THEESIS
on
A STUDY AS TO THE FEASIBILITY OF A COOPERATIVE BUTTER MARKETING AGENCY FOR OREGON CREAMERIES

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by
Robert C. Jackson

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APPROVED:

Professor of Economics and Sociology

Professor of Dairy Husbandry

Jointly in Charge of Major

Dean of the School of Commerce

Dean of the School of Agriculture

Chairman of Committee on Graduate Study
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THE PURPOSE OF THIS STUDY

For the past fifteen or twenty years the conditions in the butter market of Oregon have been most unsatisfactory, both from the standpoint of the country creameries who complain that they are very often forced to pay a price for their butterfat disproportionately out of line with the price received for their butter in cubes, and from the standpoint of the Portland jobbers who complain that the market is flooded with poor butter and that they cannot pay higher prices for it because they are unable to secure enough high grade butter of uniform quality, either for the local markets, or for out-of-state shipments. This study was made, therefore, at the suggestion of the Dairy Department of the Oregon State College, for the purpose of obtaining and analyzing the economic facts involved in the production, standardization, and marketing of creamery butter within the State, with a view to developing, if possible, a plan for correcting the above conditions.

This involved a study of dairy conditions throughout the state with particular reference to the Willamette Valley and the Lower Columbia River districts as they are the principal butter producing areas. It is true that an increasing quantity of butter is now being produced in Southern Oregon and in the irrigated sections of Eastern
Oregon, but any plan, particularly of a cooperative nature that might be developed in the Western Section of the State could be easily expanded to include other sections. It required a review of past cooperative efforts on the part of Oregon creamery interests to remedy market conditions within the state, to determine if possible the reasons for the ultimate failure of these projects and thus enable those of the future who might be interested in similar organizations to profit by past mistakes. It was also necessary to do considerable investigational work with regard to the efforts of creameries in other sections of the country that have organized for the purpose of improving their market outlets, to the end that the outstanding features leading to their success might be incorporated in such plans for organization as might be worked out for this state.

Considerable difficulty was experienced in locating original sources of information with particular reference to the history of the dairy industry in Oregon, and to the early efforts at cooperative marketing among the creameries of the state. The only historical information obtainable was from the Biennial Reports of the State Dairy and Food Commissioner, which dealt mostly in generalities and were meager in detail. The records of the early
marketing organizations were not available so that it was mainly from the records at the Oregon State Capitol and from correspondence and personal interviews with parties connected with these organizations that the writer was able to obtain the information desired.

Special acknowledgment is made to G. Herbert Fredell of the Department of Economics and Sociology of the Oregon State College for material supplied concerning the Minnesota Cooperative Creameries Association, and to C. W. Hibbert and C. L. Mitchell both of the Challenge Cream and Butter Association of Los Angeles, California for material concerning the development and organization of that association. The writer is also indebted to J. D. Mickle, State Dairy and Food Commissioner and to Mark McAllister, State Commissioner of Corporations, both of whom made available the records of their respective offices for this study, and to the librarians of the State College Library who were untiring in their efforts to assist in obtaining bibliographical references.
A BRIEF HISTORY OF THE EARLY DEVELOPMENT OF THE ORGANIZATION IDEA FOR MARKETING OREGON BUTTER

Commercial dairying in Oregon had its beginning back in 1886 when the farmers of Washington County established a creamery at Farmington. In commenting on this forward step taken by the dairymen of that section the record goes on to say that while the Willamette Valley "is less adapted by nature to the industry" in comparison with the coast counties of Tillamook and Coos, yet "Washington County takes the lead for winter dairying and buttermaking."¹

The writer has been unable to find any further records of the early developments in the dairy industry, but that it did develop into creditable proportions is evidenced by the following extract from the Biennial Report of the State Dairy and Food Commissioner for 1897; "Our dairymen now fully supply the home market with both butter and cheese, and they should endeavor to find a foreign market for their surplus product. They should organize a branch association in every county and give substantial support to a state association. Tillamook

¹Biennial Report of State Dairy and Food Commissioner, 1899
County has recently done this, and Washington County did the same four years ago, but has let it go to sleep. With effective organization the relative output of butter and cheese could be regulated so as to prevent a glut in our butter market every spring.* * *"  

Further on in the same report we find the Commissioner urging that "they the dairymen of the state should cooperate both in the production and sale of their products" and to this end he quotes from an address given by Major Alvord of what was then the United States Dairy Commission, before a meeting of dairymen at Hillsboro, Oregon. In this address the Major stated that the dairymen should organize by counties so that "the butter of a whole county would be of a uniform make and sell under one brand, which would more extensively advertise it", and a thoroughly competent man could then be secured to handle its marketing. It would also enable the dairymen to "sell their own products direct to the consumers and thus save commissions, high freight charges, etc." The address closed with the statement that "combination is the spirit of the age. There is no use or sense in crying out against it, all do it and the farmer must do it or perish." In conclusion the commissioner devotes five pages of his report to enlarging upon the necessity for
organization in the dairy industry along the lines laid down by Major Alvord and he presents some six results that could be definitely accomplished, among which are, stabilization of price, improvement in quality of product, and "cooperative organization in making and selling their products."

In the early 1900's from about 1903 on, the so-called "centralizer" began to make its appearance in the butter manufacturing field. These concerns represented large capital investments, and combined in their organization the sales function as well as that of manufacture. Such a business set-up would of necessity require a large volume production, and in order to establish and sustain such production they must needs go far afield for their raw material. This, of course, brought them into direct competition with the local creameries of the cream producing areas with the result that "competition between different creameries for the dairyman's patronage has grown very keen. There is scarcely a dairy district in which there are not two or more creameries bidding for the farmer's cream. There is, therefore, no incentive to improve the quality or care for his cream as he is just as well paid for a poor quality as his neighbor is for
his first grade cream."\(^2\) The following conclusion, therefore, is obvious. "Under such competitive conditions the creameries have been unable to effect an organization sufficiently strong to require any certain standard from the standpoint of quality."\(^3\)

In view of this helpless condition of the creameries to improve the quality of their product the Dairy and Food Commissioner recommends that a law be enacted by the State Legislature forbidding the manufacture of butter from cream containing an excessively high per centum of acidity or in other ways being unfit for human food. The idea was that the creameries would then have a common ground on which to reject poor cream, but then as now some of the creameries in their need for volume would always dissent from any opinion as to what the standard for rejection should be. The net result is that to date no agreement has been reached as to what constituted cream "unfit for manufacture", yet all agree that something should be done. As late as 1927 the writer was present at a meeting of the Oregon Creamery Operators' Association, where the matter of presenting such a bill before the State Legislature, then in session, came up for discussion, but as

\(^3\)Ibid, pp. 16 - 21
heretofore nothing came of it.

Since the above mentioned report of the Commissioner was written, a number of efforts have been made both by local and state organizations to develop and put on the market a standard quality of butter, but up to the present it has been impossible to sustain these efforts in the face of competition for volume in raw product, so that the market conditions at the present time are as unsatisfactory as at any time in the last twenty-five years.
EARLY COOPERATIVE MARKETING EFFORTS

The Northwest Butter and Produce Company

The Northwest Butter and Produce Company was the first attempt made in Oregon to market butter cooperatively. It was organized in the city of Portland, July 1913, under the corporate laws of the state, for the purpose of carrying on "any or all business as merchant, wholesale or retail, importer or exporter, and to act as commission merchant, selling agent, and factor generally without limitation as to class of products and merchandise, but especially of milk, cream, butter, cheese and other dairy products ***".¹

As originally incorporated, the capital stock stood at $5000 divided into 5000 shares at $1.00 per share. On February 9, 1914, the stockholders voted to increase the capital stock from $5000 to $10,000 at $1.00 per share. Then in May of the same year the stockholders again increased the capital stock and this time to $20,000, the value of the shares remaining unchanged.

Finally on February 9, 1917, just three years after the first increase in capital stock which seemed to

¹Articles of Incorporation of Northwest Butter and Produce Company.
indicate an increase in business, the stockholders met
and resolved "that this corporation cease doing business\textsuperscript{2},
and that the affairs be wound up and the concern liqui-
dated.

As to the identity of the organizers, only the names
of three men appear in the articles of incorporation.
No place within the document does the name of a creamery
appear, nor is the word creamery mentioned. It is evi-
dent, therefore, that the concern appeared merely as an
incorporated commission firm for handling creamery pro-
ducts, even though the stock was subscribed for by the
individual creameries who had agreed among themselves to
use the new concern as their agent.

From what the writer can find, there were approxi-
mately thirty-five "country" creameries in the organiza-
tion, which gave the "Northwest" as it was known, control
of the butter shipments from the outlying districts into
the Portland market. It was the understanding that all
these creameries, "were to ship all of their output except
what they sold locally in their home town."\textsuperscript{3} However,
"with the seasonal fluctuations in the make and quality

\textsuperscript{2}Resolveds filed with Commissioner of Corporations.
\textsuperscript{3}From a letter from Chris Nyhre, President of the North-
west Butter and Produce Co., to the writer.
of product of the member creameries, it was impossible for the manager to build up a large trade in uniform quality goods. The members were not required to send in all or even a definite part of their make, so there were times of shortage as well as times of surplus. This situation combined with the keen competition from the Portland creameries, and the fairly expensive 'overhead' made it impossible for the management to net the members satisfactory returns for their consignments."  

That there was a good market for their product is borne out by "the fact that in less than two years we were furnishing butter to 525 steady customers, including some of the very best hotels, cafes and stores in the city of Portland and nearby towns."  

The initial cause of failure is given, by those who were closely connected with the business management, as lack of operating capital. Coupled closely with this lack of operating capital was the lack of a feeling of financial responsibility in the company by those creameries who were pledged to support it and market their butter through it, yet had failed to pay up their stock subscriptions.

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4From a letter from F. L. Kent, Bureau Agricultural Economics, U. S. Department of Agriculture, to the writer.
5From a letter from Chris Myhre, President of the Northwest Butter and Produce Co., to the writer.
Referring to the lack of financial interest on the part of the country creameries, one of the old directors said, "unless the individual creameries have a large enough financial interest in the central concern they are not in duty bound to stand by it if they can get a better price on the outside." To lack of capital, therefore, must be added disloyalty on the part of members, as another cause for failure.

To these causes must be added the severe competition of the Portland creameries and particularly the centralizers.

In order to increase their volume, the centralizers introduced the practice of paying for each can of cream as delivered. To the average farmer this meant "ready money" so that the country creameries in order to exist, had to come to the same practice. This method of paying for the raw product takes plenty of ready cash so that the country creameries, usually under-financed, had to have their money at once and could not wait until an agency could dispose of the butter and settle at the price received.

Then there was the question of financing the trade. At the time this association was in business it was the custom to sell to the trade on thirty days' time. Very
often to make a sale the centralizer gave more time. When, therefore, a concern must buy for cash, sell on time and carry bad debts and slow collections, it can be seen that to start with a small capital investment is little less than suicidal.

No organized effort was ever made toward standardization of the butter of the various creameries. The result was what might be expected, an utter lack of uniformity in quality both in the butter from the various creameries and in the butter from the individual creameries from time to time. Uniformity in quality is one of the prime factors in marketing and any concern that cannot produce it is working against tremendous odds in this highly competitive field.

Among the contributory causes for failure may be mentioned, lack of business experience on the part of the management, lack of a definite financial program, failure to provide and develop an adequate accounting system, and mistakes in judgment as to purchases that led to an increase in overhead.

Add to the weaknesses of an internal nature, the open hostility of the Portland creameries, expressed in the form of published articles in the papers, and cutthroat methods of competition in business, and we have a combination of circumstances almost impossible to surmount.
Oregon Cooperative Dairy Exchange

In an article in Hoard's Dairyman under date of September 22, 1916, R. R. Graves, then Professor of Dairy Husbandry, at Oregon State College, gives a brief outline of the conditions leading to the organization and establishment of the Oregon Cooperative Dairy Exchange.

He states that for some time "the creameries outside of Portland complained that they were unable to market their butter satisfactorily and that they were gradually being forced to the wall through being "forced to pay as much as five to six cents more for butterfat than they were able to secure for their butter in cubes". On the other hand the "jobbers were complaining that the market was flooded with poor butter and that they were unable to secure enough high grade butter of uniform quality to enable them to make out-of-state shipments".

Further, the Pacific Northwest butter market was the lowest in the United States and gave no promise of immediate improvement, so that it appeared to be only a matter of time until the "so-called 'country creameries' would be out of business".

In November of 1915 the Executive Committee of the Oregon Dairymen's Association initiated a movement among
the creameries outside of Portland, to organize a central marketing agency with headquarters in Portland. There was apparently considerable enthusiasm among the creameries for such an organization but as is generally the case when it came down to effecting an actual organization and subscribing to the necessary capital, there were not so many interested.

After many discouragements the work of organization was completed in January, 1916, and an association was formed:

"To purchase, sell, store, manufacture, and transport, dairy and other agricultural products and dairying and other farm supplies*. *

The membership was composed of fifteen creameries located in different parts of the state; five of which were cooperative and the remainder were either farmer owned or were proprietary.

The capital stock was fixed at $10,000 and divided into 400 shares at $25.00 the share, to be sold to the member creameries.

Beyond the above facts, the writer has been able to

6 Articles of Incorporation, Oregon Cooperative Dairy Exchange.
secure little of a really definite nature.

It appears that certain creameries violated their agreement to ship through the Exchange. These shipped their butter to the exchange for a short or long period as they saw fit and sold their butter on the outside when it appeared to be to their interest to do so.

A number of the creameries failed to pay their capital stock subscriptions in full. Of this number, several were of the "promoted" type located in a section of small cow population and were really financially unsound when they entered the Exchange. This, of course, left the Exchange short of funds.

As in the case of the previous organization, there is no evidence of any organized work along the lines of standardization. The result therefore was simply a repetition of lack in uniformity in quality.

There is also evidence of incompetency on the part of the management. Weak in membership to start with, there is nothing to show that any effort was made to enlist the support of additional creameries both financially or with the sale of their butter.

To sum up therefore we have an organization lacking in number of creamery members, lacking in volume and quality of product, and lacking in competent management.
For a concern with these handicaps to enter a highly competitive market, such as the Portland retail butter market, there is little to expect but failure.

The Oregon Dairymen's League

The last attempt made by producers to establish a central cooperative marketing agency for dairy products was the organization of the Oregon Dairymen's League. The League was originally a collective bargaining organization of market milk producers who had become dissatisfied with the prices they were receiving at the hands of the distributors. It is, nevertheless, well worth a brief study as it later branched out into the field of butter and cheese production through its subsidiary, the Oregon Dairymen's By-Products Corporation, involving one of the most ambitious farmer-owned enterprises ever undertaken in the state.

"In 1917, milk was being sold (in Portland) as low as $1.35 per hundred, a price that scarcely paid for the feed the cows consumed".\(^1\) At this juncture several business men of Portland, who were also milk producers, as a side-line, decided to launch a producers organization,

\(^1\) R. R. Graves in Hoard's Dairyman February 2, 1921.
and the result of this decision was the Oregon Dairymen's League, an organization patterned after the New York Dairymen's League. While the League did not nearly control the milk supply of Portland enough producers had signed up to enable it to control the price. It did this by keeping some of the fluid milk off the market and selling it at butterfat prices. The result was a lowering of the average net price to the members below that received by those producers who were outside the League and delivering milk on the Portland market. In the face of all this, so sold were the majority of the members on the idea that the League would ultimately succeed that the management, in whom the farmers had perfect confidence, was able to hold the organization together and they continued to operate even at what was virtually a loss.

"The laying of hard-surfaced roads out into the country in all directions from" Portland created an "ever widening circle within which fresh milk was available to the Portland Market" at the increased prices brought about by the League. In order to hold the

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position it had gained the League was compelled to push its membership campaigns in all directions, which resulted "in a larger and larger surplus to be kept off the market in the form of butter and cheese."\(^4\) "As a manufacturer of butter and cheese the League found itself in competition with other farmers' organizations and private manufacturers in all parts of the State. This led to the ambitious scheme of expansion until it should control the dairy industry of the entire state of Oregon."\(^5\)

The League was then reorganized under the direction of Aaron Sapiro, a California attorney, along the lines of what is known as the "California plan". This plan made it a non-stock, non-profit association, with a $10.00 membership fee, and included the long-time iron-clad contract. "For purposes of raising capital, the Oregon Dairymen's By-products Corporation was then incorporated with preferred stock issued in five series,"\(^6\) the common stock to be held by the League, and this corporation was placed under contract to the League to handle all the products of League members delivered to it.

\(^4\) Ibid.  
\(^5\) Ibid.  
\(^6\) Ibid.
Thus "the League started in on July 1920 with a string of factories which had been poorly financed and poorly organized." The plants were scattered from Astoria on the Lower Columbia on down through "The Willamette Valley" and into Coos and Curry Counties, and some of them through careless appraisal were purchased at prices which were altogether too high.

That their plans for financing this tremendous enterprise had not been well worked out is evidenced by the fact that "as the membership grew and the volume of business piled up, it was found impossible to sell preferred stock [of the By-products Co.] in sufficient amount to take care of this expanding volume of business". To pay for alterations, equipment and needed repairs in these plants, funds were diverted from the proceeds of the members pools, and certificates of indebtedness up to 75% of the value of the product were issued to the producers. The producer was then forced to hold these certificates until they were redeemed by the League or discount them at his local bank. Knowing that as the producers needed money, they would discount these certificates at their banks, it appears that this was a means of getting

8. Ibid
the country banks to carry part of the credit burden, though there is nothing in any of the records that came into the writer's hands to indicate that such was the case.

The quality of the product from many of the outlying plants had been poor for some time, was lacking in uniformity and was irregular in quantity so that it was branded on the market as being of low grade and consequently failed to sell readily. The promoters evidently failed to appreciate the fact that a new brand is not taken up by the market merely because it is a producer product, but it must be sold to the trade the same as the product of any factory. The net result was that with much of the product in storage unsold, the final settlement of 25% had not been made on the raw product some three months after it had been delivered to the League by the producer.

In the selection of managers the League seems to have been unfortunate from the start. "The first manager was a man of undoubted integrity in whom the dairymen had a great deal of confidence. He lacked, however, the versatility and business experience necessary to take care of the League's business"9 and as it developed and the making of butter and cheese were added to the League's

enterprises, he was totally unable to cope with the problems arising out of this expansion. The second manager was a man trained in the electrical engineering school of the Oregon State College and knew practically nothing of dairy marketing problems. He proceeded to organize the management on an expensive scale and after a hectic career he was dismissed by the Board of Directors. The third choice was no better and at last a man was selected who had had extended experience in handling dairy products, and who had achieved success as a dealer, but he proved "utterly helpless in the face of the situation". As manager of a private concern he would probably have been very successful, but the handling of a cooperative enterprise the size of the League was beyond him. In his report on the failure of the League Dr. H. Macpherson, late of the Department of Economics and Sociology at the State College, makes the statement concerning this man that "if he had deliberately set out to destroy the organization in the shortest time possible he could not have succeeded any better".

There are, in addition to the above, a number of what might be termed contributory causes. First, under

10 Special Report on the Dairy League Situation by Dr. H. Macpherson.
this head may be put over-centralization of control. In this particular case the district known as the Lower Columbia had a special and very profitable market in the summer resort trade at the ocean beaches tributary to Astoria, Oregon. Deliveries to this trade were made direct from the local plants of the League but the business was handled through the Portland office. As so often happens under the circumstances mistakes crept in and misunderstandings arose that finally resulted in a demand from that district for local autonomy. Their defection, which was given a great deal of publicity, weakened the hold of the League in other sections. Had the more remote sections been organized under a competent local manager, responsible to his membership and loyal to the League, breaks such as this would not have occurred.

A second contributory cause lay in the contract which allowed members to "retain milk for home, farm, or local consumption, or for retail distribution.\textsuperscript{11}\footnote{Ibid} The purpose had been to permit members to continue to serve the local trade they had had before entering the League, but those within reach of the Portland market took undue advantage of it. On the other hand the contract was so tight that
many who did not have local customers, "sold" their herd to relatives, to free themselves from their League contract. And so we have the defection of the individual members.

A third and very important contributory cause was the policy that seems to have been adopted by the management toward the association members, of keeping them in the dark as to the actual status of the association's affairs. A new cooperative entering a competitive market is always the subject of opposition and the League was no exception. We find that the Portland Milk distributors conducted a "campaign of paid advertising through the newspapers attacking the League and its leaders from every possible angle". A membership that is completely in the dark as to the conditions within their association is fertile ground for such propaganda, and such tactics from without naturally added to the growing list of deserting members and broken contracts.

The conclusions that we may draw from this failure are that any organization in the dairy industry of the State to be successful must be drawn up along lines compatible with the industry, rather than an effort made to

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12Special Report on the Dairy League Situation by Dr. H. Macpherson.
fit it into a set-up that has been successful elsewhere. It must be adequately financed and have a well-defined financial policy to which it must adhere. It must have competent management, one that is in sympathy with the producer and the cooperative movement. The members must understand that they are in the organization or out of it but that they cannot be in and out at their convenience and then expect the cooperative to succeed. Lastly, there must be established a rigid system of uniform grading to which the members are willing to adhere if the movement is to succeed.
The dominating force that causes farmers to begin dairying in sections where this type of farming has become specialized is not a special adaptability of the soil, so much as it is the demand for dairy products as compared with the demand for other products that the soil could produce. The dominating force, therefore, is an economic factor. The nature of the soil and topography are secondary and indirect causes of the distribution of dairying.¹ "The force that causes specialization in the production of fresh milk or butter and cheese, is the influence of the city" for it is the tendency of the rural population in territory tributary to the city to satisfy the strong demand for these products instead of producing forage, vegetables, potatoes, and the more bulky products.²

Following this line of reasoning we find that the creameries of Oregon are for the most part located in the section of the state west of the Cascade Mountains and a large per cent of these are to be found in the city of Portland and the Willamette Valley. The local reasons for this are:--The Willamette Valley was the first section of

²Ibid, p. 91.
the state to be settled by farmers and those who had come to make the state their home. The climate was ideal for dairying and pasture was abundant. Portland developed quite rapidly into a sizeable city offering a ready market for both butter and milk which naturally led to the establishing of dairying in the adjoining counties.

As Portland grew in population the demand for market milk increased and as butter is a "highly concentrated food having a low transportation charge" the creameries, with the exception of the centralizers, migrated into the regions of the Willamette Valley "adapted to dairying but lying outside of those districts that can more profitably be devoted to the production of milk for fresh consumption". 3

Large consuming centers of dairy products are usually large producing centers and Portland, having excellent connections by rail and hard surface roads with all the principal production areas of the state, has its quota of creameries.

While the coast counties have ideal conditions for dairying, the cheese industry has developed to a considerable extent in two of them because these counties were

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3Ibid, p. 92.
isolated during their formative period by a lack of adequate transportation which cut them off from the Portland market for a product that must be handled rapidly once it is made.

Southern Oregon is mountainous and semi-arid and the early occupation of the people was largely mining. With the development of irrigation more settlers came into that section and with them came the dairy cow, and of late—the creameries. It is doubtful, however, if the dairy industry will ever develop to any great extent in that section, due to competition with the extensive fruit growing industry.

Eastern Oregon has not only been handicapped in dairy development by being semi-arid, but for years past and even at the present time it is lacking in adequate transportation. The farm enterprises have been largely wheat farming, cattle and sheep raising, but with the introduction of irrigation and an increase in population we may look for an increase in dairying in that section. This is already indicated by an increase in the creameries in the Blue Mountain section in the Northeastern corner of the state.

In 1926, ninety-two creameries reported to the office of the State Dairy and Food Commissioner as having operated for the year. Of this number, eighty-four reported
operating as proprietary concerns, five as centralizers, and thirteen as cooperatives. Upon further analysis of the distribution of these creameries we find fifty-seven in the Willamette Valley and Lower Columbia district and eighteen of these located in the city of Portland.

Of the remaining thirty-five creameries, eight are located on the coast, eight are located in the three counties composing what is known as Southern Oregon, eight are to be found in Central Oregon, and eleven are located in the Blue Mountain region. Thus we see that the creamery industry of the state is fairly well centralized in the west.

As previously reported by the Experiment Station, it is difficult to clearly differentiate between the true centralizer and the privately owned or proprietary creamery. However, the five creameries that have been classed as centralizers are, with one exception, located in Portland and draw their supply of raw material from every section of the Willamette Valley and to a limited extent from the coast counties and Central Oregon. On the other hand, several of the large proprietary creameries of the Willamette Valley have adopted centralizer methods and have

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4 See appendix for list of Oregon Creameries
invaded the territory of other creameries at considerable distance from their home plant. These concerns have not been classified by the writer as centralizers because they are hardly large enough, even though their practices may warrant such classification.

The cooperative creameries of the state are comparatively few in number in comparison with some other dairy sections of the country and are quite widely scattered. Of the thirteen in the State, eight are in the Valley and Lower Columbia, two are in the coast counties and three are in Eastern Oregon. The Cooperative movement has not gained much headway in the state due in a large measure to the nature of the competition for cream, and to the fact that dairying is a sideline for most farmers. Then, too, here as elsewhere, cooperatives have been established on a flush season production, and did not have the volume or quality of cream to carry them over the slack season in competition with the Portland Centralizers or adjacent private concerns. Such an experience always gives the cooperative movement a setback and Oregon is no exception.

As to the future development of the creamery industry in the state, as stated above, it is not likely that the cooperatives will increase to any extent for some time. There is every indication that as the city of Portland
Figure 1
Chart Showing the Creameries of Oregon 1926

Legend.
- Cooperative Creameries
- Privately owned Creameries
- Centralizers
grows, it will reach farther up into the Willamette Valley for its milk supply and many of the present creameries will either become milk receiving plants or will close and migrate into the irrigated sections of Eastern Oregon. At first glance one would expect the migration to be toward the Coast counties as the hard surface highways open up that section, but the cheese industry has become so firmly established there that it is doubtful if the creamery could successfully compete with the cheese factory. As a further indication of the future trend of the industry, the records of the Experiment Station show that the cow testing associations are on the increase in Eastern Oregon which indicates that the farmers of that section are interested in the increased butterfat production of their herds while on the coast and in the Portland milk shed, volume of milk is the dairyman's primary interest.

Any attempt at organization in the future should consider carefully the present volume of butter production, the trend of expansion in milk production and the probable shift in centers of cream and butter production. It must also be kept in mind that while the centers of cream production may shift, the volume is not likely to increase for a considerable period. This will be brought out more in detail in the following section.
COMPETITION AMONG CREAMERIES FOR CREAM

In approaching the subject of competition for raw product among the creameries it would be well to study the production areas of the State.

In table 2 the counties of the State have been divided by the writer into regional groups in order to better study the production and marketing problem. The Lower Columbia region, including the counties of Columbia and Clatsop, has been grouped with the Willamette Valley counties for the reason that these counties form the milk shed for Portland and it is also from them that Portland secures part of her supply of butter and butterfat.

While Lincoln County has been grouped with Tillamook as the North Coast counties, it does not tie up with that county in the disposal of its dairy products. Tillamook County is a unit in itself, being solidly united in the manufacture and sale of cheese. The product of Lincoln County is either handled through the creameries at Toledo or Waldport, or comes out to the creameries in the Willamette Valley.

The South Coast counties are largely a unit unto themselves, manufacturing large quantities of butter and cheese and disposing of the product on the San Francisco
Market. Like Tillamook county, these counties were isolated during their formative period, and it is only recently that rail and truck transportation have been afforded these sections. Due to their location with relation to the Portland market they have not figured in the past, and do not now figure in the competitive cream market of the state.

That section of the State known as "Southern Oregon" involves the counties of Josephine, Jackson, and Klamath. Douglas is sometimes included in this section and insofar as climatic conditions are concerned really belongs to it, but Roseburg, the local market center, looks to Portland as a market outlet for much of its products, and for that reason Douglas County will be classified with the Willamette Valley counties. Southern Oregon can hardly be classed as a dairy section though some 10,000 dairy cows are to be found in that section. Josephine and Jackson counties are largely devoted to fruit growing, yet the alfalfa grown under irrigation is responsible there as in Klamath County for the rise of this phase of agriculture. All three of these counties, situated as they are on the main line of the Southern Pacific Railroad between Portland and San Francisco, are tributary to the latter city as a market outlet. This is indicated on Table 2, showing 63,000 gallons of cream sold from that section in 1924. This was
Figure 2
Milk Cows in Oregon in 1925
Table 2
Number of Dairy Cows and the Volume of Butterfat, Milk and Cream Sold in Oregon for the Year 1924.
Source of Data; Oregon Statistics by Counties, U. S. Census of Agriculture 1925.
### Table 2

<table>
<thead>
<tr>
<th>Section and County</th>
<th>Number of Dairy Cows 1925</th>
<th>1924 Pounds of But. of Milk Sold</th>
<th>1924 Gallons of Cream Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Willamette Valley and Lower Columbia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clatsop</td>
<td>5164</td>
<td>396,741</td>
<td>921,893</td>
</tr>
<tr>
<td>Columbia</td>
<td>7177</td>
<td>542,474</td>
<td>1,072,030</td>
</tr>
<tr>
<td>Multnomah</td>
<td>8728</td>
<td>99476</td>
<td>4,477,806</td>
</tr>
<tr>
<td>Washington</td>
<td>15527</td>
<td>861,627</td>
<td>5,277,748</td>
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<tr>
<td>Clackamas</td>
<td>14963</td>
<td>1,101,535</td>
<td>1,629,467</td>
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<tr>
<td>Yamhill</td>
<td>9358</td>
<td>1,081,245</td>
<td>581,495</td>
</tr>
<tr>
<td>Marion</td>
<td>13776</td>
<td>1,159,429</td>
<td>1,631,227</td>
</tr>
<tr>
<td>Polk</td>
<td>7234</td>
<td>695,119</td>
<td>728,760</td>
</tr>
<tr>
<td>Benton</td>
<td>5643</td>
<td>430,764</td>
<td>315,764</td>
</tr>
<tr>
<td>Linn</td>
<td>13765</td>
<td>1,749,142</td>
<td>420,135</td>
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<tr>
<td>Lane</td>
<td>12951</td>
<td>1,021,769</td>
<td>1,142,235</td>
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<tr>
<td>Douglas</td>
<td>5573</td>
<td>3,435,152</td>
<td>287,248</td>
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<tr>
<td><strong>North Coast</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tillamook</td>
<td>11594</td>
<td>2,409,472</td>
<td>845,059</td>
</tr>
<tr>
<td>Lincoln</td>
<td>4482</td>
<td>4,763,800</td>
<td>184,615</td>
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<tr>
<td><strong>South Coast</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coos</td>
<td>10747</td>
<td>1,249,604</td>
<td>1,947,463</td>
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<tr>
<td>Curry</td>
<td>3071</td>
<td>7,599,424</td>
<td>1,191,687</td>
</tr>
<tr>
<td><strong>Southern Oregon</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Josephine</td>
<td>2328</td>
<td>192,046</td>
<td>132,187</td>
</tr>
<tr>
<td>Jackson</td>
<td>5456</td>
<td>427,051</td>
<td>476,016</td>
</tr>
<tr>
<td>Klamath</td>
<td>3623</td>
<td>473,946</td>
<td>220,352</td>
</tr>
<tr>
<td><strong>Central and Eastern Oregon</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hood River</td>
<td>1368</td>
<td>94,701</td>
<td>124,337</td>
</tr>
<tr>
<td>Wasco</td>
<td>2471</td>
<td>15,802</td>
<td>220,137</td>
</tr>
<tr>
<td>Sherman</td>
<td>1259</td>
<td>13,670</td>
<td>14,510</td>
</tr>
<tr>
<td>Gilliam</td>
<td>846</td>
<td>37,256</td>
<td>51,520</td>
</tr>
<tr>
<td>Morrow</td>
<td>1746</td>
<td>101,754</td>
<td>30,585</td>
</tr>
<tr>
<td>Jefferson</td>
<td>815</td>
<td>45,491</td>
<td>8,546</td>
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<tr>
<td>Wheeler</td>
<td>400</td>
<td>15,675</td>
<td>26,190</td>
</tr>
<tr>
<td>Grant</td>
<td>698</td>
<td>85,950</td>
<td>22,758</td>
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<tr>
<td>Deschutes</td>
<td>3664</td>
<td>445,568</td>
<td>253,861</td>
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<tr>
<td>Crook</td>
<td>1842</td>
<td>240,655</td>
<td>22,925</td>
</tr>
<tr>
<td>Lake</td>
<td>1123</td>
<td>163,045</td>
<td>5,019</td>
</tr>
<tr>
<td>Harney</td>
<td>820</td>
<td>66,729</td>
<td>39,073</td>
</tr>
<tr>
<td>Malheur</td>
<td>4547</td>
<td>482,176</td>
<td>51,319</td>
</tr>
<tr>
<td><strong>Blue Mountains</strong> (Eastern Oregon)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baker</td>
<td>7791</td>
<td>947,455</td>
<td>374,442</td>
</tr>
<tr>
<td>Umatilla</td>
<td>7476</td>
<td>549,182</td>
<td>475,271</td>
</tr>
<tr>
<td>Union</td>
<td>4721</td>
<td>381,224</td>
<td>338,929</td>
</tr>
<tr>
<td>Wallowa</td>
<td>3210</td>
<td>395,536</td>
<td>45,562</td>
</tr>
</tbody>
</table>
in the form of sweet cream going into the San Francisco market. Thus, Southern Oregon is eliminated from the competitive cream market of the State.

Central and Eastern Oregon include that vast semi-arid area east of the Cascade Mountains, where until recent years little or no dairying in the commercial sense was carried on. Irrigation projects have opened up a number of sections in which dairying appears to be developing quite rapidly, and with improved transportation we may expect to see the competition for cream soon extend into that section.

The other section is the Blue Mountain region of Eastern Oregon, located in the Northeastern corner of the State and includes the four counties of Baker, Umatilla, Union, and Wallowa. The dairying of this section, like the rest of Eastern Oregon, is largely carried on under irrigation though it is much more extensive than in the remaining sections. This territory is largely a problem in itself. The counties of Umatilla, Union, and Wallowa find their market outlet largely through Spokane and Seattle, while the creameries of Baker and Harney counties have joined with the Idaho creameries and market their butter in Los Angeles, California.
This brings us then back to a study of the conditions in the Willamette Valley and Lower Columbia regions where the keen competition for cream exists.

In order to understand the nature of this competition between the creameries of this section for the available supply of raw material, it will be necessary to look into the production situation.

Referring to Table 2, it will be noted that only five out of twelve counties comprising this section have a cow population of over nine thousand head and the largest number of cows in any one of these five counties is the fifteen thousand of Washington county adjacent to the city of Portland.

The other counties are either a part of the Portland milk shed or have, like Linn, Lane, and Marion Counties, fairly large urban populations which increase the demand for fresh milk and cream, all of which reduces the volume of butterfat available for buttermaking. It is further well to note here that the population of these cities is increasing, creating an ever-increasing demand for fluid milk, and sweet cream both for table use and for ice cream making.

In 1924 there was produced in this area some 8,800,000 lbs. of butterfat sold as such, for which there were fifty-
three creameries besides ice cream factories competing.
In the City of Portland alone, there are eighteen creameries, four of which are the large centralizer type and this section of the State under discussion is practically their sole source of supply of raw material. There is not a producing center of any importance in this section that does not have a cream station as well as its local creamery, and there is a continual overlapping of territory among the rural creameries. From the dairyman's point of view this is a most satisfactory situation as he can always find a ready market for his product. It apparently leaves him master of the situation as he can play one concern against the other in order to secure the highest possible price regardless of the quality of his product.

The overdevelopment in the number of creameries for this section compared with the limited supply of cream for churning has led to the introduction of many questionable practices in the competition for volume with the result that quality has inevitably been sacrificed.

All efforts at standardization of cream supply are rendered ineffective by the willingness of the Portland Centralizer cream stations to accept cream of any quality as top grade in order to "cut in" on some territory and add to their volume. To this is added the practice of
"feeding" the patron by giving him an extra point or two in his cream test for the first few deliveries in order that he may spread the news of "fair treatment" and induce others of his community to deliver their cream to this concern. Of course, this practice cannot be kept up indefinitely, especially when a first grade cream price is paid for a cream that cannot possibly churn out better than a second and too often a third grade butter. It is then only a matter of time until the test goes down and the grade is cut, or the cream is weighed "short". As soon as the farmer notes this falling off in weights, grade, or tests, he immediately delivers his cream elsewhere to have the same practice repeated.

There is another practice of little real consequence and yet it offers quite a talking point, and that is "immediate payment for each delivery". This practice necessitates a large capital reserve on the part of the creamery and proves quite a handicap to the small concern already operating on too small a volume and too narrow a margin. It is also a factor in "tolling" patrons away from cooperatives, for ready money on delivery often sounds much more attractive than more money at the close of a monthly pool.

Another practice, and one that might almost be termed
"vicious" is the "free use of buyer's cans". This means that if a farmer decides to ship to a certain concern, he writes and asks for a cream can. The can is sent and one or two shipments may be made and then they stop. Often the creamery sends out another can hoping to induce shipments, but very often no cream comes in, nor are cans ever returned.

There is another practice being carried on by a Portland concern that has, for some time past repeatedly upset the cream market. The concern in question controls a subsidiary dealing in butter substitute. It is well known that as the price of butter rises the consumption of substitutes increases, and after the price of butter goes beyond a given point, the consumption of substitutes increases very rapidly. What could be more simple, then, than to raise the price of butterfat, beyond the price for butter, force the creameries to unduly raise the price of butter or take a loss and sell more substitutes through the subsidiary.

There are a few of the practices that have reduced the competition for cream among the creameries of Western Oregon to a truly ruinous basis.

The effect of this type of competition on the quality of cream produced in Western Oregon is, as has been previously stated, decidedly detrimental. Attempts at
standardization have repeatedly failed, for as soon as one group would agree on a basis an outside creamery would step in and buy regardless of standards. The result has been to reduce the Oregon product to a sour cream rather than a sweet cream basis. This means that the most of cream received from the farmer is sour before it leaves the farm. Cream so soured is never uniform in acidity or flavor, and in many instances is what is known as "off flavor". It is almost impossible to make over a 90 score butter from this type of cream, and all too often even this score is lowered by having to use a few cans of cream of very low grade, because there was not enough to make a churning by itself and it could not be rejected. This, in turn, means that there is an over-supply of 88 and 89 score butter, which has a tendency to lower the general tone of the market.

This condition has existed in this section for some twenty years and bids fair to continue so long as this keen competition for volume continues between the individual creameries and dairying continues to be a side line among the farmers of this region.

With the exception of the large dairies tributary to the market milk supply of Portland, or some of the larger
Valley towns, dairying is a side line, and this type of competition not only tends to keep it so but renders the farmer indifferent as to the quality of his product. A different attitude toward dairying on the part of the farmers and an increase in the production per cow of the dairy cattle in the area under consideration is far more important than the establishment of new dairies, or the increase in the number of cows in the present dairies, but little can be accomplished along these lines so long as the farmer has no pride in the quality of his product.
PRESENT MARKETING CONDITIONS

Any discussion of the marketing problems of Oregon creameries must of necessity center around the Portland market. Portland is the only large city in the state. Due to its location it is the natural marketing and distribution center for the state, with the exception of the counties in the southwest corner, which, due largely to the topography of the country, are tributary to San Francisco. Portland now has excellent rail and hard-surface road connections with practically every section of the state, and being a large consuming center in itself (it requires approximately 800,000 pounds of butter per month on the average, to meet its needs) it is only natural that this market should govern the markets of the state.

Before proceeding to a discussion of the Portland market and its problems, it would be well to consider briefly the production areas of the state and their market outlets. The South Coast Counties, namely Coos and Curry, are largely a unit to themselves, manufacturing butter and cheese and disposing of their surplus on the San Francisco market. For years these counties were isolated by the Coast Range from Willamette Valley and its markets,
and it is only recently that rail and truck transportation to this section has been afforded them. During this early period their only outlet was by boat to San Francisco and their dairy products naturally sought those markets. Inasmuch as the San Francisco market pays more for butter than does the Portland market, and as their contacts are of long standing and their products known on that market, the butter from that section does not enter into the problems of Oregon butter markets.

The same is true of the surplus butter from the creameries of Josephine, Jackson, and Klamath counties. For years the only railroad connection that the Klamath Falls country had came up from California and as a result, her products went to San Francisco. As for the other two counties, their creameries were located on the main line of the Southern Pacific Railroad between Portland and San Francisco and their surplus naturally flows to the higher priced market.

As for the creameries in the central portion of Eastern Oregon and in the counties along the Upper Columbia, they market what surplus they may have in Portland, but as yet the volume is small and sporadic in delivery so that it is little more than the proverbial "drop in the bucket" so far as the market is concerned.
The creameries of the Blue Mountain region have several market outlets for their product. The creameries in Umatilla, Union and Wallowa look largely to Spokane as a market; while those of Baker county have joined with the Idaho creameries and are marketing in Los Angeles. All of them from time to time ship into Portland if the price will justify it, but such shipments do not figure to any extent in the butter supply of Portland.

The trading basis for butter throughout the state is set by the Portland Dairy Exchange which, at the present time, meets every day at 4:15 P.M. and is composed of practically all of the butter brokers, jobbers, and commission men of the city. The Exchange method of sale is a kind of auction. No samples are displayed but sales are made on specific grades that have been established and accepted as a trading basis by the members. These grades are listed as follows:--Extras (92 score or better), Standards (90 to 91 score), Prime First (89 score or below).

When the session of the Exchange is called by the chairman, he announces the Exchange to be open for trading on "formal call" and requests "bids" or "offers" for a certain grade of butter. "Formal call" involves the exchange of a unit of ten cubes of butter, or any multiple
thereof at a price "bid" by a buyer or "offered" by a seller. If the "offer" or "bid" is accepted by another member of the Exchange a sale has been made, and the price at which the exchange was made sets the price for that grade of butter for the next twenty-four hours. If no transaction is made for the grade being called by the chairman, then the price for the previous day holds until the next meeting of the Exchange. There is also an "informal call" made by the chairman at which time odd lots of butter may be traded in by the members, but this call does not affect the market price as set by the "formal call". Sales of butter made on the floor of the Exchange represent but a small fraction of the butter sold in the Portland market. In fact the great bulk of the butter coming on to the Portland market changes hands at private sales, though Exchange prices may be used as a basis for these transactions. The writer was present on one occasion when not over twenty cubes of butter (1220 pounds) representing all grades changed hands on "formal call" and yet over 250,000 pounds of butter were reported by the branch office of the Division of Markets, Bureau of Agricultural Economics, U. S. Department of Agriculture, as having been received in Portland for that particular month. There is, therefore, considerable criticism and
at times dissatisfaction, particularly among the producers, with this method of establishing prices. In the first place it is a buyers' exchange, and therefore an object of suspicion among the producers. There is the feeling that with such a small proportion of the transfers of butter represented on the Exchange, there is a chance that at times "wash" sales are made, i.e. sales in which no butter actually changes hands, but in which prices are set. However be the evils what they may, there has been found no better way to date, of setting prices, and a disorganization of the Portland Dairy Exchange would prove a serious handicap to the dairy industry of the state.

The cube is the only type of package for butter quoted on the Exchange, and considerable difficulty was experienced for some time in arriving at a price for "prints", or butter cut and wrapped in one and two pound packages for the retail trade. As a consequence, the retail market was in a chaotic condition. Everybody was out after the trade, and no one knew what his competitor was quoting for his butter. Price cutting and excessive discounts were the order of the day, with the retailer playing one dealer against the other for a minimum price. Finally realizing that such a condition could not continue an agreement was made among the dealers that prints would be quoted to the
trade [but not on the exchange] at three cents above the Exchange price for standard cubes. This does not mean that discounts are no longer given, but it does mean that the creameries know that whatever discounts are made to the trade by any creamery or dealer are made on the basis of the above method of establishing a price.

Owing to the fact that "the buying price of butterfat is determined by the price of prints and not by the price of cubes"¹ the creameries are compelled to sell as much of their butter as they can in print form. In order to do this a number of creameries ship to delivery agents in Portland, who have established a demand for their particular brand of butter, and while this disposes of their butter at the highest possible price obtainable it is done at a cost of from 1 3/4¢ to 2 1/2¢ per pound. In the smaller communities where the volume of trade does not warrant an agent, shipments are made direct to the retailers either by express, by motor-truck lines, or by the creamery's own delivery truck. Very often one creamery is found invading the local market of another in search of additional print trade. In addition to the so-called "local" creameries competing with each other in their respective markets, the centralizers come in for their share of the print trade in the various small

¹Oregon Agric. Experiment Station Circ. 74, page 11.
markets of the state, and with their volume, system of deliveries, their uniform quality [even though it is not high], and their discounts, make it very difficult for the smaller concerns to retain their trade.

As brought out in Oregon Station Circular 74, such a condition can but result in a "market oversupplied with prints with resulting price cutting, discounts and other inducements of an unsound nature. If this condition were corrected it would react to the benefit of the creameries. Competition is often spoken of as being the life of trade, but when practiced as is now being done by the various creameries in the sale of their product it most certainly means losses to those in business".

The other phase of the creameries' marketing problem is the disposal of their so-called surplus. Most of the creameries, particularly in the spring of the year, have a quantity of butter over and above what they can dispose of to the retail trade. This, they term their surplus. As stated above, with the price of butterfat on a par with the price of prints, the disposal of this surplus at a price that will represent anything but a loss presents considerable of a problem. If it is of a quality, and if it comes at a time of year that it will pay to put it in storage pending the seasons of shortage when it can be withdrawn
and sold on the print market, the creameries have little to worry over, but when this surplus must be disposed of as it comes from the churn, then the majority of creameries are "put to it" to find an adequate market. To undertake to dispose of this surplus through the brokers or jobbers of Portland means, for the majority of creameries, almost certain loss. There are a number of reasons for this:

Let us first consider the problem from the viewpoint of the jobber. Dr. Edward Weist, of the University of Vermont, in a study of "The Butter Industry in the United States", has this to say of the jobber and wholesaler: "The interests of the producing class are of course diametrically opposed to the interests of the receiving class with respect to the quotation of prices. The former desire as high a price as possible under prevailing conditions, while the latter desire the quotations to be low in order that there may be a wider margin between the price they pay to the producers and those they receive from the buyers".

Very often the Portland jobber must seek an outside market for butter shipped to him by an out-of-town creamery, and following the logic of Dr. Weist, his price to the creamery is bound to be such as to leave him a margin over freight in the outside market.
### TABLE 3

The Volume of Butter Manufactured and Received by Shipment on the Portland Market Together with Cold Storage Holdings for 1927

<table>
<thead>
<tr>
<th>Month</th>
<th>Butter Manufactured in Portland</th>
<th>Butter in Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Butternumber</td>
<td>Founds</td>
</tr>
<tr>
<td>January</td>
<td>314,126</td>
<td>328,011</td>
</tr>
<tr>
<td>February</td>
<td>286,126</td>
<td>375,563</td>
</tr>
<tr>
<td>March</td>
<td>412,202</td>
<td>415,062</td>
</tr>
<tr>
<td>April</td>
<td>606,678</td>
<td>553,610</td>
</tr>
<tr>
<td>May</td>
<td>646,880</td>
<td>633,577</td>
</tr>
<tr>
<td>June</td>
<td>667,280</td>
<td>574,257</td>
</tr>
<tr>
<td>July</td>
<td>394,687</td>
<td>483,398</td>
</tr>
<tr>
<td>August</td>
<td>283,568</td>
<td>384,423</td>
</tr>
<tr>
<td>September</td>
<td>272,738</td>
<td>366,527</td>
</tr>
<tr>
<td>October</td>
<td>292,453</td>
<td>402,831</td>
</tr>
<tr>
<td>November</td>
<td>245,610</td>
<td>401,525</td>
</tr>
<tr>
<td>December</td>
<td>311,568</td>
<td>411,287</td>
</tr>
</tbody>
</table>

Totals: 4,733,916 : 5,330,071 : 3,516,347

Total Butter Manufactured and Received.....10,063,987

Owing to the competitive conditions in the raw cream market previously discussed and to the fact that each creamery is trying to market as much of its product in the print trade as possible, this "surplus" butter coming into the hands of the jobber is all too often of inferior quality. Add to this, lack of uniformity, even though the quality is not the best, irregularity of delivery and uncertainty as to volume from time to time, and it is easy to see that the receiver in Portland has his problems.

On the other hand, in justice to the "country" creameries, the writer is compelled to admit, after personal investigation, that the Portland jobber has apparently capitalized the condition outlined above to the fullest and incidentally to his profit.

Next, let us consider the problem from a purely marketing viewpoint. Referring to table 3, it will be seen that Portland is a producing as well as a consuming market, and that of the 10,000,000 pounds handled in that city in 1926, 5,330,000 pounds were manufactured by the city creameries. The amount flowing in and out of storage does have some effect on the market's ability to absorb a portion of the surplus but the presence of this immense local production is bound to have a depressing influence on the market price.
Further, Los Angeles has an immense and a growing population; San Francisco has a number of large centers of population tributary to her markets. The Seattle market likewise has a number of large consuming centers tributary to it, but the city of Portland is the only large consuming center immediately tributary to the Portland market.

All of these conditions then tend to depress prices and make Portland the lowest priced butter market on the Pacific Coast. In Table 4, we have the prices of extras, month by month for the year 1927 as quoted by the principal markets of the Pacific Coast and the two principal butter markets of the east, which make the low prices for the year on the Portland market quite apparent.

In considering the possibility of expanding the present Oregon market it is safe to say that the only means of doing this is to improve the quality of the butter and to advertise the fact, and by this means displace the poor butter. Other means of expansion are not now possible, due to lack of population. As previously stated, Portland has no outlying centers of population save those that are in the heart of the production area, so it appears that the only market outlets left are those out of the state.
Table 4

Wholesale Prices for Extras 1927

<table>
<thead>
<tr>
<th>Month</th>
<th>Portland</th>
<th>Seattle</th>
<th>San Francisco</th>
<th>Los Angeles</th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
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<td>47</td>
<td>46</td>
<td>49</td>
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<td>February</td>
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<td>March</td>
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<td></td>
<td>46</td>
<td>48</td>
<td>48</td>
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<tr>
<td>April</td>
<td>43</td>
<td>*44</td>
<td>42</td>
<td>43</td>
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</tr>
<tr>
<td>May</td>
<td>40</td>
<td>41</td>
<td>41</td>
<td>42</td>
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<td>June</td>
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<td>41</td>
<td>41</td>
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<td>July</td>
<td>40</td>
<td>41</td>
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<tr>
<td>August</td>
<td>42</td>
<td>41</td>
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<td>44</td>
<td>41</td>
</tr>
<tr>
<td>September</td>
<td>44</td>
<td>44</td>
<td>46</td>
<td>47</td>
<td>45</td>
</tr>
<tr>
<td>October</td>
<td>46</td>
<td>45</td>
<td>48</td>
<td>49</td>
<td>47</td>
</tr>
<tr>
<td>November</td>
<td>47</td>
<td>46</td>
<td>49</td>
<td>49</td>
<td>48</td>
</tr>
<tr>
<td>December</td>
<td>47</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 4. Monthly Prices for butter as reported by the Exchanges of the principal butter markets of the Pacific Coast as compared with the two principal butter markets of the East. Averages computed by the author from Exchange reports in the New York Produce Review, the Northwestern Dairy Produce News, and the Oregonian reports of the Portland Exchange.

* No reports found on Extras for the Seattle market prior to this date.
To the North we have the Seattle market, good at times, particularly in the spring of the year when the Alaska trade opens up, but a glance at Table 4 will show that for the most of the year the price of extras differs little from that for the same grade in the Portland market. Like Portland, Seattle is the center for a large producing area and is really the gateway for the butter of Western Washington on its way to market. Dairying there is on the increase and just recently several large cooperatives have organized a marketing association with headquarters at Seattle to not only handle their butter on the Seattle market, but to ship the very best of it East. If an association of Oregon producers were in a position to tie up with this concern, Seattle might afford them a very satisfactory outlet but outside of this possibility, it is doubtful if the Oregon creameries can look to that market as a dependable outlet for their butter.

Turning our attention to California as a possible market outlet, the writer quotes from an address given by Professor G. D. Turnbow, late of the State Experiment Station at Davis, California, before the Oregon Creamery-men's Association in Portland,--"A committee of the Western Branch of the American Dairy Science Association made a study of the marketing conditions on the Pacific
Fig. 3. Relation of Fat Produced in California to Butter Manufactured
Slope and they found 'that California has a marked deficit in butter production'. In 1919, California had a surplus of butter amounting to 33.2% above normal consumption, while in 1924 California consumed 30.8% more butter than she produced...." This is due in part to the fact that "California is changing its marketing condition; that is to say, the use it is making of the butterfat produced is changing from year to year". Referring to Figure 3, it will be seen that while the production of butterfat in California has been on the increase over the six-year period, 1920-1926 inclusive, the percentage going into butter has been steadily declining. This, of course, is due to the rapidly increasing population of the state and the consequent increase in the demand for market milk, sweet cream, and ice cream. If we "take into consideration the number of years shown on the graph, it makes possible the conclusion that California is going to need more butter and that this butter will have to be brought into the state".

If we are to consider the possibility of the California markets, it would be well to give some attention to the market requirements. Professor Turnbow makes the statement that, "California markets have for a number of years criticised butter with a high acid flavor". On the
other hand it is recognized that a butter having "a uniform, milk flavor, low in acid, with good keeping qualities, as being the most desirable and which will do much to increase the consumption of butter". This, then, is the standard toward which the Oregon Creameries must work if they are going to overcome the present feeling, particularly on the San Francisco market, that "some of the best and some of the poorest butter received on the market is from Oregon", and really win a place for themselves in that market.

In his collateral reading, the writer repeatedly came across the mention of the Orient as a potential market for not only Oregon butter, but for the surplus of the entire Coast. To the writer, this is a remote possibility and merits small attention at the present time, when we consider that there are still periods during the year when the Oregon market is short of butter, and with the California consumption exceeding their production.

To effectually reach the California markets, and create a wider field of sale for Oregon butter, will require an efficient merchandising program on the part of the creameries of the State. Merchandising and manufacturing go hand in hand, for no sales program however well conceived can be made effectual unless it is accompanied
by a program of standardization resulting in uniformity of product. As the proprietary creameries are not permitted by law to organize a selling agency, and as it is not likely that they would look with favor on becoming members of a chain of creameries controlled by a holding company, it would appear that the most feasible plan for achieving both a sales program and a standardization program, would be a federation of the cooperative creameries of the state into a central marketing agency.
FEDERATION OF EXISTING COOPERATIVE CREAMERIES AS A MEANS OF IMPROVING MARKETING CONDITIONS

Before starting out to formulate any plans for a central butter marketing agency, those interested must first consider two things:

1st---Who may participate in the organization of such an agency.

2nd---What is to be expected of such an organization once it is developed.

For proprietary creameries, or creameries organized on the stock share basis and operated for profit to attempt the organization of a marketing agency would be to bring themselves into conflict with the Sherman Act which prohibits persons from combining "in restraint of trade or commerce in any Territory of the United States or of the District of Columbia, or in restraint of trade or commerce between any such Territory and another...". After a careful study of the problem, the writer finds that such an organization would have for its purpose the elimination of competition among the member creameries, particularly those in the Willamette Valley, in the Portland market, and to further "stabilize the market" by shipping out of the state the major portion of the surplus butter manufactured by its members. It was made clear
to the writer that the purpose of this would be not so much to secure a better price for their butter as to create a shortage in the Portland market and thus place the agency in a position to raise prices. This would undoubtedly bring the agency into conflict with the law mentioned above and result eventually in its dissolution.

It is true that there is in existence at the present time an organization known as the North Pacific Cooperative Creameries that admits proprietary as well as cooperative creameries into full membership. This organization has been unmolested during the three years of its existence because its efforts have been largely confined to that portion of its articles of association which states that the members propose "to establish uniform grades and standards for butter and cream; to improve the products by education and rigid inspection; to educate the dairy-men and creamery operators and employees to adopt the most improved, cleanly, and sanitary methods in handling cream and butter". During the life of this association the individual members have been and still are in active competition with one another, insofar as marketing their product is concerned, and at no time has there been any attempt "to engage in any activity in connection with marketing, buying, selling, of such products as
may be delivered to it by its members". Technically, therefore, there has been no violation of any law, for the relations existing between the creameries forming this association have been the same as exist in any trade association.

The only type of central agency open to the proprietary and small corporate creameries is the Holding Company. Such an organization would, however, own a controlling interest in each of the small creameries and they in turn would lose their autonomy, merely becoming one of a chain, with a centralized control, and making the present owner but a shareholding employee. It is doubtful, however, if an organization of this kind could be readily effected due to the individualistic viewpoint of the owners of the proprietary creameries.

The type of organization that appears to be the most practical is the federation of existing cooperative creameries of the State into a marketing organization. It is provided in the Capper-Volstead Act that, "Persons engaged in the production of agricultural products as farmers, planters, ranchmen, dairymen, **may act together in associations, corporate or otherwise, with or without capital stock, in collective, processing, preparing for market, handling and marketing in inter-state and
foreign commerce such products of persons so engaged. Such associations may have marketing agencies in common, * * * Provided, however, that such associations are operated for the mutual benefit of the members thereof * * *." There are other requirements that must not be overlooked particularly if it is intended that the association should enter inter-state trade. They are the one vote per member regardless of stockholdings; limitation of stock dividend to 8%; and "that the association shall not deal in products of non-members to an amount greater in value than such as are handled by it for its members."

Oregon statutes also provide that "any two or more associations organized pursuant to this act may act as incorporators to establish under its provisions a federated cooperative association authorized to do and perform any and all lawful business which may be deemed necessary or beneficial to its member associations".

In such an organization the individual cooperative creameries would be the controlling factors as to the furnishing of capital, the ownership of facilities, and the voting control would be entirely in their hands.

An advantage of this type of organization besides having the sanction of the law is that it is permitted
to handle the product of non-members. Under such a provision a limited number of proprietary creameries could become affiliated with a cooperative marketing agency, in what might be termed an associate membership. All that would be necessary for them to do would be to sign the marketing agreement virtually making the Association their agent. This would also give them the benefit of the standardization work of the association including the services of the association fieldman, and of the butter grading and analyzing service, hereinafter explained, to assist them in the improvement of the quality of their product. In no case, however, would the proprietary creameries have the full membership privilege of voting nor hold any ownership interest in the facilities of the association. It would further be well to follow the example of the Land O'Lakes Creameries and not permit any proprietary creamery that is situated in the same locality as a member cooperative to sign the marketing agreement. By so doing, the association would avoid the danger of appearing to circumvent the law by restricting competition, and would retain its identity as a producers' concern.

As a final word on the subject of who may become associated in any marketing agency that may be organized,
the writer is of the opinion, that only creameries outside the city of Portland had better be included. All creameries located within the city have little or no trouble in disposing of their butter. The creameries outside of Portland are at a disadvantage due to distance from their market and are in reality the ones that are in need of help. Further, there has always been more or less of a jealousy between the city and out-of-town creameries and there is the danger that the member creameries of the outlying districts would feel that the Portland creameries were unduly benefiting by knowledge of association activities.

Two Forms of Organization

After determining who may be eligible to form a marketing agency, it is next in order to discuss the form such an organization may take. There are two possible plans of development, depending upon what is to be expected of it.

First--Do the creameries interested expect such an association to handle the surplus only and at the same time head up the work of standardization, leaving the creameries to continue handling their individual print trade as at present, or

Second--Do they desire to enter the retail print
of the Portland market, in addition to handling the surplus, and directing the standardization work, among the members.

If it is the purpose to organize for handling surplus only, then a simple federation of the non-stock type composed of the cooperative creameries of the State would be sufficient. But if it is the desire of those organizing to develop an organization to enter the Portland retail market, then a much more elaborate set-up will be required.

Before taking any steps toward organization of a central marketing agency to handle surplus butter only, a careful survey should be made to determine the volume of surplus there is to be handled, and as to when this surplus occurs. It must be remembered that two attempts at developing a central marketing agency failed for lack of volume and that the production of raw material has not materially increased since that time.

To illustrate the need for such a study, a survey was conducted by the writer, of seven cooperative creameries in Western Oregon, and it was found that during the year 1926 two of the creameries had produced no surplus at all, and one had no surplus on hand after May. Of the remaining four, one showed practically no surplus
FIGURE 4

Showing Trend of Seasonal Surplus Butter for the Year of Four of the Largest Cooperative Creameries of Western Oregon
Table 5

<table>
<thead>
<tr>
<th>Creamery Number</th>
<th>Totals by Months</th>
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<td>January</td>
<td>19856 : 9848 : 23732 : 19580 : 73015</td>
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<tr>
<td>February</td>
<td>4749 : 24616 : 12191 : 41556</td>
</tr>
<tr>
<td>March</td>
<td>11640 : 8483 : 39916 : 12220 : 72259</td>
</tr>
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<td>April</td>
<td>20740 : 29996 : 56440 : 24772 : 131948</td>
</tr>
<tr>
<td>May</td>
<td>36448 : 32516 : 63920 : 45999 : 178883</td>
</tr>
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<td>25975 : 77656 : 54536 : 41964 : 200131</td>
</tr>
<tr>
<td>July</td>
<td>29920 : 18602 : 24480 : 26993 : 99995</td>
</tr>
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<td>August</td>
<td>6664 : 6546 : 8500 : 17166 : 38876</td>
</tr>
<tr>
<td>September</td>
<td>19349 : 17884 : 21538 : 58771</td>
</tr>
<tr>
<td>October</td>
<td>31566 : 19652 : 19747 : 70965</td>
</tr>
<tr>
<td>November</td>
<td>5100 : 25568 : 32436 : 24503 : 87607</td>
</tr>
<tr>
<td>December</td>
<td>23052 : 13668 : 31668 : 27233 : 95621</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Per Cry.</td>
<td>184144 : 272798 : 397780 : 293906 : 1148628</td>
</tr>
</tbody>
</table>

Showing the Volume of Surplus Butter by Months and Totals for the Year of Four of the Largest Cooperative Creameries of Western Oregon.
in February and either none at all or a negligible quantity from the first of August through November; one showed a small surplus from January to March inclusive, with none at all during February and only two showed any consistent volume of surplus throughout the year. This volume could be increased by butter from a limited number of proprietary creameries, but it is doubtful if more than three of these should be permitted to sign the marketing agreement. Table 5 shows the volume of the four cooperatives having a surplus, to be 1,140,000 pounds of butter for the entire year. On the policy of not handling products of non-members in excess of the volume handled for members, 1,000,000 pounds would be the annual maximum that could safely be received from proprietary creameries, a total of between 60 and 70 car-loads of butter for the entire year.

Further, it must be borne in mind that the only organization possible is one built to directly benefit the producer. If too large a number of proprietary creameries are allowed to sign the marketing agreement it would have the appearance of an attempt to evade the law, which prohibits pooling among private concerns, and the association might lay itself open to prosecution at law.
It has been suggested that the association could buy butter on the open market or from non-member creameries during the periods of shortage, but the writer seriously doubts the advisability of undertaking to launch an association with the idea of making this a regular practice.

It is doubtful if it would be profitable for an association of this kind to handle less than 120,000 pounds of butter per month, or one carload per week. A glance at Table 5 shows that only during five months of the year does the cooperative creamery production approach that amount. During four months of the year the shortage might be made up by butter from non-member creameries, who had signed the association market agreement, but past experience has shown that this is not a dependable source of supply. During the remaining three months, viz., February, August, and September, the association would have to buy from twenty to thirty thousand pounds of butter wherever it could get it. This shortage comes at the time of universal butter shortage throughout the state and two marketing associations have already come to grief because the butter either could not be secured at a price that would permit handling, or it was not of a quality that the association could effectually handle.
It is obvious, therefore, that it would not be a good business proposition to launch a marketing organization, and hire a sales manager to handle a carload of butter per week for five months of a year, in order to have an agency to handle the troublesome seasonal surplus. The only justification for such a set-up would be that stress was being laid on the standardization work and that the selling was incidental, but it is the writer's opinion that this would be too expensive to be satisfactory.

An Association to Enter the Portland Retail Market.

There are, at the present time, several cooperative creameries of the state who have developed a considerable retail print trade in Portland. Each of these creameries have demonstrated the possibility of sustaining the volume of this trade and it would appear to be the logical thing for these associations to pool these deliveries and build up a single marketing unit to handle them. A central marketing agency taking over the established trade of its members would later be in a position to handle the surplus that is proving such a problem to market satisfactorily.

The form of organization to carry on this retail sales work may be one of two types, viz.,--the stock issuing or the non-stock type. In the one the capitalization is
set at the time of organization, at a figure which will not only cover the initial outlay for necessary fixed assets and working capital, but will provide capital as the business expands through the issue and sale to members of stock certificates. These certificates bear not to exceed 8% interest and are redeemable only upon withdrawal of a member from the association or upon complete liquidation of the organization. In the non-stock type the total paid-in capital of the company is supplied by the membership fees. Additional capital is then obtained by deductions from sales and accounted for to members by certificates of indebtedness. Such a procedure, while entirely legitimate, increases the liabilities of the organization disproportionately for this type of business, for these certificates are direct charges against the assets and income of the association and are an obligation as binding as a note or a bond issue. For an association handling only surplus butter or one dealing in a large established market, this type is all right, but for a concern entering a highly competitive market, such as the retail butter market of Portland where considerable capital will be needed over a period of years in order that the business become firmly established, the stock-issuing type of organization is the one recommended. The common stock of
such an organization must be owned only by the cooperative creameries of the state, for the reasons previously stated, that they are the only business organizations permitted by law to combine for marketing purposes.

The status of the proprietary creameries who sign the marketing agreement of this cooperative agency would be the same as in the other type of association. Their names would not appear as a part of the organization, but the relationship would be the same as between any creamery and a commission house or jobber.

In making the deductions from non-members' sales returns, the amount or rate of these deductions will be the same as for creameries having full membership. However, in returning profits the directors will adhere to the Oregon law and apportion the same on the basis of one-half as much to non-members as to member creameries.

No attempt should be made to launch an association into the retail market of Portland with a capitalization under $25,000, and at least $10,000 of this capital stock should be paid in before the new concern opened its doors. To justify such a capitalization, it must be borne in mind that an agency to really accomplish the purpose for which it is organized, must be provided with storage space of sufficient capacity to permit holding
current deliveries and a sufficient reserve in cubes to take care of sporadic increases in the print sales volume. There would be the cost of delivery trucks and drivers, equipment for printing out extra orders and help to do it, ample office equipment and office help, credit extensions and bad debts, so that the above amount does not appear so large when all these are taken into consideration. One thing further. The above estimate is made on the assumption that the member creameries will await settlement until the butter is sold. If the agency will be expected to pay for the butter upon delivery to it by the member creameries then the above capitalization will not be sufficient.

The capital stock may be divided into 1000 shares of common stock at $25.00 each. If it is the desire of the organizers to issue preferred as well as common stock it would be well to adopt the provision to be found in the by-laws of the Minnesota Cooperative Creameries Association which permits the preferred stock to "be issued by the association only to actual producers of products handled by the association". Such a provision insures that the capital will be supplied by those for whose benefit the agency is organized. The original stock subscriptions may be made by the member creameries at the
Figure 5
Organization Chart, of the Proposed Cooperative Marketing Agency for the Sale of Oregon Butter
FIG. 5. ORGANIZATION CHART OF PROPOSED MARKETING AGENCY
rate of 1 share for a specified unit volume of butterfat received by each member during the preceding year. This proportion may be fixed so that the amount subscribed will equal the amount required to start operating. The remaining capital stock may be paid for by the member creameries from a fund accumulated from deductions, such as $1/8$ per lb. on all butter handled for each creamery in the association.

If after the entire capital stock has been subscribed, additional working capital is needed, deductions may be continued and certificates of indebtedness issued against them provided the amount thus raised is not allowed to exceed the original capitalization.

Figure 5 shows the structure of the proposed cooperative marketing agency and indicates the relationship between the member cooperative creameries and the activities of the association.

As in any similar organization the corporate powers of the Federation are in the hands of a board of directors. There are a number of ways of establishing this board. Their number may be from one to three from each member creamery. These may be elected by the membership or appointed by the Board of Directors of each individual association, or the Board of Directors may appoint one
director and the other may be elected directly by the membership of the local association to be represented. If the number of creamery associations is great enough they can be grouped into districts as has been done in Minnesota and the directors sent from the districts.

The number of cooperative creameries in this section are however not great enough to warrant development of districts with the possible exception of the Lower Columbia Association which is composed of three creameries. This association could be treated as a district, and elect one director to represent those three creameries on the central agency board of directors. The directors of the remaining creameries could each elect one of their number to serve on this agency board until such time as the number of cooperatives might increase to a number warranting the creation of a new district. It is better that the agency directors be elected from the boards of the member creameries particularly at the start, as it will not only be necessary for the member creameries to stand together but it will take the best business heads and men who are familiar with the problem of the local creameries. There will thus be less tendency on the part of the locals to criticise the activities of the
central agency and a greater willingness to stand behind it and see things through.

Next to the directors in importance and in direct charge of the enterprise is the manager. The experience of two associations in the past shows that the initial success of a cooperative marketing organization depends upon the caliber of the man employed as manager. He must be more than a successful butter merchant or successful creamery operator. While these are valuable attributes to his qualifications they do not necessarily fit him for the management of a cooperative marketing concern. In addition he must be a leader and thoroughly in sympathy with the cooperative movement. He must not only be ready to meet the competition of the city butter market, but he must be able to "sell" his organization to the producers. Such men are not easy to find, and when found, are expensive, but $3,500 to $4,000 per year would be none too much for an association of this kind to pay its manager.

As volume of business is just as important for this type of organization as it would be for the organization handling only surplus butter, the writer undertook to ascertain just how much butter was being sold at retail on the Portland market by the cooperative creameries of the State. It was found that four were making such
Table 6

<table>
<thead>
<tr>
<th></th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
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<td>28,604</td>
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<td>28,413</td>
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<td>21,540</td>
<td>71,695</td>
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<tr>
<td>Totals</td>
<td>373,366</td>
<td>181,630</td>
<td>158,066</td>
<td>713,062</td>
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</table>

The Volume of Butter Marketed in Pints on the Portland Market by Three of the Principal Cooperative Creameries in Western Oregon
deliveries, but only three reported the amounts being sold. Table 6 shows these amounts by months and it can be seen that were the figures of the fourth association available the amount would be well in the neighborhood of three carloads per month. Add to this the four carloads of surplus butter, previously estimated and there would be a volume that would come nearer sustaining a central agency than would the surplus alone.

In taking over the retail distribution of butter on the Portland market it would be a mistake to undertake the introduction of an overriding brand the first thing. The proper procedure would be to continue the distribution under the present brands, improving the delivery service and increasing the sales when possible until such time as the standardization work of the association had progressed to a point that a butter of uniform quality was being produced by all the member creameries. So important is this standardization work to the success of a central marketing agency that the following chapter has been devoted to its discussion.
STANDARDIZATION

One of the greatest problems facing the commercial world today is that of markets. The continual increase in the cost of production together with the steady growth of competition has created a necessity for reaching or creating new markets. Out of the effort to meet this problem grew the trust, with the consolidation of plants and capital into an organization to lessen cost of production and increase facilities for marketing. With this centralization came standardization and uniformity of product creating in turn a demand among consumers for certain brands of products which represented a known quality. This demand competition has been forced to meet, until practically every commodity from foodstuffs to manufactured articles sells the better for being properly graded. Of no commodity is this more true than it is of butter.

One of the first problems to be taken up should an organization of cooperative creameries be effected, is the cream grading and standardization work. In the Articles of Association of the North Pacific Cooperative Creameries, in the first paragraph we find that one of the purposes for which the association was organized was "to establish an overriding brand, and by virtue of placing
on the market high grade and standardized products, to widen and extend the markets for butter produced by members...."

In order to establish and maintain such a brand in the market there must be a uniformity of product not now realized. An overriding brand signifies that all butter sold under that brand is of an outstanding quality regardless of the location of the creamery in which it was made. Oregon buttermakers have always recognized that the quality of their butter was dependent largely upon the quality of the cream received at the creamery. They have also acknowledged the fundamental correctness of a system of cream grading and the necessity for adopting such a system has been the subject of an endless amount of discussion, but to date little or nothing has been done about it. Mutual agreements to grade and pay for cream on a quality basis have usually come to naught because of a lack of confidence among the parties to the agreements who are competitors, and the desire on the part of each creamery to retain their volume of production. There are, of course, other factors that have entered into the failure of the previous plans for cream grading, such as the competition of large concerns not party to the agreements, but in the main the above statements are true.
For three years the present association has had the services of a field man who has worked with the butter-makers of the various members toward improving the quality of their product. While much has been accomplished by this work they have failed to produce the quality necessary for an overriding brand mainly because the members are not fully agreed on a standard that all feel they can reach, and because they have failed to tie this work up with a laboratory analysis of the butter as it went into the market. As at present conducted the so-called standardization work is little more than the hit and miss efforts of one fieldman who endeavors to assist each member creamery to improve the quality of its butter toward a sweet cream basis, without relation to the production problems of any other creamery in the association.

The the end then that any organization of the future may realize to the fullest the benefits of standardization the following plan is offered for consideration:

1. All cream grading must be done in the factory, preferably by the buttermaker. The receiving, weighing, and sampling can be done by an assistant but the grading of the cream is in reality a part of buttermaking and it cannot be left to one of the helpers unless the helper is an understudy to the buttermaker. Under no circumstances
should grading be done on the cream route. The driver is usually one who is much more competent to operate a truck than to judge the quality of cream. Weather conditions under which he must operate particularly in midsummer with the heat and dust, and the midwinter with its rain and slush both militate against the best results that might be realized in grading the route-gathered cream.

The best method therefore of handling cream brought in from the routes is to have the driver bring in the individual cans of the patrons regardless of the quantity of cream they may contain, and leave a can in the place of the one taken. The cream can then be weighed on scales that are accurate, sampled under the most favorable conditions, and graded by one who is trained in the work and thoroughly familiar with the standards set by the association.

Under such a system more uniform results may be achieved in the factory. Criticism of quality and suggestions as to ways to improve it carry more weight with the patrons. And lastly, the fieldman is given a better opportunity to judge the work of the buttermaker and to locate any difficulty he may be experiencing in keeping his product up to standard.

2. All cream received in the member creameries
should be graded on the following basis:

**FIRST GRADE CREAM:** Shall consist of cream that is smooth, free from all undesirable odors, clean and sweet to the taste, no off-flavors or foreign flavors, of good physical condition, and shall contain not to exceed .20% acidity, calculated as lactic acid.

**SECOND GRADE CREAM:** Shall consist of cream that is smooth, free from undesirable odors, clean to the taste though slightly sour, no off-flavors or foreign flavors, of good physical condition and shall contain not to exceed .7 of one per cent acidity calculated as lactic acid, nor less than 30% butterfat.

**THIRD GRADE CREAM:** Shall consist of cream that is distinctly sour or high in acid—too high to grade as second grade—that contains undesirable odors and flavors in a moderate degree, that is, foamy, yeasty, metallic, or slightly stale, or that is otherwise unfit for second grade.

**SPECIAL GRADE:** Shall consist of any cream that is old, moldy, rancid, cheesy, or of such quality as to come within the classification as "unlawful cream" in the event that cream grading legislation should be enacted in the future.
Until suitable legislation makes the rejection of such cream possible it may be accepted on the same basis as third grade cream but in no case should it be incorporated in any of the regular churnings nor should it be eventually churned in the churn regularly used for handling the higher grades of cream. It should be pooled by shipment to the central agency where it may be disposed of by sale to some private concern, or the association may see fit to install a small pasteurizer and churn at the agency and let this product be worked up and sold on the local market. Such an arrangement would relieve the member creameries of a very troublesome problem, help them to improve their quality and at the same time realize the most out of this poor cream without lowering the quality of any of their regular churnings.

To try and follow such a concern as the Minnesota Creameries and have but two grades of cream is not practicable at the present time in Oregon. So long as dairying is largely a side line with the farmers there is bound to be a greater indifference to the care of cream on the farm than if it were one of the major sources of farm income.

The grading system outlined above may be sustained as a whole, and the quantity of 1st and 2nd grade cream
increased by offering a 3 cent premium for butterfat in all first grade cream brought or sent to the factory. With the premium as an inducement much cream that would now be rated as second grade would improve to first grade quality and the third grade would be raised to second leaving but the two grades.

3. All butter regardless of grade must have a standard composition. Federal regulations have established the requirement that marketable butter shall have not less than 80% butterfat and not in excess of 16% moisture. Butter therefore that is put on the market having less than the required amount of fat and more than the tolerance of water if detected, subjects the creamery to a fine.

On the other hand butter containing appreciably more butterfat, such as 82 or 83% or has as low as 14 to 15% moisture does not contain a sufficient amount of over-run. The association should therefore adopt a standard content for all butter and work to it in all its churnings. The following standard is suggested:

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Butterfat</td>
<td>80.7</td>
</tr>
<tr>
<td>Moisture</td>
<td>15.8</td>
</tr>
<tr>
<td>Salt</td>
<td>2.5</td>
</tr>
<tr>
<td>Curd</td>
<td>1.0</td>
</tr>
</tbody>
</table>

\[
\frac{100.0}{100.0}
\]
4. In order to reach any given standard for its butter the association must inaugurate a systematic plan of grading and testing each churning.

The first step is to provide for the inspection and grading of each churning made by the usual scoring method. This should be done by an impartial judge and one who is not in the pay of the association. The ideal arrangement would be the one followed by the "Land O'Lakes" Association, viz., to have the inspection and scoring done by a Federal-State inspector. This, however, is not practicable at the present time due to a lack of volume on the part of any association that might be formed among the cooperative creameries of the state, and to the lack of a demand for such service on the part of the butter, egg and cheese dealers on the Portland market. It must be borne in mind that while the Federal Government supervises and stands back of such an inspector the major portion of his salary and expenses are paid by the State which in turn creates a fund for such an expense by the collection of fees for the service rendered. The charges for inspecting butter are $1.50 for the first seven cubes or fraction thereof and 20¢ per cube for each additional cube. The best that an association of creameries could hope for would be an average of six cubes per day [each cube graded
representing 1 churning which would be approximately one hour's work for an inspector and would contribute in the aggregate about $40.00 per month toward the payment of his salary and expense. This would mean that some $300 per month would have to be collected from the market at large and as demonstrated by past efforts to secure such an inspector the market is not yet ready for such a service.

The next best method of inspection is to have the work done by an inspector from the State Dairy and Food Commissioner's Office. The charge for this inspection is the same as for the Federal Inspection, and while it admittedly does not carry quite the weight the Federal State inspection would, it would be a step in the right direction.

It has been suggested that the manager of the association could handle the scoring work until such time as the demand for a Federal State inspector made it possible to have one. It is very doubtful if such an inspection would be satisfactory to the member creameries or would accomplish the purpose for which inspection is intended. In the first place, it would be very hard to retain the confidence of all the members and avoid having some of the buttermakers feel that there was favoritism being shown
toward some of the others. Once this feeling developed all respect for the reports would be lost and the standardization work would be right back where it is now. Further any certificate of quality issued by the association manager would have no standing with either the wholesaler or the retailer. Land O'Lakes tried it and failed and there is no reason to believe the results would be any different in the Oregon or California markets. On the other hand a certificate of quality even from a State inspector would have an effect upon the retail trade, particularly with the ultimate consumer and this would eventually create a sentiment for the Federal-State inspection work.

5. All butter produced by the association should be graded and analysed. As one of the principal purposes of the proposed association is the improvement in the quality and the development of uniformity of product among the member creameries so as to be able to market the output to the best advantage each and every churning should be scored and analyzed. Churnings intended to supply the retail print trade should have a sample cube packed and shipped to the central agency with the surplus cubes. The cubes should be plainly marked with the word "Sample" to denote that there are no others like it in the shipment and that it is intended for scoring and grading pur-
poses. Such of these samples as came up to the standard quality could be credited to the creamery shipping them in and be placed in the agency's cold room to be cut into prints for emergency orders, or if not so needed the butter could be repacked in cubes not stamped with the word sample and the butter placed with other shipments in storage of like grade.

Each creamery in the association would have a number. Each would start out with Churning No. 1, the first churning it makes during the month, for the calendar month is the payment unit basis. Before shipping the creamery would put on each cube the number of the creamery, the number of the churning, this last number prefixed by the number of the month in which the churning was made, and the weight.

Example: (No. of Creamery) 4
(Month and No. of Churning) 6-15
(Weight) 61 lbs.

The special sample cubes would be marked in the same manner except there would be additional word "Sample".

When inspecting the butter the inspectors would use a score card to be made out in quadruplicate. On this card he would note the creamery by number, the churning
by number, the weight as he checked it and the weight marked up by the shipper. He should record the score on the score card in terms of FLAVOR---SALT---COLOR---TEXTURE---PACKAGE---giving the proper weight in points to each item so that the total of points will indicate the score of the butter. On this card there should also be space for comments on the condition of the butter such as "No comments--butter in good condition" or "Butter leaky" or "unclean flavor", etc. The card should then be dated and signed. Of the four copies, one is kept by the inspector, one is kept by the manager of the association, one is sent to the manager of the creamery, and one is sent to the laboratory with sample for testing to be incorporated in a laboratory report.

At the same time that the inspector is scoring the butter a sample would be drawn by him and placed in a sterilized bottle, to be sent to the dairy laboratory at the Oregon State College for chemical and bacteriological analysis.

The chemical analysis is for the purpose of determining how close the member creameries are approaching the standard for butter set by the entire association. The bacteriological analysis would be made to determine
whether or not off flavors or keeping qualities of the butter were being affected by yeasts or molds. The laboratory report would then be made out, one copy would be filed in the laboratory with the scoring report for future reference, one copy would be sent to the creamery from which the butter was shipped, and one copy would be sent to the central association office.

Arrangements could be made with the Experiment Station authorities to have the reports reviewed and commented upon by someone in the Dairy Department of the college competent to do so. These reports then, together with the college comments, could be used by the fieldmen as a basis for their work among the creameries and farmers of their respective territories.

As to the cost of this laboratory work it is estimated that the cost to the association would be 40 cents per sample. At this rate it would be much cheaper for the association than to go to the expense of equipping and maintaining a laboratory of their own, and besides the members would have the benefit of the suggestions of the College Dairy Department toward their objective of improvement in quality of their butter.

6. Competent fieldmen are essential to putting across any standardization program.
In order to properly carry on the field work the state should be divided into two districts, one district being north of Portland on what is known as the Lower Columbia, and the other south of Portland in "The Willamette Valley". The men selected to handle this work should be first class buttermakers and also be able to go out to the farms of the patrons and assist them to produce a better quality of cream. In this state much of the poor quality of butter is due to the lack of proper care of the cream on the farm. If, therefore, the creameries will put into the field, men competent to meet and help the producers, and back him up with a 3¢ premium for following his suggestions much can be accomplished to improve quality.

With the work of a competent field force, both in the field and in the creameries, based on an analytical report of the manufactured product it would be but a short time until a marked improvement and uniformity in the butter would be noted.
SUMMARY

It does not appear from the foregoing study that a cooperative marketing association to handle the surplus butter of Oregon Cooperative creameries is feasible. Volume of business is most necessary for the successful operation of a cooperative marketing association, and it is therefore essentially an organization of a section where dairying is a major enterprise instead of a sideline.

The only type of association that does appear to be feasible is one in which the cooperative creameries of the state that have developed a retail print trade in the Portland market, will merge this trade under one distributive management. There is a certain business "set up" necessary to enable an organization to function at all, and the only way to maintain it profitably is to assure it a definite volume of business. By placing this retail business under one management this would be achieved. The handling of the surplus would then be incidental and entirely practicable, giving the creameries the outlet they now feel they need.

Because of past failures, several of the cooperatives are skeptical as to the possibility for success of a
marketing association and it is not at all likely that they would surrender their hard won retail trade to any organization that had not proved its ability to handle the job.

Competition of the severest kind will be experienced by any cooperative marketing organization that may be formed, not only in the butter market, but in the field among its members, for the raw material. This was one of the rocks in the business channel on which the previous associations were wrecked and it will be the undoing of any future organization unless they profit by past experiences and are organized and financed to meet it.

No association can hope to succeed unless it is adequately financed, has a competent financial program, and an adequate accounting system. Too often those effecting the organization of an association have expected to finance the enterprise in the turnover of their product. They did not consider that any new concern coming onto a market must lose money until it is established, nor did they figure that a creamery often must take a loss on a falling market to be made up by storage holdings when the butter market rises. Such operations
cannot be financed on the turnover, particularly at the start. They should also have an adequate accounting system so as to know where they stand, particularly when the margin is as close as it is on butter.

Plans for a systematic grading of cream, and for standardizing the butter must be developed, and rigidly adhered to by all members. Creameries must also cease from "cutting in" on the territories of other creameries and seek to enlarge their volume through improved conditions among their own membership, rather than at the expense of other creameries.

One of the weaknesses of the first two associations was the fact that they were composed of proprietary as well as cooperative creameries. This was a mistake, for their objectives are directly opposite, the one being operated for the profit of its owner, while the other is operated for the benefit of the producer. In the future no attempt should be made to include proprietary creameries in the production calculations. If any butter is marketed for the private creameries the service should be incidental to the marketing program of the association.

The only agency that can ever hope to really stabilize the creamery industry of Oregon is a properly organized cooperative of dairy producers.
APPENDIX
## CREAMERIES OF OREGON OUTSIDE OF PORTLAND

<table>
<thead>
<tr>
<th>Name of Creamery</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alsea Valley Creamery</td>
<td>Alsea, Oregon</td>
</tr>
<tr>
<td>Albany Creamery Assn.*</td>
<td>Albany, Oregon</td>
</tr>
<tr>
<td>Albany Pure Milk Co.</td>
<td>Albany, Oregon</td>
</tr>
<tr>
<td>Anderson &amp; Sons</td>
<td>Salem, Oregon</td>
</tr>
<tr>
<td>Ashland Creamery Co.</td>
<td>Ashland, Oregon</td>
</tr>
<tr>
<td>Bend Dairy</td>
<td>Bend, Oregon</td>
</tr>
<tr>
<td>Blue Mountain Creamery</td>
<td>LaGrande, Oregon</td>
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<tr>
<td>Brownsville Creamery</td>
<td>Brownsville, Oregon</td>
</tr>
<tr>
<td>Clear Creek Creamery</td>
<td>Carver, Oregon</td>
</tr>
<tr>
<td>Coos Bay Mutual Creamery*</td>
<td>Marshfield, Oregon</td>
</tr>
<tr>
<td>Corvallis Creamery Co.</td>
<td>Corvallis, Oregon</td>
</tr>
<tr>
<td>Commercial Creamery Co.</td>
<td>Baker, Oregon</td>
</tr>
<tr>
<td>Coquille Ice Cream Co.</td>
<td>Coquille, Oregon</td>
</tr>
<tr>
<td>Capital City Coop.*</td>
<td>Salem, Oregon</td>
</tr>
<tr>
<td>Clover Leaf Dairy and Market</td>
<td>Pendleton, Oregon</td>
</tr>
<tr>
<td>Cottage Grove Creamery</td>
<td>Cottage Grove, Oregon</td>
</tr>
<tr>
<td>City Creamery</td>
<td>Klamath Falls, Oregon</td>
</tr>
<tr>
<td>Consumers' Cooperative Assn.*</td>
<td>Astoria, Oregon</td>
</tr>
<tr>
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</tr>
<tr>
<td>Dallas Creamery Co.</td>
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<tr>
<td>Douglas Co. Creamery</td>
<td>Roseburg, Oregon</td>
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<tr>
<td>Eugene Farmer's Creamery*</td>
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<tr>
<td>Euchre Creek Creamery</td>
<td>Gold Beach, Oregon</td>
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<td>Forest Grove Creamery</td>
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<tr>
<td>Farmers' Creamery Co.</td>
<td>Carlton, Oregon</td>
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<td>Greenvale, Creamery</td>
<td>Clatskanie, Oregon</td>
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<td>Grants Pass Creamery</td>
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<td>Golden West Creamery</td>
<td>Pendleton, Oregon</td>
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<td>Harney County Creamery</td>
<td>Burns, Oregon</td>
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<tr>
<td>Hudson Bay Cooperative Creamery*</td>
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<td>Hood River Creamery</td>
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<td>Lower Columbia Coop. Assn.*</td>
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<tr>
<td>Merrill Creamery</td>
<td>Merrill, Oregon</td>
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<tr>
<td>Mutual Creamery Co.</td>
<td>Baker, Oregon</td>
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</table>
Creameries of Oregon Outside of Portland - continued

Deschutes Valley Creamery
Morrow County Creamery
McMinnville Creamery Co.
Mt. Angel Creamery Co.*
Monmouth Cooperative Creamery
Marion Creamery & Produce Co.
Newberg Creamery
O. A. C. Creamery
Oregon City Creamery
Pine Valley Dairyman Coop.*
Prairie City Cooperative Creamery*
Prineville Creamery
Reid's Dairy
Rainier Creamery
Sandy Creamery
St. Helen's Cooperative Creamery*
Snider Dairy & Produce
Silver Creek Creamery
Springfield Creamery
Sheridan Creamery
Tillamook Creamery Assn.*
Toledo Creamery
The Dalles Creamery
Umpqua Creamery Co.
Union Creamery Co.
Valley Creamery Co.
Waldport Creamery
Winkley Creamery Co.
Wallowa Creamery Co.
Western Dairy Products

Redmond, Oregon
Heppner, Oregon
McMinnville, Oregon
Mt. Angel, Oregon
Monmouth, Oregon
Salem, Oregon
Newberg, Oregon
Corvallis, Oregon
Oregon City, Oregon

Prairie City, Oregon
Prineville, Oregon
Eugene, Oregon
Rainier, Oregon
Sandy, Oregon
St. Helens, Oregon
Medford, Oregon
Silverton, Oregon
Springfield, Oregon
Sheridan, Oregon
Tillamook, Oregon
Toledo, Oregon
The Dalles, Oregon
Reedsport, Oregon
LaGrande, Oregon
Independence, Oregon
Waldport, Oregon
Corvallis, Oregon
Wallowa, Oregon
Astoria, Oregon

* Cooperative Creameries.
### CREAMERIES LOCATED IN PORTLAND

<table>
<thead>
<tr>
<th>Associated Creameries</th>
<th>Portland, Oregon</th>
</tr>
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<tbody>
<tr>
<td>City Dairy</td>
<td>&quot;</td>
</tr>
<tr>
<td>Columbia Creamery</td>
<td>&quot;</td>
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<tr>
<td>Gold Crest Creamery</td>
<td>Swift &amp; Co.</td>
</tr>
<tr>
<td>Ideal Dairy Co.</td>
<td>&quot;</td>
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<tr>
<td>Jersey Milk Co.</td>
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<td>Mutual Creamery Co.</td>
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<tr>
<td>Maplewood Cream Co.</td>
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<tr>
<td>Modern Dairy Co.</td>
<td>&quot;</td>
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<tr>
<td>Oregon Milk Co.</td>
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<td>Oregon Creamery</td>
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<td>Pacific Creamery Co.</td>
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<tr>
<td>Portland-Damascus</td>
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<tr>
<td>Peerless Butter Co.</td>
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<tr>
<td>Riverview Dairy</td>
<td>&quot;</td>
</tr>
<tr>
<td>Vetsch &amp; Sons</td>
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<tr>
<td>Willamette Dairy Co.</td>
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</tr>
<tr>
<td>Brandes Creamery Co.</td>
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