Factors Influencing the Consolidation of Cooperative Creameries in South Dakota

Ivan R. Hanson
FACTORS INFLUENCING THE CONSOLIDATION
OF COOPERATIVE CREAMERIES
IN SOUTH DAKOTA

by

Ivan R. Hanson

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FACTORS INFLUENCING THE CONSOLIDATION
OF COOPERATIVE CREAMERIES
IN SOUTH DAKOTA

This thesis is approved as a creditable, independent investigation
by a candidate for the degree, Master of Science, and acceptable as
meeting the thesis requirements for this degree; but without implying
that the conclusions reached by the candidate are necessarily the
conclusions of the major department.

Thesis Adviser

Head of the Major Department
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This thesis is dedicated to the author's mother and father.
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CHAPTER I

INTRODUCTION

For several years, the dairy industry has been making an adjustment to consumer demand. The per capita consumption of butter declined from 17.3 pounds in 1939 to 9.2 pounds in 1955. Along with this change has come an adjustment in the number of creameries operating in South Dakota. The number of plants decreased from 120 in 1942 to 73 in 1957. The largest decline was among the plants producing less than 500,000 pounds of butter annually.

Two basic approaches to this situation have been taken by the dairy industry. One method has been the use of advertising to increase consumer preference for butter. The other approach has been to make adjustments in processing and marketing.

An effective means of adjusting the manufacturing operations has been evident in the Minnesota dairy industry for about twenty years. That method is the consolidation of cooperative creameries. Interest in a program of this nature for South Dakota was stimulated by the recent merger of two cooperative creameries.

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4 Feder, Breazeale and Newberg, op. cit., pp. 18-19.
Objectives of the Study

Because of the interest in consolidation of cooperative creameries, this study was undertaken with two main objectives in mind. These objectives are:

1. To determine the advantages and disadvantages of mergers of cooperative creameries in South Dakota.
2. To determine managers' opinions of mergers.

Importance of the Problem

Dairy products as a source of income in South Dakota ranked sixth in importance in 1955. The cash farm income from dairy products was $27,832,000 or 5.3 per cent of the total of $528,893,000 derived from crops and livestock. However, the full importance of dairying is not evident in these figures alone.

Dairying is a stable source of income to many farmers, particularly in the eastern half of South Dakota, because it is less subject to price and weather fluctuations than other farm enterprises. Moreover, 65 per cent of the farms in South Dakota reported sales of dairy products in 1954. In the high risk areas, it is important to maximize the stable income enterprise.

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Procedure

Studies of intra-plant costs have been done in other states as well as South Dakota, but these have not previously been related to consolidation in South Dakota. A portion of this study is concerned with relating these studies to the situation in South Dakota and pointing out the relationships between volume of production and costs, quality and sales.

The second phase of the study was concerned with determining managers' opinions of cooperative mergers. A questionnaire was developed to discover their outlook for cooperative creameries in South Dakota, and to determine their reaction to secondary means of cost reduction such as cooperative buying and selling agreements and common brand names as well as marketing associations and mergers.

From a list of the cooperative creameries in the state, a 25 per cent random sample was selected. The managers of the eleven plants were contacted by personal interview during July, 1957.
CHAPTER II

ADVANTAGES OF CONSOLIDATION

The advantages of consolidation of cooperative creameries fall into three broad, inter-related areas with the main objective being to maximize income and reduce costs. These are cost of plant operation, quality control and prices received for butter sold. This chapter will discuss the advantages of consolidation as they apply to South Dakota's cooperative creameries.

Cost of Plant Operation

One means of measuring plant efficiency is according to the cost per pound of butter manufactured. This has been studied by South Dakota State College and other colleges. One of the most recent publications on plant efficiency was released by Iowa State College.

Frazer, Nielsen and Nord pointed out that the number of Iowa creameries has been decreasing.7 There were 237,825,000 pounds of butter produced by 480 creameries during 1934. By 1949, these figures decreased to 193,153,000 pounds and 390 creameries. The average output per creamery rose slightly from approximately 494,000 pounds per plant to 495,000 pounds in the same period.

Costs in Thirteen Sample Plants

Thirteen Iowa plants which were considering consolidation

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were selected for a detailed analysis of their costs of processing and assembly. The annual butter production of the sample plants ranged from 173,000 to 2,958,000 pounds and was representative of the range of production volumes for the entire state.

The total costs per pound varied from 8.10 cents in the smallest plant to 2.40 cents in the second largest plant. There was a rapid decline in cost per pound up to 624,000 pounds for one-churn plants. In the two-churn plants, the costs fell less sharply but continuously as volumes rose. The optimum point for one-churn plants appeared to be somewhere between 600,000 and 700,000 pounds while two-churn plants had lowest costs at about two million pounds and beyond (Figure 1).

Unit costs of building and equipment decreased as volumes increased, indicating greater utilization of capacity. The efficiency of labor was also shown by the unit cost analysis. Plants manufacturing between 750,000 and 2,000,000 pounds had somewhat higher labor costs. One explanation was that these plants required a labor force which could handle peak loads but were idle at other times during the day. Plants of this size were large enough to require a full-time manager but did not have a large enough volume to spread the cost.

Fuel cost and electric power cost per pound showed occasional irregularities in relation to volume possibly because of individual boiler efficiency, fuel efficiency and electricity rates. Costs of
ANNUAL BUTTER PRODUCTION (millions of pounds)

○ one-churn plants
□ two-churn plants

Figure 1. Cost per Pound of Butter Manufactured in Thirteen Sample Plants, Iowa, 1950.

Source: Frazer, Nielsen and Nord, op. cit., p. 805.
processing materials decreased slightly indicating that some economies were gained from purchasing materials in larger quantities.

A breakdown of costs into departments such as administration, receiving and testing, pasteurizing and cooling, churning and general plant indicated that churning was the department with the highest cost. Churning costs generally decreased as volumes increased illustrating the advantage of operating churns at full capacity.

The departmentalization also pointed out that labor and equipment costs were chiefly responsible for the slight rise in the middle of the total unit cost curve.

The study concluded that there were three distinct ranges of costs. The first range with volumes up to 700,000 pounds was one of rapidly decreasing cost units. Group two with volumes of 700,000 to 1,500,000 pounds had essentially constant cost units, with an indication of somewhat higher costs in this area. Phase three with volumes above 1,500,000 pounds had slowly decreasing cost units.

Many Iowa creameries had a production of less than 200,000 pounds of butter per year. It was not unusual for creameries of this size to have costs of 8 to 10 cents per pound. Plants in the range of 300,000 to 350,000 pounds per year could achieve costs of less than five cents per pound. This was possible with a one-man operation, but it had a tremendous physical and mental strain connected with both plant and managerial operations.

The creamery with 600,000 to 700,000 pounds of butter production per year could achieve costs of less than four cents per
pound. This was the lowest cost unit for a one-churn plant. The amount of building space was essentially the same as a smaller plant and had only slightly more equipment and labor, which was more efficient.

The creameries producing from 750,000 to 1,500,000 pounds of butter were in a disadvantageous position having slightly higher unit costs than either smaller or larger volumes. The chief cause of this higher unit cost was the large labor force required by the segregated jobs such as buttermaking and managing.

Plants producing over two million pounds annually had the lowest operating costs. This was partly because of the efficiency achieved by hiring full-time crews in the major operations. The unit costs were approximately the same as for the creameries in the 700,000 pound bracket. Plants producing three million pounds had costs approximately .75 cent lower yet but had achieved maximum efficiency. Therefore, it was doubtful, the study concluded, that larger plants would get any greater reduction in unit costs.

**South Dakota Survey**

In 1954, a cost study of five South Dakota creameries was made. This study further illustrated the cost relationships pointed out by Frazer, Nielsen and Nord. The general trend indicated was that total operating expense per pound of butter tended to decrease as volume increased (Table I).

The sharpest change appeared between plants "A" and "B"; from that point, the drop in cost per pound leveled out. Plant "C" had a slightly higher unit cost than did the smaller plant "B". This was
Table I. Total Operating Costs Per Pound of Butter Made from Farm Separated Cream, Five Cooperative Creameries, South Dakota, 1954.

<table>
<thead>
<tr>
<th>Creamery</th>
<th>Volume* (pounds)</th>
<th>Total Operating Expense per Pound of Butter (cents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>200,000</td>
<td>10.45</td>
</tr>
<tr>
<td>B</td>
<td>400,000</td>
<td>5.81</td>
</tr>
<tr>
<td>C</td>
<td>600,000</td>
<td>5.85</td>
</tr>
<tr>
<td>D</td>
<td>1,200,000</td>
<td>4.14</td>
</tr>
<tr>
<td>E</td>
<td>1,200,000</td>
<td>4.10</td>
</tr>
</tbody>
</table>

* Annual butter production

due largely to higher general and administrative expense cost, but a large portion was due to money spent for quality improvement and educational purposes.

The three most important areas of cost were labor manufacturing expense, depreciation and salaries for administration. Manufacturing labor varied from 2.98 cents per pound in plant "A" to 1.22 in plant "E". One reason why creamery "A" had high labor costs was that most of their butter was printed and packaged manually. This study did not take into account the variation in wage rates that may have occurred between communities.

Depreciation costs declined from 1.95 cents in creamery "A" to .23 cents per pound in plant "E". Although these costs varied from plant to plant due to differences in ages of equipment and other factors, plant efficiency was still indicated by the unit cost analysis. Some plants had more equipment than others, but it was fully depreciated.

The third area of high costs, administrative salaries, proved unusually burdensome for plants "A" and "C". The indication was that the plants lacked sufficient volume to utilize the amounts spent on administration.

The crucial test of the cost of operations of a creamery is in the returns available to patrons. This varied inversely with the volume manufactured (Table II). This amount was found in Table II. Amounts Available for Payment to Patrons per Pound of Butter, Five Cooperative Creameries, South Dakota, 1954.

<table>
<thead>
<tr>
<th>Creamery</th>
<th>Volume (pounds)</th>
<th>Cost of Butterfat (cents/pound)</th>
<th>Net Margin (cents/pound)</th>
<th>Net Available for Payment to Patrons (cents/pound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>200,000</td>
<td>46.14</td>
<td>(.16)</td>
<td>45.98</td>
</tr>
<tr>
<td>B</td>
<td>400,000</td>
<td>44.77</td>
<td>4.70</td>
<td>49.47</td>
</tr>
<tr>
<td>C</td>
<td>600,000</td>
<td>45.65</td>
<td>5.82</td>
<td>51.47</td>
</tr>
<tr>
<td>D</td>
<td>1,200,000</td>
<td>45.26</td>
<td>6.80</td>
<td>52.06</td>
</tr>
<tr>
<td>E</td>
<td>1,200,000</td>
<td>45.78</td>
<td>6.51</td>
<td>52.29</td>
</tr>
</tbody>
</table>

Source: Pelberg, op. cit., p. 21.
by adding the initial payment for butterfat to the net margin available for dividend payments. Creamery "A" made the largest initial payment to producers for the butterfat, but this was later offset by a .16 cent per pound loss. The net margins gradually increased as volumes increased. It appeared that the dividends declared by the creameries were an important factor to be considered by the farmer in selecting a buyer for his cream.

Methods of Reducing Costs

From the data compiled by these two studies, several areas of cost reductions due to large scale operations were evident.

First, the high building costs for the small creameries indicated that larger volumes had a definite advantage. It is conceivable that a consolidation of several small plants would result in a smaller building cost than the total of individual plants.

Another area of possible cost reduction is in labor. The Iowa Study revealed that in some plants a labor force necessarily large for handling peak loads were idle at other times during the day. It would be desirable if the plant was of such size that workers could specialize in certain operations which would keep them occupied throughout the day. Such specialization creates greater skills in performing the tasks. A larger plant could possibly pay better wages and hire more qualified personnel.

Economies in the use of equipment are possible, also. Unused capacity creates needless cost in many cases. In the creameries interviewed in July, most managers said they were
operating at one-half their potential capacity. The two smallest plants, both of which had volumes under 300,000 pounds in 1956, were only producing at one-third capacity.

By purchasing in larger quantities, the consolidated creamery may reduce costs of purchasing supplies. The same type of economy could be gained by shipping in carload lots. This point was illustrated by two creameries contacted in the July survey. One plant has an annual production of over a million pounds of butter, and the other produces about 400,000 pounds. The two plants were located less than twenty miles apart. Both shipped by truck to Chicago. The larger plant's shipping charges were about 83 cents per hundred pounds while the smaller plant's charges were 94 cents per hundred pounds. One possible explanation for this difference was that the large plant shipped a full truckload at a time while the other was able to fill only one-third of a truck.

Quality

The second broad area where the advantages of consolidation are shown is quality. The importance of quality control to the financial success of the small creamery was emphasized by the fact that 80 per cent of the butter produced in South Dakota is shipped to other markets. At these markets, the butter is in competition with butter from other states and with other spreads.

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A recent study by Norman Rollag indicated that consumers preferred grade A butter with culture, grade A without culture, grade B, grade C butter and margarine in that order. In that case, butter manufacturers should produce mainly grade A butter; but South Dakota creameries traditionally have had a poor reputation for quality on the wholesale butter market. The poor quality of their butter was emphasized in a study conducted by the North Central Regional Committee on Dairy Marketing. This study pointed out that creameries in Wisconsin, Minnesota and Iowa produce a higher quality butter than do creameries in South Dakota (Table III).

This study also indicated that while more cooperatives manufactured 92 or 93 score butter than did non-cooperatives, no direct, significant relationship was found between the volume manufactured by the individual plant and the score reported by the federal butter graders. They reported that Stanley Krause proved the same to be true in Minnesota plants alone. However, there are several factors indirectly related to volume which greatly affect quality.

The quality of the butter varies directly with the type of procurement; that is, the plants receiving only whole milk manufacture more 93 score butter than those receiving a combination of milk and cream. The plants dealing only in cream had a smaller per-

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10 Norman L. Rollag, Consumption and Preference for Butter and Margarine in Two South Dakota Cities, Agricultural Economics Pamphlet 76, Agricultural Experiment Station, South Dakota State College, Brookings, October, 1956, p. 46.

Table III. Average Scores of Butter on Hand at Sample Plants When Graded by Area, North Central Region, 1950.

<table>
<thead>
<tr>
<th>Area</th>
<th>Score of Butter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>93 92 90 89</td>
<td>per cent of plants</td>
</tr>
<tr>
<td>Minnesota</td>
<td>31 51 18</td>
<td>100</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>54 16 26 4</td>
<td>100</td>
</tr>
<tr>
<td>Iowa</td>
<td>5 45 48 2</td>
<td>100</td>
</tr>
<tr>
<td>Kansas, Missouri, Nebraska, Nebraska, and South Dakota</td>
<td>-- 11 74 15</td>
<td>100</td>
</tr>
<tr>
<td>Illinois, Indiana, Kentucky, Michigan and Ohio</td>
<td>-- 10 76 14</td>
<td>100</td>
</tr>
<tr>
<td>Total for region</td>
<td>24 34 38 4</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Cook, Kelley, Koller, and Miller, op. cit., pp. 10.

Percentage manufacturing 93 score butter and was the only group to churn cooking grade butter. (Table IV).

The conclusion should not be drawn that only plants receiving whole milk were able to manufacture 93 score butter, but the proportion as compared to the other two forms of intake was higher.

Another factor influencing the quality of cream is the churning of separate grades of butterfat. Sixty-four per cent of the cream churned separately according to kind graded 90 score or better, and 36 per cent was below 90 score. When all cream was churned together, only 46 per cent graded 90 score and above while 54 per cent fell below 90 score. This is a practice which could be carried on in any plant regardless of size; however, it requires more labor.
Table IV. Average Score of Butter Graded at Sample Factories, by Type of Intake, North Central Region, 1950.

<table>
<thead>
<tr>
<th>Score of Sample</th>
<th>Type of Intake</th>
<th>All Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>whole milk</td>
<td>milk and cream</td>
</tr>
<tr>
<td>93</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>92</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>90</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td>89</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>cooking grade</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

| Total for all Grades | 100 | 100 | 100 | 100 |

* Less than one per cent
Source: Cook, Kelley, Koller and Miller, op. cit., p. 15.

and consequently more expense which may be a critical factor in a small creamery.

Frequency of collection of cream is also an important factor. The regional study indicated that the more frequently cream was assembled, the higher the average score was. For plants gathering cream more than three times weekly, 87 per cent of the butter averaged 92 score or better. This contrasted with 64 per cent for three times weekly pickup and only ten per cent for semi-weekly or fewer pickups.12

12 Ibid.
The greatest frequency of collection was obtained through truck routes. In this area, the small plants lead the large plants with 43 per cent of the cream purchased obtained by truck routes. In contrast, the plants of a million pounds and over obtain 69 per cent of their cream through cream stations. Truck routes were more common among cooperative creameries. Door delivery was used more often by independents. Centralizers were the main users of cream stations. Large coops relied more on truck routes.

One of the factors affecting butter quality is the care given the raw product by farmers. Producers selling whole milk tend to have better equipment for cooling and storing than cream producers, who usually have none of these facilities. Because of better handling on the farm and in bulk trucks, the milk is of higher quality when it arrives at the plant. Quality is rapidly improving as more plants shift to whole milk. An important fact to be borne in mind is that some plants are financially unable to make the shift to whole milk. These are the plants which should consider consolidation.

There are several ways by which consolidations would improve quality thereby giving the farmer a greater return for his product. First of all, many of the small plants are not financially able to


14 Cook, Kelley, Koller, and Miller, loc. cit.

shift to whole milk operations. By consolidating, the plants could improve the financial situation as a whole and begin whole milk operations. This should improve the quality of butter because of the improvement in the quality of the raw product. It is assumed that the milk receives good care in the plant itself.

Much of the cream received by creameries is of poor quality. The regional study indicated that separate churnings of cream according to quality would permit the plant to manufacture higher score butter when sweet cream was available. In a plant with a large volume, this might be possible since it would no doubt operate more than one churn simultaneously. The specialization of personnel in such a plant would expedite these operations.

A factor shown by this same study to be important was the frequency and type of pickup. Distance has been a major obstacle for centralizers to overcome so that door delivery to cream stations and rail shipments to central plants have been relied upon more than truck routes. Several improvements can account for an increase in the number of truck routes. The improvement of highways and secondary roads allow trucks to travel greater distances in less time. The amount of time ordinarily taken by door delivery to cream stations where it is held until sufficient volume is accumulated for shipment or direct rail shipment is reduced by collection and direct delivery by truck. Almost all of the managers contacted in the July interview reported that there was much duplication of routes, but a consolidation of plants in an area would eliminate this duplication and increase the density of cream collected per mile of truck travel. Hauling
charges are a large item in costs so that this economy would be a very important one.

The employment of a fieldman can be helpful in educating the farmers to the importance of high quality and the means of obtaining it. A large scale creamery can employ one or perhaps more fieldmen for this purpose. It can also hold meetings and prepare literature for distribution on this subject.

The overall effect of these advantages available through consolidation should be the standardization of butter churned and a larger percentage of high quality butter. By adopting some of these changes, South Dakota creameries could manufacture 93 score butter like the neighboring states of Minnesota, Wisconsin and Iowa. Higher quality should be a contributing factor to an increase in the price and demand for South Dakota butter.

Price Advantages of Consolidation

The advantages of butter quality improvement through consolidation were pointed out in the previous section. Any of these methods for improving quality can generally be considered as a means of increasing price. Price differentials between plants are hard to measure; and since this is not primarily a pricing study, an attempt will not be made to analyze them. However, some price advantages of consolidation should be pointed out.

One aspect of large creameries pointed out by Cook, Kelley, Koller and Miller is that plants handling most of their raw product as Grade A whole milk produce the highest quality butter. But they
were not steady suppliers of 93 score butter because they shifted their production from butter to other products.\textsuperscript{16} This diversification allowed them to switch operations to those which were currently most profitable. A consolidation of small, specialized plants could permit this diversification and allow higher returns to the farmer.

Feder, Breazeale and Newberg reported that smaller plants received slightly less advantageous selling agreements than larger plants; and that some managers apparently did not understand the nature of the agreements.\textsuperscript{17} A consolidated plant with a better financial position might pay a high salary for a well-trained expert to manage the operations. This manager could oversee the manufacturing of high quality butter and bargain for better prices. The situation where the manager was not sure of the type of agreement would not exist in a progressive, consolidated creamery.

An alert manager can also engage in some shopping for markets. This might involve storing butter for unspecified periods of time. Cook, Kelley, Koller and Miller reported that managers were skeptical of this, and some felt it would be assuming a greater burden of risk than their salary justified.\textsuperscript{18} Managers of small plants do not have the time to be both specialized buttermakers and sales managers. A larger plant can afford both.

\textsuperscript{16} Cook, Kelley, Koller and Miller, \textit{op. cit.}, p. 15.

\textsuperscript{17} Feder, Breazeale, and Newberg, \textit{op. cit.}, p. 31.

\textsuperscript{18} Cook, Kelley, Koller and Miller, \textit{op. cit.}, p. 29.
CHAPTER III

MANAGERS' OPINIONS ON MERGERS

Because of the interest in consolidation and the trend toward fewer creameries in South Dakota, the managers of cooperative creameries in the state were interviewed to determine their opinions on consolidation of cooperative creameries or the establishment of a marketing association.

The questionnaire was designed to sample reactions on three basic areas. They were: (1) outlook and financial condition of creameries; (2) buying and selling agreements; and (3) marketing associations and consolidations.

Outlook and Financial Condition of Creameries

Basically, this section was designed to determine if the managers were optimistic or pessimistic about the future for cooperative creameries in South Dakota. This area was concerned about the future number of creameries in the state, the financial condition of these creameries and the possibilities for improving the financial condition.

Outlook for Number of Creameries

The majority of the managers predicted a decrease in the number of creameries in South Dakota. Seven of the eight operators expressing this opinion gave reasons which pointed to one thing: small plants cannot operate as efficiently as larger plants. They seemed aware of the problem of increasing operating costs in relation
Most managers realized that many small plants face that problem now. Another manager differed slightly in his reason for the decrease. A problem in his area was the cut-throat competition resulting from managers infringing on each other's territory.

Two managers said that the number of plants would stay the same. One felt that only the strong creameries remain in competition now, and they should continue operations under the status quo. The other manager maintained that the volume of milk and cream available for successful creamery operations depends on the farming conditions and prices received for other farm products. In periods of good crop yields or high livestock prices, the dairy output will decrease. The opposite effect will be evident during depressions or recessions. Because of these changes, he felt it was difficult to predict whether the number of creameries in South Dakota would increase, decrease or remain the same.

The one manager who predicted an increase in the number of creameries gave as his reason the quality programs of cooperative creameries. It was his contention that only cooperatives strive for high quality butter and that farmers would eventually shift the volume from centralizers to cooperatives because of the better quality.

Financial Condition of Creameries

The discussion on the topic continued the subject of outlook for creameries by asking for their opinion on the financial condition of most creameries and if and how it can be improved. The topic was then narrowed to the individual plant's financial condition and how it could be improved.
Six of the eleven managers sampled felt that the cooperative creameries in South Dakota were in good financial condition while the remainder felt they were in fair condition. All except two showed some optimism by saying that the financial situation could be improved.

The suggestion most commonly given for improving the situation was mergers. They did not particularly point to mergers as the only solution but rather as the one they could foresee as being most prevalent. Another suggestion given by more than one manager was that creameries should not over-pay for the raw product. The one manager who felt that the financial condition could not be improved also reasoned along this line. The only hope he saw would be for the plants to keep more money in the organization for improvement and to hire more skilled, efficient personnel. However, he felt that the financial situation was right for the present number of plants so that it would be impossible to improve the financial condition considerably. Other suggestions for the improvement of the general financial condition were to concentrate on quality improvement of the raw product, eliminate cut-throat competition between individual creamery territories and take over the volume held by centralizers. One manager gave no comment.

The managers tended to be more optimistic for their own plant than for the general picture of the industry. Two managers reported the financial condition of their individual plants as being excellent; seven felt it was good; and two said fair. All except one thought their financial condition could be improved; however, the reasons differed.
Other ideas suggested were that the cooperatives should sell more stock, retain some dividends or make use of revolving funds. Two managers suggested diversifying operations; in fact, one plant was currently making preparations to add an egg department. Other suggestions ranged from paying for planned new equipment, keeping patrons from leaving the territory, taking over volume held by centralizers to arranging for a long term loan to consolidate several small ones. One creamery in the sample had just finished paying for a new plant. It is one of the few cooperative creameries in South Dakota that is debt free.

**Individual Plant Changes**

Thus far, the managers were asked their opinions on conditions for the statewide industry and then for their individual plants. They were probed to discover what ideas they might have for improvements. Then questions were asked to determine how these ideas were projected into the future; what changes they expect within the plant. Specifically, they were asked what changes they expected to make in the near future.

One plant was scheduled to remodel the building; two were planning to erect new buildings; two were adding new operations (ice cream and eggs); and eight were slated for new equipment. Of these eight, five indicated that the equipment purchased would be larger in capacity than that presently owned.

In addition, the majority predicted an increase in the number of patrons for their plants. An increase was expected by eight plants, maintenance of the status quo by two and a decrease by one.
manager. The reasons for these changes differed widely. Some managers appeared to be interested in entering new territories. Methods of attracting these patrons ranged from soliciting patrons to accepting new customers who voluntarily change plants because of better quality programs and bigger dividends. The plant preparing to add the egg business hoped that this new service would also attract more cream patrons.

Buying and Selling Agreements

Buying and selling agreements are considered means of cutting costs. Small creameries that usually need only smaller quantities of supplies do not have the advantage of price discounts that accompany large orders. The same advantages are possible with shipping carlots of butter.

Buying Agreements

With this in mind, the managers were asked, first of all, if they thought cooperative buying agreements would be an aid to cooperative creameries. Then the managers were asked if they had ever entered into such an agreement. Seven of the managers sampled said they thought it would be an aid, and four managers replied negatively. Two indicated that they had actually purchased supplies in an arrangement with another plant, but nine said they had never done so (Table V).

Generally, the small creameries opposed these money-saving ideas while the large creameries seemed to be in favor of them. The reasons given were: (1) the creameries were too far apart so that it would be a nuisance to arrange for a distribution point and pick up
Table V. Summary of Managers' Opinions on Cooperative Buying Agreements, Eleven Sample Plants, South Dakota, July, 1957.

<table>
<thead>
<tr>
<th>Volume* (pounds)</th>
<th>In Favor of Buying Agreements</th>
<th>Opposed to Buying Agreements</th>
<th>Have Purchased Cooperatively</th>
<th>Have Never Purchased Cooperatively</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 300,000</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>300,001 - 600,000</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>600,001 - 900,000</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>900,001 - 1,200,000</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1,200,000 and over</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

* Volume is expressed as the pounds of butter manufactured in 1956.

the supplies, (2) the creameries did not need the same supplies at the same time, (3) there was a possibility of unfair dealings between plants, (4) plants buying cooperatively may have to purchase such large quantities that each plant would have to take lots too big for convenient storage, and (5) it was impossible to obtain supplies much more cheaply than under the present arrangements for most plants.

All seven managers in favor of cooperative buying agreements recognized the price discounts available and gave that as their reason for this position.

While the majority of the plants favored such arrangements, only two had actually participated in this type of program although several had purchased supplies under closely related situations. One
manager indicated that he had purchased from a large creamery located nearby, and two said they had purchased supplies from a large marketing association located in a neighboring state and were satisfied with this source.

Mainly, the reasons for non-participation in this area can be traced to inertia. For instance, one manager stated that his plant was not located close enough to other creameries although there are small cooperatives situated approximately 21 and 23 miles in opposite directions from his plant. A second man mentioned that it is hard to get together with other plants. A third indicated that there is no opportunity to do so because "not much of this sort of thing is done in this area." Another gave as his reason for not participating that he had "just never done so." Another reason stated was that no one had ever approached this particular manager with such a proposal.

Both managers of the large plants said they had entered into such agreements and gave price as the only factor for doing so.

The nine managers who said they had never entered into a buying agreement were asked if they would consider joining such an agreement. Six replied they would join if additional advantages above their present system were shown to them. One manager who was in doubt answered "possibly," since his decision would depend on the circumstances of the individual case. Two managers said no because they were well satisfied with their present source.

**Selling Agreements**

The same technique was used in determining the extent of
cooperative selling agreements used by plants in South Dakota. First, the managers were asked if they thought cooperative shipping agreements would be an aid to cooperative creameries. Then they were asked if they had ever participated in such an agreement; and if not, would they consider doing so. In answer to the first question, seven managers replied that they were in favor of such agreements; but four said they were opposed (Table VI). This was the same response ratio obtained in the previous section on buying agreements; however, the managers were not consistent in giving the same answer to both questions. Considerably more plants had been involved in shipping agreements as Table VI indicated that six plants said yes and five said no.

Table VI. Summary of Managers' Opinions on Cooperative Shipping Agreements, Eleven Sample Plants, South Dakota, July, 1957.

<table>
<thead>
<tr>
<th>Volume* (pounds)</th>
<th>In Favor of Shipping Agreements</th>
<th>Opposed to Shipping Agreements</th>
<th>Have Cooperatively Shipped</th>
<th>Have Never Shipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 300,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>300,001 - 600,000</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>600,001 - 900,000</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>900,001 - 1,200,000</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1,200,000 - and over</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>
There were several advantages of this type of agreement as expressed by the managers. The main element again pointed out was the cost advantage available through cheaper transportation rates. This factor appeared to be strongest when the butter was shipped mostly by rail. At that time, the creamery had to pay the costs of icing and stop charges each time the car was stopped enroute. Then it was most important for the initial plant to utilize the car space completely either by filling the car with their own butter or cooperating with other plants. Presently, much of the butter is trucked to the central market. Under the changed conditions it is difficult to measure the shipping rates and the amount of shipping arrangements made between creameries because the trucks always go from plant to plant until they have a full load. One manager pointed out that a large volume allows the plant to operate its own trucks. Perhaps two or more plants might own a vehicle together. The costs of such an operation would have to be explored fully.

In several plants where the principal outlet for bulk butter was either a meat packing plant or a food chain, the butter was picked up at the plant by a truck operated by the buyer at no direct cost to the creamery.

Two other advantages mentioned by a manager are the possibility of butter quality being improved and stabilized from one area and the opportunity for better price negotiation on butter from a concentrated area. An indirect factor affecting quality may be the frequency of shipping. When a plant is not required to wait until it can ship an entire load, it can ship more frequently and thus
eliminate the lowering of quality due to extended storage.

Of course, certain problems arise here as in any area of cooperation. A very basic one suggested by a manager was just getting the managers together. Another who sold most of his bulk butter to a meat packer felt that such an agreement would require shipping to a central market where the plant would be at the mercy of the buyers. Other dissenting opinions were that creameries were too far apart and that freight rates would be about the same regardless of any efforts to pool shipments.

As Table VI indicated, six plants had actually been partners in some form of shipping agreements. One manager stated that his plant at one time had sold through a marketing association but that his plant was dissatisfied with the returns. He now sells to a food chain which makes no direct shipping charge; but he has to haul the butter to a neighboring plant where both plants load the truck. Other plants which have cooperated found they liked these agreements because they did not have to hold the butter so long; this is particularly true if the plant's cooler is not very large. This situation occurs most often in the high volume months.

Several problems which the managers had experienced were pointed out. One is that some problems might arise concerning the fluctuations in volume so that there may be difficulty in filling a car. The same manager said that some customers prefer butter from a particular creamery so that care must be taken to differentiate between plants. A final disadvantage mentioned was that under such arrangements it is not always possible to sell on a certain day.
Most managers gave about the same answer to this question as they did to the one applying to the general conditions.

Marketing Association and Consolidation

Some plants were hampered in their activities because of the smallness of their operations. Since there was a slight price advantage to be gained by selling butter in pounds rather than in bulk, the idea was conceived of improving the marketing of butter by increasing print sales through brand promotion. A marketing association would undertake the retail sales of butter on possibly a statewide scale. A smaller scale brand promotion could be undertaken by two or more area plants selling under a common brand. The final alternative suggested was the merger of two or more area creameries to allow expansion of marketing and, at the same time, a reduction in operating costs per pound of butter manufactured.

Common Brand

An area related to both shipping and the marketing association would be that of a common brand. The use of a common brand would facilitate shipping as well as strengthen both plants in brand competition. When asked if they would be willing to sell under a common brand with one or more plants, six managers replied yes; and the other five said no. With one exception, all the yes answers came from the largest plants and all the no answers from the smallest plants. Nearly all the yes answers contained the qualification that the participation in this program would depend on the advantages.

One of the advantages that was pointed out by three managers
who said "yes" and one who said "no" was the necessity for rigid quality control and greater uniformity of color. One manager indicated that his plant was currently engaged in a program of this nature. Two managers felt that the common brand should be a large one such as a meat packing plant. One added that he felt butter should be distributed with other products.

Two of the managers answering "no" were skeptical of the dealings between the creameries involved, with the main thought being that there was danger of one creamery trying to control the situation. Both expressed a certain satisfaction from independent control of their own plants' product. They also seemed to agree somewhat with another manager who did not want to lose consumer preference for his brand.

The next question asked for their opinion on an extensive advertising campaign to promote this common brand. It was an open end question designed to test their reaction on the common brand and obtain a general impression of their views on advertising. Generally, the managers seemed reluctant to comment on it. Most of the answers indicated that some form of advertising was necessary but little indication was given as to the intensity and kind of advertising that was most desirable. Two "no comments" were received besides one answer that said advertising would do no good. Three were more optimistic in their answers. The manager of the fourth largest plant in the sample thought a program of this nature would be excellent for helping overcome the prejudice against South Dakota's butter. Another felt that a program like the Iowa State Brand would
be valuable. The third stressed the importance of brand name advertising for best results.

**Marketing Association**

In regard to a marketing association, four managers were opposed to the establishment of a regional or statewide sales agency, and three were in favor of the idea (Table VII). However, four men were undecided; and two of them were inclined to the affirmative.

The advantages of this sales agency as seen by the managers would be an increase in print outlets for some plants and the opportunity to bargain for higher prices of one-half to one-fourth cent more on the central markets. Another manager stated that Iowa State and Land O'Lakes Brands had been successful so he was hopeful for a similar project in South Dakota.

Table VII. Managers' Opinions on the Success of a Regional or Statewide Sales Agency, Eleven Sample Plants, South Dakota, July, 1957.

<table>
<thead>
<tr>
<th>Volume* (pounds)</th>
<th>Would be Successful</th>
<th>Would Not be Successful</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 300,000</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>300,001 - 600,000</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>600,001 - 900,000</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>900,001 - 1,200,000</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1,200,001 - and over</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3</strong></td>
<td><strong>4</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>

*Volume is expressed as pounds of butter manufactured in 1956.
Some of the problems predicted by the managers involve such things as the difficulties in organizing a program of this nature and mechanics of operating such a large project throughout the country. Several were satisfied with the present outlets and saw no reason to change. Another manager felt that lack of Grade A butter would hamper the success of the association.

Prospects for future members appeared good as eight managers thought they would join and three others said "possibly" (Table VIII). One manager explained that his plant was presently engaged in a program closely related to this idea. Most of the managers seemed receptive to the idea; but, at the same time, made it clear that all the details of establishing a marketing association would have to be settled before they would make a definite commitment to join. Several managers mentioned that care should be taken to avoid the

Table VIII. Managers' Reactions as to Whether or Not They Would Join Sales Agency, Eleven Sample Plants, South Dakota, July, 1957.

<table>
<thead>
<tr>
<th>Volume (pounds)</th>
<th>Would Join</th>
<th>Would not Join</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 300,000</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>300,001 - 600,000</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>600,001 - 900,000</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>900,001 - 1,200,000</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1,200,001 - and over</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>
situation where the association exercises too much control over the individual plants.

Consolidation

Following the general pattern developed throughout the questionnaire, the questions concerning actual mergers were designed to sample the general outlook for the entire state, to determine how they applied these ideas to their individual plant and to discover any ideas they had on methods of pursuing a consolidation program.

Generally the managers favored mergers and predicted that actual mergers will become more prevalent in the state in the near future.

Table IX shows that six managers favored mergers, two opposed them, two were undecided, and one answered "don't know."

Table IX. Managers' Opinions on the Success of Mergers of Small Creameries, Eleven Sample Plants, South Dakota, July, 1957.

<table>
<thead>
<tr>
<th>Volume (pounds)</th>
<th>Would be Successful</th>
<th>Would Not be Successful</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 300,000</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>300,001 - 600,000</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>600,001 - 900,000</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>900,001 - 1,200,000</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1,200,001 - and over</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
The general feeling among the managers favoring mergers was that the industry faces an adjustment in the future, and mergers are a means of making the adjustment. The main cause for consolidating is to reduce the overhead per unit of output. The cost factor was pointed out by four managers.

Both managers who were undecided tended to be affirmative in their thinking. Both of them mentioned real problems that must be considered. One problem was the distance factor between plants, particularly in the more sparse dairy areas of the state. The other problem is that of community residents losing the plant from their town.

This last factor also prompted one manager to oppose mergers on the grounds that a creamery was an asset to the town. However, he pointed out that very small creameries would benefit by merging. The other manager giving a dissenting opinion felt that the larger creameries in the area should buy out the smaller ones.

The idea that only the strongest plants remain and will continue under the status quo was offered by the manager who answered "don't know."

When the questioning was narrowed to the individual plant, the opinions were almost equally divided with one more "yes" than "no" answer (Table X).

Four of the managers had definite ideas on which plant in their respective areas should merge and some idea of how it should be carried out. One had actually participated in a merger several years ago. Conversation with these managers indicated that they were
Table X. Managers' Consideration of Merger of Their Individual Plant, Eleven Sample Plants, South Dakota, July, 1957.

<table>
<thead>
<tr>
<th>Volume (pounds)</th>
<th>In Favor of Merger</th>
<th>Opposed to Merger</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 300,000</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>300,001 - 600,000</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>600,001 - 900,000</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>900,001 - 1,200,000</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1,200,001 - and over</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

aware of the problems that need study such as routes, capacity of various plants and the density of milk and cream production in the areas concerned. One manager revealed the rivalry between plants in the area which he felt would affect mergers.

The importance of competition between creameries as a part of the "American way of life" was expressed by two managers as being an element opposing mergers. This was closely related to the position taken by one manager who said that his creamery would remain independent as long as it could continue operations. Some managers applied the same reasoning for the individual plant as they did for the general picture. That is, the plants were too far apart, or the town benefits from having the plant, or the larger plants should absorb the smaller plants.

The conditions under which the plant should consider a merger
should be worked out between the two boards of directors. Some felt that both cooperatives should dissolve and issue stock in the name of the new cooperative, but others thought the larger plant should absorb the smaller one. The conditions under which the merger should take place depend entirely upon the financial and physical condition of the plants involved. Several managers refused to comment on this question.

Only three managers said that there had been any discussion concerning a marketing association or a merger among their patrons or producers either at annual meetings or informal discussions. Two of these plants were actually involved in these programs at the present time. The other manager stated that the board of directors of his plant had discussed a merger at a board meeting but had rejected the idea for their plant because they felt that it would cause a lot of trouble and the plant would inherit a lot of debt.

Four managers said they would like to see some discussion among their board of directors or patrons concerning mergers. The general thinking seemed to be that it would be excellent long range planning to get them thinking about this subject. Most of the managers replied that their plant was doing fine so there was no need for such discussions. One manager mentioned that a merger would put him out of a job.

The fact that mergers may become a definite trend was predicted by four operators. One felt that they would become more prevalent in the next two or three years; another estimated five to eight years. The strongest prediction was that about fifty per cent
would be involved in mergers in the near future. Most of the managers indicated that there will be a change in the future and that some mergers might be involved, but they were not certain of the intensity of this trend.

The majority of the operators agreed that a concentrated program to foster mergers was necessary; however, they were uncertain about how it should be undertaken. Several felt that the college should lay the groundwork through publications, contacts with the boards of directors and attendance at annual meetings.
CHAPTER IV

CONSIDERATIONS FOR CONSOLIDATION

Even though the basis for consolidating creameries is economic, that is the maximization of net returns for farmers, some of the most important facts to be considered are more sociological in nature. These objections were pointed out quite clearly in the manager interviews.

These objections, the alternatives in consolidation and a suggested procedural outline which the managers, boards of directors and producers should consider are explained in this chapter.

Objections to Consolidation

Managers and employees may tend to oppose mergers on the grounds that it would put them out of a job. However, the consolidation of several plants would present greater opportunities for employment. A very large plant might require departmental foremen. Furthermore, diversified operations may require managers of the egg department, locker plant, feed, hatchery, etc. Supervision of one department would lessen the managerial burden and allow the operator to develop greater skills in one area. Usually, large plants can afford to pay higher salaries than small plants.

Another objection voiced by managers was that the town would oppose mergers because they do not want to lose the business. With the greater use of truck routes, door deliveries have become almost non-existent. Producers then are not attracted to a certain town
because the creamery is located there. Businessmen need not fear the loss of customer trade for those reasons. The consolidated plant could keep bank accounts in local towns thus keeping the same amount of money in the community. This could also eliminate exchange charges on checks.

Patrons and the boards of directors may oppose mergers because of vested interests. Both groups do not want to lose their identification with a small plant. There is a certain amount of pride connected with being an owner in a local establishment. The individual identity is transferred to group identity in large organizations. The decision to be made is to what extent these sociological considerations compete with the economic advantages in Chapter II.

These objections could be minimized by the careful planning of the merger. An extensive educational campaign organized to acquaint the producers of the advantages and procedure in the early stages would eliminate much of the opposition caused by lack of adequate knowledge on the subject.

Consolidation Alternatives

Cooperative creameries in South Dakota appear to be faced with a choice of four basic alternatives for future operations. If the trend of decreasing number of plants continues, every creamery will be affected by one of these conditions. The four alternatives are: (1) continued competition; (2) larger creameries purchasing smaller plants; (3) voluntary merger of plants forming a new
cooperative; and (4) small plants acting as receiving stations for larger plants.

Continued Competition

Continued competition between creameries will eliminate the less efficient plants and give increased volume and economies in operation to the more efficient. Competition among the plants for producers will always be strong because many of the plants indicated that they were operating their churns at only one-third or one-half capacity. Most managers will make efforts to increase the number of their producers and utilize this capacity. Some of the managers of the small creameries indicated that the number of their patrons had decreased since 1945, and others reported that it had remained about the same. The plants adding whole milk increased the number of producers as had the largest plants. In one case, the number of producers had doubled because two creameries had gone out of business in that area increasing the plants territory; the recent addition of trucks was also a factor.

A factor deciding which plants will hold and attract producers is the amount available for dividends. The study showed that the amount paid for butterfat shows little variation between plants, but the amount available for dividends varies greatly. As more and more producers become aware of this difference, they will be attracted away from the small plants by the large creameries.

The result of continued competition, then, may be a decline in the number of small plants. Because they chose to remain in competition rather than make an agreement, many will be forced to
cease operations in very poor financial condition. The patrons may not receive 100 per cent of their equity in the plants; whereas, if they would choose one of the following alternatives, they may receive returns greater than just the value of their stock.

**Larger Creameries Purchasing Smaller Plants**

A more profitable alternative for the small plants than ceasing operations in a financially destitute condition would be for them to sell out to a larger plant. This move would allow them to liquidate their stock at face value and transfer their producers to a plant which would return them more money for the raw product. The patrons could choose between having their stock purchased by the liquidating plant or exchanging it for stock in the large plant.

The new owner could possibly utilize the equipment and the building in some way or sell it. The building could probably be used for storage or poultry operations. This alternative would increase the probability that some employees of the liquidated plant could find work in the larger plant.

**Voluntary Merger of Plants**

The alternative offering the greatest fairness to all plants and producers concerned would be a voluntary merger. There are several benefits of this program.

A program of this type could involve a number of plants. The unification of all plants would reduce the duplication of truck routes cutting down a large expense and permit one large plant to operate at full capacity. The unit cost of manufacturing would be reduced returning a higher dividend to all producers in the area.
Another advantage is that the patrons of the liquidated plants have the privilege of greater participation in the affairs of the new cooperative. The new plant should have representatives from all plants on the board of directors. Some of the doubt of the people who have a vested interest in a small plant would be dispelled. These interests can be transferred to the new organization where pride can be established in an improved quality product and brand name.

A large undertaking would necessitate a careful study of the physical resources available. Perhaps one plant would have the facilities to handle the volume of the area or a new building might be needed. The selection of plant site must take into consideration the buildings, labor, electricity, fuel, water, sewer, and railroads available at the proposed site. It should be in the center of the area producing the greatest volume of milk and cream. The proposed pickup routes should be evaluated, also, before the final site is selected.

Receiving Stations

The last alternative for a plant to select is the operation of a small plant as a receiving station for a larger creamery. This operation has been successful for a number of small plants. The plant having difficulties in competing with a neighboring plant might choose to ship its cream to that plant for processing. A system of this nature gradually unites the two slowly and offers excellent opportunities for complete merger at later stages.

If the small plant has door deliveries, they may be cooled and hauled to the other plant daily for churning. The most efficient
means of disposing of truck collected cream would be to haul direct to the processing plant.

Procedure for Merging

Consolidating two or more plants requires much patience on the part of the planners. The idea must come from within the plants involved to gain acceptance. Furthermore, an extensive educational program must be carried out by the managers and directors to get the full confidence, unity and support of the patrons. A suggested procedure is outlined for organizing a merger.

1. The manager of the individual plant should evaluate his plant's operations. The basic points to be considered are: (a) the size of initial payments for cream and the dividends paid to producers; (b) quality of raw product and butter churned; and (c) relative costs and profitability of various departments such as feed, hatchery, eggs, poultry buying, cream, fluid milk, ice cream, etc. The plant should not be using the profits of egg handling to cover a loss in butter manufacturing, for example. Felberg found this situation existing in several South Dakota plants. These factors should be compared to the neighboring plants. The criterion used in determining whether or not a plant should remain in operation is the competition from other plants in the area.

2. When the manager has viewed the plant's operations as objectively as possible, he should present his findings to the board.

19 Felberg, op. cit., p. 10.
of directors. They should discuss the problem and evaluate the four alternatives presented in this chapter. A wise board of directors will view the future of the plant in the long run.

3. When the directors have reached a decision involving another plant or plants, they should contact the manager and board of directors of each plant involved. If there is hope of future action on this program, all plants should begin a program of concentrated study to evaluate the resources of the area. These resources should include the volume of milk and cream produced in the area concerned and the production trends. They should also enumerate the buildings, equipment, other assets, and liabilities of the creameries involved.

4. A very important point to be remembered is the reaction of the producers. As soon as the creameries agree on the need for a program and begin to lay the groundwork for future consolidation, a carefully organized educational program should be started at the producer level. Meetings, literature and personal contacts should be utilized to acquaint the patrons with the needs, advantages, disadvantages and procedure of consolidation. If the patrons feel they are actively participating in the movement, opposition can be minimized.

5. Outside authorities should be consulted to conduct the evaluation of resources and suggest the best alternative. Qualified appraisers would be necessary to appraise the buildings and equipment involved. Auditors could audit the books and figure the financial benefits to be accrued from the several alternatives. Legal counsels
should help with the liquidation proceedings.

6. When the best alternative has been selected and worked out by all committees, each creamery should hold a meeting and allow the patrons to vote on the proposals.

7. A joint meeting of all stockholders should be held to organize the new cooperative.

8. The plans voted on by the stockholders should be carried out. This would be the step of actual moving of equipment, etc.

9. Educational meetings and personal contacts should be continued to maintain producer interest and satisfaction.
SUMMARY AND CONCLUSIONS

Summary

A growing trend in business is the consolidation of small, inefficient businesses into large-scale organizations capable of producing greater returns on investment for the owners. This trend has become prominent in the dairy industry not only on the national level but also among the small cooperative creameries.

The cost study of thirteen Iowa creameries indicated that costs per pound of manufacturing butter generally decreased as volumes increased. The costs in a plant having a volume of less than 200,000 pounds were almost double those in a plant manufacturing slightly more than 300,000 pounds.

The lowest cost point for a relatively small plant was in the area between 600,000 and 700,000 pounds. This was a one-churn plant. The high degree of efficiency in this area was due to stable building requirements, the use of only slightly more equipment, and the increased efficiency of an even larger work force. The volumes between this point and 1,500,000 pounds had slightly higher unit costs and were not as competitive as smaller or larger plants. The increased cost was attributed to inefficiency in labor. The large creameries of about 2,000,000 pounds or over had the lowest operating costs. From this point on, the costs decreased slowly.

The three areas of highest cost were building, equipment, and labor with building and equipment costs decreasing more rapidly than
labor cost. The most costly department was churning.

A similar study in South Dakota further illustrated the declining costs of larger volume plants. The three high cost areas discovered were labor manufacturing expense, depreciation and salaries for administration. Butter manufacturing costs were difficult to isolate because the creameries tended to charge some departments for more than their proportionate share of costs. Another point illustrated by this study was the importance of dividends to the producer. Most creameries tended to make approximately the same initial payment to producers for butterfat. In fact, the smallest plant paid the highest amount; but it resulted in a loss for this firm. The larger creameries had more net profits available for patronage refunds.

Butter quality was shown by two studies to not be directly related to volume; however, several indirect factors were noted. The processing of whole milk rather than cream resulted in a higher proportion of Grade AA butter. Cream, when churned separately according to grade, also manufactured high quality butter. Frequency of pickup and care given the raw product by farmers were other factors.

Improvement in quality was generally considered to result in an increased price for butter. Alert managers bargaining for price and markets obtained higher butter prices for the creameries.

Twenty-five per cent of the cooperative creamery managers in South Dakota were interviewed to determine their outlook for the future of creameries in the state and to determine their opinions to
cooperative buying and selling agreements, common brands, marketing associations and mergers.

The majority of the managers predicted a decline in the number of creameries because of increasing costs. Many of them pointed to mergers as the solution to the poor financial condition of some plants.

Cooperative buying and selling agreements were favored by the majority of managers for price discount reasons. Few of the plants visited had participated in buying agreements, but about half had participated in shipping arrangements.

One-half of the managers favored the use of a common brand for one or more creameries. They were somewhat undecided about the success of a regional or statewide sales agency because three operators thought it would be successful; four felt it would not; and four were undecided. The majority said they would join the marketing association if one were started and would offer selling advantages.

Mergers were generally favored. Six managers favored a merger involving their plant; five opposed it. There was little indication that mergers or a marketing association had been discussed. Seven replied that they would not care to have the board of directors or producers discuss a merger. No definite trend was shown for possibilities of mergers in the state, but eight operators thought there should be a concentrated program on this subject.

Objections to consolidation were sociological rather than economic in nature. Most of the objections involved the vested
interest of managers, directors or local businessmen. Patrons did not want to lose their identification with a small plant.

The alternatives facing creameries are: (1) continued competition, with some of the plants going out of business possibly by bankruptcy, (2) larger plants purchasing smaller plants no longer able to compete, (3) voluntary merger of two or more plants forming a new cooperative, or (4) small plants acting as receiving stations and selling to larger plants with the possibility of future mergers.

Conclusions

Larger plants have a definite cost advantage over the smaller plants. They can operate at lower cost per pound, thereby, leaving more profits available for patronage dividends. This cost advantage is due to greater utilization of assets and labor, the quality improvement of butter sold, and better bargaining on the markets.

The managers surveyed were aware of a future decrease in the number of creameries in South Dakota and the need for bettering their financial condition. Some of them had valuable ideas for improving the plants. A number of operators appeared to feel that the addition of new operations would solve their problems, but they should be cautioned to not over-invest in equipment for the number of patrons which they have.

Most of the managers seemed to be aware of the price advantages of cooperative buying and selling agreements, but few had actually participated. There were indications that great competitive spirit exists between cooperative creameries which may hamper such agreements.
Several seemed willing to enter into such agreements, but no one had approached them on the subject. An area leader is needed to start such programs.

Although the managers were somewhat pessimistic about the success of a marketing association, they seemed interested on a local level. A study on this topic with a specific beginning program is needed to obtain their support.

The general feeling on the future of mergers in South Dakota was favorable. Almost half of the managers were reluctant to see their plants enter into mergers; however, sociological considerations seemed very important in holding them back. An educational program should be undertaken to point out the possibilities for departmental managerships in larger coops at higher salaries. A similar program should also be geared to the producer and board of directors level.

Specific recommendations for mergers can best be made when local interests demand it. Then dairy marketing people can study the resources of the area and make recommendations.


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