

A DAIRY PROGRAM for OREGON



Oregon Agricultural College Extension Service

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Director

A Report of the Convention *for the* Revision of Oregon's Dairy Program Corvallis, Oregon, March 21-22, 1929



CORVALLIS, OREGON

SUMMARY OF CONVENTION'S IMPORTANT RECOMMENDATIONS.

(1) Gradual expansion of Oregon's dairy industry primarily in irrigated districts, through increasing average production per cow and saving heifers from high-producing stock. Expansion based on improved standards of quality in dairy products for both home and out-of-state markets.

(2) Adoption of Federal standards for butter and cheese, the obtaining of Federal or Federal-State inspection on these products by July 1, 1929, and cooperation of all agencies in obtaining Federal reporting service at Portland.

(3) Adoption of cream grading and payment on grades voluntarily until legal action may be taken.

(4) Appointment of a committee to draft rules for butter manufacture and practice with the intent of making the quality of butter more uniform.

(5) Endorsement of the principles of the Norbeck-Haugen Bill relative to the introduction, manufacture, and sale of cooking fat and requesting support of the Oregon delegation, also endorsing an increased tariff on vegetable oils and copra.

(6) Continued organization of dairy-herd improvement associations. Use of more legumes and succulent feeds and the establishment of better pastures in all areas of the state.

(7) Formation of West Coast Credit Corporation with a capital of \$50,000 to finance dairymen and suggestion that bankers make loans only on dairy animals that are free from abortion and tuberculosis.

(8) Action to prevent sale of animals at public auction except those shown to be free of abortion disease as a result of the blood test.

(9) Endorsement of the blood test as the method of diagnosis of abortion disease. Area testing recommended.

(10) Statement of belief that the laxness of Federal control over introduction of disease from foreign ports is nothing short of criminal, and that adequate supervision should be immediately established.

(11) Establishment of the Oregon Dairy Improvement Council, to be composed of official representatives of organizations interested in Oregon's dairy industry, for the primary purpose of carrying out the program herein adopted.

**Report of the Convention for the
Revision of Oregon's Dairy Program**

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Origin and Development of State Dairy Convention

 THE convention for the revision of Oregon's dairy program held on the campus of Oregon State Agricultural College March 21 and 22, 1929, had its origin in a series of more than one hundred articles on "Making Oregon the Great Dairy State" published in the Oregon Journal by Marshall N. Dana, Associate Editor.

Noting the opinions expressed by numerous authorities contributing to the Journal series, the State Dairymen's Association, at its annual meeting held at Medford in January, 1929, authorized the officers of that organization to join other agencies in a conference on the further development of the dairy industry. Shortly thereafter W. G. Ide, Manager of the Land Settlement Department of the State Chamber of Commerce, after conference with Mr. Dana, J. D. Mickle, State Dairy and Food Commissioner and Professor P. M. Brandt, head of the Dairy Husbandry Department of Oregon State Agricultural College and Secretary of the State Dairymen's Association, called a meeting of representatives of the dairy industry in Salem, Saturday January 26, 1929. This meeting was attended by approximately fifty interested persons, including dairymen, creamerymen, State officials, representatives of the College and other interested organizations. After a general discussion the meeting took the following action:

1. Appointed a committee to consider, and if deemed desirable to act, in the matter of having a compulsory cream grading law introduced in the Oregon State Legislature then in session. (Such a bill was subsequently introduced, but owing to opposition it failed to pass.)

2. Appointed a committee of ten to organize a convention to revise the Dairy Program adopted in January, 1924, by the State Economic Conference, and appoint committees to consider and report a course of action on such phases of the dairy problem as (1) production and management, (2) financing the industry, (3) disease control, (4) economic status of industry, (5) marketing methods, grades and standards.

On February 5 this committee of ten met in Corvallis in the office of the chairman, set the time and place of the convention for Corvallis, March 21 and 22, and decided on the following arrangement with respect to delegates:

1. Approximately one hundred delegates were authorized to be chosen from among producing dairymen. These were apportioned to the respective counties on the basis of one delegate for approximately 2000 milk cows as reported in the 1925 Federal census. In the fifteen counties in which dairy meetings were held in connection with County Farmers' Weeks, the dairymen were invited to elect their delegates. In other counties nominations were requested from county agricultural agents, county judges, and chambers of commerce. From the list of dairymen so nominated the general committee of ten chose the delegates.

2. It was agreed that there should be about twenty-five delegates representing dairy manufacturing interests. These were nominated by the State Dairy and Food Commissioner and confirmed by the general committee.

3. It was estimated that the number of public officials, representatives of general organizations interested in dairying, transportation agents, bankers, etc., entitled to act as delegates, would be about twenty-five or thirty. The general committee assumed authority for naming this list of delegates.

The general committee also designated a chairman and one or more technical advisers for each of the five general conference committees. The technical advisers were for the most part members of the staff of the State Agricultural College. One representative of the United States Bureau of Agricultural Economics and one representative of the Marketing Department of the Portland Chamber of Commerce served as technical advisers.

Two weeks before the date of the convention the delegate list was completed and delegates were assigned to the respective committees as follows: Committee on Production and Management, 55 delegates; Marketing, Grades and Standards, 38 delegates; Financing the Industry, 21 delegates; Disease Control, 16 delegates; Economic Status of Industry, 29 delegates.

During the period intervening between the appointment of committees and the date of the convention, the chairman and technical advisers distributed outlines and information designed to facilitate the work of the convention. In fact, much of the success of the convention is due to the large amount of information assembled in advance and classified for the consideration of delegates. No attempt was made, however, to arrive at conclusions or recommendations, this responsibility being reserved for the convention itself.

One hundred and eighty-two delegates registered from twenty-one different counties of the state. Of these, 102 were producing dairymen, 21 represented dairy manufacturing interests, six were bankers, eleven were members of the College staff, twelve were county agents of the Extension Service, thirty were public officials, representatives of the press, various organizations, and transportation companies.

The convention was thoroughly representative. The reports adopted and recommendations made, as printed herein, constitute a revised dairy program for the state. The Oregon Dairy Improvement Council was created by the convention to unite all interested agencies in executing the program. In conformity with the request of the convention the Extension Service presents the report in printed form.

Report of the Committee on

Economic Status of the Dairy Industry

Except about \$25,000,000 worth of cheese from Europe and Canada and \$5,000,000 worth of cream from Canada, United States dairymen are now producing dairy products approximately equal to the United States consumption. Prices for dairy cattle and dairy products have been advancing sharply for several years, and are now probably near the peak of the price cycle. These high prices have encouraged dairymen to save more heifer calves. The number of dairy heifers now on hand appears to exceed the normal requirements for replacement of herds by 5 or 10 percent. Reports indicate that still greater numbers of heifer calves are being saved this year. Unless there is an increase in the rate of slaughtering of dairy cows for beef, it appears that the dairy industry will soon enter a period of more intensive competition in production and marketing. Because prices for dairy products in world markets are low compared to the United States, this competition will take place mostly in domestic markets. It will probably be keenest in eastern states first but may be expected to develop in the western states also. Butter substitutes and vegetable oil food products may provide stiffer competition for dairy products, and prices for dairy cattle may be affected by increased production of beef and other meat animals.

The Oregon situation

The Oregon dairy industry represents about 1 percent of the United States dairy industry and about 10 or 12 percent of that of the eleven western states. Although some butter and cheese is marketed in California in competition with Idaho, Utah, Montana, Wisconsin, and other states, the home market is the most important outlet for Oregon dairy products at this time. Some canned and dried milk is exported from Oregon. Although prices received by Oregon producers for butter-fat have averaged higher than in the western states as a group, and substantially higher than in the chief competitive butter and cheese shipping states of the west—Idaho, Utah, and Montana—and materially higher than for the United States as a whole, the dairy industry in Oregon has been increasing at the rate of only about one percent a year in the number of milk cows. The increase in production of milk has been more rapid because of improvement in the average production per cow, which is now said to be slightly under 200 pounds of butter-fat a year. The present trend in saving heifer calves would provide for a more rapid expansion unless there is an increase in out-shipments or the slaughter of dairy cattle. The number of dairy heifers one to two years old on hand January 1 this year apparently was 10 to 15 percent more than enough to provide for replacements. Reports indicate that there will be further increases next year of dairy heifers both over and under one year of age. For the eleven western states as a group the rate of increase is materially more rapid than in Oregon.

Although it seems impractical to raise heifer calves from cows incapable of producing at least 300 pounds of butter-fat a year, herd replacements alone require on the average over a period of years that about 50 percent of our heifer calves be saved. It is apparent, therefore, that many heifers are now

being raised from cows producing much less than 300 pounds and even below the average amount of milk produced by Oregon dairy cows. Although no major division of the United States excels Oregon in the average production of milk per cow, and only nine individual states are superior in this regard according to census statistics, it is doubtful whether it will prove profitable to raise large numbers of heifers from the lower 50 percent of our dairy cows, even though good pure-bred bulls are used. On the other hand, increasing our herds by in-shipments may result in the increase of disease; considering both quality and price, moreover, it appears that cows are now as cheap or cheaper in Oregon than anywhere else in the country.

From the standpoint of relative advantages it has already been pointed out that Oregon dairymen have enjoyed relatively high prices for butter-fat. The cost of hay averages somewhat higher than in Montana, Idaho, and Utah; somewhat less than in California, Wisconsin and Minnesota, but not much different from the average for the whole country or for the western states as a group. Feed grains are higher than the average for the western states and materially higher than for the United States as a whole. Labor costs less than the average of the western states but more than the average for the whole country. Just what effect increasing the surplus of Oregon dairy products might have on the comparative level of prices for butter-fat is problematical, but would no doubt depend much on progress in standardization and better marketing practices for disposing of the surplus in out-of-state markets. The reserve supply of hay is scarcely adequate for the proper maintenance of the livestock now on hand in Oregon, although a few localities may have a small surplus under average circumstances. The supply of feed grains is inadequate. Expansion of the dairy industry, therefore, requires that more feed be produced or that other kinds of livestock be replaced by dairy cattle. To what extent either or both of these alternatives might be employed to bring about a material and rapid expansion of the dairy industry raises questions affecting the whole economic structure of Oregon's agricultural and allied industries.

Recommendations.

A gradual expansion of the dairy industry in Oregon should be made, but a rapid expansion is not advisable at this time. A policy of increasing milk production by increasing the average production per cow rather than materially increasing the number of cows appears to be desirable. Increases in the number of cows should be made only by raising heifers from high-producing stock. Increased feed supplies must be produced to care for any increase in dairy cattle. For this purpose more irrigated pasture and other roughage feeds that can be fed at a cost less than that of hay and grain should be produced rather than to increase in-shipments of hay and grain for feeding Oregon dairy cattle. It seems most practical for expansion of the dairy business to be made in the irrigated districts of Eastern Oregon where water supplies are ample for increasing alfalfa hay and irrigated pasture production. Increases may also be made in Western Oregon in some localities where it is possible to increase the production of forage. Any program of expansion should be based on improved standards for dairy products that will increase the demand both at home and in out-of-state markets. There should also be improvement in management practices including the development of more herds of such size as are considered economic units.

Report of the Committee on

Marketing, Grades, and Standards

Oregon butter

The amount of creamery butter manufactured in Oregon in 1928 was 25,781,038 pounds. During the ten-year period, 1919-1928, butter supplies gradually increased and have almost doubled. The increase, however, has not been as great as in the neighboring states that compete with Oregon in marketing surplus production. There has been some improvement in the quality of Oregon butter during the past several years, particularly in certain sections where special efforts have been made to bring this about. In general, however, the quality of Oregon butter remains low for it to compete advantageously in discriminating markets. This is especially significant in view of increasing demand for butter of the higher-scoring grades and in view of the fact that Oregon must compete with states that are producing butter of a higher quality.

Market milk and cream

Market milk ranks next to butter in the utilization of Oregon's milk production. In 1927 approximately 345,000,000 pounds of milk were used for this purpose as compared with an estimate of 524,115,660 pounds used in butter manufacture. Consumption is increasing, and there is a gradual extension of the Portland milk-shed into the Willamette Valley and the Lower Columbia region. There is no indication of a definite program or plan for supplying market milk needs.

Cheese

The volume of cheese manufactured and sold during the ten-year period 1919-1928, ranges from about 8,500,000 in 1920 to about 13,500,000 pounds in 1926. Production in 1928 was 12,968,412 pounds. More than 65 percent of the cheese marketed is sold in California, the remaining part of the output in the Northwest, mainly in Washington. As compared with butter, Oregon cheese manufacture and marketing are in strong hands. There are a few small independent factories and a few small cooperatives that might improve their own position through affiliation with other agencies, but in general Oregon has established and maintained a reputation for high-quality cheese.

Concentrated milk

The condenseries of Oregon reported the purchase of 108,167,238 pounds of milk in 1928. They manufactured 28,071,448 pounds of condensed milk and 2,035,164 pounds of milk powder. Oregon is not yet important in the manufacture and marketing of canned milk and milk powder, owing largely to the character of its dairy industry and to the many small creameries throughout the state. There is a tendency, however, for more creameries to enter the field, especially in the manufacture of milk powder.

Cottage cheese and ice-cream

Six cottage-cheese manufacturers made 2,026,286 pounds of cottage cheese in 1928. Ice-cream factories are estimated to have manufactured and

sold more than 2,788,465 gallons of ice-cream in the same year. One-half of the ice-cream output is credited to one company. About one-half of all ice-cream manufactured in the state is sold in Portland.

Marketing facilities

There are in Oregon 108 creameries, 55 cheese factories, 10 condenseries, 6 cottage-cheese factories, and 44 ice-cream manufactories. Eliminating duplications, there are 180 establishments or plants for manufacturing dairy products. In addition there are 70 cream shipping stations. During the past ten years the number of creameries has increased from 91 to 108. Twenty-two of these are in Portland and include 5 centralizers. The other 86 creameries are located at 64 different towns or cities. The 70 cream shipping stations are located at 48 different towns. The number of cheese factories shows a decline from 74 in 1920 to 55 in 1928, this decline being offset to some extent by increase in the size and efficiency of remaining units.

It is generally recognized that large numbers of manufacturing plants and distributing organizations mean heavy overhead charges, especially when supplies are insufficient for capacity operations. Severe competition for raw supplies in Oregon means excessive duplication and economic waste. In general, small, independent concerns are not in a position to compete advantageously with large organizations in marketing, in diverting raw supplies to different uses according to market demands, or in obtaining any other advantages that go with large-scale operations.

Competition for supplies

The large number of competitive manufacturing plants and buying agencies, in relation to the number of dairy cows, has brought about the keenest competition in producing sections. Increasing demand for market milk, together with shifts in sources of supply for manufacturing, has further increased this competition. Volume of business is a most important factor in the success of a creamery; to obtain or maintain volume, quality has been sacrificed and questionable methods have been employed. It has been stated that no cream is so poor that it cannot be sold. In general there is little inducement for quality. The rising price of butter-fat in relation to butter has also contributed to the relatively favorable position of the dairyman and his lack of interest in bringing about changes for the good of the industry. At the same time it has forced creameries into the manufacture and sale of print butter, resulting in turn in excessive supplies of prints and greater competition in marketing as well as in manufacturing.

A number of creameries in the state have adopted plans for the grading of cream as a basis of payment for butter-fat. Theoretically sweet cream receives a premium and sour cream is penalized, but actually the competition is so severe that very few pay a lower price for the sour cream. It is a general practice for the creameries to mix sweet and sour cream, thereby making a butter of only average or poor quality and packing it for sale in prints that are not sold on the basis of score.

The Portland market

Portland, the only large city in Oregon and therefore the central and dominant market, is of the utmost importance in any consideration of

marketing. It is the center of butter manufacture as well as the only large consuming market. In 1927 butter receipts were 9,643,557 pounds, of which more than half (5,428,965 pounds) was manufactured in Portland. In 1928 receipts were 8,550,000 pounds, of this 4,550,719 pounds being manufactured locally. The wholesale butter trade, including wholesale dealers, brokers, and commission men, is composed of about 30 concerns. More than 30 percent of the butter manufactured in Oregon enters into Portland's supplies.

Portland is the lowest-priced butter market on the Pacific Coast. The trend of consumer demand is for butter of better than the average quality that is obtainable on the market, but competition is such that those creameries that could supply high-scoring butter are unable to obtain satisfactory premiums, if any, and they do not have the volume and capital necessary to do pioneer work in making Portland a quality market.

Market quotations

Prices of dairy products in Oregon are based largely on the quotations of the Portland Dairy Exchange. The butter quotation is a single figure for each grade and is widely used as a trading basis. The grades for which quotations are established are extras, standards, prime firsts, and firsts. Prints are quoted 3 cents over cube standards, and butter-fat buying prices are named for station, track, and delivery at Portland. Cheese is not traded in on the Exchange. The butter quotations of the Exchange have been of value as a trading basis, regardless of the small volume of transactions, but they do not reflect actual differences in quality.

Inspection

Inasmuch as improvement in marketing, including wider and more advantageous market distribution and increase in price, depends largely on higher quality, every possible means should be employed to increase the quality of Oregon's dairy products, especially butter. Failure to adopt standards, Federal or Federal-State inspection, and other services or methods that will put Oregon's industry on a par with adjoining states with reference to marketing means further loss in its relative position among competing states, other things being equal.

Cream grading

In the areas of the state where competition is so keen that dairymen have little incentive to improve the quality of the cream they deliver and creamery operators are in no position to insist on quality, it is difficult to bring about improvement. At the same time improvement must be made in the quality of cream or Oregon will remain indefinitely on a sour-cream basis, losing its opportunities in out-of-state markets and in time losing its home markets. It is reasonable to expect that organizations and concerns in other states will extend their operations into Oregon if and where their volume increases to the point that they need Portland for an outlet. It seems necessary, therefore, to adopt uniform or official cream grades and to establish and maintain price differentials between grades so as to force the delivery of better cream.

The California market

California markets are the principal out-of-state outlets for Oregon's dairy products, and continue to offer the greatest opportunities. California is deficient in butter and cheese production and with a continued increase in population it will be even more dependent on out-of-state supplies. Idaho, Utah, Montana, Oregon, and Washington, in the order named, are the principal shippers of butter to California markets. Supplies are received, however, from about 15 states. In Los Angeles Oregon ranks sixth among the shipping states and in San Francisco it ranks second.

Oregon is advantageously located with respect to California markets and has lower transportation expense than competing states. Oregon supplies are decreasing both relatively and actually, however, and Oregon has dropped from third to fourth place among competitive states. It needs to be pointed out in this connection that the greatest opportunities in California markets are offered to those states that can furnish quality butter consistently and throughout the year. At the present time the quality of Oregon shipments is below that of Idaho and Washington. It is estimated that approximately 35 percent of the annual receipts from Oregon will score 92 or better, and that about 14 percent will score below 90. This leaves half of the receipts 90 and 91 score.

More than 70 percent of the cheese consumed in California is manufactured outside the state. Its production is declining. Idaho, Oregon, and Wisconsin, in the order named are the main sources of supply. Shipments are increasing from these states. In 1928 Oregon shipped 3,554,596 pounds of cheese to Los Angeles and 2,876,984 pounds to San Francisco. Total receipts were 14,585,733 pounds at Los Angeles and 12,675,861 pounds at San Francisco.

Cooperative marketing

Considered as a group the cooperative creameries of Oregon have not made progress in manufacturing butter comparable to the progress made by cooperatives in adjoining states. The largest of the cooperatives ships to California, and the surplus of those in Eastern Oregon is shipped to the same state. The remaining six cooperatives ship mainly to Portland, their combined shipments being a negligible part of Portland's receipts. In a number of dairy states cooperative marketing has been a vital factor in bringing about marked improvement in quality. This has usually been accomplished through the federation of small cooperatives into a large organization.

Recommendations

1. It is recommended that the convention endorse the principles of the Norbeck-Haugen Bill, introduced at the last session of Congress, relative to the introduction, manufacture, and sale of cooking fats, and that the convention request the Oregon delegation in Congress to support any proposed legislation at the next session of Congress which embodies these principles.
2. It is recommended that the convention endorse an increased tariff on vegetable oils and copra.

3. It is recommended that market quotations on the Portland market be placed on the same basis as on other large markets on the Coast, and that all agencies cooperate with the Bureau of Agricultural Economics in establishing and maintaining a Federal reporting service at Portland.

4. It is recommended that Federal standards for butter and cheese be adopted in Oregon and that the Portland Dairy Exchange, Oregon State Agricultural College, the Dairy and Food Commissioner, and the Oregon Creamery Operators Association immediately work out plans to assure Federal or Federal-State inspection of butter and cheese beginning in July, 1929.

5. It is recommended that the following cream grades be adopted by voluntary agreement until such time as legal action may be taken, and that buying agencies establish price differentials that will encourage the delivery of cream of the higher grades:

SWEET CREAM shall be understood to be cream that contains not in excess of .2 of 1 percent lactic acid and is smooth, clean to the taste, and free from foreign flavors and odors.

FIRST GRADE cream shall be understood to be cream that contains not in excess of .7 of 1 percent of lactic acid and is smooth, clean to the taste, and free from foreign flavors or odors. Butter from this cream should score 91 or better.

SECOND GRADE cream shall be understood to be cream that is too high in acidity to grade as firsts, that may be foamy, yeasty, metallic, or contain foreign flavors and odors or either of them in a moderate degree, or is slightly stale and that is edible but does not meet the requirements of first grade cream.

UNLAWFUL cream shall be understood to be cream that is old, musty, rancid, dirty or with marked undesirable odors or flavors.

6. It is recommended that the convention sponsor and call a meeting of producers of market milk, in the Portland milk-shed and in other areas interested, for the purpose of going more thoroughly into their problem and developing a program to be followed by this special group.

7. It is recommended that the convention endorse a movement developing in the Portland Dairy Exchange to establish a primary market on cheese at Portland.

8. It is recommended that this committee endorse the program of the State College Creamery in buying cream on a graded basis with an approximate production of 300 pounds per day.

9. It is recommended that a committee be appointed of practical butter-makers, composed of L. B. Ziemer (chairman), H. C. Raven, E. S. Larrabee, P. C. Jorgensen, Mark Thompson, Dr. Gustav Wilster, to establish correct manufacturing rules and practices intended to bring about uniformity in quality of Oregon butter.

10. It is recommended that the convention request the Portland Chamber of Commerce to appeal to the Port of Portland requesting them to establish a wharfage charge on dairy products exported through that port equal to other Pacific Coast ports and also encourage more frequent and faster sailings to Hawaii and the Orient.

Report of the Committee on Dairy Financing

Dairymen are now financed principally by local banks. A negligible amount of financing is done by dealers in connection with sales of dairy cattle. Intermediate credit facilities are utilized only to a limited extent. There are but four agricultural credit and livestock loan companies organized under the Intermediate Credit Act to make advances to dairymen in Oregon. One is located in Portland, another in Klamath county, a third in Redmond, and the fourth in Payette, Idaho.

Generally speaking, the committee finds that country bankers have been as liberal in advancing credit to dairymen as sound commercial banking practices permit. The character of the dairy loan itself is necessarily such as to involve considerable trouble and expense to the banker. The dairyman receives his cream checks at regular periodic intervals, weekly, bi-weekly or monthly. Experience with dairy loans dictates that the borrower be encouraged to pay installments on principal and interest accruals at the time when he received his milk or cream checks. It is well known that if dairy cattle are to be paid for out of the proceeds from milk or cream checks, an interval ranging from twelve to twenty months is required, usually twenty months.

The sentiment of your committee is that the facilities of the Intermediate Credit System could be invoked with success particularly in those localities where dairying is one of the major enterprises and where local bankers may be hard pressed to furnish an adequate supply of credit. Bankers may also welcome the facilities afforded by this system in those instances where borrowers desire financing not only to purchase dairy cattle but to grow feeds and pasture. In such cases the banker may prefer to limit his extension of credit to that of financing the feed program, leaving the dairy-cattle purchase program to be financed through intermediate credit channels.

The present rate of interest charged by the Federal Intermediate Credit Bank of Spokane is 5 percent. The sending companies are permitted to charge a spread of $2\frac{1}{2}$ percent above this on livestock loans secured by chattel mortgages. An agricultural credit corporation organized under the State laws to place itself in a position to do business with the Intermediate Credit Bank of Spokane must have a minimum paid-in capital in cash of \$10,000.

Direct loans may be made to cooperative marketing associations when such loans are secured by warehouse receipts or shipping documents on staple agricultural commodities. Unfortunately for cooperative marketing associations operating in the dairy industry, dairy products are not classed as staple agricultural commodities by the Federal Farm Loan Board, nor has the United States Warehouse Division issued regulations permitting the issuance of United States Warehouse receipts representing these commodities.

Intermediate credit facilities are available only to producers who borrow through a constituted company such as the agricultural credit corporation or livestock loan company. Because of dairy loans being small and because

of the monthly liquidation of these loans, the maximum spread of 2½ percent permitted these companies does not allow for large profits. Such organizations should therefore be organized with the primary purpose of service to the borrower and the upbuilding of the industry.

Recommendations

Inasmuch as the development of the dairy industry in Oregon involves adequate financing, the committee recommends that if present commercial channels of dairy financing are deemed inadequate to meet the demands of a sound development program, and in view of the sentiment that sufficient use is not being made of Federal Intermediate Credit facilities, an agricultural credit corporation to operate on the west coast of Oregon, including the Willamette Valley, be organized with a capital of at least \$50,000, a portion of the stock to be on a 7-percent preferred basis; the remainder, and at least 50 percent, to be common stock. In order to minimize expense and thus reduce interest charges to the borrower, it is suggested that creameries and other organizations might serve as a collecting agency for this corporation and that reliable field-men of these creameries act as its inspectors. The management of this corporation should be experienced in banking and have a sound knowledge of the dairy industry. Where possible, borrowers might be encouraged to take a portion of their loans for investment in the preferred stock of the organization. The loans themselves should be subject to monthly repayments ranging from 3 to 5 percent. The committee is strongly of the opinion that this corporation should exist primarily to render a service, and that investors in common stock should make such investments with this thought primarily in mind, rather than large financial returns. Obviously in order to make the rate of interest to the borrower on the lowest possible terms, the organization should also be managed on an efficient and economically sound basis. The greatest need for such an organization exists on the west coast including the Willamette Valley. It might, however, prove advisable to organize a separate corporation to serve Coos and Curry counties. Eastern, Central, and Southern Oregon are now being served to a limited degree.

Your committee further recommends that as a proper basis of credit for commercial banks and Federal Intermediate Credit banks, dairy products be classed as eligible for the issuance of United States Warehouse receipts, and that proper steps be taken to have regulations issued by officers of the United States Warehouse Act placing these commodities on the eligibility list for the issuance of United States Warehouse receipts.

In addition it is recommended that proper information be placed before the Federal Farm Loan Board to facilitate the classification of these products as staple commodities in order that the making of direct loans by Federal Intermediate Credit Banks and other financing agencies to cooperative marketing associations may be facilitated.

The committee further believes and recommends that bankers should encourage borrowing dairymen to produce proper legumes and forage crops on their premises, thereby lowering the cost of production and permitting discontinuance of the practice of purchasing large quantities of feed from commercial sources.

Bankers in making loans should also insist on tuberculosis-free animals and abortion-free herds. They should foster and promote the building up of high-grade herds through the use of registered bulls and lend their influence toward the adoption of approved methods of marketing dairy products.

Finally, in their dealings with borrowers bankers are urged to emphasize the importance of placing farm operations on a budget plan. The committee commends the bankers of the state for their zeal in supporting boys' and girls' calf clubs and solicits their continued interest and cooperation in its behalf.

NOTE: After the presentation of this report the following motion was made and adopted: "That this gathering call on the State Bankers' Association, through the chairman of its agricultural committee, to incorporate in its program a general schedule of dairy credits somewhat similar to that adopted in California."

Report of the Committee on Production and Management

Subcommittee on dairy herd improvement associations

Dairy herd improvement associations are the organized method of determining production costs and culling out unprofitable cows. These organizations have increased from 4 in 1923 to 14 in 1929, testing 12,000 cows, placing Oregon for the second time fourth in the United States in the percentage of cows on test.

In view of the value of these organizations in improving the state's dairy industry, it is recommended that new associations be organized wherever local conditions permit.

One of the problems of the small dairyman is his difficulty in obtaining the use of high-class pure-bred sires in building up his herd. The smallness of his herd often makes his purchase of a high-class sire prohibitive, and because of the fear of spreading disease the use of a neighbor's high-class animal is not always possible.

Recognizing the value of high-class sires in the building up of the state's dairy herds, and with so many herds of the state small in size, it is recommended that the organization of bull associations be encouraged. It is further recommended that dairymen recognize the value of preserving and prolonging the service of sires which have proved their ability to transmit increased production.

Subcommittee on sales policies

During the past two or three years the state has experienced a large demand for dairy cattle on the part of buyers from California. This business is now developed to a volume of about 2,500 head per year and could be expanded if more animals were available. These buyers are buying high-class dairy animals and are beginning to demand that they be disease-free not only from tuberculosis but also from abortion disease. Preference has always been shown for cattle with known records of production.

There is also some demand for dairy cattle on the part of new dairymen, especially in the eastern part of the state. Some beginners have had unsatisfactory experience in their first purchases, frequently finding that they had low producers and animals that were diseased.

In view of these conditions it is recommended that local buyers desiring cattle for their own herds be urged to buy only quality stock of known production and known freedom from all infectious diseases. It is further recommended that we recognize the demand for cattle on the part of California as another possible cash crop, and that we strive to build up a reputation for quality, both in production and freedom from disease. It is also recommended that dairymen having cattle for sale recognize the value of having the animals offered in good flesh and trimmed to make a good appearance.

Subcommittee on economical units

It is known that 10 cows is a more economical unit on a sideline dairy than a smaller number and further that a herd of 18 to 20 cows is required to make a reasonable living where dairying is the major source of income. It is likewise a fact that the average dairy herd of Oregon has less than eight cows. It is recognized, nevertheless, that feed conditions and the size of farm do not always permit an increased size of herd. It is recommended that there be no discouragement of the small dairyman, but rather that he be given encouragement to keep only cows of 300 pounds production or more, to sell products of highest quality, and to increase the size of his herd of 10 cows or more *when feed conditions permit*.

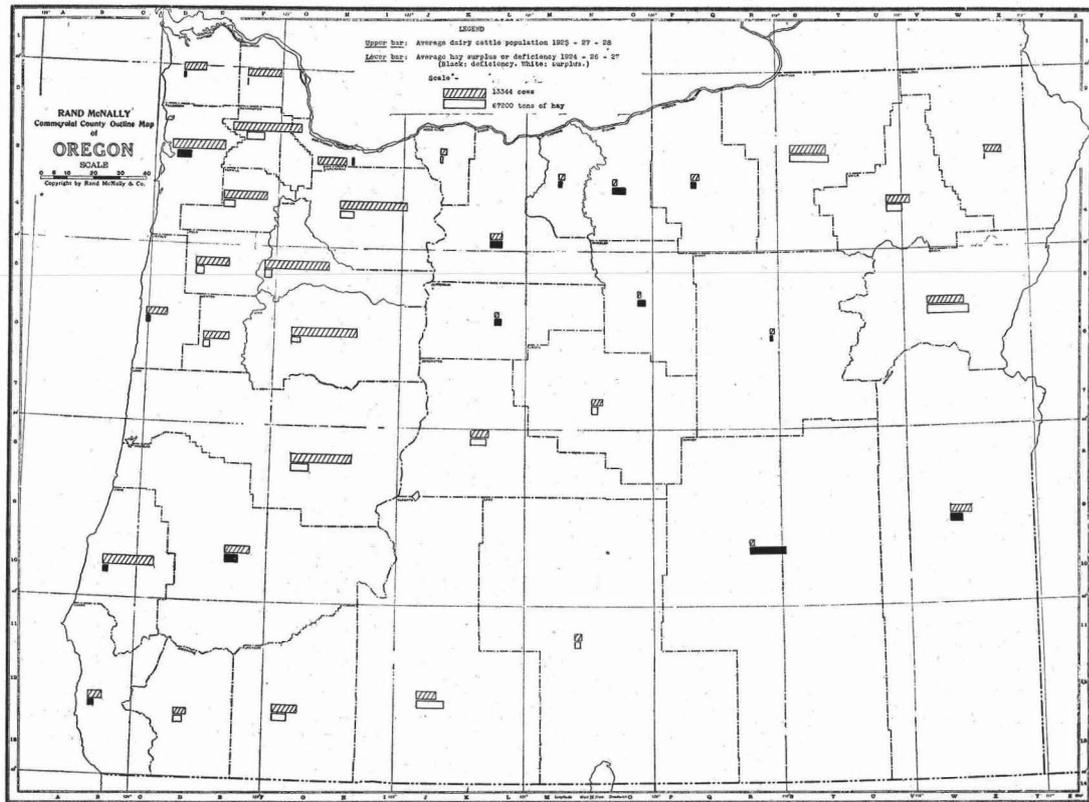
Subcommittee on feeds and pastures

Feed supply is the foundation upon which successful dairying rests; a shortage means curtailment and an oversupply makes expansion possible. Roughages are of special importance in livestock production. Grain can be imported and shipped for considerable distances economically. But "long hauls" are prohibitive on bulkier feeds except in special cases such as superior markets for products or the saving of animals from starvation. A comparison of production and requirements of hay for Oregon livestock as prepared by the department of Animal Husbandry shows that for ten years, 1918 to 1927, there was an average yearly shortage of more than 100,000 tons; while for the five years, 1923 to 1927, there was an average surplus of approximately 30,000 tons. This surplus is too small a margin for safety, as is shown by the experience of this year when hay shortages are reported in every county but Baker and Klamath. Studies of the feed supply by counties and for the state indicate that with the present livestock population, there is plenty of total hay in the average year but that the margin of hay carried over is probably a little too small for the years of long feeding periods due to short pasture in summer and to long hard winters.

The legume requirement for the dairy cattle of Western Oregon is not met by local production though improvement is made each year. Some of the coast counties and the district known as the Portland milk-shed are yet on an import basis for legume hay, all of which is not supplied by other sections of the state but is supplied in part by imports from Washington.

The potential feed supply is probably not a limiting factor in the expansion of the dairy industry as there are ample means of increasing the hay yield per acre and increasing the acreage also. The principal hay deficiency areas where dairying is important are the coast counties including Douglas county and some Southeastern Oregon counties. The former area does not produce much hay but can and will do so as there is greater use of lime and culture of vetch, clover, and in some cases even alfalfa. The Southeastern Oregon area produces much good dairy hay but because of the large population of beef cattle and sheep is an important deficiency area. The wheat counties of the Columbia basin, except Umatilla county, are deficiency counties for hay.

Important surplus hay counties include Washington, Yamhill, and Clackamas in the Willamette Valley, Jackson and Josephine in Southern



* Upper bar represents Average Dairy Cattle Population 1925, '27, '28.
 Lower bar represents Average Hay Surplus or Deficiency 1924, '26, '27. Black: Deficiency. White: Surplus.

Oregon, Klamath and Deschutes in Central and Southeastern Oregon, and Umatilla, Baker, and Union in Northeastern Oregon.

In Eastern Oregon the established and new irrigation projects may produce an enlarged acreage when the demand justifies a more complete settling of these projects. In Western Oregon there are many acres that with lime and drainage may produce more vetch, clover, and alfalfa. Estimates based on soil survey maps and field experience indicate that there are more than 550,000 acres in the ten Willamette Valley counties that are included in soil types suited to alfalfa culture when limed, drained, or otherwise put into proper condition.

A high quality of hay, both for home use and for market, is essential. The buyer of hay is therefore interested in obtaining hay of known quality. Federal hay grades have been established to this end and many states have a cooperative agreement with the Department of Agriculture for the supervision of hay grading. Some dissatisfaction has been expressed with present methods of hay inspection in this state but the State Market Agent expressed himself as agreeable to a cooperative agreement with the United States Department of Agriculture if producers and consumers desire it.

The value of legume hay as compared to other types of hay in dairy-cattle feeding is well known, and it is of interest to note that feed costs per pound of butter-fat are lower in the sections with an abundant supply of this type of hay.

The use of green feeds and succulent feeds during the winter period or when pastures are short is of decided advantage. The particular crop to be used will vary with the different sections and different soil types. Silage crops, such as corn, vetch and oats, or peas and oats, and sunflowers, have practically equal value as far as milk production is concerned. The one to be used will, therefore, depend on the yield obtainable, the cost of production, and which crop is most desired in a crop rotation. Root crops have a little less than half the feed value of silage crops, but the yield often offsets this disadvantage. Kale is also found to have a feed value equal to silage crops. Green feeds, such as corn, alfalfa, vetch and oats, are profitable crops to supplement pasture, especially in Western Oregon sections.

Considering the low silage yields in parts of the Willamette Valley and the value of kale as a feed, many dairymen believe that kale is of sufficient importance that it should be grown as a major succulent crop but that there should be supplemental silage or roots for periods when kale is not available.

Recommendations

(1) That dairymen strive to provide legume hay exclusively for their cows in milk and for their growing heifers.

(2) That more attention be given to the value of green feeds and succulent feeds for winter feeding and as a supplement to pastures, and that rotations be so estimated that cows in milk are provided with succulent feeds or pasture throughout the year.

(3) That the State Market Agent be requested to enter into the cooperative agreement to obtain Federal hay-inspection supervision for Oregon and that a copy of this request be forwarded to the State Market Agent and

to the Governor of the state. It is also recommended that a hay grade committee be appointed to follow up these grade matters.

Subcommittee on pastures

The importance of pastures to the dairy industry in Oregon is very great. Pastures contribute to the health of the animals and provide a large amount of cheap feed. On many Eastern Oregon farms the establishment of grass pastures would reduce labor charges, lighten all the farm work, give higher average acre returns, and put farming on a more stable basis.

Since in these regions the water is already on the land, no new cost would be involved; in fact, costs would be lessened, owing to the smaller amount of labor required. In a survey of an irrigated district in Utah the farms with plenty of good pasture showed the highest labor income.

The profitableness of irrigated pastures in Eastern Oregon may be estimated by considering the returns made on three Central Oregon farms with a total of 19 acres which pastured 51 cows. The results are as follows:

Number of days on pasture.....	153
Number of cows per acre	2.7
Other feed used—hay	4,469 pounds
Milk production per acre	9,391 pounds
Fat production per acre	429 pounds
Total value of milk and fat	\$195.56
Less the value of hay	22.35
Gross return per acre	173.21

In the Willamette Valley a great deal of water is available from the many streams of the Valley ranging in size from the streams flowing one-half a second-foot in mid-summer to the Willamette River and its larger tributaries. Land to be cheaply irrigated from streams must be closely adjacent to these streams. Lifts of twenty feet or under are reasonable. Thirty feet is not excessive.

It is not usually advisable to put a high overhead on poor land. If such a program is undertaken, therefore, good free-working soil should be selected, having good drainage and topography such that the land can be leveled for irrigation with a reasonable amount of labor. If a good distribution system can not be worked out for an area under consideration with a reasonable amount of labor, the project should be discouraged. Not only is a good soil recommended, but a high fertility should be maintained by applications of manure in order to maintain high carrying capacity.

The operation cost of a pumping plant suitable for irrigating 10 acres, which would include interest, taxes, and depreciation on the equipment, labor, fuel and oil, and interest and taxes on land, will approximate \$300.00 per year. On the basis of the 10 acres pasturing 20 cows for six months, this would make a charge of \$2.50 per cow per month.

That such a cost is not excessive is evident from data obtained by the Oregon Agricultural Experiment Station on two herds of cows. One had access to 22 acres of luxuriant Canary Grass pasture while the other was barn fed throughout the year. These herds were in the center of the

Willamette Valley. The herd receiving pasture produced an average of 5,887 pounds of milk and 269.36 pounds of butter-fat. The value of butter-fat was \$123.20. The feed cost, including cost of pasture, averaged \$59.37, thus leaving an average profit of \$64.12 per cow.

The herd that was barn fed was composed of 54 cows, but results were averaged on only 46. Their average production was 6,877 pounds of milk and 276.8 pounds of butter-fat, the value of which was \$126.95. The feed cost was \$87.79 (one and one-half times greater than that for the other herd), leaving a profit of \$39.06. Considering this on the basis of the cost of butter-fat, the pasture-fed herd produced fat at a cost of 22 cents per pound while the barn-fed herd produced fat at a cost of 32 cents per pound.

Observations in all dairy sections of the state would indicate that rotation grazing of pastures is desirable, that stands are better maintained and carrying capacity of the pasture is increased. Dairymen also report that beneficial results are obtained from judicious use of fertilizer on pasture land.

Recommendations

(1) That dairymen give increased consideration to the desirability of establishing permanent grass pastures, and that in their seeding only recommended grass mixtures be used. Further that in Eastern Oregon, Ladino and grass on the moister lands and sweet clover on drier lands be given special consideration, while in Western Oregon Ladino and Burr clovers on more irrigated soils and Ladino on irrigated lands be especially considered.

(2) That dairymen in Western Oregon give further consideration to the possibility of establishing irrigated grass pastures on their farms and that such pastures already established be observed in determining on their feasibility.

(3) That it be recognized that the success of grass pastures is dependent to a large degree on their management and that rotation grazing and judicious fertilization should therefore be given proper consideration.

Report of the Committee on Disease Control

Losses through disease represent one of the greatest handicaps to the livestock industry. As livestock population grows, farmsteads become closer together, and general trafficking increases through the development of transportation facilities, the danger of spreading disease increases materially and the problem of control becomes more complex.

Modern methods of livestock management, moreover, are frequently conducive to the development of diseases. The problem of maintaining health, fertility, and virility is much greater under modern high-pressure conditions than under conditions that prevailed twenty years or more ago. All of these things emphasize the importance of livestock sanitation, disease control, and research in a combined effort to reduce losses to a minimum. In this report the committee has considered only those diseases which may become of importance from a community or general public standpoint.

Tuberculosis

The last report of the Livestock Sanitary Board shows .6 of 1 percent of tuberculosis infection in Oregon. Under the present laws, recently amended, it will be possible for many of the counties that have been doing county-wide testing in the dairy herds to extend this testing to all cattle. It is confidently expected that within the next eighteen months a number of additional counties in Oregon will become tuberculosis-free areas.

In the control of tuberculosis in cattle it becomes increasingly apparent that more attention must be given to the control of tuberculosis in chickens, especially in the farm flocks. Dairymen should give careful attention to the health of their farm flocks and be careful in the purchase of all poultry.

Recommendation

The committee advises that tuberculosis control in Oregon is well taken care of, and recommends that the present policy be continued with the idea of stimulating interest in accredited-fee areas.

Abortion

It is now definitely established that infectious abortion can be controlled. It can be eradicated from herds that are infected, clean cattle can be raised from abortion-infected cows, and the spread of the disease through communities or from one farm to another can be stopped. Abortion disease undoubtedly causes more economic loss in Oregon than any other single dairy cattle disease. This is owing to the marked loss of milk flow and general milk and breeding efficiency which is characteristic of those animals infected. For these reasons it is important that the methods that have been adopted from the findings of careful experimental work should be put into state-wide or at least regional effect as soon as possible.

The State Livestock Sanitary Board has established systems for accrediting both individual herds and areas as being abortion-free. A study of the requirements leading to the establishment of both accredited herds and areas is suggested to every dairyman.

Recommendations

1. The conference affirms its confidence in the accuracy of the agglutination test, and its belief that the disease can be eradicated through using it as a means of diagnosis.
2. Breeders of pure-bred cattle are urged to take steps to place their herds on the accredited list.
3. Since owners of grade cattle will be more interested in community testing, disease-control associations and other organized testing are urged as a means of eradicating the disease to the point where certification can be granted.
4. The Livestock Sanitary Board is requested to adopt an official brand that may be used in marking reactors to the abortion test.
5. No public auction sale of dairy cattle should be held except when the herd is wholly free from the disease, or unless the owner or sale manager states the percentage of reactors in the herd from which the sale cattle are taken. But in no case should any animal be sold at public auction except those that are free from the disease.
6. All livestock shows and expositions in Oregon are requested to require all cattle shown after January 1, 1930, to be free from abortion disease.

Sterility

There are three different types of sterility. The cause of one is unknown. It is possible that any one or all of four factors may contribute to this condition. These factors are infection, malnutrition, heredity, and poor management. Research of the most painstaking character must be made until methods leading to the relief of this condition are discovered.

Recommendations

It is recommended that the Experiment Station continue its program of research on the cause of sterility and that this conference endorse this study as an important part of the dairy program of the state.

Anthrax

During the last year two important areas in Oregon have been infected with anthrax. This is a type of infection which will, to all practical purposes, remain in the soil forever. Livestock kept in these areas will probably always have to be vaccinated to prevent further outbreaks. One of these areas probably became infected through the shipping of unvaccinated cattle from an anthrax-infected area from another state.

It is not known how the other area became infected, but there is some reason to believe that the infection may have come through feed or materials from foreign lands. The coming of both of these infections into the state indicates the importance of patrolling interstate traffic.

Rigid quarantine should be placed against any livestock or materials which may carry this disease from other states or from foreign ports. The Bureau of Animal Industry should take adequate measures to prevent the

introduction of anthrax or any oriental stock diseases on copra, cocoanut meal, soy-bean meal, bone, or bone products, or any of the other products on which this infection could be carried.

Foot and mouth disease

This is another disease of a most serious nature, the control of which depends on the destruction of infected animals. Two outbreaks within the last five years have occurred on the Pacific Coast. Both of these outbreaks have been traced to the feeding of contaminated garbage from ships that have come from foreign ports. This again emphasizes the importance of having adequate Federal supervision leading to the prevention of the introduction of livestock diseases in this manner. The responsibility for this rests clearly with the Federal government. The inadequacy of the protection given in the past to the American owner of livestock cannot be overemphasized. The committee makes the following recommendation.

Recommendation

It is affirmed that the laxness of Federal control over the introduction of disease from foreign ports is nothing short of criminal and that adequate supervision should be immediately established. There is no excuse for the second outbreak of foot and mouth disease. This condition should be directed to the attention of the Secretary of Agriculture, the Chief of the Bureau of Animal Industry, and the two senators and three representatives in Congress, with the request that immediate action be taken to give adequate protection against the introduction of such diseases from foreign ports.

John's disease

This infectious disease of cattle characterized by chronic scours and gradual loss of flesh, has been found a few times in Oregon. After it becomes well established in a herd it is rather difficult to eradicate. Dairy-men should be on the lookout for indications of this disease. All suspected cases should be reported promptly to either the state or the county veterinarian. The slaughter method is the only procedure which has proved successful.

In Oregon indemnity can be had for animals slaughtered on account of this trouble.

White Scours in calves

This disease is becoming more prevalent on Oregon dairy farms. Now that the price of cattle is good the grade heifer calves should be protected from this trouble. On those ranches where white scours is causing losses all calves should have an injection of white scours serum as soon as they are born. This serum is a preventive rather than a curative agent.

Thorough cleaning and disinfection of the barns is an important part of any campaign to control losses from this trouble.

Infectious Scours in cattle

This malady has become rather serious in several sections of the state. It seems to be a definitely infectious disturbance which spreads through a

herd very rapidly. Affected cattle show a severe diarrhea, a marked decrease in milk flow, and a rapid loss of flesh. After a few days the diarrhea tends to disappear, but the animal usually fails to come back to normal milk flow. The losses from the trouble are mainly the result of diseased milk production rather than death losses.

The exact cause of this disease is not known. The only method of prevention known at present consists in preventing exposure of susceptible cattle to the disease. Dairymen should not visit ranches where this trouble is occurring. If outbreaks of infectious scours are known to exist in a dairyman's county it is good insurance to keep all visitors out of the barns and corrals where the dairy herd is kept.

This malady has become serious enough to warrant research studies. If it continues to increase in prevalence as it has done during the last two years it will demand serious attention within the very near future. It seems to be the type of disease which might possibly be controlled through the development of a preventive vaccine.

Patent medicine salesmen

Salesmen of various livestock remedies who go from farm to farm are often spreaders of disease. They visit those ranches which are having diseases because it is on such ranches that they have their best chances for sales. They examine the sick animals, walk around in the infected yards, and frequently go directly from these infected premises to other farms without taking any sanitary precautions.

It is good disease-prevention insurance to forbid these salesmen to come on to the ranch.

Truck and public carriers

It is increasingly apparent that the truck and trailer used to haul livestock from farm to farm and from farm to the slaughter house are effective spreaders of livestock diseases. They are not adequately cleaned or disinfected. The dairyman is in a position to assist materially if he responds to the following suggestions.

Recommendations

1. That all dairymen be urged to send the names of truck and trailer owners used in hauling livestock to the Livestock Sanitary Board, Salem, Oregon.
2. Dairymen are urged not to have any cattle shipped nor to receive any cattle on their farms on trucks unless in each case they themselves have personally supervised the cleaning and disinfection of the truck.
3. Report any cases of hauling livestock without proper disinfection of truck or trailer to the Livestock Sanitary Board in order that they may enforce the quarantine provision against said truck.
4. When any areas are declared free from livestock disease these quarantine and sanitary provisions against trucks must be applied to the common carriers.

Dairy Improvement Council

The following report was received and adopted by the convention:

We, your committee to which was referred the question of developing an organization to unite the various interests concerned with the development of the dairy industry and guarantee the execution of the program growing out of this convention, respectfully report as follows:

1. We recommend that an organization be created to be known as the "Oregon Dairy Improvement Council."

2. The principal purposes of the organization may be stated as follows:

(1) Execution of the program growing out of this Convention (Convention for the Revision of the Oregon Dairy Program, held on the campus of Oregon State Agricultural College March 21 and 22, 1929).

(2) Coordinating the efforts of the various agencies interested in the welfare of the dairy industry in the state.

(3) Capitalizing on the good-will and helpful attitude of various businesses and commercial groups by familiarizing these groups with the need and value of the more extensive use of dairy products and obtaining such legislation as may be necessary to establish effective grading of cream, proper sanitary inspection of sources of supply of milk, and necessary program of fundamental research and extension.

(4) Educating consumers to recognize and demand quality dairy products.

(5) Emphasizing the need and value of dairy products in human diet.

It is the judgment of the committee that the Oregon Dairy Improvement Council should be a representative body, with official representatives from such organizations as the following:

- State Dairymen's Association
- Dairy breed associations
- Creamery Operators' Association
- Buttermakers' Association
- State College Experiment Station
- State College Extension Service
- Teachers of Vocational Agriculture
- State University
- State Dairy and Food Commissioner
- State Market Agent
- Oregon Bankers Association
- State Chamber of Commerce and affiliated members
- Service clubs
- United States Department of Agriculture
- United States Department of Commerce
- Transportation agencies
- Newspapers and periodicals
- Broadcasting stations
- Federated Women's organizations
- Oregon State Grange
- Oregon Farmers Union
- Portland Cooperative Dairy Association

The Council should have the customary officers and an executive committee consisting of the officers and the following:

1. President State Dairy Association
2. President, Oregon Creamery Operators' Association
3. State Dairy and Food Commissioner
4. Head of Dairy Department, Oregon State Agricultural College
5. Director Extension Service, Oregon State Agricultural College
6. Regional Representative, United States Bureau of Agricultural Economics
7. Manager State Chamber of Commerce
8. Chairman Agricultural Committee, Oregon Bankers Association
9. President Oregon Jersey Cattle Club
10. President Oregon Holstein-Friesian Association
11. President Oregon Guernsey Cattle Club

The Council should sponsor three meetings per year to be held on the first Friday of February and June, and the third Friday of November, in various parts of the state. It should lend its aid and support to the dairy program sponsored by the College Extension Service through its County Agricultural Agents, Home Demonstration Agents, and Boys' and Girls' 4-H Club leaders.

The Council would not require an operating budget, imposing financial obligations upon the various constituent members. It would employ no salaried executive officers. The necessary clerical work should be performed by the Oregon State Chamber of Commerce and the State College Extension Service.

There is no organization in existence at the present time sufficiently broad and representative to serve the purposes referred to herein. The Dairy Improvement Council as proposed will not encroach upon or duplicate the functions of any existing organization; rather, it will provide a clearing house for information pertaining to dairying and fill the need for constructive leadership required to carry forward in an effective manner the work outline by the Convention now in session.

Convention Personnel

OFFICERS

JOSEPH A. LARSON, Marshfield, Oregon, Chairman of the General Convention
C. R. BRIGGS, Corvallis, Oregon, Secretary of the General Convention

COMMITTEE ON CONVENTION PLAN AND ORGANIZATION

PAUL V. MARIS, Director of Extension, Oregon State Agricultural College, Corvallis,
Chairman
W. G. IDE, Manager Oregon State Chamber of Commerce, Portland, Secretary
J. D. MICKLE, State Dairy and Food Commissioner, Portland
JOSEPH A. LARSON, Creamery Manager, Marshfield
H. B. ALDRICH, Vice-president State Dairy Association, Redmond
CLAUD BUCHANAN, Dairyman, Corvallis
EUGENE COURTNEY, Chairman Agricultural Committee of Oregon Bankers Association,
Woodburn
CHESTER MULKEY, Dairyman, McMinnville
E. W. MCMINDES, County Agent, Astoria
MARSHALL N. DANA, Associate Editor Oregon Journal, Portland

WORKING COMMITTEES OF CONVENTION

Committee on Production and Management

CLAUD BUCHANAN, Benton county dairyman, Chairman
N. C. JAMISON, Dairy Extension specialist, Oregon State Agricultural College, technical
adviser to Committee.

There were five subcommittees under the Committee on Production and Management,
with chairmen as follows:

Herd Improvement, CURTIS DYER, Hermiston
Sales Policy, E. A. RHOTEN, Salem
Feeds, CLARENCE BROWN, Shedd
Grass Pastures, BURTON ALDRICH, Redmond
Economical Unit, CHESTER MULKEY, McMinnville

Note: Professor G. R. HYSLOP, Head of Farm Crops department, served as technical
adviser to Committee on Feeds and Grass Pastures, and N. C. JAMISON, as technical
adviser to the other subcommittees.

Committee on Economic Status of Dairy Industry

GEORGE FULLENWIDER, Carlton, Chairman
L. R. BREITHAUPT, Department of Economics, Oregon State Agricultural College,
technical adviser

Committee on Finance

WILL T. WRIGHT, Oregon City, Chairman
DR. M. N. NELSON, Department of Economics, technical adviser

Committee on Disease Control

C. C. DICKSON, Shedd, Chairman
P. M. BRANDT, Head of Dairy Department, Oregon State Agricultural College, technical
adviser

Committee on Marketing, Grades and Standards

A. E. ENGBRETSON, Director Lower Columbia Dairymen's Association, Chairman
GEO. O. GATLIN, Extension Specialist in Marketing, Oregon State Agricultural College,
technical adviser
R. H. KIPP, Manager of Marketing Department, Portland Chamber of Commerce,
technical adviser
WM. A. SCHOENFELD, Regional Representative of the United States Bureau of Agri-
cultural Economics, technical adviser
E. S. LARRABEE, Research Specialist representing the Oregon Agricultural Experiment
Station and United States Department of Agriculture, technical adviser

CLASSIFIED LIST OF PERSONS IN ATTENDANCE

PRODUCING DAIRYMEN

Fred Hurlbutt, Warrenton	S. B. Holt, Scio
Arvo F. Seppa, Astoria	D. O. Woodworth, Albany
Chas. W. Buell, Corvallis	W. N. Locke, Route 1, Corvallis
R. L. Brewster, Redmond	C. Stuy, Lafayette
M. J. Brugger, Gresham	R. L. Burkhardt, Albany
W. E. Townsend, Troutdale	R. B. Thompson, Eugene
Frank Loughary, Monmouth	H. L. Plank, Junction City
W. Lovell Grover, Halfway	S. G. Simmon, Albany
B. E. Sykes, Halfway	Chester L. Mulkey, McMinnville
Roy Vanderwall, Haines	Byron DeYoung, Gresham
E. E. Lage, Hood River	F. M. Kiger, Portland
Jess R. Brown, Baker	C. Schroeder, Arago
H. A. Scroggin, Bend	Hillis Perkins, Bandon
Henry Stewart, Albany	F. E. Bogue, Corvallis
C. Buchanan, Corvallis	L. R. Woodward, Arago
L. C. Dyer, Hermiston	G. H. Fullenwider, Carlton
C. L. Bush, Kings Valley	Claude Hoisington, Monmouth
H. F. Butterfield, Woodburn	W. A. Forest, McMinnville
P. H. Martin, Corvallis	G. W. Lawson, McMinnville
Newton Huyett, Toledo	R. W. Hogg, Salem
Mrs. Florence Gail-Neal, Oregon City	M. S. Lorenzen, Dayton
Mrs. A. I. Hughes, Oregon City	George Biersdorf, Cornelius
R. C. Williamson, Halsey	E. H. Wise, Grants Pass
R. M. Lyon, Halsey	W. A. Johnson, Grants Pass
Cedric Williamson, Halsey	G. G. Hewitt, Independence
Guy Porterfield, Myrtle Point	A. L. Emmons, Jefferson
Geo. H. Gilmore, Junction City	M. M. Porter, Philomath
Willard Bosholm, Boring	E. A. Parker, Philomath
H. W. Kanne, Portland (Base Line Road)	H. H. Chindgren, Molalla
D. G. Lilly, Forest Grove	M. L. Carlson, Molalla
A. Malar, Boring	Fred Uhlmann, Scappoose
Thomas Williams, Forest Grove	L. K. Adams, Haines
L. M. Hesse, Beaverton, Route 3	R. J. McIsaac, Parkdale
T. B. Denny, Beaverton	J. R. Pifer, Parkdale
H. H. Hanson, Beaverton	Phil Parrett, Parkdale
Edw. Frendenthal, Hillsboro	Paul H. Crouter, Prairie City
J. R. Dickie, McMinnville	John Hubler, Alsea
Jake Lohrenz, Baker	E. P. Edwards, Philomath
J. J. Van Kleek, Beaverton	I. P. Crist, Corvallis
Martin Rostvold, Mt. Angel	Hector Macpherson, Albany
M. Weinacht, Mt. Angel	G. H. Burge, Corvallis
W. C. Morgan, Marshfield	C. O. Allen, Monmouth
C. H. Brown, Shedd	Mrs. S. B. Holt, Scio
Henry Smith, Marshfield	H. P. Larsen, Milwaukie
J. H. Teegarden, Yamhill	Frank Lynn, Perrydale
H. P. C. Nielsen, Carlton	Mrs. Frank Lynn, Perrydale
C. B. Swango, Eugene	John Edwards, Philomath
W. O. Morrow, Independence	W. J. Filz, Mt. Hood
Ivan Ayres, Lebanon	Mrs. W. J. Filz, Mt. Hood
A. L. Jobe, Lebanon	E. A. Rhoten, Salem
C. C. Dickson, Shedd	J. R. McCracken, Ashland

DAIRY MANUFACTURING INTERESTS

J. W. Snider, Snider's Creamery, Medford
P. C. Jorgensen, Toledo
Joseph A. Larson, Marshfield
M. H. Bauer, Winkley Creamery Co., Corvallis
Geo. Jacobsen, Portland-Damascus Milk Co., (Supt.) Portland
F. G. Deckebach, Salem, Mgr., Marion Creamery
John R. Norris, Corvallis Creamery Co., Corvallis
H. C. Hill, Hillsboro

C. W. Laughlin, Mgr., Lower Columbia Dairymen's Association, Astoria
 M. M. Boney, Mgr., Eugene Farmers' Creamery, Eugene
 Wayne Dawson, Mgr., Albany Creamery Co., Albany
 F. F. Moser, Bandon
 F. E. Murdock, Mgr., Monmouth Farmers' Coop. Creamery, Monmouth
 H. A. West, Tigard
 R. B. Bush, Mgr., Nestle Food Products Co., McMinnville
 D. B. Mackenzie, Salem, Mgr., Greenwood Creamery
 H. C. Raven, Raven Dairy, 165 Fourth St., Portland
 E. A. Wagner, Dallas
 E. G. Tipp, Mgr., Eastern Oregon Dairymen's Coop. Assn., Haines
 J. A. Emerson, Astoria
 E. L. Martindale, Mgr., Cry. & Prod. Dept., Swift & Co., Portland

BANKERS

F. E. Meyer, Asst. Mgr., Federal Intermediate Credit Bank, Spokane, Wash.
 T. P. Cramer, Jr., Secretary, Oregon Bankers Association, Portland
 Clyde Williamson, Albany
 Eugene Courtney, Woodburn, Chm., Agric. Com. Ore. Bankers Assn.
 W. T. Wright, Oregon City
 Henry Crawford, Ladd & Bush, Bank, Salem

BREED ASSOCIATION REPRESENTATIVES

Ivan Loughary, Jersey, Corvallis
 R. E. Everley, Holstein-Friesian, Portland
 Jack Robinson, Guernsey, Portland

RAILROAD REPRESENTATIVES

C. C. Gignoux, U. P. System, Portland
 Fred W. Graham, Great Northern, Seattle
 E. F. Benson, Northern Pacific, Seattle
 Geo. W. Barr, Southern Pacific, San Francisco
 G. H. Bulkley, R. R., Seattle

NEWSPAPER REPRESENTATIVES

Marshall Dana, Oregon Journal, Portland
 George Angell, Oregon Farmer, Portland

REPRESENTATIVES OF OREGON STATE AGRICULTURAL COLLEGE

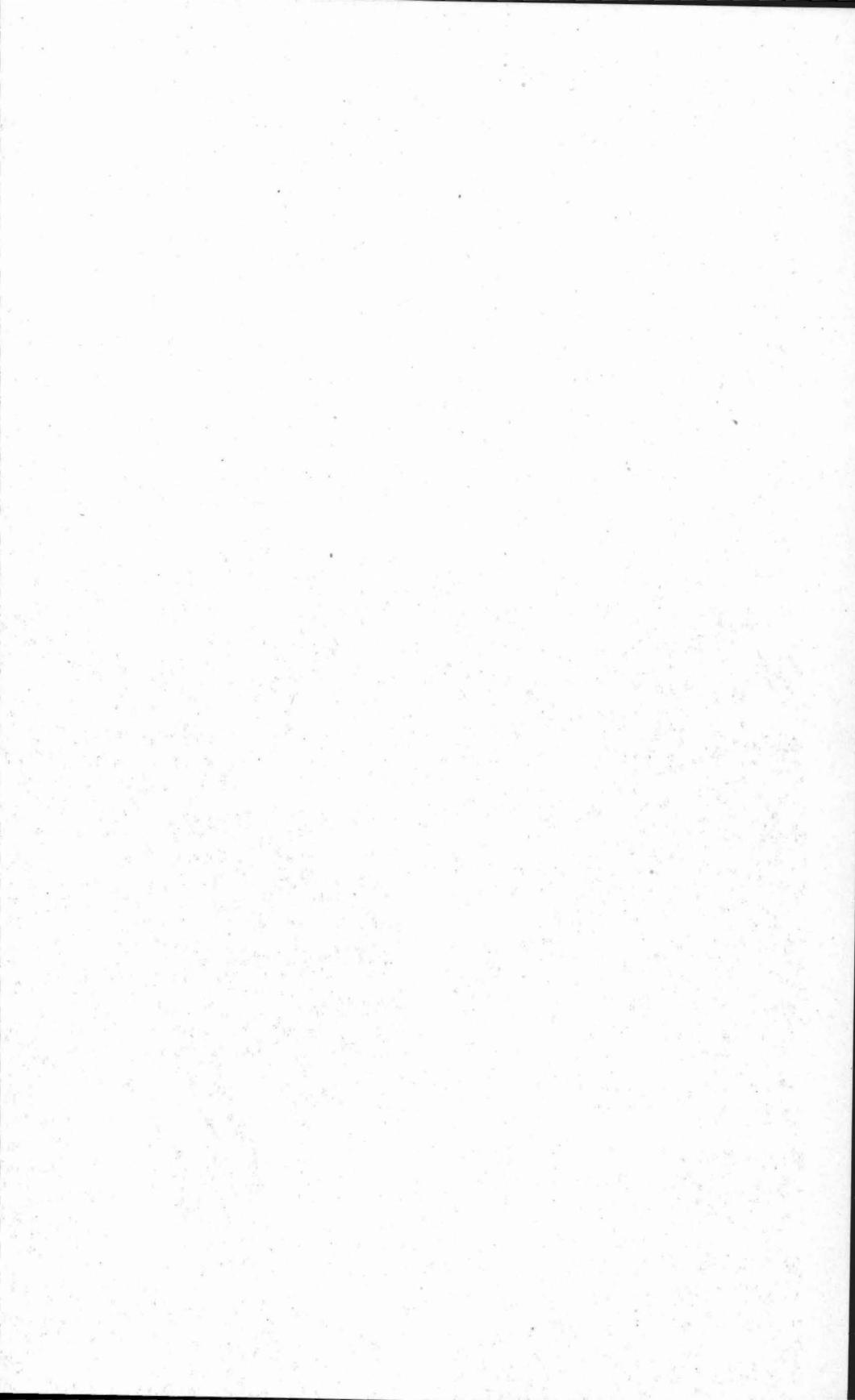
Paul V. Maris, Director of Extension
 G. R. Hyslop, Professor of Farm Crops
 Geo. O. Gatlin, Marketing Specialist
 N. C. Jamison, Dairy Specialist
 P. M. Brandt, Professor of Dairy Husbandry
 M. N. Nelson, Professor of Economics and Sociology
 I. R. Jones, Dairy Department
 J. H. Steele, Dairy Department
 E. S. Larrabee, Dairy Department
 L. R. Breithaupt, Specialist in Agricultural Economics
 Dr. Gustav Wilster, Dairy Department

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 E. W. McMIndes, Clatsop County, Astoria
 H. S. Hale, Coos County, Coquille
 R. W. Morse, Baker County, Baker
 R. G. Fowler, Jackson County, Medford
 M. J. Conklin, Lincoln County, Toledo
 O. T. McWhorter, Washington County, Hillsboro
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 W. T. McDonald, Deschutes County, Redmond
 H. B. Howell, Josephine County, Grants Pass
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 O. S. Fletcher, Lane County, Eugene

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L. B. Ziemer, Deputy State Dairy and Food Commissioner, Portland
A. E. Engbretson, Experiment Station, Astoria
Hon. I. L. Patterson, Governor of Oregon, Salem
Edward D. Parker, Bureau of Agricultural Economics, Washington, D. C.
M. S. Shrock, Feed Dealer, Milwaukie
Seymour Jones, State Market Agent, Salem
A. C. Heyman, Supt. Childrens Farm Home, Corvallis
D. M. John, Insurance, Corvallis
O. I. Paulsen, State Director, Smith-Hughes Work, Salem
Herman Lafky, Smith-Hughes Teacher, Canby
Wm. A. Schoenfeld, 519 New Post Office Bldg., Portland (U. S. D. A.)
R. H. Kipp, Portland Chamber of Commerce, Portland
Kenneth Miller, Portland Chamber of Commerce, Sheridan
Geo. A. Palmiter, State Grange Master, Hood River
Leonard Gilkey, Sec. Albany Chamber of Commerce, Albany
John H. Fuller, Ashland
W. G. Ide, Mgr., Oregon State Chamber of Commerce, Portland
R. E. Burnett, Smith-Hughes Teacher, Woodburn
A. G. Ziebell, Dairy Coop., Marysville, Wash.



*An abundance of LEGUM
hay is an essential of
successful dairying*

