Motion seconded and carried unanimously for the election of Mr. F. M. Werner of Waterloo, as treasurer.

Mr. Moore, Chairman: Next officer to be elected is the Secretary; whom will you nominate, gentlemen?

Member nominates Prof. Benkendorf.

Mr. Benkendorf: I beg to say that I have had this position for ten years,—a long while, but I am not a candidate this year; I have always enjoyed the work and the officers have helped me very much in every way, but I do not wish to be considered as a candidate this year.

Mr. Erickson: Inasmuch as Prof. Benkendorf does not feel like serving us any longer, I believe I would urge the Association to consider a man from the northern part of the state, Mr. R. P. Colwell.

Vote by ballot is taken; result of ballot, Mr. Colwell received 96 votes, Mr. Mott, 17. Mr. Colwell declared elected secretary.

Mr. Chairman: Gentlemen, there is one more to be elected; a member of the Executive Committee. Who will you have in place of H. E. Griffin for the next three years?

Motion made, seconded and carried unanimously for the election of Mr. Alfred Erickson of Amery to the Executive Committee.

Mr. Benkendorf: The Executive committee is Oscar Cornish, Mr. Dodge and Mr. Erickson. I would like to have a meeting of the Executive committee in my office tonight to look over our books.

Mr. Moran resumes the chair.

Mr. Moran: We will continue with our regular program.

CO-OPERATION VERSUS COMPETITION AMONG CREAMERIES

E. H. Farrington

One of the secrets of success in butter making is uniformity in quality. Many illustrations might be cited to demonstrate the truth of this statement. Every butter maker, as well as every butter buyer, knows that higher prices will be paid for a carload or two of butter that is uniform in quality or made at one factory than can be obtained for the same amount of butter made up of the churnings from several creameries, no matter how expert the butter makers in these creameries may be.

The general market likes to recognize a taste in butter that the consumer has become accustomed to, and any variation from the familiar flavor, arouses suspicion and provokes expressions of dislike. These
may not always mean that the butter is inferior in quality but that the familiar butter taste is lacking.

A uniformity in the salt, the color and the texture of butter is obtained by careful and uniform workmanship. This is largely mechanical but when it comes to obtaining a uniform flavor in the butter from several creameries, this requires something more than a mechanic; some attention must be given to the condition of the cream delivered from the farms.

E. H. FARRINGTON

The effect of a variety of farm conditions on the flavors in the cream is much more apparent in raw cream butter than in butter made from pasteurized cream. When the cows receive sound and wholesome feed and are milked in a clean way as is generally the case after a rain in June, the butter made from such milk will often have a different flavor than that obtained from the same cows only a few months later when they may be standing all day in stagnant pools of water, fighting flies in a pasture that has been barren of feed in consequence of a continued drouth. There is a great difference in the purity of the milk produced under these two conditions and in the kind of bacteria found in the cream.
One of the strongest arguments in favor of pasteurizing the cream for butter making is the fact that it aids in obtaining a butter that is uniform in quality because the great variety of bacteria and ferments found in the cream from a number of farms are destroyed by pasteurizing the cream and the butter maker has a better chance to obtain a uniform butter than from raw cream.

Every butter maker knows that the flavor of such pasteurized cream butter is likely to be less pronounced than that made from raw cream, but he will soon find that his milk, sweet flavored, pasteurized cream butter will be more satisfactory to his trade because of its uniformity in flavor, than can possibly be the case with butter made from unpasteurized cream.

This brief reference to the importance of pasteurization in making butter of a uniform quality, I could not fail to mention, although pasteurization is not the topic which I am supposed to discuss at this time.

"Centralized Carlots" Compared With Butter From One Creamery

There are a number of other things that aid in the production of large quantities of uniform butter. One of these is illustrated by the effect which standardized methods of manufacture have on the quality of butter.

Those of us who follow the creamery butter, market reports have noticed that the market quotations of so-called "centralized carlots" of butter scoring 90, are occasionally a cent or more above the quotations for so-called "whole milk" butter, scoring 90 points.

I was interested in making comparison of the prices of these two kinds of butter, and gave a graduate student the job of making a diagram that would show the way in which these prices followed each other from day to day during an extended period of time. The figures used in making this diagram were taken from the "butter market reports," published daily by the United States Department of Agriculture, from the office of the Bureau of Markets located in Chicago.

This diagram of prices was begun in May, 1918, and it shows that all through the summer and up to about the last of September, there was a difference of nearly one cent between the market quotations of "centralized" and "whole milk" butter scoring 90. In October and November the difference was only about one-half a cent, while in December, the price of "centralized" butter dropped below that of "whole milk" butter scoring 90, and then for the remainder of the year, the differences in price fluctuated, but as a rule, the price of "centralized" butter in
carloads is usually higher than that of the "whole milk" butter of the same score.

This, it seems to me, shows that there is an opportunity for our co-operative creameries to increase the prices they are receiving for butter, by adopting a practice of co-operation rather than of competition. One can easily understand that if the creameries in a given territory would work together and compare their methods of manufacture so that the butter in each one of several factories is made by exactly the same methods, it would be uniform in flavor, texture, color, and salt, and the several carloads of butter made daily by such a group of creameries would undoubtedly sell for a higher price than the same amount of butter manufactured and sold from each of these creameries independently of the other.

REDUCTION IN THE NUMBER OF CREAM ROUTES

"There are always some patrons at co-operative creameries who do not understand the difference between competition and co-operation." This statement was made to me not long ago by the president of one of our largest co-operative creameries. He said that he had noticed a tendency among some farmers to think that when competition is removed or when they are so situated that only one cream wagon drives by the farm, they are not receiving the benefits they would obtain if there were more cream wagons on the same road. They have an idea that two or more routes will compete with each other and because of this competition, the farmer will receive a higher price for his cream per pound of butter fat than would be the case if he was located on a farm where only one cream wagon passed by it.

Some farmers he said, "seem to forget that the expense of operating these wagons must be paid out of the receipts for the butter made from the cream and they also fail to understand that the greater number of cream wagons passing a given farm or the more competition there is to get his cream, the greater will be the cost of gathering it."

The president of this creamery cited a locality where four cream wagons passed over a certain highway and several of the farmers on that road seemed to think their farms were favorably located because of these four routes. He said further, that some farmers seem to have an idea that a creamery can pay any price it chooses to pay for cream, but they fail to realize that the cost of operating a factory must come out of the farmer in one way or another.

Another mistaken notion which some farmers seem to have is that when they live near a creamery they ought not to pay so much for hauling as those farmers living several miles away. Such farmers do not

5—B. A.
seem to understand that the men living near the factory must necessarily help to pay the running expenses of the factory and that the cream hauling is one of these expenses. As a rule, there are not a sufficient number of patrons living near the factory to make it profitable to operate the same, but by taking the cream from farms ten miles or more away, the volume of business is increased so that those farmers living near the factory profit by the reduced cost of operating a large factory and in this way both the far and the near patrons are financially benefited by having factory in operation no matter what distance away from a factory the farm is located.

The Use of a Field Man

The way in which some of the large manufacturers of dairy products have built up their business during the past four years ought to convince the patrons of co-operative creameries that some of their methods could be profitably imitated by the farmers in the management of their own creamery.

One of the things the large manufacturers are doing that the co-operative creamery patrons might profitably imitate is the employment of a field man who is capable of doing two things; first, giving instruction to the operators in all the creameries of a given group; and second, visiting the farms, supplying the cream, and finding out how well these are equipped with milk houses, cooling tanks, clean stables and profitable cows.

The work of such a man with the butter maker at the creamery should include the standardizing of methods of manufacturing the butter. In order to do this, he should spend at least one week with the butter maker and during this week, he would get an idea of the condition of the cream when it is received. This information would help him in his later inspection of the farms supplying the cream. He would also, at the creamery, make suggestions in regard to the equipment needed and methods of doing the work that would reduce the losses of manufacture to their lowest terms and turn out a quality of butter from the creamery, that is uniform from day to day.

The importance of the work a field man might do among the creamery patrons is well understood. He must become acquainted with what each farmer has and what he needs. This should enable him to suggest changes that would help the farmer deliver to the cream haulers, a cream entirely satisfactory both in test and in sanitary condition. One of his duties would be to demonstrate and to convince the patrons that it is absolutely necessary to have a milk house or some method of cooling the cream on the farm. He also would inspect the methods of milk-
ing the cows and suggest the whitewashing of stables and many other things which it is hardly necessary to enumerate at this time.

The value of the work of such a field man was impressed on me recently by a superintendent employed as a general manager of the field men working among the patrons of a large dairy manufacturing plant in this state. He informed me that he had convincing evidence of the great value that the field men had been to the firm in raising the quality of the product manufactured. He quoted from his records to show that in one locality there had been reported by the field men an increase of 80 per cent in the milk houses and 48 per cent in the whitewashed cow stables during a period of two years that this field man had been visiting that territory.

In one of the localities where a field man had been employed for a year or more, one of the important things accomplished was the abolishing of four cream routes. This naturally reduced the cost of making the butter by a considerable figure. Another thing accomplished was the establishment of an agreement among the factories that they would refuse to take cream from the patron of another factory unless he had a good reason for leaving the creamery he had been patronizing.

One of the field men working among the patrons of a certain group of creameries, reported that he had many evidences of the benefits his work had been to the creamery patrons. These benefits were noted on the second and third trips made among the patrons when he nearly always found an increase in the number of milk houses, whitewashed cow stables and improvement in the cleanliness of the dairy utensils as well as in the cleanliness of the cow stables. Many of the improvements, he stated, would not be noticed by the average person but they were easily seen when the conditions at the farm were compared with those existing before the field man visited the farms.

It is natural to expect that the work of a field man is not always pleasant and his efforts are sometimes misunderstood by the farmers. He must occasionally put up with some disagreeable situations, as he is expected to accomplish his end without prosecution. In nearly every case, however, it has been demonstrated that a great deal can be accomplished by the right kind of a field man, as it is undoubtedly true that inferior grades of cream are sometimes the result of ignorance on the part of the farmer as to what he ought to do in order to supply the factory with cream of a satisfactory quality.

A field man who has worked among a group of factories in this state reports that when the idea was first suggested to the creameries, some of the directors objected, because they claimed it would be a needless expense. A few of the creameries, however, finally decided to try out the idea of employing a field man among their patrons and the man
selected for this work states that he became very much interested in it. He concluded that the creamery part of the work was fully as important as visiting the farmers and that the secret of success in carrying out this plan depends first, on the type of man who has charge of the work and second, on the uniformity of the product made in the factories over which this man has general supervision.

OUR WISCONSIN OBSERVATIONS

Some of the members of this association will remember that a few years ago we began discussing the plan of forming Mutual Benefit Organizations among the co-operative creameries and cheese factories in sections of this state where a good opportunity was afforded to make it possible to derive the benefit of such an organization in that locality.

One of these organizations was started in the La Crosse river valley and the other among the Co-operative Creameries near Chippewa Falls. The Associated Co-operative creameries of La Crosse River Valley included eight creameries, and the Chippewa Falls Co-operative Association started out with 12 creameries in the Association. The method of starting these associations was the same in both cases. A public meeting of the directors of all the creameries in each group and as many of the patrons as cared to attend, was called for the purpose of organizing a central association which would draw up the necessary constitution and by-laws for making such an organization harmonious and effective.

Briefly stated, the purpose of these associations were: first, to prevent the duplication of milk and cream routes; second, to employ the service of a field man who will visit all the farms supplying either milk or cream to the factory belonging to the organizations; third, to cooperate in buying the supplies for all the factories in each group; fourth, to co-operate in selling the product of these factories.

Such an organization and co-operation among the factories in each group was designed to make the patrons of the factories better acquainted with each other and by so doing, establish and maintain co-operative instead of competitive relations. This would reduce the cost of operating the factories, and by manufacturing a large quantity of butter having a uniform quality, to obtain a better price for such butter than could be obtained by each of these creameries when operating under their own individual management.

Such organizations would be called upon to adjust any differences or controversies that might arise among the creameries, and by so doing the entire membership would reap the benefits of such co-operation to a marked degree.
One of the methods of accomplishing this end that has been suggested, is to make a house to house canvas of the farms in a given territory, and talk over the matter with them, explaining its importance and profits to each individual farmer. After this is done, call a meeting of these farmers and have the plan explained in all its details at this meeting. In order to make the project successful, it will be necessary to get the co-operation of all the stockholders of the different factories in the locality where such a piece of work is undertaken. A good way of doing this, is first, to get the directors of every creamery to meet and talk the matter over after which a meeting of the stockholders may be called to discuss the plans outlined by the directors. Still another way would be to have the directors and stockholders at the annual meeting of their creameries vote authority to their directors to act at the general meeting, when such an organization is to be formed.

This organization of a central board of directors and the employment of a manager for a number of creameries in a given territory, will help to establish cordial relations among all of the factory operators, as well as among the farmers. It also will help to advance the common interest of everyone connected with the enterprise.

In a certain locality on the Pacific coast where this general idea has been tried, and is now in operation, the results have proved to be very satisfactory. Some 26 dairy manufacturing plants are now under one general management, which has the duty not only of buying the supplies used by all these factories, but the product made is sold by one management. The seller of the product knows what prices ought to be paid and also what markets are available for buying it. By keeping himself well informed of the market conditions he is much better able to dispose of the products from all the factories at a price above that which could possibly be obtained by the management of each creamery selling his products separately.

The experience of this organization to which I have referred, shows further that bad debts of the various factories have been greatly reduced, and the regularity with which the money is received from the sale of the products manufactured is a source of great satisfaction to the patrons.

It is further claimed that 90 per cent of the factories have received a much higher price for their products than was the case before they joined this central organization.

Uniform butter in large quantities, places the creameries in a position where it is possible to name the price they must receive for butter. It is not necessary to meekly inquire from a butter buyer, the price he will give, but there will be buyers eager to get the butter and after discovering its evenness in quality, they will undoubtedly be glad.
to pay a premium above the market and will be always looking for more butter.

There is no danger of overcrowding the market with good butter. During the past few years it has been demonstrated that cows are one of the safest investments a farmer can make and that butter of good uniform quality will always be in demand.

Briefly stated, the plan suggested for increasing the supply of uniform butter that will command high prices, is to adopt:

1. Pasteurization of the cream.
2. Standardization of the methods of manufacture.
3. Reduction in the number of cream routes.
4. Employment of a field man for visiting the farmers and a manager for buying supplies and for selling the butter.

Many people who are interested in the creamery business have doubtless noticed the figures printed occasionally by a dairy extension worker showing the great variety of prices paid the farmers per pound of butter fat in a given month at different factories. When there is such a great variation as these figures indicate, it is very evident that high prices may be obtained and that co-operation of the creameries in a given territory will aid in securing these high prices for all the factories.

THE IMPORTANCE AND THE USE OF STARTERS IN CREAMERY BUTTER MAKING

MARTIN H. MEYER

Mr. President, Ladies and Gentlemen: The question of starters has occupied our attention during the last quarter century and it is still new and a live subject for the reason that it is directly connected with the making of 400,000,000 lbs. of butter annually, and with the salary of the butter maker.

Better Butter Made

It is not too much to say that the discovery of the value in the use of a pure lactic culture in butter making was hailed with genuine delight and its results received with satisfaction.

It was soon found that a pure culture added to cream, especially when pasteurized, showed marked improvement and the resultant, butter had a cleaner aroma and flavor with better keeping quality.