIATIONS, 1936

Location and type of association	Operation of surplus plant	Checking of weights and tests	Guarantee of outlet and payments	Handling of producer pay roll	Quality field work	Advertising of dairy products	Assembly and use of market data	Education in co-operation
<b>Bargaining associations:</b>								
Davenport.....	No.....	Yes.....	Yes.....	Yes.....	Some.....	Some.....	No.....	Some letters and meetings.
Fort Dodge.....	do.....	When complaints arise.	do.....	do.....	None.....	No.....	do.....	None.
Iowa City.....	do.....	Occasionally.....	No.....	No.....	do.....	do.....	do.....	Some.
Omaha (including Council Bluffs).....	do.....	Yes.....	Yes.....	Yes.....	Yes.....	do.....	Some.....	Bimonthly paper and meetings.
Sioux City.....	do.....	do.....	do.....	do.....	Some.....	do.....	Yes.....	Monthly news letter.
<b>Operating associations:</b>								
Burlington.....	Yes <sup>1</sup> .....	do.....	do.....	do.....	Yes.....	Some.....	No.....	Some.
Cedar Rapids.....	do. <sup>1</sup> .....	do.....	do.....	do.....	do.....	Yes.....	do.....	Do.
Des Moines.....	do.....	do.....	do.....	do.....	do.....	do.....	Yes.....	Monthly paper and meetings.
Dubuque.....	do. <sup>1</sup> .....	do.....	Indirectly.....	do.....	do.....	do.....	No.....	Very little.
Ottumwa.....	do.....	do. <sup>2</sup> .....	Yes.....	do.....	Some.....	Some.....	do.....	Some.

<sup>1</sup> Leased plant.

<sup>2</sup> At 60-day intervals.

in much the same manner as an operating association. The only significant difference lies in the fact that they dispose of all their milk through established dealers or other handlers rather than divert a portion of the supply to plants controlled and operated by the association.

On the basis of the above classification, associations of each type are now operating in Iowa at the following locations:

Bargaining associations	Operating associations	Distributing associations
Davenport. Fort Dodge. Iowa City. Mason City. Omaha (including Council Bluffs). Sioux City. Waterloo.	Burlington. Cedar Rapids. Des Moines. Dubuque. Ottumwa.	Marshalltown.

A general idea of the extent to which selected functions are performed by 10 associations may be had from table 6. All are engaged in price negotiations with dealers. The first five listed operate manufacturing plants, three of which are leased.

### OPERATING ASSOCIATIONS

The largest association classified as an operating organization, the Des Moines Cooperative Dairy Marketing Association, is described here in some detail. The other cooperatives in the group will be discussed more briefly but with sufficient detail to show outstanding differences in organization set-up and general policies.

#### *Des Moines Cooperative Dairy Marketing Association*

The first corporate organization of fluid-milk producers in the Des Moines territory in 1917 and the reorganization as the Des Moines Cooperative Dairy Marketing Association in 1922, under the nonstock law (ch. 390, Iowa code of 1935), have been discussed. There has been no change in corporate status of this association since 1922. However, an important development took place in 1926 when the association expanded its activities to include the operation of a manufacturing plant. In the interval between 1922 and 1926 the organization functioned as a strictly bargaining agency.

By 1926, because of relatively favorable prices for fluid milk and increased receipts—largely a result of improved methods of transportation—the market was carrying a heavy burden of surplus milk.

Distributors accepted only such quantities of milk as they required for their respective trades and during the flush season farmers were without a market for a large portion of their milk.

The principal reason for acquiring manufacturing facilities was to provide an every-day outlet for all milk produced throughout the year. It was also recognized that the association's bargaining power would be enhanced if it should obtain direct control of most or all of the surplus milk. The new plan soon brought about improvement in marketing conditions and in the course of a few years the association built up a large manufacturing business and gained a widespread reputation for successful manufacture of surplus milk.

The other fluid-milk producers' associations in Iowa are indebted to the Des Moines association for its leadership, and many of them are modeled after it, at least in part.

After revising its business set-up in 1926, the association continued on a nonstock basis with a membership fee of \$1. A small plant was purchased for \$5,000, and \$15,000 was spent for equipment. Since nearly \$19,000 had been accumulated from earnings of the bargaining association, capital was available for these purposes. The next year, however, a new plant was acquired at a considerably greater cost and financed by cash and notes received from members according to a quota system of \$12.50 per cow in the dairy herd. These notes were used as collateral for a bank loan of \$30,000. Ten percent of each producer's milk check was deducted until his note was paid in full. As a result, all notes were paid in less than a year and the bank loan was retired. As soon as each member's subscription was fully paid a certificate of indebtedness was issued to him, as evidence of his equity in the business. Over \$88,000 in certificates was outstanding in 1935. Interest has been paid on these certificates at the rate of 6 percent annually.

The association had no indebtedness at the time of this study and the surplus account was well in excess of the outstanding certificates. Steps were taken early in 1936 to allocate the surplus equitably among the patrons who had helped to create it. The details of this plan are discussed later.

Five cents per 100 pounds is deducted on all sales of fluid milk, to provide operating capital for the fluid-milk business. All expense for handling the surplus is charged to the general fund before computing the pool price available to patrons.

About 860 producers, all under contract, are now selling fluid milk through the organization. In addition, farm-separated cream is received during the flush season from as many as 2,000 producers. The cream shippers are nonmembers. This has resulted in a large proportion of nonmember business and is an important organization problem.

There are nine directors on the board, one for each of eight districts and one "at large." The term of office is 3 years and several directors have served since the time of organization. Regular meetings are held monthly and special meetings have been numerous. A full-time manager has always been employed.

Under the Des Moines plan distributors buy only class 1 milk directly from the producers and, therefore, pay the same price for all milk received at their plants, except for a variation noted below. The system involves daily orders of class 1 requirements. Regular haulers deliver entire loads of certain patrons' milk and so-called "switch" haulers leave such additional quantities of milk as may be required from day to day. The balance is delivered to the association's plant. The buyer is responsible for watching purchases so that he does not have more milk than he needs for his whole-milk business.

In order to protect the dealer against the necessary day-to-day surplus which he must carry on his routes, 6 percent of all milk purchased is paid for according to the surplus price established by the association. Experience has shown that this procedure protects the dealer from loss on bottled milk not sold and the constant percentage removes the necessity for auditing distributors' books. The one-price plan is further modified by the fact that "charity" milk has been sold under a separate price plan during recent years.

The class 1 price is based on 100 pounds of 3.5 percent milk and is arrived at by periodic negotiations between the association and the dealers. Variations in fat content above or below 3.5 percent are paid for according to the exact average of New York Extra butter during



FIGURE 3.—SECTION OF THE PLANT OF THE DES MOINES COOPERATIVE DAIRY MARKETING ASSOCIATION.

This view shows a part of the equipment used in the preparation of fluid cream for sale to distributors.

the period of sale. The buyers make payments direct to the association every 15 days.

Distributors obtain cream for bottling and other purposes from the association's plant (fig. 3). There is only one sweet-cream price, regardless of use, and the price is variable depending upon the average price of New York Extra butter during the sale period. Since the pasteurizers have no skim milk under this system, they buy some skim milk from the association. There is nothing which prevents the dealers from buying whole milk and separating it for sweet cream and skim, except that it would be unprofitable to do so because the price schedule provides a lower price for butterfat in cream than for butterfat in whole milk. It has been the policy to keep cream prices in line with butter prices, so as not to induce distributors to seek sources of cream supply outside the association.

All milk not sold directly as whole milk or in the form of cream and skim is processed in the surplus plant. The net returns from all milk handled in excess of class 1 milk make up the surplus price. In other words, surplus in this market is all milk in excess of fluid sales. Thus, when there is a substantial percentage of surplus, there may be an actual shortage because the association does not have sufficient milk to meet the fluid-cream requirements.

All the returns from milk are pooled by the association, and milk patrons are paid a straight pool price on a 100-pound basis, arrived at by dividing the total income by the quantity of milk delivered. Adjustments are made for butterfat differentials from 3.5 percent milk according to the average price of New York Extra butter during the pool period. There are no base ratings or quality differentials entering into the prices paid producers. Location, however, affects a patron's net price insofar as transportation charges vary. The pool period is bimonthly and payments are delayed 5 days.

Farm-separated cream from cream shippers is not pooled. The producers are paid weekly in the middle of the week following the purchases. The price is based on the Chicago 92-score creamery butter market plus an average of about 1 cent per pound of butterfat. Some attempt is made to allocate the proper expenses against the cream business in arriving at the amount to pay for butterfat.

The general policy of the association is not to expand the fluid-milk membership much beyond the present number. Prospective milk shippers must first make application to the route chairman nearest their farms. The case is then taken to the district director and finally is passed upon by the board. The association works closely with the health department in Des Moines. There is no limit on cream patronage within a very extensive and expanding cream territory (see fig. 1) except that cream must be of high quality.

Besides negotiating the sale of fluid milk, operating a manufacturing plant, and handling the producer pay roll, the association carries on



a number of other important activities and functions. Weights and tests are checked at the purchasers' plants, payments and outlets are guaranteed to patrons, and trucking, including payment of truckers, is strictly controlled. One employee gives his entire time to quality work among milk patrons, and market data and other information are disseminated through meetings and a monthly paper. Considerable attention is given to advertising dairy products and to cooperative education. The association's finances permit the making of short-term loans to members, with certificates of indebtedness as security.

In addition to sweet cream and butter, the association manufactures in its surplus plant various kinds of condensed and semisolid skim milk and skim milk powder (fig. 4). Cottage cheese is also made and sold locally. Many supplies and feeds are handled at cost for all patrons.

Private truckers under contract to the association operate about 50 milk routes daily. This arrangement has permitted a rational organization of the truck routes and is similar to the plan used by the Nebraska-Iowa Non-Stock Cooperative Milk Association, at Omaha. The number of cream routes varies somewhat from time to time; 15 to 20 has been the usual number in recent years. Cream is picked up twice weekly, on a commission basis, by private truckers at 3 cents per pound of butterfat from all shippers. Of this amount, 2 cents is paid from the general operating fund and 1 cent is deducted from the producer's check. All of the hauling charge is deducted from the producer's check in the case of milk. In 1936 the hauling rates varied between 15 and 35 cents per 100 pounds.

TABLE 7.—ANNUAL VOLUME OF MILK HANDLED BY THE DES MOINES COOPERATIVE DAIRY MARKETING ASSOCIATION, 1927 TO 1936

Year	Total volume	Fluid-milk sales	Percentage of volume classed as surplus
	<i>Million pounds</i>	<i>Millions pounds</i>	<i>Percent</i>
1927.....	44, 144	29, 903	32
1928.....	46, 882	30, 012	36
1929.....	49, 332	28, 586	42
1930.....	50, 801	28, 493	44
1931.....	52, 184	26, 280	50
1932.....	49, 154	22, 033	55
1933.....	47, 464	19, 204	60
1934.....	53, 440	23, 364	56
1935.....	46, 270	20, 520	56
1936.....	47, 517	21, 521	55

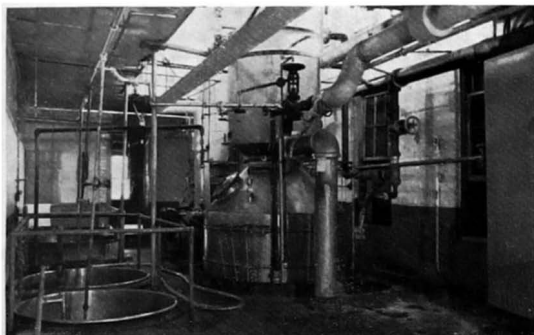


FIGURE 4.—CONDENSING EQUIPMENT USED FOR PROCESSING MILK IN THE PLANT OF THE DES MOINES COOPERATIVE MILK MARKETING ASSOCIATION.

The association manufactures various kinds of condensed milk and semisolids of skimmed milk.

The city of Des Moines, in which the association operates, is the largest metropolitan center wholly within the State of Iowa. The 1930 population of this city was 142,599. Six distributors, including all the important pasteurizers in the market, purchase their milk supply through the association. The last large distributor began dealing with the association in December 1933. This group sells nearly all the pasteurized milk and cream and from 75 to 80 percent of all bottled sales in the market.

Distributors have not entered into written contractual agreement with the producers' organization. Relations with distributors have in general been very satisfactory; the distributors particularly appreciate the handling of the surplus milk by the association. A Federal milk license was obtained in February 1934, and it has been helpful in maintaining satisfactory arrangements between the association and the dealers.

Table 7 shows the volume of milk sold through the organization annually from the first full year of plant operation in 1927 to 1936, inclusive. Total volume expanded from 1927 through 1931, declined in 1932 and 1933, then reached a peak of 53,440,000 pounds of milk in 1934. Sales of class 1 or market milk did not keep pace with the expanding volume in the earlier years and declined more rapidly than total volume in 1932 and 1933, so that the percentage of surplus increased year after year until 1934.

The loss of fluid-milk sales during the depression years was partly the result of declining consumption and partly because of the loss of

market to independent producer-distributors. These producers have been the main source of competition for the association but to date they have not permanently increased their volume of sales.

A more detailed picture of all milk handled and fluid sales to distributors is shown in figure 5, where the volume data are expressed on a monthly basis for the period from 1927 through 1935. The extreme seasonal variation in milk production and the relatively stable month-to-month fluid sales are noticeable. The result is a highly seasonal volume for manufacturing purposes, which serves to illustrate the importance of supplementing the surplus manufacturing business by handling farm-separated cream. In 1936, the total value of the milk and cream business amounted to approximately \$1,350,000.

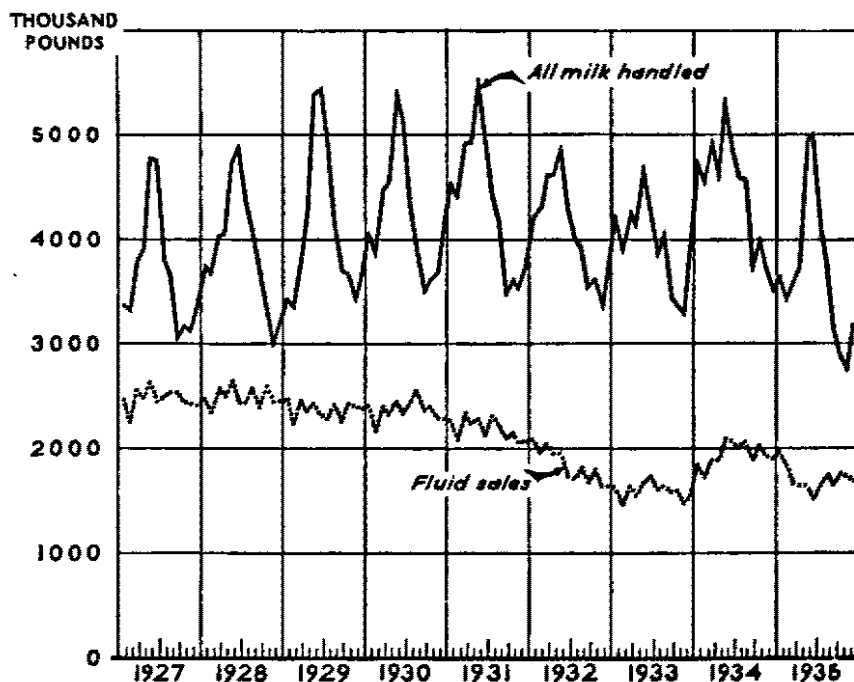


FIGURE 5.—MONTHLY VOLUME OF ALL MILK HANDLED AND FLUID SALES TO DISTRIBUTORS, DES MOINES COOPERATIVE DAIRY MARKETING ASSOCIATION, 1927 TO 1935.

There is wide seasonal variation in production of fluid milk in this area; the fluid sales, however, remained relatively constant except for 1932 and 1933. Since the middle of 1935 sales have been steadily increasing.

#### *Cedar Rapids Cooperative Dairy Marketing Company*

The second largest operating association in Iowa is the Cedar Rapids Cooperative Dairy Marketing Company. It was incorporated in 1926 as a capital-stock cooperative and is the only stock cooperative

among the milk producer's organizations operating in Iowa. In 1936, the dollar value of the business transacted amounted to \$438,708.87, or about one-third as much as that of the Des Moines association.

A bargaining association had been organized as early as 1918 (table 4) and continued to function until 1926. At that time the problem of large quantities of surplus milk led the producers to set up a new organization and provide facilities for handling milk. It will be recalled that the association at Des Moines had expanded to include plant operations in the same year.

The association's authorized capital is \$100,000, divided into shares of \$10 each. The articles limit the dividend rate to 10 percent, and 6 percent is the rate usually paid. Each member must purchase shares in proportion to his butterfat production at the time he joins the organization, except that there is a 50-share limit per member. The stock subscriptions are paid for in cash or by deductions from milk checks. If a member ceases to be a producer or leaves the territory and wishes to dispose of his stock, he must first offer to sell it to the association. He may keep it if he so desires, but not more than 5 percent of the stock is in the hands of nonpatronizing members.

Soon after the reorganization in 1926 a small surplus plant was built from funds obtained through stock subscriptions. Farmers gave notes which were used as collateral for a loan from a local bank. In the course of a few years the new plant proved to be inadequate and a second large modern plant which had been built according to association specifications was leased on a 10-year basis beginning in 1932. Machinery and equipment for the new plant were purchased by the association out of funds from stock subscriptions and accumulated surpluses. The old plant has been retained by the organization and leased to a milk distributor.

While the association has no mortgage indebtedness, it has borrowed operating capital for short periods secured by association notes. For the most part, operating capital is provided by a deduction of 5 cents per 100 pounds on all milk delivered by members.

There are five directors on the board, elected for a term of 3 years in the usual staggered manner. A full-time general manager is employed. The manager at the time of the study (1936) had previously been a producer and chairman of the board.

Distributors receive milk from certain patrons for fluid requirements and pay the association for it at the class 1 price, which is based on 100 pounds of 3.5 percent milk. As at Des Moines, the plan calls for diversion of all other milk to the surplus plant. Actually, however, one or two distributors continue to buy some milk for fluid-cream purposes. But the plan is unique among the fluid-milk cooperatives in the State in that there is generally no price differential

between milk used as whole milk or as a source of cream for fluid consumption. That is, class 1 and class 2 prices are the same. The prices are established by periodic bargaining.

Since the class 1 and class 2 prices are the same, distributors pay one price for all milk received. As at Des Moines, it is their responsibility to watch their daily purchases so as not to have an excess of milk over fluid-milk and fluid-cream requirements. The necessary day-to-day surplus carried by the distributors is repurchased by the association at the current butterfat prices.

One large manufacturing distributor has been allowed to purchase some surplus milk on a butterfat basis. The diversion of all surplus milk away from the distributors has been one of the major problems confronting the association. Unless it is diverted the surplus plant cannot be used efficiently and if it is diverted some of the distributors are left with excessive manufacturing capacity.

With the exception noted, the plan is a modified "use" price plan. Distributors who do not buy fluid milk for cream purposes purchase sweet cream from the association's plant. Cream for making ice cream is sold on a butterfat basis at a percentage differential over the price of butter. Any sales of surplus milk are also on the basis of the butter market plus the value of the skim.

The association operates a milk pool for its members and handles the producer pay roll. Producers are paid a straight pool price arrived at by dividing the total returns from milk sold direct to distributors and from milk processed in the association plant by the total quantity handled. Prices are based on 100 pounds of 3.5 percent milk, with a variable test differential. The pool period is semimonthly and payments are delayed about 15 days. Payments and an outlet for members' milk are guaranteed and association employees check all weighing and testing. Except in the case of the surplus milk sales to one distributor, there is no necessity for auditing distributors' books to determine the exact use made of the milk, since all milk must be paid for at one price.

In addition to milk from approximately 500 milk patrons who are members under contract to the association, farm-separated cream is received from nonmember patrons for buttermaking purposes. In a few instances alternate shipping of milk and cream is allowed. All the cream shippers are paid according to the market quotations on butterfat. The principal reason for receiving cream is to use the present plant and equipment more nearly to capacity. The new plant is greatly overexpanded on the basis of surplus milk now processed by the association. For example, in the peak production month of May 1936, less than 30 percent of the total deliveries of milk reached the surplus plant and much of it was sold as sweet cream. Cream patronage is open to all producers within the truck

territory and fluid-milk patronage and membership are open to all producers who meet relatively rigid health department requirements.

Twenty-two milk routes are operated by private truckers and in 1936 the rates varied, largely in accordance with distance, from 12½ to 20 cents per 100 pounds. The association makes the deductions from producers' checks and handles the truckers' pay roll. The management is experiencing considerable dissatisfaction with the present trucking arrangements, and reorganization of the truck routes has been made a major objective of the association. Cream is hauled on separate trucks (with the exception of one or two mixed loads) at a commission of 2 cents per pound of butterfat.

In 1930, Cedar Rapids had a population of 56,097. There are 11 distributors in the market, including 4 large ones, all of which cooperate with the association. These large distributors handle about 80 percent of the pasteurized milk and cream and about 70 percent of all milk sold. Not all of the dealers have entered into written agreements with the association. There are about 30 producer-distributors who constitute an important source of competition for the organized producers. Cedar Rapids has well-enforced sanitary regulations for milk and has a high ranking for pure milk products.

### *Other Operating Associations*

Smaller operating associations are located at Ottumwa, Burlington, and Dubuque. All are incorporated under the Iowa nonstock law (ch. 390, Iowa code of 1935) and have a membership fee of \$1. The Ottumwa association, the oldest in this group, was incorporated in 1921. It was the first to operate a surplus plant, beginning in 1930. The plant was purchased out of past accumulations of excess earnings and members were not required to contribute additional capital. In 1934, however, a mortgage loan was obtained from the Omaha Bank for Cooperatives, to purchase more equipment. This loan is being retired under a revolving-fund plan. The repayment fund is created by a 2 percent deduction from gross sales each month, and patrons are credited with such deductions. A non-interest-bearing certificate of indebtedness is to be issued to each patron when his credits total \$100. These certificates will be retired after the loan has been repaid, the oldest certificates being retired first.

The association at Dubuque was organized in 1922 and functioned as a strictly bargaining organization until 1933. At that time a surplus plant was leased but there was no change in the corporate status. Small mortgage loans were obtained in 1934 and in 1935 from the Omaha Bank for Cooperatives to finance the purchase of new machinery. Three bank failures had previously tied up a large amount of cash reserves.

The Burlington association was not incorporated until 1926 and did not operate a surplus plant until 1934. The plant is operated under a leasing arrangement; the association owns the equipment. Funds for the purchase of equipment were obtained mainly through a loan from a local bank. This loan, which represents the first and only indebtedness incurred by the organization, was repaid within 6 months by levying an assessment against each member's milk check at the rate of \$5 per cow milked. No certificates of interest were issued as evidence of these capital contributions.

Farm-separated cream is received at the surplus plants in Ottumwa and Dubuque from nonmembers under circumstances similar to those at Des Moines and Cedar Rapids. It is used entirely for butter-making purposes. Thus, the association at Burlington is the only one of the operating type which has not expanded its manufacturing business by processing farm-separated cream. This may be partially explained by the relatively short time the surplus plant has been in operation.

Milk is sold to distributors at Ottumwa and Burlington according to the Des Moines plan except that no allowance is made to distributors for the necessary day-to-day surplus. All milk received by distributors must be paid for at the straight class 1 price, which is based on 100 pounds of 3.5 percent milk. The test differentials vary by steps—one-half cent for each 5-cent change in the value of butterfat.

Both these associations sell sweet cream on the basis of butterfat content. At Ottumwa the price is variable, depending on the value of Chicago Extra Creamery butter, and no difference is made between the price of cream sold for bottling and for manufacturing purposes. At Burlington distributors buy cream for bottling purposes according to a straight negotiated (bargained) price; the price of cream for manufacturing purposes is arrived at according to a formula based upon the price of Chicago Extra Creamery butter. Both associations sell skim on a 100-pound basis.

The Dubuque association has not diverted all milk in excess of class 1 milk to its own plant so that, in reality, it continues to sell milk to distributors according to the use plan. As at Cedar Rapids, dealers have excessive plant capacity and purchase some milk for manufacturing purposes.

Class 1 milk is used for fluid consumption and is sold at a straight bargained price based on 100 pounds of 3.5 percent milk with a differential for milk testing more or less as to butterfat content. Class 2, which is milk used for bottled cream, was recently changed from a formula price based on Chicago Extra Creamery butter to a straight bargained price based on 100 pounds of 3.5 percent milk.

All other milk is included in class 3 and the price per 100 pounds is based on the value of Chicago Extra Creamery butter during the pur-

chasing period. The plan allows distributors to purchase all their requirements of class 1 and class 2 milk, plus an additional 10 percent at class 3 prices. Some distributors still buy surplus milk in excess of 10 percent, but on this additional amount they are charged a differential over the established class 3, or surplus, price.

In all three markets, distributors make payments every 15 days directly to the association rather than to individual patrons. At Burlington distributors and the association enter into a written agreement every 6 months. At Dubuque such contracts were discontinued in 1933, and at Ottumwa the last signing was in 1925.

In all three associations every milk patron is a member. The \$1 membership fee is payable in cash or deducted from the first milk check. All members are required to sign a marketing contract.

In each case the association operates a pool for the members delivering fluid milk and handles the producer pay roll. Payments are based upon 100 pounds of 3.5 percent milk with test differentials corresponding to those paid by distributors. At Ottumwa the producers receive one price for class 1 milk and a different price for surplus. There is no base-surplus plan, however; the surplus price is paid on that percentage of a producer's deliveries which equals the percentage of surplus milk handled by the association. Since only class 1 milk is sold directly to distributors, the surplus price is the average of returns from all milk in excess of class 1, including sweet cream, skim, and manufactured products. The class 1 price to producers is the same as the distributors' buying price. The producers' check is the sum of the value of the two classes of milk (less deductions) and the blended price is not computed. The pool period is semimonthly and payments are delayed 10 days.

The Dubuque market has been operating under a Federal license since December 1934, and the determination of a straight pool price for milk is supervised by the market administrator; that is, to arrive at the blended (pool) price for each 100 pounds of milk, the total income from milk in all its various uses or outlets is divided by the total quantity delivered. In this respect the pool is exactly like that of most strictly bargaining associations not using a base-surplus plan of payment to producers. Here the pool period also is semimonthly and payments are delayed from 7 to 10 days.

At Burlington all the returns from milk, whether sold as class 1 to distributors or handled through the surplus plant, are pooled twice each month and payments are delayed 5 days after the close of the pool. It is the only operating association employing a base-surplus plan in making payments to producers. Producers receive the straight class 1 price for that percentage of their base milk which represents the relationship between total base milk delivered and class 1 sales. The price for all milk delivered in excess of base milk, as well



as excess within the base, is paid for at the surplus price. This price is variable, depending on the net returns from all milk in excess of class 1. The producer's milk check is the sum of the value of the milk paid for at the base price and that paid for at the surplus price.

In each market the producers' checks are subject to deductions to provide operating capital, usually 4 or 5 cents per 100 pounds on all milk handled. The Burlington association also deducts the amounts due haulers and handles the haulers' pay roll. None of the price plans provide for quality differentials other than test differentials, nor for location differentials other than those arising out of variations in transportation costs.

As at Des Moines and Cedar Rapids, the cream patrons at Ottumwa and Dubuque are not members unless they have previously been milk shippers and have retained their membership. Nor are the returns from farm-separated cream pooled. Cream patrons are paid on the basis of current market quotations for butterfat. There are no limitations on the number of cream patrons, but milk patronage is generally restricted.

### BARGAINING ASSOCIATIONS

Seven strictly bargaining associations in Iowa have been covered in this study. A detailed description of the operations, functions, and business practices is given here for the two larger associations. Three others are treated more briefly, but in sufficient detail to show the extent of cooperative effort in the markets in which they function.

#### *Sioux City Milk Producers Association*

The Sioux City Milk Producers Association was organized at Sioux City in 1932. The producers in the market area had been unorganized since 1928, when a retailing association went out of business. The original organization started in 1921 as a local of the Iowa Dairy Marketing Association (see table 3), and remained a strictly bargaining group until June 1922. At that time a milk-price agreement could not be reached, so the producers called a strike and subsequently went into the retail field. The retail business was operated from 1922 to 1928. The present cooperative is a nonstock organization with a membership fee of \$1.<sup>11</sup> The incorporation followed a milk strike of some 800 producers during the demoralized marketing conditions of 1932.

There were 900 members under contract to the association in 1936, and this number has not fluctuated greatly since the time of organization. Only farmers producing dairy products and landlords who

<sup>11</sup> The original members paid 50 cents. This was raised to \$1 in the articles so as to apply to new members. Later the board raised the fee to \$3 without amendment. It was intended as a deterrent fee to limit membership. As a result, nonmembers made individual agreements with dealers and the fee was again reduced to \$1.

rent their dairy farms on shares are eligible for membership. Members must sign a marketing agreement and pay the membership fee in cash or through deductions.

The association owns no physical facilities other than office equipment. It was originally financed by some \$200 obtained from membership fees. Operating capital is provided by a deduction of 4 cents per 100 pounds on all milk delivered. The articles allow a maximum of 5 cents but the present rate has been sufficient to permit the accumulation of a substantial liquid reserve account in the business.

As a bargaining association, one of its most important functions is to arrange the conditions and terms of sale for its members' milk. Milk is sold according to the use plan and three classes are recognized. Class 1 means all milk distributed as whole milk, and class 2 includes all milk used to produce cream for direct consumption or for manufacture into ice cream or ice cream mix. Class 3, or surplus, is all milk in excess of classes 1 and 2.

Each distributor takes all of his requirements for class 1 and class 2 from a designated group of shippers, and all the surplus is delivered to one distributor who has manufacturing facilities. Until August 1936, distributors purchased milk on a butterfat basis, the class 1 price being determined through bargaining at a fixed amount per pound, and class 2 and 3 prices varying with the value of Chicago 90-Score Creamery butter.

At one time the class 1 price was also placed at a differential over Chicago butter prices, with the hope of eliminating the necessity of periodic bargaining. The experiment proved unsatisfactory because dealers made commitments during the summer when prices were relatively low, which caused them serious financial strain later on. The association is now of the opinion that a straight price for class 1 milk, negotiated from time to time, is the most desirable arrangement. All Iowa associations follow this plan.

Under the present plan, both the class 1 and class 2 prices are based on 100 pounds of 3.5 percent milk with a test differential which moves up and down with the value of butterfat in butter. In each case the prices are established by bargaining. The class 2 price is somewhat less than that of class 1 milk. The surplus price remains on a butter-value basis. All payments for milk are made to the association rather than to the patrons. A written contract stipulates the terms and conditions of sale to distributors.

As previously stated, 900 members are under contract to the organization. These are all milk patrons, as the association does not handle farm-separated cream. Although some attempts have been made to limit the membership, the most recent policy is to keep membership open to all patrons selling milk for fluid consumption.

About 75 percent of the members live in the State of Iowa; 20 percent in South Dakota; and 5 percent in Nebraska. The milkshed

extends a maximum of approximately 35 miles from the center of Sioux City.

A milk pool is operated for all the patrons on a semimonthly basis and payments are deferred 8 days. The pool price is a straight average price, arrived at by dividing the total amount of money received from sales of milk by the number of 100 pounds of milk handled. The price per 100 pounds is based on 3.5 percent milk with the same butterfat differential as that paid to the association by the distributors. Deductions to cover operating expenses and the amounts due haulers are made from the producer's check. That is, the association handles both the producers' and the truckers' pay rolls.

The association also provides daily checking of weights and tests, audits the sales figures, guarantees outlets and payments to producers, issues a monthly publication including market news, and sells some supplies. Considerable attention is being given to the improvement of quality through field work and to keeping members informed concerning their cooperative.

Thirty milk routes are operated daily by private truckers. Trucking conditions have not been entirely satisfactory, and the officers of the association feel that it should own the trucks if it is to attain maximum efficiency in procurement.

In 1936 the hauling rates ranged from 12 to 25 cents per 100 pounds; most of the milk was hauled for 22½ cents. Rates vary according to the size of the shipment and the distance from market. The actual rate charged in each case is the result of a personal arrangement between the producer and the hauler.

In 1934 members of the association shipped 31,360,629 pounds of milk, for which they received \$422,948.06. This amounted to 36.4 cents per pound of butterfat, the average test being 3.71 percent. Volume dropped somewhat in 1935 to 27,754,671 pounds, but an advance in prices and a higher percentage of class 1 milk increased the total net returns to \$434,733.37. Operating expenses were slightly less than \$12,000 in each year.

The quantity and the percentage of total volume sold as class 1 milk in 1934 and 1935 are shown in table 8. The percentage figures are not directly comparable with the monthly volume inasmuch as they apply to the first pool period of each month rather than the entire month. However, the relation between total milk sold and proportion of class 1 sales is clearly evident. In the first half of June 1935, for example, class 1 sales represented 36.3 percent of the total and for the corresponding period in October, 63.4 percent of the total. The October-November situation actually represented a shortage of milk from association members because requirements for cream and other uses more than used up the milk available after the class 1 requirements had been filled. In this case the organization purchased "outside" milk rather than compel individual dealers to seek additional supplies.

TABLE 8.—VOLUME OF MILK SOLD BY SIOUX CITY MILK PRODUCERS' ASSOCIATION, 1934 AND 1935

Month ending—	1934		1935	
	Milk sold	Percentage of total in class 1 <sup>1</sup>	Milk sold	Percentage of total in class 1 <sup>1</sup>
	<i>Pounds</i>	<i>Percent</i>	<i>Pounds</i>	<i>Percent</i>
Jan. 15.....	2,465,800	37.8	2,199,188	48.8
Feb. 15.....	2,666,022	37.5	2,232,873	51.7
Mar. 15.....	2,532,750	36.4	1,937,753	57.0
Apr. 15.....	2,858,262	39.3	2,181,591	53.9
May 15.....	2,907,978	37.5	2,392,273	43.6
June 15.....	3,216,711	37.8	3,056,759	36.3
July 15.....	3,149,541	35.4	3,027,114	37.1
Aug. 15.....	3,008,259	40.7	2,531,675	46.8
Sept. 15.....	2,527,735	48.8	2,472,620	44.7
Oct. 15.....	2,002,409	58.0	1,871,581	63.4
Nov. 15.....	2,027,556	57.3	1,833,385	62.2
Dec. 15.....	1,997,606	48.0	2,017,859	53.1
Total.....	31,360,629	.....	27,754,671	.....

<sup>1</sup> Applies to the period from the 1st to the 15th of each month.

Sioux City has a population of some 90,000 and is the second largest population center within the State of Iowa. Eleven Sioux City dealers purchase their full requirements from the association according to a written agreement. In 1935 these dealers handled 82 percent of all the bottled milk and cream in the market and nearly 90 percent of all pasteurized milk and cream. There are three non-cooperating pasteurizing distributors. Nonmember-producers who belong to another farmers' organization are an important source of competition for the association. A Federal milk license which became effective March 16, 1934, has been considered an important stabilizing influence in the market.

*Nebraska-Iowa Non-Stock Cooperative Milk Association*

The Nebraska-Iowa Non-Stock Cooperative Milk Association, which operates in the Omaha-Council Bluffs market, was incorporated in 1932 under the Nebraska Non-Stock Co-operative Marketing Act of 1925 (ch. 24, art. 14, Compiled Statutes of Nebraska, 1935). As at Sioux City, the organization grew out of the demoralized condition of the milk market. It was the first organization of its kind in the Omaha territory, except for a very small association which was started in 1916 and operated only a short time.

The association has about 2,700 member-patrons shipping whole milk. This number includes nearly every producer in the territory selling milk for fluid consumption. The organization is unique in this respect. Membership is automatic with patronage, and the membership fee is \$10. A producer's written application must have been approved, however, before he can ship milk through the association. He is also required to sign a marketing contract.

The association is financed by means of a deduction of 4 cents per 100 pounds on all milk shipped.<sup>12</sup> This amount has provided sufficient income to more than cover operating expenses, so that a substantial liquid reserve account has been created. Funds in this account amounted to \$54,919.15 as of April 1, 1936. At each annual meeting the members have voted to place excess earnings in the surplus account in lieu of paying patronage dividends. The association has no indebtedness and no fixed assets other than office furniture and equipment.

The board of directors has 21 members and 5 of these constitute an executive committee. Management has been delegated to a full-time manager who previously was a producer and president of the organization.

The association is primarily concerned with representing its membership in the sale of milk and returning the proceeds to the members on an equitable basis. All the milk is sold to the distributors according to the use plan. The distributors, in turn, make payments directly to the association. There are three classes of milk: Class 1, which represents milk used for fluid consumption; class 2, which includes sweet cream for fluid consumption and other purposes; and class 3, which is all milk in excess of classes 1 and 2. The plans followed at Sioux City and Omaha are similar in this and many other respects.

Arrangements have been made with a distributor who owns extensive manufacturing facilities to purchase all the class 3 or surplus milk. Thus, the other distributors purchase class 1 and class 2 requirements according to daily order. Each buyer receives milk from specific patrons, in addition to which other milk is diverted to balance his needs when required. The surplus price applies to daily "returns" of class 1 milk and cream from the distributors' wagons.

The class 1 price is a straight bargained price based on 100 pounds of 3.5 percent milk with varying adjustments for butterfat differentials. In the fall of 1936 the class 2 price, which had formerly fluctuated on a formula basis according to butterfat prices, was also made a straight bargained price per 100 pounds of 3.5 percent milk. The class 3 price is still determined according to a formula based on the price of Chicago 90-Score Creamery butter.

<sup>12</sup> An additional cent is deducted to finance the office of the market administrator, as the market is under a Federal milk license.

Fluid-milk patronage is open to all fluid-milk producers in the territory, but farm-separated cream cannot be sold through the association. The association operates a milk pool for its members and handles the producer pay roll. In addition, it checks weights and tests, guarantees an outlet for members' milk and payments to producers, and makes deductions for amounts due haulers.

The pool period ends semimonthly and payments are delayed 8 days. Prices to producers are based on 100 pounds of 3.5 percent milk with a test differential corresponding to that paid by the dealers who purchase the milk.

This is one of the four markets included in the survey in which the base-surplus plan is being employed. Bases were established according to the average production during the year 1933. Subsequent adjustments in basic quantities have been made by a base-adjusting board, depending on the production records of individual producers since 1933.

Class 1 and class 2 sales are considered base milk in the market, so that the base price is a blend of class 1 and class 2 prices. In 1933, the total sales of base milk were 70 percent of the aggregate bases established by the producers, so that each producer was given a base equal to 70 percent of his average production in 1933. This brought about an adjustment between producers' bases and class 1 and class 2 sales which has since been maintained. A producer is not required to ship any milk in excess of his base but he can always market additional milk at the class 3 (surplus) price. The surplus price to producers is identical with the class 3 price paid by the purchasers.

During the period June 1-15, 1936, for example, the base price was \$1.62 per 100 pounds of 3.5 percent milk and the returns from the milk in excess of the base amounted to \$1.20 per 100 pounds. It should be emphasized that the base price to producers varies according to the total income from sales of base milk divided by the total amount of base milk delivered. In a recent low-production month producers were allowed 10 percent in excess of established bases at base-milk prices in order to stimulate production.

The producer's check is made up of the sum of the value of the base milk and the value of all milk in excess of his base, less deductions. No location differentials enter into the producer prices, other than those arising out of variations in transportation charges.

Seventy milk routes are operated daily by private haulers, who are under contract to the association. The routes are thus under the complete control of the association. One of the organization's most significant achievements has been a reorganization of the truck routes in such a way as to eliminate duplication of services and other un-economic practices.

The association employs one fieldman who works with producers and distributors to further improvement in quality. It is also part

TABLE 9.—VOLUME OF MILK HANDLED BY NEBRASKA-IOWA NON-STOCK COOPERATIVE MILK ASSOCIATION, 1933 TO 1936

Month	1933		1934		1935		1936	
	Milk handled during month	Percentage of annual volume	Milk handled during month	Percentage of annual volume	Milk handled during month	Percentage of annual volume	Milk handled during month	Percentage of annual volume
	<i>Pounds</i>	<i>Percent</i>	<i>Pounds</i>	<i>Percent</i>	<i>Pounds</i>	<i>Percent</i>	<i>Pounds</i>	<i>Percent</i>
January.....	6,029,383	7.95	7,155,201	8.63	6,672,880	8.05	6,599,562	8.15
February.....	5,858,035	7.72	6,766,113	8.16	6,166,519	7.44	5,329,197	6.54
March.....	6,517,383	8.59	7,506,037	9.06	6,765,680	8.16	7,086,688	8.75
April.....	6,609,464	8.71	7,532,822	9.09	7,689,030	9.27	7,630,084	9.42
May.....	7,804,832	10.29	8,132,649	9.81	9,710,196	11.71	9,011,557	11.13
June.....	6,723,843	8.86	7,496,109	9.04	9,233,100	11.13	8,323,116	10.24
July.....	6,173,908	8.14	7,155,425	8.63	7,375,126	8.89	6,687,795	8.26
August.....	6,787,701	8.95	6,568,559	7.92	6,986,748	8.43	6,378,548	7.88
September.....	5,995,253	7.90	5,863,653	7.07	5,637,934	6.80	5,952,486	7.35
October.....	5,640,624	7.44	6,186,955	7.46	5,267,288	6.35	6,337,287	7.82
November.....	5,444,441	7.18	6,285,097	7.58	5,250,178	6.33	5,761,260	7.11
December.....	6,274,363	8.27	6,262,231	7.55	6,166,645	7.44	5,886,946	7.27
Total.....	75,859,230	100.00	82,910,851	100.00	82,921,324	100.00	80,984,526	100.00

of the program to instruct the directors regarding quality field work. Cooperative education is fostered through a bimonthly paper and by local and general meetings.

The association provides the milk supply to all but two very small dealers in the Omaha and Council Bluffs market of some 260,000 population. It is estimated that 99 percent of all pasteurized milk sold in 1935 came from members of the organization. The dealers have not entered into written agreements with the association, and the officers of the organization are of the opinion that such contracts are unnecessary, if not undesirable.

Table 9 shows the volume of milk sold from 1933 through 1936 on a monthly basis. Between 6 and 7 million pounds have been handled in most months, the peak coming in May and the low point usually in the late fall. The variation from high to low is somewhat less than might be expected for the Omaha territory, because it is a measure of sales through the association rather than total production by members. In the summer when there is the greatest excess over base milk the farmers may choose to keep the excess at home or sell it elsewhere. During this period the percentage of all milk sold as class 1 has varied from 37 to 60 percent, the trend being upward in spite of an increased volume beginning in 1934.

#### *Fort Dodge and Iowa City Bargaining Associations*

*Fort Dodge.*—One of the early bargaining associations was organized at Fort Dodge in 1922 under the Iowa nonstock cooperative law of 1921 (ch. 390, Iowa code of 1935). It was not preceded by any similar organization and there has been no change in its corporate status since that date. Its early history is associated with the second attempt to organize a State-wide federation in 1922 following the collapse of the Iowa Dairy Marketing Association.

At Fort Dodge, all patrons are members and the membership fee is \$5. The income is provided by a deduction of 2½ percent from each producer's milk check. This represents a deviation from the usual method in Iowa of deducting a fixed amount for 100 pounds of milk.

Careful consideration has been given to the possibility of financing and operating a manufacturing plant to handle surplus milk. About \$9,000 in cash reserves, which had been accumulated out of past deductions for building purposes, has been largely lost through bank failures. Recently the practice has been to prorate any income in excess of expenses back to the patrons at the end of the year.

The association negotiates a monthly contract for a full supply of milk with each of the four leading distributors in the market. Each distributor takes all of certain patrons' milk and pays the association according to a use plan. However, only two classes of milk are recognized: Class 1 is fluid sales of milk in bottles, and the remainder is



surplus. The class 1 price is a bargained price based upon 100 pounds of 3.5 percent milk with varying adjustments for test. These adjustments are not automatic and, therefore, changes are relatively infrequent. Distributors pay for all milk, in excess of fluid sales, on a butterfat basis according to a formula based upon New York Extra butter. The association provides check testing and weighing in case of complaints but does not audit the distributors' books to verify the uses made of the milk.

All milk sales are pooled and the patrons receive payment from the association. The total average percentage of surplus is determined on all milk shipped and each patron receives the surplus price for a like percentage of his milk. Again the value of the base milk is computed separately from the value of the surplus milk and the producers' check is the sum of the two values. The blended or average price is not computed. Both prices are on the basis of 100 pounds of 3.5 percent milk, the base price corresponding with the dealers' buying price for class 1 milk and the surplus price varying with the returns from all milk in excess of class 1.

In 1935 the hauling rate was uniformly 20 cents per 100 pounds on all established truck routes. However, about one-third of the producers made deliveries direct to the distributors.

Expansion of membership has created a serious surplus problem and hence the desire for a surplus plant. During 1933, the surplus was in excess of 75 percent of all milk handled in all except 4 months and, during the first half of the year, producers received less per 100 pounds for class 1 milk than for surplus milk. Such a pricing scheme was necessary in order to hold the fluid-milk market from outside competition. The situation improved materially after 1934.

*Iowa City.*—The Johnson County Dairy Marketing Association at Iowa City was organized in 1933 under the Iowa nonstock law. The association has a membership fee of \$1 and membership is contingent upon the producer's signing a membership contract. Operating funds are provided by a deduction of 1 cent per 100 pounds on all milk shipped. This has proved sufficient to cover all expenses and permit the accumulation of a small liquid reserve, since the association's activities are relatively limited.

The association represents its membership in negotiating the sale of milk to the two pasteurizing distributors in the market. The distributors have entered into a written agreement for a full supply and purchase milk according to the use plan. In one important respect this plan differs from those used by the other associations; that is, each distributor operates his own pool and handles the pay roll of his patrons instead of a single pool being operated by the association. The pool period ends semimonthly and payments are delayed 5 days.

The class 1 price is a straight bargained price based upon 100 pounds of 3.5 percent milk with a test differential which is varied according to the value of butterfat. With the exception of Cedar Rapids, it is the only price plan which calls for variations in the class 1 price on the basis of grade of milk. Most of the milk is paid for, however, at the top or premium grade.

Class 1 prices apply only to actual sales of fluid milk in bottles. All other milk, including returned bottled milk is paid for on a butterfat basis at a differential over the price of Chicago Extra Creamery butter. Although provided for in the contract, distributors' books are not audited and weights and tests are not checked except at irregular intervals.

Distributors make payments to producers according to a base-surplus plan. Each producer's base is determined by his average production during the 3 preceding years. That is, 1936 bases were the average of production for 1933, 1934, and 1935. Under this system the established bases are far in excess of class 1 sales. During June 1-15, 1936, one dealer had 66 percent more base milk than fluid sales. Instead of reducing the established bases, the adjustment is made by paying each producer the class 1 price on that percentage of his base which represents the percentage of total base milk sold as class 1.<sup>18</sup> Thus, the producer is said to have surplus in his base. All surplus in the base and all excess over the base is paid for at the surplus price.

The blended price is not calculated in figuring the milk check. The value of the base milk is determined separately from the value of the surplus milk and the check is the total of the two values, less deductions.

Delivery of milk to the dealers is entirely in the hands of the producers and haulers, and the association has no knowledge of what the rates are. The haulers, with one exception, are producers who bring in the milk from several producers in addition to their own. More than half the producers deliver their own milk direct to the pasteurizing plants.

### *Quad-Cities Organizations*

As previously stated, there are two milk producers' associations operating in the Quad Cities market. The oldest organization is known as the Quality Milk Association. It was incorporated in Illinois in May 1930, and has headquarters at Moline, Ill. It is essentially a bargaining association and has arrangements with a cooperative creamery in Moline for the disposal of surplus milk.

The second group, known as the Illinois-Iowa Milk Producers Association, was incorporated in Iowa in February 1933, with head-

<sup>18</sup> This percentage, 34 percent in the above example, varies somewhat among dealers for any given pool period.

quarters at Davenport, Iowa. In this survey special attention was given to this association by virtue of its headquarters within the State of Iowa. It grew out of dissatisfaction on the part of a number of producers with the first-named organization and some rivalry with varying degrees of intensity has prevailed ever since. Since 1934, however, the differences have been well regulated under a Federal milk license.

In December 1935, the Quality Milk Association had 470 active members and the Illinois-Iowa Milk Producers Association had 380. There are also several independent producers and producer-distributors in the market. The total deliveries of milk in one month in 1936 were as follows:

	<i>Pounds</i>
Quality Milk Association.....	1, 930, 000
Illinois-Iowa Milk Producers Association.....	1, 662, 000
Independent producers.....	465, 000
Producer-distributors.....	113, 000
Total.....	4, 170, 000

The distributors buy milk from the associations according to the use plan and both associations pool payments to producers according to a base-surplus plan. An equalization fund has been set up under the market administrator so that in reality there is one market pool and each producer receives the same blended price for base milk and the same price for surplus milk, regardless of the association to which he belongs. The organization with the highest percentage of class 1 sales pays into the equalization fund in order to provide funds with which to equalize the payments to producers who ship to the other association.

Producer bases for 1936 were established by the producer's average production in October, November, and December 1935, plus that of the low month. If the low month happened to be one of the 3 base months, that month was counted twice in the calculations. When it was found that class 1 and class 2 sales equaled 90 percent of the producer bases thus established, each producer was given a base equal to 90 percent of the one first determined. If a producer falls below 85 percent of his established base he is given a new and lower base.

The base price paid to producers is determined by blending the returns from base milk. As a result the base price is variable from month to month. In this respect the method used is identical with the Omaha base-surplus plan. Since the plan tends to keep the total quantity of base milk near the total class 1 and class 2 sales, a relatively high average base price is maintained. If producers were permitted to establish total bases in excess of the quantity sold in the first three classes, and delivered the full quantity of base milk, the blended base price would include some surplus milk.

The records from the Illinois-Iowa association show that it handles the producers' pay roll and guarantees a market for all the milk of its members. The market now operates a monthly pool, but the distributors make cash advances to the association semimonthly and the association, in turn, advances \$1 per 100 pounds to all patrons. This system greatly reduces the bookkeeping involved in operating the pool over that necessary for a semimonthly pool. Cash advances are deducted from the final check due at the end of the month.

The membership fee is \$1 and 450 such fees have been paid in. The association is financed mainly by deductions of 3 or 4 cents per 100 pounds on all milk handled. An additional 2 cents is deducted for the maintenance of the office of the Federal market administrator. There are no fixed assets other than office equipment and no indebtedness or reserves.

This association operates about 30 truck routes in Iowa and Illinois. The board of directors sets the hauling rate for the private truckers. The rates in 1935 varied from 10 to 20 cents per 100 pounds, and the standard rate was 18 cents. It is understood that the routes belong to the association and control over the routes has been rather effective.

### A MILK-DISTRIBUTING COOPERATIVE

The Marshalltown Cooperative Dairy Marketing Association represents the one remaining milk-distributing cooperative in Iowa. It was incorporated in 1923 after a bargaining association, which started in 1919 (table 3), proved unsatisfactory. At that time most of the fluid-milk producers in the territory were selling their milk to one dairy and to a grocery company which manufactured milk hominy. Heavy stocks of hominy finally made it unprofitable to manufacture a large volume of milk on this basis and these producers were faced with the loss of their market. When the matter was put before them they decided to organize and distribute milk to consumers cooperatively. They leased a part of the grocery company's plant and obtained capital for new equipment by means of personal notes.

The business grew rapidly for a time and the volume of the private distributor was cut in half. Milk was received from about 40 producers in 1923 and the surplus above fluid sales was sold to the grocery company. The retail business fell off gradually after its early peak, and at the time of this study only nine patrons were delivering whole milk. These constitute the entire membership and no new members are being taken in. However, in order to use the plant more nearly to capacity, some sweet cream is purchased from nonmembers for retail trade and for ice cream. Sour cream is purchased at station prices for the making of butter. No milk or cream is sold at wholesale to the five pasteurizing distributors in the market.

## MID-WEST NON-STOCK COOPERATIVE DAIRIES

An organization closely associated with cooperative fluid-milk producers' associations in Iowa is the Mid-West Non-Stock Cooperative Dairies. As previously mentioned, it is to some extent the outgrowth of attempts in 1922 and earlier to form a federation of fluid-milk producers' associations in Iowa. It was incorporated in 1933 under the Nebraska nonstock law. Its membership includes 12 of the 13 Iowa associations listed above, besides Lincoln and Norfolk, Nebr., and Sioux Falls, S. Dak.

It has no capital stock or membership fees; the only source of income is special assessments. It was organized principally to establish the inter-State characteristic of fluid milk in this locality so that the associations could get the fullest benefit from the marketing agreements which were being formed under the Agricultural Adjustment Administration. When this need did not develop to the extent anticipated, the association continued as an overhead organization representing its members on special problems of concern to all associations. One of its important services was the reaching of an agreement with the United States Post Office Department allowing truckers to deliver checks containing price, test, and quantity information to the producers after the practice had been declared illegal.<sup>14</sup>

The association now meets quarterly and discusses common operating and marketing problems. Undoubtedly such a federation if formed earlier could have done much to prevent the serious losses incurred from unwise business policies. Many of the members hope that the federation can be strengthened and its activity broadened in the near future. There can be little doubt as to the need for such an organization, especially to assist the numerous small associations with their complex management problems. Probably it is the stronger groups, however, that will contribute the greater part of the financial support and leadership for the undertaking.

## CORPORATE AND COOPERATIVE FEATURES OF IOWA MILK-MARKETING ASSOCIATIONS

**T**HIS STUDY has shown that there are many points of similarity among the several associations in Iowa. Likewise, there are instances of wide variation in their organization set-up and operating practices. Some of these differences and similarities are summarized here.

<sup>14</sup> The Post Office Department reapproved this practice when the associations agreed to remove the perforated line between the check and information stub. The ruling was also a matter of great concern to cooperative creameries operating truck routes and milk producers' associations in other sections of the country. The test case had been prepared against the Des Moines Cooperative Dairy Marketing Association.

Of the 10 local associations in this group, 9 were organized under cooperative nonstock laws. One of the nine has a Nebraska charter, and the remainder are incorporated under the Iowa nonstock cooperative law of 1921.<sup>15</sup>

The oldest nonstock association, on the basis of its present corporate status, was organized in 1921. Four others were organized between 1921 and 1926 and the remaining four were divided between 1932 and 1933. The membership fee is \$1, with two exceptions—one a \$10 fee and one a \$5 fee. Only one association reported that it returned the membership fee (\$1) when membership was terminated. The association at Cedar Rapids is the only one organized on a capital-stock<sup>16</sup> basis.

### VOTING AND MEMBERSHIP REQUIREMENTS

One vote per member is the rule with all associations and in no case is proxy voting permitted. Voting by mail is generally provided for. Except in those associations that handle cream for churning, business is done with members only. This is largely explained by the nonstock plans of organization and the low membership fees. All members must be farmers producing dairy products, or share landlords of dairy farms. Cash landlords are excluded.

### DISTRIBUTION OF INCOME

All of the associations provide for the distribution of undivided earnings, in excess of required reserves, according to patronage. Under the Iowa nonstock cooperative law of 1921, not less than 10 percent of the earnings in any year are to be added to surplus until the surplus equals 40 percent of the invested capital. From 1 to 5 percent of the earnings is required for educational purposes. Similar provisions are included in the Nebraska nonstock cooperative laws.

However, with the exception of Fort Dodge, no associations have ever paid patronage dividends. Either no excess savings were available or they have been held in the business as part of the surplus or as a reserve account. There is a general feeling among organized milk producers that to be fortified with a substantial amount of liquid

<sup>15</sup> New associations in Iowa must be organized under the new cooperative law passed in 1935 (ch. 390-G-1, Iowa Code of 1935) which provides the same cooperative requirements for organizations whether on a stock or a nonstock basis, and offers certain other advantages over the nonstock law of 1921. Property rights of members are more definitely defined and there is greater assurance that the business will be conducted for the benefit of patrons. In general, it sets forth methods and practices designed to promote the cooperative purpose.

It is probable that reorganizations following expirations of charters, or for other reasons, will also be based on the 1935 law.

<sup>16</sup> This association is organized under the Iowa stock cooperative law of 1915 (ch. 369, Iowa Code of 1935). The law is patterned after the general corporation law and was the first specific cooperative law in the State. It is typical of the Rochdale-type laws and provides for one vote per member, limitation on stock owned by any member (\$5,000), limited interest on stock (10 percent), and the distribution of excess earnings among the stockholders on the basis of patronage.

reserves strengthens their bargaining position with distributors. It places a bargaining group in a position to acquire a manufacturing plant or perhaps enter the retail business if at any time it is impossible to sell milk to their regular distributing customers. An association already operating physical facilities may need the excess earnings to build up the capital account or to expand the business.

The accumulation of a large surplus within the cooperative organization has in some cases created the problem of allocating the surplus equitably among patrons. The nonstock cooperative law provides that operations shall be conducted at the lowest practicable cost. The accumulation of a large unallocated surplus may violate the intent of the law. The logical way out is to allocate the surplus in excess of reasonable reserves to the members on the basis of patronage. The surplus is thus converted to membership capital and each patron shares in it in proportion to the volume of his business.

The fact that many of the associations are relatively new and others do not have large surplus accounts has kept the surplus allocation from becoming a general problem. At Des Moines, however, where the surplus was far in excess of the outstanding certificates of indebtedness, a resolution providing for an allocation of the surplus as shown in the financial report of December 31, 1935, was introduced and adopted at the annual meeting in January 1936. Considerable unrest had developed among the members regarding their claims to the unallocated capital account, and the officers and directors were agreed that such an allocation was desirable and proper.

The plan calls for an equitable allocation of all surplus accumulated by the association since it began plant operations. Specifically, each member is to share in the surplus in proportion to the value of business done with the association since January 1, 1926. The allocation is to be accomplished by the simple method of establishing a credit for each member on the books of the association, rather than by issuing certificates of indebtedness. The credit is without a due date or an interest rate and is secondary to all other claims against the organization. The payment of interest on the credits would result in an increased fixed overhead charge against the organization and thereby reduce the amount available to pay patrons for milk.

The credits are to be retired according to a revolving-capital plan. Under this plan the capital will revolve with some relationship to a 10-year basis; that is, any capital accumulated in 1936 will be used to retire credits established in 1926. This period, of course, may be shortened or lengthened depending on current accumulations relative to past credits. In any case the oldest credits are to be retired first.

## FINANCIAL HISTORY

Since all except the association at Cedar Rapids began as purely bargaining organizations, the original financing did not create an important problem. Very little capital was needed. Membership fees provided funds to pay the costs of incorporation and other incidental expenses. Operating capital was obtained by deductions from the producers' milk checks.

The five associations that have continued on a purely bargaining basis have had no additional financing since the time of organization; that is, they have never incurred indebtedness through borrowings nor have they received capital by the sale of shares or certificates to members. The operating associations usually required some additional financing when manufacturing facilities were obtained. In 1926 producers at Des Moines subscribed \$12.50 per cow in their dairy herds. Certificates of indebtedness were issued when the amounts were fully paid in cash or through deductions. In 1934 the members of the association at Burlington paid in \$5 per cow.

Two of the operating associations have some indebtedness arising from the purchase of plants or equipment, and one has borrowed operating capital. Two of these loans were made by the Omaha Bank for Cooperatives; they are being retired by monthly payments. Accumulated earnings from past operations and leased plant arrangements have lessened the need for raising large amounts of capital in a short time, in order to finance fixed assets.

It is undoubtedly true that lack of capital has limited the activities of many Iowa associations. While some may not require a large amount of capital, because of the nature of the functions performed, it is true that their activities depend on the amount of capital available.

In all associations, operating capital is provided by deductions from the producers' milk checks. In 9 of the 10 cases, deductions are on a per unit basis and in 1936 ranged from 1 to 6 cents per 100 pounds. In one case the deduction is on a percentage basis. Five of the markets—Sioux City, Omaha, Davenport, Des Moines, and Dubuque were under a Federal milk license at the time of the survey, and the deductions included 1 or 2 cents per 100 pounds of milk handled, to finance the office of the market administrator. For the operating associations, deductions usually apply to class 1 sales only, since the surplus price is arrived at on the basis of income less expenses and is not subject to further deductions except for transportation.



## OPERATING PRACTICES

## PRICE NEGOTIATIONS

THE primary activity of five associations and the only one common to the entire group is that of negotiating the terms of milk sales to distributors. Collective bargaining is of first importance to organized fluid-milk producers. All associations, to a greater or less extent, bargain with dealers over the price of fluid milk for bottling purposes and of other classes of milk according to use.<sup>17</sup> In addition to determining prices, bargaining covers all the conditions of sale, including how and when payments shall be made, how weights and tests will be checked, the right to divert milk and patrons, and nearly every other phase of the associations' operating plans. No plan of operation can be successful unless agreed to and thoroughly understood by all parties concerned. Because of the wide scope of activities included in the sale of milk by a bargaining association, some of the more important features of the sales agreement are discussed separately.

## SALES OF SURPLUS MILK

The operation of a manufacturing plant for processing surplus milk is an important function of each of the five operating associations. However, there is some variation in the extent to which these organizations have gone into the handling of surplus milk. At Des Moines, Ottumwa, and Burlington, distributors buy only class 1 milk, all other milk being diverted to the association's surplus plant. Cream and skim milk are purchased as such from the associations. In these cases surplus includes all milk in excess of class 1 sales for bottling purposes. At Cedar Rapids and Dubuque, distributors continue to buy some milk for cream and for lower-valued uses, so that not all milk in excess of fluid sales in bottles passes through the surplus plants.

In the four markets where farm-separated cream is received at the surplus plants and manufactured into butter, the purchases are handled in a separate pool or under a separate plan of payment, and the shippers are usually nonmembers. The nonmember cream business is causing a serious organization problem here. If membership were to be extended to all cream patrons, they would gain voting control of the organization because they are greater in number than the other patrons, although their production is much smaller per patron than that of the milk shippers. This possibility of control by cream patrons does not generally meet with the approval of the existing members who are producers of fluid milk.

<sup>17</sup> It should be pointed out that this feature has been modified somewhat at the markets which are operating under Federal milk licenses. The licenses provide a price schedule for each market, setting forth the dealers' buying prices. However, the producers had an important part in establishing these prices and periodic bargaining continues, since the licenses are subject to amendment. Such amendments have not been infrequent.

An important reason for receiving farm-separated cream is to increase the size of the business and use the surplus plant and equipment more efficiently. In most of these markets the volume of surplus milk is too small for efficient plant operation even though it may be large on a percentage basis and even though it may, unless properly handled, have an important effect on marketing conditions. For technical reasons the plants must be of a certain size and involve certain minimum labor requirements. As a result, per unit costs are high on small volumes. Moreover, the volume of surplus milk is highly seasonal. Unless supplies are supplemented from other sources, a churn necessary to process a small quantity of surplus butterfat may be idle much of the year.

Because of the relatively small volume of surplus milk, some associations maintain that it is best to allow existing distributors with manufacturing facilities to handle all the milk and pay the association according to the use plan. This is, of course, the procedure followed by the strictly bargaining associations. But the fact remains that if the volume of surplus milk were concentrated in one plant it would lead to more efficient handling. On only a few markets have distributors accepted a plan such as that used at Omaha and Sioux City, where one distributor handles all the surplus milk. In these markets some friction prevails among the distributors, because they feel that the surplus milk is an important source of profit to the one distributor and that he uses this income to take an unfair advantage of them in the bottled-milk and cream business. The elimination of such friction between buyers is of great importance to the farmers and is another reason for the handling of surplus milk by the association.

The surplus plants permit the associations to guarantee with greater assurance a market outlet for the milk of members at all times. Next to price considerations, this is probably the most important reason why the organizations were formed. Loss of market during part or all of the year was a particular grievance of producers and the guarantee that a market would be available worked to bring them together into one organization. All except one of the strictly bargaining associations also make a similar guarantee of an outlet for all the milk of their members. When difficulties in making sales arise, however, these associations have to depend on processors having available equipment

To a certain extent the associations themselves have created a need for more manufacturing facilities in that they have expanded their membership and increased the volume of milk coming into the fluid-milk market. As the surplus increased, the bargaining position of the producers' organization was weakened and in some cases the distributors did not care to handle additional milk, even under the use price system. Thus the surplus plants have, in general, facilitated orderly marketing

by holding the surplus milk under producer control. Local circumstances must be considered carefully, however, before any association undertakes the operation of a surplus plant. Available volume and existing facilities may be the determining factors.

### CHECKING OF WEIGHTS AND TESTS

It is a general policy of all associations to check the weights and tests of milk at the distributors' plants (fig. 6). Some associations have



FIGURE 6.—TEST LABORATORY OF A COOPERATIVE MILK MARKETING ASSOCIATION.

Practically all of the cooperative milk associations maintain laboratories for testing the butterfat content of milk and cream.

employees to check all weights and tests each day; other associations make checks at certain intervals; and still others, only occasionally or in the event of a complaint. The performance of this function is closely correlated with the size and position of the association in the market. The small associations do very little checking, as they have no personnel for such work.

### HANDLING THE PRODUCER PAY ROLL

Each of the associations, except the one at Iowa City, handles the producer pay roll and computes the pool price for milk. This practice of handling the producer pay roll by the associations and pooling the returns from dealers represents an advanced stage in the development of producer organization. The dealers generally have come to recognize the association as an important agency which renders a significant marketing service.

Under a plan whereby the association pays its members for milk, the producers are more likely to feel allegiance to the association than to a particular dealer. Furthermore, a method of payment which provides uniform prices to all is probably of advantage in maintaining harmony among producers. Under a dealer pool there may be enough variation in the dealers' prices to cause considerable unrest among producers. The one-price system has the further advantage of relieving the dealers of some of the clerical work involved in handling producer pay rolls and of placing the organization in a better position to organize or reorganize truck routes on the most economical basis.

### PROMOTION OF SALES

It is not the general practice of fluid-milk producers' associations in Iowa to join with others in the industry to promote the use of more dairy products. Four associations reported no work along this line, three reported only a limited amount, and the remaining three—all operating associations—advertised their butter and other manufactured products, if any, by brand, and cooperated with distributors in the sale of pasteurized milk.

It is doubtful whether any of the producer organizations in Iowa, except perhaps the one at Des Moines, has cooperated in an industry program for the increased use of dairy products to an extent proportionate to that of the associations in many larger milk markets. Developments along this line seem likely to be expanded as the associations become older and more firmly established.

### QUALITY IMPROVEMENT

All of the associations surveyed recognized that the production of high-quality milk is a goal worthy of the best efforts of the cooperative association. Field work with regard to quality has been a major part of the program of a few of the associations. In many cases, however, the work is handicapped by lack of personnel. Usually the manager or the tester gives at least a part of his time to such work, and two associations have fieldmen on a full-time basis who give considerable time to quality work. The services of the State extension service and city health officials have been used to advantage in this connection and often it has been possible to cooperate with the distributors on quality improvement. While it would be difficult to measure the extent of quality improvement and to know how much of it has been creditable to association activities, milk-producers' organizations undoubtedly deserve much credit for improvement in the grade of milk offered for fluid consumption.

## COMPILATION OF MARKET DATA

The assembly and use of market data has not generally been a function of these organizations. Three, however, issue a monthly bulletin to members in which market conditions and other information regarding the business of the association are included. Likewise, except at Des Moines, general educational work in cooperation has usually been done on a small scale, if at all. News bulletins, special letters, route meetings, district meetings, and annual meetings provide the important channels for such educational work. Most of the associations agree that more attention should be given to the subject of cooperation, and there is an apparent tendency to expand activities along this line.

## OTHER SERVICES

Numerous other functions, usually of a less important nature or performed on a more limited basis, are part of the business of these organizations. Loans or advances are sometimes made to producers and even occasionally to milk dealers; milking supplies and other farm supplies—such as binder twine and petroleum products—are often handled at cost. Occasionally an association handles mill feed and assists in the purchase of hay and other farm feeds. The general policy of service to members prevails, but beyond price bargaining and other matters related to negotiating the sale of milk to pasteurizing distributors, the functions performed in some cases are limited.

## COST OF SERVICES

Because of the differences in methods used in keeping records, it has been difficult to analyze separately the costs of carrying on the many functions of these associations. A general idea of the disposition of income may be had, however, from a study of a typical bargaining association (table 10).

This association had an income of 4 cents per 100 pounds of milk. Office salaries, including a full-time manager and all the workers necessary to keep detailed records of individual patrons' accounts, was the largest single expense item and amounted to 1.73 cents per 100 pounds or 44.5 percent of the total expense. Two men employed by the testing department checked weights and tests in every dairy every day at a cost of 0.93 cent per 100 pounds of milk handled. Miscellaneous office expense and directors' fees were other relatively important items. The remaining expenses were relatively unimportant and accounted for less than 17 percent of all expenditures. Advertising and donations amounted to only 0.02 cent per 100 pounds.

TABLE 10.—DISPOSITION OF AN INCOME FROM BROKERAGE OF 4 CENTS PER 100 POUNDS OF MILK HANDLED BY A BARGAINING ASSOCIATION, 1935

Expense item	Amount of ex- pense	Percentage of total income
	<i>Cents</i>	<i>Percent</i>
Office salaries.....	1. 78	44. 50
Testing department.....	. 93	23. 25
Miscellaneous office expense.....	. 38	9. 50
Directors' fees.....	. 25	6. 25
Rent.....	. 14	3. 50
Legal fees.....	. 13	3. 25
Traveling expense.....	. 10	2. 50
Bank exchange, postage, and telephone.....	. 10	2. 50
Meetings and route work.....	. 07	1. 75
Bonds, insurance, and taxes.....	. 06	1. 50
Auditing fees.....	. 04	1. 00
Advertising and donations.....	. 02	. 50
<b>Total.....</b>	<b>4. 00</b>	<b>100. 00</b>

MANAGEMENT AND ACCOUNTING

THE NUMBER of directors for these 10 associations varies from 5 to 21, distributed as follows:

Number of directors:	<i>Associations having indicated number of directors</i>
5.....	4
7.....	1
9.....	3
13.....	1
21.....	1
<b>Total.....</b>	<b>10</b>

The term of office is usually 3 years. Elections are staggered so that there is always a majority of old members. All the boards except one meet at least once each month, and special meetings are frequent. The board which does not meet monthly chooses from its membership an executive committee which holds monthly meetings.

Eight associations have full-time managers and two are managed by farmer-secretaries. One of the oldest organizations, which was said to have "run itself" in the past, engaged a manager recently. Of the eight full-time managers, six have had no previous experience in the business other than that of having been a producer and having served as a board member—usually as president. One of these

managers and the two farmer-secretary managers are still producers and serve on the board of directors. One manager has had some previous creamery experience and another has had both considerable experience in the business and advanced educational training. Of the present managers, only one was employed prior to 1933. This is partly explained by the fact that four of the associations with full-time managers were organized since that date.

Double entry accounting records adequate for operating and financial statements are kept by half of the organizations. Records kept by the other associations are sometimes quite inadequate. A monthly operating statement is prepared by all associations handling the producer pay roll and an outside audit is performed by a local auditing firm or individual. Four associations have monthly audits; one, quarterly; and four, annual audits. At Iowa City there is none, largely because the distributors handle the producer pay roll.

Bonds are provided for all officers or employees handling funds; nine of these are commercial bonds paid for by the association. The amount per person ranges from \$10,000 down to \$1,500.

## COMPARISON OF SALES PLANS

**I**N EVERY market dealers buy milk according to some form of the use plan, and the class 1 price is now uniformly based on 100 pounds of milk testing 3.5 percent butterfat.<sup>18</sup> During 1932, 1933, and 1934 the butterfat differential was usually 3 cents for each 0.1 percent above or below 3.5 percent butterfat content. Since 1934, most associations have shifted to a sliding-scale differential, based upon the value of butterfat in butter. At Des Moines, for example, the butterfat differential varies each sale period with the average price of New York Extra butter during that period. In most other markets the differential changes by one-half-cent intervals. That is, when the price of butter averages between 30 and 35 cents, the differential is 3 or 3½ cents per point; and when the butter price averages between 35 and 40 cents, the differential payment increases by one-half cent.

It is also true that all the class 1 prices are straight bargained prices, that is, remain unchanged except by agreement between producers and distributors. At one time the class 1 price at Sioux City was placed on a sliding scale at a fixed differential over the price of Chicago Extra Creamery butter. By so doing it was hoped to eliminate periodic bargaining of fluid-milk prices. The plan probably had some merit but was soon discontinued because it was found that dealers were making resale commitments on the low summer prices, which extended into the fall and winter. Then when the class 1 price

<sup>18</sup> The association at Sioux City adopted this plan in August 1936. Milk had previously been sold on a butterfat basis.

advanced, the dealers were placed under a serious financial strain and refused to cooperate with the organization. Apparently, with a more or less fixed resale price, the associations find it more satisfactory not to vary class 1 prices except periodically by agreement.

Information is not complete on the exact manner in which the necessary day-to-day reserves of class 1 milk are paid for. In general, however, the bargaining associations selling milk according to the use plan have no problem with the dealers' day-to-day surplus of class 1 milk, since the use classification is based on actual sales rather than on purchases. For example, returned bottled milk is not considered as a class 1 sale. The plan does make it necessary to audit the distributors' books in order to determine the actual class 1 sales. It is in this respect that many of the smaller associations are at a disadvantage.

While the operating associations of the Des Moines type have no problem of auditing the distributors' books to determine the exact use made of the milk, since only class 1 is sold to distributors as milk, there is a problem regarding the payment for class 1 milk purchased but not sold in fluid form. The allowance of 6 percent of milk purchases at surplus prices, which is made at Des Moines, is probably the most satisfactory arrangement. The Cedar Rapids Association allows "returns" at the butterfat value of sour cream, but some associations reported no allowance for class 1 milk purchased but not sold in fluid form.

In June 1936, the prices per 100 pounds of 3.5 percent fluid or class 1 milk were as follows:

Price per 100 pounds:	Number of associations
\$2.00.....	3
\$1.90.....	2
\$1.85 <sup>1</sup> .....	3
\$1.60.....	1
Total .....	9

<sup>1</sup> Includes 10-cent premium usually paid at Iowa City.

<sup>2</sup> Total of 9, since the association at Sioux City was then selling milk on a butterfat basis.

In eight out of nine associations the price varied within the narrow range of \$1.85 to \$2 per 100 pounds. These prices had prevailed generally for the previous year but represent marked increases over 1932 and 1933. It should be pointed out that the average test of milk delivered (and in many cases the average test of milk bottled) is above 3.5 percent butterfat, so that the prices actually paid by distributors are somewhat above the base prices.

As a general rule the highest prices tend to be associated with the largest markets. These markets also tend to have somewhat more



costly production and sanitation requirements and naturally draw their milk supplies from wider areas.

Where three classes of milk are provided under the use plan of the bargaining associations—the usual situation—class 2 applies to milk used to obtain cream for fluid consumption. Until the fall of 1936, all class 2 prices were variable, were based upon a butterfat formula and were quoted in terms of cents per pound of butterfat. During the fall of 1936 two of the five bargaining associations (at Omaha and Sioux City) changed to a bargained price for class 2 milk, based upon 100 pounds of 3.5 percent milk. The prices were thus placed on the same basis as class 1, but at a lower level.

Among the operating associations, Cedar Rapids and Burlington producers have long maintained bargained or negotiated cream prices. The Cedar Rapids price is optional, between 100 pounds of 3.5-percent milk at the established class 1 price and an equal amount (considering the value of skim) from the surplus plant on a pound-of-butterfat basis. That is, Cedar Rapids not only uses a fixed class 2 price but this is the same as the class 1 price.

The producers at Dubuque, where a surplus plant is operated in combination with the use plan of selling, also changed from a formula to a fixed price per 100 pounds for class 2 milk. Thus, five markets have a fixed or bargained class 2 price and the other five sell cream or fluid milk for fluid-cream purposes at a variable price determined according to a formula.

In addition to variations in the method of arriving at and quoting the class 2 prices, there is some variation in the method of arriving at the price of cream for fluid and for manufacturing purposes. At Des Moines and Ottumwa, where cream prices are established on a formula basis at near the butterfat value, sweet cream is sold at one price regardless of use. On the other hand, in all the markets where class 2 milk is based on 100 pounds of 3.5 percent milk, cream for manufacturing purposes is sold on the basis of a price determined by formula, in a separate class or as surplus milk.

Local conditions largely determine the various methods used in pricing cream to distributors. If alternative sources of sweet cream supply are readily available outside the association, the general policy is to keep the cream price low and based on the value of butterfat. It is not unlikely that many associations which adopted a fixed and relatively high cream price during the unfavorable production conditions of 1936 will subsequently have to alter their plans in order to prevent distributors from seeking cheaper sources of cream supply.

In all cases where class 3, or surplus, milk<sup>10</sup> is sold to distributors, the price is variable depending upon some central-market butter

<sup>10</sup> The price plan at the Quad Cities provides for four classes of milk but steps are being taken to gradually eliminate class 4.

quotation. It may be based on 100 pounds of 3.5 percent milk or on a pound of butterfat. Five markets use Chicago Extra Creamery butter prices in their formulas, two use the price of Chicago standards and three use the price of New York Extra butter. The formulas do not apply to the operating associations such as those at Des Moines and Ottumwa except on sweet cream, since the surplus milk is processed and the net returns are based on the selling price of manufactured products (including sweet cream) less expenses.

All the associations have had written agreements with distributors at one time or another, for a full supply of milk. However, by 1935 only six associations used written contracts with distributors, and in one case the last signing occurred in 1925. Managers expressed various opinions regarding distributor contracts. Some thought they were essential; others said they used them but did not consider them of great value, and still others thought that they were definitely harmful to the association. Distributor contracts were considered of least importance in the markets under a Federal license. After reasonably satisfactory distributor relations had been worked out in the licensing arrangement, there was little to be gained by contracts with distributors. (See sample contract in Appendix, pp. 67-72.)

In all cases the organized producers supply the milk to the leading pasteurizing distributors in the market. While the exact percentage of all pasteurized milk supplied by association members is not known, information from several markets indicates that from 60 to 75 percent is a typical figure. At Omaha, however, the association provides nearly 100 percent of the milk that goes into pasteurizing plants for bottling purposes.

## PAYMENTS TO PRODUCERS

WHILE there is considerable variation among the 10 associations in the manner in which patrons are paid for milk, there is, nevertheless, considerable uniformity in certain features of the price plans. For example, in all cases payments are made to producers on the basis of 100 pounds of 3.5 percent milk with a varying test differential corresponding to that paid by the distributors on milk purchased from the association. Reference has already been made to the milk pools, producer pay rolls, and deductions for operating expenses and for hauling. With the exception of Iowa City, the returns to the individual producer are in no way affected by the particular outlet to which his milk is delivered or the use to which it is put. All the variations in the net price received at the farm, for any one market, arise out of differences in (1) quality, (2) butterfat content, (3) transportation costs, and (4) base ratings, if any.

Except for the monthly pool used at the Quad Cities, the prevailing pool period is semimonthly. Payments to producers after the close of the pool are delayed as follows:

Days payments are delayed:	Number of associations
5.....	3
8.....	3
10.....	1
15.....	2
20.....	1
9.9 <sup>1</sup> .....	10

<sup>1</sup> Average.

Since the pool prices are arrived at by dividing the total income from milk by the number of 100 pounds delivered, it is clear that the final price received by the producer depends not only on the returns from milk in each of its uses or outlets, but also on the proportion disposed of at each price. The higher the percentage of milk sold as class 1, the nearer the pool price approaches the price paid by distributors for class 1 milk.

Complete historical information is not available on the proportion of class 1 sales by each association, but some attention has been given to this question in connection with the individual associations. Because of the relatively wide seasonal fluctuations in production, as compared with consumption of fluid milk, there is a pronounced seasonal variation in the percentage sold as class 1. Also the percentage may vary markedly from year to year because of changes in production per member, in number of members, in total consumption, and in the proportion of the fluid market supplied by competitors. When reference is made to the percentage of surplus rather than the percentage of class 1 milk, it might be said again that it is important to know the basis for calculating surplus milk.

It is also true that some associations during certain seasons, particularly in unfavorable production years, have little more than enough milk to supply the fluid needs of the cooperating distributors. In recent years, however, it is only in rare instances that milk or cream is purchased outside the association membership during a low-production period.

An example of the pool-price calculations at Des Moines for May 16-31, 1936, appears in table 11. According to this calculation, the price available for 3.5 percent milk, f. o. b. city, was \$1.53 per 100 pounds.<sup>20</sup> The association actually paid \$1.52 as a margin of safety. During the same period the price of New York Extra butter averaged 27.3 cents, so that the test differential was 2.7 cents per point.

<sup>20</sup> The same pool price might have been obtained by computing the value of each use and dividing the total value thus obtained by the number of 100 pounds delivered.

It will be noted that the pool price was only 22 cents per 100 pounds above the returns for surplus milk. If an association has a high percentage of surplus it is especially important that it use every effort to obtain the highest possible returns from the surplus in order to have a favorable pool price. It might be argued that milk of some producers should be dropped in order to reduce the surplus and thereby raise the average price, but that result does not necessarily follow. The members who were left out of the pool might sell to independent dealers and thus reduce the quantity of fluid milk sold by the association, so that the pool price would not be increased.

TABLE 11.—METHOD OF CALCULATION OF THE POOL PRICE FOR MILK BY THE DES MOINES COOPERATIVE DAIRY MARKETING ASSOCIATION, FOR THE PERIOD MAY 16-31, 1936

Class	Pounds of milk handled	Percentage of total in each class	Price per 100 pounds	Value per 100 pounds <sup>1</sup>
Fluid.....	949, 275	35. 1	<sup>2</sup> \$1. 95	\$0. 68445
Relief.....	43, 272	1. 6	<sup>2</sup> 1. 65	. 02640
Surplus.....	1, 711, 941	63. 3	1. 30	. 82290
Total.....	2, 704, 488	100. 0	-----	1. 53375

<sup>1</sup> The price per 100 pounds times the percentage of total.

<sup>2</sup> 5 cents per 100 pounds has been deducted from scheduled prices.

### BUTTERFAT-TEST DIFFERENTIALS

The uniform practice of quoting prices on 3.5 percent milk results in producer prices which average, before deductions, somewhat higher than the base prices since most of the milk delivered tests in excess of 3.5 percent. This is illustrated in figure 7, which shows the average monthly test of milk at Des Moines and Sioux City during 1935. The average tests at Des Moines ranged from 3.62 to 4.11 percent and those at Sioux City from 3.50 to 3.98 percent. There is a marked tendency for the tests to decline during the first 6 months of the year and to recover during the last half.

Establishing the base price on milk of a butterfat content which is below the bulk of the deliveries has the important psychological effect of paying producers premiums on nearly all deliveries. Insofar as all milk is sold to distributors according to the use plan on a corresponding test- and butterfat-differential payment basis, a high differential does not directly affect the income of the association. However, if an association operates a surplus plant and manufactures a large quantity of surplus milk, it is important that the butterfat-differential payments to producers be in line with the value of butter-

fat. Otherwise, high differentials would give excessive premiums to high-test producers at the expense of low-test producers and for this reason would directly affect the member according to the average test of his herd. Likewise, this differential will influence the association's ability to find buyers for surplus milk. It is for this reason that some associations vary the differential payment according to the exact average butter prices during the pool period.

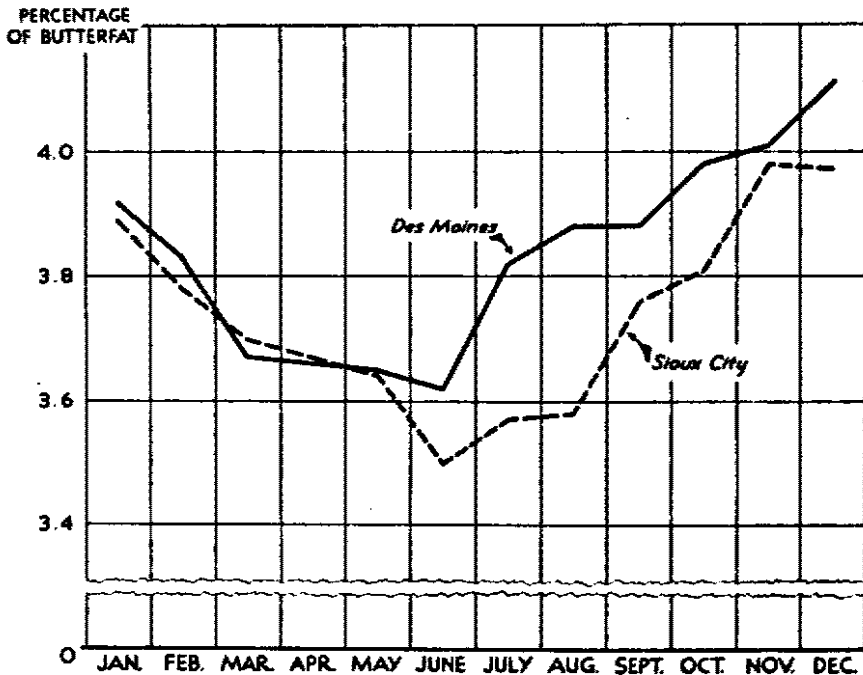


FIGURE 7.—AVERAGE MONTHLY BUTTERFAT TEST OF MILK DELIVERED BY ORGANIZED PRODUCERS AT DES MOINES AND AT SIOUX CITY, 1935.

Prices are quoted customarily on the basis of milk testing 3.5 percent butterfat. The average receipts at the market, however, test higher in butterfat content, and producers therefore receive, on the average, prices somewhat higher than those quoted.

### BASE-SURPLUS PLANS

In four markets the straight pool plan of making payments to producers is modified by an application of the base-surplus plan of payment. In each of these plans, producers establish a base, and deliveries in excess of base are considered surplus milk. In reality the patron receives two prices, one price for base milk and a different price for that in excess of the base. In all cases the value of the base milk is computed separately from the value of the surplus milk and the producer's check is the sum of the two values less deductions. These calculations are attached to the check. The blended or average

price is usually not calculated. It is readily obtainable, however, by dividing the total value of the milk by the number of 100 pounds sold.

The base-surplus plans used at the four markets differ considerably in the methods of establishing producer bases and in arriving at the base and surplus prices. At the Omaha-Council Bluffs market and the Quad Cities, an effort has been made to keep total producer bases in line with fluid sales (class 1 and class 2). This is accomplished by adjusting bases by that percentage figure which represents the relationship between fluid sales and total bases first established under the scheme. At Omaha the bases, once established according to 1933 production, remain fixed except as altered by an adjusting board; whereas, under the Quad City plan, new bases can be established according to the production in the fall months of the previous year.

It should also be pointed out that while the class 1 and class 2 use prices are fixed, the price paid for base milk depends on the percentage of base milk used for these and sometimes lower-valued uses. Therefore, even though the adjustment between established bases and fluid sales is not perfect, variations in the value of base milk are automatically compensated for by variations in the base price to producers. This, the most refined system used in any of the markets, was worked out in connection with Federal milk licenses.

The alternative system used at Iowa City and Burlington allows producers to establish bases without regard to fluid sales. As a result, the total bases tend to be far in excess of fluid sales. A fixed basic price is then paid on the percentage of base milk sold as class 1. The remainder, that is, excess within the base and all over the base, is paid for at the surplus price. These two associations recognize but two uses—fluid and surplus.

One significant difference between the plans is that the first method gives the producer a relatively high average price for his base milk and the latter affords a relatively high base. The base price also tends to be relatively high with the high-base plan, but this is offset by the fact that only a portion of the base milk is paid for at the base price.

The present base-surplus plans are relatively new, and an adequate appraisal of their results would be difficult. The plans appear to be working with reasonable satisfaction, in the opinion of the officials in charge. These officials agree that some attempt should be made to divide the surplus more equitably by rewarding the producer who maintains an even production throughout the year. There is no evidence to date, however, that the aggregate production since adoption of these plans has seasonal variations any less pronounced than formerly, though some of the variations may be attributed to abnormal production conditions during the last few years.

At some other Iowa markets forms of the base-surplus plan have been tried and subsequently discontinued because the results were unsatisfactory. At Sioux City, for example, a 3-month trial in 1932

is said to have nearly disrupted the new association. The feeling is quite widespread on the part of marketing officials in these markets that the base-surplus plan in any of its modified forms is ill-adapted to heavy surplus areas, such as many of those surrounding Iowa markets. When the membership of the cooperative includes a large proportion of the available or potential milk supply, control schemes are usually much more workable. In any case, the local situation is an important consideration. There is also the danger that any present arrangements may create new and more difficult problems unless an enlightened management is continually available to make necessary adjustments. Some of the managers not using the base-surplus plan expressed the opinion that its use by other Iowa associations had merely resulted in additional marketing machinery without improving any of the market conditions. The plan has not been used for a sufficient period to warrant definite conclusions as to its adaptation to conditions in Iowa.

## MEMBERSHIP POLICIES

**A**LL OF the organizations operating in Iowa use a written marketing agreement between the association and the producers. The contracts in the different markets are all similar or identical, since most of them are patterned after the agreement used by the Des Moines Cooperative Dairy Marketing Association. (See Appendix, p. 70.)

The number of producers reported under contract in each of the 10 associations in 1935 is listed below according to location:

Location of association:	Producers under contract
Omaha-Council Bluffs.....	2,700
Sioux City.....	900
Des Moines.....	860
Davenport <sup>1</sup> .....	477
Cedar Rapids.....	384
Dubuque.....	370
Fort Dodge.....	200
Burlington.....	124
Ottumwa.....	100
Iowa City.....	80
Total.....	6,195

<sup>1</sup> Illinois-Iowa Milk Producers Association.

## FEATURES OF CONTRACT

The contracts, for the most part, apply to whole-milk patrons only and customarily run for a limited period, with the provision that either party may terminate the contract by means of a written notice 30 days in advance of a specified date.

The agreements call for full consignment of all milk produced on farms occupied or controlled by the producer except for home-consumption requirements. In many cases, especially with bargaining associations operating a base-surplus plan of payment to producers, this provision has not been enforced. On the contrary, producers are given the specific privilege of keeping on the farm milk in excess of the base quantities and frequently are actually encouraged to do so. If a producer, under the agreement, refuses to sell any milk through the organization, it is definitely considered a violation of the contract and steps are taken to bring the producer in line.

The contracts provide a \$25 fine for each violation. Most associations, however, have had no occasion to resort to legal means of enforcing the contracts. Such violations as there are often arise out of misunderstandings, and disputes are settled without difficulty. Moreover, the associations are usually more interested in compliance than in collecting liquidated damages.

The association at Des Moines recently adopted a resolution to change to a new producer contract which takes cognizance of the courts' objections to the existing agreement and otherwise simplifies the language. The resolution requires that 90 percent of the active producers agree before the change can be made. If the new contract is adopted, it is not unlikely that the other Iowa associations will follow this lead in revising their producer contracts.

### EXPANSION OF MEMBERSHIP

Five associations reported that it was their policy to limit the number of milk patrons to somewhere near the existing number, and the remainder reported membership open to all in the established trade territory who could qualify from a quality standpoint. This, in some cases, involved meeting the sanitation requirements of the city. The mere statement that membership is limited or open means little, except as a statement of policy. Membership may be open with many limitations and may be closed with many exceptions. For example, some associations announce an open policy, yet the requirements for new producers are such that they tend to discourage prospective members from joining the association.

The larger associations generally require a written application for membership which is acted upon by the board of directors. The producer's location relative to established truck routes, his facilities for producing high-quality milk, and the quantity of milk available are important considerations. Also the alternatives of the prospective shipper are taken into account. If he has been a producer-distributor, or has been selling milk to an independent pasteurizer, or may reasonably be expected to obtain one of these outlets in the near future, he is likely to be considered a desirable association member.



The cream shippers mentioned on previous occasions represent nonmembers, and the patronage in every case is open to all who can be reached on established or expanded truck routes and direct hauls, unless they should be refused on the basis of quality.

One of the principal reasons for attempting to limit fluid-milk patronage is to hold the market for the old and relatively nearby producers. If the membership is expanded the result is a larger volume of milk, and unless fluid sales happen to be expanding, a lower average price to all shippers. The old and nearby producers, being more experienced in the sale of fluid milk, tend to produce milk of higher quality and more uniform in flow. If a large membership results in a heavy surplus it may not be to the interests of the old producers to sell through the association pool. Thus, the holding of these most desired members in line often dictates a policy of limited membership.

On the other hand, insofar as nonmembers are a potential, if not a real source of competition for the fluid-milk market, the nearby producers may have less to lose by expanding the membership. In this way the fluid-milk market is maintained by the association. The surplus of milk over fluid requirements surrounding most Iowa markets, therefore, tends to result in a membership which supplies milk well in excess of fluid needs.

The expansion tends to stop sooner than one might at first expect in view of the heavy milk production in the State, together with a system of improved roads and modern truck transportation. Except for numerous improvised means for limiting membership, the answer seems to lie in the fact that most Iowa farmers are not typically dairymen and they are not interested in supplying fresh whole milk daily as a side-line enterprise even at some premium. As the membership expands, the premium becomes smaller and the price approaches that of milk for manufacturing only. It is then more profitable to sell farm-separated cream, since the transportation charges are lower and the skim milk is available for feeding on the farm.

## PROCUREMENT OF MILK AND CREAM

**P**ROCUREMENT of milk, and in some cases cream, represents a major problem in the operation of nearly all of the associations under consideration. However, in most instances, reasonably satisfactory arrangements have been worked out during the last few years. The trend is markedly toward more stable trucking conditions. The developments at Des Moines and Omaha are of particular interest. Information regarding the routes operated by 10 associations is summarized in table 12.

TABLE 12.—MILK AND CREAM ROUTES OPERATED BY 10 FLUID-MILK PRODUCERS' ASSOCIATIONS, 1935

Association headquarters	Number and frequency of routes hauling—		Hauling rate				Cream rate per pound of butterfat charged producer	Truck ownership and control of routes		
	Milk (daily)	Cream	Milk—per 100 pounds		Cream—per pound of butterfat content	Ownership of trucks		Source of payments to truckers	Degree of association control	
			Range	Average						
Omaha.....	70	None.....	Cents 15-30	Cents 24	Cents	Cents	Private.....	Association.....	Complete.	
Sioux City.....	30	do.....	15-25	22½			do.....	do.....	Partial.	
Des Moines.....	50	18—twice a week..	15-35	22	3	1	do.....	do.....	Complete.	
Davenport.....	30	None.....	10-20	18			do.....	do.....	Do.	
Cedar Rapids.....	23	(1).....	12½-20	16	2	2	do.....	do.....	Partial.	
Dubuque.....	8	3—twice a week..	12-20	15	2	1	do.....	Producers.....	Do.	
Burlington.....	10	None.....	13-up	<sup>2</sup> 18			do.....	Association.....	Complete.	
Ottumwa.....	8	3—2 and 3 times a week.	8-35	18	2½	2½	do.....	Producers.....	None.	
Fort Dodge.....	4	None.....	None	20			do.....	do.....	Do.	
Iowa City.....	3	do.....	(3)	(4)			do.....	do.....	Do.	

<sup>1</sup> 2 trucks haul mixed loads.

<sup>2</sup> Approximate.

<sup>3</sup> Information not available.

<sup>4</sup> Very little commercial hauling, and the association has no knowledge of the rates charged.

## NUMBER OF ROUTES

Seventy association milk routes are operated in the largest market center of Omaha and Council Bluffs. This is more than twice as many as at any other point except Des Moines. In addition to the size of the market, the fact that nearly 100 percent of the milk supplied to pasteurizing distributors comes from association members, tends to increase the number of routes in the Omaha area.

The number of routes, however, gives no adequate measure of the quantity of milk handled, because of differences in the size of loads and in the proportion of milk delivered direct by producers. In the smaller markets, with from 3 to 10 routes, there tends to be a larger proportion delivered direct. Of the three routes listed at Iowa City, for example, only one is operated by a nonproducer. The other two are not greatly different from numerous other producers who haul their own and their neighbors' milk, except that they have special equipment and larger loads. At Fort Dodge, where four routes are operated, about one-third of the milk is delivered direct.

Eighteen cream routes are operated by the Des Moines association. This is by far the largest number of routes operated by any of the milk-producer groups. At Cedar Rapids, where there are a few mixed loads, the exact number of routes is not known. At Dubuque and at Ottumwa there are only three cream routes. Milk is collected daily in all cases and cream usually twice a week.

## HAULING RATES

Milk-hauling rates in 1935 are shown in columns 3 and 4 of table 12. The minimum rate per 100 pounds is usually 12 to 15 cents, and the maximum 30 to 35 cents for the larger markets and about 20 cents for the smaller markets.

In general, the rate varies with distance above a flat-rate minimum, but other factors, such as size of shipments, condition of roads and accessibility of shipper, are taken into consideration. Where the association has no part in the hauling, truck drivers may work out hauling-rate schedules which involve numerous other considerations and which may not be uniform for all producers whose positions are comparable as to the points mentioned.

At Burlington the minimum rate is 13 cents per 100 pounds for the first 5 miles, and 1 cent per 100 pounds for each additional mile. In other cases, where distance is taken into account, the rate is usually uniform for an entire route or an entire area. At Fort Dodge, where all milk is obtained within a radius of 6 miles of the city, a uniform rate of 20 cents per 100 pounds applies to all milk shipped on commercial routes.

The average rate, which represents the rate at which the bulk of the milk is hauled, varies from a high of 24 cents at Omaha down to 15-18 cents for all except the relatively large markets of Des Moines and Sioux City. The average rate bears a direct relationship to the size of the milkshed (fig. 2). Milk hauling charges are either assessed against the producer in the form of a deduction from his returns, or paid direct by the producer. Therefore, they are never considered an operating expense of the association.

In the case of cream routes, the practices differ as to the methods of handling the charge to producers. At Des Moines, where the rate is 3 cents and at Dubuque, where it is 2 cents per pound of butterfat, 1 cent is deducted from the producer's check and the balance is paid from the general fund of the association. At Cedar Rapids and Ottumwa, the entire hauling charge is deducted from each cream check.

Insofar as all cream is delivered on truck routes, which is essentially the case, and the cream expenses are allocated properly against the cream part of the business, it makes little difference to the producer whether the charge appears as a deduction or as a part of the costs of operation which directly lowers the amount available to pay producers. It does make a difference in the stated price at the plant, and for competitive reasons, some associations prefer to keep the door price relatively high. Under other competitive circumstances it is apparently considered better to have a relatively small proportion of the hauling charge deducted from the producer's check, thereby partially obscuring the actual hauling rate paid to truckers.

#### OWNERSHIP AND CONTROL OF ROUTES

All the trucks used in delivering milk from the farm to the city plants are privately owned. Association control over the haulers and their routes varies all the way from practically complete control involving contractual relations, to no control and with practically no knowledge on the part of the cooperative of working arrangements between haulers and individual producers.

It is generally considered desirable from the association viewpoint to exercise rather complete control over the milk routes. When this is not done it is difficult to maintain satisfactory membership relations. Unregulated haulers tend to vary rates between comparably situated shippers, shift patrons from one route to another, induce new patrons to start shipping milk, start new routes in old territories, and to introduce other undesirable practices which cause the patrons to feel allegiance to the hauler rather than to the association. Stated in another way, the principal contact the association has with most patrons is through the milk haulers who visit their farms daily. It is important, therefore, that the hauler act as an agent whose function is to serve the best interests of the association and its members.

Another undesirable consequence of noncontrol over milk routes, particularly in the supply area of a large market, is an uneconomical arrangement of the routes. Although no adequate statistical information is available on the subject for Iowa markets, apparent conditions lead to the conclusion that in these areas the usual tendencies toward overlapping and duplication of services are found. Excessive mileage is traveled and many partial loads are hauled. Producers themselves have much to do with this condition. When milk prices are falling sharply their first complaint is to the hauler. They insist on lower rates and threaten to change haulers or deliver their own milk. They may start routes of their own and further complicate the trucking situation.

It should also be pointed out that in general, established milk routes antedated the producers' organizations. When the patrons of several distributors, each with scattered producers or scattered territories, were brought into one organization, routes were seldom adjusted for a more economical arrangement. Had the association assumed control of hauling as well as marketing, however, truck routes might have been placed on a more economical basis. Some managers recognize the inefficient trucking system but are not greatly concerned, because competition keeps the producers' rates as low as could reasonably be expected under any other system. Under such conditions losses are probably being absorbed by the truckers, many of whom fail to earn the going wage rate or the replacement value of their truck, or both. This situation is unsound from the standpoint of social waste or desirable membership relations, and will not permanently give the most economical hauling arrangements.

One of the principal ways of exerting the maximum of control over privately operated trucks is the handling of the truckers' pay roll by the association. In six cases, including all the large markets, the associations deduct the amount due haulers from the producers' checks and pay the haulers from the organization's general fund. This system in itself does not directly insure control but if the trucker refuses to carry out the instructions of the association, he may be faced with the alternative of collecting his accounts individually from each of his shippers. Thus a degree of control may be exerted by the association.

Four associations exercised almost complete control over truck routes (table 12), three had some degree of control, and three associations took no part in the trucking arrangements. In these three organizations the producers and the haulers made any agreements that were mutually acceptable.

## TRUCKING CONTRACTS

Two notable examples of controlled truck routes are provided at Des Moines and at Omaha-Council Bluffs. In each case the truckers are under contract to the association. The provisions of the agreements are quite similar.<sup>21</sup> (See Appendix, p. 70, for contract in use at Des Moines.)

The contract specifies that the hauler shall assume full responsibility for the truck and must deliver to the point designated by the association. It is agreed that the purchaser of the milk remit to the association the entire amount due patrons and haulers. The association, in turn, makes deductions for the hauler before making payments to producers. This practice prevails generally even when there are no written contracts between the hauler and the association.

Other important provisions of the contract are:

1. The association reserves the right to discontinue at any time the purchase of the milk of any or all of the producers which the hauler may be serving. If the services of the hauler are discontinued for any other reason, the board must allow the hauler a hearing before a committee composed of board members, three haulers, and three route chairmen from the routes nearest the route affected. If the board, after such a hearing, decides to discontinue the services of the hauler, the association agrees to pay the discharged hauler \$25 for each 100 pounds of average daily weight of milk.

2. The hauler expressly agrees not to haul any milk except for a definite list of producers which is attached to and made a part of the contract. Any subsequent additions or subtractions require the consent of the association.

3. If a producer moves to a farm on another route, then the hauler for that route serves the producer. If he moves to a farm from which milk has not been shipped before, the nearest hauler is entitled to serve him. In case of disagreement, the route chairmen of the routes involved and three board members settle the dispute.

4. In event that a producer changes from one route to another, either at his own initiative or through solicitation, the compensation for hauling his milk is paid to the hauler previously hauling until an amicable agreement is reached between the two haulers and the association.

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<sup>21</sup> The contract plan was first introduced at Omaha and later at Des Moines. Much of the application and refinement, however, has been worked out mutually through the managers of the two associations, the present Des Moines manager having been manager at Omaha when the plan was introduced.

This contractual system results in routes established by central authority rather than by a number of haulers individually. In addition to having specified producers, each route is given a number and has a route chairman who is responsible for the affairs of the route. The privilege of discontinuing routes with compensation to the hauler has made it possible for the two associations using this system to reorganize their routes and materially reduce the number of haulers. It has been necessary to arbitrate numerous individual cases in re-establishing routes. The \$25 compensation referred to above is a minimum only, and if the hauler disposing of his route can obtain more he is entitled to do so.

Most cases of arbitration are involved in situations in which producers have been shifted from one route to another by the association and the route chairman. Once the new routes are established under this system, however, such disputes are limited to cases of new producers and to questions as to the logical route to serve his farm. Both associations have nearly completed the reorganization of all routes and the results have been extremely gratifying. A more detailed study would be necessary to determine the actual dollar savings under the new system and to appraise all the intangible values accruing to the organizations from "planned" and controlled truck routes. It is unquestionably a significant step forward in the service of these cooperatives to their members and the plan may well be studied by other organizations.

## APPENDIX

### STANDARD MARKETING AGREEMENT OF THE DUBUQUE CO-OPERATIVE DAIRY MARKETING ASSOCIATION

THIS AGREEMENT, made and entered into on this \_\_\_\_\_ day of \_\_\_\_\_  
19\_\_\_\_, by and between the DUBUQUE CO-OPERATIVE DAIRY MARKETING ASSOCIATION,  
party of the first part, and \_\_\_\_\_ of \_\_\_\_\_  
(Name) (Address)  
\_\_\_\_\_, party of the second part.

WITNESSETH: That in consideration of the mutual obligations of the parties hereinafter set forth, the parties do hereby agree as follows:

(1) That party of the second part shall consign unto party of the first part all the milk produced on the farm or farms occupied or controlled by him, except such as may be required for home or farm consumption, during the period from \_\_\_\_\_, 19\_\_\_\_, to \_\_\_\_\_, 19\_\_\_\_: *Provided, however,* That either party shall have the right to terminate this contract at the end of any calendar year during the foregoing period or any extension thereof by giving notice in writing of its or his intention so to do to the other party at any time between the 15th and 30th days of November of each year: *And provided further,* That this contract shall be extended after the period limited herein from year to year upon the same terms and conditions as are herein embodied, unless notice of intention to terminate is given by either party to the other in manner and form herein provided;

(2) That party of the second part shall deliver such milk to such shipping stations or other plants as party of the first part may from time to time direct, and to be of such test and quality, delivered at such hours and produced under such sanitary and hygienic regulations as may be the rules and regulations of party of the first part and the board of health, the city, and the law of the State where the milk is produced and is to be finally marketed. If the producer shall desire to retail milk and cream to residences, he shall make application to the association, which may grant him the right to so retail upon such terms and conditions as the association may see fit.

(3) That if party of the first part shall be unable to sell or otherwise dispose of the said milk during any portion of the contract period, party of the second part shall be so notified, and in such an emergency it shall be optional to party of the second part to manufacture said milk into milk products at home, or otherwise utilize it, and said inability of party of the first part to sell or dispose of said milk, when said notice thereof is given, shall in no event be considered a breach of or failure to perform this contract.

(4) That party of the first part shall sell and dispose of the milk consigned to it by party of the second part as the board of directors shall determine by either of the following methods:

- (a) It may be accepted for sale on consignment;
- (b) It may be accepted under the general conditions governing cooperative pools, or under such conditions as may be determined by the board of directors, along with other milk of like grade and character. Such pooled milk shall be disposed of as whole milk, or after further process of manufacture at the discretion of the directors, and pro-rata settlement shall be made at the same price for each grade, proper consideration being given to differentials due to handling and transportation costs.



(5) The deductions made by the association for its services shall be governed at all times by the bylaws which are made a part of this contract as fully as though specifically set forth herein, and any savings shall be prorated to all producers in proportion to the business done and in accordance with the articles of incorporation.

(6) That in case of failure of party of the second part to deliver his milk to party of the first part, as provided herein, he shall pay as liquidated damages, and in consideration of the difficulty of ascertainment of the precise damages suffered by party of the first part, and by members thereof who shall have entered into contracts similar to these presents, the specific sum of twenty-five dollars (\$25.00) for each and every such failure and breach of this contract, and in addition thereto a sum equivalent to the amount of the deductions which would have been payable had party of the second part delivered his milk as herein provided. All deductions and damages shall be payable at the office of party of the first part at Dubuque, Iowa.

(7) That in the event that party of the second part is offered a price for his milk in excess of the price obtainable by party of the first part, he shall tender said offer to party of the first part, and if said offer is accepted by party of the first part and the said milk is sold and delivered thereunder, it shall be deemed to have been sold by party of the first part subject to all the terms and conditions of this contract.

(8) That party of the second part shall furnish any and all statistical data with respect to milk produced by him upon forms provided by party of the first part.

In witness whereof the parties hereto have set their hands the day and date first above written.

DUBUQUE CO-OPERATIVE DAIRY MARKETING ASSOCIATION,

By .....

(Party of the first part (association))

By .....

(Party of the second part (producer))

## MILK MARKETING CONTRACT OF THE OTTUMWA CO-OPERATIVE DAIRY MARKETING ASSOCIATION, INC.

THIS CONTRACT made and entered into this ..... day of ..... 19.... between the OTTUMWA CO-OPERATIVE DAIRY MARKETING ASSOCIATION, INC., a corporation incorporated under the provisions of chapter 1, title IX, of the Code of Iowa and acts amendatory thereto, as agent, party of the first part, hereinafter known as the ASSOCIATION, and ..... of ....., party of the second part, hereinafter known as BUYER, witnesseth:

The parties hereto in consideration of the premises herein and the sum of \$1 by each to the other in hand paid, the receipt whereof is hereby acknowledged, do hereby agree as follows:

### THE ASSOCIATION

1. The party of the first part agrees to sell and deliver to the party of the second part at its ..... receiving plant in ..... in accordance with the terms of this contract, all of the milk consigned to it ..... for sale by the parties named in exhibit A at the points therein designated as "place of delivery." said exhibit constituting a part of this agreement. It is understood that all milk sold under this agreement shall be pure,

unadulterated and of good quality suitable for sale in the State of Iowa, and the city of ----- as may be regulated by the State and municipal authorities.

#### THE BUYER

2. The party of the second part agrees to pay the party of the first part at its office in -----, Iowa, or at its option and by its authorization to the parties and places named in exhibit A from whom milk is received f. o. b. the place of delivery named in exhibit A, the sum of ----- dollars per hundred pounds of milk testing ----- percent butterfat, and on each hundred pounds of milk testing above said ----- percent butterfat, 5 cents less per point, shall be accordingly added or taken from above rate and paid as above provided.

The party of the second part further agrees, out of the purchase price aforesaid, to pay the sum of 5 cents per hundred pounds, on said milk so delivered, to the Ottumwa Co-operative Dairy Marketing Association, Inc., at its office in -----.

3. The party of the second part hereby agrees to make tests daily or periodically on the written order of the Association, said tests to be made carefully and accurately and in accordance with such methods of sampling and testing of milk as conform to the laws of Iowa pertaining thereto and approved by the State dairy and food commissioner of Iowa. The party of the second part further agrees to furnish weekly, or as often as required, for testing purposes, to the party of the first part when requested, a set of duplicate samples of milk of any party named in exhibit A, the same to be taken under the eye of authorized representatives of first party.

4. It is further agreed by the parties hereto that in case of dispute in regard to correctness of tests and resultant grading of milk consigned by any person named in exhibit A that samples thereof, or of consignments made in following week, shall be taken under supervision of representatives of both parties hereto and submitted for testing to the State dairy and food commissioner of Iowa, and the average of four tests made by him shall be the standard for payment for the milk so consigned for the 2-weeks period in which tests are made.

5. The party of the second part hereby agrees to pay in full on or before the ----- and ----- day of each month, for all milk delivered to it under this contract during the immediately preceding half month beginning with the 1st and ending with the 15th and beginning with the 16th and ending with the last day of the month.

6. The party of the second part agrees to properly sterilize and return to the parties whose names appear on exhibit A from which milk is received, all cans within 24 hours after receiving same, in accordance with the laws and regulations of the State and ordinances of the city of ----- relative to sterilization of milk bottles, milk cans, and dairy utensile.

7. It is further agreed by the parties hereto that the failure on the part of the Buyer to comply with the foregoing provisions when and in the manner agreed upon, shall be sufficient warrant for the Association to discontinue further delivery of milk under this contract and the Buyer agrees that all sums for milk delivered shall at once become due and payable and in case of suit to enforce collection of same to pay a reasonable attorney fee in addition.

8. It is further agreed by the parties hereto that should either party be unable to carry out the terms or conditions of this contract because of the action of legal authorities, adverse legislation, interruption of railroad transportation

facilities, conditions caused by floods, fire, accidents, or any other cause not under his, her or their control, the one being unable to carry out the conditions herein imposed shall at once give the other written notice of his, her or their inability to do so, and upon receipt of said notice this contract shall from that time terminate. However, after said inability has ceased, the terms of this contract may be renewed by mutual consent (the shipping of milk and the accepting of the same shall be considered "mutual consent") and its terms shall then be binding the same as though no interruption had taken place.

9. It is further understood and agreed that this contract is to begin and take effect on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, and to continue for a period of \_\_\_\_\_ therefrom.

In witness whereof the parties of these presents have hereunto set their hand and seals the day and year first above written. Signed, sealed and delivered in the presence of,

OTTUMWA CO-OPERATIVE DAIRY  
MARKETING ASSOCIATION, INC.

By \_\_\_\_\_  
(President)

\_\_\_\_\_  
(Sec'y-Treas.)

\_\_\_\_\_  
(Party of the second part)

### AGREEMENT USED BY THE DES MOINES COOPERATIVE DAIRY MARKETING ASSOCIATION

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, between DES MOINES COOPERATIVE DAIRY MARKETING ASSOCIATION, a corporation, of Des Moines, Iowa, hereafter called the "Association," and \_\_\_\_\_ of \_\_\_\_\_, Iowa, hereafter called the "Hauler,"

WITNESSETH:  
WHEREAS, the Hauler has been for some time past hauling milk from the farms of milk producers (members of the Association) the plant or plants of distributors of milk, or other milk market or customers of the Association within the corporate limits of Des Moines or in its vicinity, and

WHEREAS, said hauling of milk has been by contract, by which such Association reserved the right to discontinue at any time the purchase of the milk of any or all of the producers which the Hauler may be hauling, and to engage at any time any other hauler or haulers to haul any or all of any such milk;

NOW THEREFORE, for the purpose of making a written record of the arrangement hereafter to be in effect, and in consideration of the mutual promises and agreements hereinafter set out, the parties hereto mutually agree that from and after this date the hauling of the milk to any plant of any such distributor or other customer shall be done for the Association under the terms and conditions herein set out:

1. The Hauler agrees to provide, maintain, and operate the trucks used in the hauling of milk by him and assumes complete responsibility for the operation thereof; to comply with all laws and regulations now or hereafter applicable thereto, and to cover and keep covered with a canvas cover each container of milk while the same is being hauled to comply with the requirements of the health department of the city of Des Moines; to comply, if he becomes an Employer within the meaning of the workmen's compensation laws, with the provisions

thereof with respect to obtaining workmen's compensation insurance without expense to, or liability on the part of the Association, and to comply with all other requirements of the Workmen's Compensation Act and all other statutes and ordinances now or hereafter in effect in said vicinity.

2. Any price for transportation of milk will be understood to be fixed on the basis of delivery thereof at the plant of a distributor or other market designated by the Association and subject to inspection and acceptance by the Association's customer. Out of the price agreed to be paid to each respective producer by any such customer of the Association, it is agreed between the Hauler and the Association that such customer shall have the absolute right and duty to withhold the agreed compensation to be paid by such customer to the producer and the Hauler, and each of them, for the transportation of such milk as the Hauler may haul, and shall pay such compensation to the Association. Settlement will be made for each period ending with the 15th and last days of each month within 5 days after the receipt of such money from such customer. The Hauler shall give notice in writing to the Association of any objection to, or error in, the settlement of any such period within 10 days after receiving payment therefor. After expiration of such period of 10 days without any such notice, the settlement shall be conclusive in every respect between the Hauler and the Association.

**3. THE AGREED PRICE:**

- (a) to be paid by the producer to the Hauler,
- (b) to be deducted from money received by the Association for each producer's milk and
- (c) to be paid, when deducted, to the Hauler,

**FOR THE TRANSPORTATION OF SUCH MILK SHALL BE THE DIFFERENCE BETWEEN:**

- (1) The pooled price (i. e., the price after deducting the Association's fee) of all classes of milk marketed through the Association, on the one hand, and
- (2) The amount payable to the producer under such Association's schedules as issued from time to time, on the other hand.

In making such deduction, the Association does not become personally liable beyond the amount actually deducted for the benefit of the Hauler.

For such agreed price, the Hauler agrees to transport and deliver each producer's milk at such plant or to such other market or customer of the Association in Des Moines or vicinity, as the Association may designate, and at such time as the Association may require and return to the producer all empty cans required to transport the producer's milk. Between the Hauler and the Association, the Hauler assumes full responsibility for, and agrees to hold the Association harmless, concerning the safety, care, and protection of such milk from the time it is received by him until it is delivered to and accepted by the distributor (or other purchaser) designated by the Association, and agrees to receive from any such purchaser and, without charge for hauling, return to the respective producers (1) any milk refused by such customer, and (2) such cans as may be required to contain such producer's milk.

4. The Hauler will give the Association 30 days' written notice of his intention to discontinue entirely or partially the hauling of milk for the Association to any of its customers. The Association will likewise give the Hauler 30 days' written notice of its intention to discontinue entirely or partially the services of the Hauler except as herein provided:

- (a) The Hauler shall haul to the plant of any such distributor or other market or customer of the Association, the milk (and only the milk) of such producer as the Association may designate. Also, the Hauler shall refrain from saying or doing anything detrimental (or considered by the Association through its board as detrimental) to the interests of the Association.

(b) The Association reserves the right to discontinue at any time the purchase of the milk of any or all of the producers which the Hauler may be hauling.

(c) Before discontinuing the services of the Hauler for any reason other than that set out in subsection (b) above, the board shall allow the Hauler to have a hearing before a committee composed of the board, three haulers from among the haulers for the Association, and three route chairmen from the routes nearest the route affected. If following such hearing, the board shall determine to discontinue the services of the Hauler, the Hauler shall be entitled to the compensation provided for in section 7 hereof.

(d) It is expressly agreed that the Hauler will not haul, or permit any trucks operated under his direction or control to haul, without the consent of the Association, any milk except from the territory described as follows: The land and only the land occupied by the milk producers on route no. ----- of the Des Moines Cooperative Dairy Marketing Association, a list of said producers being set out in exhibit A attached hereto and by this reference made a part hereof, and additions or subtractions thereto hereafter made by and with the consent of the Association. Such additions and subtractions to be noted on said exhibit A as they occur.

5. If a producer served by the Hauler under this contract shall move on to another route, then the Hauler for such route shall serve such producer, providing said Hauler has been theretofore collecting milk from the farm on which said producer moved, but if said producer moves on a farm not thus previously served, the Hauler on the nearest route shall be entitled to serve him. In case of a dispute between two or more haulers, the route chairman of such routes and a committee of three from the board of the Association shall constitute a board of arbitrators and shall settle such dispute.

6. In the event that a producer shall change from one hauler to another either on his own initiative, or through solicitation, the compensation for hauling his milk shall be paid to the hauler previously hauling until an amicable agreement is made between the two haulers and the Association.

7. In the event of the discharge of the Hauler as provided in section 4 hereof, or of the sale of the route covered hereby to a buying hauler approved by the Association, the Association agrees to pay the selling hauler or the discharged hauler for such route, the sum of twenty-five dollars (\$25.00) for each hundred pounds of the average daily weight, determined as hereafter provided, of the milk that has theretofore been hauled by the selling hauler for each producer. Such weight shall be determined by ascertaining the daily average weight of milk hauled for the year immediately preceding the date of selling, or if such producer shall have been supplying the selling hauler with milk for less than a year, then the daily average shall be that of such portion of a year next preceding the date of such sale.

It is expressly understood that the price herein fixed which the selling hauler shall receive is the minimum price and that if such route can be sold for a higher price, that the selling hauler shall receive in addition to the sum herein stipulated, the difference between said sum and such selling price.

Executed this the day and date first above written.

DES MOINES COOPERATIVE DAIRY  
MARKETING ASSOCIATION, A CORPORATION.

-----  
(Manager)

-----  
(Hauler)

# Other Publications Available

In addition to this circular, the following publications on farmers' cooperative organizations are published by the Farm Credit Administration:

**Cooperative Purchasing of Farm Supplies**

Bulletin No. 1, *Joseph G. Knapp and John H. Lister*

**Accounting Principles for Cooperative Cotton Gin Associations**

Bulletin No. 2, *Otis T. Weaver*

**Cooperative Marketing of Agricultural Products**

Bulletin No. 3, *Ward W. Fetrow*

**Cooperation in Agriculture, a Selected and Annotated Bibliography**

Bulletin No. 4, *Chastina Gardner*

**Organization and Operation of the Illinois Livestock Marketing Association**

Bulletin No. 5, *H. H. Hulbert*

**Statistics of Farmers' Cooperative Business Organizations, 1920-1935**

Bulletin No. 6, *R. H. Elsworth*

**Cooperative Marketing of Range Livestock**

Bulletin No. 7, *L. B. Mann*

**Mutual Irrigation Companies in California and Utah**

Bulletin No. 8, *Wells A. Hutchins*

**Membership Relations of Cooperative Associations**

Bulletin No. 9, *J. W. Jones*

**Marketing Policies of the California Walnut Growers Association**

Bulletin No. 10, *Harry C. Hensley and Neil H. Borden*

**Organization and Operating Problems of Nebraska Cooperative Creameries**

Bulletin No. 11, *T. G. Stitts and Gordon C. Laughlin*

**Analysis of the Business Operations of Cooperative Cotton Gins in Oklahoma, 1933-34, Bulletin No. 12, Otis T. Weaver and Omer W. Herrmann**

**Transportation of Milk in the Philadelphia Milkshed**

Bulletin No. 13, *John J. Scanlan*

**Cooperative Organization of Iowa Farmers' Creameries**

Bulletin No. 14, *Frank Robotka and Gordon C. Laughlin*

**Contract Feeding and Pasturing of Lambs and Cattle**

Bulletin No. 15, *C. G. Randell*

**Milk Cooperatives in Four Ohio Markets**

Bulletin No. 16, *Wm. C. Welden and T. G. Stitts*

**Loans to Farmers' Cooperatives, Circular No. 6**

**Early Developments in Cooperative Cotton Marketing**

Circular No. C-101, *O. W. Herrmann and Chastina Gardner*

**Organization and Operation of Cooperative Irrigation Companies**

Circular No. C-102, *Wells A. Hutchins*

**Western Cattle and Sheep Areas, Circular No. C-103, L. B. Mann**

**Economic Analysis of Bargaining Problems of Milk Cooperatives**

Circular C-104, *T. G. Stitts and Wm. C. Welden*

*These may be obtained free of charge as long as a supply is available from the*

**Director of Information and Extension  
Farm Credit Administration  
Washington, D. C.**