TWENTY-EIGHTH ANNUAL REPORT

OF THE

STATE DAIRY COMMISSIONER

TO THE

GOVERNOR OF THE STATE OF IOWA

FOR THE YEAR 1914

W. B. BARNEY
STATE DAIRY COMMISSIONER

PRINTED BY ORDER OF THE GENERAL ASSEMBLY

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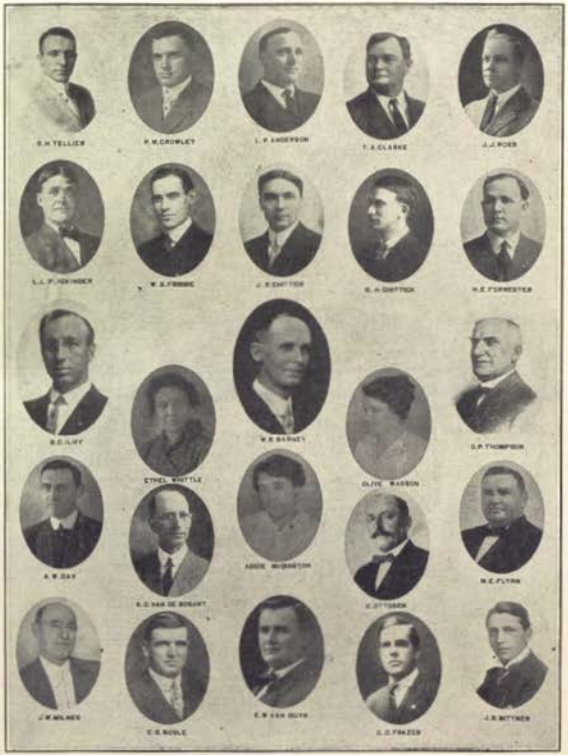


LETTER OF TRANSMITTAL

To His Excellency, G. W. Clarke, Governor of Iowa.

SIR: In compliance with the law, I have the honor to submit herewith the Twenty-Eighth Annual Report of the Dairy and Food Commissioner.

W. B. BARNEY,
Dairy and Food Commissioner.

Des Moines, November 16, 1914.

IOWA STATE DAIRY AND FOOD COMMISSION.

W. B. Barney	Commissioner
B. C. Iliff	Deputy Commissioner
O. P. Thompson, M. D.	State Dairy Inspector
J. J. Ross	Asst. Dairy Commissioner
T. A. Clarke	Asst. Dairy Commissioner
G. H. Tellier	Asst. Dairy Commissioner
P. W. Crowley	Asst. Dairy Commissioner
H. E. Forrester	Asst. Dairy Commissioner and Food Inspector
L. L. Flickinger	Asst. Dairy Commissioner and Food Inspector
L. P. Anderson	Asst. Dairy Commissioner and Food Inspector
E. W. Van Duyn	Chief Inspector of Weights and Measures
M. E. Flynn	Food Inspector
J. W. Milnes	Food Inspector
S. O. Van De Bogart	Food Inspector
C. Ottosen	Food Inspector
J. S. Bittner	Food Inspector
C. S. Bogle	Food Inspector
C. O. Frazer	Food Inspector
J. R. Chittick	State Chemist and Sealer of Weights and Measures
G. H. Chittick	Asst. Chemist
W. S. Frisbie	Asst. Chemist
A. W. Day	Chief Clerk
Ethel Whittle	Seed Analyst and Clerk
Olive Wasson	Clerk
Addie McQuiston	Clerk

EXPENSE OF THE OFFICE OF THE STATE DAIRY AND FOOD COMMISSION FOR THE YEAR ENDING NOVEMBER 1, 1914.

W. B. Barney, salary	$ 2,700.00	
W. B. Barney, expense	483.00	$ 3,183.00
B. C. Iliff, salary	1,800.00	
B. C. Iliff, expense	112.44	1,912.44
O. P. Thompson, salary	1,600.00	
O. P. Thompson, expense	1,213.38	2,813.38
J. J. Ross, salary	1,400.00	
J. J. Ross, expense	948.95	2,348.95
T. A. Clark, salary	1,400.00	
T. A. Clark, expense	1,060.17	2,460.17
G. H. Tellier, salary	1,600.00	
G. H. Tellier, expense	775.00	2,375.00
P. W. Crowley, salary	1,600.00	
P. W. Crowley, expense	867.33	2,467.33
H. E. Forrester, salary	1,600.00	
H. E. Forrester, expense	964.04	2,564.04
L. L. Flickinger, salary	1,600.00	
L. L. Flickinger, expense	854.52	2,454.52
L. P. Anderson, salary	1,516.68	
L. P. Anderson, expense	703.52	2,503.52
E. W. Van Duyn, salary	1,800.00	
E. W. Van Duyn, expense	703.52	2,503.52
M. E. Flynn, salary	1,600.00	
M. E. Flynn, expense	747.51	2,347.51
J. W. Milnes, salary	1,600.00	
J. W. Milnes, expense	801.56	2,401.56
S. O. Van DeBogart, salary	1,600.00	
S. O. Van DeBogart, expense	267.34	1,867.34

C. Ottosen, salary	1,544.00	
C. Ottosen, expense	819.71	2,363.71
J. S. Bittner, salary	1,525.00	
J. S. Bittner, expense	763.94	2,288.94
C. S. Bogle, salary	1,470.63	
C. S. Bogle expense	753.54	2,224.17
C. O. Frazer, salary	1,462.32	
C. O. Frazer, expense	976.25	2,438.57
J. R. Chittick, salary	2,400.00	
J. R. Chittick, expense	242.90	2,642.90
G. H. Chittick, salary	1,375.00	
G. H. Chittick, expense	70.36	1,445.36
*Augustus Forest, salary	1,423.30	
Augustus Forest, expense	197.06	1,620.36
W. S. Frisbie, salary	1,500.00	
W. S. Frisbie, expense	76.58	1,576.58
*H. W. Dahl, salary	1,069.99	
Ethel Whittle, salary	900.00	
Olive Wasson, salary	900.00	
Addie McQuiston, salary	900.00	
*A. W. Day, salary	150.16	3,920.15
J. W. Lytton, salary	780.00	780.00
Tags, etc.	1,028.50	
Laboratory apparatus and chemicals	675.40	
Weight and Measure apparatus	1,351.42	3,065.32
Milk agents, fees	3,053.50	
Milk agents, expense	63.79	3,117.29
Office expense, miscellaneous	337.72	
Telephone, telegraph, drayage, express	408.95	746.67
Grand Total		$ 62,288.18

The items noted under head of Milk Agents' fees and Milk Agents' expenses, given above amounting to $3,117.29, are for services of milk inspectors in cities of 10,000 or more people and really should not be chargeable to this department.

*Does not include a complete year.

FEES EARNED BY THE STATE DAIRY AND FOOD COMMISSION FOR THE YEAR ENDING NOVEMBER 1, 1914.

Babcock test licenses	$ 6,085.00
Milk licenses	2,554.00
Inspection fee tags	15,825.15
Scale tag fees	2,286.00
Scale inspection fees	2,750.00
Sanitary law licenses	11,349.00
Stock food licenses	2,575.00
Seed analysis	53.50
Feeding-stuffs analysis	26.00
Fertilizer licenses	120.00
Cold storage licenses	218.75
Total	$ 43,842.40

Fines for violation of the food and dairy laws are paid into the school fund of the county where prosecution is brought and do not appear in the above statement. At a conservative estimate, the amount of fines would reach $5,500.00 annually.

REPORT OF COMMISSIONER

In handing you this, the Twenty-eighth Annual Report of the Dairy and Food Commissioner, it is with some degree of satisfaction that I am able to call to your attention and that of the incoming Legislature, the continued progress and development of this department.

When the 35th General Assembly adjourned, we found this department responsible for the enforcement of the following laws:

DAIRY LAW
PURE FOOD LAW
AGRICULTURAL SEED LAW
CONCENTRATED FEEDING STUFFS LAW
CONDIMENTAL STOCK FOOD LAW
PAINT AND LINSEED OIL LAW
TURPENTINE LAW
WEIGHT AND MEASURE LAW
SANITARY LAW
COLD STORAGE LAW
COMMERCIAL FERTILIZER LAW and
CALCIUM CARBIDE LAW.

The last five of these laws were enacted by that body during the last session.

We know of no laws on our statute books that are of more importance or affect a larger number of people, than do the Weight and Measure and Sanitary Laws. Some states of no greater population than Iowa employ more people in the enforcement of their Weight and Measure Law alone than we have in this department for the enforcement of the twelve laws with which we are charged. We only speak of this to call the attention of the Legislature to the importance and magnitude of this work.

While there is only a small per cent of the people engaged as purveyors of different commodities that seek to short weight or in other ways swindle the consumer, eternal vigilance on the part of some one is about the only protection for the public and the

honest dealer. We have every reason to believe that the people are going to demand the protection that they are entitled to and that the work in this department along this line is going to materially increase in the future. When you consider how far reaching the results of this work may be made and that practically all the people of our commonwealth are either directly or indirectly affected we are surprised that they have been so slow in asking for relief.

As to the Sanitary Law which has been effective about eighteen months, the results show for themselves. Eighty or ninety per cent of the stores and other places that sell food products are in first class shape. Those that have not cleaned up will have to drop out for the public will no longer patronize the poorly kept insanitary place. Many hundred thousands of dollars have been invested in new and up to date show cases and equipment by the grocers, butchers, and others selling food products. We have some times been at a loss to know why it was necessary to pass a law obliging these people to properly care for and protect their products from dust, dirt, and flies, when the up to date dry goods, clothing, hardware and jewelry merchants have been giving their wares proper protection for several years.

Many new slaughter houses have been built and old ones remodeled. We have tried to be as reasonable and lenient in the enforcement of this law as possible where it applies to these places, for we feel there is a great advantage in killing as much of our meat at home as we can, saving the freight on these products both ways.

There are many sections of this law that can well be applied to the dairy work and have been and will be most helpful. While this is primarily the dairy report of the department, we have thought best to refer briefly to these two laws on account of their importance in connection with the dairy work.

THE CREAMERY PROMOTER.

The creamery promoter has been rather more active for the last year than for some time past. Several plants have been built and equipped on which the owners could have saved anywhere from

$1,000 to $3,000 if they had called on the Dairy and Food Commission or the Iowa State Agricultural College at Ames for assistance. This department is now well equipped with blue prints, plans, and specifications, also cost of machinery and equipment, constitution, by-laws and all other information necessary. We have men in the department that have specialized in this work and their services may be secured without cost where there is a reasonable certainty of a sufficient number of cows (600 to 800) assured, and a desire on the part of the community to build and support a plant.

We deplore the fact that the promoter pays so little heed to the future success of most plants they construct. They build an undersized, cheap building, put in much of the equipment that would be obsolete in an up to date factory, charge a big price for the outfit and leave it for this department to nurse along for several years. We recently heard a new definition for the promoter that can well be applied to most creamery promoters,—"A man who sells something he hasn't got, to people who pay for something they never get."

CENTRALIZERS OR CENTRAL CHURNING PLANTS.

Some of these plants have been unusually active in the last year in their efforts to put the farmers' co-operative or small individual creamery out of business. By reference to a map shown in another part of this report, you will notice that of the 496 creameries in this state about 400 of them are located in the northern two-thirds and about 96 in the southern third of the state. We think there is no disputing the fact that the prices paid for butter fat in any of the many well managed co-operative creameries range from 3c to 7c more than the price paid by the centralizer. This being true, we feel that this department is fully justified in giving all possible assistance and support to the creameries already organized, and encouragement and help to the communities where there is reason to believe there is sufficient interest and enough cows to make a paying proposition of a plant.

We realize that the men operating the centralizers are in a legitimate line of trade. They make dairying possible in sections where there would be little or no market for butter fat if it were

not for the one they offer. They are fully entitled to just and fair treatment. So long as we are at the head of this department its policy will be "a square deal to all and favors to none."

We have been much surprised within the last year to find that in practically every case where there was sufficient dairy sentiment aroused so there were prospects of a plant being built, the price of butter fat was advanced by buyers for the centralizers from three to four cents by the time the creamery was ready to begin business, and that twelve or fifteen miles distant the same old prices were paid. It is apparent that the motive behind this is a desire on the part of the big plant to kill off the local creamery. We believe this unfair and unbusiness like and that if they can pay these prices in competition to a local creamery they should pay them where this competition does not exist or where they come in competition with other centralizers. This is our fifth report since taking the office of commissioner, and we have never been obliged to refer to troubles of this nature in our former reports. We had hoped that the rather unpleasant relations that existed several years ago between these two branches of the dairy industry was a thing of the past.

When the position of commissioner was tendered, it was accepted without entanglement or obligation to any set of men or interests. We expect to direct the efforts of the department along lines, that in our judgment will be of greatest benefit to dairymen and farmers. If by helping to organize a creamery in a community, the dairyman may be benefited to the extent of an increase of from three to six cents a pound for his butter fat, we expect to render this assistance even though the centralizer may lose the business.

COST OF MAINTAINING THE DEPARTMENT.

In looking over the laws under which this department was organized, there is nothing that we find that gives reason to believe that it was the intention of the Legislature to make the department which is a law enforcing body, self supporting.

The Government appropriates many hundred thousands of dollars yearly for the enforcement of the Dairy and Food Laws.

When the present commissioner took charge of the Department in 1909, the annual revenue from licenses, tax tags, etc., amounted to $9,593.24; for 1910 the amount turned over to the State Treasurer was $17,435.30; for 1911, $20,892.97; for 1912, $22,049.02; for 1913, $36,504.52; and for the year ending November 1, 1914, the earnings of the Department are $43,842.40.

As all fines under the Food laws go into the county school fund in the county where these cases are prosecuted, this should be added to the earnings. At a conservative estimate this amount would reach $5,500, making a total of $49,342.40.

As compared with an adjoining state with 150,000 less people, we find that for maintaining the Dairy and Food Department for the year 1912, the cost per capita was two and ninety-four hundredths cents for that state, and for Iowa fifty-eight hundredths of one cent.

We beg leave to call your attention to the fact that no other State Dairy and Food Department has the number of laws for enforcement that we have, and that the greater the amount of work, the more help is necessarily required to properly look after the work, and the greater the cost. In some states the same work that is done by this department is divided up—two, three, or four commissions or departments doing the work. We do not speak of this because we think it a good or economical plan but to call the attention of the Legislature to the fact that the criticism by some people on account of a multiplicity of commissions does not hold good so far as this department is concerned, with its twelve different laws to enforce.

WORK OF INSPECTORS.

We have been trying out the plan of having some of our inspectors do all kinds of work. Those designated in the list given in this report, as "Assistant Dairy Commissioners and Food Inspectors," have been looking after the enforcement of all of the different laws in the territory they cover. By reference to our former reports you will find that this plan of work originated in the Department some four years ago, and not with the Committee on Retrenchment and Reform, or the special Efficiency Committee as some have been led to believe.

We put on two men over four years ago so that we might know from experience whether there was any advantage either by reason of saving in expense or efficiency in handling the work. If we only had the enforcement of a few laws the plan would be quite acceptable and in certain territories it works fairly well, even with the enforcement of the twelve different laws. In other sections of the state, we find it practically impossible to handle the work in this way. We have found that the work of an inspector, if properly looked after, is a "real man's job," and that this is especially true since the sanitary and weight and measure laws have been added. There is no saving in expense under this plan, and as we all know that this is an age of specialists in all lines, we do not know why it should not apply in a measure to work in this Department. If houses like Marshall Field & Company and Hibbard, Spencer, Bartlett & Company, find it necessary to employ from two to five men who visit Des Moines and other large cities in the state, representing the different lines of merchandise they have put on the market, they do it because these men are specialists in the various lines. In the memory of many middle aged people, the doctor acted as surgeon, dentist, eye, ear, nose, and throat specialist, veterinarian, etc. Today, specialists in these lines do this work and the man who claims to make good in all these various lines is generally sized up as a fraud.

NEW OFFICE BUILDING MUCH NEEDED.

Since the enforcement of the Weight and Measure Law has been placed in this department and about $2,000.00 worth of equipment has been added for this purpose, there is more reason than ever for a move on the part of the incoming legislature to provide better quarters for this and several other departments. The law reads as follows:

> "The State Sealer shall take charge of the standards of the state, causing them to be kept at the Capitol in a fire proof building, belonging to the state."

Besides this, we have about $8,000.00 worth of laboratory and other equipment, making in all $10,000.00 worth of property belonging to the State. The records of the department since it was

organized would go with the above, should the building take fire as it is apt to do at any time on account of poor wiring and the general bad and dilapidated conditions on account of age.

CREAM GRADING IN IOWA.

Again this year the creameries over the state have started an agitation leading toward the grading of cream and paying according to quality. For several months a few local creameries have been working on a quality basis, and the improvement in the quality of their butter and the general betterment of the conditions on the farm has been gratifying. There should be no market for an inferior grade of cream, and when this time comes the careless, unclean, dairyman will either have to improve his product or get out of business.

The whole system, if it can be called a system, of buying cream irrespective of quality is absolutely wrong. The packer will not pay the same price per pound for a canner cow that he will for a finished steer; the grain dealer will not offer the same price for moldy grain that he will for a clean, dry product; it is equally absurd for a creamery to offer the same price for cream in all stages of deterioration, and expect to make good butter out of it. Many creameries are struggling along with this poor quality cream, doping it with neutralizer, adding a large percentage of starter in an endeavor to cover up the undesirable flavors, and then trying to pawn it off on the unsuspecting consumer as first grade butter.

The Dairy and Food Commission of the State of Iowa will use every means to bring about the grading of cream and paying therefore according to quality or grade. The best interests of dairying in this state demand that this system be adopted, and the following grades have been established:

Extra—Special grade cream is sweet cream, suitable for table use, and such as will not curdle in hot water, tea or coffee.

First Grade—First Grade cream shall consist of cream that is clean to the taste and smell, slightly sour, containing not to exceed four-tenths of 1% acid, and not less than 25% butterfat, and free from lumps, curd, dirt and all other foreign matter.

Second Grade—Second grade cream is cream that is too sour to grade as first grade, or may have weedy or other undesirable flavors or odors. All other cream shall be deemed illegal.

Illegal Cream—Illegal cream is cream that is very old, rancid, mouldy, dirty or muddy; or that is produced from an unclean separator; or that is stored, handled or transported in unclean cans; or that has been produced, handled, separated, stored or transported in violation of the state dairy, pure food or sanitary law; and the sale, purchase or manufacture of such cream for any human food purpose should be prohibited by statutes.

In the spring of 1911 the dairy and food department at the solicitation of several of the larger creameries of the state, made a ruling governing the buying of cream according to quality. Copies of these rulings were printed in large quantities and distributed all over the state, in fact practically every creamery man and cream station operator had a copy of them tacked up in his place of business to refer to. These rulings were not adhered to by many unscrupulous buyers and thus the good accruing from our efforts would scarcely defray the cost of printing.

Before "cream grading" can be put on a workable basis in the state of Iowa or any other state, the cream-station operator must be better trained and equipped. He is not now competent to tell the difference between first and second grade cream and the facilities of the average station are insufficient for handling a perishable product. The operator is put in charge of the station, a check book is placed in his hand, and he is instructed to pay a certain price for butter fat, and under no conditions to vary this price unless competition demands it. Then this cream is placed in ten gallon cans and shipped, without refrigeration, to the place of manufacture from fifty to five hundred miles distant. For these reasons we must maintain that the central plants are largely responsible for the poor grade of cream delivered to our Iowa creameries.

We are in favor of cream grading; we are in favor of law forcing the grading of cream in every creamery of the State. We are ready and willing to lend our assistance to any plant soliciting our aid. We want to see every creamery adopt an honest and conscientious grading system, and stick to it, and when that is done Iowa butter will be greatly enhanced in value.

STATE DAIRY AND BUTTERMAKERS' ASSOCIATIONS.

We are particularly fortunate in having in these two associations a live and active membership, officered by men who are willing to give their time even more than should be expected of them.

The State Buttermakers' Association, though only five years old, is doing a most excellent work and filling into a place that had not been covered by the older association. These associations have each put on very successful conventions. Our contention is that as much good comes out of these meetings by reason of the members getting together and discussing with each other the propositions that they come in contact with as the information they get from papers and addresses.

ICE CREAM.

The past year was not such a busy one for the ice cream makers of the state as the one before. This conclusion is drawn from the reports received from the manufacturers, in regard to their output, from October 1, 1913, to October 1, 1914; the output for the past year, as near as we are able to learn, being about 500,000 gallons short as compared with the year before. This shortage, we feel justified in attributing to the weather conditions, as the past season was remarkable for its lack of hot days and protracted spells of warm weather.

This shortage of 500,000 gallons does not necessarily, however, mean that the manufacturers have not realized as much on the output as heretofore. This can be attributed to the fact that a large number are coming to realize that the only parties who derive a benefit from the low price at the factory are the retailers, and since their margin is great, the manufacturer can increase his profits by increasing the wholesale price without materially decreasing the percentages of profit of the retailers, not sufficiently at least to cause him to discontinue to handle the product or to discourage the consumption of the same. However, there is still room for the

manufacturer to increase his revenues by considering the matter of where the larger percentages of profit from the manufacture of the products go, and what effect it would have upon the consumption to raise or lower his price to the retailer.

As before stated, the ice cream output in this state fell short about 500,000 gallons, the output for the entire year being in the neighborhood of 2,500,000 gallons.

Due to the premium paid for butter fat in sweet cream for ice cream making purposes, this output means a great deal to the dairy farmers in the state who are supplying this trade. From reports received, about 1,560,000 pounds of butter fat must have been used in the manufacture of ice cream or about one pound of butter fat from every cow in the state was used for ice cream making purposes. The average premium paid for butter fat in sweet cream for ice cream purposes was about 10c. Therefore, the producer in this state received 10c more for each cow he milked last year because of the ice cream industry. These figures are not very startling but when considered as a whole over $15,000 does not seem to be a very trifling revenue which was added to the income of the producers of the state because of the development of the ice cream industry. We trust that another year will show even greater returns.

We are gratified to be able to say in this report that the Supreme Court of this state saw fit to reverse the decision of Judge McHenry, which declared the law enacted about three years and a half ago, setting forth a standard for ice cream, unconstitutional. We believe that the language used in handing down the reversal of this decision is sufficiently plain so that no one need question but what, in the minds of those on the bench, a state clearly has a right to establish for itself standards by which those manufacturing food products shall be governed. In this state, ice cream is considered one of these products.

We are pleased to state that during the past year, such gross violations of the ice cream law have not come to the notice of the department as did last year.

We wish to again call your attention to the fact that more careful attention should be paid in the factory to the details in making up batches. The time has long since passed when ice cream can be made by guess. Competition is too keen, the trade too critical, and the risk too great to still employ guess methods. We want to urge upon the manufacturer, the necessity of the use of the Babcock

test in standardizing the cream used in the making of ice cream. No one would expect to churn skim milk and get butter out of it, neither can the ice cream manufacturer expect to secure a standard product by putting into his mixing vat, skim milk and other products, the butter fat content of which he has no knowledge.

Furthermore, the buying of cream for ice cream purposes should be done only on the butter fat basis. We believe the ice cream maker is entitled to get all that he pays for and are warning him not to buy cream by the gallon unless he is doing so under a contract that calls for a certain percentage of butter fat in the cream, and then this should only be done when the cream is tested regularly. We have two or three reporting a price of $1.20 to $1.50 per gallon paid for sweet cream and will venture to say that these people probably had very little idea as to what they were paying per pound for butter fat or what this cream was testing.

We are pleased to learn that there is an improvement in the condition of the returned empty ice cream containers. An ice cream container is a utensil used in the distribution of a food product and must, under the sanitary law, be kept clean at all times. It, therefore, behooves the retailer or the users of ice cream to wash and keep clean containers in their possession. So far, we have been pursuing the policy of educating these people to the fact that such containers must be washed as soon as emptied. However, in all probability it will be necessary to prosecute a few violators before this evil can, within the next year, be remedied entirely.

We should like to be able to report a greater improvement in the condition of the ice cream factories, and within another year expect to be able to do so. This will mean that during the coming year a number of the manufacturers will have to provide more light and ventilation for their factories, put in better floors, make tight, smooth walls, provide proper ventilation, do more effective screening, and pay more attention to the keeping of the factory and employees in a clean condition. By doing this, the manufacturer will not only avoid conflict with the officials and running the risk of losing his factory license, but trade will be stimulated by such inviting surroundings.

HOMOGENIZED PRODUCTS.

During certain seasons of the year, there is a scarcity of cream suitable for ice cream making purposes. This scarcity has caused the development of the use of the homogenizer and other devices, which are used to reincorporate butter fat with milk serum, either skim milk, natural, or that made by mixing skim milk powder and water.

This department is in favor of the use of any device or idea which will help simplify food producing and distributing problems, but highly disfavors any practice which tends to discourage cleanliness and the use of high grade products to accomplish this result.

Inferior grades of butter should not be allowed to be incorporated in milk and the product put on the market and sold in competition with the pure, fresh article produced under sanitary conditions. It is the intention of this department to have a law enacted regarding the handling of homogenized products, which shall be similar to the ruling issued last May. This ruling is as follows:

"Any product prepared by passing cream through an apparatus which increases its viscosity, and said product contains not less than sixteen per cent of milk fat by weight shall be known and sold under the name 'Homogenized Cream.'

Any product prepared by passing wholesome milk fat together with milk, skim milk, or skim milk powder, through an apparatus, which will cause the products to unite, forming a product having a semblance of cream, and containing not less than 16 per cent of milk fat by weight, shall be known and sold under the name 'Homogenized Process Cream.'

Any product prepared in the semblance of ice cream, which has been made in whole or in part from homogenized process cream and said product contains not less than 12 per cent by weight of milk fat, shall be known and sold under the name, 'Homogenized Process Ice Cream.'

Each container of said homogenized products shall be distinctly labeled with the true name of said product as herein specified, together with the name of the manufacturer or producer thereof."

We would recommend that in the case of bottled goods such as cream, the word "Homogenized" or "Homogenized Process" be added to the printing on the bottle caps which have already printed thereon the name of the producer. In the case of ice cream containers for those who use homogenized cream occasionally we would suggest that printed slips, bearing the word, or words, "Homogenized" or "Homogenized Process" ice cream and the name of the manufacturer, similar in style to those used by express companies in marking packages of goods, be pasted on the packer in conspicuous place. For those using homogenized or homogenized process cream continually in the manufacture of ice cream, we would suggest that the words be stenciled on the packer in a manner similar to that used in marking the brand or the name of the manufacture of the product.

"Wherever homogenized products are sold at retail, a printed sign or signs shall be conspicuously displayed, giving the true name of the product as herein specified, followed by the words, 'Used Here' or 'Sold Here.' All of said words shall be printed on white cards, using black letters, not smaller than 72 point, heavy face, Gothic caps (standard line). No other printed matter of any kind shall appear on this card.

Butter which is made from cream, which previous to its ripening in the hands of the manufacturer, could not be used as sweet cream, or butter, which at the time of its use does not score 93 or more, shall not be used in manufacturing homogenized products."

The Supreme Court of Iowa has sustained the validity of the law requiring 12% of butter fat in ice cream. The law creating a standard having been upheld, the course of this department is made plain and manufactures and dealers should exercise care to insure that ice cream handled by them is above the standard set by the statute.

OPPORTUNITIES FOR CONDENSERIES AND CHEESE FACTORIES IN IOWA.

The department believes in a greater Iowa. It not only believes in it, but it is going to do what it can to make this state a more desirable and attractive place in which to live, by bettering its conditions and showing its opportunities.

Although our dairying is very well developed, it is not developed as much as it should be when we consider the quantities of these products which are shipped into this state in the form of cheese and condensed milk, besides a large amount of skim milk powder which is used extensively in bakeries, ice cream factories, and creameries.

In order to determine the amounts of these products which are shipped into this state annually, report blanks were sent to all of the wholesale houses in this state, inquiring as to the amounts of cheese and condensed milk which were distributed by their establishments during the year. We received replies from nearly all of these concerns and find that during the past year, the wholesale houses of the state distributed over 10,391,934 pounds of condensed milk, the majority of which was sent in from Wisconsin and Illinois, only one concern reporting having received a portion of their product from Iowa. This does not include large quantities of bulk condensed milk, and milk bought directly from the factories outside of the state, by ice cream makers and bakeries. When we consider that the condenseries of the state produce only six and a half million pounds, we see that in Iowa there is a large field for the development of condenseries, because of the local market which should be filled with home products.

Over 6,765,000 pounds of cheese were distributed by these houses and reports from our factories show that only 433,000 pounds were manufactured in this state.

These two lines of dairy activities should be developed as we have the markets for these products. Dairying is an essential in the permanent system of our state agricultural development and by pointing out the fact that we have home markets for these products to the extent of about 14,000,000 pounds more of condensed milk than is being produced and about 6,500,000 pounds more of cheese than is being manufactured in home factories, this department hopes to be able to stimulate development along these lines.

Reports received show 12 cheese factories in operation as compared with 11 for the previous year. The amount of cheese made is hardly in keeping with the increase in number of factories. It is entirely possible that the causes which contributed in reducing the amount of creamery butter manufactured have operated to reduce the amount of cheese for the same period. The number of creameries in operation at the present time is given as 496, a shrinkage of 22 from a year ago. Some of these plants are fully equipped and

will remain closed during the winter months, planning to reopen in time to do much of the spring business. With a normal season, we believe many of the creameries now idle will be organized and manufacture butter during the coming year.

A MOVE TO IMPROVE IOWA BUTTER.

After having made what we know is a marked improvement in the quality of Iowa eggs, we are going to see what we can do to help the quality of the cream.

Nearly a million of what is known as our "Bad Egg Warning" have been sent out within the last year. This is only one of our various plans of educating the producer. We believe in education first, and prosecutions as a last resort. We will have to admit that we were obliged to make a good many prosecutions to get results and get rid of the bad eggs and the end is not yet.

We have sent to the creameries for distribution among their patrons, a large quantity of our bulletin, "Care of Milk and Cream on the Farm." Speakers from this department have addressed Farmers' Institutes, Dairy and Creamery meetings, warning the farmers time and again that there was altogether too much poor cream on the market to make the class of butter that sells for top prices. We realize that a great many of the producers have made a very general improvement in their products by bettering the conditions about their places in the way of putting in ice houses or water tanks for the purpose of cooling and keeping their milk and cream in good condition. Besides this, many new milk houses have been built and others remodeled and cleaned up.

We expect to keep up this kind of work and from this time on, supplement it by having the Assistant Dairy Commissioners, where their time will permit, visit some of the most flagrant violators on the farm. Within the last few weeks we have made several successful prosecutions under the new sanitary law, enacted by the 35th General Assembly. Part of Section 1 reads as follows: "Every dairy, creamery, cheese factory, restaurant, hotel, grocery, meat market, or other place or apartment used wholly or in part for the preparation, sale, manufacture, packing, storing, or distribution

of any food, shall be properly lighted, drained, plumbed and ventilated, and conducted with strict regard to the influence of such conditions upon the purity and wholesomeness of food therein produced, and for the purpose of this Act, the term 'food' as used herein shall include all articles used for food or drink."

The courts have held that milk and cream come within the meaning of this act, and we believe no one will dispute that they are articles of food. This being true, why should this department stand for the operation of the cream separator in a hog house. Last week a would-be dairyman donated $25.00 to the school fund of Fayette County for that privilege; besides this he paid the costs of the case. One other offender paid $15 and costs, while two others in Clayton County contributed $10 each. We wish to give these prosecutions the publicity they merit as a warning to other willful offenders. The old saying that "cleanliness is next to Godliness" does not seem to appeal to some of the cream producers. If these people alone were the sufferers for such gross negligence, we should not feel so vitally interested. They do not appear to know or care how much loss or damage they are doing a careful neighbor with whose cream their filthy product is mixed in going to market, neither are they at all solicitous of the welfare of the buttermaker who is using every effort to make a grade of butter that will score 92, or better, so that the creamery may receive a price that shall reflect credit on the management as business men, and fairly compensate the real dairyman for his hard work.

We believe that the unwashed separator has had more to do with low grade butter than any other evil.

We are writing this as a warning to the filthy offenders and to say that unless they clean up and change their methods they will be obliged to do so after having donated to Iowa's school fund.

TRADE MARK FOR IOWA BUTTER.

This department has been co-operating with the Dairy Department of the Iowa State College at Ames working out plans for a trademark brand for Iowa butter. Mr. M. Mortensen, professor in dairying at Ames, spent four months this summer in Denmark and Holland, and brings home with him much valuable data.

We have requested E. R. Harlan, curator of the state historical department, to draft an appropriate design for the Iowa trade mark. It was at first suggested that the state coat of arms be placed on the design, but this suggestion was dropped.

We have recommended that the Iowa State Dairy Association appoint a committee to work with the State Dairy and Food Commission and representatives of the Iowa State College in formulating laws to be enacted by the next general assembly. A reasonable amount of financial aid or help will be asked of the legislature to put this brand of butter before the people of this and other countries.

The idea, as put before the buttermakers, is that the state adopt a trademark which may be used by all persons who comply with a certain standard to be fixed by the state for Iowa butter. The butter must score at least 93 per cent on the system of scoring adopted by the state. This system included inspection of the plants, the material used, and the butter products. At any time a plant falls below the standard, the state would withdraw the privilege of putting the product out as Iowa butter.

The state produces for sale outside of Iowa nearly 90,000,000 pounds of butter annually. The grade is high, but by the establishment of a standard, we think it can be improved so that outside of the state there will be a steady demand for Iowa butter at prices 2c to 3c above the market.

Regarding the scoring, we would further recommend that butter from the creameries having the privilege of using this trademark be scored monthly and that such scoring be done at the Iowa experiment station and that for doing such scoring one man be furnished by the State Dairy and Food Commissioner, one by the Dairy Department, Iowa State College, and third to be a creamery buttermaker from one of the creameries belonging to the association. The reports from such scorings should be mailed immediately to the office of the State Dairy and Food Commissioner, who should have the authority to call for a return of the trademark whenever it is found that the quality of the butter does not warrant the use thereof.

Any creamery desiring the privilege of using such a trademark should apply in writing to the office of the state dairy and food commissioner in Des Moines.

Any creamery allowed to use the trademark should also be allowed to use it on print butter. The manufacturers of parchment

paper for such prints should receive a stamp from the street commissioner and no one would be allowed to use such a stamp except by instruction of the state dairy and food commissioner.

CONDITION OF BUTTER MARKET.

For the past twelve months the butter market has averaged somewhat lower than for the preceding year. Late in the year 1913, large shipments of foreign butter began to arrive which, taken in connection with rather a large amount of storage butter held in freezers, had a depressing effect on trade conditions. The demand for strictly fancy butter remained quite keen throughout the year, undergrades suffering because of the foreign competition. Very little of the butter received from New Zealand, Australia, Argentine or Siberia, has been good enough to compete with the best American butter. This condition has caused a wide range of prices between the grades offered and on December 15, 1913, the best butter was quoted on the New York market at 37c while seconds would not sell for more than 27c.

Creameries receiving poor raw material have found it difficult to operate at a profit owing to the low price received for poor grades of butter. This has resulted in an extraordinary effort being put forth to obtain a better grade of raw material and the outside competition, which appeared at first as a calamity, will result in an improved quality. Figures received from 506 creameries reporting indicate that the average quality of butter has again shown improvement over the preceding year.

The creameries of Iowa manufactured 92,865,921 pounds of butter which sold for $29,513,902.27, an average of 31.78c per pound. For the year preceding, the butter sold for 1.51c more than the average price quoted for extras, while for this year the butter brought 1.81c above the average quotation. This would indicate that the butter, selling on the same basis, was .3c per pound better value than in 1913. This increase seems small but when applied to the entire output amounts to $278,597 which, after all, is a mighty good return for the money and effort expended in securing the better quality.

The amount of butter produced is somewhat smaller than that reported a year ago and in our opinion the shrinkage is in a large measure due to the extremely dry weather which prevailed in the southern half of the state during the summer months. The general prosperity has also tended to decrease the number of cows milked on each farm but figures are not available which would indicate to what extent this has reduced the output of butter.

SHOWING AVERAGE MONTHLY PRICE OF EXTRA CREAMERY BUTTER IN NEW YORK MARKET.

Month	Twelve months ending Oct. 1 1903	Twelve months ending Oct. 1 1904	Twelve months ending Oct. 1 1905	Twelve months ending Oct. 1 1906	Twelve months ending Oct. 1 1907	Twelve months ending Oct. 1 1908	Twelve months ending Oct. 1 1909	Twelve months ending Oct. 1 1910	Twelve months ending Oct. 1 1911	Twelve months ending Oct. 1 1912	Twelve months ending Oct. 1 1913	Twelve months ending Oct. 1 1914
October	$.2302	$.2100	$.2000	$.2184	$.2611	$.2915	$.2973	$.3064	$.2900	$.3044	$.3125	$.3146
November	.2650	.2317	.2481	.2350	.2762	.2725	.2957	.3005	.3117	.3201	.3446	.3265
December	.2920	.2422	.2686	.2489	.3164	.2887	.3131	.3040	.2966	.3079	.3727	.3612
January	.2762	.2270	.2910	.2850	.3089	.3009	.3152	.3344	.2630	.3810	.3518	.3266
February	.2900	.2317	.3218	.2709	.3254	.3232	.3009	.2964	.2611	.3114	.3639	.2984
March	.2900	.2402	.2897	.2700	.3061	.2949	.2952	.3293	.2391	.3004	.3677	.2774
April	.2725	.2284	.3009	.2188	.3009	.2855	.2708	.3119	.2111	.3235	.3459	.2549
May	.2900	.2012	.2371	.2017	.2501	.2909	.2958	.2843	.2187	.3043	.2801	.2916
June	.2100	.1802	.2049	.2022	.2369	.2329	.2581	.2797	.2499	.2731	.2781	.2722
July	.2012	.1797	.2056	.2062	.2481	.2242	.2622	.2831	.2510	.2713	.2702	.2790
August	.1940	.1793	.2111	.2257	.2488	.2285	.2719	.2938	.2631	.2963	.2798	.3043
September	.2075	.1947	.2068	.2462	.2781	.2588	.3013	.2989	.2955	.2976	.3137	.3143
Av. value per lb. per year	$.2438	$.2140	$.2489	$.2240	$.2759	$.2762	$.2848	$.3000	$.2809	$.3121	$.3241	$.2997

REPORT OF THE IOWA STATE DAIRY ASSOCIATION.

The work of the Educational Department of the Iowa State Dairy Association during the past year has been conducted somewhat differently than in previous years, due to the development of dairying throughout the State. The special campaigns of previous years which covered large areas in a limited time served their purpose to stimulate interest and created a demand for more detailed information along the lines of better dairying. In order to meet this demand the department arranged to hold longer meetings and wherever possible conduct practical demonstrations by using the equipment and stock from the farms of each community.

The special work was also conducted as nearly as possible in those sections where dairying is least developed and where its in-

troduction will be of greatest benefit in improving the agricultural conditions. The southern half of Iowa is in need of more dairying because of the condition of the soil and the relatively low income obtained with the present methods of farming used on the high priced land. There are but few creameries in this portion of the state and therefore the market for the dairy products is not as well developed as in the northern portions. In order to be of the greatest assistance a large part of the work has been devoted to the southern half of the State.

Since our last report representatives of the Iowa State Dairy Association have met 268 audiences in 62 counties. The records of the attendance at these various meetings show that 37,480 people have been reached. Of the 268 audiences, 43 were in attendance at the Farmers' Institutes, 89 at Creamery Meetings, and the remaining 136 meetings were conducted by the Dairy Association directly.

Up to the winter of 1913-14 the department had operated 12 dairy trains. These covered every railroad line in the State and furnished the lecturers an opportunity to reach 595 towns, 47 of which were given two meetings due to the crossing of the various lines. These special trains were conducted in a manner to create an interest in dairying and prepared the way for more detailed information in the localities visited.

During the winter of 1914, a special dairy train was operated over the Chicago, Burlington & Quincy Railroad. Meetings from one half day to a full day in length were held at each town and a complete program given. Although the train was out nearly a month, the longer meetings would only permit holding from three to four a day. This limited the number of meetings and only the communities that were willing to give assistance were included in the itinerary. The farmers, the business men, and the commercial clubs at each place cooperated in every way to make the meeting a success.

Upon the arrival of the train, lectures were given in a hall provided by the town for this purpose. The subjects of feeding, breeding, care of the herd, the pure bred sire, barn construction, silos and ensilage, alfalfa, the care of cream, diseases of dairy cattle, etc. were taken up in a practical manner. After each lecture questions were called for and discussions held.

The exhibit cars carried on this special were equipped more completely than those on the previous trains. The exhibit of dairy appliances, model silos, barns, etc., as well as representatives of the leading breeds were shown to the audiences after the program at the hall and the local cow show had been completed.

A community cow show was held in conjunction with 58 of the meetings conducted during the year. This feature in every instance proved most practical and instructive. At each town the business men provided prizes for the best cows exhibited. This created considerable rivalry and brought out an average of 18 cows at each show.

In addition to the farmers' meetings an effort was made to reach the younger generation. In order to do this most efficiently, lectures on general dairying were delivered to the high school students. At the completion of the lectures the boys and girls were given work in judging dairy cattle. Prizes for this contest were also offered by the local merchants. According to the records 1685 boys and girls were given instructions in judging dairy cattle.

A milk record contest among the boys and girls between the ages of 12 and 20 years was also conducted during the year. One hundred and eighty-two contestants were entered, and one hundred fifty-seven completed the work. Each of the contestants kept records on the milk and butterfat produced, the cost of feed, and figured the profit or loss on three or more cows for three months. The results of the contest indicate that 623 cows were under test. Practically all of them were located on farms which would not have carried on this work had it not been for the contest. As an inducement to encourage the boys and girls to enter this contest, three pure bred bull calves, representing the Holstein, Jersey and Guernsey breeds were given for the first three prizes. Other prizes in the form of dairy equipment, cash prizes and farm journals were offered by companies interested in the promotion of dairying.

A number of creameries were assisted in issuing to their patrons bulletins containing dairy information. The department made a study of the conditions of the various localities and furnished the copy for these bulletins.

The practice of issuing bulletins which began last year was continued throughout the present year. During the busy season for the farmers when it was impossible to hold meetings, bulletins on timely topics, pertaining to the improvement of the dairy conditions on the average farm were prepared and sent for publication to the newspapers in 364 communities.

In addition to the above mentioned work the Association has assisted the managements of the County and District fairs to increase their dairy departments. Production contests were also conducted at a number of the local fairs. The organization of breeding and testing associations has also been encouraged in a number of localities.

Like in former years the state dairy expert helped with the management of the Dairy Cattle Congress which is held annually with the State Dairy Association Convention. The Dairy Show since its beginning in 1910 has been an important factor in encouraging better dairying . It brings the best representatives of all the leading breeds of dairy cattle in America to Iowa for the inspection of the farmers and dairymen. In addition to the cattle there is a large exhibit of butter and other dairy products as well as up-to-date dairy farm equipment of all kinds. The convention proper is held on the grounds of the show and furnishes an added attraction to those seeking dairy information.

The Iowa State Dairy Association in all of its work has been assisted in a large measure by the other dairy interests of the State. Chief among these in the Dairy and Food Department which had a number of speakers on the trains throughout the tours and also co-operated in all the other work. The individual dairymen have also sacrificed portions of their time to educating their brother farmers in better methods and giving them the benefit of valuable experience. The Dairy Department of the Iowa State College and the Department of the State Veterinarian has also given valuable assistance each year.

There is an extensive field for dairy educational work in Iowa. The preliminary work of showing the vital relation of good dairying to permanent agriculture is being rapidly accomplished. If the necessary funds are supplied the work con be extended and dairying made to be a very profitable department on the Iowa farm.

ALFALFA.

The acreage devoted to alfalfa, especially in dairy districts, is rapidly increasing in Iowa from year to year. The men who contend that alfalfa cannot be grown on Iowa land are harder to find than

they were a few years ago, and when farmers over our state know as much about raising alfalfa as they do about raising our great corn crop, its success will be assured. It is not an uncommon thing for alfalfa to yield five tons to the acre in three cuttings and being nearly equal in nutritive food value to wheat bran, it is not unfair to say that good alfalfa hay is worth from $10.00 to $15.00 per ton to any feeder of farm animals.

When starting an alfalfa field select a well drained tract with a water level at least five feet from the surface. Alfalfa will not grow on a water-logged, mucky or sour soil. To determine the sourness or acidity of the soil, use the blue litmus paper test. Procure some blue litmus paper from your druggist, cut a slit in the moist soil and insert the paper and press the soil closely around it. Allow it to remain about a half hour and then examine the color of the paper. If the paper is pink the soil shows acidity and should be limed before sowing alfalfa, but if it remains blue no lime is necessary.

Alfalfa may be sown in either the fall or spring, but fall sowing is to be advised as a grain crop can be raised on the land during the early months of the season and if sown in the spring the field is apt to become infested with weeds. The plant does not, as a rule, do well with a nurse crop.

The field to be used should be well fertilized with well rotted barnyard manure, and inoculated with nitrogen gathering bacteria which are so essential to the life of the alfalfa plant. Soil may be inoculated in two ways; First, by taking wagon loads of dirt from a neighboring alfalfa field, or sweet clover field, (which uses the same kind of bacteria) or the pure culture. These nitrogen producing bacteria are seldom found in soil never before used for alfalfa. Plow the soil deep, providing as much aeration as possible before planting the seed.

Sow about twenty pounds to the acre of the best alfalfa seed procurable to obtain the best results. The time to cut the crop is when the little shoots put out at the base of the plant. Never harvest the crop until these appear.

Good alfalfa hay used in conjunction with corn silage and a small grain ration is the ideal balanced ration feed for a dairy cow without the addition of any high priced concentrate to reduce the profit from the butterfat. When the dairymen of the state are universally equipped with silage and alfalfa their profits will be very materially increased.

THE BABCOCK TEST IN THE PUBLIC SCHOOLS.

Ever since the Babcock test has been generally used as a means of determining the amount of butterfat produced by individual cows, dairy authorities have recognized the value of placing these machines in the hands of dairymen. Farmers and dairymen have been urged to weigh the milk from each cow and test the product on the farm as this part of the dairy work always creates an interest in better dairy animals and adds an attractive feature to the otherwise monotonous labors of the dairyman.

Realizing the importance of reaching the young people on the farm, the operation of the Babcock test has been demonstrated to large numbers of pupils in the schools throughout the state and the interest shown in this subject leads us to believe that within a short time the subject of testing milk and cream will be taught as a part of a regular course in agriculture in the rural schools.

The Owasa public school has during the past year carried on a course of instruction in testing milk and cream and prizes were offered to those who stood highest in an examination given at the close of the school year in June, 1914. In giving the examination the same blanks were used as have been adopted in examining operators of the Babcock test before issuing licenses in this state and the papers filled out by these pupils were very creditable and indicated that the instruction had been thorough. In addition, these pupils were given instruction in the care of milk and cream and bulletins issued by this department were used as a text in school work. Essays written by the various pupils, which were later submitted to this department, for grading, indicate that the pupils gained a very clear idea of the subject matter and we believe this plan furnishes the best means of improving the quality of Iowa butter. Keeping in mind that many of these boys and girls will within a few years be the people who will live on the farms of Iowa, we cannot over-estimate the importance of teaching them proper methods in the care of milk and cream.

Much of the poor cream produced is a result of failure on the part of our dairymen to understand the necessity for giving the best care to their produce and no work undertaken in recent years will bring greater direct benefit to the individuals and to the state as a whole than this line of instruction in the rural schools of the state.

CREAMERY SCORE CARD.

Early in the year 1913, Prof. M. Mortenson of the Dairy Department at Ames offered prizes for the best kept creamery premises with a view to creating an interest in better creamery buildings and surroundings. The contest aroused considerable rivalry and the results were such as justified an expansion of his idea.

At the semi-annual meeting of inspectors of this department in May, 1914, Prof. Mortensen appeared and presented his plan with the result that a committee of our inspectors met with Prof. Mortensen and a creamery score card was designed to be used in grading the various creameries according to the condition of the plant and equipment. Prof. Mortensen again provided prizes for the highest scoring plant and our creamery inspectors are able to fill out a score card of the building and grounds while making the regular sanitary inspection of the plant and at the end of the year the score cards will be judged by a committee to determine the winner of the prizes.

It has long been acknowledged that a clean building with well kept grounds had a good effect on the producer of the raw material and a creamery plant in which the producers take pride acts as a stimulant to produce a superior quality of milk or cream. There are many creameries throughout the state that will pass inspection under the law and yet may be greatly improved by a little additional care on the part of the buttermaker or Board of Directors. Little attention has been paid to the beautification of the grounds surrounding our industrial establishments but we hope in the future to so educate the farming communities that they will make their creamery grounds a place of beauty as well as a financial asset to the community.

FOOT AND MOUTH DISEASE.

Foot and mouth disease is an acute, highly communicable disease confined to cloven-footed animals and ruminants and is characterized by an eruption of vesicles on the mucous membrane of the mouth and on the skin between the toes and above the hoofs and

sometimes on udder, teats and escutcheon. The vesicles rupture, forming erosions and ulcerations; there is also salivation, tenderness of the affected parts, loss of appetite, lameness, emaciation, and diminution in the quantity of milk secreted. In some instances, the horn tissues slip from the foot of the hog. The foot lesions are most pronounced in hogs, the mouth lesions in cattle.

The tremendous ravages of the disease are seen in the number and variety of the species attacked. While it may be regarded as essentially a disease of cattle, hogs are fully as susceptible. Sheep and goats are apparently not as susceptible as cattle and hogs. Horses, dogs, cats and even poultry, may occasionally carry the infection. Man himself is not immune, and the frequency of his infection by coming in contact with diseased animals is established by numerous observations.

The disease prevails in European countries and occasions great economic losses. The disease has made its appearance in the United States only on five different occasions—1870, 1880, 1884, 1902-3, and 1908, but fortunately every outbreak upon American soil has thus far been quickly followed by its complete eradication. The United States through the Bureau of Animal Industry, working in co-operation with the authorities of various states, has never failed to eradicate this disease. This cannot be said of any other country in connection with the outbreaks of foot and mouth disease.

The causative agent or germ of this disease has not been isolated or identified. The specific principle may be found in the serum of the vesicles in the mouth and on the feet and udder; in the saliva, milk and various secretions and excretions; also in the blood during the rise of the temperature. Animals may be infected directly through the saliva, as by licking each other, and in calves by sucking diseased cows, or indirectly by fomites such as infected manure, hay, utensils, drinking troughs, railway cars, animal markets, barnyards, and pastures.

Foot and mouth disease is primarily and principally a disease of cattle, sheep, goats and swine. The disease may be transmitted to man, and especially to children, through the ingestion of raw milk from a diseased cow. It is doubtful whether the disease can be transmitted to man by cutaneous or subcutaneous inoculation, though it is probable the infection may be communicated if the virus directly enters the blood through wounds of any kind. Children are not infrequently infected by drinking raw milk during the periods in which the disease is prevalent in the neighborhood,

while persons in charge of diseased animals may become infected through contact with the diseased parts or by milking, slaughtering, or caring for the animals.

The disease is very seldom fatal to human beings, usually appearing in a very mild form except in weakened children, in whom an accompanying intestinal catarrh may lead to a fatal termination.

An animal in the first stages of the disease, or with a slight attack, will produce milk which is only slightly abnormal. There is generally a reduction in the quantity of sugar and casein, which causes a reduction in the specific gravity. When the disease is fully developed, the milk invariably contains inflammatory products of a very pronounced character and the quantity of milk is greatly reduced. Cows affected with malignant form of the disease practically fail to produce milk.

If the udder becomes involved the milk becomes slimy and is yellowish and viscous like colostrum. It may contain blood and deposit a sediment on standing; the cream layer is thin and of a dirty color. Sometimes no cream layer is formed, the milk appearing uniform but slimy and possessing a bad odor and repulsive rancid taste.

On account of the possibility of the disease being transmitted to human beings as well as to animals, through the use of milk and its products, it is advisable that all milk, cream, skim milk, and buttermilk be efficiently pasteurized. The bacteria causing the disease loses its virulence by being heated to 122° F. for 15 minutes; by being heated to 158° F. for 10 minutes; heating to boiling destroys it at once. The bacteria is not easily killed by cold and has been known to remain active after being placed in a refrigerator for one month.

As a means of safeguarding the health of the people through the milk supply of the state, as well as for the protection of the dairyman and his herd, the Commission makes the following recommendations:

ALL FARMS FOUND TO HAVE DISEASED ANIMALS MUST BE IMMEDIATELY QUARANTINED AND NO MILK OR DAIRY PRODUCTS THEREFROM PERMITTED TO BE USED FOR ANY PURPOSE WHATSOEVER.

CREAMERIES MUST THOROUGHLY PASTEURIZE ALL CREAM, MILK, SKIM MILK, AND BUTTER-MILK.

WASH AND SCALD ALL MILK CANS AS SOON AS THEY ARE RETURNED.

DO NOT VISIT FARMS OR DISTRICTS WHERE THE DISEASE IS PREVALENT OR SUSPECTED.

DO NOT PURCHASE FEED OR BEDDING FROM INFECTED DISTRICTS.

ALL BUILDINGS AND EQUIPMENT SHOULD BE KEPT IN A CLEAN AND SANITARY CONDITION.

THOROUGHLY CLEANSE ALL WATERING TROUGHS FREQUENTLY.

DO NOT PERMIT VISITORS OTHER THAN OFFICERS OR VETERINARIANS TO INSPECT YOUR ANIMALS.

KEEP ALL LIVE STOCK OFF THE HIGHWAYS.

ALL DOGS AND CATS SHOULD BE CONFINED AT HOME, ALSO PIGEONS. ALL STRAY DOGS, CATS, PIGEONS AND CROWS SHOULD BE SHOT.

The following disinfectants are satisfactory when thoroughly applied to cow barns and premises.

Three per cent solution cresol compound U. S. P. or 5% solution of carbolic acid, with sufficient lime to whiten the solution.

If the disease is prevalent in your vicinity, spray barns thoroughly with either of the above solutions. The water should be luke warm. Strain the solution before placing in sprayer. Spray the barn soon after the cows are turned out in the morning.

Animals' feet may be disinfected with a 1 to 1,000 solution of Bichloride of Mercury.

COMPETITIVE EXHIBITIONS OF MILK.

In this state four such annual exhibitions have been held, under the auspicies of the State Dairy Association, and in connection with the Dairy Cattle Congress at Waterloo, during the month of October. As no tabulated reports of these contests have been published we deem them worthy of a place in this report, since the first three were under the direct supervision of O. P. Thompson, State Dairy Inspector of this department.

"The first public milk and cream exhibition for prizes in this country was held in connection with the National Dairy Show in

Chicago, under the direction of the Dairy Division, Bureau of Animal Industry, United States Department of Agriculture, February 15-24, 1906. The objects were, first, educational; second, to determine the possibilities in the handling and keeping of milk and cream produced under sanitary conditions and kept cold; and third, to test a score card for rating fairly and accurately this class of dairy products."

It was deemed advisable to have but one class—raw milk at this time, and to add at a later date pasteurized milk, and also a class for cream both raw and pasteurized.

Some objection has been made to this sort of an exhibit from the fact that the samples submitted do not accurately represent the milk offered for sale in a regular way, and that the milk men take extra pains with this milk. This is ordinarily the case, but this is an educational exhibit and is intended to show what can be done.

The buttermaker who enters a tub of butter for the scoring contest does not take this butter from his regular churning, neither does the exhibitor of dairy cattle, for a prize, lead his cow directly from the pasture into the show ring. To those unfamiliar with these exhibitions, it may seem that the score under the head of "Visible dirt" is low, but it averages up well with other similar exhibits, at other shows. The samples for the first three years were judged and plated for bacterial count on the fourth day after being milked, and those for the current year were judged and plated on the second day.

UNITED STATES DEPARTMENT OF AGRICULTURE.

BUREAU OF ANIMAL HUSBANDRY, DAIRY DIVISION.

SCORE CARD FOR MILK.

Place .....

Class ..... Exhibit No. .....

Item	Perfect Score	Score Allowed	Remarks
Bacteria	35		Bacteria found per cubic centimeter
Flavor and odor	25		Flavor Odor
Visible dirt	10		
Fat	10		Per cent found
Solids not fat	10		Per cent found
Acidity	5		Per cent found
Bottle and cap	5		Cap Bottle
Total	100		

Exhibitor .....

Address .....

(Signed) .....

Judge.

Date, ..., 191....

DIRECTIONS FOR SCORING.

BACTERIA PER CUBIC CENTIMETER—PERFECT SCORE, 35.

	Points		Points
400 and under	35	55,001 to 60,000	19
401 to 700	34.5	60,001 to 65,000	18
701 to 1,000	34	65,001 to 70,000	17
1,001 to 2,000	33.5	70,001 to 75,000	16
2,001 to 3,000	33	75,001 to 80,000	15
3,001 to 4,000	32.5	80,001 to 85,000	14
4,001 to 5,000	32	85,001 to 90,000	13
5,001 to 6,000	31.5	90,001 to 95,000	12
6,001 to 7,000	31	95,001 to 100,000	11
7,001 to 8,000	30.5	100,001 to 110,000	10
8,001 to 9,000	30	110,001 to 120,000	9
9,001 to 10,000	29	120,001 to 130,000	8
10,001 to 15,000	28	130,001 to 140,000	7
15,001 to 20,000	27	140,001 to 150,000	6
20,001 to 25,000	26	150,001 to 160,000	5
25,001 to 30,000	25	160,001 to 170,000	4
30,001 to 35,000	24	170,001 to 180,000	3
35,001 to 40,000	23	180,001 to 190,000	2
40,001 to 45,000	22	190,001 to 300,000	1
45,001 to 50,000	21	Over 300,000	0
50,001 to 55,000	20		

Note—When the number of bacteria per cubic centimeter exceeds the local legal limit the score shall be 0.

FLAVOR AND ODOR—PERFECT SCORE, 25.

Deductions for disagreeable or foreign odor or flavor should be made according to conditions found. When possible to recognize the cause of the difficulty it should be described under Remarks.

VISIBLE DIRT—PERFECT SCORE, 10.

Examination for visible dirt should be made only after the milk has stood for some time undisturbed in any way. Raise the bottle carefully to its natural, upright position, without tipping, until higher than the head. Observe the bottom of the milk with the naked eye or by the aid of a reading glass. The presence of the slightest movable speck makes a perfect score impossible. Further deductions should be made according to the amount of dirt found. When possible the nature of the dirt should be described under Remarks.

FAT IN MILK—PERFECT SCORE, 10.

	Points		Points
4.0 per cent and over	10	3.2 per cent	6
3.9 per cent	9.8	3.1 per cent	5
3.8 per cent	9.6	3.0 per cent	4
3.7 per cent	9.4	2.9 per cent	3
3.6 per cent	9.2	2.8 per cent	2
3.5 per cent	9	2.7 per cent	1
3.4 per cent	8	Less than 2.7 per cent	0
3.3 per cent	7		

Note—When the per cent of fat is less than the local legal limit the score shall be 0.

SOLIDS NOT FAT—PERFECT SCORE, 10.

	Points		Points
8.7 per cent and over	10	8.1 per cent	4
8.6 per cent	9	8.0 per cent	3
8.5 per cent	8	7.9 per cent	2
8.4 per cent	7	7.8 per cent	1
8.3 per cent	6	Less than 7.8 per cent	0
8.2 per cent	5		

Note—When the per cent of solids not fat is less than the local legal limit the score shall be 0.

ACIDITY—PERFECT SCORE, 5.

	Points		Points
0.2 per cent and less	5	0.23 per cent	2
0.21 per cent	4	0.24 per cent	1
0.22 per cent	3	Over 0.24 per cent	0

BOTTLE AND CAP—PERFECT SCORE, 5.

Bottles should be made of clear glass and free from attached metal parts. Caps should be sealed in their place with hot paraffin, or both cap and top of bottle covered with parchment paper or other protection against water and dirt. Deduct for tinted glass, attached metal parts, unprotected or leaky caps, partially filled bottles, or other conditions permitting contamination of milk or detracting from the appearance of the package.

TABLE NO. 1—1911.

Sample No.	Fat Per cent	Solids not fat Per cent	Acidity Per cent.	Total bacteria Per C. C.	Appearance of Package	Remarks
1	4.1	9.22	.175	9,200	Slight sediment	
2	3.3	7.98	.15	48,000	Slight sediment	
3	4.4	8.82	.165	12,400	Slight sediment	Diploma
4	6.4	10.10	.195	1,000	Slight sediment	Silver medal
5	6.1	9.00	.175	275,580	Slight sediment	
6	5.4	9.28	.185	9,200	Much sediment	
7	3.1	8.90	.160	850	Slight sediment	Cowey odor and flat flavor
8	4.9	9.23	.34	919,700	Slight sediment	Cheesy flavor and sour
* 9	4.6	8.38	.213	1,443,480	Much sediment	Barn flavor
*10	4.2	9.11	.735	240,000	Much sediment	Sour
*11	5.1	9.29	.21	37,000	Much sediment	Grass flavor
*12	4.3	9.13	.18	1,099,550	Much sediment	
*13	4.4	8.84	.185	2,403,500	Slight sediment	Grass flavor, cowey odor
14	2.6	.....	.500	42,000	Much sediment	Cheesy flavor and sour
15	4.4	8.70	.18	28,600	Slight sediment	Grass flavor
16	5.11	9.54	.205	400	Slight sediment	Suspected pasteurization
17	3.00	8.69	.185	1,750	Very slight sediment	
*18	4.5	8.68	.23	476,474	Slight sediment	Grassy and cowey flavor—sour
*19	4.3	8.67	.195	810,000	Slight sediment	Cowey odor
21	7.	10.28	.21	805,250	Much sediment	Stable and cowey flavor and odor
22	5.4	9.36	.18	1,850	Slight sediment	Grassy flavor
*23	3.8	8.97	.205	900,000	Large amount sedim't	Bitter and soapy flavors
24	3.7	9.23	.175	1,600	Much sediment	Oily flavor
25	3.5	9.22	.215	7,000	Slight sediment	Flat flavor
26	5.0	9.40	.18	1,350	Very slight sediment	Grassy and cowey odor and flavor
27	6.	9.27	.195	950	Very slight sediment	Gold medal

*Shipped without being properly iced.

TABLE NO. 2—1911.

Sample No	Bacteria per Cu. C. Perfect score 35	Flavor and odor Perfect score 25	Visible dirt Perfect score 10	Fat in milk Perfect score 10	Solids not fat Perfect score 10	Acidity Perfect score 5	Bottle and cap Perfect score 5	Total Perfect score 100
1	29	21	9.5	10	10	5	4	88.5
2	21	19	9.5	9	8	5	4	69.5
3	29	23	9.5	10	10	5	4	88.5
4	33.5	19	9.5	10	10	5	4	92
5	0	20	9.5	10	10	5	4	88.5
6	29	20	8	10	10	5	4	86
7	24	19	8	9	10	5	4	81
8	0	9	9.5	10	10	0	4	42.5
* 9	0	10	5	10	6	4	5	40
*10	0	7	8.5	10	10	0	5	30.5
*11	23	17	8	10	10	3	4	75
*12	0	19	6	10	10	5	5	55
*13	0	13	9	10	10	0	5	47
14	22	5	5	0	0	0	5	37
15	23	17	8	10	10	5	5	80
16	31.5	15	9	10	10	4	5	87.5
17	27	10	9.5	4	9	5	5	78.5
*18	0	15	9.5	10	9	1	4	48.5
*19	0	13	9.5	10	9	5	4	50.5
21	0	10	7	10	10	3	4	44
22	33.5	17	9.5	10	10	5	5	90
*23	0	5	2	9.6	10	0	4	30.6
24	33.5	15	7	9.4	10	5	5	84.9
25	31	19	9	9	10	3	4	85
26	28	13	9.5	10	10	5	5	80.5
27	34	19	9.5	10	10	5	5	92.5

*Shipped without being properly iced.

No. 27 received first prize—Gold Medal
No. 4 received second prize

	Flavor	Visible dirt	Fat	Solids not fat	Acidity	Bottle and	
		O. K.	3.1	8.92	1		Paraffin not even
	Bitter and cowey.	Slight	3.2	9.04	19		Not enough paraffin
	Bitter and cowey.	Slight	5	9.35	21		Perfect
		Some	5	8.8	19		
1,000	Cow and barn	Some	3.8	8.2	21		
500		Some	4.3	9.8	21		Leaky
2,000	Cowey	Slight	4.2	8.6	19		Leaky
300,000	Bitter	Slight	7.8	8.60	21		Leaky
1,000	Flat	O. K.	4	8.85	3		Perfect bottle, not full
4,000		Some	4.1	9.27	18		Poor capping
600	Bitter and cowey.	Very dirty	6	9.4	21		Leaky
500			4.4	9.45	2		Perfect bottle, not full
8,000		Much	4.2	9.19	24		Not full
200	Dirty	Much	4.6	9.04	21		Not full
900	Cowey, bitter	Slight	3.6	8.74	22		Not full
500	Barn	Much	4.3	9.03	18		Leaky
14,000	Dirty, bitter	Much	4.6	9.44	22		Leaky

TABLE NO. 1—1912.

Sample No.	Fat Per cent	Solids not fat Per cent	Acidity Per cent	Total bacteria Per C. C.	Remarks
1	5.4	8.69	.15	17,300	Slight sediment
2	3.2	9.40	.17	600,000	Very slight sediment
3	5.1	8.74	.18	1,200,000	Cap unprotected, slight sediment
4	4.7	8.95	.14	78,500	Slight sediment
5	5.2	9.08	.17	252,000	Slight sediment
6	5.9	8.76	.17	22,900	Unprotected cap, slight sediment
7	5.3	9.08	.16	22,400	Cowey flavor, slight sediment
8	4.6	8.33	.14	6,200	Foreign flavor, slight sediment
9	5.4	8.92	.15	1,000	Cowey flavor, slight sediment
10	4.7	8.93	.20	780,000	Slight sediment
11	4.2	8.60	.16	75,500	Washy flavor, slight sediment
12	3.8	8.92	.17	323,000	Washy flavor, slight sediment
13	5.0	8.40	.17	9,000	Flat flavor, slight sediment
14	3.8	7.85	.12	280,000	Bitter flavor, slight sediment
15	3.9	8.19	.21	1,500,000	Washy and cooked flavor, slight sediment
16	4.4	8.17	.14	2,650,000	Greasy flavor, slight sediment
17	4.8	9.06	.16	1,800,000	Grassy flavor, slight sediment
18	3.4	8.79	.15	6,000,000	Cowey flavor, slight sediment
19	5.3	8.91	.16	930,000	Slight sediment
20	4.4	9.00	.15	4,800,000	Cowey flavor, slight sediment
21	3.1	8.43	.15	18,200	Cowey flavor, slight sediment
22	4.9	8.92	.16	1,680,000	Washy flavor, slight sediment
23	4.3	8.92	.18	2,520,000	Slight sediment

.27 .19

d without being properly leed.

TABLE NO. 2—1912.

Sample Number	Bacteria per C. C. Perfect score 35	Flavor and Odor Perfect score 25	Visible dirt Perfect score 10	Fat in milk Perfect score 10	Solids not fat Perfect score 10	Acidity Perfect score 5	Bottle and cap Perfect score 5	Total Score perfect 100
1	28	24.5	8.0	10.0	9.0	5.0	5.0	89.5
2	0	15.0	9.5	6.0	7.0	5.0	3.5	46.0
3	0	15.0	6.5	10.0	10.0	5.0	3.5	50.00
4	15.0	25.0	6.0	10.0	8.0	5.0	5.0	71.0
5	0	21.0	9.0	10.0	10.0	5.0	3.5	58.5
6	*30.0	21.35	8.5	10.0	10.0	5.0	3.5	84.5
7	30.0	22.0	7.5	10.0	10.0	5.0	5.0	85.5
8	21.0	21.75	8.0	10.0	6.0	5.0	5.0	82.75
9	33.5	17.00	9.0	10.0	8.0	5.0	3.5	86.0
10	0	24.5	7.5	10.0	10.0	5.0	3.5	60.5
*11	16.0	23.0	8.5	10.0	9.0	5.0	3.5	75.0
12	0	21.0	7.0	9.6	10.0	5.0	2.5	55.1
13	30	22.0	9.0	10.0	7.0	5.0	4.5	88.5
14	0	15.0	8.0	9.6	1.5	5.0	3.5	42.6
*15	0	22.0	6.0	9.8	5.0	4.0	2.5	50.3
16	0	19.0	8.0	10.0	4.0	5.0	5.0	48.0
17	0	19.0	9.5	10.0	10.0	5.0	3.5	32.5
18	0	21.0	8.0	8.0	10.0	5.0	3.5	43.5
19	0	23.5	7.0	10.0	10.0	5.0	5.0	60.5
20	0	15.0	8.0	10.0	10.0	5.0	5.0	58.0
21	27.0	17.0	8.0	5.0	7.0	5.0	4.0	73.0
22	0	20.0	8.0	10.0	8.0	5.0	5.0	56.0
*23	0	23.0	9.75	10.0	8.0	5.0	5.0	60.75

*Shipped without being properly leed.
No. 1 received first prize—Gold Medal. Wm. Galloway Farms, Waterloo.
No. 13 received second prize—Silver medal. N. L. Bennett, Waterloo.
No. 9 received third prize—Diploma.

TABLE NO. 1—1913.

No. of entry	Bacteria per C. C.	Flavor and odor	Visible dirt	Fat	Solids not fat	Acidity	Bottle and cap
1	28,000	----------	O. K. ----------	3.1	8.92	1	Paraffin not even
2	2,000	Bitter and cowey.	Slight ----------	3.2	9.04	19	Not enough paraffin
3	1,000	Bitter and cowey.	Slight ----------	5	9.55	21	Perfect
4	64,000	----------	Some ----------	5	8.8	19	----------
5	1,000	Cow and barn	some ----------	3.8	8.2	21	----------
6	500	----------	None ----------	4.3	9.8	21	Leaky
7	2,000	Cowey ----------	Slight ----------	4.2	8.6	19	Leaky
8	300,000	Bitter ----------	Slight ----------	2.8	8.66	21	Leaky
9	1,000	Flat ----------	O. K. ----------	4	8.85	2	Perfect bottle, not full
10	4,000	----------	Some ----------	4.1	9.27	18	Poor capping
11	600	Bitter and cowey.	Very dirty ----------	6	9.4	21	Leaky
12	500	----------	----------	4.4	9.45	2	Perfect bottle, not full
13	8,000	----------	Much ----------	4.2	9.19	24	Not full
14	500	Dirty ----------	Much ----------	4.6	9.04	21	Not full
15	900	Cowey, bitter ...	Slight ----------	5.8	8.74	22	Not full
16	500	Barn ----------	Much ----------	4.3	9.03	18	Leaky
17	14,000	Dirty, bitter ----	Much ----------	4.6	9.44	22	Leaky

TABLE NO. 2—1913.

No. of entry	Bacteria Perfect score 35	Flavor and odor Perfect score 25	Visible dirt Perfect scor	Fat Perfect score 10	Solids not fat Perfect score 10	Acidity Perfect score 5	Bottle and cap Perfect score 5	Total score
1	25	24.23	10	5	10	5	4.75	84
2	32.5	23	9.5	6	10	3	4.75	89.75
3	34	23	9	10	10	4	5	95
4	18	24.5	8.5	10	10	5	5	81
5	34	24.25	7.5	9.6	5	4	5	88.35
6	34.5	23.75	7.5	10	10	4	4	96.75
7	33.5	23.5	9.5	10	9	4	4.25	94.75
8	0	10.5	9.5	2	9	4	4.25	48.5
9	34	22.5	10	10	10	5	4.75	96.25
10	32.5	24.75	8	10	10	5	4	94.25
11	34.5	19	4	10	10	4	3	84.5
12	34.5	24	8	10	10	5	4.75	96.25
13	30.5	24	6	10	10	1	4.75	86.25
14	34.5	21	5	10	10	4	4.75	89.25
15	34	19.5	7.5	7.2	10	3	4.5	87.7
16	34.5	22	7	10	10	5	4.75	96.25
17	28	21	7.5	10	10	3	4	83.5

Nos. 9 and 12 tied. Each received first prize—Gold Medal.
No. 3. received second prize—Silver Medal.
No. 9, Iowa Dairy Co., Waterloo.
No. 12, Hillcrest Farm, Des Moines.
No. 3, Shoemaker, Van Pelt, Mayne Co., Waterloo.

TABLE NO. 1—1914.

No. of entry	Bacteria per C. C.	Flavor and odor	Butter Fat	Solids not fat	Acidity
1	4,800	Cowy	3.35	8.8	.16
2	26,000		5.35	8.6	.14
3	90		6.95	9.7	.15
4	3,650	Paper	3.50	9.0	.14
5	12,300	Drug	4.95	9.5	.17
6	1,600,000		4.40	9.4	.18
7	200	Cowy	4.50	8.7	.15
8	2,400		3.50	8.4	.14
9	145	Paper	3.00	9.1	.14
10	1,400		3.00	8.7	.15
11	700	Cowy	3.40	8.9	.15

TABLE NO. 2.—1914.

No. of entry	Bacteria per C. C. Perfect score 35	Flavor and odor Perfect score 25	Visible dirt Perfect score 10	Fat Perfect score 10	Solids not fat Perfect score 10	Acidity Perfect score 5	Bottle and cap Perfect score 5	Total score
1	32.0	23.25	8.25	7.0	10.00	5.0	4.5	90.00
2	25.0	22.00	8.00	10.0	9.00	5.0	4.5	83.50
3	35.0	23.00	8.50	10.0	10.00	5.0	5.0	96.50
4	32.5	21.00	5.75	9.0	10.00	5.00	4.75	88.00
5	28.0	16.50	5.00	10.0	10.00	5.0	4.75	79.25
6	00.0	22.50	5.75	10.0	10.00	5.0	4.75	58.00
7	35.0	19.50	8.00	10.0	10.00	5.0	4.75	92.25
8	33.0	21.00	8.75	9.0	7.00	5.0	4.75	88.50
9	35.0	20.50	5.75	9.8	10.00	5.0	4.75	90.80
10	32.5	21.50	8.25	4.0	10.00	5.0	4.75	87.00
11	34.5	21.75	8.00	8.0	10.00	5.0	5.00	92.25

No. 3 won first prize—Gold Medal. Shoemaker, Van Pelt, Mayne Co., Waterloo, Iowa.
No. 11 won second prize—Silver Medal. Dairyland Dairy, Newton, Iowa.
No. 7 won third prize—Diploma. N. E. Stanton, Estherville, Iowa.

Table showing the number of milk licenses issued to city milk dealers for each year from 1907 to 1914. In each case the year ends on July Fourth.

	1907	1908	1909	1910	1911	1912	1913	1914
Number..	1006	1078	1149	1106	1310	1908	2038	2189

Cities	Population	Inspectors
Boone	10,347	M. Healy, M. D.
Burlington	25,741	W. F. Schroeder
Cedar Rapids	32,811	Phil Pray
Clinton	25,577	J. H. Spence, D. V. S.
Council Bluffs	29,292	Peter Smith
Davenport	43,028	H. J. High
Des Moines	86,368	H. W. McElroy
Dubuque	38,494	F. J. Kennedy, D. V. S.
Fort Dodge	15,543	Francis Ludgate, M. D.
Keokuk	14,008	W. P. Sherlock, M. D.
Iowa City	10,091	C. S. Chase, M. D.
Marshalltown	14,000	C. A. Noggle, D. V. S.
Mason City	11,230	A. L. Wheeler, M. D.
Muscatine	16,178	John Tillie, D. V. S.
Ottumwa	22,012	B. W. Van Der Veer
Sioux City	47,848	E. C. Pape
Waterloo	26,693	W. W. Wyant

TABLE NO. 3.

Table Showing Number of Pounds of Milk Received, Number of Pounds of Cream Received, Pounds of Butter Made and Pounds Sold in Iowa and Outside the State so far as Reported by the Creameries.

Counties	Number reporting	Pounds of milk received	Pounds of cream received	Pounds of butter manufactured	Pounds sold to patrons	Pounds sold in Iowa	Pounds sold outside the state
Adair	2	137,473	1,568,831	602,824	38,506	35,460	328,798
Adams	1		325,238	132,502	5,171	13,356	113,375
Allamakee	8		7,112,711	1,937,855	40,123	117,328	1,780,404
Appanoose							
Audubon	8	47,354	2,968,538	1,098,945	61,322	40,179	996,334
Benton	6	9,000	1,440,543	501,347	17,436	106,974	376,937
Black Hawk	14	24,978,862	4,593,030	2,437,108	149,111	660,118	1,627,939
Boone	2		845,895	285,615	11,536	140,200	133,879
Bremer	25	69,338,236	1,279,312	3,040,178	268,131	163,498	2,608,549
Buchanan	8	15,856,232	2,196,738	1,348,487	100,814	165,050	1,082,473
Buena Vista	6	44,209	3,351,591	1,086,915	47,266	72,684	966,965
Butler	15	8,085,970	3,800,743	1,315,082	125,836	96,181	1,293,465
Calhoun	5	11,716	2,319,292	830,825	23,433	30,960	776,432
Carroll	10	185,210	2,270,248	821,370	21,948	134,312	665,120
Cass	2		1,570,193	534,735	1,535	111,567	421,713
Cedar	4	181,496	1,482,660	490,334	18,889	210,148	261,297
Cerro Gordo	9	1,337,817	2,841,683	1,518,772	43,117	223,091	1,252,364
Cherokee	2		297,783	110,824	28,562	26,000	56,262
Chickasaw	11	19,122,372	5,870,040	2,314,710	177,906	108,232	2,228,512
Clarke							
Clay	8	318,212	2,162,466	812,274	51,065	82,064	678,540
Clayton	14	15,562,554	7,464,985	3,185,670	101,934	313,987	2,769,749
Clinton	6	233,908	3,374,056	1,124,941	20,792	159,890	914,259
Crawford	1		372,804	124,269	676	24,039	98,553
Dallas	3	4,868,000	3,908,317	323,223	18,435	204,192	100,596
Davis	1		168,000	60,480	1,350	29,165	29,965
Decatur	1		1,294,050	418,067		13,414	404,643
Delaware	16	17,170,094	7,108,437	2,109,066	197,133	264,081	2,647,852
Des Moines	6	36,777	2,670,475	941,341	19,642	58,732	862,967
Dickinson							
Dubuque	17	2,020,396	6,392,830	2,181,904	85,718	311,681	1,787,505
Emmet	5	1,251,473	931,636	470,535	38,752	9,345	422,458
Fayette	21	36,035,392	7,276,695	3,739,045	267,533	280,962	3,190,550
Floyd	4	43,000	4,062,832	756,308	31,418	199,123	525,777
Franklin	7	29,969	3,941,583	1,178,443	53,569	71,391	1,053,483
Fremont	1		120,345	40,115		11,372	28,743
Greene	2	174,705	325,325	126,633	11,273	39,701	75,659
Grundy	5	964,139	2,495,244	806,779	47,515	9,968	750,256
Guthrie	5	66,875	1,908,290	672,635	49,958	76,609	546,068
Hamilton	5	1,506,221	1,179,867	356,782	43,096	44,901	268,795
Hancock	8		4,577,808	1,448,172	63,403	56,934	1,327,835
Hardin	10	540,339	4,806,631	1,605,339	94,976	132,872	1,377,511
Harrison	1		300,000	100,000	20,000	80,000	
Henry							
Howard	9	1,700,215	5,700,230	1,680,967	91,832	150,205	1,438,930
Humboldt	6		2,567,201	879,006	31,630	61,032	746,344
Ida	1	26,000	651,670	255,500	4,000	35,000	216,500
Iowa	7		1,304,752	508,303	46,029	50,295	411,969
Jackson	13	744,126	4,688,179	1,576,053	34,323	97,561	1,444,158
Jasper	3	407,747	444,035	159,171	11,287	47,923	99,961
Jefferson	1		265,450	86,250		56,250	30,000
Johnson	1	10,000	36,000	12,000	2,000	10,000	
Jones	7	1,516,361	6,699,111	2,037,059	101,673	117,743	1,818,241

TABLE NO. 3—Continued.

Counties	Number reporting	Pounds of milk received	Pounds of Cream received	Pounds of butter manufactured	Pounds sold to patrons	Pounds sold in Iowa	Pounds sold outside the state
Keokuk	2		485,000	164,800	2,000	62,800	100,000
Kossuth	18	1,029,217	5,819,500	1,893,792	137,119	128,878	1,597,795
Lee	1	23,410	4,439,260	1,140,420		120,970	1,013,450
Linn	10	1,197,479	7,125,567	2,280,332	68,841	402,623	1,817,839
Louisa	1		32,194	13,711	160	2,943	10,608
Lucas							
Lyon	3		1,403,134	481,027	2,622	15,885	463,000
Madison							
Mahaska	1		497,679	165,893			165,893
Marion	1	115,824	282,432	102,826		10,720	92,106
Marshall	4	82,516	1,940,030	687,414	21,874	213,165	452,375
Mills	1	58,898	210,525	70,175		40,672	29,503
Mitchell	7	713,160	4,240,491	1,253,316	85,776	66,309	1,101,231
Monona	2		172,255	45,085	6,067	9,152	29,866
Monroe	1		320,000	90,000	2,000	50,000	38,000
Montgomery							
Muscatine							
O'Brien	5	183,813	1,772,165	663,810	34,774	95,878	533,158
Osceola	3		567,076	232,174	5,460	31,359	195,337
Page	1		1,999,115	858,083		57,785	800,298
Palo Alto	12	3,085,001	4,410,808	1,517,538	155,762	102,006	1,259,769
Plymouth	3	234,387	771,551	265,077	8,204	87,808	169,065
Pocahontas	5	5,000	1,079,968	351,610	7,209	40,165	304,236
Polk	3	320,000	10,953,473	3,729,311		1,590,221	2,138,990
Pottawattamie	1		2,868,656	954,508		207,100	747,408
Poweshiek	3	83,165	684,356	232,204	4,294	123,279	104,631
Ringgold	1	3,467	25,110	8,859	110	1,945	6,804
Sac	6	57,422	1,674,924	569,546	25,962	83,048	460,538
Scott	2	5,836	764,255	250,992		56,016	194,976
Shelby	6		993,228	379,967	20,071	22,172	337,324
Sioux	9	191,887	4,245,218	1,540,089	36,410	92,709	1,410,970
Story	8	104,220	2,256,420	792,138	86,375	141,997	563,766
Tama	5	22,974	1,029,300	341,487	12,379	87,250	241,858
Taylor	2		2,310,228	766,705	15,620	46,320	704,765
Union	2	108,604	757,302	275,586	5,388	44,829	225,374
Van Buren							
Wapello	3		4,468,304	1,423,827		381,354	1,042,473
Warren							
Washington	2	787,500	64,968	20,656			20,656
Wayne	2		1,820,457	603,169	2,245	66,723	593,201
Webster	3	431,151	1,427,856	424,922	2,973	212,498	209,451
Winnebago	8	4,212,328	4,712,220	1,640,114	129,306	72,388	1,438,300
Winneshiek	10		8,240,797	2,367,506	35,855	108,043	2,222,608
Woodbury	3	1,141,100	27,452,206	10,740,082	19,000	721,836	10,006,246
Worth	9	20,910	4,300,159	1,306,374	72,086	55,975	1,178,313
Wright	5	51,149	2,047,787	607,680	27,506	114,909	465,275
Total	306	149,347,153	256,661,802	92,805,921	3,768,478	11,337,247	77,760,196

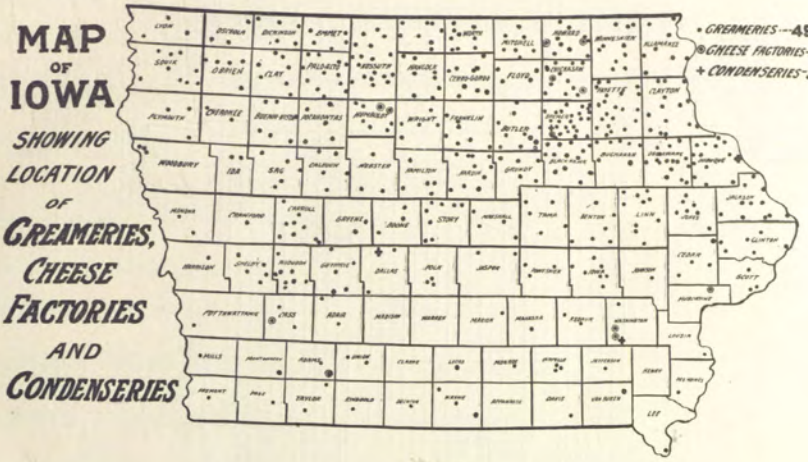
TABLE NO. 4.

Table Showing Number of Hand Separators, Number of Patrons and Number of Cows.

Counties	Received cream by rail	No. of creameries reporting hand separators	Hand separators reported	No. of patrons reported	No. of cows reported
Adair	.....	2	713	717	4,698
Adams	.....	1	144	160	1,120
Allamakee	.....	8	1,648	1,735	15,623
Appanoose	.....	.....	.....	.....	.....
Audubon	.....	8	1,086	1,259	8,881
Benton	.....	6	1,196	778	4,491
Black Hawk	2	12	1,359	2,049	13,519
Boone	.....	2	300	393	2,699
Bremer	.....	7	248	1,984	16,926
Buchanan	1	7	867	1,353	9,594
Buena Vista	.....	6	1,354	1,267	9,268
Butler	.....	14	934	1,535	10,980
Calhoun	2	5	857	1,020	5,866
Carroll	.....	10	1,394	1,476	7,998
Cass	2	2	471	541	3,440
Cedar	.....	4	747	789	5,344
Cerro Gordo	2	8	943	1,462	9,975
Cherokee	.....	2	260	384	3,158
Chickasaw	.....	9	1,402	1,978	16,702
Clarke	.....	.....	.....	.....	.....
Clay	.....	9	1,125	1,014	6,226
Clayton	.....	13	2,172	2,665	21,176
Clinton	2	6	1,645	1,672	7,778
Crawford	1	1	120	124	988
Dallas	1	2	440	721	4,387
Davis	.....	1	80	129	812
Decatur	1	1	600	700	4,400
Delaware	1	13	1,877	2,543	16,077
Des Moines	1	6	1,040	1,000	6,739
Dickinson	.....	.....	.....	.....	.....
Dubuque	2	17	1,768	1,939	15,184
Emmet	.....	5	381	414	3,317
Fayette	.....	14	1,802	3,021	21,332
Floyd	.....	4	633	902	5,930
Franklin	1	7	1,105	1,200	8,484
Fremont	.....	1	60	65	455
Greene	.....	3	309	279	1,968
Grundy	.....	5	584	695	5,429
Guthrie	.....	6	780	869	5,446
Hamilton	.....	5	593	674	4,353
Hancock	.....	8	1,339	1,339	9,884
Hardin	1	10	1,467	1,584	10,427
Harrison	.....	1	130	130	1,050
Henry	.....	.....	.....	.....	.....
Howard	.....	.....	.....	.....	.....
Humboldt	.....	9	1,499	1,603	13,552
Ida	1	6	903	938	6,485
Iowa	.....	1	180	200	1,000
Jackson	.....	7	509	582	3,594
Jasper	1	12	1,490	1,561	11,089
Jefferson	.....	2	232	244	1,629
Johnson	.....	1	75	120	850
Jones	.....	1	30	30	180
Keokuk	2	7	1,321	1,678	13,353
Kossuth	1	2	175	200	1,400
Lee	.....	18	1,639	1,639	12,481
	2	1	400	4,000	27,000

TABLE NO. 4—Continued.

Counties	Received cream by rail	No. of creameries reporting hand separators	Hand separators reported	No. of patrons reported	No. of cows reported
Linn	1	10	2,502	2,803	17,436
Louisa	.....	1	75	85	500
Lucas	.....	.....	.....	.....	.....
Lyon	1	2	585	667	4,844
Madison	.....	.....	.....	.....	.....
Mahaska	1	1	165	165	1,155
Marion	.....	1	161	327	1,130
Marshall	.....	4	867	908	4,941
Mills	.....	1	70	70	490
Mitchell	.....	7	1,694	1,473	9,485
Monona	.....	2	130	154	886
Monroe	.....	1	175	175	1,050
Montgomery	.....	.....	.....	.....	.....
Muscatine	.....	.....	.....	.....	.....
O'Brien	.....	5	846	870	5,229
Osceola	.....	2	234	291	2,029
Page	1	1	1,100	1,200	7,960
Palo Alto	.....	12	1,373	1,413	9,216
Plymouth	.....	3	420	424	2,814
Pocahontas	1	5	542	542	3,420
Polk	3	3	3,745	4,245	35,315
Pottawattamie	1	1	800	964	6,678
Poweshiek	1	3	457	682	4,720
Ringgold	.....	1	130	150	1,050
Sac	.....	6	896	935	6,206
Scott	3	3	277	297	2,366
Shelby	1	6	682	682	3,999
Sioux	.....	9	2,095	2,278	13,228
Story	.....	8	992	1,001	6,724
Tama	.....	5	416	426	2,622
Taylor	1	2	739	739	5,000
Union	1	2	330	351	1,961
Van Buren	.....	.....	.....	.....	.....
Wapello	3	3	1,206	1,422	9,954
Warren	.....	.....	.....	.....	.....
Washington	.....	1	30	30	210
Wayne	1	2	500	630	2,350
Webster	1	3	475	578	3,430
Winnebago	.....	8	1,307	1,447	9,547
Winneshiek	.....	10	2,000	2,270	15,294
Woodbury	.....	3	2,694	10,134	70,938
Worth	.....	9	1,023	1,228	8,989
Wright	.....	5	856	2,794	6,242
Total	50	471	77,749	103,319	687,584



CREAMERY LIST.

*Central Churning Plant. c—Co-operative. s—Stock. i—Individual.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Adair County—					
1	Adair Co-op. Cry.....c	Adair	D. J. Cowden	Adair	J. T. Ryan	Adair
2	Greenfield Cry. Co.....c	Greenfield	Jas. F. Laude	Greenfield	Chris. Lundboy	Greenfield
	Adams County—					
3	Fars. Mutual Co-op. Cry. Assn.....c	Prescott	O. M. Green	Prescott	A. H. Ady	Prescott
	Allamakee County—					
4	New Albin Co-op. Cry. Co.....c	New Albin	R. G. May	New Albin	E. Rice	New Albin
5	Fars. Waukon Co-op Cry. Co.....c	Waukon	E. P. Raymond	Waukon	A. H. Hansmeier	Waukon
6	Arctic Spring Cry. Assn.....c	Quandahl (9 mi. s)	O. C. Flatberg	Spring Grove, Minn.		
7	Ludlow Co-op. Cry Co.....c	Waukon (7 mi. sw)	Wm. F. Shafer	Postville, R. 3	Wm. P. Muth	Waukon, R. 1
8	Fars. Co-op. Cry. Co.....c	Waterville	Fred Mortensen	Waterville	Jack B. Frisbie	Waterville
9	Postville Fars. Co-op. Cry.....c	Postville	Geo. W. Fay	Postville	E. L. Forrester	Postville
10	Calhoun Cry. Co.....c	Church	C. J. Riser	Church	K. V. Ferris	Church
11	Harpers Ferry Co-op. Cry.....c	Harpers Ferry	A. M. Rafter	Harpers Ferry	R. C. Gehring	Harpers Ferry
	Audubon County—					
12	Liberty Cry. Co.....c	Manning	G. E. Bobenmoyer	Manning	Chris. Lund	Manning
13	Danish Sep. Cry. Co.....c	Kimballton	Peter Thuesen	Kimballton	Peter Thuesen	Kimballton
14	Blue Grass Cry. Co.....c	Hamlin	Jno. Slayton	Exira, R. 5	Geo. Gude	Hamlin
15	Exira Cry. Co.....c	Exira	A. S. Stone	Exira	C. B. Petersen	Exira
16	West Hamlin Cry. Co.....c	Exira (6 mi. e)	Martin Nelson	Exira, R. 2	Johannes Johansen	Exira, R. 2
17	Audubon Twp. Cry. Co.....c	Exira (6 mi. e)	L. P. Nelsen	Exira, R. 3	L. P. Nelsen	Exira, R. 3
18	Oakfield Twp. Cry. Co.....c	Brayton (3 mi. w)	Harry Nymand	Brayton	M. Andersen	Brayton
19	Sharon Sep. Cry. Co.....c	Audubon (6 mi. sw)	Otto Larsen	Audubon, R. 5	Peter Windfeldt	Audubon, R. 4

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Benton County—					
20	Blairstown Cry. Co. 4	Blairstown	Chas. Hanbold.....	Blairstown	Chas. Hanbold	Blairstown
21	Norway Cry. Co. 4	Norway	J. W. Derflinger.....	Cedar Rapids, 284 S. 16th St..	E. W. Switzer	Norway
22	Fars. Cry. Co. c	Belle Plaine	C. A. Sweet.....	Belle Plaine	J. L. Lovestrom.....	Belle Plaine
23	Shellsburg Cry. Co. 4	Shellsburg	J. A. Moeller.....	Shellsburg	Rob A. Moeller.....	Shellsburg
24	Model Cry. Co. 4	Newhall	Gardemann & Jungclaus	Newhall	F. L. Francisco.....	Newhall
25	Vinton Cry. Co. 4	Vinton	Pyburn & Daniels....	Vinton	C. F. Daniels.....	Vinton
	Black Hawk County—					
26	Benson Dairy Co. c	Benson	J. R. Dumond.....	Cedar Falls	J. F. Lorenzen.....	Cedar Falls
27	*Cedar Falls Cry. Co..... 4	Cedar Falls	F. A. Riedel	Cedar Falls	L. S. Johnson.....	Cedar Falls
28	Farmers Dairy Assn. c	Waterloo (5 mi. s).....	S. Switzer	Waterloo	R. W. Chadwick.....	Waterloo
29	Gilbertville Dairy Assn..... c	Gilbertville	J. B. Kascht.....	Waterloo	W. F. Schurke.....	Gilbertville
30	Co-op. Cry. Co. of Jubilee..... c	Jubilee	F. J. Orth.....	Jesup	Albert J. Widdel.....	Jesup
31	Mt. Vernon Cry. Co..... c	Boles (1½ mi. w).....	Geo. H. Moeller.....	Denver	L. R. Moon.....	Cedar Falls
32	Hudson Co-op. Dairy Assn..... c	Hudson	H. Lafrenz.....	Hudson	Wm. McFarland.....	Hudson
33	Union Cry. Co..... c	Pinehford	G. A. Evenson.....	Winslow	Wm. Diley	Winslow
34	East Lester Cry. Co..... c	Fairbank (4 mi. sw).....	Ira Pineh	Fairbank	W. P. Hughes.....	Fairbank
35	Fars. Cry. Co..... c	Dunkerton	G. S. Kleckner.....	Dunkerton	O. G. Alexander.....	Dunkerton
36	Crain Creek Cry. Co..... 4	Denver (9 mi se).....	Wm. Meier	Denver R. 1.....	Wm. Meier	Denver R. 1
37	La Porte City Cry. Co..... 4	La Porte City.....	L. A. Benson.....	La Porte City..	C. A. Miller.....	La Porte City
39	*Swift & Co..... s	Waterloo	F. S. Hayward.....	Union Stock yards, Chicago	W. D. Wenthe.....	Waterloo
	Boone County—					
39½	Flynn Dairy Co. Cry..... s	Madrid	Guy Brewer	Des Moines.....	A. D. Jordan.....	Madrid
40	Boone Cry. Co..... 4	Boone	P. J. Saverald.....	Boone	C. A. Carlson.....	Boone
41	Rosendale Co-op. Cry. Co..... c	Boone (6 mi w).....	L. C. Peterson.....	Story City	L. C. Peterson.....	Story City

	Bremer County—					
43	Knittel Cry. Co..... c	Readlyn (2½ mi nw).....	J. Strottmann	Readlyn R. 1.....	F. H. Wehling.....	Readlyn R 1
43	Fremont Cry. Co..... c	Tripoli (3½ mi se).....	J. P. Snelling.....	Tripoli	H. J. Hankner.....	Tripoli
44	Gilt Edge Cry. Co..... 4	Plainfield	H. C. Ladage.....	Plainfield	H. C. Ladage.....	Plainfield
45	Dayton Cry. Co..... c	Sumner (4 mi s).....	J. H. Kasemeier.....	Sumner	C. W. Zell.....	Sumner
46	Mohawk Condensed Milk Co..... s	Waverly	L. H. Wilson.....	Waverly		
47	Janesville Cry. Assn..... c	Janesville	H. W. Stine.....	Cedar Falls	B. O. Squires.....	Janesville
48	Readlyn Co-op. Cry. Co..... c	Readlyn	H. A. Griese.....	Readlyn	H. A. Griese.....	Readlyn
49	Spring Fountain Cry. Co..... c	Sumner (3 mi sw).....	Wm. Zell	Sumner	F. W. Bremer.....	Sumner R 6
50	Denver Cry. Co..... 4	Denver	C. A. Fosselman.....	Waverly	A. W. Mooney.....	Denver
51	Grove Hill Cry. Co..... c	Fairbank	Frank Kane	Fairbank	C. J. Meier.....	Fairbank
52	Seigel Cry. Co..... c	Tripoli (6 mi nw).....	H. F. Moeller.....	Waverly	F. H. Harms.....	Waverly R 2
53	Washington Cry. Co..... c	Waverly (3½ mi e).....	E. W. Brandt.....	Waverly R. 5.....	D. A. Bottermann..	Waverly R 5
54	Lafayette Cry. Co..... c	Waverly (4½ mi. n).....	L. H. Cutler.....	Waverly R. 6.....	J. G. Nichols.....	Waverly R 1
55	Artesian Cry. Co..... c	Denver (4 mi n).....	C. C. Trastow.....	Waverly	J. Wehling	Waverly
56	Tripoli Cry. Co..... c	Tripoli	B. B. Bennett.....	Tripoli	Wm. Ambrose	Tripoli
57	Potters Siding Cry. Co..... c	Tripoli (3 mi w).....	H. Willbrandt.....	Tripoli	R. Kees	Tripoli R 2
58	Sumner Cry. Co..... c	Sumner	S. A. Munger.....	Sumner	E. B. Olds.....	Sumner
59	Excelsior Cry. Co..... c	Sumner (6 mi nw).....	Geo. Rockdaschel...	Sumner	Robt. Wagner	Sumner
60	Climax Cry. Co..... c	Sumner R No. 6.....	H. W. Schnadt.....	Sumner R. 6.....	L. L. Zbornik.....	Sumner R 6
61	Klinger Cry. Co..... 4	Klinger	C. H. Rohrsen.....	Dunkerton R. 2.	C. H. Rohrsen.....	Dunkerton
62	Frederika Cry. Assn..... c	Frederika	J. H. McDonald.....	Frederika	Jno. Ambrose	Frederika
63	First Maxfield Cry. Co..... c	Denver (2 mi e).....	H. C. Griese.....	Denver R. 7.....	Henry Piegors	Denver R 7
64	Little Valley Cry. Co..... c	Sumner (7 mi s).....	Chas. Krueger	Sumner R. 7.....	G. O. Miller.....	Sumner R. 7
65	Western Douglas Cry Co..... s	Waverly	Carl Oberbeu	Plainfield R. 1....	Ernest Haase	Waverly R. 1
66	Bremer Cry. Co..... c	Bremer	P. W. Noble.....	Waverly R. 2.....	Jno. Wedemeier	Waverly R. 2
	Buchanan County—					
67	Wapsie Valley Cry. Co..... s	Independence	C. V. Rosenberger..	Independence	Watson Shick	Independence
68	Aurora Cry. Co..... c	Aurora	E. H. Flickinger....	Aurora	E. H. Flickinger....	Aurora
69	Lamont Cry. Assn..... c	Lamont	O. C. Gladwin.....	Lamont	E. A. Cole.....	Lamont
70	Jesup Cry. Co..... c	Jesup	C. L. Bright.....	Jesup	Anton Smith	Jesup
71	Hazleton Fars. Co-op. Cry..... c	Hazleton	J. W. Basham.....	Hazleton	Matt McDowall	Hazleton
72	Fairbank Fars. Cry. Co..... c	Fairbank	A. J. Langley.....	Fairbank	C. E. Brant.....	Fairbank
74	Stanley Cry. Co..... 4	Stanley	R. R. Halsted.....	Stanley	W. W. Halsted.....	Stanley
	Buena Vista County—					
75	Fars. Co-op. Cry Co..... c	Alta	C. P. Cornelinsen..	Alta	H. S. Allen.....	Alta
76	Linn Grove Cry. Co..... 4	Linn Grove	Peterson & Jensen..	Linn Grove	Peter Peterson	Linn Grove
77	Fars. Cry. & Produce Co..... c	Newell	E. P. Krone.....	Newell	N. O. Olson.....	Newell
78	Buena Vista Cry Co..... s	Storm Lake	J. G. Duncan.....	Storm Lake.....	W. F. Reid.....	Storm Lake
79	Sioux Rapids Cry. Co..... 4	Sioux Rapids	F. R. Ballantyne...	Sioux Rapids....	E. H. Cardy.....	Sioux Rapids
80	Fars. Cry. Co..... c	Albert City	J. E. Lauridsen.....	Albert City.....	J. E. Lauridsen.....	Albert City

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Butler County—					
81	Eleanor Cry. Co.	Eleanor	C. J. Rohde	Aplington	C. J. Rohde	Aplington
82	Clarksville Cry. Co.	Clarksville	M. J. Johnson	Clarksville	M. A. Jones	Clarksville
83	New Hartford Mut. Co-op. Cry.	New Hartford	R. L. Farnsworth	New Hartford	P. W. Peterson	New Hartford
84	Albion Co-op. Cry. Co.	Parkesburg (8 mi ne)	Mrs. Carrie Olmsted	New Hartford	J. P. Sharp	Parkersburg
85	Courbat Cry. Co.	Shell Rock (9 mi w)	O. F. Courbat	Shell Rock	O. F. Courbat	Shell Rock
86	Shell Rock Cry. Assn.	Shell Rock	Ed. Holland	Shell Rock	F. D. Daniels	Shell Rock
89	Beaver Co-op. Cry Assn.	New Hartford (3½ mi sw)	W. H. Chapman	New Hartford	W. H. Chapman	New Hartford
90	Fars. Co-op. Cry. Co.	Allison	G. W. Barsty	Allison	R. D. Sweet	Allison
91	White Rose Cry. Co.	Greene	A. S. Shook	Greene	J. Jacobsen	Greene
92	Dumont Cry. Co.	Austinville	S. L. Patterson	Austinville	P. F. Anderson	Austinville
98		Dumont	J. A. McAdams	Dumont	J. A. McAdams	Dumont
	Calhoun County—					
94	Cedar Creek Cry. Co.	Somers	S. P. Peterson	Somers	Andrew M. Knudson	Somers
95	Pomeroy Cry. Co.	Pomeroy	H. A. Albrecht	Pomeroy, R. 1	Geo. F. Allard	Pomeroy
96	Moon Bros. Cry.	Manson	H. A. Moon	Manson	Chas. Moon	Manson
97	*Western Cry. Co.	Rockwell City	Andrew Wood	Rockwell City	Paul Hough	Rockwell City
98	*A. Baird & Co.	Lohrville	Hugh Baird	Lohrville	J. J. Stamen	Lohrville
	Carroll County—					
99	Davis Cry. Co.	Coon Rapids	Fred S. Davis	Coon Rapids	Paul Border	Coon Rapids
100	Willey Cry. Co.	Willey	H. Lauridsen	Carroll, R. 5	Maverius Nielsen	Carroll, R. 5
101	Halbur Cry. Co.	Halbur	M. J. Wagner	Halbur	M. J. Wagner	Halbur
102	Templeton Cry. Co.	Templeton	Henry Langel	Templeton	C. C. Bomberger	Templeton
103	Rose Valley Cry. Co.	Roselle	C. Koborst	Carroll, R. 4	C. Koborst	Carroll, R. 4
104	Coon Rapids Co-op. Cry. Co.	Coon Rapids	R. C. Bantsche	Coon Rapids	Chester F. Crandall	Coon Rapids
105	Manning Cry. Co.	Manning	H. C. Darger	Manning	Earl A. Hayes	Manning
106	Fars. Co-op. Cry. Co.	Breda	A. J. Polking	Breda	H. E. Fowler	Breda
107	Selzer Pure Food Pro. Co.	Carroll	Jno. Selzer	Carroll	E. J. Riley	Carroll
	Cass County—					
108	*Atlantic Produce Co.	Atlantic	G. G. Jeck	Atlantic	Robt. Rae	Atlantic
109	*Fars. Cry. Co.	Cumberland	E. Euken	Cumberland	A. Heyn	Cumberland
	Cedar County—					
110	Golden Star Cry. Co.	Bennett	W. H. Kroeger	Bennett	W. H. Kroeger	Bennett
111	Tipton Cry. Co.	Tipton	A. J. Barth	Cedar Rapids	C. C. McCue	Tipton
112	Lowden Fars. Mut. Co-op. Cry.	Lowden	H. Ruprecht, Jr.	Lowden	W. L. Sloan	Lowden
113	Massillon Co-op. Cry. Co.	Massillon	P. H. Schneider	Massillon	Peter White	Massillon
	Cerro Gordo County—					
114	The Fars. Co-op. Cry. Co.	Swaledale	E. E. Mason	Swaledale, R. 1	Henry Shrader	Swaledale
115	*Fars. & Merchants Produce Co.	Mason City	C. H. Cleveland	Mason City	L. B. Bennett	Mason City
116	Sunnyside Cry. Co.	Thornton	Jno. Christiansen	Thornton	Jno. Thn Jansen	Thornton
117	Ventura Fars. Cry. Co.	Ventura	J. E. Sawyer	Clear Lake	Robt. Biess	Ventura
118	Rockwell Co-op. Cry. Co.	Rockwell	W. B. Bruce	Rockwell	Fred D. Ford	Rockwell
119	Plymouth Co-op. Cry. Co.	Plymouth	N. F. Ward	Plymouth	Peter Refsdahl	Plymouth
120	Fars. Mut. Co-op. Cry Co.	Clear Lake	H. E. Palmeter	Clear Lake	Guy Thomas	Clear Lake
121	*E. B. Higley Co.	Mason City	C. O'Keeffe	Mason City	R. L. Baumgartner	Mason City
122	Dougherty Co-op. Cry Co.	Dougherty	C. I. McCoy	Aredale	R. H. Fontz	Dougherty
	Cherokee County—					
123	Cherokee Cry. & Bottling Wks.	Cherokee	J. H. Goeb	Cherokee	L. Lowell	Cherokee
124	Marcus Cry. Co.	Marcus	Eugene Slater	Marcus	Eugene Slater	Marcus
	Chickasaw County—					
125	Sande Co-op. Cry. Assn.	Sande	Herman O. Natvig	Cresco	G. F. Landquist	Sande
126	Jerico Cry. Assn.	Jerico	Mike Kroomey	Lawler	J. J. Kelley	New Hampton
127	Fars. Co-op. Cry. Assn.	Nashua	S. W. Blim	Nashua	M. E. McMurray	Nashua
128	The New Hampton Fars. Cry.	New Hampton	J. W. Krieger	New Hampton	D. W. Mohler	New Hampton
129	Lawler Cry. Assn.	Lawler	P. J. Cooney	New Hampton	A. W. Snyder	Lawler
130	Ionia Fars. Cry. Assn.	Ionia	M. L. Meyers	Ionia	F. W. Stickman	Ionia
131	Fredericksburg Butter Factory	Fredericksburg	W. L. Whitcomb	Fredericksburg	Christ Rueseler	Fredericksburg
132	Alta Vista Cry. Assn.	Alta Vista	Albert Tietjen	Alta Vista	R. Jorgenson	Alta Vista
133	Boyd Co-op. Fars. Cry. Assn.	Boyd	Wm. Denner	New Hampton, R 5	W. F. Harmes	New Hampton, R 5
134	Williamstown Cry. Assn.	New Hampton (6½ mi. s)	C. M. Burmaster	Fredericksburg	Roy Scoles	Fredericksburg
135	Deerfield Cry. Co.	Bassett (7 mi. se)	T. R. Ballantyne	Bassett	T. R. Ballantyne	Bassett
	Clay County—					
136	Gillett Grove Cry. Co.	Gillett Grove	E. E. Higgins	Gillett Grove	J. M. Peterson	Gillett Grove
137	The Everly Co-op. Cry. Co.	Everly	O. A. Lemm	Everly	Wm. Kucker	Everly
138	Langdon Mut. Co-op. Cry. Assn.	Langdon	N. C. Nielsen	Langdon	N. C. Nielson	Langdon
139	Royal Cry. Co.	Royal	L. Larsen	Royal	L. Larsen	Royal
140	Fostoria Cry. Co.	Fostoria	Olaf Hofstad	Fostoria	Edgar Chadwick	Fostoria
141	Fars. Co-op. Cry. Co.	Dickens	Jno. J. Lawler	Dickens	W. A. Thayer	Dickens
142	Spencer Dairy Produce Co.	Spencer	C. W. Petersen	Spencer	H. L. Petersen	Spencer

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Clayton County—					
143	Fars. Cry. Co. c	Osterdock	H. A. Malloy	Osterdock	J. W. Holtzman	Osterdock
144	Garber Fars. Co-op. Cry. Co. c	Garber	R. F. Smith	Garber	C. H. Pinch	Garber
145	Union Fars. Co-op. Cry. Co. s	Monona	Cora E. Hazlett	Monona	P. A. Jordahl	Monona
146	Northern Iowa Butter and Egg Co. s	McGregor	J. L. Van Neste	Ogden Blvd., Chi.	J. S. Watson	McGregor
147	Crown Brand Cry. Co. i	Elkader	J. T. Leonard	Elkader	J. T. Leonard	Elkader
148	Millville Cry. Co. s	Millville	Fred Moeller	Guttenberg	Carl Loomis	Turkey River
149	Volga City Fars. Co-op. Cry. c	Volga City	R. W. Duff	Volga	W. McGuiness	Volga
150	Strawberry Point Fars. Cry. c	Strawberry Point	C. D. Wolcott	Strawberry Point	J. J. Brunner	Strawberry Pt.
151	Farmersburg & St. Olaf Co-op. Cry. Co. c	St. Olaf	Wm. F. Fuhrman	St. Olaf	Herbert Olson	St. Olaf
152	Littleport Fars. Co-op Cry. c	Littleport	Geo. C. Regnitz	Elkport	Earl Batchelder	Littleport
153	Luana Fars. Co-op. Cry. Co. c	Luana	W. J. Spiles	Luana	S. Peterson	Luana
154	Garnavillo Fars. Co-op. Cry. c	Garnavillo	Alvin J. Kregel	Garnavillo	J. F. Fisher	Garnavillo
155	Fidelity Cry. Co. i	Edgewood	H. F. Beyer	Edgewood	Royal Firman	Edgewood
156	Edgewood Fars. Co-op. Cry. c	Edgewood	W. A. Robinson	Edgewood	H. Evert	Edgewood
	Clinton County—					
157	*Clinton Co. Central Cry. i	DeWitt	A. E. Banta	DeWitt	Herbert Sample	DeWitt
159	*Swift & Co. s	Clinton	Swift & Co.	Chicago	J. W. Freed	Clinton
160	Fars. Co-op. Cry. Co. c	Toronto	Edw. Hart	Toronto	W. P. Schurke	*Toronto
161	Fars. Co-op. Cry. Co. c	Wheatland	Earl V. Wilmarth	Wheatland	R. E. Long	Wheatland
162	Springbrook Cry. Co. s	Welton	Balch W. Newman	Elgin, Ill.	A. E. Kinsler	Welton
163	Charlotte Cry. Co. c	Charlotte	Theo. Cohlmann	Charlotte	Martin Nielsen	Charlotte
	Crawford County—					
164	*Nicholson Produce Co. c	Denison	B. Y. Nicholson	Denison	Chas. Trimble	Denison
	Dallas County—					
165	Fars. Co-op. Cry. Assn. c	Dexter	Jas. L. Keachie	Dexter	Jas. L. Keachie	Dexter
166	*Woodward Cry. Co. i	Woodward	H. P. Caloskey	Woodward	C. H. Ramsey	Woodward
'67	The Van Camp Packing Co. s	Perry	I. H. Hedden	Perry		

	Davis County—					
168	Fars. Co-op. Cry. Co. c	Pulaski	A. J. Hartzler	Pulaski	Chas. Nelsbaum	Pulaski
	Decatur County—					
169	*Swift & Co. s	Leon	Swift & Co.	Chicago	O. J. Gustin	Leon
	Delaware County—					
170	Dundee Cry. Co. i	Dundee	H. L. Sheetz	Stockton, Ill.	Andrew Anderson	Dundee
171	Manchester Co-op. Cry. Co. c	Manchester	Jas. Bishop	Manchester	Elmer J. Reed	Manchester
172	Hammels Cry. i	Earlville	W. F. Hammel	Earlville	W. F. Hammel	Earlville
173	Hazel Green Cry. Co. c	Ryan (6 mi. e)	Daniel King	Delhi	A. Graham	Manchester
174	Fars. Co-op. Cry. Co. c	Thorpe	M. E. Blair	Manchester	G. Stuesst	Manchester
175	Silver Spring Cry. Co. s	Delhi	E. B. Porter	Delhi	H. P. Bancroft	Delhi
176	Masonville Co-op. Cry. Co. c	Masonville	Hiram J. New	Manchester	Milton Colton	Masonville
177	*Dairy City Cry. Co. s	Manchester	S. A. England	Manchester	Roy Stewart	Manchester
178	Delaware Co-op. Cry. Co. s	Delaware	A. D. Long	Manchester	J. F. Dawson	Delaware
179	Bear Grove Cry. Co. c	Dyersville (6 mi. nw)	Jno. T. Goodken	Earlville, R. 2	Howard J. Reed	Dyersville, R. 39
180	Hopkinton Co-op. Cry. Co. c	Hopkinton	I. T. Wilson	Hopkinton	P. F. Shipton	Hopkinton
181	Colesburg Cry. Co. c	Colesburg	Robt. A. Gull	Colesburg	A. L. Landis	Colesburg
182	Greeley Fars. Co-op. Cry. c	Greeley	J. C. Matthews	Greeley	W. R. Crabb	Greeley
183	Sand Springs Co-op. Cry. Co. c	Sand Springs	B. E. Flint	Hopkinton	J. L. Batchelder	Sand Springs
184	Ryan Cry. Co. i	Ryan	A. R. Dickinson	Ryan	A. W. Dickinson	Ryan
185	Earlville Cry. Co. i	Earlville	I. S. Hutton	Earlville	I. S. Hutton	Earlville
	Dickinson County—					
186	Lake Park Co-op. Cry. Co. c	Lake Park	J. G. Chrysler	Lake Park	E. E. Starr	Lake Park
187	Milford Butter & Cheese Assn. c	Milford	Fred W. Born	Milford	Fred W. Born	Milford
188	Terril Co-op. Cry. Assn. c	Terril	R. A. Klingbell	Terril	P. C. Flaskegaard	Terril
189	Superior Co-op. Cry. Assn. c	Superior	Sarah E. Perkins	Superior	P. H. Wolf	Superior
190	*Western Packing Co. s	Spirit Lake	Andrew Wood	Rockwell City	Vic Welter	Spirit Lake
	Dubuque County—					
191	Holy Cross Cry. Co. c	N. Buena Vista	Robt. Butters	Grs'	J. P. McCool	N. Buena Vista, R. 1
192	Hague Cry. Co. i	Zwingle	H. S. Hague	Zwingle	H. S. Hague	Zwingle
193	Sherrill Mut. Co-op. Cry.	Sherrill	J. C. Boleyn	Dubuque	Fred Koeller	Durango, R. 34
194	O'Neill Cry. Co. i	Waupeton (6 mi. s)	C. O'Neill	Waupeton, R. 36	Al Barker	Waupeton, R 36
195	Worthington Cry. Co. i	Worthington	C. Baehler	Worthington	C. N. Baehler	Worthington
196	New Vienna Central Cry. s	New Vienna	Henry F. Smith	New Vienna	Ben Frank	New Vienna
197	Globe Cry. Co. c	Luxemburg	Geo. Friedmann	N. Buena Vista, R. 2	A. F. Matson	New Vienna, R. 39

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Dubuque County—Continued—					
198	Farley Cry. Co.	Farley	O. W. Cropp	Farley	P. E. Landis	Farley
199	*Beatrice Cry. Co.	Dubuque	A. F. Ulrich	Dubuque		
200	*Iowa Dairy Co.	Dubuque	Andrew Fluetsch	Dubuque	H. E. Williamson	Dubuque
201	Fars. Golden Star Cry. Co.	Dyersville	A. J. Kern	Dyersville	Wm. Cornell	Dyersville
202	Hickory Valley Cry. Co.	Dyersville (5 mi. ne)	Jno. Ramm	Farley	Peter Goetzinger	Dyersville, R. 21
203	Cascade Co-op. Cry. Co.	Cascade	P. J. Conlin	Cascade	Albert Fay	Cascade
204	Columbian Cry. Co.	Lauderville	Henry W. Laude	Dubuque, R. 4	Joe Taylor	Dubuque, R. 4
205	Balltown Cry. Co.	Waupeton	Jno. Mangold	Specits Ferry	A. R. Barker	Waupeton
206	*Swift & Co.	Dubuque	Swift & Co.	Chicago	Fred Goodenow	Dubuque
	Emmet County—					
207	Fars. Co-op. Cry. Co.	Armstrong	Peter H. Burt	Armstrong	Chris. Beck	Armstrong
208	Estherville Cry. Co.	Estherville	W. A. Kerr	Estherville	W. A. Kerr	Estherville
209	Fars. Cry. Co.	Wallingford	O. O. Refsell	Wallingford	J. C. Jensen	Wallingford
210	Hoprig Fars. Co-op. Cry. Co.	Ringsted (3 mi. sw)	Jno. C. Bosold	Graettinger	Julius Jensen	Graettinger
211	Denmark Co-op. Cry. Co.	Ringsted	P. L. Petersen	Ringsted	Louis Anderson	Ringsted
	Fayette County—					
212	Oran Cry. Co.	Oran	J. N. Getz	Oran	B. P. Bentley	Oran
213	German Cry. Co.	Westgate (4 mi. ne)	Wm. Seegers	Sumner	L. C. Barnes	Westgate
214	Maple Grove Cry. Co.	Oelwein (4 mi. sw)	Thos. E. Sadler	Oelwein	Thos. Sadler	Oelwein
215	Alpha Fars. Cry. Co.	Alpha	Jno. T. Gager	Alpha	W. A. Rizer	Alpha
216	Richfield Cry. Co.	Sumner (3 mi. sw)	F. P. Wittenburg	Sumner	C. A. Day	Sumner
217	Fars. Mut. Co-op. Cry. Assn. of Scott	Stanley (8 mi. n)	A. E. Anderson	Arlington	D. T. Broers	Stanley
218	Wanecoma Fars. Co-op. Cry.	Wanecoma	Joe Lynch	Wanecoma	W. H. Fischeid	Wanecoma
219	Riverside Cry. Co.	Wadena	F. J. Schroeder	Wadena	L. C. Popenhagen	Wadena
220	Westgate Co-op. Cry. Co.	Westgate	F. S. Coleman	Westgate	E. H. Homan	Westgate
221	The Fars. Co-op. Cry.	St. Lucas	G. H. Hackman	St. Lucas	Ben H. Kuennen	St. Lucas
222	Center Valley Cry. Co.	Randalia	P. J. Messerer	Sumner	F. M. Zell	Sumner
223	Randalia Cry. Co.	Randalia	D. N. Holmes	Randalia	G. M. Miller	Randalia
224	Jefferson Co-op. Cry. Co.	Oelwein (4 mi. nw)	H. H. Meyer	Independence	M.E. Roots	Oelwein, R 3
225	Harlan Fars. Mut. Co-op. Cry.	Maynard	J. C. Lewis	Maynard	C. B. Bracy	Maynard
226	Hawkeye Co-op. Cry. Co.	Hawkeye	Frank Ostrander	Hawkeye	Frank Bowdish	Hawkeye
227	Fayette Cry. Assn.	Fayette	Peter E. Jubb	Fayette	Mart Cronk	Fayette
228	Elgin Fars. Dairy Co.	Elgin	M. Luchsinger	Elgin	Hans Jensen	Elgin
229	Clermont Valley Cry. Co.	Clermont	Frank Fay	Clermont	Amon Erickson	Clermont
230	Fars. Cry. Co.	Arlington	Floyd Finney	Arlington	E. E. Mittlestadt	Arlington
231	Oelwein Fars. Co-op. Cry.	Oelwein	L. C. Harwood	Oelwein	F. W. Stephenson	Oelwein
232	West Union Cry. Co.	West Union	F. C. Billings	West Union	B. F. Schultz	West Union
	Floyd County—					
233	Rockford Co-op. Dairy Assn.	Rockford	E. P. Briggs	Rockford	J. C. Farnham	Rockford
234	Niles Cry. Co.	Charles City	Frank Brunner	Charles City	Emil Hinzer	Charles City
235	Charles City Cry. Co.	Charles City	N. H. Nelson	Charles City	Walter Beck	Charles City
236	Nora Springs Cry. & Pro. Co.	Nora Springs	W. F. Miner	Nora Springs	Clarence Finnell	Nora Springs
	Franklin County—					
237	Fars. Co-op. Cry. Co.	Popejoy	John Preese	Dows	H. J. Binger	Popejoy
238	*W. F. Priebe Cry. Co.	Hampton	W. F. Priebe	Hampton	E. E. Thompson	Hampton
239	Fars. Co-op. Cry. Co.	Dows	H. J. Iverson	Dows	Frank L. Larson	Dows
240	Latimer Co-op. Cry. Co.	Latimer	Chas. Johnson	Latimer	Rasmus Nelson	Latimer
241	Hamilton Cry. Co-op. Co.	Coulter	Geo. Dohrmann	Hampton	Herbert Soballe	Coulter
242	Fars. Cry. Co.	Alexander	B. G. Cunningham	Alexander	H. E. Gates	Alexander
243	Bradford Cry. Co.	Bradford	Geo. Freese	Bradford	H. Brokaw	Bradford
	Fremont County—					
244	Sidney Co-op. Cry. Co.	Sidney	C. W. Cress	Sidney	W. L. Carlisle	Sidney
	Greene County—					
245	G. W. Nicholson Co.	Grand Junction	Wilbur W. Wertz	Jefferson	Carl W. Larson	Grand Junction
246	Jefferson Cry. Co.	Jefferson	C. E. Mills	Jefferson	F. B. Lucas	Jefferson
	Grundy County—					
247	Bucks Grove Cry. Co.	Aplington	C. A. Miller	Aplington	H. C. Chapman	Aplington
248	Predsville Cry. Co.	Dike (4 mi. ne)	N. C. Snydergaard	Cedar Falls, R 3		
249	Beaver Center Cry. Co.	Stout (2 mi. sw)	Andrew J. Meyer	Stout	T. E. Edger	Stout
250	Fern Cry. Co.	Parkersburg (7 mi. se)	W. N. Henning	Parkersburg	B. T. Soles	Stout
251	German Twp. Cry. Co.	Ackley (3 mi. se)	P. J. Martin	Ackley	Henry Schutjer	Ackley
	Guthrie County—					
252	Panora Co-op. Cry. Co.	Panora	A. R. Taff	Panora	Alex. Johnson	Panora
253	Menlo Cry. Co.	Menlo	F. L. Hitchcock	Menlo	H. H. Colbert	Menlo
254	Guthrie Center Co-op. Cry.	Guthrie Center	J. A. McLaughlin	Guthrie Center	A. W. Hanks	Guthrie Center
255	Casey Cry. Co.	Casey	Harlle E. Smith	Casey	Geo. A. Whaley	Casey
256	Bayard Co-op. Cry. Co.	Bayard	E. E. Strauser	Bayard	F. P. Wilcox	Bayard

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Hamilton County—					
257	Jewell Butter & Ice Cream Factory..i	Jewell	M. J. Mansager	Jewell	M. J. Mansager	Jewell
258	Fars. Co-op. Cry. Co.....c	Stratford	Edw. Peterson	Stratford	Jno. Rierson	Stratford
259	Ellsworth Co-op. Cry.....c	Ellsworth	S. Stenberg	Ellsworth	O. B. Stenberg	Ellsworth
260	Randall Fars. Cry. Co.....c	Randall	M. G. Olson	Randall	M. G. Olson	Randall
261	Ellingson-Mathre & Co.....i	Webster City	Ellingson-Mathre Co.	Webster City	C. L. Best	Webster City
	Hancock County—					
262	Fars. Mut. Co-op. Cry.....c	Kanawha	Geo. McNeish, Jr.	Kanawha	B. O. Brownlee	Kanawha
263	Woden Fars. Cry. Co.....c	Woden	Adolph Orthe	Woden	Jno. Paarlberg	Woden
264	Concord Cry. Co.....c	Garner	J. A. Penger	Garner	J. A. Penger	Garner
265	Fars. Co-op. Cry. Co.....c	Garner	J. Kleser	Garner	C. R. Conway	Garner
266	Goodell Co-op. Cry. Co.....c	Goodell	Jno. Smith	Goodell	E. P. Conway	Goodell
267	Crystal Cry. Co.....c	Crystal Lake	H. P. Stahr	Crystal Lake	N. P. Pederson	Crystal Lake
268	Britt Co-op. Cry. Co.....c	Britt	H. A. Schaper	Britt	Geo. G. Koltdoff	Britt
269	Klemme Co-op. Cry. Co.....c	Klemme	N. L. Palmer	Klemme	A. D. Gimer	Klemme
	Hardin County—					
270	Fars. Co-op. Cry. Co.....c	Buckeye	H. M. Lielaff	Buckeye	M. E. Williams	Buckeye
271	Alden Co-op. Cry. Co.....c	Alden	E. C. Edwards	Alden	Wm. Mittlestadt	Alden
272	Eldora Cry. Co.....i	Eldora	Peter Jensen	Eldora	Peter Jensen	Eldora
273	Hubbard Co-op. Cry. Co.....c	Hubbard	H. K. Granner	Hubbard	Fred Herzog	Hubbard
274	Iowa Falls Cry. Co.....c	Iowa Falls	E. E. Benedict	Iowa Falls	J. R. Jones	Iowa Falls
275	Concord & Scott Cry. Co.....c	Radcliffe	Le Roy Anderson	Radcliffe	C. B. Jensen	Radcliffe
276	Owasa Co-op. Cry. Co.....c	Owasa	W. N. McLenon	Owasa	G. J. Gudknecht	Owasa
277	*Swift & Co.....s	Iowa Falls	F. S. Hayward	Swift & Co., Chicago	J. Fiete	Iowa Falls
278	Cleves Cry. Co.....i	Cleves	A. J. Stenberg	Cleves	A. J. Stenberg	Cleves
279	Ackley Cry. Co.....i	Ackley	F. J. Martin	Ackley	R. R. Hadley	Ackley
	Harrison County—					
280	Roundy McMurray Co.....s	Woodbine	H. J. McMurray	Council Bluffs		

	Howard County—					
281	Maple Leaf Cry. Co.....c	Elma	D. Lane	Elma, R. 1	N. W. Graf	Elma, R. 1
282	Fars. Co-op. Cry. Co.....c	Protovin	Richard Bouska	Protovin	Walter Johnson	Protovin
283	Saratoga Co-op. Cry. Assn.....c	Saratoga	Henry Foss	Saratoga	Henry Foss	Saratoga
284	Elma Co-op. Cry. Co.....c	Elma	J. P. Whelan	Elma	J. P. Whelan	Elma
285	Cresco Cry. Co.....i	Cresco	D. A. Palmer	Cresco	D. A. Palmer	Cresco
286	Schley Cry. Co.....i	Schley	C. A. Fosse	Cresco	C. A. Fosse	Cresco
287	Fars. Co-op. Cry. Assn.....c	Chester	L. A. Eggerichs	Chester	C. C. Plummer	Chester
288	Fars. Cry. Co.....c	Lime Springs	E. Z. Carr	Lime Springs	E. Z. Carr	Lime Springs
289	Cresco Milk Co.....i	Cresco	F. B. Hulls	Cresco	F. B. Hulls	Cresco
	Humboldt County—					
290	Thor Cry. Co.....s	Thor	C. J. Lund	Thor	B. E. Loaning	Thor
291	Rutland Co-op. Cry. Co.....c	Rutland	James Oslo	Rutland	Joe Bogh	Rutland
292	Wacousta Cry. Assn.....c	Ottosen	W. O. Claw	Ottosen	L. J. Bremson	Ottosen
293	*Humboldt Cry. Co.....c	Humboldt	D. R. Gray	Humboldt	A. H. Bertelson	Humboldt
294	Bode Cry. Co.....c	Bode	H. C. Olson	Bode	Iver Shursen	Bode
295	Bradgate Cry. Co.....i	Bradgate	E. H. Avery	Bradgate	D. A. O'Neill	Bradgate
	Iowa County—					
296	Shimer Cry Co.....c	Conroy	S. H. Staneerson	Conroy	Tom Tompsen	Conroy
297	Genoa Bluff Cry. Co.....c	Ladora (3 mi. se)	M. W. Kelting	Williamsburg	J. O. Erslandson	Marengo
298	*Marengo Fars. Mut. Co-op. Cry.....c	Marengo	Dennis Sullivan	Marengo	W. H. Sampson	Marengo
299	Victor Co-op. Cry. Co.....c	Victor	H. F. Lenocker	Victor	H. F. Lenocker	Victor
300	Troy Cry. Co.....c	Williamsburg	Geo. C. Howe	Williamsburg	W. R. Edwards	Williamsburg
301	York Cry. Co.....c	Williamsburg (7 mi. e)	H. W. Hudepohl	South Amana R 1	G. E. Steinke	Williamsburg R 1
302	Parnell Cry. Co.....c	Parnell	A. N. Fritz	Parnell	A. N. Fritz	Parnell
	Ida County—					
303	Holstein Co-op. Cry. Co.....c	Holstein	Jno. D. Suiter	Holstein	Jno. D. Suiter	Holstein
304	Fars. Co-op. Cry. Co.....c	Galva	Wm. Zwenke	Galva	R. D. Ewing	Galva
	Jackson County—					
305	Monmouth Cry. Co.....i	Monmouth	Jas. P. Younger	413 N. State, Chicago	F. G. Irons	Monmouth
306	*Hanson Produce Co.....i	Maquoketa	E. D. Hanson	Maquoketa	G. S. Wing	Maquoketa
307	St. Donatus Cry Co.....c	St. Donatus	Henrig & Frantzen	St. Donatus	J. P. Frantzen	St. Donatus
308	Sterling Cry. Co.....i	Lamotte	Hoffman Cry. Co.	Lamotte	Jno. M. Hoffman	Lamotte
309	Jno. Gonner's Cry.....i	Spring Brook	Jno. Gonner	Spring Brook	Geo. Gonner	Spring Brook
310	Springbrook Cry. Co.....i	Preston	Jno. Newman Co.	Elgin, Ill.	A. J. Negus	Preston
311	Preston Cry. Co.....c	Preston	Samuel McNeil	Preston	B. E. Bragg	Preston
312	Fars. Union Co-op. Cry. Co.....c	Maquoketa (6 mi. w)	M. W. Joiner	Maquoketa	A. O. Otnes	Maquoketa
313	Fulton Cry. Co.....i	Fulton	Myrom & Helde	Fulton	Casper Myrom	Fulton
314	Fars. Cry. Co.....s	Sabula	F. A. White	Sabula	A. E. Tolman	Sabula
315	Bellevue Cry. Co.....i	Bellevue	J. P. Runkle	Bellevue	J. P. Runkle	Bellevue

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Jasper County—					
316	Baxter Dairy Co.....c	Baxter	Aug. Klemme	Baxter	G. W. Peterson	Baxter
317	Newburg Cry. Co.....c	Newburg	C. F. Devore	Newburg	H. W. Spencer	Newburg
	Jefferson County—					
318	Fairfield Pure Butter Co.....i	Fairfield	U. B. Rogers	Fairfield	Jno. McClane	Fairfield
	Johnson County—					
319	Iowa City Cry. & Ice Cream Co....i	Iowa City	B. W. Kehlet	Iowa City	W. H. Graham	Iowa City
	Jones County—					
320	Fars. Co-op. Cry. Co.....c	Monticello	O. W. Brazelton	Monticello	Fred Lehman	Monticello
321	Scotch Grove Co-op. Cry.....c	Scotch Grove	H. B. Jacobs	Scotch Grove		
322	Langworthy Co-op. Cry. Co.....c	Langworthy	Jno. H. Batchelder	Langworthy	Jno. H. Batchelder	Langworthy
323	*Amber Co-op. Cry. Co.....c	Amber	P. B. Daly	Anamosa	F. S. Nickels	Amber
324	Fars. Co-op. Cry. Co.....c	Center Junction	C. A. Burmeister	Center Junction	F. E. Craig	Center Junction
325	Anamosa Cry. Co.....i	Anamosa	C. L. Niles	Anamosa	H. M. Derieth	Anamosa
326	Iowa Cry. Co.....s	Oxford Junction	S. L. Murphy	Oxford Junction	Otto Hankom	Oxford Junction
	Keokuk County—					
327	*Geo. M. Griffin Cry. Co.....i	Sigourney	A. Oscar Jones	Sigourney	A. O. Jones	Sigourney
328	S. E. Reisman Produce Co.....i	What Cheer	S. E. Reisman	What Cheer	Laurence Thomas	What Cheer
	Kossuth County—					
329	Ledyard Co-op. Cry. Co.....c	Ledyard	J. J. Tillmoney	Ledyard	H. M. Deyer	Ledyard
330	Rahm Bros. Cry. Co.....i	St. Benedict	E. F. Rahm	St. Benedict	Geo. Froom	St. Benedict
331	Whittemore Cry. Co.....c	Whittemore	Thos. Carmody	Whittemore	A. M. Whitney	Whittemore
332	Lotts Creek Co-op. Cry.....c	Lone Rock (6 mi. sw)	Jno. Markgraf	Whittemore	Fred Kuecker	Lone Rock
333	Swea City Co-op. Cry.....c	Swea City	Mrs. B. A. Montgomery	Swea City	Carl Nelson	Swea City
334	Sexton Co-op. Cry.....c	Sexton	C. A. Little	Sexton	L. H. Larsen	Sexton
335	Seneca Co-op. Cry. Co.....c	Fenton	M. Jenson	Fenton	W. H. Anderson	Fenton

336	Lone Rock Co-op. Cry. Co.....c	Lone Rock	Robt. Jacob	Lone Rock	Wm. Helgason	Lone Rock
337	Irvington Cry. Co.....i	Irvington	P. J. Vanalstine	Irvington	P. J. Vanalstine	Irvington
338	Fars. Co-op. Cry. Co.....c	Hobart	A. E. Clayton	Algona	Joel Blomster	Algona
339	Germania Co-op. Cry. Co.....c	Germania	J. E. Smith	Germania	H. W. Jarchow	Germania
340	Fenton Cry. Co.....c	Fenton	C. F. C. Laage	Fenton	C. F. Bollig	Fenton
341	Bancroft Co-op. Cry. Co.....c	Bancroft	Chas. P. Hanson	Titonka	M. J. Dyer	Bancroft
342	Burt Co-op. Cry. Co.....c	Burt	M. E. Warner	Bancroft	R. E. Clemons	Burt
343	Plum Creek Co-op. Cry. Co.....c	Algona	Elmer C. Zeigler	Burt	Bernhard Swanson	Algona
344	Algona Co-op. Cry. Co.....c	Algona	D. A. Wallace	Algona	L. S. Edwards	Algona
345	Wesley Cry. Co.....i	Wesley	Carl Nelson	Algona	N. O. Nelson	Wesley
346	Titonka Co-op. Cry. Co.....s	Titonka	J. C. Newville	Swea City	S. S. Hudson	Titonka
	Lee County—					
347	*Swift & Co.....s	Keokuk	Swift & Co.	Chicago	Frank A. Payne	Hamilton, Ill.
	Linn County—					
348	*Blue Valley Cry. Co.....s	Cedar Rapids	C. J. Walker	Chicago	G. L. Matteson	Cedar Rapids
349	Walker, Iowa, Cry. Co.....i	Walker	H. J. Nietert	Walker	S. W. Laird	Walker
350	Springville Cry. Co.....i	Springville	C. E. Batchelder	Springville	Charley Huettner	Springville
351	Ely & Western Cry. Co.....s	Ely	Frank J. Dolezal	Ely	Frank Dolezal	Ely
352	Center Point Cry. Co.....s	Center Point	F. E. Mitchell	Center Point	Jno. Lundering	Center Point
353	Valley Farm Cry. Co.....i	Central City	E. E. Henderson	Central City	Earl George	Central City
354	Central City Cry. Co.....i	Central City	E. E. Henderson	Central City	Roy Goldsberry	Central City
355	*Gurler Company.....i	Cedar Rapids	C. H. Wilson	Cedar Rapids	J. J. Bork	Cedar Rapids
356	Rogers Cry. Co.....i	Rogers	A. J. Barth	Cedar Rapids	W. I. Dilger	Central City
357	Coggon Cry. Co.....i	Coggon	O. C. Capper	Coggon	O. C. Capper	Coggon
	Louisa County—					
358	Oakville Cry. Co.....c	Oakville	Geo. Graham	Oakville	Wm. Boyle	Oakville
	Lucas County—					
	Douglas Ice Cream Co.....i	Chariton	L. B. Douglas	Chariton	W. C. Miller	Chariton
	Lyon County—					
359	Fars. Co-op. Cry. Assn.....c	Inwood	Arthur Chambers	Inwood	H. C. Nelson	Inwood
360	George Cry. Co.....s	George	C. A. Rasmusson	George	Ed. Wilson	George
361	*Rock Rapids Cry. Co.....i	Rock Rapids	W. J. Purchas	Rock Rapids	A. E. Robertson	Rock Rapids
	Mahaska County—					
362	*Oskaloosa Cry. Co.....c	Oskaloosa	J. C. Reisman	Oskaloosa	Jas. Love	Oskaloosa

CREAMERY LIST—Continued.

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Marion County—					
393	Pella Cry. Co. #	Pella	D. Van Sittert	Pella	T. Smorenburg	Pella
	Marshall County—					
394	*Marshalltown Cry. Co. i	Marshalltown	F. H. Logsdon	Marshalltown	Geo. L. Richardson	705 Wood St., Marshalltown
395	State Center Farm. Cry. Co. c	State Center	P. C. Brown	State Center	G. T. Shaunce	State Center
396	Minerva Valley Cry. Co. c	Clemons	L. H. Armbrecht	Clemons	E. M. Frederikse	Clemons
397	Dunbar Cry. Co. c	Dunbar	K. O. Selm	Dunbar	B. S. Hill	Dunbar
	Mills County—					
398	Glenwood Cry. Co. c	Glenwood	W. A. Bogart	Glenwood	J. G. MacKellar	Glenwood
	Mitchell County—					
369	New Haven Cry. Co. i	Osage (8 mi. e)	Julius Brunner	Osage, R. 4	Julius Brunner	Osage, R. 4
370	Little Cedar Cry. Co. i	Little Cedar	G. L. Helfter	Little Cedar	G. L. Helfter	Little Cedar
371	Osage Co-op. Cry. Assn. c	Osage	Jno. Torsleff	Mitchell	G. Burdett	Osage
372	St. Ansgar Cry. Co. c	St. Ansgar	M. A. Tollefson	St. Ansgar	H. R. Bullis	St. Ansgar
373	Farm. Co-op. Cry. Assn. c	Orchard	E. O. Clapper	Orchard	Albert Tieman	Orchard
374	Rock Creek Co-op. Cry. Assn. c	Osage (10 mi. sw)	H. L. Johnson	Rudd	J. E. McCaffrey	Osage, R. 2
375	Stacyville Cry. Co. i	Stacyville	Jos. Heus	Stacyville	Wm. Heus	Stacyville
	Monona County—					
376	Moorhead Cry. Co. i	Moorhead	P. D. Nelson	Moorhead	Nels Nelson	Moorhead
377	Maple Valley Cry. Co. i	Castana	Harry Jones	Ute	W. A. Fischer	Castana
	Monroe County—					
378	Albia Cry. Co. i	Albia	Sam Jones	Albia	Earl Burlingame	Albia
	Montgomery County—					
378½	Tyler Bros. Cry. Co. i	Villisca	Royal F. Tyler	Villisca	Royal F. Tyler	Villisca

	O'Brien County—					
379	The Hartley Cry. Co. #	Hartley	J. C. Joslin	Hartley	Chas. W. Green	Hartley
380	Sutherland Cry. Co. i	Sutherland	Adolph Christensen	Sutherland	Adolph Christensen	Sutherland
381	Sheldon Cry. Co. i	Sheldon	D. A. Miller	Sheldon	Axel Fransen	Sheldon
382	Caledonia Cry. Co. c	Paullina (6½ mi. sw)	J. C. Lange	Paullina	Wm. Gehrls	Paullina
383	The Archer Cry. Co. i	Archer	B. G. Rensink	Archer	F. Welter	Archer
	Osceola County—					
384	Ashton Cry. Co. i	Ashton	J. A. Kramer	Ashton	J. A. Kramer	Ashton
385	Farm. Co-op. Cry. Co. c	Ocheyedan	A. G. Fletcher	Ocheyedan	J. DeVries	Ocheyedan
386	Sibley Cry. Co. i	Sibley	L. Lohnbakken	Sibley	Jno. Salamon	Sibley
	Page County—					
387	*Swift & Co. #	Clarinda	Swift & Co.	Chicago	C. H. Carson	Clarinda
	Palo Alto County—					
388	Depew Cry. Co. c	Cylinder	P. C. Duer	Emmetsburg	Henry Hanson	Cylinder
389	West Bend Co-op. Cry. Co. c	West Bend	A. L. Frye	West Bend	O. W. Dubbs	West Bend
390	Farm. Co-op. Cry. Co. c	Ruthven	G. A. Appelman	Ruthven	J. H. Tripp	Ruthven
391	Mallard Butter & Cream Assn. c	Mallard	T. C. Truog	Mallard	T. R. Wilson	Mallard
392	Lost Island Cry. Co. c	Graettinger	Albert Christiansen	Ruthven	M. P. Junker	Graettinger R 1
393	Emmetsburg Cry. Co. c	Emmetsburg	Lewis Stuehmer	Emmetsburg	M. Anderson	Emmetsburg
394	Rush Lake Cry. Co. c	Curlew	E. Matthesen	Curlew	C. G. Nelson	Curlew
395	Cylinder Cry. Co. i	Cylinder	L. C. Reid	Cylinder	L. C. Reid	Cylinder
396	Silver Lake Cry. Co. c	Ayrshire	J. J. Martin	Ayrshire	Fred Christianson	Ayrshire
397	Fairville Cry. Co. c	Cylinder (8 mi. ne)	C. H. Bleckwenn	Cylinder	A. V. Larson	Cylinder
398	Farm. Co-op. Cry. Co. c	Graettinger	P. L. Lambe	Graettinger	Wm. Matters	Graettinger
399	Rodman Cry. Co. i	Rodman	Elmer Gustafson	Rodman	Elmer Gustafson	Rodman
	Plymouth County—					
400	LeMars Cry. Co. #	Le Mars	W. R. Hutchinson	Sioux City	P. E. Hornor	LeMars
401	Paynes Cry. Co. i	Hingsley	Carl Lissner	Kingsley	Carl Lissner	Kingsley
402	Grant Twp. Cry. Co. c	Craig (3½ mi. se)	Fred Kusch	Craig	H. W. Becker	LeMars R 4
	Polk County—					
403	*Des Moines Cry. Co. #	Des Moines	B. S. Schermerhorn	Des Moines	A. L. Larson	Des Moines 4100 Kingman Blvd.
404	*Farm. Co-op. Produce Co. #	Des Moines	L. O. Lozeaux	Des Moines	N. Danielson	Des Moines
405	*Beatrice Cry. Co. #	Des Moines	H. R. Wright	Des Moines	A. C. Root	Des Moines

CREAMERY LIST—Continued

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Pocahontas County—					
406	Fonda Cry. Co.	Fonda	R. F. Beswick	Fonda	E. White	Fonda
407	*Pocahontas Cry. Co.	Pocahontas	J. A. Crowther	Pocahontas	Gust Wehler	Pocahontas
408	Laurens Cry. Co.	Laurens	J. G. Hinn	Laurens	F. W. Johnson	Laurens
409	Palmer Cry. Co.	Palmer	Geo. Siebel	Palmer	Geo. Siebel	Palmer
410	Plover Cry. Co.	Plover	H. Fitzgerald	Plover	A. T. Helvig	Plover
	***Pottawattamie County—**					
411	*Bloomer Cold Storage Co.	Council Bluffs	G. D. Brkenbaugh	Council Bluffs	Jno. A. Dutton	Council Bluffs
	Poweshiek County—					
412	Deep River Cry. Co.	Deep River	L. B. Holmes	Deep River	H. J. Gorbel	Deep River
413	*Grinnell Cry., Ice & Cold Storage Plant	Grinnell	J. W. Fowler	Grinnell	A. C. Anderson	Grinnell
414	Brooklyn Cry Co.	Brooklyn	G. H. Guthrie	Brooklyn	G. H. Guthrie	Brooklyn
	Ringgold County—					
415	Mt. Ayr Cry. Co.	Mt. Ayr	H. A. Fuller	Mt. Ayr	Louis Pohle	Mt. Ayr
	Sac County—					
416	Hillman Cry. Co.	Lytton	I. Hillman	Lytton	Fred Hillman	Lytton
417	Wall Lake Cry. Co.	Wall Lake	O. W. Davis	Wall Lake	C. W. Davis	Wall Lake
419	Fars. Co-op. Cry. Co.	Early	L. W. McCreery	Early	L. W. McCreery	Early
420	Lake View Cry. Co.	Lake View	E. C. Rogers	Lake View	E. C. Rogers	Lake View
421	Sac City Cry. Co.	Sac City	A. C. Schultz	Sac City	M. L. Phillips	Sac City
	Scott County—					
422	Star Cry. Co.	Long Grove	Marriott, Wolf & Briceland	Long Grove	Guy Mathias	Long Grove
423	*Bell-Jones Company	Davenport	Bell-Jones Co.	Davenport	Geo. Ferris	Davenport
424	*Davenport Cry. Co.	Davenport	P. J. Lingholm	Davenport	E. L. Selhaver	Davenport

	Shelby County—					
425	Prairie Rose Cry. Co.	Walnut (9½ mi. n)	Jno. Vincling	Walnut R 2	H. Anderson	Walnut R 2
426	Fars. Mut. Co-op. Cry. Co.	Kirkman (5 mi. e)	Fred Koenig	Kirkman	Chris Anderson	Kirkman
427	Buck Valley Cry. Co.	Kimballtown (5 mi. nw)	Jno. J. Christensen	Harlan, R 5	P. Nymann	Harlan R 5
428	*Earling Cry. Co.	Earling	J. A. Bruck	Earling	J. A. Bruck	Earling
429	Harlan Ice & Cold Stg. Co.	Harlan	M. Ankerstjerne	Harlan	M. Ankerstjerne	Harlan
	Sioux County—					
430	Fars. Co-op. Cry. Assn.	Hull	N. Burrekom	Hull	Wm. Giesfen	Hull
431	The Hawarden Cry. Co.	Hawarden	E. Zorr	Hawarden	E. Zorr	Hawarden
432	Hospers Cry. Co.	Hospers	Stover & Boterman	Hospers	Jno. J. Marx	Hospers
433	Alton Cry. Co.	Alton	C. J. Mueller	Alton	H. E. Collins	Alton
434	Fars. Mut. Co-op. Cry. Assn.	Orange City	E. J. Kraai	Orange City	J. F. Vandermeer	Orange City
435	Fars. Co-op. Cry. Co.	Boyden	Jno. Rensink	Boyden	Henry Wargasky	Boyden
436	Fars. Mut. Co-op. Cry. Co.	Sioux Center	Evert den Herder	Sioux Center	Evert den Herder	Sioux Center
437	Rock Valley Cry. Co.	Rock Valley	F. Vander Stoep	Rock Valley	Ed Vander Stoep	Rock Valley
438	Granville Cry. Co.	Granville	P. J. Diederich	Granville	P. J. Diederick	Granville
	Story County—					
439	Fars. Mut. Co-op. Cry.	Gilbert	C. P. Lake	Gilbert	C. P. Lake	Gilbert
440	Huxley Fars. Co-op. Cry.	Huxley	Sam Maland	Huxley	O. J. Olson	Huxley
441	Roland Fars. Cry. Co.	Roland	F. M. Red	Roland	Geo. Wick	Roland
442	Story City Cry. Co.	Story City	Alex. Henderson	Story City	Sam Savereid	Story City
443	Fars. Co-op. Cry. Co.	Slater	Chas. Skortman	Slater	Clarence Clark	Slater
444	Zearing Cry. Co.	Zearing	C. P. Bean	Zearing	F. D. Shiffet	Zearing
445	Iowa State College Cry.	Ames	Prof. M. Mortenson	Ames	M. R. Tolstrup	Ames
446	McCallsburg Fars. Cry. Co.	McCallsburg	G. J. Vallem	McCallsburg	C. T. Knutson	McCallsburg
	Tama County—					
447	Fars. Co-op. Cry. Co.	Garwin	Ralph Hall	Garwin		
448	J. H. Neil Cry. Co.	Tama	J. H. Neil	Tama	J. H. Neil	Tama
449	Gladbrook Cry. Co.	Gladbrook	C. S. Mitchell	Gladbrook	C. S. Mitchell	Gladbrook
450	Springbrook Cry. Co.	Elberon	Jno. Newman Co.	Elgin, Ill.	O. A. Fosse	Elberon
451	Traer Cry. Co.	Traer	T. L. Steines	Traer	T. L. Steines	Traer
	Taylor County—					
452	*The Bedford Cry. Co.	Bedford	Frank Dunning	Bedford	Leslie Klopp	Bedford
453	Peacock Cry. Co.	Lenox	A. H. Peacock	Lenox	A. H. Peacock	Lenox
	Union County—					
454	Fars. Co-op. Cry. Co.	Afton	B. M. Breed	Afton	V. O. Williams	Afton
455	*Swift & Co.	Creston	Swift & Co.	Chicago	Leonard Bros.	Creston

CREAMERY LIST—Continued

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	Van Buren County—					
455½	Stockport Cry. Co.....c	Stockport	.....	.....	J. B. Garrett.....	Stockport
	Wapello County—					
456	*Swift & Co.....s	Ottumwa	Swift & Co.....	Chicago	L. E. Fletcher.....	Ottumwa
457	Yorkshire Cry. Co.....s	Ottumwa	R. N. Morrell.....	Ottumwa	C. A. Gage.....	Ottumwa
458	*F. G. Buxton Cry. Co.....i	Ottumwa	F. G. Buxton.....	Ottumwa	R. E. Hall.....	Ottumwa
	Washington County—					
459	Hawkeye Condensed Milk Co.....i	Brighton	T. Thompson.....	Brighton	.....	.....
460	Wellman Cry. Co.....s	Wellman	C. M. Reisman.....	Oskaloosa	Harry Martin.....	Wellman
	Wayne County—					
461	*Old Colony Cry. Co.....i	Humeston	Jas. L. Humphrey, Jr.	Humeston	M. W. Bixby.....	Humeston
462	Corydon Cry. Co.....s	Corydon	J. K. Green.....	Corydon	E. P. Davis.....	Corydon
	Seymour Cry. Co.....i	Seymour	C. F. Luthey.....	Seymour	C. F. Luthey.....	Seymour
	Webster County—					
463	*Ft. Dodge Cry. Co.....i	Ft. Dodge	A. R. Loomis & Son	Ft. Dodge	B. Jensen.....	Ft. Dodge
464	Dayton Co-op. Cry. Co.....s	Dayton	J. A. Cling.....	Dayton	C. L. Mills.....	Dayton
465	Gowrie Co-op. Cry. Co.....c	Gowrie	J. E. Johnson.....	Gowrie	A. E. McClune.....	Gowrie
	Winnebago County—					
463	Forest City Co-op. Cry. Co.....c	Forest City	Jno. Carson.....	Forest City	E. A. Jensen.....	Forest City
467	Lake Mills Cry. Co.....c	Lake Mills	Ole T. Grove.....	Lake Mills	C. G. Hovland.....	Lake Mills
468	Lincoln Co-op. Cry. Co.....c	Rake	P. N. Peterson.....	Rake	L. K. Bjerke.....	Rake
469	Scarville Cry. Assn.....c	Scarville	J. E. Herrmansen....	Scarville	H. K. Nelson.....	Scarville
470	Vinje Cry. Co.....c	Scarville (3 mi. w).....	Ole Strom.....	Scarville, R 1.....	H. C. Stendel.....	Scarville R 1
471	Thompson Co-op. Cry. Co.....c	Thompson.....	M. M. Tapager.....	Thompson.....	A. M. Hanson.....	Thompson
472	Buffalo Ctr. Co-op. Cry.....c	Buffalo Center.....	B. E. Hook.....	Buffalo Ctr.	.....	.....
473	Leland Co-op. Cry. Co.....c	Leland.....	E. E. Branstad.....	Leland.....	S. O. Rusley.....	Leland

	Winneshiek County—					
474	Ridgeway Cry. Co.....i	Ridgeway.....	L. T. Fosse.....	Ridgeway.....	G. G. Bowers.....	Ridgeway
475	Lincoln Cry. Co.....c	Ridgeway.....	O. O. Roe.....	Ridgeway.....	J. H. Bakken.....	Ridgeway
476	Silver Springs Cry. Co.....s	Nordness.....	H. P. Nicholson.....	Ossian.....	O. C. Hauge.....	Ossian
477	Nordness Cry. Co.....s	Ossian.....	J. N. Bragestad.....	Decorah, R 1.....	V. V. Johnson.....	Decorah R 2
478	Rock Springs Co-op. Cry. Co.....c	New House, Minn. (4 mi. s).....	P. M. Peterson.....	Spring Grove, Minn.	.....	.....
	Highlandville Cry. Co.....i	New House, Minn. (8 mi. s).....	Bidne & Akre.....	Highlandville.....	P. J. Bidne.....	Highlandville
480	Festina Cry. Co.....c	Festina.....	H. J. Schopaints....	Festina.....	Mike Hauer.....	Calmar R 1
481	Calmar Cry. Co.....s	Calmar.....	A. A. Olson.....	Calmar.....	Iver Barlow.....	Calmar
482	Silver Creek Cry. Co.....c	Burr Oak.....	W. H. Emmons.....	Burr Oak.....	Jno. Johnson.....	Burr Oak
483	Decorah Fars. Ice Cave Cry.....c	Decorah.....	A. T. Holtan.....	Decorah.....	N. O. Bendickson....	Decorah
	Worth County—					
484	Joice Cry. Co.....c	Joice.....	M. C. Evans.....	Joice.....	J. H. Hagen.....	Joice
485	Tenold Cry. Assn.....c	Kensett (10 mi. nw).....	O. K. Stone.....	Kensett.....	N. O. Dahlen.....	Northwood
486	Brookfield Cry. Co.....c	Northwood (8 mi. w).....	E. A. Tenold.....	Northwood.....	A. O. Peterson.....	Northwood
487	Hartland Cry. Co.....c	Northwood (9 mi. nw)..	Sigurd G. Bjorlie...	Emmons, Minn. R 2	Andrew O. Dahlen....	Northwood
488	Fars. Co-op. Cry. Co.....c	Manly.....	H. D. Backhaus.....	Manly.....	F. C. Hinze.....	Manly
489	Fars. Butter & Cheese Assn.....c	Northwood.....	M. D. Johnson.....	Northwood.....	F. D. Warner.....	Northwood
490	Kensett Cry. i	Kensett.....	Nils Gylleck.....	Kensett.....	N. Gylleck.....	Kensett
491	*Fertile Co-op. Cry. Co.....c	Fertile.....	J. A. Johnson.....	Fertile.....	J. A. Johnson.....	Fertile
492	Hanlontown Cry. Co.....c	Hanlontown.....	F. C. Hinze.....	Hanlontown.....	E. A. Godvangen.....	Hanlontown
	Woodbury County—					
493	*Blue Valley Cry. Co.....s	Sioux City.....	C. J. Walker.....	Chicago, Ill.	C. L. Smith.....	Sioux City
494	*Arctic Cry. Co.....s	Sioux City.....	C. E. Gear.....	Sioux City.....	N. H. Timble.....	Sioux City
495	*Hanford Produce Co.....s	Sioux City.....	J. H. Whittemore....	Sioux City.....	M. O. Wheelock.....	Sioux City
	Wright County—					
496	Goldfield Co-op. Cry. Co.....c	Goldfield.....	C. M. Clausen.....	Goldfield.....	Nels J. Nelson.....	Goldfield
497	Fountain Cry. Co.....i	Eagle Grove.....	W. E. Mann.....	Eagle Grove.....	.....	.....
498	Fars. Co-op. Cry. Co.....c	Belmond.....	G. F. Elder.....	Belmond.....	C. H. Jennings.....	Belmond
499	Clarion Cry. Assn.....c	Clarion.....	Wiert Johnson.....	Clarion.....	.....	.....
500	Norway Cry. Co.....c	Belmond (9 mi. w).....	Oscar Lein.....	Kanawha, R 5....	.....	.....

CHEESE FACTORY LIST

Number	Name of Creamery	Located at or Near	Name of Proprietor, Secretary or Manager	P. O. Address of Proprietor, Secretary or Manager	Name of Buttermaker	P. O. Address of Buttermaker
	Adams County—					
1	Nodaway Cheese Factory	Nodaway	P. M. Estlack	Nodaway	P. M. Estlack	Nodaway
	Bremer County—					
2	Janesville Cheese Factory	Janesville	Geo. V. Fowler	Waterloo	Chas. Rye	Janesville
	Cass County—					
3	Lewis Cheese Factory	Lewis	M. E. Delean	Lewis	M. E. Delean	Lewis
	Chickasaw County—					
4	Ionia Cheese Factory	Ionia	H. W. Kann	Ionia	A. H. Kann	Ionia
5	Devon Cheese Factory	Devon	Kann & Lord	Devon	Jno. Lord	Devon
	Howard County—					
6	Clover Leaf Cheese Factory	Cresco	J. J. House	Cresco	Carl Argel	Cresco
7	Jamestown Cheese Factory	Riceville	Anton Pinder	Riceville, R 3	Anton Pinder	Riceville, R 3
	Humboldt County—					
8	Pioneer Cty. Co.	Renwick, R 2	Badger Cheese Co.	Monroe, Wis.	Willie Keller	Renwick
9	Elmer & Co. Cheese Factory	Renwick, R 1	Conrad Elmer	Renwick	Antone Motz	Renwick
	Muscatine County—					
10	Muscatine French Cheese Co.	Wilton Junction	E. A. Kurtz	Boscobel, Wis.	P. A. Schmidt	Wilton Jct.
	Washington County—					
11	Dublin Cheese Factory	Dublin	J. S. Mangold	Washington	J. S. Mangold	Washington
12	Clay Cheese Factory	Richland (1 mi. n)	C. F. Wolcott	Richland	Joe Goesser	Richland

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ILLUSTRATIONS.