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AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF MINNESOTA

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MINNESOTA FARM BUSINESS NOTES

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University Farm, St. Paul, Minnesota

COOPERATIVE MILK MARKETING PROBLEMS IN THE TWIN CITIES

Prepared by P. E. Quintus and W. Bruce Silcox

The Twin Cities are situated in the midst of the greatest dairy region in the United States. This area represents the most difficult field for the successful operation of a cooperative fluid milk marketing association. The fact that the price of fluid milk is normally higher than the price of milk used for manufacturing purposes presents a constant temptation for every non-cooperating producer within the potential supply area to divert his supply from creameries and cheese factories to the fluid milk market. This temptation has increased tremendously the last four years, during which time the returns for manufactured products have declined to unusually low levels.

Dissatisfaction among milk producers with existing conditions led to the organization of the Twin City Milk Producers' Association in September 1916. Following difficulties inherent in early development, this organization became one of the most successful fluid milk marketing associations in the country. It is the oldest Association which carries on a wholesale trade in market milk and cream. Raw milk is sold to distributors who pasteurize and bottle it. The surplus is manufactured into the most profitable dairy products in its own plants. Undoubtedly, one of the outstanding achievements of the Association has been the marked improvement in the quality of milk delivered by the producers. All milk delivered by members is handled on a pooling plan. Milk prices are determined and payment is made on the basis of delivery to the Twin Cities. Every shipper is paid on this basis irrespective of the use made of the milk. Where milk is delivered to outlying plants, a zone rate of so much per hundred pounds is deducted before making payment.

The Association, at present, has over 8,000 members but operates in a comparatively small milk shed. The milk is obtained from the area within a forty-mile radius of the Twin Cities. In this area there are over 80 creameries and cheese factories in addition to 13 plants which the Association owns and operates. No other large city milk shed is so predominantly a manufacturing area. Production in this small area is almost five times the fluid milk consumption in St. Paul and Minneapolis.

Since 1930 the Association has handled on the average about one million pounds of milk daily. This amount represents approximately fifty per cent of the total milk production of the seven counties wholly included within the forty-mile zone. A part of seven other counties and a large area in Wisconsin are also included within the forty-mile radius. This indicates that the Association controls much less than fifty per cent of the milk supply within easy hauling distance of the Twin Cities. (As will be pointed out later, the Association furnishes much more than fifty per cent of the fluid milk used in the Cities and therefore has a stronger position in fluid milk market than in the supply area.) Not only is there

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a considerable quantity of additional milk in the existing milk shed but also improved roads, increased trucking and additional cooling facilities have rendered the forty-mile radius too narrow to include the limits of the potential city milk supply.

Surplus--The Big Problem

It is significant that not only is there a large surplus above fluid milk requirements in the Twin City milk shed, but also that there is a large surplus above sales to distributors within the Association. Table 1, which follows, shows the total volume of milk handled by the Association each year since 1920. The division of the milk between sales to distributors and the surplus to be manufactured is also indicated.

Table 1

Amount of Milk Handled by the Twin City Milk Producers' Association, 1920-1932

Year	Total pounds handled	Pounds sold to distributors	Pounds of surplus manufactured	Per cent manufactured
1920	97,303,379	78,218,850	19,084,529	19.6
1921	147,031,303	98,242,331	48,788,972	33.2
1922	161,502,871	116,751,838	44,751,033	27.7
1923	215,035,772	140,010,056	75,025,716	34.9
1924	252,053,926	143,521,773	108,532,153	43.1
1925	279,521,109	150,435,501	129,085,608	46.2
1926	297,226,178	148,203,976	149,022,202	50.1
1927	296,416,296	150,711,362	145,704,934	49.2
1928	315,264,795	155,137,504	160,127,291	50.8
1929	347,880,437	155,261,703	192,618,703	55.4
1930	370,826,637	161,907,661	208,918,976	56.3
1931	363,487,501	155,776,287	207,711,214	57.2
1932	363,846,750	151,755,517	212,091,233	58.3

There has been a very substantial growth in the total amount of milk handled by the Association throughout the entire period principally because of increase in membership. However, sales to distributors increased slowly after 1923. The inevitable result has been a rapidly increasing amount of surplus milk to be manufactured in the Association plants. From Table 1 it is apparent that the surplus milk doubled more than five times from 1920 to 1932. The percentage of surplus increased from 19.6 per cent of all milk handled by the Association in 1920 to 58.3 per cent in 1932. Owing largely to the extreme seasonal fluctuations in production, the percentage of surplus within the Association in 1932 varied from 41 per cent to 64 per cent for individual months. Thus, in the flush season approximately two-thirds of the milk has to be manufactured and sold on the national competitive market.

Spread Must be Small in Surplus Market

As indicated earlier, the price received for fluid milk is normally above the price received for milk used for manufacturing purposes. Higher production standards and handling costs of fluid milk are principally responsible for this difference. But in surplus areas the spread between the fluid milk price and the price of milk used for manufacturing purposes must be small. If the spread is not narrow, outside organizations and individual producers are

encouraged to offer milk in the city market at a price substantially below the established fluid milk price. That is, since these outside organizations receive only the manufactured price for milk, any amount above the manufactured price they can obtain for their milk which more than covers additional costs, increases their net return. If, however, the regulations of the Health Department regarding quality are such as to limit the sources of the supply of milk, a slightly wider spread than is otherwise possible may be maintained.

For example, in January 1932 the price paid the Association by distrubutors in Minneapolis was $1.65 per hundred pounds for 3.5 per cent milk delivered at the Twin Cities. On a butter basis, the same milk would have returned approximately 80 cents per hundred pounds, plus a small value for skimmilk, at country points. Obviously organizations or producers which were able to sell their milk in the city for as little as $1.50 per hundred pounds secured returns in excess of the manufactured price. Allowing for a hauling charge of 20 cents per hundred, the net spread was 50 cents per hundred. This furnished sufficient inducement to outside organizations to flood the fluid milk market with outside milk and resulted in serious demoralization of the market structure.

This situation has been a more acute problem in Minneapolis than in St. Paul. The St. Paul milk ordinance has provided for inspection of the farms supplying milk to that market, and this has offered some control over the source of supply. Minneapolis did not have such a requirement prior to May 1, 1933, and the problem of surplus consequently has been more serious in the latter market. As a result of this difference, the Association has been able to maintain a somewhat higher price for fluid milk in St. Paul.

If a similar ordinance had been in force in Minneapolis, it is reasonable to assume that large supplies of outside milk would not have come in. Consequently the fluid milk price in Minneapolis could have been maintained at a level comparable to that in St. Paul, and other large cities. Furthermore, were it not for the depressing effect of the Minneapolis market, the returns from fluid milk would have been not only comparable between the two cities but also higher in each case.

Difficult to Maintain Fluid Milk Sales

This large supply of outside milk that demoralized the Minneapolis market from the standpoint of price has also made it extremely difficult for the Association to maintain its volume of fluid milk sales. This is illustrated in Table 2, which shows sales of pasteurized milk in the Twin Cities and the sales of raw milk to distributors by the Association, 1929-1932.

Table 2

Sales of Pasteurized Milk in the Twin Cities, 1929-1932

Year	Total pounds of pasteurized milk sold	Pounds of milk sold distributors by Association	Per cent sold by the Association
		Minneapolis	
1929	128,428,908	105,345,773	82.0
1930	133,033,624	105,095,750	79.0
1931	132,919,287	97,056,371	73.0
1932	132,789,384	93,847,635	70.6
		St. Paul	
1929	63,313,600	49,639,361	72.6
1930	74,786,675	55,645,104	74.4
1931	78,835,985	56,467,729	71.6
1932	72,347,586	52,660,707	72.8

In 1929, the Association furnished 82 per cent of all the pasteurized milk consumed in Minneapolis. In 1932, this proportion had declined to 70.6 per cent. In St. Paul, no significant change took place in the percentage of pasteurized milk furnished by the Association during the same period. This illustrates clearly the stabilizing effect of an ordinance which regulates the source of the milk supply.

Price Problem Paramount

Along with the improvement in quality, there has developed the feeling on the part of the cooperative producers that they are entitled to a premium above the manufactured price for milk. In order to secure such a price, it is necessary for the Association not only to dispose of a large proportion of its milk as fluid milk, but also to dispose of it at a price substantially above the returns for milk used for manufacturing purposes. Unless this is done, the pool price will naturally be very little, if any, above the price paid at any cooperative creamery. Herein, without doubt, lies the greatest problem which the Association has had to face during the depression.

In an effort to pay producers a premium above manufactured returns for milk as has been customary, the Association has endeavored as far as possible to hold the price of fluid milk above the price of milk used for other purposes. In doing this, an opportunity was afforded outside producers to undersell the Association in the fluid milk market. This means that to hold the fluid milk market, the Association had to meet this outside competition. Consequently the Association was forced to reduce its price to distributors time after time. As this situation continued, it became so acute that finally the Association actually sold milk to Minneapolis distributors at a price below manufactured returns for milk. In April 1933, these distributors paid the Association only 50 cents per hundred pounds for milk, while on a butter basis milk was worth approximately 83 cents per hundred. Since the St. Paul distributors paid the Association 95 cents per hundred, the pool price to all producers was 83 cents per hundred pounds of milk.

Altho the unusual policy of selling fluid milk for less than the manufactured price has allowed the Association to regain 50,000 pounds of milk daily in the Minneapolis fluid milk market, this same policy necessarily has resulted in lowering the pool price to producers to approximately manufactured levels. It should be remembered, however, that if the Association had not adopted the policy it did, the position of the Association as a fluid milk marketing organization might have been completely destroyed. As indicated earlier, the amount of milk produced outside the Association in the metropolitan milk shed is more than sufficient to satisfy entirely fluid milk requirements in the Twin Cities. The Association, therefore, was forced to meet the price competition of this milk.

Under present economic conditions, unless the requirements for fluid milk become more rigid, the cooperative producers can expect to receive little more than the manufactured price for their milk. As conditions in general improve, however, the returns from milk used for manufacturing purposes will naturally rise. This will tend to relieve the pressure of outside milk on the fluid milk market and raise the price above the manufactured price to the cooperative producer of fluid milk.

MINNESOTA FARM PRICES FOR APRIL 1933

Prepared by Adena E. Erickson

The index number of Minnesota farm prices for the month of April 1933 was 39.9. When the average of farm prices of the three Aprils 1924-25-26 is represented by 100, the indexes for April of each year from 1924 to date are as follows:

April 1924 - 82.4
" 1925 - 105.9
" 1926 - 112.4
" 1927 - 110.4
" 1928 - 106.2
" 1929 - 112.2
" 1930 - 100.9
" 1931 - 70.8
" 1932 - 46.3*
" 1933 - 39.9*

*Preliminary

The price index of 39.9 for the past month is the net result of decreases in the prices of farm products in April 1933 over the average of April 1924-25-26 weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index, April 15, 1933, with Comparisons*

	Apr.15, 1933	Mar.15, 1933	Apr.15, 1932	Av. Apr. 1924-25-26	% Apr.15, 1933 is of Mar. 15, 1933	% Apr.15, 1933 is of Apr. 15, 1932	% Apr.15, 1933 is of Apr. 15, 1924-25-26
Wheat	$.46	$.36	$.53	$1.29	128	87	36
Corn	.20	.14	.35	.64	143	57	31
Oats	.13	.10	.22	.35	130	59	37
Barley	.23	.16	.38	.57	144	61	40
Rye	.30	.21	.35	.73	143	86	41
Flax	1.00	.93	1.18	2.29	108	85	44
Potatoes	.26	.23	.32	.95	113	81	27
Hogs	3.15	3.15	3.40	9.69	100	93	33
Cattle	3.35	3.25	4.10	6.09	103	82	55
Calves	4.15	4.35	4.60	8.51	95	90	49
Lambs-sheep	4.25	4.15	5.24	11.44	102	81	37
Chickens	.082	.073	.105	.183	112	78	45
Eggs	.09	.09	.09	.22	100	100	41
Butterfat	.18	.17	.19	.42	106	95	43
Hay	5.92	5.76	10.28	11.62	103	58	51
Milk	.89	.82	1.14	1.98	109	78	45

*Except for milk, these are the average prices for Minnesota as reported by the United States Department of Agriculture.

Indexes and Ratios of Minnesota Agriculture

	April 1933	March 1933	April 1932	Av.April 1924-26
U.S. farm price index	37.6	35.5	41.8	100.0
Minnesota farm price index	39.9	35.5	46.3	100.0
U.S. purchasing power of farm products	58.8	53.8	59.6	100.0
Minnesota purchasing power of farm products	62.3	53.8	64.3	100.0
U.S. hog-corn ratio	11.4	15.6	11.4	-
Minnesota hog-corn ration	15.8	22.5	9.7	15.5
Minnesota egg-grain ratio	17.1	22.2	12.0	12.7
Minnesota butterfat-farm grain ratio	43.9	54.8	27.1	36.8

U.S. Farm Price Index: The United States Department of Agriculture index of farm prices with the average of the years 1924-1925-1926 equal to 100.

Minnesota Farm Price Index: The index of the Division of Agricultural Economics of the University of Minnesota, 1924-1925-1926 equal to 100.

U.S. Purchasing Power of Farm Products: The ratio of prices received by farmers in the United States to the prices paid for commodities bought by farmers, with the ratios in 1924-1925-1926 taken as 100.

Minnesota Purchasing Power of Farm Products: The ratio of prices received by Minnesota farmers for commodities sold to the prices paid for commodities bought by farmers, with the ratios in 1924-1925-1926 taken as 100.

Minnesota Hog-Corn Ratio: The number of bushels of corn which 100 pounds of hogs will buy at Minnesota farm prices.

Minnesota Egg-Grain Ratio: The number of pounds of mixed grain which a dozen eggs will buy at Minnesota farm prices. The grain mixture consists of one bushel of wheat, one bushel of corn, and one bushel of oats.

Minnesota Butterfat-Farm Grain Ratio: The number of pounds of mixed grain, in the proportion of 200 pounds of oats, 100 pounds of corn and 100 pounds of barley, which one pound of butterfat will buy at Minnesota farm prices.