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MANHATTAN, KANSAS

THE ORGANIZATION AND OPERATION OF COOPERATIVE CREAMERIES IN KANSAS

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SUMMARY

1. The desire and demand for a cooperative creamery should originate with the cream producers in the community.

2. There should be sufficient interest manifest in a cooperative creamery to develop the organization without the help of outside agencies.

3. The organization should be incorporated and should comply fully with the provisions of the Capper-Volstead act and the revised cooperative marketing act of Kansas.

4. The organization of a cooperative creamery should not be considered by any community in Kansas unless it can supply the creamery at the start with 225,000 to 250,000 pounds of butter fat, which is equivalent to the production of approximately 1,700 average Kansas cows.

5. Sufficient capital to build and equip the creamery and furnish a balance for operating capital should be available before the building is started or the equipment purchased.

6. Capital is most conveniently raised through the sale of common stock to members of the association.

7. Additional capital for operating purposes may be obtained by the sale of preferred stock to local business men.

8. The board of directors should be carefully selected from the cream producers of the community who are members.

9. A capable, efficient manager is essential to the success of a cooperative creamery.

10. Business should be done with members only.

11. The truck route system is an economical method of procuring cream in Kansas.

12. An adequate system of records and accounts should be installed before the creamery starts operating.

13. The accounts and records should be audited by disinterested parties at frequent intervals.

14. Operating expenses should be kept as low as possible for each pound of butter manufactured.

15. The price that a cooperative creamery can pay for butter fat is dependent upon three major factors; namely, (1) the market value of the butter; (2) the overrun; and (3) the creamery margin.

16. Butter fat should be paid for at monthly intervals. The receipts after all expenses have been deducted should be prorated to the cream patrons.

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THE ORGANIZATION AND OPERATION OF CO-OPERATIVE CREAMERIES IN KANSAS[1]

GEORGE MONTGOMERY AND W. J. CAULFIELD

INTRODUCTION.

Membership in a coöperative creamery has been a disappointment to some Kansas farmers. Others have been benefited by becoming members and have received from their membership gratifying returns in the form of higher prices for their products. Whether a member is disappointed or proud of his membership is determined to a large extent by the manner in which the creamery is organized and the way in which its business is conducted. In order to render the members satisfactory economical service, a cooperative creamery, like any other business organization, must recognize certain fundamental business principles. A cooperative which seeks to attract members by paying for butter fat more than it is worth, or which incurs high operating expenses because of inefficient management or a small volume of business cannot be of permanent benefit to the farmers of the community.

During the last three years a number of cooperative creameries have been organized in Kansas. These creameries have met with varying degrees of success, some achieving unusual success while others have failed to benefit their members. One cooperative, during

TABLE I.—PRICE PAID FOR BUTTER FAT BY A SUCCESSFUL COÖPERATIVE CREAMERY AND SAVINGS TO ITS MEMBERS DURING THE FIRST YEAR OF OPERATION.

MONTH.	Price paid to members (cents).	Prevailing cream station price (cents).	Difference.	Pounds of butter fat purchased.	Savings to members.
1930.					
April	38	33	+5	21,700	$1,085
May	32	28	+4	27,500	1,100
June	33	26	+7	31,100	2,177
July	35	29	+6	32,300	1,938
August	39	34	+5	29,300	1,465
September	40	34	+6	27,100	1,626
October	35	33	+2	24,500	490
November	32	29	+3	24,800	744
December	29	25	+4	31,000	1,240
1931.					
January	26	21	+5	35,900	1,795
February	27	22	+5	35,700	1,786
March	28	23	+5	41,600	2,080
Total saving to members					$17,526

1. Contribution No. 74 from the Department of Agricultural Economics and No. 78 from the Department of Dairy Husbandry.

TABLE II.—SUMMARY OF CERTAIN BUSINESS FACTS CONCERNING NINE COÖPERATIVE CREAMERIES IN KANSAS, 1930.

Creamery No.	1	2	3	4	5	6	7	8	9
Organized by	Commercial firm	Commercial firm	Commercial firm	Commercial firm	Commercial firm	Commercial firm	Local effort	Local effort	Commercial firm
Building and equipment cost	$14,800	$17,900	$17,900	$17,000	$19,000	$15,800	$100,250	$25,934	Building $8,800
Qualified coöperative (a)	No	No	No	No	No	No	Yes	Yes	No
Number of members	120	207	215	130	180	165	1,510	450	205 agreed to buy stock
Number of farmer stockholders	75	150	165	Probably 80 or 90	500 patrons	200 patrons	All are farmers	All are farmers	90 per cent
Av. monthly pounds of butter	9,000	15,700	13,000	6,000	15,087	18,885	80,000	50,000	Not operating
Financial condition	Fair	Bad	Fair	Bad	Good	Good	Excellent	Excellent	Lien on building
Profits or loss last year	Moderate losses	Heavy losses	Just started	Heavy losses	Small profit	Small profit	All net proceeds prorated	All net proceeds prorated	Not operating
Method of buying butter fat	Competitors' price	Competitors' price	Competitors' price	Competitors' price	Competitors' price	Card price	Av. return for month	Av. return for month	Not buying

(a) A qualified coöperative is one whose plan of organization complies with the 1931 coöperative law of Kansas and with the federal coöperative marketing act (the Capper-Volstead act).

its first year of operation, paid to its members $17,526 more than they would have received at prevailing cream station prices. (Table I.) In contrast, two other cooperative creameries during the same year sustained losses in excess of $3,000 each. This difference was due primarily to the manner in which these creameries were organized and to differences in overhead costs and operating policies.

In order to secure information on the method of organization, cost of building and equipment, operating costs, and policies of operation of some of the recently organized associations, a survey was made of nine cooperative creameries located in north central Kansas. The fundamental business facts obtained from the survey are summarized in Table II. The creameries included in the survey present an interesting contrast in methods of organization and policies of operation, Practices adopted by some of the creameries have proved detrimental to both the creamery and the community, while in other cases the adherence to a few fundamental principles has been responsible for gratifying success even in periods of adverse conditions.

Farmers who are planning to start cooperative creameries should profit by the experiences of communities where unsuccessful creameries have been organized as well as those of communities where successful creameries are now operating. A properly organized, efficiently managed cooperative creamery is a credit to any community, but a poorly organized creamery with a small, indifferent membership is a costly reminder of mistaken judgment.

THE COOPERATIVE MUST BE PROPERLY ORGANIZED

One of the first essentials for the organization of a cooperative creamery is a demand among the farmers concerned for improved marketing conditions. A demand for better marketing conditions consists not only of a desire for improvement but also a willingness and determination to secure improvement. The need for better marketing conditions exists in many Kansas communities where cream is produced in quantity, so that from the standpoint of organizing a creamery the problem becomes one of developing a realization of this need to the point where there will be loyal and enthusiastic support of a coöperative project. The successful cooperative creameries in Kansas are the outgrowth of such a realization among the farmers of the need of improved marketing methods.

Creameries which have been promoted by agencies from outside the community, with one or two exceptions, have not had the permanent, loyal support of the farmers of the community. This is apparent from a study of the membership of these creameries. Two creameries included in the survey had fewer than 100 farmer stockholders. In two others the farmers were not sufficiently interested to take an active part in the management of the creamery, while in another community there was not enough confidence in the project to justify buying equipment and starting operation, even though the building was completed. These cases are not an indication of indifference on the part of farmers toward cooperatiye creameries, but they do point out the results which may occur when a creamery

is started where there is not the proper interest and confidence among the farmers of the community. In contrast, in one creamery, organized by the farmers of the community, the volume of business exceeded 50,000 pounds of butter a month, and more than 450 farmer members were secured during the first year of operation.

A cooperative creamery should grow out of a substantial cooperative spirit, among the farmers and business men of the community. It cannot be created by the simple process of constructing a building and equipping it with butter-making machinery. It must be organized and developed by leaders in the community; and have among its membership men who will take charge of its affairs and manage them in an efficient and economical manner. A cooperative creamery should be the result of local effort rather than something which is brought into the community and sold on a contract price. The physical plant and equipment are only a part of the necessary requirements for a cooperative creamery. There must be a cooperative spirit, leadership, and business ability to keep the enterprise going through periods of adversity. An organization from outside the community may provide an easy method of securing the building and equipment, but it does not develop the intangible human factors which are also essential for the organization of a successful cooperative enterprise.

ABILITY OF THE COMMUNITY TO SUPPORT A CREAMERY

The ability of a community to support a cooperative creamery depends on the extent of the area from which cream can be secured, the number of cows in that area, and the location of competing creameries. Several creameries in north central Kansas have been located without regard to local conditions. In one community which has comparatively few dairy cows a cooperative creamery was located so it competes with three other creameries within a radius of 35 miles. This creamery was handicapped from the first by a small volume of cream and a small membership. It had about 75 farmer members and was churning only about 10,000 pounds of butter a month, which is too small a volume for economical operation.

A creamery should not be started until it is certain that enough cream can be obtained to permit it to operate economically. A profitable showing on the first few months' operations attracts new members, while a loss at the start gives the creamery a handicap which is difficult to overcome. Before the work of organizing a creamery is undertaken a careful survey of the community should be made to determine the advisability of starting such an enterprise. The survey should take into consideration the number of dairy cows in the community, the probable number of farmers who will become members, the character, ability, and experience of the farmers who will be leaders of the project, the interest and support of the business men of the community, the type of roads, the extent of the territory from which cream can be secured, and the competition in cream buying in the territory. Not until it has been

determined that the community meets the requirements for supporting a cooperative creamery should steps toward organization be undertaken.

SHOULD BE ORGANIZED AS A TRUE COOPERATIVE

Many organizations which consider themselves cooperative associations are not cooperative according to laW. Both federal and state governments have passed laws providing for the organization and protection of cooperative associations. Farmers' organizations which comply with the requirements of these laws enjoy certain benefits and privileges which are not extended to associations which do not meet the requirements. A group which is planning to form a cooperative organization should secure the advice of a competent attorney to be certain that they are properly organized.

The federal government, through the agricultural marketing act of 1929, makes possible financial aid and other assistance to organizations which are truly cooperative. The organizations to which assistance may be given are cooperatives which meet the qualifications of the Capper-Volstead act. Briefly stated the requirements of this act are: All the stockholders must be producers of agricultural products; the dividends on capital stock must be limited to not more than 8 per cent or there must be only one vote per member; and at least one-half of the business must be done with members. Seven of the nine creameries surveyed did not qualify under this act and consequently were not eligible for assistance from the Federal Farm Board. In reality they were stock companies rather than cooperative associations. In the majority of them 20 to 40 per cent of the stockholders were not farmers. Two of the creameries did not limit dividends to 8 per cent, and several did more than one-half of their business with nonmembers. Those creameries which are doing more business with nonmembers than with members could remedy this condition by issuing a small share of stock to each patron permitting him to pay for it by a small deduction from each delivery of cream.

Cooperative associations organized in Kansas should be incorporated under the revised Kansas cooperative marketing law of 1931. The association should be incorporated, so that the liability of each member will be limited to the amount of stock which he owns. In an association which is not incorporated each member may be held liable for all the debts of the organization. Incorporating begins with filing with the secretary of state a petition for a charter. After the charter is received by-laws are prepared and filed in the office of the secretary of state. Copies of the cooperative laws may be obtained from the secretary of state at Topeka, and models of by-laws suitable for a cooperative creamery may be obtained from the county agent or from the Department of Agricultural Economics of the Kansas State College at Manhattan, Kan.

SOUND FINANCING GIVES STABILITY

The method of financing the business is one of the first problems which the directors of a cooperative creamery must solve. The principal methods used by the Kansas creameries surveyed were the issue of stock and loans from local banks. Seven of the nine creameries surveyed depended entirely upon the sale of common stock for securing funds for the building and equipment. The other two creameries did not depend entirely upon common stock, but sold preferred stock to finance part of the equipment, to purchase trucks and to provide working capital. The creameries which issued only common stock depended upon loans from local banks for working capital and purchasing additional equipment. The agricultural marketing act provides that loans may be made for building and equipment and also for operating purposes to cooperatives which comply with the Capper-Volstead act.

ISSUE OF STOCK

A cooperative association which is incorporated is a corporation, and as such has certain powers granted to it in the charter issued by the state. One of these powers is the right to issue stock. Stock issued by cooperative associations may be common or preferred, common stock being more extensively used by local associations. The owners of common stock are the owners of the association issuing the stock. Common stock conveys to the holder the rights and duties of membership in the associations, including the privilege of voting. Owners of common stock share in the profits of the business, through dividends which are paid on the stock. In the case of cooperative associations the dividends are usually limited to not more than 8 per cent, the net profits, if more than sufficient to pay the dividends, being prorated to the members in proportion to the volume of business given to the cooperative by the member.

Common stock in a cooperative creamery should be sold only to the owners of dairy cows, so that the ownership and control of the creamery will be in the hands of those who furnish the business. In the creameries promoted by outside agencies bankers and other business men own from 20 to 40 per cent of the common stock. This is an undesirable situation because it leads the farmers to feel that since the creamery belongs to the business men these men may run it to suit themselves. In one community studied the farmers seemed to have lost all interest in the creamery, taking no more active part in the affairs of the cooperative than if it had been a privately owned business.

The shares of common stock of a cooperative creamery should have a low par value so that it will be easy for any farmer to become a member. One desirable method is to issue shares of stock with a par value of $20 and provide that each member shall buy a share of stock for each cow or each two cows that he owns. This method divides the ownership of the business in proportion to number of cows, makes it easy for any farmer to become a member,

and facilitates the sale of stock. Many creameries have made the mistake of issuing shares of stock with too large par value. Seven of the nine creameries surveyed issued common stock in $100 shares. Nearly all of them had had difficulty in selling sufficient stock to pay for the building and equipment. In one community there were only about 75 farmers who were willing to pay $100 to become a member of the creamery. In another community more than a year was required to sell the necessary amount of stock. In both these cases stock was sold to anyone who could pay for it, regardless of whether he was a producer of butter fat. Had these creameries issued stock in small shares they would have secured a larger number of farmer members and consequently would have been in a better position to start operation.

Another thing which aids in selling stock after the creamery is in operation is a provision for extending credit to those who do not wish to make cash payment. A plan which has proved satisfactory is one in which the member pays for the stock by deductions from the proceeds of the butter fat delivered to the creamery. Under this plan the member signs an agreement to buy stock, making a down payment, usually 10 per cent, and agrees to pay the remainder by small deductions, amounting usually to 2 cents, from each pound of butter fat delivered. The stock is issued in the member's name at the time he makes the first payment; but it is held as security until fully paid up, then delivered to him. This method, which makes it possible for any farmer to become a member with only a small cash investment, is more satisfactory than the use of a note, the full amount of which is due at a stated time. Many of the creameries which have issued stock in $100 shares have taken notes in payment for part of the stock. If the member becomes dissatisfied, or if the creamery fails to make a profitable showing before the note is paid, the member frequently is reluctant to pay it. In one case members were sued in an attempt to collect notes which were given for stock. Such a procedure, in addition to being expensive, leaves a spirit of resentment and an unfavorable attitude among the members.

There are two other provisions which should not be overlooked in the issue of common stock. (1) The dividends should be limited to not more than 8 per cent, and (2) by-laws should provide that stock shall not be transferred except on the books of the association. The latter provision enables the association to know who are members and also prevents a dissatisfied member from selling his stock for less than its par value or to men who are not producers of cream. Two creameries in the group studied did not limit dividends on capital stock to 8 per cent,, thus failing to comply with the revised cooperative law of Kansas and also with the requirements of the Capper-Volstead act.

Bankers, business men and others who wish to support the cooperative, but who are not owners of dairy cows, may be given an opportunity to lend their support and financial assistance through the purchase of preferred stock. Two of the creameries included in

the survey used preferred stock to finance the purchase of trucks, to make improvements in their buildings, and to purchase new equipment. Several of the creameries which found it difficult to sell enough common stock to cover the original investment could have raised additional funds by the sale of preferred stock to business men of the community. The sale of preferred stock instead of common stock to those not owning cows has the advantage of leaving the control of the association in the hands of those who supply the business.

Preferred stock differs from common stock in that it is not evidence of part ownership of the business. It is more in the nature of security for loans to the association. The claims of the owners of preferred stock take precedent over those of the owners of common stock. Preferred stock usually carries a fixed rate of interest or dividend payable annually or semiannually. This dividend should be nonaccumulative; that is, if the association is unable to pay a dividend when it is due, it should not be held liable for that dividend at a later time. Dividends which are accumulative may become a heavy burden in a comparatively short period of unfavorable business. The cooperative should also retain the privilege of retiring preferred stock at any time that it wishes to do so.

METHOD OF SELLING STOCK

The method of selling stock determines in a large measure the attitude of the farmers toward a cooperative creamery. On first consideration it might seem that the manner of selling stock is of small importance so long as members are secured and money is obtained for the building and equipment, but it frequently is the difference between a satisfied, enthusiastic membership and a dissatisfied, skeptical membership. How the stock is sold is fully as important as how much is sold. It makes a great deal of difference whether the member is satisfied and proud of his purchase of stock or whether he feels that he was induced to buy stock against his will, and is skeptical as to the success of the undertaking. Another important consideration is to whom the stock is sold. The creamery should have among its membership the farmers who are leaders in the community and as few as possible of the skeptical "hanger-on" type of members.

Some methods of selling stock secure the desirable type of members and create a loyal spirit among the members to a greater extent than other methods. Three methods of selling stock were used by the nine creameries in the group surveyed. First, the sale of stock by leaders in the community; second, a solicitor employed by the cooperative on a commission basis; and third, an agent sent into the community by the organization constructing the building and furnishing the equipment.

The sale of stock by leaders in the community is the most desirable method, because it places a local stamp of approval on the undertaking, inspires confidence, and makes the enterprise a com-

munity project in its fullest extent. Furthermore, the man who is selling the stock understands the conditions in the community and knows the characteristics of the men whom he is asking to join. Under such conditions rash promises which the creamery cannot fulfill are seldom made. When local leaders secure the members the sale of stock is on a basis of confidence and the development of the creamery is truly a community project.

The sale of stock by an agent working under the supervision of the board of directors or organization committee is a satisfactory method where local leaders cannot be secured to do the work. One creamery recently organized used this method with satisfactory results. In the organization of this creamery, stock was sold in small shares and in proportion to the number of cows owned by the member. It was agreed that the building should not be started until applications for stock representing a certain number of cows had been secured. The organization committee contracted with a salesman who had had experience in securing members for cooperative creameries to sell stock on a commission basis. As a part of his commission the agent received the initial payment on the stock which was made at the time the application was signed. When he had obtained applications representing the agreed number of cows the cooperative paid him the balance of his commission.

This method avoids the necessity of requiring much time of a few local leaders, but it is not satisfactory under all conditions. It is satisfactory only when an efficient, active organization committee supervises the sale of stock and gives the undertaking community approval and support. The salesman must have the support and assistance of local leaders and the benefit of publicity in the local paper or he will be received with doubt and misgiving when he approaches the farmers of the community. In one community where this method was attempted the farmers became skeptical because the project did not have the proper community approval. The salesman secured only about half the necessary number of applications and the project was abandoned, resulting in dissatisfaction among the farmers.

The third method of selling, and one which is unsatisfactory from the standpoint of the community, is the sale of stock by an agent of a company which agrees to construct the building and furnish the equipment for the creamery for a specified price. This method is undesirable because the salesman has no permanent interest in the community; he may and frequently does make promises which the creamery cannot fulfill; usually stock is sold to anyone who will pay for it; and funds for operation are not secured. The salesman's chief interest is to raise enough money to equal the contract price of the building, after which he moves into a new community. He is little concerned whether the members are satisfied or whether the creamery is well organized, and whether or not it will operate at a profit. Such a salesman usually is willing to make any promises which will further the sale of stock. In one instance a member was

given a written statement that the cooperative would buy back the stock at any time he wished to sell it.

Another disadvantage of this method is that it frequently leads to the organization of a creamery in a conmunity where conditions are not favorable for such an undertaking. Under this method local conditions unfavorable to the organization of a creamery are frequently entirely ignored in the selection of a community in which to start operations. A creamery organized in this way is in reality the result of the activities of outside interests rather than a community development. Such a creamery is handicapped from the start because it lacks community support, it frequently has a small volume of cream, inadequate working capital, and usually has a number of dissatisfied or skeptical members even before the first butter is churned.

A serious mistake that has been made by several creameries was to start the construction of the building before the sale of stock was completed. In one community it was impossible to sell enough stock to purchase equipment for the building, and that community now has an excellent building standing idle because of lack of equipment. Another association was unable to sell sufficient stock to meet the contract price of the building and equipment. In two other instances notes which members had given for stock were assigned to the contractor in final payment of the building. Several other creameries which contracted for their building and equipment before the stock was sold were handicapped for operating capital at the time they started operation because it was difficult to sell additional stock.

PROPER MANAGEMENT IS NECESSARY

More important than how the creamery is financed is the election of the board of directors. A cooperative organization is judged to a large extent by its directors and officers. The directors and officers make the decisions for the cooperative, determine its policies, and hire the manager and other employees. The character of the directors will be reflected in the activities and the policies of the association.

The members can well afford to give careful consideration to the election of the directors. Directors should be elected for their ability, good judgment, experience, and qualities of leadership, rather than because of popularity, prominence in the community, or because of the desire for an office in the cooperative. In choosing directors the members should realize that they are choosing men to represent their interests in the management of the association.

The directors of a cooperative creamery should be farmers. The members must feel that the creamery belongs to them and it is their responsibility to operate it. Such is seldom the case when the creamery is organized by outside effort and three or four members of the board are business men. In one creamery surveyed there were three bankers, a merchant, and five farmers on the board of directors. Such a plan may be satisfactory, but there is grave danger that the

farmer members will take the attitude that the business men are responsible for the creamery and therefore may manage it as they please. A cooperative creamery needs the support and assistance of the business men, but it should be in the form of advice and counsel rather than in active management of the affairs of the association. In one of the most successful creameries of the state a prominent local business man supported the development of the creamery, and still advises and discusses plans with the directors from time to time, but he has refused to hold an office in the association. He perhaps has rendered a greater service to the cooperative and his judgment is respected more highly than if he were a director of the association.

After the directors are elected it is their duty to select officers for the cooperative from among the board of directors. The officers are the active agents of the association, and are responsible for operating the business and deciding questions which may arise between meetings of the directors. The officers should be the type of men who inspire confidence. They should be men who are successful in managing their farms and handling their own business. It is desirable that they have some experience in conducting meetings and in public affairs. The officers should have the ability to make decisions and follow the decisions with action. Officers who secure the confidence of the members and the public can do much to build up the organization and increase the membership of the cooperative. No one of the directors should be a paid employee of the association.

The manager of a cooperative creamery should be a man of experience and ability. He should be hired for these qualities rather than because he is a friend or relative of one of the directors or because he needs a job. One of the creameries in north central Kansas employed a business man as manager because he happened to be located near the creamery. He had no experience in a creamery or other farmers' organization. Another creamery employed a farmer as manager. He was conscientious, hard-working, and a capable farmer, but he was inexperienced in operating a creamery. Many cooperative organizations in Kansas have failed because the members assumed that a good farmer would make a good manager for the cooperative. The successful operation of a creamery requires business ability and technical knowledge, which is usually acquired only by training and experience. The cooperative should expect and should be willing to pay a manager for his experience and ability. After a capable manager is hired he should be placed in charge of the operation of the creamery under the supervision of the board of directors and responsible only to them. If a member has a complaint to make concerning the operation of the creamery he should make it to the board of directors and allow them to take it up with the manager. The manager cannot be expected to be responsible to or to take orders from all of the members.

BUILDING AND EQUIPMENT COSTS

A community considering the organization of a cooperative creamery should be familiar with the cost of building and equipping a modern plant. Under present-day conditions a creamery must be constructed so that it will be sanitary, durable, equipped with modern machinery, and conveniently arranged. Modern standards demand that butter, like all other food products, must be manufactured in sanitary factories.

The planning and construction of a creamery is not a job for a novice. A reputable authority who has been intimately associated with the planning of creameries should be consulted by the building committee of a local creamery association, so that costly mistakes in the construction and arrangement of the plant may be avoided.

A carefully planned plant (fig. 1) will mean more efficient operation, not only from the standpoint of the utilization of labor, but from the standpoint of the utilization of power as well.

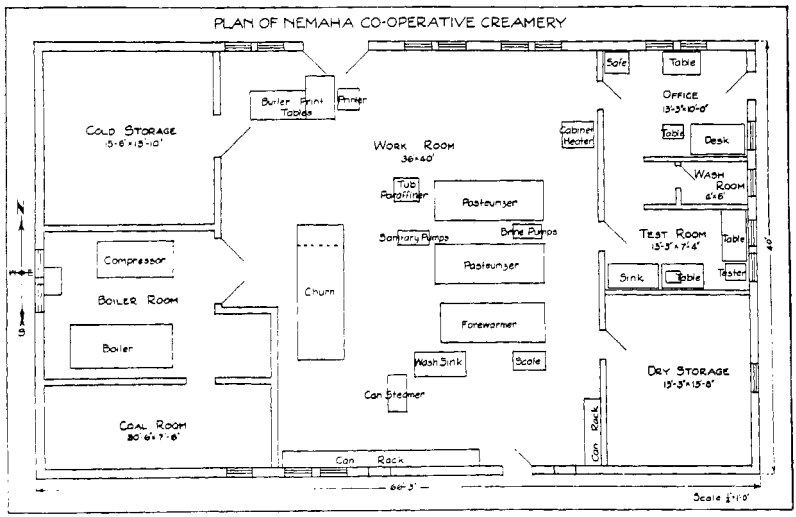

FIG. 1.—Floor plan of Nemaha County Coöperative Creamery.

OUTSIDE APPEARANCE OF CREAMERY SHOULD BE ATTRACTIVE

A creamery building should not be constructed entirely from a strictly utility standpoint. The outside appearance of the plant and surroundings should be attractive and inviting to the eye. A clean, attractive creamery and grounds possesses tremendous advertising value. Every community, once such a plant is established, should capitalize on the advertising value that such a plan possesses by inviting people to the plant, and showing them how the cream is handled from the time it reaches the creamery until it is manufactured into butter. A modern cooperative creamery should be one of the show places of the community. (Figs. 2 and 3.)

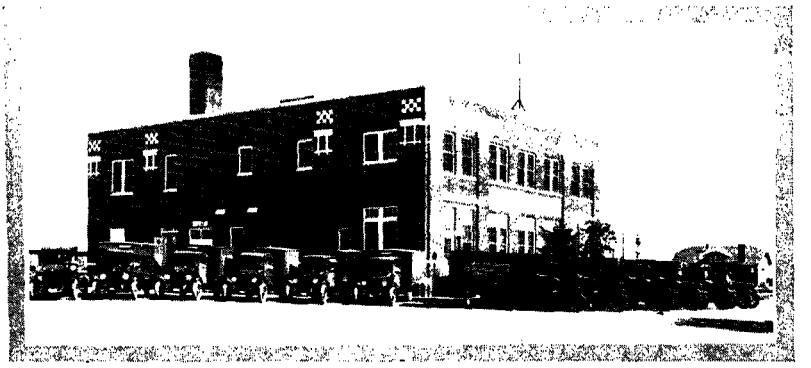

FIG. 2.—View of building, trucking equipment, and buttermaker's home of the Washington County Coöperative Creamery Company. (Linn, Kan.)

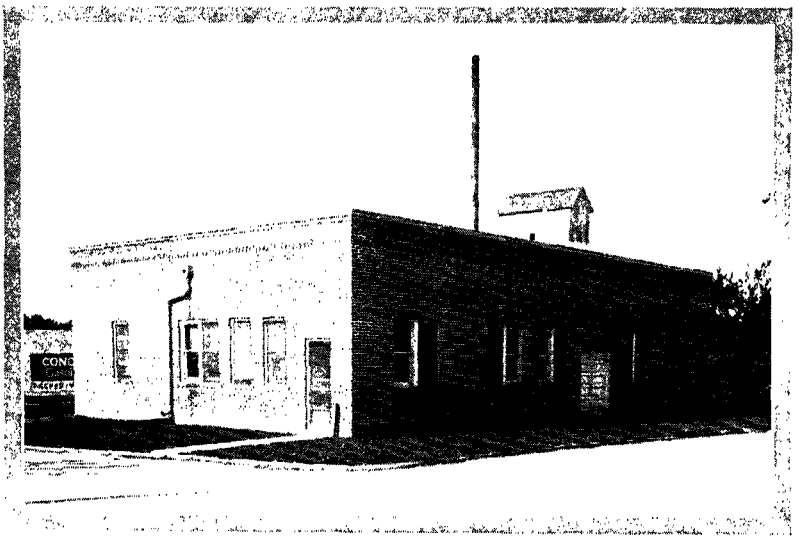

FIG. 3.—Nemaha County Coöperative Creamery, Sabetha, Kan.

CHOOSING A SITE FOR A CREAMERY

The site for a cooperative creamery should be carefully selected with respect to sewage disposal, water supply, transportation facilities, and advertising possibilities. It is becoming a fairly common practice to locate the creamery near the main business district of the town. Such a location is more expensive, but the additional expense is more than compensated for by the convenience and adver-

tising value of such a location. A location must be secured that will be easily accessible for the receiving of cream and other supplies.

Sewage Disposal.— In purchasing the site for a cooperative creamery it is important that adequate provision be made, through the purchase of additional ground, for the establishment of a sewage-disposal system should the city at any time refuse to allow the creamery sewage to enter the city sewer. Generally a plot of ground 50 feet square will be large enough for this purpose. If the city sewer is used, it is highly desirable that a catch basin should be installed between the creamery outlet and the municipal sewer. This is a tight cistern, through which all the creamery sewage must pass and in which the curdy material is given an opportunity to separate out and rise to the surface, forming a dense layer. This curdy material if allowed to pass into the city sewer is prone to clog the sewer sooner or later. The catch basin avoids this if cleaned out at reasonable intervals.

Water Supply.— An adequate supply of cold water is essential to the operation of a creamery. A plant manufacturing 300,000 to 400,000 pounds of butter a year should have a well that will furnish 1,000 gallons of water an hour. Water may be purchased from the city, but it is usually good economy for the creamery to own its own well unless the city water rates are unusually low. Water obtained directly from a well will be several degrees colder than the city water, which is an important consideration to a creamery. The cost of an adequate well will vary widely in different locations, but in general the cost will range from $200 to $400.

Transportation Facilities.— Convenience to a railroad is another factor that should be considered in locating a creamery. If the plant can be located on a siding of a railroad, considerable labor and drayage expense can be saved.

TYPE AND SIZE OF BUILDING REQUIRED

The type and size of building required will depend on the character and volume of business to be conducted. The one-story building is, as a rule, the most satisfactory type of building for creameries manufacturing up to 500,000 pounds of butter a year. If feed and other supplies are to be handled by the creamery association, a two-story building would be necessary to provide the necessary storage space for these supplies.

A building 40 by 66 feet, outside dimensions, proved adequate for plant No. 8, which manufactured approximately 450,000 pounds of butter from April, 1930, to April, 1931. Due to an increase in the volume of business and a change in the method of processing the cream, an addition 26 by 42 feet was recently added to this plant. It is estimated that this plant at the present time will be able to manufacture as much as 1,000,000 pounds of butter annually should it become necessary to do so.

CONSTRUCTION MATERIALS

The foundation and floors of a creamery can be satisfactory only when they are constructed of substantial, nonrotting material. The material used for the superstructure can be chosen according to availability of material and the funds available for construction purposes. If the matters of upkeep, depreciation and insurance are taken into consideration, it is doubtful if it would be good economy to build the superstructure out of wood, even though the original cost might be considerably less when compared with brick or tile. Brick or tile construction has been used in all of the cooperative creameries built in this state during the past two or three years.

BUILDING COSTS

An idea of the cost of constructing a suitable creamery building may be gained by referring to Table III, which shows the cost of a representative group of Kansas cooperative creamery buildings. These figures do not include any equipment.

TABLE III.—COST OF A REPRESENTATIVE GROUP OF COÖPERATIVE CREAMERY BUILDINGS IN KANSAS.

PLANT NO.	Size of building in feet.	Cost.	Material used.	Cost per square foot of floor Space.
6	26 x 70	(a) $6,500	Tile	$3.57
8	40 x 66	$8,472	Brick	$3.20
9	28 x 70	$8,800	Tile	$4.48

(a) This figure represents the book value of this particular plant, April 20, 1930.

EQUIPMENT COSTS

The cost of equipping a creamery will depend upon the size of the creamery and the quality and quantity of equipment purchased. The following estimate is taken from actual figures furnished through the courtesy of plant No. 8.

1. Office furniture and fixtures:
   1 steel cabinet for books and records;
   1 roll top desk with chair;
   1 adding machine;
   1 typewriter;
   1 table and chair.
   Cost $250.00
2. Testing equipment and supplies (fig. 4):
   1 24-bottle steam tester.. ..... $48.00
   2 lead-top tables 24.00
   1 cream-testing balance 35.00
   1 moisture-test scale 39.00
   1 acid-test outfit 5.50
   1 salt test 6.25
   5 sample-jar trays 10.00
   3 test-bottle racks 11.40
   1 wash sink 16.00
   ½ gross cream-test bottles.. ..... 17.50

½ gross buttermilk test. bottles	$5.00
4 gross sample jars (2 oz.)	20.00
1 dozen cream pipettes	2.80
1 dozen thermometers	6.00
Glymol	.60
Sulphuric acid	5.00
Total	$252.05

3. Creamery equipment (fig. 5.):

1 200-gal. forewarmer (secondhand)	$100.00
1 can steamer on forewarmer (homemnde)	12.00
2 300-gal. coil pasteurizers	1,968.00
1 900-pound churn	800.00
1 King cabinet heater installed	560.00
1 sanitary pump, 1½-inch	105.00
1 tub paraffiner	50.00
1 15-barrel water tank, galvanized	20.00
1 Friday printer	90.00
10 Friday print boxes	75.00
1 butter-print scale	65.00
2 beam scales	130.00
Butter stampers and ladles	8.35
1 5-ton refrigeration machine with brine pump, brine tank, and 260 feet of dry coils	2,685.00
1 water-cooling tower	35.00
1 20-horsepower boiler	900.00
1 cold-storage room insulated with 4 inches of cork. Size 15' 6" by 15' 10"	1,588.00
Total	$9,188.35

4. Miscellaneous costs:

Wiring expense	$375.00
Plumbing (material only)	327.00
Sanitary pipes and fittings	70.00
Total	$772.00

5. Summary of equipment costs:

Office furniture and fixtures	$250.00
Testing equipment and supplies	252.05
Creamery equipment	9,188.35
Miscellaneous costs	772.00
Total	$10,462.40

Considerable economy was effected at this plant by hiring a capable buttermaker while the building was under construction so that he could install the equipment with the help of inexpensive labor. The expense of an erecting engineer was thereby eliminated. This practice would be unwise, however, unless the man hired was entirely capable and familiar with the installation of creamery equipment.

The following new equipment was purchased and installed after the plant had been in operation about one year to facilitate the handling of an increased volume of cream:

1 small hand-feed can washer	$623.00
1 6,000-pound per hour flash pasteurizer	760.00
1 12-foot tubular cooler, 20 water tubes, and 8 direct expansion tubes,	1,600.00
1 sanitary pump	105.00
1 300-gallon coil vat	840.00
Total	$3,928.00

FIG. 4.—Testing laboratory in a modern coöperative creamery.

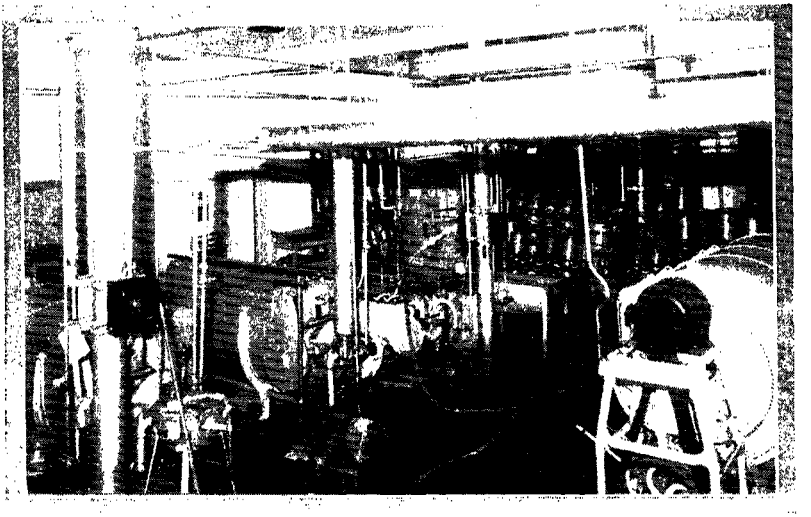

FIG. 5.—Manufacturing room, Nemaha County Coöperative Creamery. (Sabetha, Kan.)

The cost figures shown for the new equipment do not include the cost of the sanitary piping and fittings, nor do they include the installation expenses; consequently, the above figures are lower than the actual cost involved.

The total investment in equipment at plant No. 8 at the present time is approximately $14,390.40. A plant planning to manufacture up to 500,000 pounds of butter a year should plan on spending approximately $8,000 to $10,000 in equipping the plant with high-grade standard creamery equipment.

TRUCKING EQUIPMENT

The investment in trucking equipment will depend upon the number of trucks purchased, the size of truck, and the kind purchased. Plant No. 8 is using three trucks. The total investment in the three trucks was $5,400. This was an average investment of $1,800 per truck. At plant No. 7, 12 1½-ton trucks were used, representing an investment of about $13,080.

COMBINED PLANT AND EQUIPMENT INVESTMENT

The combined investment in plants and equipment of eight Kansas coöperative creameries is shown in Table IV. The investment for each pound of butter manufactured is also shown.

TABLE IV.—COMBINED PLANT AND EQUIPMENT INVESTMENT OF A GROUP OF KANSAS COÖPERATIVE CREAMERIES, 1930.

PLANT NO.	Investment.	Pounds of butter manufactured yearly.	Investment per pound of butter manufactured.
1	$14,800	98,820	$0.150
2 (a)	17,500	.....	.....
3 (a)	17,900	.....	.....
4 (a)	17,800	.....	.....
5	19,000	182,129	.104
6	15,800	230,220	.069
7	100,250	1,203,607	.083
8	25,934	449,436	.058

(a) Complete figures for a year's operation were not available.

PRINCIPLES OF SUCCESSFUL OPERATION

After the organization of a coöoperative creamery is completed and the building and equipment are ready for use, the operating policies must be decided by the board of directors. The manner in which questions of policy are decided and the principles of operation established will determine in a large measure the success or failure of the coöperative.

Sooner or later the directors must decide how the price paid for cream is to be determined; how payments to members are to be made; whether or not the cooperative will deal with nonmembers; how much working capital is needed and where it will be obtained; what reserve funds are to be set aside and where they will be invested. Definite policies relating to such questions should be established before the creamery opens for business. New methods and practices can be put into operation more easily then than after the creamery has been operating for some time. Furthermore, it is essential that the creamery make a favorable showing and give efficient service during the first few months, for that is the period when members as well as the community at large will pass critical judgment on the cooperative.

DEALING WITH MEMBERS ONLY

One of the first questions which the board of directors must decide is whether the creamery will do business with members only, or will buy cream from everyone who wishes to sell to the cooperative. The two most successful creameries in the group surveyed follow the policy of buying cream from members only. Both of these creameries issue stock in small shares, with the privilege of paying for it by deductions from the proceeds of the butter fat. Then everyone who wishes to sell cream to the cooperative is required to buy stock and become a member of the creamery.

This is a fair and businesslike method of solving the problem of dealing with nonmembers. When only a few of the patrons who deliver cream to the cooperative own stock, an unequal burden is placed on those who are stockholders. The stockholders assume the risks of organizing and maintaining the cooperative, and it is unfair to them if the profits and benefits of the organization are distributed among a large number of patrons who assume no responsibility toward the association. Requiring all patrons to be members is one way to avoid the mistake of prorating profits to nonmembers. One creamery in the group had about 500 patrons but only 180 members. At the end of the year it prorated to all patrons 1 cent a pound of butter fat delivered, but paid only 4 per cent interest to the stockholders who had made the creamery possible. In this creamery it was a distinct disadvantage to be a member since the income which should have been used to pay a reasonable dividend on the capital stock was given to nonstockholding patrons as a bonus. Nonmembers, if permitted to deliver cream to the creamery, should not share in the patronage dividends.

METHODS OF MAKING PAYMENT TO MEMBERS

Another policy which must be determined by the board of directors is the method of paying for butter fat purchased from members. The two common methods used by the Kansas creameries studied were (1) the purchase of cream at a card price posted from day to day, and (2) the payment at the end of the month of a price

determined from the proceeds of the butter sold during the month. The latter method has many advantages where the cooperative creamery has competition from private or line cream stations and independent creameries. By this method the competitiors never know just what price the cooperative is paying and thus are unable to "outbid" or "run up the price" above the actual market value of butter fat.

Two of the creameries included in the survey use this method of paying for cream, and both reported that local competition was a negligible factor. These creameries pool the proceeds of all butter made during the month and after operating costs, interest, depreciation and other expenses are deducted, the remaining amount is divided by the number of pounds of butter fat purchased. This establishes the price to be paid for butter fat during the month. In one of the creameries the members were paid the approximate value for the first delivery of cream, and if they requested they were paid for two other deliveries, but final settlement was not made until after the end of the month. In the other one, payment was not made until the end of the month, but the member had the privilege of drawing on his account during the month if he desired. In addition to eliminating unnecessary competition, this system also reduced the labor required in accounting and writing checks.

Buying cream on the "card price" invites competition and also permits critical members to compare from day to day the price which the cooperative is paying with the price which competitors are offering. It is not advisable for coöperative creameries to enter into competition with established "line stations," because they do not have the resources to endure an artificial market for any length of time. In one community, when the prevailing price of butter fat in surrounding territory was 21 cents, the cooperative had bid against its competitiors until the price was raised to 26 cents. This same creamery, although churning only 6,000 to 8,000 pounds of butter a month and with operating expenses of approximately $700, paid a dividend of 2 cents a pound to all patrons at the end of the month. The directors of this creamery simply were allowing the manager to use the value of the member's stock to carry on a "price war" and to make payments to which the patrons were not entitled. By dealing with members only and pooling its proceeds and paying at the end of the month, this cooperative could have avoided competition, and also would not have been guilty of using the stockholders' money as a bonus to secure members. This is an extreme example, but there are other coöperative creameries doing the same thing on a smaller scale. It is the responsibility of the directors of such creameries to study the situation, and to adopt policies and methods which will permit the creamery to operate economically and to effectively serve the dairy farmers of the community.

ADEQUATE WORKING CAPITAL IS NECESSARY

The amount of working capital needed and the method of securing it is given insufficient attention by many cooperative creameries. Adequate funds for operating expenses insures the stability of the organization and inspires confidence among the members. Furthermore, it permits the creamery to buy fuel and supplies in larger lots, and also to take advantage of business opportunities which may arise. Many of the creameries in Kansas which were organized by agencies from outside the community are handicapped by lack of working capital, because all the proceeds from the sale of stock were applied to the contract price of the building and equipment.

In some cases these creameries were forced to operate on funds which were insufficient to pay for the cream delivered by members, while in other cases directors or members signed notes as security for a bank loan. When a cooperative creamery is being organized the building should not be started until sufficient stock has been subscribed to pay for the building and equipment and leave $2,000 to $2,500 for operating purposes.

One of the successful creameries which has been operating less than two years maintains a bank balance of $3,000 to $6,000. In contrast, another creamery during its first year attempted to operate with practically no funds at all except those received from the sale of butter. The patrons were compelled to wait until a shipment of butter had been sold before the bank would cash their cream checks. Nothing is more discouraging or will make a member more dissatisfied than to have his cream check refused because the cooperative has insufficient funds in the bank.

Working capital may be obtained by the sale of stock, either common or preferred, or by a bank loan. Where sufficient common stock cannot be sold to secure all the necessary funds, or where there are business men or others who wish to invest money in the creamery, but who do not wish to become members, the sale of preferred stock can be used to advantage. Bank loans are usually secured by a lien on the building or equipment or by notes signed by the directors. The latter method is undesirable because it places too great a responsibility on the directors. It is unfair to expect the directors, in addition to giving their time and energy in managing the creamery, to furnish credit upon which it may operate. There is an opportunity for creameries which are qualified cooperatives to secure loans from the Federal Farm Board for operating funds as well as financing building and equipment. Another method which may be used to provide working capital is a small deduction from each lot of cream, which is placed in a revolving fund for operating purposes. By this method each member contributes in proportion to the volume of cream he delivers, but it has the disadvantage that it does not supply adequate funds at the start when operating capital is needed most.

PROPER ACCOUNTING IS ESSENTIAL

Another principal of operation for which the directors should be responsible is proper accounting. An efficient and adequate system of records is necessary to furnish information about the business, to inspire confidence among the members, and to furnish data for monthly statements about the condition of the business. One creamery sustained losses amounting to several thousand dollars in a short time because the accounts did not show the losses and because too much reliance was placed on the statement of the manager. These statements were not supported by actual figures. In another instance a creamery was operating at a heavy loss, but the directors and members did not know it because it was not shown in statements presented to the directors at their monthly meetings.

There are several systems of accounts which have been designed especially for cooperative creameries. These systems have special forms for each set of records and provide a simple, practical method of keeping records which will give information on any part of the operations at any time. An operating statement and a financial statement showing the condition of the business should be prepared for the directors each month. The directors should study these statements carefully and should not accept them until they have verified the accuracy of the items contained in them. An analysis of these statements should indicate the strong and the weak phases of the cooperative's operations. It is on the basis of these statements that the directors should make plans for future improvement of the business. With the approval of the directors the statements should be made available to the members, either through letters or in the columns of the local paper. Such a procedure inspires confidence and loyalty among the members and maintains interest in the cooperative.

ACCOUNTS SHOULD BE AUDITED

The accounts of the cooperative should be audited at frequent intervals, at least annually. The purpose of an audit is to check on the accuracy of the accounts, to detect any irregularities which may occur, and to obtain recommendations in regard to the operation of the business. The audit should be made by a competent auditor who has no connection with the creamery and preferably should be a man who is experienced in auditing accounts of cooperative creameries. Few of the cooperative creameries in Kansas have had their accounts audited satisfactorily. A few of them have had audits by a committee of directors or by the bookkeeper, but that is not adequate, because the primary purpose of the audit is to have a disinterested person from outside the organization check the accuracy of the accounts. One creamery in the group could have avoided serious losses if the accounts had been audited at the proper time. Another one of the creameries could profit materially by the recommendations of a competent and experienced auditor.

RESERVE FUNDS ASSURE FINANCIAL STABILITY

Setting aside reserve funds for emergencies is a problem to which directors of cooperative creameries should give careful attention. A reserve is a fund set aside regularly to take care of expenditures which occur at irregular or infrequent intervals. The directors should decide what reserves are to be set aside, and the manner in which the reserve funds are to be invested. Reserves should be set aside for depreciation of building and equipment, interest, taxes, insurance, and for any other purpose which the directors deem advisable.

Reserves should be invested in safe, secure investments which can be readily converted into cash. The safety of the investment and the readiness with which reserve funds can be turned into cash are more important than the rate of interest which can be obtained on them. Government bonds present an excellent method of investing reserve funds. Reserves should be used only for the purpose for which they are intended. When used for other purposes they cease to be reserves.

IMPROVEMENT IN THE QUALITY OF CREAM

Cooperative creameries have an opportunity to render a valuable service to their communities by encouraging the production of high-quality cream. The cream should be graded as it is delivered at the plants. If a premium is paid for first-quality cream, it will stimulate the members to deliver a better grade of cream, but this system requires some additional labor where a large quantity of cream is purchased from a large number of members. A system of cards on the cans to indicate to the members the quality of cream has proved an effective method of improving quality in one plant. No tag on the can when it is returned to the member indicates that the cream was of good quality and that no improvement is needed. A blue tag on the can indicates cream which was slightly off quality. A red tag indicates poor-quality cream. A note is usually written on the card to tell the member what was wrong with the cream and to suggest how the condition may be improved. The creamery in which this system was adopted reported an improvement in the quality of the cream in a comparatively short time.

Another thing which may be done to improve the quality of cream is to encourage the members to build cooling tanks. One creamery has been conducting a cooling tank campaign among its members. Demonstrations of the construction of concrete cooling tanks have been given. The creamery has forms for building concrete tanks which it loans to members free of charge. These are only two examples of what a cooperative may do to induce its members to deliver a higher grade of cream. The creamery should furnish its members information on the proper handling of cream, proper care of utensils, and proper sanitation around the barn. A cooperative which is interested in building up the dairy industry in the

community should develop a program which will aid the community in producing high-quality products.

MAINTAINING COMMUNITY INTEREST IN THE CREAMERIES

Favorable public opinion and community interest are resources which no cooperative can afford to neglect. This is especially true of an organization such as a cooperative creamery which depends upon a large number of farmers to furnish its volume of business. A cooperative creamery should consciously and systematically plan a program for developing and maintaining the good will and interest of both the farmers and business men. One effective method of accomplishing this is by giving the members efficient and economical service. The member should feel that the cooperative is his organization, prepared to furnish him as good or better service than he could secure elsewhere. If he has questions concerning the operation of the creamery or the condition of its business they should be freely and frankly discussed. By a proper attitude toward the members and the public in general the directors and manager can do a great deal in building up an enthusiastic and satisfied membership. A cooperative creamery can have no better recommendation than to have a member tell his neighbor that the creamery is a good thing and that he is glad he is a member.

Another means of developing community interest is through the local newspapers. News items telling of the quantity of butter churned during the month, or of new members secured, and stories about the purchase of new equipment, provide a method of letting the public know what the cooperative is doing. One creamery in the state which has a large membership covering a wide territory sponsors the publication of a monthly paper. (Fig. 6.) In addition to the operating statement of the creamery the paper contains information for dairymen and poultrymen, and stories of general interest to the community. This type of publicity has developed a feeling of good will and has created community pride in the creamery. Many of the creameries have failed to realize the value of publicity in local papers. In several of the communities where cooperative creameries were surveyed the business men of the town knew little more about the creamery other than when it was started and where the building was located. In one creamery even the manager did not know the names of all the members of the board of directors. A cooperative association cannot expect the community to take an interest in its affairs and support its activities unless the community knows something about the cooperative. It is the cooperative's responsibility to keep the community informed of its activities.

A creamery with a progressive, public-spirited board of directors and an energetic manager can usually find ways of creating community interest. One creamery transformed an unsightly vacant lot next to its building into an attractive landscaped garden. This same creamery cooperated in building some tennis courts on another adjoining lot. It also built an attractive brick house for the buttermaker. This house has stimulated the desire for new homes and now

COW AND HEN JOURNAL

OFFICIAL PAPER OF THE WASHINGTON, CLAY AND SMITH COUNTY FARM BUREAUS

VOLUME 7 LINN, KANSAS, JULY, 1931 NUMBER 11

"We Get the Best of the Deal"

Co-op Creamery at Linn Continues to Pay Members a Premium for Butter Fat

The Washington County Cooperative Creamery, at Linn, is weathering the storm in strong condition. Consistently during the trying months

By Raymond H. Gilkeson

Let's take a glimpse at the minutes . . . leaving the company to deduct 2 cents

test and every cent that is due me. Money I put into the creamery is the best investment I've made." Mr. Wil-

PAGE FOURTEEN The Cow and Hen Journal for April

News Letter of the Washington County Co-operative Creamery Company, Linn, Kansas

OFFICERS

HENRY HATESOHL	President
F. C. McNITT	Vice-president
H. J. MEIERKORD	Secretary-treasurer
GEORGE E. RAVEN	Field Man

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Ed Specht A. J. Beikman Herman Wiesers, jr.
C. G. Steele Ed Downard L. G. Nevin Henry Hatesohl
A. F. Lohmeyer John Horan Emil Meier Geo. Wilkens
William Woodyard F. C. McNitt Walter Fagan

OPERATING STATEMENT FOR THE MONTH OF MARCH, 1931

Expenses		
Hauling or Truck Operation:		1,339.67
Manufacturing Expenses:		
Factory Labor	663.29	
Fuel	96.30	
Packages and Liners	1164.14	
Salt	75.00	
Repairs	145.45	
Freight and Drayage	18.21	
Power and Light	141.66	
Depreciation—Buildings	200.00	
Depreciation—Machinery & Equipment	550.00	
Total		3,055.05
Administrative Expenses:		
Office Salaries		

L. L. Lupher, F. C. McNitt, Emil Meier, Henry Menard, W. C. Meyer, H. W. Meyerhoff, W. C. Mueller, N. L. Newcomb, Dick Oestreich, Fred C. Oestreich, August Ohlde, Emil Ohlde, George Ohlde, Henry E. Ohlde, G. W. Parker, Wm. Poutre, Henry Pruser, Mrs. Chris Rabe, Henry J. Rabe, Henry F. Raven, Herman Reith, P. S. Reitzel and Son, Rhine Brothers, J. R. Ryland, Ernest Schaaf, George Sedlacek, E. H. Specht, Fred Specht, G. W. Specht, C. G. Steele, Harry Stuenkel, G. M. Thomas, A. J. Turinsky, Ed Wehling, Ed Wilkinson, Glen Winterrowd, L. H. Young, R. Zurfluh.

STATEMENT OF CONDITION ON FEBRUARY 1, 1931

Cash	1,295.65	Capital Stock	42,250.00
Plant	100,350.17	Preferred Stock	24,950.00
Feed and Dairy Mdse.	7,614.94	Bills Payable	5,000.00
Accounts Receivable	1,825.59	Certificate of Ind.	31,850.00
Bills Receivable	200.00	Class B Certificates	10,730.59
Tubs, Supplies, etc.	2,810.02	Contracts for Share	11,200.00
Cans	3,571.62	Profit Feed Dept.	278.93
Fuel	156.42	Overdraft—Bank	81.38
Salt	316.59		
Inventory	8,238.15		
Sinking Fund	131.45		
	126,340.90		126,340.90

OPERATING STATEMENT FROM FEB. 1, 1930 TO FEB. 1, 1931

Total Butter Sales	382,993.21	Paid for cream	310,562.95
Buttermilk Sales account	298.38	Paid Class B Cert.	3,028.25
	3.80	Inventory Feb. 1, 1930	11,027.09
Excess paid cream		Trucking expense	19,614.18
Inventory Feb. 1, 1931	8,238.15	Salaries & wages	10,579.26
Rent from dwelling	175.00	Fuel	935.10
Interest from Trucking Department	800.00	Tubs and supplies	11,627.76
Tax Deficiency	174.38	Salt	612.45
		Repairs	534.12

FIG. 6.—A typical issue of the monthly paper in which the Washington County Coöperative Creamery Companay coöperates in publishing.

several other houses are being built on adjacent lots. Through its activities this creamery has become the center of improvement projects which have created an enthusiastic community interest in the creamery.

RELATION OF VOLUME OF BUSINESS TO OPERATING EXPENSES

Low operating expenses per pound of butter manufactured are of vital importance to any creamery organization. The lower the expenses of operation for each unit volume of product, the more money there will be available for distribution among the cream patrons in the case of a cooperative creamery. One of the most important factors affecting the operating costs of a creamery for each pound of butter manufactured is the volume of output.

TABLE V.—COST OF MANUFACTURING A POUND OF BUTTER IN IOWA, 1922.

Output in pounds	Under 100,000.	100,000 to 200,000.	200,000 to 300,000.	300,000 to 400,000.	400,000 to 500,000.	Over 500,000.	State average.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Labor	2.13	1.33	1.16	0.88	0.89	0.77	1.04
Supplies	1.22	1.18	1.04	.95	.89	.92	1.00
Heat, power, refrigeration	.78	.58	.44	.35	.40	.36	.43
Miscellaneous	.23	.15	.20	.17	.19	.13	.17
Total operating expenses	4.37	3.24	2.84	2.36	2.37	2.18	2.65
Overhead	1.57	1.14	1.02	.98	.66	.71	.93
Total cost of manufacturing	5.94	4.38	3.86	3.34	3.03	2.89	3.58

The relation of volume of output to the manufacturing costs per pound of butter is shown in Table V taken from Iowa bulletin number 267.

The figures expressed in Table V show that the total cost of manufacturing a pound of butter decreases as the volume increases, but the decrease is less significant once a plant attains a volume of 300,000 to 400,000 pounds of butter a year. A creamery with a minimum volume of 300,000 pounds of butter annually should be able to meet competition successfully, since any advantage that may be gained through lower manufacturing costs by the larger plants may be more than offset by increased procurement costs and a poorer quality of cream at the time it reaches the plant. While a plant can keep its manufacturing expenses reasonably low with a volume of 300,000 pounds of butter annually, it is desirable to strive for a volume of approximately 500,000 pounds of butter a year, since this volume will make it possible to ship the butter in carload lots, thereby effecting further savings through lower freight rates, which in turn will be reflected in the patron's cream check. This point will be further emphasized in another section of this bulletin.

NUMBER OF COWS REQUIRED FOR A CREAMERY

The average Kansas cow produces approximately 140 pounds of butter fat a year. It would require nearly 1,700 such cows to supply sufficient butter fat to make possible a volume of 300,000 pounds of butter a year. Statements are frequently made that a community should have 1,000 to 1,200 cows before attempting to start a local cooperative creamery, but in the final analysis the production of the average cow in the community will determine the number of cows required. It must further be recognized that even though there are the required number of cows in the community, not all of the cream produced from those cows will be marketed through the cooperative creamery. Allowances should also be made for milk and cream consumed in the home.

A creamery should not be considered by any community until it has sufficient cream available to permit economical operation of a creamery at the start. The argument is frequently advanced that if a cooperative creamery is established, the farmers in that community will become interested in dairying and the community will soon be producing ample cream to supply the local creamery, but such is not the case. A cooperative creamery that is handicapped at the start with a small volume of business and high operating expenses will be unable to pay a satisfactory price for the butter fat purchased, which in turn will cause dissatisfaction among the present membership and will not stimulate a greater interest in dairying among the nonmembers.

Communities with a limited volume of raw material should consider the possibilities of organizing themselves into a cooperative cream pool or some similar type of organization with the idea of eventually organizing a creamery, rather than to undertake the organization of a creamery when it would probably fail.

PROCUREMENT COSTS

The board of directors of every newly organized cooperative creamery must decide on some definite policy relative to getting the cream from the farm to the creamery. There are four cream-procurement systems generally used by creamery organizations; namely, (1) cream station system, (2) direct shipper, (3) direct delivery, and (4) cream-route system. Each of these systems will be discussed briefly.

Cream-station System

The cream station has served its purpose admirably in building up the dairy industry in Kansas. It furnished a cash cream market, in areas where the cow population was so scattered that the establishment of a local creamery would have been out of the question. A community that has developed in dairying to a point where it is justified in establishing a local cooperative creamery should not give the cream-station system of procuring cream serious consideration.

The cost of establishing, maintaining, and operating cream stations is prohibitive for a local cooperative creamery. The cost of operating 233 cream-buying stations in Missouri during the year 1925 averaged 6.21 cents per pound of butter fat purchased, according to figures published in Missouri Research Bulletin No. 137. Such a cost would be greater than the total of all other operating costs in an efficient creamery.

In addition to the burden of costly operation, the quality of cream secured through the cream station is poorer at the time it reaches the creamery than would be the case if the cream were picked up at regular intervals by trucks, or delivered direct to the creamery. Good butter cannot be made from old cream. The modern cooperative creamery cannot afford to consider the cream-station system either from an economic standpoint or from the standpoint of its effect on the quality of the cream.

Direct Shipper

In the direct-shipper system the cream producers ship their cream direct to the creamery, thereby eliminating the cream-station expense.

The direct-shipper system, like the cream-station system, is particularly well adapted for the centralized creameries that secure their cream supply over a wide area. This system of procuring cream is not applicable to the average local cooperative creamery which derives its cream supply from a rather limited area.

Direct Delivery

In the direct-delivery system the cream is hauled by the farmer direct to the creamery. This system is the oldest method of getting cream to the creamery. It is decidedly the cheapest system that a creamery can employ, since the cream is secured without any expense to the creamery.

The biggest objection to this system lies in the fact that it very definitely limits the cream supply to a very narrow radius. The direct-delivery system can be used successfully only in sections where the dairy industry has reached a high state of development, where the farms are close together, and where the cow population is dense. Under Kansas conditions at the present time, where dairying is just starting to develop, it would be impossible for a local creamery to secure enough cream to operate economically with this system.

Cream-route System

The establishment of cream-routes to serve the community in which the cooperative creamery is located has considerable merit. This system is being used successfully by at least three of the Kansas coöperative creameries. The cream trucks gather up the cream regularly twice a week at the farmer's door and deliver it to the creamery. A study made recently at two of these plants showed that the cost of procuring cream was less than 2 cents a pound of butter fat, which shows the economy of this system compared with the cream-station system. At one of these plants the cream trucks also handled poultry and eggs, while at the other plant cream was the only product hauled by the cream trucks. The cream-procurement cost was slightly less at the plant which used its trucks exclusively for hauling cream.

Even more important than the economic advantage of the truck-route system is the fact that the cream is never more than three to four days old before it is churned into butter. This results in a higher-quality cream and a higher-quality butter than would be the case if the cream were a week or more old before it reached the creamery.

If the cream-route system is to be used successfully and economically, the routes must be carefully mapped out to serve the maximum number of cream producers with the minimum mileage. Duplication of routes; that is, two drivers passing over the same road, must be avoided whenever possible.

The responsibility for keeping the truck clean, properly oiled, greased, and the tires inflated must be definitely fixed with some one individual so that these matters will not be neglected. Plant number 8 has solved this problem by appointing one of the truck drivers a route foreman and making him responsible to see that the trucks are properly serviced. The route foreman at this plant is paid $10 per month in addition to his regular salary.

PAYMENT OF TRUCK DRIVERS

The system of paying cream-truck drivers varied with every plant and in one instance there was a variation within the same plant. In some cases the trucks were owned by the drivers, while in other cases the trucks were owned by the creamery. Some of the systems of paying the truck drivers were as follows:

1. Straight salary.
2. Two cents a pound butter fat, the driver owning his own truck.
3. Two dollars a day plus 8 cents a can of cream and one cent for each dozen eggs.
4. Six cents a mile and 10 cents a pick-up, the driver owning his own truck.

Local conditions will influence the system used in paying the truck drivers. The creamery, however, should figure out a system whereby they can procure their cream at a cost of slightly less than 2 cents a pound of butter fat. It is desirable in most instances for the creamery to own and operate its own trucks, if possible.

LABOR AND MANAGEMENT COSTS

The importance of selecting the right man to act as manager of a cooperative creamery cannot be overemphasized, since the success or failure of the creamery will in many cases depend upon his ability. In no case should a creamery manager be hired simply because he will work for a low salary. Good creamery managers are able to command salaries ranging from $150 to $300 per month, depending upon the size of the plant, and their experience and training. The best man available should be selected for manager and the board of directors should be prepared to pay a salary commensurate with his training and experience.

The small creamery manufacturing not more than 500,000 pounds of butter annually usually cannot afford to hire a man exclusively for the purpose of looking after the management of the plant. Such plants should secure a skilled butter-maker who can also act as manager. The practice of hiring a working manager is common in the older cooperative creamery districts of Minnesota, Wisconsin and Iowa. Intelligent supervision by the board of directors and an adequate system of records are essential if this system of management is to be successful.

The labor employed in the creamery will depend upon the volume of business, the quantity of butter printed, and the method of procuring the cream. An idea of the help employed in several Kansas cooperative creameries may be gained by referring to Table VI.

TABLE VI.—LABOR EMPLOYED IN A REPRESENTATIVE GROUP OF KANSAS COÖPERATIVE CREAMERIES.

PLANT NO.	Number of men employed in the plant.	Truck drivers.	Office help.	Total number employed.	Salary expense each month.	Pounds of butter manufactured annually.
1	2	.....	1	3	(a)	98,820
4	2	.....	.....	2	$284	(b) 42,286
5	3	.....	1	4	$410	182,129
8	4	3	1	8	$765	449,436

(a) Figures not available. (b) For seven months' operation.

The labor expense exclusive of truck drivers should not exceed 1.5 cents a pound of butter manufactured in an efficient plant. The normal labor expense ranges from 0.75 cent to 1.5 cents a pound of butter.

MANUFACTURING SUPPLIES

If creamery supplies are to be purchased economically, a year's supply of each particular item should be contracted for at one time. It is desirable, whenever possible, to purchase such items as salt, butter tubs, etc., in car lots. In the event one creamery would not be justified in ordering a carload of such supplies at one time, two or more creameries located in the same territory may order their supplies together. Cooperation along these lines will work to the mutual advantage of the cooperating plants.

Once the supplies have been purchased, they must be properly stored to prevent deterioration and loss. The room provided for the storage of the various manufacturing supplies should present a neat, orderly appearance at all times.

The cost of manufacturing supplies will vary widely in different plants, depending upon the quantity purchased, the volume of business and the method of selling the butter. Plant No. 5 estimates that their manufacturing supplies cost approximately $3,000 per year, which is equivalent to a cost of 1.64 cents per pound of butter manufactured. The manufacturing supplies at plant No. 7 amounted to $12,240.21 for the year 1930. This expense is equivalent to 1.01 cents per pound of butter manufactured.

FUEL EXPENSE

The cost of fuel did not fluctuate widely among plants of approximately the same size and equipped with the same size boilers. Two of the creameries are usuing natural gas instead of coal as a source of fuel to their entire satisfaction. The average monthly gas bill ranged from $38 to $50 at each of these two plants. Plant No. 5, which is burning coal, estimates that their coal bill will average $50 a month. These plants are equipped with 10- to 12-horsepower boilers.

Even though natural gas costs as much as coal it would still have several points in its favor, such as convenience, cleanliness, and the ease of operation. Any community establishing a cooperative creamery in a territory that is served by natural gas should consider seriously the possibility of using it as a source of fuel.

POWER EXPENSE

The economical use of power is one place where considerable saving can be effected. Each machine has its individual power requirement, and it is wasteful to exceed or to go below that power requirement. In other words, if a one-horsepower motor is all that is required to operate a particular machine, it would be wasteful to use a five-horsepower motor to perform this same work. Yet there are many plants that are doing this very thing through the use of one

motor and a central line shaft for the operation of all the creamery equipment. In many instances a five- or seven-horsepower motor has to be operated several hours a day to perform the work that should be accomplished with perhaps a one-horsepower motor.

Not only are power costs increased through the use of a central motor and line shaft, but serious and costly delays in the manufacturing processes are oftentimes necessitated in the event anything happens to the central power unit.

The original purchase price of belt-driven equipment is less, but if everything is taken into consideration, it is questionable economy to purchase belt-driven equipment instead of direct motor-driven equipment.

The employees of the creamery can materially reduce power costs by exercising care in shutting off motors and lights when they are not needed. The refrigeration equipment, which uses more power than any other machine in the average creamery, is frequently operated for a longer period each day than is absolutely necessary.

WATER EXPENSE

The economical utilization of water is of prime importance in keeping the water expense as low as possible. Water should not be needlessly wasted. Refrigeration equipment utilizes a considerable

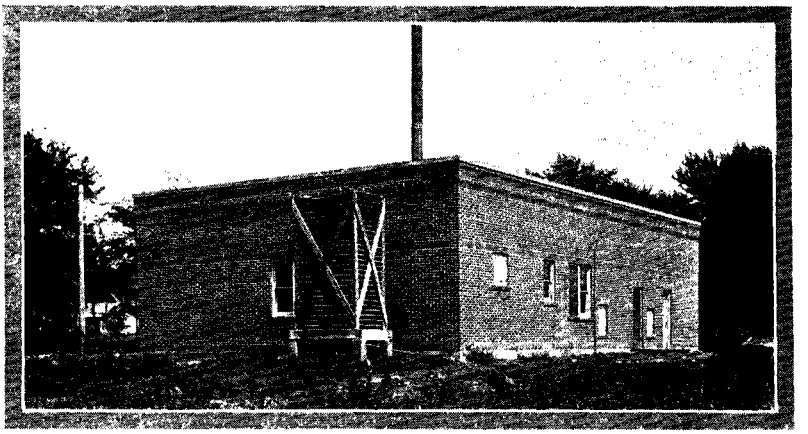

FIG. 7.—Cooling tower at Nemaha County Coöperative Creamery.

quantity of water, but by passing this water over a cooling tower such as is shown in figure 9, it is possible to use it over and over again. One of the plants estimates that their water consumption was reduced approximately 50 per cent through the use of a cooling tower. A cooling tower such as is illustrated in figure 7 can be built for approximately $35 and represents a sound investment.

As stated elsewhere in this bulletin, it is usually good economy

for a creamery to own its own well unless the city water can be obtained at a low rate.

The expenditure for electric power and water not only varies with the quantity used, but with the rate paid for these items. One plant reported an expenditure of $65 a month for electricity and water, whereas another plant paid only $22 a month for these items.

MARKETING COSTS

The cost of getting the butter from the creamery to the market is another expense which every local cooperative creamery must bear. The majority of coöperative creameries in this state are shipping their butter to the New York or Chicago market. The butter is usually shipped in small lots to Omaha, and from there it is shipped in carload lots to New York or Chicago.

The freight rates reported by the plants shipping in this manner from the plant to New York ranged from 2.43 cents to 2.83 cents a pound, depending upon the distance of the individual plant from Omaha. The carload freight rate for each pound of butter from the territory in which these creameries are located is 1.775 cents to New York or 1.04 cents to Chicago.[2]

The economy of shipping in car lots is emphasized by the above figures. A saving in freight of nearly 1 cent a pound can be effected by shipping in car lots to the New York market. This saving is equivalent to $189 a car of 300 63-pound tubs of butter.

It is possible, in some cases, for two creameries located in the same territory to go together and ship in car lots, even though neither of the plants would be able to ship in car lots by itself.

DEVELOPMENT OF A LOCAL MARKET

No cooperative creamery should fail to realize that one of the best markets available for a portion of its butter is the local community in which the creamery is located. Too frequently cooperative creameries have either ignored their local markets, supplied them with an inferior grade of butter, or charged excessive prices for the butter sold locally. If the local markets are to be developed to their fullest extent, they must not be made the dumping ground for butter of inferior quality, nor must the price charged for butter in the local markets be out of line with selling value of this same butter on the wholesale markets.

OVERHEAD COSTS

In addition to the actual current expenses which must be paid regularly, there are other overhead costs incident to the operation of a creamery. Such items as taxes, insurance, interest, and depreciation make up this group of overhead costs. Of these various items, depreciation is the one that is most difficult to ascertain and is the one that is most frequently neglected.

2. Rate from Manhattan, Kan.

DEPRECIATION

Every coöperative creamery should establish a depreciation account, as a part of its general reserve funds. A certain portion of the monthly earnings of the plant should be set aside in this depreciation account which will provide for the replacement of the building and the equipment when replacements are necessary. The amount of money set aside in this depreciation account will depend upon the original cost of the building and the various pieces of equipment together with the estimated length of time they will remain in useful service. Thus, if a piece of equipment costs $800 and it is estimated that this equipment will remain in service for 10 years, the annual depreciation for this particular piece of equipment would be $80 or $6.67 per month.

The length of time that various pieces of equipment will remain in service is extremely variable. It naturally will depend upon the service, care, and attention the equipment receives. In a general way the annual depreciation rates approved by the depreciation committee of the International Association of Milk Dealers, may be used as a guide.[3] These rates represent the best judgment of men who have been in the creamery business for years and who are in a position to know how long a machine will stand up under plant conditions. They are as follows:

Equipment.	Per cent depreciation.	Equipment.	Per cent depreciation.
Ammonia compressors	8	Milk cans	40
Belting	25	Motors, electric	14
Boiler and setting	8	Sanitary piping	20
Brine pumps	12	Sanitary pumps	20
Butter printers	20	Scales	15
Can driers	20	Starter can	20
Churns	10	Steam engine	8
Cream pasteurizers	20	Steam piping	10
Electric wiring	10	Water piping	10
Laboratory equipment	12		

The rate of depreciation on cream trucks charged at plant No. 8 was 25 per cent. The building at plant No. 8 was depreciated at the rate of 2 per cent. It is generally agreed that 2 or 3 per cent is a satisfactory rate of depreciation on buildings constructed of brick or tile.

FACTORS AFFECTING THE PRICE A COOPERATIVE CREAMERY CAN PAY FOR BUTTER FAT

The price that a coöperative creamery can afford to pay for butter fat is determined by three factors: (1) The net price received for butter, (2) the overrun, and (3) the creamery margin, that is, the difference between the price received by the creamery for a pound of butter fat and the price paid to the patron.

3. Association Bulletin, No. 2, Dec. 11, 1929, pp. 5 to 8.

PRICE RECEIVED FOR BUTTER

The price received for butter is determined by: (1) The quality of cream, (2) the buttermaker's skill in making the highest quality butter possible from the grade of cream received at the creamery, (3) the equipment, and (4) the marketing costs.

Of the above factors none is more important than the quality of cream at the time it reaches the creamery. The average individual may think that a skilled buttermaker and a modern, well-equipped creamery are all that are necessary for the production of high-quality butter, but such is not the case. The most skillful buttermaker working with modern creamery equipment cannot make high-quality butter from cream that is extremely sour or contains undesirable odors and flavors.

The premium paid on the wholesale markets for high-quality butter is seldom less than 3 cents, and may run as high as 10 cents a pound. Whether or not an individual creamery receives this premium will depend to a large extent upon the care that the cream receives on the farm. The cooperative creamery patrons must be educated to the fact that the price their butter brings on the market has a direct effect on the price they receive for their cream. If the cream producers are interested in securing maximum returns from their cream, it is up to them to cooperate with their buttermaker and produce the kind of cream that will make the highest quality butter.

Frequent delivery of the cream should be an essential part of the program of any cooperative creamery interested in marketing high-quality butter.

CREAMERY OVERRUN

Creamery overrun represents the difference between the pounds of butter fat purchased and the pounds of butter sold. The overrun consists of the salt, moisture, and curd that are incorporated into the butter.

The overrun is definitely limited by law to 25 per cent since all butter must contain not less than 80 per cent butter fat. Even though a theoretical overrun of 25 per cent is possible, under actual plant conditions an overrun of 23 to 24 per cent is the maximum an efficient plant should expect to obtain.

Since the amount of overrun will determine the number of pounds of butter sold from a given quantity of butter fat, it is very important that the maximum overrun be maintained. If a creamery should sell 123 pounds of butter for every 100 pounds of butter fat purchased, but through careless, inefficient management sell only 120 pounds of butter, the creamery has lost the price of three pounds of butter. This loss may not seem significant, but on an average churning it would be equivalent to a loss of about 25 pounds of butter. The value of 25 pounds of butter per day, even under present market conditions, would be sufficient to pay the salary of an efficient creamery manager.

The overrun is directly under the control of the creamery manager.

It is influenced by such factors as: (1) Butter fat losses in buttermilk, vats, pipe lines, churns, etc. (2) Composition of the butter. (3) Accuracy of weighing and testing cream. A certain loss of butter fat is inevitable, but the creamery manager should be held responsible for maintaining an overrun of not less than 23 per cent.

Not only is the amount of overrun an important consideration to a cooperative creamery, but its value is also important. Generally speaking, the overrun in a coöperative creamery is expected to pay all of the operating costs of the creamery and make it possible for the creamery to return to the cream patrons a price that is equivalent to or even higher than the price received for the butter. This can be true, however, only when butter is selling at a relatively high price, as the value of the overrun is determined by the market value of the butter. The following tabulation shows the value of the creamery overrun for each pound of butter manufactured when the butter market is at different price levels and the overrun is approximately 23 per cent:

Selling price of butter per pound.	Value of overrun.
20 cents	4.60 cents
25 cents	5.70 cents
30 cents	6.90 cents
35 cents	8.05 cents
40 cents	9.20 cents
45 cents	10.35 cents
50 cents	11.50 cents

When butter is selling at a relatively high price and the overrun is worth 10 to11 cents a pound of butter sold, it is easy for an efficient plant with low operating expenses to pay considerable more for butter fat than is received for the butter. Only a plant with extremly low operating costs can afford to pay anything in excess of the butter price when the butter market is only 20 to 25 cents a pound and the overrun has a value of only 4 to 6 cents per pound of butter sold.

CREAMERY MARGIN

The difference between the total receipts of the creamery and the money distributed among the cream patrons in the form of cream checks represents the margin taken by the creamery to cover the various operating expenses. It is obvious that low operating expenses will reduce the margin taken by the creamery, which in turn will increase the money available for distribution among the cream patrons.

The creamery margin must include, in addition to the current operating expenses, adequate reserves for interest, insurance, taxes, and depreciation. These reserve funds rightfully belong to the business and should under no circumstances be prorated back to the creamery patrons.

A creamery that is interested in paying higher prices for butter fat must do so by making the plant more efficient and not by using funds to which the patrons are not entitled.

The following monthly operating statement furnished through the courtesy of one of the plants surveyed will illustrate how the price that a coöperative creamery can afford to pay for butter fat is determined. This statement is especially valuable since the figures shown are not hypothetical figures, but are actual figures taken from the records of a plant operating under present-day conditions in Kansas.

OPERATING STATEMENT FOR THE MONTH OF JULY, 1931

EXPENDITURES

Manufacturing expenses:			
Salaries		$740.15	
Commissions		35.26	
Office supplies		2.00	
Postage		1.00	
Telephone and telegraph		7.72	
Laundry		14.75	
Maintenance (creamery)		23.70	
Power and light		115.51	
Fuel		40.00	
Manufacturing supplies		284.66	
Butter tubs		218.49	
Freight and drayage		16.51	
Administrative expense		34.22	
Miscellaneous expense		4.30	
Truck expense		237.06	
Total			$1,775.33
Reserves:			
Insurance		$40.00	
Interest on preferred stock and dividend on common stock		130.00	
Taxes		65.00	
Depreciation		220.00	
Total			455.00
Total expenses			$2,230.33

INCOME

	Pounds.	Value.	
Butter sales:			
Local	8,375	$2,045.59	
Patrons	3,762	902.92	
Shipments	40,264	9,392.26	
Closing inventory	2,263	516.03	
Total	54,664	$12,856.80	
Less opening inventory	3,690	910.99	
Total butter sales	50,974		$11,945.81
Buttermilk sales:			
Wholesale		$41.06	
Retail		54.66	
Total			$95.72
Merchandise sales:			
Cans		$91.35	
Supplies		6.92	
Miscellaneous		32.24	
Total			$130.51

Total income	$12,172.04
Total expenses	2,230.33
Balance for distribution	$9,941.71
Total settlement for butter fat: 40,927.12 pounds at 24 cents a pound	9,487.85
Balance to Undivided Profits Account	$93.86

An analysis of the figures shown in this operating statement reveals several interesting facts relative to the operating efficiency of this creamery, which will be discussed briefly.

1. OVERRUN

The overrun for the month covered by this operating statement was 24.5 per cent, which indicates a high degree of efficiency on the part of the buttermaker in controlling the factors which affect the overrun.

2. OPERATING COSTS

The total operating expenses for the month amounted to $2,230.33, which is equivalent, to 4.375 cents for each pound of butter manufactured. This expense includes procurement costs manufacturing expense, and reserves for interest, depreciation, insurance, and taxes. Only a plant that is operating efficiently can show a total operating expense as low as 4.375 cents a pound of butter. One of the other creameries surveyed showed a total operating expense of 5.56 cents a pound of butter manufactured during the year 1930.

3. PRICE PAID FOR BUTTER FAT

The operating statement shows that the patrons were paid 24 cents a pound of butter fat during the month of July, 1931. The average net price received by the creamery for its butter during July, 1931, was 23.435 cents a pound. Thus, even with butter selling at an extremely low price, the creamery was able to return to its patrons slightly more than a half cent a pound for their butter fat than was received for the butter.

The figures shown in Table VII indicate that the price paid for butter fat has been consistently high in relation to the butter market ever since the plant started operation.

The price paid to the patrons for butter fat at this creamery corresponds very closely with the average price of 92-score butter on the New York market with the exception of the three months, October, November, and December, 1930. During these three months the price paid to the patrons for butter fat averaged 4.05 cents a pound below the average price of 92-score butter on the New York market. The butter market, which steadily declined from an average price of 40 cents a pound in October to an average price of 32.2 cents a pound in December, together with the time consumed in getting the butter from the creamery to the market, is the principal reason why the prices paid for butter fat were below the average price of 92-score butter during these three months.

The butter manufactured during any month will not all be sold during that month, but a certain portion of it will not be sold until the first part of the following month. This inevitable delay in getting the butter from the creamery to the market, during a period

TABLE VII.—PRICES PAID FOR BUTTER FAT BY A SUCCESSFUL KANSAS COÖPERATIVE CREAMERY AND THE NEW YORK PRICE OF BUTTER.

DATE.	Price paid per pound of butter fat.	Average price of 92-score butter on the New York market.
1930.	*Cents*	*Cents*
April	38	38.5
May	33	34.8
June	33	32.9
July	35	35.3
August	39	38.9
September	40	39.7
October	35	40.0
November	32	36.0
December	29	32.2
1931.		
January	26	28.5
February	27	28.4
March	28	28.9

when the price of butter is rapidly and steadily declining, will materially reduce the amount of money available for distribution among the creamery patrons.

The wisdom of paying for cream on a monthly basis, out of the returns resulting from the sale of the butter manufactured during any given month, is most apparent when the market value of butter is declining. Cream purchased for cash at the prevailing market price of butter on the day it is received at the creamery may be marketed at a severe financial loss to the creamery if the price of butter materially declines before the cream can be marketed in the form of butter. Such a practice, if continued any length of time, may easily throw a creamery into bankruptcy.