

Thirteenth Annual Report  
OF THE  
STATE DAIRY COMMISSIONER

TO THE  
GOVERNOR OF THE STATE OF IOWA

FOR THE YEAR 1899.

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B. P. NORTON,  
State Dairy Commissioner.

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LETTER OF TRANSMITTAL.

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*To His Excellency, Leslie M. Shaw, Governor of Iowa:*

SIR—In compliance with the law, I have the honor to submit herewith the thirteenth annual report of the dairy commissioner. Very respectfully,

October 14, 1899.

B. P. NORTON,  
*Dairy Commissioner.*

## PROSECUTIONS.

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During the past summer this department has undertaken several prosecutions under the oleomargarine law and a few for adulteration of milk. The violators of the oleomargarine law have all been railroad contractors, who were attempting to feed their men on oleomargarine to save expense. Successful prosecutions were conducted as follows: Two at Ottumwa, three at Council Bluffs, one at Grundy Center. One man is now under bonds to appear before the grand jury at Toledo, and one man, who has not at this writing been arrested, is now under indictment in another part of the state. All the cases are based upon the portion of the law which forbids any one to have in his possession oleomargarine having a yellow color. In the cases tried no defense has been made and no particular expense has been incurred other than that of the dairy commissioner. In every case the oleomargarine is found in the original tub bearing the government stamp. Hence no analysis has been necessary.

A patron of the Clarksville creamery was prosecuted for watering his milk and delivering the same to the creamery. He was convicted and fined \$25 and costs. The law is so very plain and the Babcock test is so very sure that it is hard to understand why any patron of a creamery should be so shortsighted.

Prosecutions of city milk dealers for various offenses are set out in the part of this report devoted to the matter of city milk inspection.

The law could be much more fully enforced if this office were allowed additional assistance. There is no doubt that violations of the oleomargarine law are more or less frequent, but the detection and prosecution of the same takes a great deal of time and is more or less difficult. The collectors of internal revenue, while refusing, under instructions from their superiors, to give out any information in regard to shipments of "oleo," inform us in general terms that large quantities of it are shipped into the state. If so, most of it escapes the knowledge of this department.

## CO-OPERATION IN IOWA CREAMERIES.

It is almost a self-evident proposition that all creameries are co-operative in their relation to the farmers, whether they are so in name or not. The farmer cannot do without the creamery as an institution, neither can the creamery be run at a profit to anybody if the patronage of the creamery is not sufficient. There is great room for improvement in the management of creameries in this and other states, so far as the relations of the patrons and the operator of the creamery are concerned. Distrust of the test and small profits on the one hand, and impatience with sour or bad milk on the other, lead to an antagonism that is disastrous to the partnership that exists in reality between the farmer and the creamery. Hence both suffer, when a little effort of "management" would relieve the situation greatly and be to the profit of both.

The number of requests sent to this office to test milk indicate that there is a growing interest on the part of some dairymen to know just what difference exists between the samples of milk from their different cows, and the creamery man will do well to foster this desire. If the farmer can get better cows he will make more profit, of course; will send more milk to the creamery, and forget that he ever said that the creamery cheated him, and that there is no money in dairying. Suggest to your patrons the advisability of getting a small hand tester and determining the difference between cows as regards profit; or test the milk for them, after explaining to them how to take proper samples. You will incidentally teach them some things about the test and gain their confidence by showing an interest in their welfare. If you succeed in getting them to replace their poor cows with good ones, you will get more milk at your creamery. At any rate, the more the farmer knows about dairying the better it will be for you and the creamery business as a whole.

Some of the larger creameries have adopted the plan of having a summer meeting of their patrons to talk over the

business, discuss creamery and dairy matters as a whole, and in particular as it affects them, and incidentally get better acquainted through the medium of a picnic. While this plan is impossible to a single small creamery, it is not at all difficult if neighboring creameries will get together, and as an attraction get some speakers of reputation to address the gathered farmers on dairy subjects. Don't have the discussion confined to the care of cans and the making of butter from a poor quality of milk. Give the farmer something that will help him to make more money out of his cows and it won't be difficult to make him keep his milk well.

Every creamery operator ought, for his own benefit, to be a self-appointed agent for the best dairy paper he knows. Modern dairying is not "the good old way," and the successful dairyman must learn how, if he has not already done so. Modern dairy literature is full of new things and helpful matter for both the dairyman and the creamery operator. Added interest on the part of the farmer will pay the creamery man big dividends. The creamery man who is not willing to do anything that will tend to educate his patrons, proceeding on the theory that the less they know the easier it will be to "work" them, can count on a business life of a few days and lots of trouble. Get your patrons to take the best dairy papers, teach them by good example how to care for their milk and the utensils of their dairies, help them in every way you can to make more out of their dairies, and you will increase your business and consequent profit. The creamery papers are full of instructions and advice to the butter-maker; the butter buyer is continually trying to have the butter-maker produce better butter, and takes great pains to inform him of the exact faults of his butter and how to avoid them. Why should not the creamery operator, acting on the same business principle, endeavor to increase the knowledge of his patrons by some other means than merely sending back the milk with some words equally sour? Help your patrons and they will help you.

The man who thinks that all the attention should be paid to the immediate interests of the creamery has an entirely wrong idea of dairying in Iowa. The basis of the creamery industry is not the man who makes the butter and sells it; the cow and the man who milks her constitute the basis, and when they do not produce milk at a profit there will be no need of creameries.

### THEY PASTEURIZE THEIR SKIMMED MILK.

Seventy-eight creameries report that they pasteurize their skimmed milk before sending it back to the farmer, and all who express opinions about it say it is a great success. If the calves that drink the milk could be heard on the subject they would also be unanimous on the advisability of the practice.

Souring of milk, while it is of course a natural process, does not improve the feeding value of the milk. The milk must be sweet in order that all of its value may be obtained by feeding. In this day of small profits from butter-making, the farmer has a right to demand that the milk returned to him shall have all its original value except that removed by the separator. Pasteurization of the skimmed milk and cleanliness of the skimmed milk tank enables the creamery man to return the milk to the farmer in good condition. Skimmed milk contains practically all the elements of growth that were in the whole milk. Fats in feed go to furnish energy to the animal or fat to his body. The carbohydrates of grains will supply the place of the fats removed from the milk. But if the milk begins to sour, it is worth so much the less, and nothing can be added to it to take the place of the lost value. The farmer who receives his milk from the creamery sweet can substitute corn or ground flax seed for the fat that the creamery separator has taken out and raise as good a calf as though it had been fed whole milk. Pasteurize your skimmed milk; you will find it popular among your patrons.

### FEEED AND CARE OF COWS.

From the reports of Iowa creameries it is estimated that the average cow produces but 140 pounds of butter per annum. There is a large and increasing number of farmers in this state who have succeeded in making their cows produce from 200 to 350 pounds of butter in a year, and therefore there must be a great number of cows whose product falls far below the average in amount. The average value of the product of the cow cannot be more than \$20 or \$25, and the same sum cannot be far from the cost of the cow's keep. Hence the only apparent advantage in keeping cows is that of turning into an easily marketed product the bulky or possibly unsalable produce of the farm. But what is the use of so feeding a cow that she

will scarcely pay her board, when it is just as easy and almost as cheap to so feed her that she will return a handsome profit? There are two reasons for the small returns from our dairy business: the poor quality of some of the cows, and lack of proper feeding. It is the purpose of this article to discuss only the latter of these two points, in the hope that it will be of service to Iowa dairymen.

It will be readily admitted that it costs as much in feed to keep the cows alive and repair the waste of the body whether she is dry or produces 400 pounds of butter per year, for it is plain that it is only the excess of the feed that is turned into milk. If we can feed the cow something that is more suitable to milk production than she has been getting, she will certainly give more milk, and the only question to be determined will be whether the increase in milk is obtained at such a cost as to allow a profit. Of course it is not possible to make a great increase with every cow, no matter what the feed; neither is it possible to increase the milk production by a mere increase in the amount of the feed, unless it is the proper feed. It is easily seen that the farmer who has a dairy herd should attempt to keep cows that will give milk at a profit if properly fed, and then see to it that they are properly fed and handled.

The feeder must take account of three groups of substances in determining a ration for an animal; they are protein, carbohydrates, and fat. All analyses give the percentage of dry matter and the amount of digestible protein, carbohydrates and fat, and it is possible to arrange the amount of each of these in the feed to suit the purpose for which the animal is fed, whether it be for growth, increase in weight, or milk.

Protein furnishes the materials for the formation of the muscles, hair, brain and nerves, and the casein and albumin of milk. It is absolutely essential to the existence, growth and milk-giving powers of an animal, and no other substance in the feed can take its place. Protein may be used by the animal in the place of either the carbohydrates and fat and in case of too little feed it will be so used. The cow gives milk only after the waste of the body or growth is fully provided for, hence it is the excess of protein beyond the actual needs of the cow that enables her to produce milk.

Carbohydrates are the producers of fat in the body or are used up at once in the production of heat and energy.

Fat includes the fats of the plants or grain, and is also a producer of heat and energy and fat in the body. A pound of fat in a ration is equivalent to about 2.25 pounds of carbohydrates. Fats are often called ether extract.

It will be seen at once that if a cow receives too much of the fats and carbohydrates, she will not use all the feed she eats in the production of heat and energy and will, therefore, take on fat, and go dry. If at the same time the amount of protein in the feed is deficient, she will have an additional reason for not giving milk. Any combination of the feeds usually raised upon the farm makes just such a ration as here indicated, deficient in protein and having an excess of carbohydrates. It therefore follows that the feeder for milk must buy some feed which contains a large amount of protein in proportion to the carbohydrates, in order to balance the feeds he already has. He can avoid this in some measure by raising those feeds which contain the greatest proportion of protein, and under Iowa conditions the best feed for the farmer to raise is clover hay. The soja bean, and peas and oats, or alfalfa will do to experiment with, and if successfully grown will be more valuable than clover as a feed, but clover must be the mainstay of the farmer unless he prefers to raise something else that is a surer crop, and sell it to buy bran, oil meal, or some of the less common concentrates.

In the tables of comparative values of feed stuffs, found at the end of this article, are given the varying per cents of each of the nutrients in the common farm products and by-products. By long experiment it is found that the best results are obtained with milch cows of average size, in full flow of milk, when the cow receives the following amounts of the several materials per day:

Dry matter, 28 to 28 lbs. Protein, 2 to 2.5 lbs. Carbohydrates, 12 to 15 lbs. Fat, .4 to .8 lbs.

Note the weakness of the following ration:

	D. M.	DIGESTIBLE.		
		PRO.	C. H.	FAT
Timothy, 14 pounds.....	12.28	.48	6.08	.18
Barley meal, 4 pounds.....	3.82	.29	2.52	.08
Corn meal, 4 pounds.....	3.32	.86	2.79	.11
Oat meal, 4 pounds.....	3.68	.46	2.08	.24
Totals .....	23.00	1.99	13.38	.61

This ration has too much carbohydrates and fat and but little more than half the amount of digestible protein required for the maximum. On such a ration the cow will go dry and get fat. If a suitable amount of corn stover is fed instead of the timothy the ration is worse yet. If clover could be substituted it would greatly improve the ration, and probably the grains could be sold and bran or oil meal bought, not only to the advantage of the ration but to the pocket of the owner. It will nearly always be the case that the common grains can be sold and concentrates bought which will leave money in the pocket and put more in when the milk is sold.

If such a sale is made it is for the purpose of getting more protein than is already found in the grain or hay at hand. The farmer with the usual stock of feed already has too much carbohydrates, and buys bran or other feed for the protein there is in it. Hence the price for which he can afford to sell the grain, and the price he can afford to pay for the concentrate, is determined by the relative amounts of protein. For example, oats at 20 cents is worth \$12.50 per ton and contains 184 pounds of digestible protein. (See the table.) A ton of bran can usually be bought for less than \$12.50 and contains 250 pounds of protein. That is, the protein in the oats will bring in the market about 6.8 cents per pound, and the protein in the bran can be bought for 5 cents or less per pound.

Cows do best on some succulent feed. Mixed pasture grasses make the best of all feeds. The most successful winter ration will approximate as closely as possible to the grass ration. Ensilage or roots enables the winter ration to furnish the required succulence. Neither has any large amount of protein, but that can be furnished in the grain part of the ration and by the use of ensilage the greatest amount of feed per acre is obtained. If neither ensilage or roots are fed then some loosening feeds must be fed with the constipating feeds to obtain the best results. Loosening feeds are ensilage, roots, bran, linseed meal; constipating feeds are corn fodder and cornstalks, timothy and prairie hay, corn and cotton seed meal. The cow is a dainty animal and the feed should be clean and bright, as well as suitable in kind and quantity.

Most dairy cows drink too little water in the winter time. A sensible cow will not drink cold water when she is shivering with cold. Keep the cows warm. It will pay you to water them in the barn. They will not suffer for lack of exercise if

they are not turned out of the barn at all on the coldest days. Give a little salt with the feed every day. Don't turn the hungry cow out to the straw pile or into a field of cornstalks to fill up on such woody materials. She won't eat any more after she is full. Feed her that which will make her give the most milk for the least money, not that which will fill her up the cheapest. Raise all the clover you can and feed it to the milch cows. There is money in it. Study the following tables and rations and compound a balanced ration that will suit your condition. A serious decrease in the amount of milk given by the cow cannot be made up either by feeding, or otherwise. Keep the cow up to her maximum from the time she is fresh until she should go dry. The profitable cow is the one that gives a reasonable amount of milk ten months in the year. Persistency in milking is more or less of a habit, so milk the heifers as long as you can. A cow will give more milk if she is fresh in the fall than she will if she calves in the spring. By proper feeding she will give a full flow of milk all winter and as long as the grass is good in the summer, and will go dry in the late summer when feed is poor and flies are bad. But if summer dairying is practiced it will pay to have some kind of feed for the time when the pastures are drying up. The following table was intended for those who are in the habit of soiling their cows, but will be valuable here as suggesting the relative time of maturing of different feeds and the acreage of each kind to sow. Any surplus can be made into hay or fodder:

CROPS AND AREAS FOR SAME, FOR SOILING TEN COWS DURING THE ENTIRE SUMMER\*.

CROP.	SEED PER ACRE.	TIME OF SEEDING.	AREA.	TIME OF CUTTING.
Rye.....	2 bushels.....	Sept. 10-15.....	½ acre..	May 20—May 30.
Wheat.....	2 bushels.....	Sept. 10-15.....	½ acre..	June 1—June 15.
Red clover.....	20 pounds.....	July 15—Aug. 1	½ acre..	June 15—June 30.
Grass and clover.....	¼ bu. red top... ¼ bu. timothy... 10 lbs red clover	September.....	¾ acre..	June 15—June 30.
Vetch and oats.....	3 bu. oats.....	April 20.....	½ acre..	June 25—July 10.
Vetch and oats.....	50 lbs. vetch.....	April 30.....	½ acre..	July 10—July 20.
Peas and oats.....	¼ bu. Canada... ¼ bu. oats.....	April 20.....	½ acre..	June 25—July 10.
Peas and oats.....	1¼ bu. Canada... 1½ bu. oats.....	April 30.....	½ acre..	July 10—July 20.
Barnyard millet.....	1 peck.....	May 10.....	½ acre..	July 25—Aug. 20.
Barnyard millet.....	1 peck.....	May 25.....	½ acre..	Aug. 10—Aug. 20.
Soja bean.....	18 quarts.....	May 10.....	½ acre..	Aug. 25—Sept. 15.
Corn.....	.....	May 20.....	½ acre..	Aug. 25—Sept. 10.
Corn.....	.....	May 30.....	½ acre..	Sept. 10—Sept. 20.
Hungarian.....	1 bushel.....	July 15.....	½ acre..	Sept. 20—Sept. 30.
Barley and peas.....	1½ bu. each.....	August 5.....	1 acre..	Oct. 1—Oct. 20.

\* Hatch Experiment Station, Massachusetts.

The several rations following are compiled from various sources, and a study of them will undoubtedly suggest a proper combination of feeds suitable to Iowa conditions. Percentages given in tables of analyses are averages of a large number of analyses, and the numbers given by different authorities differ slightly. Feed stuffs not of best quality will be deficient in protein content. Every ration must have in it a fair proportion of the brains of the feeder. If the cow responds liberally to the feeding let her have more than the average amount of the grain ration. When she begins to go dry reduce the grain ration gradually. The rations here given are for cows in full flow of milk. The protein content of their ration should bear a proportion to the amount of milk given.

Study your cows and how to feed them; there is money in it. Make use of the bulletins published by the department of agriculture, and reports of dairy organizations; subscribe for a dairy paper, and use all the means possible to arrive at the result desired, namely, how to make the most money out of your dairy business.

In the following rations the word stover means the stalks of cut corn after the ears are removed. Fodder corn means the stalk and the ear fed together. Shredded corn stover is worth twice as much as unshredded, because when shredded the cows will eat all of it instead of only half.

All the usual feeds may be fed in any quantity desired, but three pounds of oil meal per day is the maximum amount to be fed. Feed grain rations and roughage separately; that is, feed the grain part of the ration and then feed all the roughage they will eat. The amounts given in the following rations are about what the average cow will consume. Any change in rations must be gradual. Two weeks is none too long to make a radical change of feed.

COMPARATIVE VALUE OF FEED STUFFS FOR DAIRY COWS.

Calculations based upon the percentage of digestible protein.

	PERCENTAGE COMPOSITION.			COMPARATIVE VALUE PER TON WHEN TIMOTHY IS WORTH—					
	Dry Matter	DIGESTIBLE.			\$5.00	\$6.00	\$7.00	\$8.00	\$9.00
		Pro.	C-H.	Fat.					
<b>GREEN FODDER.</b>									
Corn fodder	20.70	1.9	11.6	.4	1.47	1.76	2.06	2.35	2.65
Oat fodder	37.80	2.7	22.7	1.0	3.97	4.76	5.56	6.35	7.15
Red clover	29.20	3.1	14.8	.7	4.56	5.47	6.38	7.30	8.21
Corn silage	20.9	1.0	11.4	.7	1.47	1.76	2.06	2.35	2.65
<b>HAY AND DRY COARSE FODDERS.</b>									
Corn stover (Field cured)	59.50	2.0	33.4	.6	2.94	3.52	4.12	4.70	5.30
Corn fodder (Field cured)	57.80	2.5	34.6	1.2	3.68	4.41	5.15	5.88	6.62
<b>HAY FROM—</b>									
Timothy	87.68	3.4	43.4	1.3	5.00	6.00	7.00	8.00	9.00
Alfalfa	91.60	10.6	37.3	1.4	15.59	18.71	21.83	24.94	28.06
Alsike clover	90.30	8.2	41.7	1.4	12.06	14.47	16.88	19.30	21.71
Red clover	87.75	7.6	40.0	1.5	11.18	13.41	15.65	17.88	20.12
Millet	88.00	3.9	48.5	1.0	5.74	6.88	8.03	9.18	10.32
Orchard grass	90.10	4.8	42.0	1.4	7.06	8.47	9.88	11.30	12.71
Prairie, upland	87.50	3.5	41.8	1.4	5.15	6.17	7.20	8.23	9.26
Prairie, mixed	84.10	3.4	41.5	1.2	5.00	6.00	7.00	8.00	9.00
Red top	91.10	4.8	46.8	1.0	7.06	8.47	9.88	11.30	12.71
Sedge grass	89.84	3.4	45.3	1.1	5.00	6.00	7.00	8.00	9.00
Soja bean	88.70	10.8	38.7	1.5	15.56	18.67	21.78	24.90	28.01
Wheat straw	92.59	1.0	38.0	.4	1.47	1.76	2.06	2.35	2.65
Oat straw	91.61	1.5	43.4	.5	2.21	2.65	3.09	3.53	3.97
<b>ROOTS AND TUBERS.</b>									
Potatoes	24.55	2.1	20.2	.....	3.09	3.71	4.33	4.94	5.56
Sugar beets	15.00	1.5	12.3	.....	2.21	2.65	3.09	3.53	3.97
Mangels	14.00	1.5	9.0	.....	2.21	2.65	3.09	3.53	3.97
Turnips	9.50	.8	6.5	.1	1.18	1.41	1.65	1.88	2.12
Ruta-bagas	11.40	.9	7.7	.1	1.33	1.59	1.86	2.12	2.39
Carrots	11.40	.8	7.8	.2	1.18	1.41	1.65	1.88	2.12

	PERCENTAGE COMPOSITION.			COMPARATIVE VALUE PER TON WHEN BRAN IS WORTH—							
	Dry M't'r	DIGESTIBLE.			\$7.00	\$8.00	\$9.00	\$10.00	\$11.00	\$12.00	\$13.00
		Pro.	C-H.	Fat.							
<b>MILL PRODUCTS.</b>											
Barley meal	88.10	7.4	63.9	2.0	4.14	4.74	5.33	5.92	6.51	7.10	7.70
Corn meal	88.00	9.0	67.4	2.8	5.04	5.76	6.48	7.20	7.92	8.64	9.36
Corn and cob meal	84.90	6.5	56.3	2.9	3.64	4.16	4.68	5.20	5.72	6.24	6.76
Oat meal	92.10	11.5	53.1	5.9	6.44	7.36	8.28	9.20	10.12	11.04	11.96
Pea meal	89.50	16.8	51.8	.7	9.41	10.75	12.10	13.44	14.78	16.12	17.47
<b>BY PRODUCTS.</b>											
Bran	89.50	12.5	42.1	3.6	7.00	8.00	9.00	10.00	11.00	12.00	13.00
Buckwheat shorts	88.90	21.1	33.5	5.5	11.82	13.49	15.19	16.88	18.57	20.25	21.94
Cotton seed meal	91.86	32.0	20.2	10.0	17.92	20.48	23.04	25.60	28.16	30.72	33.28
Linseed meal	90.00	27.6	33.5	7.3	15.46	17.66	19.87	22.08	24.29	26.49	28.70
Gluten meal	90.00	24.5	47.0	6.7	13.78	15.68	17.64	19.60	21.56	23.52	25.48
Germ meal	93.00	12.3	52.4	6.1	6.89	7.87	8.86	9.84	10.82	11.81	12.79
Brewers' grains (Dried)	91.10	14.7	36.6	4.8	8.23	9.41	10.58	11.76	12.94	14.10	15.29
Brewers' grains (Wet)	24.30	3.9	9.3	1.4	2.18	2.50	2.81	3.12	3.43	3.74	4.06
Malt sprouts	89.80	18.7	43.5	2.2	10.47	11.97	13.46	14.96	16.46	17.95	19.45
Shorts	89.50	10.0	55.9	1.3	5.60	6.40	7.20	8.00	8.80	9.60	10.40
<b>GRAINS AND OTHER SEEDS.</b>											
Barley	89.10	8.7	65.6	1.6	4.87	5.57	6.26	6.95	7.66	8.34	9.05
Corn	89.10	7.9	66.7	4.3	4.42	5.06	5.69	6.32	6.95	7.58	8.22
Flax	90.80	20.6	17.1	29.0	11.54	13.18	14.83	16.48	18.13	19.77	21.42
Millet seed	87.50	9.0	54.1	2.9	5.04	5.76	6.48	7.20	7.92	8.64	9.36
Oats	89.00	9.2	47.3	4.2	5.15	5.89	6.62	7.36	8.10	8.82	9.57
Peas	90.16	19.4	59.6	.5	10.86	12.62	13.97	15.52	17.07	18.63	20.18
Rye	88.40	9.9	67.6	1.1	5.54	6.34	7.13	7.92	8.71	9.40	10.30
Wheat	89.00	11.0	58.6	1.6	6.16	7.04	7.92	8.80	9.68	10.56	11.44
<b>PRICE PER BUSHEL ON ABOVE BASIS.</b>											
Barley					Ots.	Ots.	Ots.	Ots.	Ots.	Ots.	Ots.
Corn					11.7	13.4	15.0	16.6	18.4	20.0	21.7
Flax					12.4	14.2	15.9	17.7	19.5	21.3	23.0
Millet seed					12.1	13.8	15.6	17.3	19.0	20.7	22.5
Oats					8.2	9.4	10.6	11.8	13.0	14.2	15.3
Peas					32.6	37.6	41.9	46.6	51.2	55.9	60.5
Rye					15.5	17.7	19.9	22.1	24.4	26.6	28.8
Wheat					18.5	21.1	23.8	26.4	29.0	31.6	34.3

VALUE OF FEED STUFFS BASED UPON THEIR DIGESTIBLE PROTEIN CONTENT.

Protein in Barley as a Basis.

KIND OF FEED.	WHEN BARLEY IS WORTH PER BUSHEL—							
	16 cts.	18 cts.	20 cts.	22 cts.	24 cts.	26 cts.	28 cts.	30 cts.
Corn	16.9	19.1	21.2	23.3	25.4	27.5	29.7	31.8
Oats	11.3	12.7	14.1	15.5	16.9	18.3	19.7	21.2
Rye	21.2	23.9	26.6	29.2	31.9	34.6	37.2	39.8
Wheat	25.3	28.4	31.6	34.8	37.9	41.1	44.2	47.4
Bran, per ton	\$ 9.43	\$10.78	\$11.97	\$13.17	\$14.37	\$15.56	\$16.76	\$ 17.96
Linseed meal	21.12	28.79	26.44	29.07	31.72	34.38	35.10	39.65

Protein in Corn as a Basis.

KIND OF FEED.	WHEN CORN IS WORTH PER BUSHEL—							
	16 cts.	18 cts.	20 cts.	22 cts.	24 cts.	26 cts.	28 cts.	30 cts.
Barley	15.0	17.0	18.9	20.8	22.7	24.5	26.4	28.3
Oats	10.6	12.0	13.3	14.6	16.0	17.3	18.6	20.0
Rye	20.0	22.6	25.1	27.6	30.1	32.6	35.1	37.6
Wheat	23.9	26.9	29.8	32.8	35.8	38.8	41.8	44.8
Bran, per ton	\$ 9.05	\$10.16	\$11.29	\$12.43	\$13.56	\$14.68	\$15.81	\$ 16.94
Linseed meal	19.98	22.42	24.94	27.44	29.92	32.40	34.92	37.44



Protein in Oats as a Basis.

KIND OF FEED.	WHEN OATS IS WORTH PER BUSHEL—							
	16 cts.	18 cts.	20 cts.	22 cts.	24 cts.	26 cts.	28 cts.	30 cts.
Barley.....	22.7	25.6	28.4	31.2	34.1	36.9	39.8	42.6
Corn.....	24.0	27.1	30.1	33.1	36.1	39.1	42.1	45.1
Rye.....	30.1	33.9	37.7	41.4	45.2	49.0	52.7	56.5
Wheat.....	35.9	40.4	44.8	49.3	53.8	58.3	62.8	67.3
Bran, per ton.....	\$13.58	\$15.29	\$16.99	\$18.69	\$19.53	\$22.08	\$23.78	\$ 25.49
Linseed meal.....	30.00	33.75	37.50	41.25	43.11	48.75	52.50	56.28

Protein in Rye as a Basis.

KIND OF FEED.	WHEN RYE IS WORTH PER BUSHEL—							
	16 cts.	18 cts.	20 cts.	22 cts.	24 cts.	26 cts.	28 cts.	30 cts.
Barley.....	12.0	13.6	15.1	16.6	18.1	19.6	21.1	22.6
Corn.....	12.8	14.4	16.0	17.6	19.2	20.7	22.3	23.9
Oats.....	8.5	9.6	10.6	11.7	12.7	13.8	14.9	15.9
Wheat.....	19.9	22.4	24.9	27.4	29.8	32.3	34.8	37.3
Bran, per ton.....	\$ 7.21	\$ 8.12	\$ 9.02	\$ 9.93	\$10.84	\$11.72	\$12.63	\$ 13.54
Linseed meal.....	15.91	17.87	19.85	21.85	23.85	25.80	27.80	29.80

All the foregoing tables are taken, with slight changes, from "Feeding Dairy Cows," Prof. T. L. Haecker, University of Minnesota.

RATIONS FOR DAIRY COWS.

FORMULA.	Organic matter.	DIGESTIBLE NUTRIENTS.			FORMULA.	Organic matter.	DIGESTIBLE NUTRIENTS.		
		Protein.	Carbohydrates.	Fat.			Protein.	Carbohydrates.	Fat.
20 lbs. red clover..	15.70	1.30	6.98	.33	20 lbs. clover hay..	15.70	1.30	6.98	.32
5 lbs. corn.....	4.38	.32	3.24	.25	4 lbs. bran.....	3.30	.50	1.76	.12
5 lbs. bran.....	4.12	.63	2.21	.15	4 lbs. ground oats..	3.44	.36	1.79	.16
Totals.....	24.20	2.25	12.43	.72	Totals.....	22.44	2.16	10.53	.60
20 lbs. clover hay..	16.94	1.36	7.16	.34	20 lbs. clover hay..	15.70	1.30	6.98	.32
5 lbs. corn.....	4.45	.40	3.34	.23	6 lbs. ground corn..	5.26	.38	3.89	.30
5 lbs. oats.....	4.45	.46	2.37	.31	4 lbs. bran.....	3.30	.50	1.76	.12
Totals.....	25.84	2.22	12.87	.77	Totals.....	24.26	2.18	12.63	.74
15 lbs. clover hay..	12.70	1.02	5.36	.26	15 lbs. clover hay..	12.70	1.02	5.37	.26
2 lbs. bran.....	4.40	.63	1.93	.15	6 lbs. corn stover..	3.57	.10	1.94	.04
2 lbs. corn.....	1.78	.16	1.33	.09	6 lbs. bran.....	5.29	.75	2.32	.18
2 lbs. oats.....	1.78	.18	.94	.08	4 lbs. corn and cob				
1 lb. oil meal.....	.91	.29	.33	.07	meal.....	4.45	.32	3.15	.18
10 lbs. stover.....	5.95	.17	3.24	.07	Totals.....	25.96	2.19	12.79	.66
Totals.....	27.52	2.45	13.13	.72	13 lbs. clover hay..	10.20	.85	4.54	.21
10 lbs. clover hay..	7.85	.65	3.49	.16	10 lbs. corn stover..	5.35	.20	3.34	.06
10 lbs. corn fodder..	6.08	.87	4.04	.12	4 lbs. oats.....	3.44	.36	1.79	.16
6 lbs. bran.....	4.94	.75	2.65	.17	6 lbs. corn and cob				
4 lbs. corn.....	3.50	.25	2.59	.20	meal.....	5.00	.40	3.38	.17
1 lb. oil meal.....	.85	.28	.33	.07	1 lb. oil meal.....	.85	.28	.33	.07
Totals.....	23.82	2.30	13.10	.72	Totals.....	24.84	2.09	13.38	.67
20 lbs. clover hay..	16.94	1.36	7.16	.34	15 lbs. clover hay..	12.70	1.02	5.37	.26
4 lbs. bran.....	3.52	.50	1.54	.12	8 lbs. corn stover..	4.40	.14	2.59	.06
4 lbs. corn chop....	3.56	.32	2.67	.17	6 lbs. bran.....	5.29	.75	2.32	.18
1 lb. oil meal.....	.91	.29	.33	.07	4 lbs. corn meal....	3.52	.32	2.67	.17
Totals.....	24.93	2.47	11.70	.70	Totals.....	25.91	2.23	12.95	.67
20 lbs. mammoth					8 lbs. clover hay....	6.78	.54	2.86	.14
clover.....	15.76	1.14	6.40	.38	15 lbs. corn stover..	8.93	.26	4.86	.11
4 lbs. bran.....	3.52	.50	1.54	.12	4 lbs. bran.....	3.52	.50	1.54	.12
4 lbs. corn and cob					4 lbs. corn chop....	3.56	.32	2.67	.17
meal.....	3.56	.25	2.52	.14	2 lbs. oil meal.....	1.82	.59	.65	.14
1 lb. cotton seed					Totals.....	24.61	2.21	12.58	.68
meal.....	.92	.37	.17	.09	15 lbs. clover hay..	12.70	1.02	5.37	.26
Totals.....	23.76	2.26	10.63	.73	10 lbs. corn stover..	5.97	.17	3.24	.07
20 lbs. clover hay..	16.94	1.36	7.16	.34	4 lbs. corn and cob				
8 lbs. corn and cob					meal.....	3.56	.32	2.52	.14
meal.....	7.12	.51	5.04	.28	4 lbs. bran.....	3.52	.50	1.54	.12
1½ lbs. oil meal....	1.36	.44	.49	.11	1 lb. oil meal.....	.91	.29	.33	.07
Totals.....	25.42	2.31	12.69	.73	Totals.....	26.65	2.30	13.00	.66
Give all the fodder and stover in addition that any cow will eat.					15 lbs. clover hay..	12.71	1.02	5.37	.26
20 lbs. clover hay..	16.94	1.34	7.16	.34	10 lbs. corn stover..	5.95	.17	3.24	.07
5 lbs. (corn) chop....	4.45	.40	3.33	.22	5 lbs. bran.....	4.40	.63	1.93	.15
4 lbs. bran.....	3.52	.50	1.54	.12	5 lbs. ground corn..	4.45	.40	3.34	.22
1 lb. oil meal.....	.91	.29	.33	.07	Totals.....	27.51	2.22	13.88	.70
Totals.....	25.82	2.53	12.36	.75	14 lbs. clover.....	12.28	1.06	5.60	.21
12 lbs. clover hay..	10.16	.82	4.30	.20	4 lbs. barley meal..	3.52	.29	2.52	.08
10 lbs. corn stover..	5.95	.17	3.24	.07	4 lbs. corn meal....	3.52	.36	2.70	.11
5 lbs. bran.....	4.41	.63	1.93	.15	4 lbs. oat meal.....	3.68	.46	2.08	.24
2 lbs. corn.....	1.78	.16	1.33	.09	Totals.....	23.00	2.17	12.90	.64
2 lbs. oats.....	1.78	.18	.95	.08	14 lbs. clover.....	12.28	1.06	5.60	.21
1 lb. barley.....	.89	.09	.66	.02	4 lbs. barley meal..	3.52	.29	2.52	.08
1 lb. oil meal.....	.85	.28	.33	.07	4 lbs. corn meal....	3.52	.36	2.70	.11
Totals.....	25.82	2.33	11.74	.68	4 lbs. bran.....	3.58	.50	1.69	.14
					Totals.....	22.90	2.21	12.51	.54

RATIONS FOR DAIRY COW—CONTINUED.

FORMULA FOR RATION.	DIGESTIBLE NUTRIENTS.			FORMULA FOR RATION.	DIGESTIBLE NUTRIENTS.		
	Dry matter.	Protein.	Carbohy- drates.		Dry matter.	Protein.	Carbohy- drates.
40 lbs silage.....	10.56	.52	5.90	30 lbs silage.....	7.92	.39	4.90
15 lbs stover.....	8.93	.25	4.66	10 lbs hay.....	4.37	.24	1.98
5 lbs bran.....	4.40	.63	1.93	5 lbs stover.....	6.95	.17	3.24
5 lbs corn.....	4.45	.40	3.94	1 lbs bran.....	5.39	.39	3.82
1 lb cotton seed meal.....	.92	.37	.17	3 lbs mts sprouts.....	2.70	.56	1.11
Totals.....	29.16	2.18	15.90	Totals.....	23.13	2.11	12.85
20 lbs silage.....	7.92	.39	4.26	20 lbs silage.....	7.92	.39	4.20
10 lbs hay.....	5.88	.48	3.96	10 lbs roots.....	2.28	.16	1.56
6 lbs bran.....	5.29	.75	2.33	4 lbs bran.....	3.52	.50	1.54
2 lbs cotton seed meal.....	1.84	.74	.34	2 lbs oil cake.....	1.84	.59	.65
Totals.....	23.83	2.96	10.88	Totals.....	24.32	2.24	12.27
25 lbs silage.....	6.90	.33	3.50	30 lbs silage.....	7.92	.39	4.20
8 lbs hay.....	6.32	.32	3.47	10 lbs hay.....	5.00	.30	3.80
8 lbs stover.....	4.76	.14	2.59	2 lbs middlings.....	1.69	.24	.94
5 lbs bran.....	4.41	.63	1.93	Totals.....	23.54	2.23	12.47
5 lbs ground corn.....	4.45	.40	2.93	25 lbs silage.....	6.90	.33	3.50
2 lbs oil meal.....	1.81	.59	.65	10 lbs clover hay.....	8.47	.68	3.05
Totals.....	28.85	2.31	15.47	3 lbs bran.....	4.40	.63	1.93
25 lbs silage.....	6.90	.43	3.50	2 lbs cotton seed meal.....	1.84	.74	.34
10 lbs clover hay.....	8.47	.68	3.68	Totals.....	21.31	2.38	9.85
7 lbs bran.....	6.17	.88	2.70	20 lbs silage.....	5.28	.36	2.80
3 lbs middlings.....	2.54	.38	1.59	10 lbs clover hay.....	8.47	.68	3.05
3 lbs oil meal.....	2.67	.34	2.00	4 lbs bran.....	3.52	.50	1.54
Totals.....	23.55	2.61	13.37	4 lbs gluten feed.....	3.69	.51	1.94
20 lbs silage.....	5.28	.36	2.80	2 lbs corn meal.....	1.78	.16	1.33
10 lbs stover.....	5.95	.17	3.24	Totals.....	22.74	2.41	11.19
5 lbs hay.....	5.15	.29	2.38	20 lbs silage.....	5.28	.36	2.80
6 lbs bran.....	5.29	.75	2.32	10 lbs timothy hay.....	8.63	.28	4.34
2 lbs oil meal.....	1.82	.59	.65	2 lbs oil meal.....	1.82	.59	.65
Totals.....	23.49	2.06	11.39	2 lbs corn meal.....	1.78	.16	1.33
30 lbs corn silage.....	7.80	.36	4.50	8 lbs bran.....	7.05	1.09	3.09
10 lbs timothy.....	4.28	.17	2.17	Totals.....	24.61	2.29	12.31
4 lbs barley meal.....	3.52	.39	2.52	20 lbs silage.....	5.28	.36	2.80
8 lbs bran.....	7.16	1.00	3.39	10 lbs timothy hay.....	8.63	.28	4.34
1 lb oil meal.....	.90	.28	.94	2 lbs corn meal.....	1.78	.16	1.33
Totals.....	23.76	2.10	12.92	2 lbs oil meal.....	1.82	.59	.65
30 lbs ensilage.....	7.80	.36	4.50	3 lbs bran.....	2.94	.38	1.16
8 lbs clover.....	5.27	.46	2.59	2 lbs oil meal.....	1.78	.16	1.33
4 lbs barley meal.....	3.52	.39	2.52	3 lbs gluten feed.....	3.77	.51	2.45
8 lbs bran.....	7.16	1.00	3.39	Totals.....	22.87	2.28	11.73
Totals.....	23.75	2.11	12.81	20 lbs mixed hay.....	17.16	.98	7.83
12 lbs prairie hay.....	10.50	.42	6.02	4 lbs corn and Cob meal.....	3.56	.36	2.62
10 lbs bran.....	8.81	1.26	3.88	4 lbs bran.....	3.56	.35	2.61
4 lbs corn.....	3.56	.32	2.67	2 lbs oil meal.....	1.91	.59	.65
2 lbs oil meal.....	1.82	.59	.65	Totals.....	26.19	2.16	13.61
Totals.....	24.69	2.60	12.30	20 lbs hay.....	16.34	.82	8.34
17 lbs timothy hay.....	14.76	.48	7.48	4 lbs bran.....	3.25	.50	1.79
5 lbs ry bran.....	4.43	.58	2.58	4 lbs corn.....	3.50	.26	2.59
4 lbs buckwheat middlings.....	3.49	.88	1.24	2 lbs oil meal.....	1.70	.57	.65
1 lb oil meal.....	.91	.39	.50	Totals.....	24.84	2.15	13.35
Totals.....	23.58	2.23	11.67				

RATIONS FOR DAIRY COW—CONTINUED.

FORMULA FOR RATION.	DIGESTIBLE NUTRIENTS.			FORMULA FOR RATION.	DIGESTIBLE NUTRIENTS.		
	Dry matter.	Protein.	Carbohy- drates.		Dry matter.	Protein.	Carbohy- drates.
10 lbs prairie hay.....	8.13	.35	4.18	29 lbs mixed hay.....	16.08	.4	7.88
10 lbs oat hay.....	8.49	.43	4.64	4 lbs ground corn.....	3.40	.25	2.59
4 lbs bran.....	8.34	.53	2.66	4 lbs bran.....	3.30	.50	1.76
2 lbs oil cake.....	1.70	.57	.65	2 lbs oil meal.....	1.70	.57	.66
Totals.....	23.26	2.10	12.14	Totals.....	24.48	2.26	12.89
12 lbs timothy hay.....	10.42	.34	5.21	20 lbs mixed hay.....	17.16	.98	7.92
10 lbs corn stover.....	5.65	.17	3.24	30 lbs mangels.....	2.73	.33	1.92
5 lbs bran.....	4.40	.63	1.93	5 lbs bran.....	4.41	.63	1.93
4 lbs gluten feed.....	3.89	.82	1.91	1 lb cotton seed meal.....	.92	.37	.17
1 lb oil meal.....	.91	.29	.36	Totals.....	25.22	2.29	11.64
Totals.....	25.37	2.25	15.65	12 lbs mixed hay.....	10.30	.58	4.75
18 lbs mixed hay.....	14.97	.33	7.99	10 lbs corn stover.....	5.95	.17	3.24
4 lbs bran.....	3.30	.50	1.76	4 lbs ground corn.....	3.56	.32	2.67
4 lbs corn and oats.....	3.47	.31	2.19	4 lbs bran.....	3.52	.50	1.54
2 lbs oil meal.....	1.70	.57	.66	1 lb oil meal.....	.91	.29	.33
Totals.....	23.14	2.23	11.70	Totals.....	24.24	1.86	12.53
10 lbs millet hay.....	8.53	.45	4.64	12 lbs prairie hay.....	9.76	.42	5.02
10 lbs prairie hay.....	8.13	.35	4.18	10 lbs corn stover.....	5.65	.29	3.24
8 lbs bran.....	6.59	1.00	3.53	10 lbs bran.....	8.24	1.26	4.41
4 lbs oats.....	3.44	.36	1.79	1 lb oil meal.....	.91	.29	.33
Totals.....	26.79	2.16	14.14	Totals.....	24.96	2.17	13.10
15 lbs oat straw.....	12.85	.24	6.31	12 lbs timothy hay.....	9.89	.36	6.27
10 lbs bran.....	8.24	1.26	4.41	10 lbs corn stover.....	5.65	.29	3.24
5 lbs oats.....	4.30	.46	2.24	4 lbs cob meal.....	3.34	.26	2.25
Totals.....	25.39	1.98	12.86	4 lbs bran.....	3.30	.50	1.76
10 lbs oat hay.....	9.11	.49	4.64	2 lbs middlings.....	1.59	.25	.94
10 lbs corn stover.....	5.95	.17	3.24	2 lbs oil meal.....	1.70	.57	.66
4 lbs ground corn.....	3.56	.32	2.67	Totals.....	25.57	2.14	14.26
4 lbs bran.....	3.52	.50	1.54	10 lbs millet.....	9.23	.45	5.17
2 lbs oil meal.....	1.82	.59	.65	10 lbs stover.....	5.95	.17	3.24
Totals.....	23.06	2.01	12.44	5 lbs bran.....	4.40	.63	1.93
25 lbs corn stover.....	14.90	.43	8.10	5 lbs corn and cob meal.....	4.45	.39	3.15
10 lbs bran.....	8.81	1.26	3.88	2 lbs oil meal.....	1.82	.59	.65
2 lbs oil meal.....	1.82	.59	.65	Totals.....	25.85	2.16	14.14
Totals.....	25.53	2.28	12.61	15 lbs corn fodder.....	10.02	.56	6.06
20 lbs corn stover.....	11.90	.34	6.45	10 lbs millet hay.....	8.63	.45	4.64
30 lbs beets.....	4.05	.33	3.06	10 lbs bran.....	8.24	1.26	4.41
4 lbs corn.....	3.56	.32	2.67	Totals.....	26.89	2.27	15.11
6 lbs buckwheat middlings.....	5.24	1.32	2.00	12 lbs mixed hay.....	11.30	.58	4.75
Totals.....	24.75	2.31	14.21	8 lbs corn stover.....	4.76	.12	3.23
12 lbs mixed hay.....	10.30	.58	4.75	4 lbs bran.....	3.52	.50	1.54
10 lbs stover.....	5.95	.17	3.24	4 lbs gluten feed.....	3.69	.52	1.94
4 lbs corn and cob meal.....	3.56	.36	2.62	Totals.....	23.27	2.03	11.46
4 lbs buckwheat middlings.....	3.49	.38	1.34	6 lbs mixed hay.....	5.15	.29	2.38
3 lbs bran.....	2.64	.28	1.16	5 lbs millet hay.....	4.61	.23	2.59
Totals.....	25.94	2.27	13.01	10 lbs stover.....	5.25	.17	3.24
15 lbs timothy hay.....	12.36	.45	6.69	4 lbs bran.....	3.52	.50	1.54
9 lbs oats.....	7.74	.82	4.02	4 lbs corn chop.....	3.56	.32	2.67
6 lbs bran.....	4.94	.79	2.65	2 lbs oil meal.....	1.82	.59	.65
1/2 lb oil meal.....	.43	.14	.16	Totals.....	22.31	2.03	11.88
Totals.....	25.47	2.16	13.41	15 lbs prairie hay.....	13.13	.53	6.27
15 lbs prairie hay.....	13.13	.53	6.27	10 lbs bran.....	8.81	1.26	3.88
10 lbs bran.....	8.81	1.26	3.88	2 lbs oil meal.....	1.82	.59	.65
2 lbs oil meal.....	1.82	.59	.65	Totals.....	23.76	2.38	10.78

## DAIRY LAWS OF IOWA.

## CHAPTER 13.

## OF THE DAIRY COMMISSIONER AND IMITATION DAIRY PRODUCTS.

SECTION 2515. *Appointment—bond—powers and duties of commissioner—report.*—On or before the first day of April of each even numbered year, the governor shall appoint a dairy commissioner, who shall have a practical knowledge of and experience in the manufacture of dairy products, and hold his office for two years from the first day of May following his appointment, and until his successor is appointed and qualified, subject to removal by the governor for inefficiency, neglect or violation of duty. He shall give bond in the sum of \$10,000, conditioned for the faithful performance of his duties, with sureties to be approved by and filed with the secretary of state. He shall keep on hand a supply of standard test tubes or bottles and milk measures or pipettes adapted for use by each milk testing machine, the manufacturers or dealers of which have filed with the dairy commissioner a certificate from the director of the Iowa agricultural experiment station, which shall certify that said milk testing machine, when properly and correctly operated, will produce accurate measurements of butter fat, and furnish to any person or corporation desiring the same for testing milk one such tube or bottle, and such milk measure or pipette for each factory, of the kind adapted for the machine operated therein, upon request therefor, certifying it to be accurate, reliable and standard, placing thereon the letters "D. C." as a permanent mark; the tubes or bottles and pipettes to be furnished at the actual cost thereof. He shall have and keep an office in the capitol, and preserve therein all correspondence, documents, records and property of the state pertaining thereto, and may, when necessary, employ a clerk at an expense of not more than \$75 per month. During his term of office he shall hold no other official position nor any professorship in any state educational institution, and on or before the first day of November shall make annual report to the governor, which shall contain a detailed account of all his doings as commissioner, and the receipts and disbursements of his office since the preceding report, with such facts and statistics in regard to the production, manufacture and sale of dairy products, with such suggestions as he may regard of public importance in connection therewith. In the conduct of his office, he shall have power to issue subpoenas for witnesses, enforce their attendance, and examine them under oath by him to be administered, such witnesses to be allowed fees as in justices' courts, to be paid by the commissioner as part of the expenses of his office, and do such other acts and things as are necessary and proper in the enforcement of the provisions of this chapter.

SEC. 2516. *Imitation butter or cheese.*—Every article, substitute or compound, save that produced from pure milk or cream from milk of cows, made in the semblance of or designed to be used for and in the place of butter, is imitation butter; and every article, substitute or compound, save that produced from pure milk or cream from milk of cows, made in the semblance of or designed to be used for and in the place of cheese, is imitation cheese. No one shall manufacture, have in his possession, offer to sell or sell, solicit or take orders for delivery, ship, consign or forward by any common carrier, public or private, and no common carrier shall knowingly receive or transport, any such imitation butter or cheese, except in the manner and subject to the regulations in this chapter provided.

SEC. 2517. *Substitute for butter or cheese—regulations as to sale and use—transportation.*—A substitute for butter and cheese, not having a yellow color nor colored in imitation of butter and cheese as prohibited in the next section, may be manufactured, kept in possession, offered for sale, sold, shipped, consigned or forwarded by common carriers, public or private, if each tub, firkin, box or other package in which the same is kept, offered for sale, sold, shipped, consigned or forwarded shall have branded, stamped or marked on the side or top thereof in the English language, in a durable manner, the words, "Substitute for butter" or "Substitute for cheese," as the case may be, the letters of the words to be not less than one inch in length by one-half inch in width. The defacing, erasure, canceling or removal of this brand or mark, with intent to mislead, deceive, or violate any provision of this chapter, is prohibited. Such substitute for butter or cheese may be kept, used or served as a food or for cooking in hotels, restaurants, lunch counters, boarding houses or other places of public entertainment, only in case the proprietor or person in charge of such place shall display and keep constantly posted a card opposite each table or other place where the guests or others are served with the same, which card shall be white, at least ten by fourteen inches in size, the words, "Substitute for butter used here" or "Substitute for cheese used here," as the case may be, printed in black Roman letters of the same size as herein required to be placed upon the tubs, firkins, boxes or other package in which substitute for butter or cheese is kept, and no other words or figures shall be printed thereon. No substitute for butter or cheese shall be offered for sale in the manufacturer's original package under the name of or for true butter or cheese made from the milk or cream of cows, nor shall any substitute for butter or cheese be offered for sale or sold unless the purchaser at the time was informed thereof, and, in addition, furnished with a printed statement in the English language in prominent type that the substance sold is such substitute, and giving the name and place of business of the maker. Nothing herein contained, however, shall be so construed as to prohibit the transportation of imitation butter or cheese through and across the state.

SEC. 2518. *Coloring—adulteration.*—No one shall color with any matter whatever any substance intended as a substitute for butter or cheese, so as to cause it to resemble true dairy products, or combine any animal fat, vegetable oil or other substance with butter or cheese, or combine with any substance whatever, intended as a substitute for butter or cheese, any thing of any kind or nature for the purpose or with the effect of imparting to the compound the color of yellow butter or cheese, the product of the

milk or cream from cows, or use, solicit orders for delivery, keep for sale or sell any such substance so colored and disguised as a substitute for butter or cheese; but nothing in this chapter shall be construed to prohibit the use of salt, rennet or harmless coloring matter in making butter or cheese from such such milk or cream.

SEC. 2519. *Package branded.*—No one shall have in his possession or under his control, except for the actual consumption of himself or family, any substance designed as a substitute for butter or cheese, unless the tub, firkin, box or package holding the same is branded or marked as in this chapter required. Any person having in his possession or under his control such substance, not so branded or marked, shall be presumed to know its true character and name.

SEC. 2520. *Contracts invalid.*—No action shall be maintained in any of the courts of the state upon any contract or sale made in violation of or with the intent to violate any provision of this chapter by one who was knowingly a party thereto

SEC. 2521. *Search warrants—samples.*—Whoever shall have in possession or control any imitation butter or cheese, or any substance designed to be used as a substitute for butter or cheese contrary to the provisions of this chapter, shall be held to have possession of property with intent to use it as a means of committing a public offense, and all the provisions of the chapter relating to search warrants and proceedings thereon shall apply, except the officer serving the warrant, in addition to his duties as therein required, shall deliver to the dairy commissioner, or to a person by him authorized in writing to receive the same, a perfect sample of each article seized by virtue of such warrant, for the purpose of having the same analyzed, and forthwith return to the person from whom it was taken the remainder of each article seized. If any sample is found to be imitation butter or cheese, or substance designed to be used as a substitute for butter or cheese, it shall be returned to and retained by the magistrate for the purposes contemplated in said chapter on "search warrants and proceedings thereon," but if any sample be found not imitation butter or cheese, or a substance designed to be used as a substitute therefor, the value of the same shall be paid by the dairy commissioner as a part of the expenses of his office, to the person from whom it was taken.

SEC. 2522. *Milk dealers—manufacturers and packers—reports.*—Every city milk dealer, or every person furnishing milk or cream to such dealer, or the employe of such milk dealer, and every person or corporation, or the employe of such person or corporation, who operates a creamery, cheese or condensed milk factory, or re-works or packs butter, shall maintain his premises and utensils in a clean and hygienic condition, and shall make, upon blanks furnished by the dairy commissioner, such reports and statistics as may be required for the purpose of compiling statistics authorized by this chapter, and such dealer, owner, operator or business manager shall make such returns and reports in the manner and in the time prescribed by the commissioner, and certify to the correctness thereof.

SEC. 2523. *Milk test.*—Any person or corporation, or the employe of such person or corporation, who operates a creamery or cheese or condensed milk factory, and uses a chemical milk test to determine the quantity of butter fat in milk purchased, used or received, shall so use only such tests

as shall be clear oil, free from any foreign substance, and produce correct measurements of butter fat, and every such person or corporation using a milk test shall procure from the dairy commissioner for each factory so operated one standard tube or bottle, and one standard measure or pipette, for testing milk, certified and marked by him as in this chapter provided, which shall be kept for inspection by the patrons and used by such person or corporation in testing or verifying test tubes or bottles and milk measures or pipettes used. In any action arising between any such operator and patron, the burden of establishing the use of reliable tests and the results therefrom, equivalent to the standard herein provided, shall be upon the operator.

SEC. 2524. *Samples collected.*—The commissioner may appoint agents in any city having over 10,000 inhabitants to collect from each dealer, not more than four times each month, samples of milk offered for sale therein. The agent shall make an accurate test of each sample received by him, and keep a true record thereof, with the name and location of the person from whom it was obtained, and report his work in detail to the commissioner, the compensation therefor not to exceed three dollars for each day actually employed therein.

SEC. 2525. *Permits.*—Any person or corporation who shall sell milk or cream from a wagon, depot or store, or sell or deliver milk or cream to a hotel or restaurant or boarding house, or any public place in any such city, shall be considered a city milk dealer. No such city milk dealer shall sell milk or cream from a wagon, depot or store in any such city without a written permit from the commissioner for each wagon, depot or store operated by him, for which he shall pay annually one dollar. All permits shall expire on the fourth day of July of each year, and no permit shall be issued for less than one dollar.

SEC. 2526. *Inspection.*—He or his agent may open any can or vessel containing milk or cream offered for sale in such city, and inspect its contents and take samples therefrom for testing and analysis. And any city milk dealer or employe of such milk dealer, or any other person who shall resist or interfere with the commissioner or his agent in the performance of his duties in executing any of the requirements of this chapter, shall be guilty of a misdemeanor and punished as provided in this chapter.

SEC. 2527. *Penalties.*—Whoever shall violate any provision of this chapter shall be punished by a fine not exceeding five hundred dollars, or by imprisonment in the county jail not exceeding six months, or by both such fine and imprisonment, at the discretion of the court.

SEC. 2528. *Compensation—expenses.*—The commissioner shall be allowed necessary postage, stationery and office supplies, and shall receive an annual salary of fifteen hundred dollars and necessary expenses, which shall not exceed three thousand dollars per year; such expenses to be itemized, verified by him, and, when examined and approved by the executive council, to be paid upon a warrant of the state auditor drawn upon the state treasurer. The salary of the clerk shall be paid in the same manner.

FROM CHAPTER 10, TITLE 24, CODE.

SEC. 4989. *Sale of impure or skimmed milk—skimmed milk cheese—labeling.*—If any person shall sell, exchange, or expose for sale or exchange or deliver or bring to another, for domestic or potable use, or to be converted into

any product of human food, any unclean, impure, unhealthy, adulterated, unwholesome or skimmed milk, or milk from which has been held back what is commonly known as strippings, or milk taken from an animal having disease, sickness, ulcers, abscess or running sore, or which has been taken from an animal within fifteen days before or five days after parturition; or if any person, having cows for the purpose of producing milk or cream for sale, shall stable them in an unhealthy place or crowded manner, or shall knowingly feed them food which produces impure, unwholesome milk, or shall feed them distilled glucose or brewery waste in any state of fermentation, or upon any substance in a state of putrefaction or rottenness or of an unhealthy nature, or shall sell or offer for sale cream which has been taken from milk the sale of which has been prohibited, or who shall sell or offer for sale, as cream an article which shall contain less than the amount of butter fat as prescribed in this chapter; or if any person shall sell or offer for sale any cheese manufactured from skimmed milk, or from milk that is partly skimmed, without the same being plainly branded, stamped or marked on the side or top of both cheese and package, in a durable manner, in the English language, the words "skimmed milk cheese," the letters of the words to be not less than one inch in height and one-half inch in width, he shall be fined not less than twenty-five nor more than one hundred dollars, and be liable for double damages to the person or persons upon whom such frauds shall be committed; but the provisions of this section shall not apply to skimmed milk when sold as such and in the manner and subject to the regulations prescribed in this chapter.

Sec. 4990. *What deemed adulterated or impure milk.*—For the purposes of this chapter, the addition of water or any other substance or thing to whole milk or skimmed milk or partially skimmed milk is hereby declared an adulteration, and milk which is obtained from animals fed upon waste as defined in this chapter, or upon any substance of an unhealthy nature, is hereby declared to be impure and unwholesome, and milk which is proved by any reliable method of test or analysis to contain less than twelve and one-half per cent of milk solids to the hundred pounds of milk, or than three pounds of butter fat to one hundred pounds of milk, shall be regarded as skimmed or partially skimmed milk, and every article not containing fifteen per cent or more of butter fat shall not be regarded as cream.

Sec. 4991. *Enforcement.*—It is hereby made the duty of the dairy commissioner to enforce the provisions of the two preceding sections.

#### AN INCH OF CREAM.

The dairy commissioner's office has had a number of inquiries as to the proper diameter of a cream pail in which the cream may be measured in inches. The law does not specify any size for the pail, except as follows:

Code Sec. 3013. The unit or standard measure of capacity for liquids, from which all other measures of liquids shall be derived and ascertained, shall be the standard gallon and its parts, as furnished this state by the

government of the United States. The inch or gauge, of cream, shall be one-half of a standard gallon.

A pail 12.126 inches, approximately 12 $\frac{1}{4}$  inches in diameter, will hold one-half a gallon for every inch in depth. A variation of one-eighth of an inch in the diameter will make a difference of about 2 per cent in the capacity of the pail.

#### OLEOMARGARINE.

The most prosperous industry in the country, judging from the increase of production, is the oleomargarine trade. If this state or any other were able to increase the production of butter 60 per cent in one year it would be deemed almost a miracle. But the oleo manufacturer can and does so increase the output of his factory at will, the only limitation being the market which he supplies. The United States government collects a tax of 2 cents a pound on the manufacture of oleo, and hence has records showing the exact number of pounds made in any given time. The following table shows the production of oleo for the last twelve years. The year ends June 30th of each year:

Year.	Pounds.
1888	21,513,537
1889	34,325,527
1890	35,664,026
1891	44,392,409
1892	48,364,155
1893	67,294,298
1894	69,632,246
1895	56,958,105
1896	50,853,234
1897	45,531,207
1898	57,516,136
1899	87,800,000

Practically all of the oleo made is sold to the consumer and eaten as butter. Iowa creameries made last year about the same number of pounds of butter as the oleo factories made of their product. It is evident at once that if the creameries of Iowa ceased to make butter, the price of butter would boom. Is it not equally evident that the price of butter would take a great rise if the production and fraudulent sale of oleo were to cease?

## WHY PAY A TAX OF 3 CENTS A POUND ON YOUR OWN BUTTER?

The best authorities estimate that the fraudulent sale and use of oleo reduces the price of butter at least 3 cents a pound, which virtually amounts to a tax of 3 cents per pound on the butter produced in this country. Why do we pay it? Because it has not been possible to arouse sufficient interest on the part of the producers of butter to demand and insist that laws be passed that will prevent the swindling of the people by the sale of oleo for butter. A tax of 3 cents a pound is a levy of 16 to 20 per cent, \$4.50 per cow, \$31.50 per patron of Iowa creameries, \$3,618 per creamery, or about \$500 more than the value of the creamery. Shall we continue to pay that tax, or, shall we insist that the next congress pass laws sufficiently strong to prevent the sale of oleo for anything but what it is? The above figures are none too large, for the butter made in Iowa creameries does not amount to more than half that made in the whole state.

## COST OF MAKING A POUND OF OLEOMARGARINE.

About two years ago the New York state commissioner of agriculture prepared a careful estimate of the cost of making oleomargarine. He gives the actual total cost at 4.41 cents per pound, to which must be added the government tax of 2 cents per pound, making the total cost of the substitute for butter at 6.41 cents per pound. The stuff is sold for butter and at butter prices or near it. A dealer at Fort Madison, Iowa, was retailing oleomargarine at 17½ cents when butter was selling, best quality, for 20 cents. This oleomargarine was a butter yellow color and sold under the name of butterine. A profit of 11 cents per pound on an investment of 6.41 cents is a profit that is charming, or would be if the farmer enjoyed any of it.

## THE ARGUMENT AGAINST OLEOMARGARINE.

Friends of the dairy interests have in the past made the mistake of devoting their attention to the unhealthfulness, uncleanness of oleomargarine, and its lack of nutritious qualities. All of their arguments are true, but do not touch the spot. Very few people eat oleomargarine knowingly, and users of butter care little about the defects of any substitute for butter so long as they do not use the substitute, or are deceived into thinking that they do not use it. It is a fact that when properly colored, salted, with artificial flavor given it by churning in sour milk, oleomargarine is a successful counterfeit of good butter, and

hence it is easy to deceive the consumer into thinking he is eating butter. What is the use of arguing that the stuff he eats is not clean, or unhealthful or adulterated with paraffine wax or coal tar dyes? The vulnerable point in the armor of the oleomargarine manufacturer is that he perpetrates a *fraud* and that his product is ultimately sold *fraudulently*. There is no fight being made on oleomargarine simply because it is designed to take the place of butter, but because it is sold as butter, because the consumer is not aware of what he is buying, because he is defrauded into buying something that he would not otherwise purchase, because he pays twice as much as the article is worth, because no one has a right to perpetrate a *fraud* on another. The oleomargarine manufacturer's cry of the poor man's butter is migaty flat when the stuff sells for butter prices.

## YELLOW OLEOMARGARINE IS A FRAUD.

All efforts pointing toward the regulation of the sale of it have recognized the fact that people will not buy it if it has not the appearance of butter. No danger of any fraud by the sale of white oleomargarine. Butter is yellow and you can't make a man believe that a white, greasy compound is butter. It may be so flavored that his taste will be deceived, but if it is not yellow he knows it is not butter and refuses to pay butter prices for it, if he does not absolutely refuse it at any price at all. It is a fact that there is no sale for white butter in any market of the country and white oleomargarine is so little sought after that its manufacturer is practically unknown. The supreme court of the United States has held that oleomargarine is entitled to all the rights possessed by other articles of commerce, but has uniformly upheld those state laws which forbid the sale of yellow oleomargarine, on the ground that the police powers of a state are ample to prevent a fraud. But it is found that while the laws are all right from the standpoint of constitutionality, the enforcement of them is a practical impossibility, especially in large cities. The profit on the sale of yellow oleomargarine at butter prices is so great that the violator of the state law can afford to pay an occasional fine, and in the long run is successful in avoiding the officers whose duty and desire it is to successfully prosecute him. The internal revenue officers tell us that large quantities of the oleomargarine come into this state every year. The most strenuous efforts on the part of this department in the last year have succeeded in finding less than

a ton. If the laws we now have are not capable of successful enforcement in those states which have diligent officials, how much can be expected in those states where the officials are apparently friendly to the oleomargarine interests? What, then, shall we do?

#### THE 10-CENT TAX ON OLEOMARGARINE.

The National Dairy Union proposes to ask congress the following winter to pass a law taxing colored oleomargarine 10 cents per pound. The innocent consumer of oleomargarine now pays about that much more than it is worth, and as a matter of justice it seems to be the proper thing that the manufacturer should pay the amount and let the public treasury get the benefit of the tax paid. But, of course, the real intention is to make the substitute for butter cost something near what butter does, so that from a financial standpoint they will compete on equal terms. There will then be no 10-cent profit to be divided between the manufacturer and the retail dealer, and little inducement for either to violate the law by selling oleo as butter when they can sell *bona fide* butter at the same price and profit. The tax being collected at the place of manufacture, and a tax of 2 cents per pound being now collected, the machinery for the enforcement of the proposed law is already in operation and will need no increase.

The National Dairy Union is officered by the most prominent and well known supporters of dairy interests in the United States and is worthy of the greatest confidence. In this movement for the 10-cent tax on colored oleomargarine it has the support of practically all the dairy papers of influence, the dairy and food commissioners, and commissioners of agriculture of the different states, and all who are interested in the continued usefulness of the American cow and the sale of her best products. The proposed bill will doubtless have the votes of a large majority of both houses of the next congress, for thirty-three states with sixty-six out of ninety senators and 284 out of 356 representatives have already passed anti-color laws, and it can scarcely be possible that the congressmen from the states that are already on record as prohibiting the sale of yellow oleo will do other than vote to pass a law that will effectually control the sale of an illegal article in their states. If the proposed bill fails it will be because of the apathy of the butter producers of the country, and it is greatly to be desired that the farmers of the country and the butter-makers and handlers of

dairy products make it very plain to the congressmen who ask our votes, that they are expected not only to vote for the bill, but to actively support it. It would be a wise thing to do to prohibit the manufacture of oleomargarine altogether, as Canada does, but such a federal law would not be upheld by the courts, and it is useless to think of such stringent measures. But a tax so large as to bring the cost of oleo up to that of butter will take away all the inducement to make and sell it. And since uncolored oleo is not to be so taxed, there will still be opportunity for any one who wishes to eat the stuff to buy it and use it as he desires.

#### FACTS TO THINK ABOUT.

States having anti-color laws.....	33
States without anti-color laws.....	12
Licensed dealers in oleo.....	3,658
In anti-color states.....	2,800
In Illinois.....	1,083
In Iowa.....	1
Number of manufactories of oleomargarine in United States....	14
Permanent investment in same, say .....	\$1,500,000
They produce pounds of oleomargarine .....	87,000,000
Number of Iowa creameries and skim stations.....	954
Permanent investment in same .....	\$ 3,000,000
Cows tributary to Iowa creameries, investment in.....	25,000,000
Land, etc., say .....	25,000,000
Iowa creameries produce, pounds of butter.....	80,000,000

Remember that the creameries produce only one half the total butter of Iowa, and hence the above estimate on Iowa investment in dairy industry should be least at least doubled.

Remember that the oleo maker is restrained from increasing his output only by the market for it. He makes all he can sell, and he can double or treble or quadruple his product almost at will without increasing the expense per pound, or his investment. But the farmer, to make more butter, must have more cows and more land to keep them on. His investment must be greatly increased.

#### A FEW DONT'S.

Don't think the 10-cent tax "excessive." Prohibition of yellow oleo nargarine in this state is even more so.

Don't say, "We can't do it. It's too big an undertaking." Yellow oleomargarine is already an outlaw in thirty-three states representing four-fifths of the population.

Don't fear that a 10-cent tax will "legalize" oleomargarine. It is already taxed 2 cents per pound, and it is rather difficult to

see how an increase in the tax will change the status of the article taxed.

Don't forget that there is a tariff duty of 6 cents per pound on oleomargarine and an internal revenue tax of 15 cents per pound on all oleomargarine brought into the country and sold here. If oleomargarine needs protection from foreign competition to the extent of 21 cents, is it not reasonable for butter to ask for protection to the extent of 10 cents?

Don't fear that some new and unthought-of point will be sprung by the opposition that will defeat the measure and its effectiveness when passed. The matter has been fought out in a manner satisfactory to the legislatures, governors, and people of thirty-three states of this country, and the laws made in answer to public sentiment in these states containing the great majority of the population of the United States have been passed upon by the highest courts of the land.

The only question not now settled is, "Will the butter producers of the country demand the enactment of the proposed law by the next congress?" Would you stand quietly by and see a thief carry away your property? Write your congressman just what you want in the matter of the 10-cent tax and don't let congress be able to give as an excuse for not passing the bill, "Nobody is asking for it."

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## DAIRY FAKES.

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### THE TIN CAN SEPARATOR.

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There are now upon the market and being advertised very extensively in a very few dairy papers and a good many farm papers, whose editors must certainly be aware of the facts, certain forms of tin can water dilution, so-called "separators," which are designed to separate the farmer from his money, and are reported to be a marvelous success in that particular. Only one of these machines has come close enough to this office so that the department was able to make any tests of the same, but the tests made gave results exactly in line with the results of those reached at the experiment stations of Iowa, Vermont, New York and Illinois. These machines are advertised to separate all the cream in from thirty minutes to an hour by the

simple process of mixing the milk with about an equal quantity of water, always of course, using the agent's particular form of tin can to do the mixing. In the few tests made by this office it was found that the best results obtained left in the skimmed milk more than one-fifth of the original fat content, to say nothing of the lessened value of the partially skimmed milk for feeding purposes because of its great dilution.

The publication of the above facts in a Des Moines newspaper drew upon this department a deluge of complaint from the sellers of the different forms of the tin can separator, and threats of damage suits for injuring the "business" of selling a 75-cent can, patented and painted red, to the farmer, for \$10 to \$15.

The process of separating cream from milk by pouring cold water into it is an old one and the scheme was condemned as far back as 1890 by the experiment station of Vermont. And on April 15, 1899, the same station issued a press bulletin from which the following is an extract. "Over one hundred trials show that there was left in the skim milk 13 per cent of the fat of mixed Jersey milk, 40 per cent of the fat of Ayrshire milk, and 17 per cent of the fat of stripper milk, mostly Jersey. The centrifugal separator left in the skim milk between 1 and 2 per cent only of the fat. The centrifugal separator, moreover, was able to extract cream from the diluted skim milk from the so-called 'separator.'

"These results speak for themselves. The cans are less efficient than centrifugal separators, less efficient than the best forms of deep setting apparatus, and no more efficient on the average than the old fashioned shallow pan."

The New York Experiment Station Bulletin 151, August, 1898, says: "In all probability they (the dilution separator) would give better results if used without dilution and immersed in as cold water as possible."

But the strongest evidence of all for Iowa people is a letter written by Professor McKay, professor of dairying at Ames, and published in the Chicago Produce of July 8, 1899. This is especially strong in view of the fact that one of the firms that is getting rich selling a water separator claims to have a letter from Professor McKay saying that their machine takes out more than 99 per cent of the butter fat. He says in reality what is contained in the following letter:



AMES, Iowa, June 14, 1899.

Mr. S. J. Fairfield, Cherokee, Iowa:

DEAR SIR—In answer to your letter would say that I consider the hydraulic separator to be one of the biggest frauds that has been placed before the dairy men for some time.

In our experiment here with it, we found it left in the milk nearly 1 per cent of fat, and in some cases more, or in other words it left one pound of butter to every one hundred pounds of milk. Experiments were conducted at Cornell, also at the station in Vermont, where same results were obtained.

We have had as good results when using just a common milk can and pouring cold water in with the milk, thus causing a separation of the fat.

This skim milk is not as good for the calves as ordinary skim milk, as they have to drink twice as much as of ordinary skim milk to obtain the same amount of solids. Yours respectfully, G. L. MCKAY.

Cream raised by the dilution method will average something like 15 per cent butter fat instead of 30 or more per cent found in separator cream. People of experience in churning understand easily that such low testing cream is hard to churn and the loss of fat in the buttermilk is large.

The fact is that the dilution method of creaming is a quick, but wasteful method of separating part of the cream from the milk, with the additional disadvantage that the skimmed milk is diluted very much. And even if a person chooses to use the method of dilution, he does not need to buy a painted and patented can at the agent's price to do so; for he may use a common shotgun can, or have a tinner put a concave bottom and a faucet in a common can, and pour in water at the top to his heart's content, knowing that he is getting just as much of the cream as is his neighbor who paid the price asked, under the impression that he was getting a very valuable and scarce article. The only possible advantage of the water method is that the cream obtained, being only a couple of hours old, is sweet. But since cream must sour to a degree before butter-making, the loss of the cream in the diluted skim milk is in no way compensated for by the sweetness of the cream.

The reason why the cream is not all separated by this method when a major part of it does so separate in a short time, lies in the fact that the globules of butter fat are not of the same size. In ordinary deep setting in cold water not all of the cream is obtained, and it is well known that a part of the cream that is obtained comes to the top only at the end of twenty-four or thirty-six hours. That is to say, it is a well known fact that the large globules of fat raise quickly and the

small ones do not. In Jersey and Guernsey milk the globules are of large size and quite uniform; while in Holstein milk they are small and vary in relative size, and such is the case in milk from other breeds. The dilution of milk with cold water cools the milk very rapidly, but because the butter fat globules have a different rate of conduction of heat than the other parts, the natural difference in specific gravity is increased and the larger globules come to the top rapidly. But the smaller ones, not rising so soon, have time to become as cold as the mixture in which they float, and do not come up at all, or if at all, at the end of a much longer period of time than they would have taken naturally. Now, here is the agent's strong point. He sets away some of the diluted skimmed milk, refers to the fact that new milk, such as he has in his skimmed milk, will show cream in a very short time, and at the end of six or eight hours calls attention to the fact that there is no cream on his partially skimmed milk, and, therefore, his machine has separated all the butter fat from the milk. But the Babcock test will invariably show something like 1 per cent of butter fat, or about one-fourth of the original content of fat.

If your patrons are approached by agents for such machines, protect them by applying the Babcock test, using for the diluted skimmed milk about a third more acid than for whole milk, and you will have no trouble in convincing them that they have no need of any such method.

Do not let your patrons be imposed upon by agents of the rival concerns. There are a number of them going the rounds demanding royalty because of infringement of patent. That part of the thing is a swindle indeed. The patents, if any, apply to the particular form of the can and not to the process. There can be no patent on the process of diluting milk with water, though there may be as many patents on different forms of cans as there are different individuals desirous of getting a stiff price for a useless article. The scheme of scaring a man into paying royalty, because of infringement of patent, was worked out years ago, and your patrons will be safe in paying no attention to the demands of the agents aforesaid.

A late issue of Hoard's Dairyman says editorially:

The Wheeler Separator company, of Syracuse, N. Y., is demanding a royalty from dairymen of New York who are using the dilution method of separating cream, claiming that they have a patent on the process. Seeing that every experiment station and dairy authority in the country hav

condemned the process and cans as useless and wasteful, it is strange that so many dairymen still bite at this fake and submit to be buncoed into paying a royalty for using a process that is not and cannot be patented. Verily, a fool and his money are soon parted.

#### BUTTER INCREASESERS.

Another scheme is the sale of so-called butter increasers. The chemists tell us that there are a number of chemicals which, by proper manipulation, will increase the weight of butter. The facts are these: A certain weight of butter melted and churned with an equal weight of milk, together with a portion of the "increaser," will be greatly increased by the process, because of the increased amount of water retained in the butter. Naturally butter will contain about 12 or 15 per cent of water. By the use of the "increaser" it may be made to contain 50 or more per cent of water; that is, two pounds of butter can be made from one. But unfortunately for the user of this new wonder, the butter is of such consistency that it deceives no one and is unsalable at butter prices. This office received a sample last winter that contained 59 per cent of water, but the commission man to whom it was originally shipped was obliged to sell it for 3 cents per pound, and then it was returned to him as of no value whatever. This butter increaser, by whatever name, is one of the things that are made to "sell," not to use or to serve any purpose at all. But the cheap chemical is sold at a high price to the ignorant person who hopes to get rich selling water at butter prices. It is the opinion of this department that the law defining imitation butter and specifying penalties for the manufacture of it in Iowa will apply to such a compound. Section 2516: Every article, substitute or compound, save that produced from pure milk or cream from milk of cows, made in the semblance of, or designed to be used for and in the place of butter, is imitation butter. The penalty for violating any of the provisions of the law is "not exceeding \$500 or six months in jail."

#### THE THREE-MINUTE CHURN.

This much advertised machine consists of a box which has inside of it apparatus for setting up a more or less cyclonic motion, with the result that the butter "comes" in a very short time, but it is a sort of cross between whipped cream and butter, contains an excess of curd, the loss of fat in the butter milk is very great, whereas it should be little or nothing.

Beware of labor-saving inventions that are said to save *all* the labor.

#### PRESERVATIVES IN MILK SOLD TO CREAMERIES.

Several complaints have come to this office from creameries in different parts of the state in regard to the use of preservatives by the patrons of the creamery. We have invariably replied that such use of preservatives in milk is a very plain violation of the law, and have advised that the offending patron be fined in the nearest justice's court. The use of the preservative is a confession on the part of the user of it that his milk is not properly handled, that it is more or less filthy, and that he is obliged to embalm it to make it keep twelve hours. Insist that your patrons bring you clean, sweet, pure milk. It is for your interest to do so, but vastly more to their interest that the creamery be able to make a good article of butter. The preservative will keep the milk sweet, and it will delay the ripening of the cream from such milk, and the cream will be unevenly ripened and the fat lost in the buttermilk. Neither the creamery nor the patron can afford such loss. It is possible for milk to be kept thirty-six hours in a good condition if it is properly handled. The cans must be made clean by washing and scalding, the milk must be handled in a cleanly manner and cooled to a temperature of 50 degrees or less as soon as drawn.

The preservatives in use are more or less poisonous. There are several kinds of preservatives now advertised extensively and there seems to be an epidemic of the use of them. The basis of most of them is either boracic acid or formaldehyde. The latter of these is, in strong solution, used for disinfecting or embalming purposes. It is sold under the names of "Freezine," "Liquid Milk Sweet," and other catchy titles, but it is the same old poison all the time. It is worth about 4 or 5 cents a quart and is sold under the trade name for about \$1 a quart. These preservatives are sold on the pretense that they are harmless, that they improve the digestion, and that they cannot be detected by chemical analysis. All of these claims are false, as certain milk men in Iowa have found to their sorrow. But the Iowa law absolutely forbids the use of these or any other adulterations of milk. "The addition of water, or any other substance or thing, to whole milk, or skimmed milk, or partially skimmed milk, is hereby declared an adulteration."—Section 4990. The fine for selling adulterated milk is

from \$25 to \$100 and the person upon whom the fraud is committed can collect double damages from the one who so defrauds him. The legal aspect of the use of milk preservatives is more fully discussed in the part of this report devoted to matters pertaining to the city milk inspection.

#### STANDARD BOTTLES AND PIPETTES.

Despite the fact that this department has three times sent circulars to all the creameries of the state, there still remains a great amount of ignorance on the part of some creamery managers in regard to the law relating to standard bottles and pipettes. The law provides a means of showing to your patrons that your glassware and testers are accurate and reliable. Not only that, but the law requires that each creamery shall have the D. C. standard bottles and pipettes. And the burden of proof, in any action relating to the testing of milk, is upon the operator of the test to show that his test is accurate. Several creameries have complained to this department of having received watered milk, and we have been obliged in nearly every case to point out to the complainant the incongruity of asking this department to prosecute a farmer for bringing watered milk to a creamery that did not comply with a plain command of the law relating to the accuracy of the very test which was the foundation of the complaint. No court would convict a man for selling adulterated or watered milk, if it could be shown that the operator of the test had not complied with a very easy requirement of the law looking toward accuracy of his test. In fact, it would be easy to show that the operator of the test did not know whether his glassware was accurate or not, and the law lays upon him the burden of proving that the bottles and pipettes used are accurate. Hence, we have declined to enter into suits that could only result in acquittals under any circumstances.

Accuracy of test is just as important to the creamery man as it is to the farmer, for unless that farmer is satisfied with his test, he will find some way to change the matter, and in the long run the creamery man will lose by the faults of his testing. It may be that the farmer will lose also, but that will not be any satisfaction to the creamery man whose creamery is closed

“for lack of patronage.” Inaccuracy in the testing of milk is equivalent to dishonesty. Read the law.

SEC. 2515. He [the dairy commissioner] shall keep on hand a supply of standard test tubes or bottles and milk measures or pipettes adapted for use by each milk testing machine, the manufacturers or dealers of which have filed with the dairy commissioner a certificate from the director of the Iowa agricultural experiment station, which shall certify that said milk testing machine, when properly and correctly operated, will produce accurate measurements of butter fat, and furnish to any person or corporation desiring the same for testing milk one such tube or bottle, and such milk measure or pipette for each factory, of the kind adapted for the machine operated therein, upon request therefor, certifying it to be accurate, reliable and standard, placing thereon the letters “D. C.” as a permanent mark; the tubes or bottles and pipettes to be furnished at the actual cost thereof.

SEC. 2523. *Milk test.*—Any person or corporation, or the employe of such person or corporation, who operates a creamery or cheese or condensed milk factory, and uses a chemical milk test to determine the quantity of butter fat in milk purchased, used or received, shall so use only such tests as shall be clear oil, free from any foreign substance, and produce correct measurements of butter fat, and every such person or corporation using a milk test shall procure from the dairy commissioner for each factory so operated one standard tube or bottle, and one standard measure or pipette, for testing milk, certified and marked by him as in this chapter provided, which shall be kept for inspection by the patrons and used by such person or corporation in testing or verifying test tubes or bottles and milk measures or pipettes used. In any action arising between any such operator and patron, the burden of establishing the use of reliable tests and the results therefrom, equivalent to the standard herein provided, shall be upon the operator.

Have you complied with the above law?

Below will be found a list of the milk testers that have been certified to this office by the Iowa agricultural experiment station, and for which standard bottles and pipettes will be furnished. The price of the bottle is 50 cents; the pipette is 25 cents. This department will also furnish a correctly calibrated cream pipette, one-third size, for 25 cents.

#### STEAM MACHINES.

Cornish, Curtis & Green. Curtis Babcock, 20, 24 and 30 bottles.  
 F. B. Fargo & Co. Fargo's New 40 Bottle.  
 Elgin Manufacturing Co. Standard, Nos. 1, 2, 3 and 4; Russian No. 1, 12 bottles; No. 2, 24 bottles.  
 Creamery Package Manufacturing Co. Ideal Turbine, 20, 24, 32 and 40 bottles; Cushman Turbine Tester, 24 to 40 bottles.  
 Haney-Campbell Co. Superior, 24 bottles; Haney Tin Tester, 20 bottles; Haney's Turbine Tin, 12, 16, 24 and 30 bottles.

A. H. Barber & Co. Dr. Babcock's Milk Tester, 20, 24, 30, 36 and 40 bottles; Omega, 24 bottles.

D. H. Burrell. Facile, iron frame, 24 bottles.

Vermont Farm Machine Co. Doctor Babcock's 20 bottles.

#### HAND MACHINES.

Creamery Package Manufacturing Co. Roe Pattern, 4, 8, 12 and 24 bottles.

Elgin Manufacturing Co. No Tin Babcock, 6 bottles.

Cornish, Curtis & Green. Curtis Babcock, 4, 6, 8, 10, 15 and 20 bottles.

D. H. Burrell. Facile, 6, 8 and 10 bottles.

### MILK TESTING.

The separator and the Babcock test have done more for modern dairying than all other agencies combined. But there is no one thing just now that causes more trouble between the patron and the butter-maker or manager than dissatisfaction with the test. Aside from a few cases of plain dishonesty in testing, this dissatisfaction arises from two causes, both under the control of the creamery manager. The farmer is, in a large majority of cases, absolutely ignorant of the manner of testing or its possible accuracy, or the things that affect the test. He cannot be made to believe that the test of his cows will be less than that of his neighbors' on the same feed. His lack of faith is founded on a lack of knowledge, but it injures the creamery business just the same as though his lack of faith were founded on the actual dishonesty of the creamery man. It would be wise to have the matter of the test thoroughly explained at every farmers' institute in the country and at every like gathering. When the patrons of the creamery come to know all about the test, they will be less dissatisfied and more able to tell the dishonest manager from the fellow who knows his business and does the testing and the recording of the same properly. The second cause of dissatisfaction lies in the ignorance and carelessness of the man who makes the test. When a butter-maker reports that the number of his D. C. test bottle is 176cc and that his tester makes 6,000 revolutions per minute, it is evident that if he has any knowledge of milk testing he has carefully concealed it. When a butter-maker writes that the test shows the amount of butter to be made from the milk, and that there is no overrun, it is plain that his ignorance is monumental.

This department has tested a large number of samples of milk from various sources during the past year, with various results. In general, tests made by this department were higher than the tests of the creamery. One man brought in quite a number of samples and said his patrons were watering their milk. His tests had averaged about 2.6, and the tests made here averaged about 3.4. His bottles were filthy with accumulated dirt and mold, chunks of mold floated in his samples, and he was curious to know why we floated the samples before taking the sample. It seems as though a good many operators of the test prefer to have the farmer think the test is manipulated dishonestly rather than take a little pains to have it right and appear right.

The greatest source of error is in mixing the sample before taking the milk into the pipette. The composite sample invariably has a portion of cream upon it, and no amount of shaking will make it mix with the milk. It must be heated to make the cream melt down sufficiently to mix properly. Then it must be cooled to 60 degrees, the proper temperature for the mixture with the acid. All of this takes time and labor, but the conscientious butter-maker will give just such effort, and he will have a successful creamery and a satisfied patronage. He ought to have good wages, also, but the chances are he will have to compete for his place with some cheaper man, who knows all about milk testing but will do it in a hurry and with little effort, on the theory that the success of the creamery depends mainly upon the price at which his butter sells. The creamery business cannot run without the farmer, and Iowa is the graveyard of numerous creameries, "closed for want of patronage."

It is just as bad morally, and has the same bad effect on the creamery industry, for an operator to carelessly and inaccurately make his tests, as it is for the dishonest man to scale the test for the purpose of taking the difference out of the producer. The creamery men of Iowa can afford to put a good deal of effort into some plan of educating the farmer in regard to the test, and a little greater care to see that he gets an accurate test every time. The errors of testing are all towards a reduction of the test. You cannot get more butter fat out of the milk than there is in it, and if you make any mistake the farmer is the loser. But the creamery man cannot afford to

let the producer lose too often, or he will find himself where a great many others now are, "without patrons."

If sour milk is to be tested, a few drops of ammonia may be used to dissolve it so that it will enter the pipette. Or it may even be necessary to use equal quantities of ammonia and milk, correcting the test for the amount of ammonia added. Any such method is manifestly inaccurate, and is given here only as a suggestion for use when better methods cannot be used.

#### TESTING CREAM.

The large and steadily increasing number of farm separators now in use leads naturally to a study of cream testing. Cream from the farm separators will obviously be bought by the creameries by the test, and in any case the farmer will insist that the cream be bought and paid for according to its amount of butter fat. But practically all the creameries will continue to buy milk to be separated at the factory. Hence there will be necessary some adjustment as to the exact manner of payment for the fat in the cream as compared with an equal amount of fat in the whole milk. The creamery pays for all the fat in the milk, but does not get it all out. If milk testing 4 per cent is purchased and the separator leaves in the skimmed milk one-tenth of one per cent or more, the creamery pays for that amount which it does not get. The amount left in the skimmed milk is from  $2\frac{1}{2}$  to 5 per cent of the amount paid for. There is, of course, no such loss in the case of cream brought to the creamery; neither is there any expense of separation of such cream and the fat in the cream is worth more per pound than the same amount of fat in the whole milk.

But all the present objections to the Babcock test, and suspicions of its accuracy, will be increased in cream testing, for the reason of the increased richness of the same. Hence there is greater need of carefulness in cream testing than in testing of milk.

The method in use under the direction of this office in the city milk inspection, requires the use of a pipette one-third size in connection with the ordinary whole milk bottles. The process is as follows: Using the one-third size pipette, take one pipette of cream and follow with two pipettes of water; use about two-thirds the usual amount of acid because there is a smaller quantity of curd to be dissolved than there is in milk; complete the tests as you would for milk and multiply the read-

ing of the fat by three, because the amount of cream taken is only one-third as much as the amount for which the scale is written. If the cream is very rich, testing more than 80 per cent, mix equal quantities of the cream and water, proceed as before and multiply by six. If the fat column is milky or has milky specks in it, the acid is too weak or too small in quantity; if the fat column has black specks in it the acid is too strong or too much in amount. The fat in all tests should show a clear golden yellow color.

The advantages of this method over that of using the usual cream bottles are numerous. The cost is entirely limited to the price of the pipette, which is sold for about a quarter of a dollar. It gives more accurate results than the cream bottle method, for two reasons: there is no cream left sticking to the pipette, for it is washed out by the two pipettes of water that follow the cream; and the divisions of the scale on the whole milk bottles being so much larger than those on the cream bottles, the reading, with proper care, is more nearly correct. But on the other hand, any error is multiplied by three.

The possible or probable errors in cream testing are rather more than in milk testing. Sometimes the cream will reach the creamery too sour and lumpy. It will be necessary in such case to heat the cream to about 170 degrees and stir it thoroughly until it is smooth and uniform. It may be necessary to add a few drops of strong ammonia, but the cream must be smooth in order to get a fair sample of it. Too much care can not be exercised in taking the sample. About a teaspoonful is to be tested to show the value of a number of gallons of cream, and it is only fair to the seller that great care be taken to have the tests as accurate as possible. Then, again, the pipette, whatever its size, will not always deliver the same weight of cream, for cream varies in weight in proportion to its richness of butter fat. The 17.6 cubic centimeter pipette is intended to deliver 18 grams of milk, and will do so with practical uniformity, because milk varies only a very little in weight. But with 10 per cent cream it will deliver 17.9 grams, and with 50 per cent cream it will deliver but 15.8 grams of cream. All the numbers used in the testing of milk and cream are weights, except the number 17.6 cubic centimeters, which is the capacity of the pipette intended to hold 18 grams of milk.

Absolutely accurate cream testing can only be done by weighing the cream. If facilities are at hand for weighing

the cream, about 5 or 6 grams of cream should be weighed into an ordinary bottle, followed by twice the same volume of water and two-thirds the usual amount of acid. When the test is complete multiply by 18 and divide by the weight in grams of the cream used. But the method of weighing the cream, while much more accurate than any other, is of course not so practicable as the one first mentioned herein, because of lack of means to get the correct weights.

It will be seen that whatever the manner of measuring the cream the possible errors are all in the direction of too small a test, and so the reading of the fat should be liberal. It should be from the top of the column to the bottom. Too much care cannot be exercised by the one doing the testing. It will pay you to study all the books on milk and cream testing you can secure. If you can persuade your patrons that you are giving them a fair deal in the matter of testing you will have that many friends, otherwise that many enemies.

#### WHAT IT COSTS TO MAKE A POUND OF BUTTER.

The reports in answer to the question, "What is the cost of making a pound of butter, including all expenses except hauling milk, freight and expenses," vary greatly, even with creameries of about the same capacity. This is not unexpected, for some expenditures, such as insurance for a term of years, permanent repairs or minor improvements, new machinery or other unusual expenses might increase the apparent cost quite a good deal over that in a creamery which had none of these items this year, but may have them next. Hence, all of the replies, which did not show on the face of them a misunderstanding of the query, have been tabulated and the result given in the following table.

The average creamery of the state makes about 110,000 pounds of butter in a year, and the following table shows that the cost of making approximated 2 cents per pound. The cost of tubs and butter-makers' wages will probably be about \$1,100, which would leave another \$1,100 for other expenses, and this seems to be a not unreasonable expense. Naturally the expense of making butter decreases greatly as the amount of butter made increases

Reports from gathered cream creameries were very few in number and hence of little value:

DESCRIPTION OF CREAMERIES.	Number reporting.	Cost—cents.
In creameries making not more than 50,000 pounds of butter.....	20	8.05
In creameries making between 50,000 and 100,000 pounds of butter.....	45	2.96
In creameries making between 100,000 and 150,000 pounds of butter.....	28	1.85
In creameries making between 150,000 and 200,000 pounds of butter.....	11	1.79
In creameries making between 200,000 and 300,000 pounds of butter.....	11	1.50

#### SHOWING AVERAGE MONTHLY PRICE OF FANCY WESTERN CREAMERY BUTTER IN NEW YORK MARKET.

MONTH.	Twelve months ending Nov. 1, 1882.	Twelve months ending Nov. 1, 1883.	Twelve months ending Nov. 1, 1884.	Twelve months ending Nov. 1, 1885.	Twelve months ending Nov. 1, 1886.	Twelve months ending Nov. 1, 1887.	Twelve months ending Nov. 1, 1888.	Twelve months ending Nov. 1, 1889.
November.....	\$ .2590	\$ .3100	\$ .2790	\$ .3510	\$ .3230	\$ .3112	\$ .2325	\$ .2337
December.....	.2887	.3112	.2840	.3440	.3200	.2250	.2230	.2160
January.....	.3075	.3287	.2562	.2519	.2295	.1900	.2040	.1975
February.....	.2975	.2875	.2700	.2394	.2000	.2050	.2042	.2100
March.....	.2985	.2925	.2250	.2670	.2185	.1900	.1937	.2075
April.....	.2889	.3112	.2287	.2000	.1650	.1580	.1980	.1962
May.....	.2125	.2455	.1700	.1785	.1572	.1530	.1580	.1790
June.....	.1944	.2191	.1811	.1784	.1550	.1500	.1587	.1881
July.....	.2210	.2160	.1950	.1770	.1505	.1500	.1687	.1835
August.....	.2230	.2260	.2360	.1980	.1571	.1675	.1800	.2000
September.....	.2325	.2750	2.00	.2125	.1600	.1600	.2033	.2205
October.....	.2087	.2041	.2540	.2294	.1850	.2230	.2235	.2400
A. v. val. per lb. for each yr.	\$ .2594	\$ .2776	\$ .2350	\$ .2100	\$ .1882	\$ .1885	\$ .1971	\$ .2065



Saving in cost of hauling milk to creamery and back.

Increased value of the skimmed milk, due to its uniform sweetness.

Saving of time, labor, and dairy utensils formerly in use.

The disadvantages are:

The expense.

The labor of running the separator.

Despite the fact that there are many separator creameries in Iowa, there is still a great number of large dairies, and innumerable smaller ones, that still pursue the old wasteful methods of gravity creaming. To these, where the dairy is large enough to warrant the expense, the hand separator comes as a money-making machine without a doubt. The best methods of gravity creaming, using ice, leave in the milk from six to nine-tenths of one per cent of fat, while the best separators will take out practically all of the fat, and give a better quality of cream. Such a saving of one-seventh or one-sixth of the total fat content of the milk is certainly desirable. It seems to be a self-evident proposition that the use of the farm separator will soon become the regular thing in connection with gathered cream factories.

The dairyman who sends his whole milk to the creamery, pays, on the average, either in money or his own time and labor, about 9 or 10 cents per hundred pounds for the hauling. A large part of this will be saved if he sends only the cream. The average price for milk the state over for the year will approximate 66 cents per hundred, of which the price paid for hauling is about one-seventh, or an amount equivalent to what the gravity creamer loses in defective skimming. In both cases the skimmed milk will have a greatly increased value if separated while warm and fed. The skimmed milk contains all the elements that go to form bone, hair, muscle and nerve, and lacks only those elements which go to form fat or to keep up the heat of the body. But the gravity skimmed milk is thirty-six hours old and sour before fed; and the creamery milk is sweet one day and sour the next, and the calf fed upon it is likely to be afflicted with diseases of his digestive organs, culminating in scours. At the best he will not do well on such a diet. The farm separator enables the farmer to feed his milk within an hour after it is drawn from the cow, and the calves or pigs get absolutely all there is in the milk, and in its natural state except the cream taken out of it. The uniformity

of such milk will be greatly appreciated by the calf, and he will show it by increased growth and vigor.

The saving in time and labor in the use of the separator is considerable. Especially is this true if the farmer has some sort of power with which to run the machine. He can then have his milk separated almost by the time he has the milking done and no dairy utensils to wash, except the separator and the milk pails, no large quantity of milk to take care of and keep cool, no fear that it will be tainted by bad odors, and no expense of ice, or time or attention to the pumping of the proper amount of water to keep the milk sweet. But the time spent in turning the separator by hand is a different matter. A tread power is a small additional investment and the value of it is very great, for it can be made to take the place of a man a couple of hours every day and seems to be an almost indispensable adjunct to the separator on a large dairy farm.

When milk is run through a separator immediately after milking, the cream has an added quality over that which is skimmed at the end of twelve or more hours. The separator is the best aerator of milk yet invented. Large city dairymen run their milk through separators in order to aerate it and take out the odors that may be therein, and they find that the milk with the cream put back into it is of much better quality and keeps better than that which has not been so treated. The use of the farm separator tends towards better butter, and hence higher prices for it.

Of course every farmer must determine for himself whether the conditions on his farm will warrant the expense of a separator and power. Assuming that dairymen are in the business for the money there is in it, and not exclusively for the pleasure of the society of the cow, it is evident that the question is one of dollars and cents. The dairy authorities all estimate that a man can afford to have a separator if he is in the business to the extent of 10 cows or more. And it may be well to state here that experience shows that it is cheaper in the long run to buy the larger-sized machines. It is usually found that if a man gets something for nothing that it is worth about that price. A great many have discovered that they have a desire to keep more cows and cannot do so without buying a larger machine. The tendency of the use of the farm separator is toward expansion in the dairy herd.



But there is another feature of the use of the separator on the farm that will cause the creamery man grief, and loss to the farmer. The large dairymen will possibly get the idea that they can do better by making butter at home if they have the cream already separated. It should be remembered by them that the operating of a separator requires no particular skill, but that the making of butter requires the greatest of skill and experience, and the marketing of butter in Chicago or New York is not so simple a matter as selling a load of hogs to the local dealer.

Then, too, there is a prejudice existing against dairy butter, and the price for the same, except in a strictly local retail market, will probably be less than for an equal quality of butter that has a creamery brand upon it. Except in those cases where a farmer can work up a trade for his butter in some near by town or city, it will be found more profitable for him to send his milk or cream to the creamery than to make it into butter at home and market his own product.

It is not to be expected that the use of the farm separator will become universal and so crowd out the separator creameries, but only that the larger dairies will take advantage of its usefulness, and that the smaller producers will still continue the present system, and the natural growth of the industry all over the state will support all the creameries we now have, and in a few years will support twice as many as at present.

TABLE No. 1.

COUNTIES.	AV. VALUES OF CREAMERIES AND SEEM STATIONS.				NUMBER OF COWS AND PATRONS.								
	No. of creameries.	No. reported.	Average value.	No. of milk stations.	No. creameries.	Average value reporting.	Av. number for creamery reporting.	No. creameries reporting.	Av. No. cows per creamery.	Tot. patrons of creamery in county.	Total number of cows in county.		
The state.....	779	619	\$ 3,145	188	101	\$ 1,491	532	116	366	804	90,843	625,512	
Adair.....	5	5	4,340	7	4	1,625	5	210	2	942	1,050	4,710	
Adams.....	7	7	5,369	5	1	1,000	21	1,690	1	1,216	1,000	9,723	
Allamakee.....	9	9	3,355	3	1	1,000	8	113	6	736	1,017	6,624	
Audubon.....	11	5	3,500	3	1	1,000	2	55	2	325	605	3,575	
Benton.....	19	14	3,068	1	1	1,500	14	86	10	958	1,634	15,877	
Black Hawk.....	7	7	5,369	5	1	1,000	3	122	2	225	854	5,775	
Boone.....	24	19	3,174	1	1	1,000	21	62	16	750	1,488	15,600	
Bremer.....	16	13	3,077	1	1	2,200	13	141	5	990	2,346	15,810	
Buchanan.....	9	6	3,333	1	1	2,000	6	133	2	1,200	1,197	10,800	
Buena Vista.....	31	30	2,835	1	1	1,500	16	107	14	785	2,247	16,385	
Butler.....	4	3	2,893	3	3	1,000	3	107	2	650	428	2,600	
Calhoun.....	11	6	3,000	1	1	2,000	6	88	6	504	968	6,534	
Carroll.....	1	1	8,000	6	5	1,200	1	168	3	1,143	1,176	8,001	
Cedar.....	7	5	3,900	4	3	1,333	3	6	86	2	800	688	6,400
Cerro Gordo.....	8	6	2,750	1	1	1,000	6	86	5	110	450	770	3,150
Cherokee.....	7	4	3,450	3	3	967	5	180	11	1,029	3,600	20,600	
Chickasaw.....	2	2	2,872	4	3	1,000	2	247	2	725	494	1,450	
Clarke.....	9	6	3,666	1	1	1,000	6	70	4	512	630	4,608	
Clayton.....	30	18	3,133	1	1	1,000	18	121	11	1,047	2,420	20,940	
Clinton.....	7	7	2,357	7	1	750	7	27	2	250	111	870	
Crawford.....	3	3	3,600	1	1	1,000	1	100	1	400	738	3,600	
Dallas.....	6	4	3,000	8	1	1,400	4	123	1	696	730	3,600	
Davis.....	2	2	2,250	1	1	1,000	1	100	1	400	200	800	
Decatur.....	3	2	3,500	1	1	1,000	2	24	70	711	1,900	19,908	
Delaware.....	28	23	3,099	1	1	1,000	23	104	2	1,028	416	4,112	
Dickinson.....	4	4	3,500	1	1	1,000	4	58	14	676	1,378	12,612	
Dubuque.....	22	17	2,882	1	1	1,000	17	68	7	550	420	3,900	
Emmet.....	6	6	3,166	1	1	850	6	71	4	550	420	3,900	
Fayette.....	21	19	3,400	1	2	1,750	18	124	13	1,021	2,694	21,441	
Floyd.....	7	7	2,700	1	1	1,000	7	121	4	575	847	4,075	
Franklin.....	9	6	4,000	3	1	2,000	7	132	5	1,200	1,158	10,854	
Greene.....	7	7	3,400	2	5	1,500	5	115	2	425	805	3,175	
Grundy.....	13	12	3,540	4	1	1,500	12	68	10	685	884	8,905	
Guthrie.....	6	4	4,500	8	6	1,416	4	240	1	1,440	1,440	1,440	
Hamilton.....	11	9	3,222	1	1	1,800	7	123	6	534	1,353	10,274	
Hancock.....	9	8	3,002	2	3	1,100	8	70	7	609	630	5,481	
Hardis.....	11	10	3,500	3	3	2,000	6	184	5	1,135	1,474	12,485	
Harrison.....	4	3	3,700	1	1	1,000	3	141	2	650	544	2,530	
Henry.....	2	2	5,000	1	1	1,000	2	70	2	375	140	700	
Howard.....	8	7	2,314	1	1	1,000	7	180	2	1,469	1,468	11,728	
Humboldt.....	10	8	3,550	1	1	1,000	8	84	4	712	840	7,130	
Ida.....	5	2	2,750	1	1	1,000	2	76	2	750	375	3,750	
Iowa.....	5	3	2,888	1	1	1,000	3	130	1	350	1,750	1,750	
Jackson.....	12	9	3,650	10	8	1,150	7	126	4	723	1,512	8,676	
Jasper.....	8	6	2,583	2	1	1,200	6	125	4	1,000	1,000	1,000	
Jefferson.....	6	6	3,233	1	1	1,000	4	114	3	663	654	3,978	
Johnson.....	3	2	1,750	4	1	1,000	3	78	3	380	380	380	
Jones.....	18	15	3,103	11	11	1,000	14	118	9	489	2,123	8,502	
Keokuk.....	3	3	4,000	1	1	1,000	3	288	2	615	864	1,545	
Kossuth.....	21	17	2,153	1	1	1,000	18	84	14	827	1,764	17,367	
Lee.....	1	1	1,000	1	1	1,000	1	1	1	1	1	1	
Lincoln.....	24	18	3,693	6	2	1,100	18	91	6	676	2,174	13,824	
Louisia.....	3	2	1,250	1	1	1,000	2	116	2	650	948	1,950	
Lucas.....	1	1	3,000	1	1	1,000	1	50	1	600	80	600	
Lyon.....	5	4	2,775	1	1	1,000	3	65	1	500	320	2,500	
Madison.....	3	2	2,900	1	1	1,000	2	75	2	375	150	700	

TABLE No. 1—CONTINUED.

COUNTIES.	AV. VALUES OF CREAMERIES AND SKIM STATIONS.				NUMBER OF COWS AND PATRONS.							
	No. of creameries.	No. reported.	Average value.	No. of skim stations.	No. reported.	Average value.	No. creameries reporting.	Av. number patrons per creamery.	No. creameries reporting.	Av. No. cows per creamery.	Tot. patrons of creamery in county.	Total number of cows in county.
Mahaska.....	1	1	10,000	1	1	10,000	1	400	1	2,000	400	2,000
Marion.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Marshall.....	6	4	3,375	6	.....	.....	4	164	2	800	982	5,400
Mills.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Mitchell.....	10	8	2,225	.....	.....	.....	.....	247	3	1,671	2,470	16,710
Monona.....	1	1	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monroe.....	1	1	3,000	.....	.....	.....	1	95	1	400	95	400
Montgomery.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Muscatine.....	4	3	3,167	1	.....	.....	3	241	3	1,222	964	5,168
O'Brien.....	6	5	3,920	.....	.....	.....	4	55	3	550	330	3,300
Osceola.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Page.....	6	5	3,640	1	2	1,500	3	56	1	650	336	3,900
Palo Alto.....	17	17	2,982	1	1	2,000	16	87	11	895	1,479	15,215
Plymouth.....	11	10	3,200	.....	.....	.....	7	87	5	576	957	6,336
Pocahontas.....	9	6	2,600	4	2	1,000	6	93	1	900	837	8,100
Polk.....	5	2	3,500	2	2	1,500	3	278	.....	.....	1,390	.....
Pottawattamie.....	6	5	2,900	.....	.....	.....	5	149	4	1,100	894	6,600
Poweshiek.....	7	4	2,750	1	.....	.....	3	188	1	1,200	1,316	8,400
Ringgold.....	2	2	2,600	1	.....	.....	1	80	1	500	160	1,000
Sac.....	14	8	3,025	1	.....	.....	8	76	4	372	1,064	5,208
Scott.....	3	3	2,666	.....	.....	.....	3	72	2	580	216	1,740
Shelby.....	8	7	3,000	1	1	2,000	6	118	4	706	944	5,648
Sioux.....	8	8	2,875	2	.....	.....	7	90	6	510	720	4,080
Story.....	15	12	3,358	.....	.....	.....	10	135	9	897	2,025	13,455
Tama.....	7	5	2,740	4	1	1,200	4	173	3	808	1,038	4,848
Taylor.....	5	2	2,750	1	.....	.....	2	107	1	600	535	3,000
Union.....	5	5	4,800	9	13	1,430	4	319	3	1,570	1,595	7,850
Van Buren.....	4	3	3,166	.....	.....	.....	3	190	2	701	760	2,800
Wapello.....	4	3	2,500	.....	.....	.....	1	40	1	150	160	600
Warren.....	3	2	2,750	2	2	1,700	2	140	2	550	420	1,650
Washington.....	6	6	3,766	.....	.....	.....	2	221	2	440	1,326	2,640
Wayne.....	3	2	4,000	3	3	2,000	1	300	.....	.....	900	.....
Webster.....	10	8	3,187	2	1	1,000	5	118	3	600	1,180	6,000
Winnebago.....	7	5	3,200	8	7	1,457	6	115	4	894	805	6,258
Winneshiek.....	13	11	2,655	.....	.....	.....	11	142	5	837	1,846	10,881
Woodbury.....	7	6	3,080	.....	.....	.....	4	120	1	800	840	5,600
Worth.....	10	8	3,088	1	1	1,000	9	107	7	722	1,070	7,220
Wright.....	10	9	2,800	2	1	1,200	8	112	7	764	1,120	7,640
The state.....	779	619	\$ 3,145	188	101	\$ 1,494	552	116	356	804	90,248	625,512

COMPARISONS.

	1898.	1899.
Number of creameries.....	793	779
Number of skim stations.....	161	188
Number of cheese factories.....	67	69
Total number of plants.....	1,021	1,036
Average value of creameries.....	\$ 3,024	\$ 3,145
Average value of skim stations.....	1,510	1,494
Total value of creameries.....	2,398,269	2,449,855
Total value of skim stations.....	243,110	280,872
Number of cows per creamery.....	798	804
Number of cows per patron.....	7	7
Total number of cows.....	632,814	625,512
Number of patrons per creamery.....	116	116
Total number of patrons of creameries.....	92,998	90,364

In answer to the question, "Is the number of cows more or less than a year ago?" about 300 answers were received, of which almost equal numbers were "less," "more," "the same." These answers seem to strengthen the estimate of the number of cows per creamery given above, which shows practically no difference from the number given in the last report.

TABLE No. 2.

COUNTIES.	OWNERSHIP— INDIVIDUAL, CO-OPERATIVE OR STOCK COMPANY.				HOW OPERATED.	RECEIVING MILK— BY TEST OR BY CWT.		NEW CREAM- ERIES AND SKIM STAND PLANTS CL'D.	
	Total number of creameries and skim stations.	No. reporting.	Individual.	Co-operative. Stock company.		No. reporting.	By test.	New creameries. Total new cream- eries and skim stations	Plants closed or burned.
The state	967	966	501	349	116	963	842	71	50
Adair	132	127	11	1	122	122	6	6	7
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
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Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
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Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
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Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair	11	11	1	1	11	11	1	1	1
Adams	11	11	1	1	11	11	1	1	1
Adair									

COMPARISONS.

	1898.	1899.
Total number of creameries and skim stations.....	954	967
OWNERSHIP:		
Owned by individual.....	510	501
Owned on co-operative plan.....	342	349
Owned on stock company plan.....	88	116
State property.....	1	1
PLAN OF OPERATION:		
Separator plan.....	788	842
Gathered cream plan.....	66	71
Combinations of the above plans.....	60	50
Not reported.....	40	4
BASIS OF RECEIVING MILK OR CREAM:		
Receiving by the test only.....	746	849
Receiving by weight or measure.....	107	110
Not reported.....	61	8
CREAMERY CHANGES:		
Number of new creameries.....	90	56
Number of new skim stations.....	43	36
Number of plants closed.....	53	79

Five of the plants given as "closed" above have been turned into cheese factories.

TABLE No. 3.

COUNTIES.	WAGES OF BUTTER-MAKERS.						CHANGES IN EMPLOYMENT.					
	IN CO-OP. AND STK. CO. CR'Y.			IN INDIV. CREAMERY.			CO-OP. AND STK. CO. CR'Y.		IN IND. CR'Y.		Total changes.	Per cent of whole number.
	No. reported.	Average wages.	Av. months employed.	No. reported.	Average wages.	Av. months employed.	No. of creameries.	No. of changes.	No. of creameries.	No. of changes.		
The state.....	379	\$54.97	11.8	175	\$47.55	11.8	412	104	372	51	155	20
Adair.....	1	50.00	12	2	50.00	12	1		3	1		25
Adams.....	1	75.00	12	1	60.00	12	1		1			33
Allamakee.....	7	57.50	12	1	30.00	12	7	2	2	1		21
Audubon.....	9	60.25	11.2				9	2	2			18
Benton.....	3	56.66	10.6	1	50.00	7	4	2	7			16
Black Hawk.....	13	49.40	11.6	1	25.00	12	13	3	5		3	33
Boone.....	1	75.00	12	3	42.00	12	1	1	5	1		23
Bremer.....	19	59.42	12				23	6	4		6	12
Buchanan.....	9	61.33	12	3	46.66	12	9	2	7		2	25
Buena Vista.....	3	50.00	12	2	47.50	12	3	1	5	1		27
Butler.....	15	49.00	12	3	50.00	12	14	5	8	1	6	9
Calhoun.....	2	55.00	12	1	45.00	12	4		3			100
Carroll.....	2	60.00	11	2	50.00	12	3	1	8			
Cass.....	1	60.00	12	1	60.00	12			1	1		
Cedar.....	2	45.00	12	4	53.75	11	2		4			
Cero Gordo.....	2	57.50	12	4	62.62	12	3		7	1	1	75
Cherokee.....				3	50.00	12	1		6			
Chickasaw.....	13	56.75	11.7	5	50.00	12	14	7	5	2	9	26
Clarke.....				2	52.50	12	4		5			
Clay.....	3	46.66	12	2	51.50	10			2			
Clayton.....	11	54.50	12	8	53.12	12	10	4	9	1	5	20
Clinton.....				7		10.7			8			
Crawford.....	1	50.00	12	2	45.00	12	1		4	1	1	33
Dallas.....	2	47.50	12	3	50.00	12	2	1	3		1	20
Davis.....				2	40.00	12			3			
Decatur.....	1	50.00	12	1	55.00	9			2			
Delaware.....	16	56.15	11.6	6	46.66	12	15	4	15	2	6	16
Dickinson.....	2	70.00	12	1	60.00	12	2		2			
Dubuque.....	13	49.25	11.3	4	48.25	11	16	3	7		3	13
Emmet.....	5	55.00	12				5	1	1		1	16
Fayette.....	17	63.43	12	2	50.00	12	18	6	4		6	27
Floyd.....	2	62.50	12	3	45.00	12	2		5	1	1	14
Franklin.....	4	50.60	10.5	4	50.00	12	4	1	5	2	3	33
Greene.....	2	47.50	12	4	44.25	11	3		5			
Grundy.....	3	53.33	12	8	51.22	12	4		12			
Guthrie.....	2	50.00	12	2	40.00	12	2		3			
Hamilton.....	5	61.60	12	1	50.00	12	4	2	6	1	3	80
Hancock.....	7	50.07	12				8	1	1		1	11
Hardin.....	8	57.50	12	1	35.00	12	8	1	4	1	2	16
Harrison.....	2	55.00	12				3	1	1		1	25
Henry.....				2	42.50	12	1		2	2	2	66
Howard.....	4	53.25	12	4	47.50	12	5	1	3		1	12
Humboldt.....	8	54.00	12				8	4			4	50
Ida.....									5	4	4	
Iowa.....									6			
Jackson.....	4	55.31	11	3	40.00	12	5	1	7	1	2	16
Jasper.....	2	58.50	12	4	36.00	12	3	1	5	2	3	25
Jefferson.....	4	51.25	12	1	35.00	12	3	1	5	1	2	25
Johnson.....	1	35.00	12				1		3			
Jones.....	6	52.50	11.1	7	52.85	12	7	1	11	2	3	16
Keokuk.....	1	50.00	12	2	37.50	12	2		1			
Kossuth.....	18	55.50	12				20	7	1		7	33
Lee.....									1			
Linn.....	7	42.71	12	6	48.16	12	11	3	14	3	6	24
Louisa.....				2	40.00	12			3			

TABLE No. 3—CONTINUED.

COUNTIES.	WAGES OF BUTTER-MAKERS.						CHANGES IN EMPLOYMENT.					
	IN CO-OP. AND ST'K CO. CR'Y.			IN INDIV. CREAMERY.			CO-OP AND ST'K CO. CR'Y.		IN IND. CR'Y.			
	No. reported.	Average wages.	Av. months employed.	No. reported.	Average wages.	Av. months employed.	No. of creameries.	No. of changes.	No. of creameries.	No. of changes.	Total changes.	Per cent of whole number.
Lucas.....	2	\$52.50	12	1	40.00	12	1	1	1	1	5	
Lyon.....	1	60.00	12	1	45.00	12	1	1	1	1	5	
Madison.....	1	60.00	12	1	45.00	12	1	1	1	1	5	
Mahaska.....	1	60.00	12	1	45.00	12	1	1	1	1	5	
Marion.....	1	60.00	12	1	45.00	12	1	1	1	1	5	
Marshall.....	4	62.50	12	1	45.00	12	4	3	3	3	50	
Mills.....	9	51.83	12	1	45.00	12	9	2	2	2	33	
Mitchell.....	1	60.00	12	1	45.00	12	1	1	1	1	100	
Monona.....	1	60.00	12	1	45.00	12	1	1	1	1	100	
Monroe.....	1	60.00	12	1	45.00	12	1	1	1	1	100	
Montgomery.....	3	51.60	12	2	45.00	12	1	3	2	2	66	
Muscatine.....	1	75.00	12	2	43.00	11	1	4	2	2	66	
O'Brien.....	3	58.33	12	1	45.00	12	4	2	2	2	33	
Osceola.....	3	58.33	12	1	45.00	12	4	2	2	2	33	
Page.....	3	58.33	12	1	45.00	12	4	2	2	2	33	
Palo Alto.....	17	56.20	11.9	1	45.00	12	17	2	2	2	47	
Plymouth.....	3	53.30	12	1	45.00	12	10	2	2	2	18	
Pocahontas.....	3	57.27	11.3	4	52.50	12	3	1	1	1	12	
Polk.....	3	58.00	12	1	45.00	12	2	1	1	1	20	
Pottawattamie.....	3	50.00	12	1	45.00	12	3	1	1	1	20	
Poweshiek.....	1	50.00	12	3	45.00	9	5	1	1	1	8	
Ringgold.....	1	45.00	12	1	45.00	12	1	1	1	1	8	
Sac.....	1	50.00	12	4	42.50	12	2	11	1	1	33	
Scott.....	1	50.00	12	2	45.00	6	3	3	1	1	33	
Shelby.....	3	63.33	12	1	40.00	12	4	3	1	1	33	
Sloux.....	5	57.00	11.2	1	45.00	12	4	4	2	2	25	
Story.....	10	54.85	12	2	67.50	12	9	4	1	1	8	
Tama.....	3	54.00	12	3	45.00	12	2	6	2	2	25	
Taylor.....	2	50.00	12	3	45.00	12	2	3	3	1	20	
Union.....	2	52.50	12	3	55.33	12	2	3	1	1	20	
Van Buren.....	1	35.00	6	1	40.00	12	1	2	4	1	25	
Wapello.....	1	30.00	12	1	30.00	12	1	4	1	1	25	
Warren.....	2	47.50	11.5	2	40.00	12	1	2	5	1	25	
Washington.....	2	47.50	11.5	2	37.50	12	1	2	5	1	25	
Wayne.....	1	50.00	7	1	50.00	12	4	2	2	2	50	
Webster.....	1	50.00	12	2	57.50	12	1	8	3	3	33	
Winnebago.....	7	54.43	11.3	2	35.00	12	10	1	1	1	25	
Winneshiek.....	2	63.85	12	2	35.00	12	10	1	1	1	12	
Woodbury.....	7	45.00	9	1	50.00	8	4	5	1	1	11	
Worth.....	8	58.75	12	1	60.00	12	7	2	1	1	25	
Wright.....	4	48.75	12	2	45.00	12	4	2	2	2	22	
The state.....	379	\$54.97	11.8	175	\$47.53	11.8	412	104	372	51	155	20

Average wages of all butter-makers, \$52.77.  
Last year the averages wages, \$53.63.

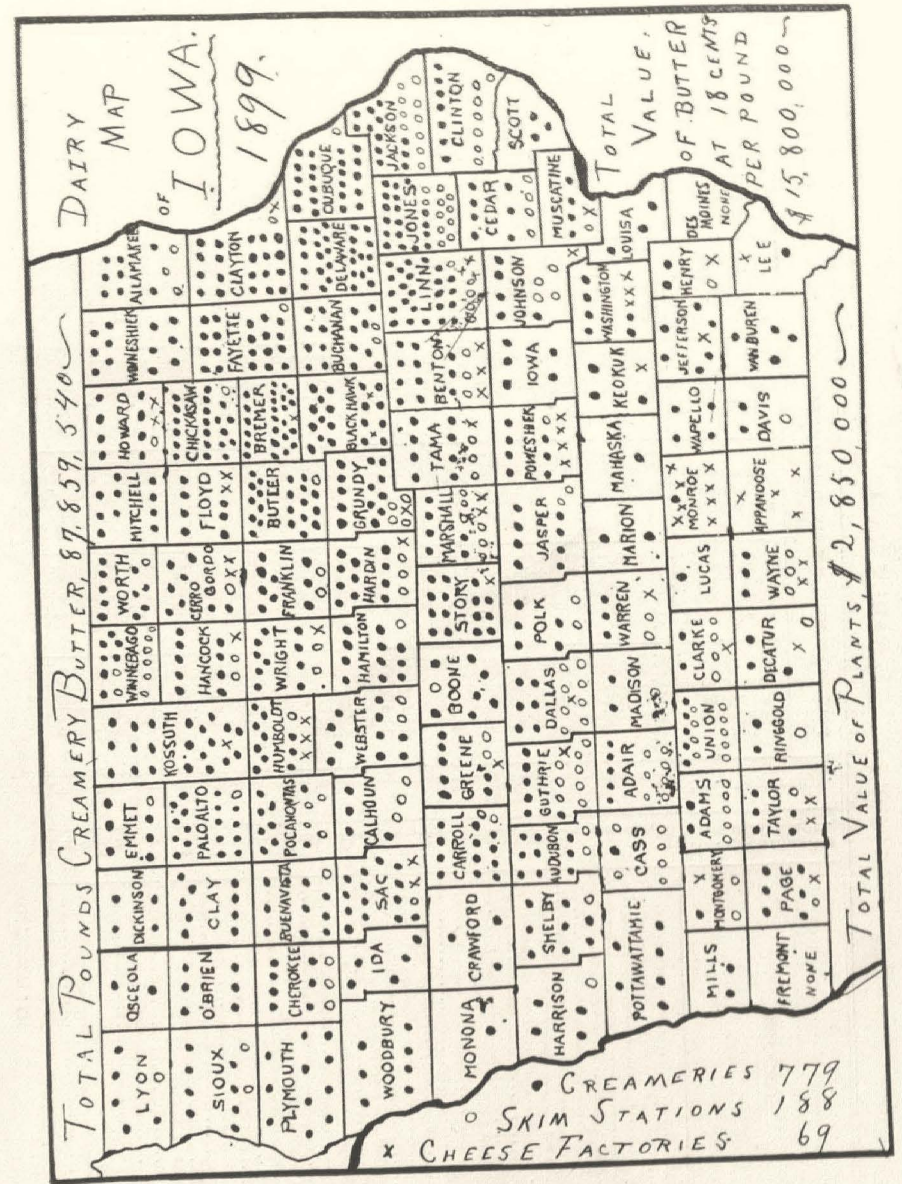


TABLE No. 4.

COUNTIES.	No. creameries in operation.	No. reporting.	POUNDS OF MILK RECEIVED AND SEPARATOR BUTTER MADE.						GATHERED CREAM BUTTER REPORTED.			
			Pounds of milk received.	Pounds of separator butter made.	Pounds sold to patrons.	Pounds sold in Iowa.	Pounds shipped out of the state.	Pounds G. C. butter made.	Pounds patrons.	Pounds sold in Iowa.	Pounds shipped out of the state.	
The state.	779	557	1,998,369,763	54,846,866	3,122,308	2,730,542	48,804,018	8,255,576	63,544	407,477	7,784,555	
Adair.....	5	5	15,457,650	651,653	7,910	17,008	630,083					
Adams.....	1	1	7,793,000	397,616	3,137	12,724	322,755					
Allamakee.....	8	8	16,187,540	716,971	85,908	10,961	671,102	636,533	1,882	8,397	686,373	
Appanoose.....												
Audubon.....	9	8	20,295,100	873,303	79,412	16,700	777,191					
Benton.....	11	7	11,571,230	459,202	7,579	20,300	431,383					
Black Hawk.....	19	12	36,594,500	1,527,095	118,494	124,850	1,283,941					
Boone.....	7	5	10,040,000	439,630	14,840	2,700	421,490		24,503	24,503		
Bremer.....	24	20	58,330,543	2,595,199	188,269	45,480	2,362,330					
Buchanan.....	16	12	46,531,251	1,768,100	129,975	62,880	1,575,845		5,000	195,000		
Buena Vista.....	9	3	6,879,000	303,666	13,825	800	289,041					
Butler.....	21	17	43,371,500	1,961,560	111,388	19,050	1,830,337					
Calhoun.....	4	3	7,491,000	331,720	6,033	2,945	323,942					
Carroll.....	11	7	13,798,000	564,250	8,900	40,700	514,650					
Cass.....	1	1	12,402,000	543,900	1,600	6,800	535,000					
Cedar.....	24	20	11,435,000	493,500	34,000	340,300	453,500					
Cerro Gordo.....	8	4	4,852,000	370,713	38,042	18,500	314,171					
Cherokee.....	7	7	1,652,350	78,112	3,105	34,965	89,952					
Chickasaw.....	20	18	54,192,000	2,477,553	184,123	109,491	2,134,559		11,000	284,784		
Clarke.....	2	2	5,163,000	226,500	2,600	75,100	148,900					
Clay.....	9	4	7,653,000	339,250	22,560	200	316,490					
Clinton.....	20	19	56,182,000	2,505,511	154,059	9,000	2,361,212	22,900	500	800	20,700	
Crawford.....	3	3	5,410,000	223,300	3,500	5,000	222,800					
Dallas.....	6	3	8,107,000	328,650	13,000	39,200	286,450			10,000	40,000	
Davis.....	2	2	2,608,000	75,300			75,300					
Decatur.....	3	3										
Delaware.....	28	24	69,406,333	2,994,051	221,730	67,060	2,705,341					
Des Moines.....												
Dickinson.....	4	4	8,870,300	396,400	35,200	5,400	355,800					
Dubuque.....	22	17	34,335,800	1,482,852	89,945	147,855	1,285,032					
Emmet.....	21	20	9,361,000	383,814	28,443	5,500	355,302					
Fayette.....	21	20	17,196,000	3,072,820	274,424	66,968	2,731,250	20,000		29,000		
Floyd.....	7	4	6,443,000	176,640	10,000		165,640	310,000	1,440	13,650	294,910	
Franklin.....	9	5	9,540,000	489,504	14,532		474,972	35,500	500	5,000	30,000	

Greene.....	7	6	9,118,000	393,235	3,575	23,425	399,235				
Grundy.....	13	12	29,363,500	1,254,351	87,925	13,130	1,154,339				
Guthrie.....	6	3	15,981,500	578,226	8,700	315,800	583,726				
Hamilton.....	11	8	22,450,000	979,100	50,600	28,000	900,500				
Hancock.....	19	9	12,222,000	533,425	22,582	7,008	493,719	68,400		10,000	58,400
Hardin.....	4	3	4,451,620	236,968	16,140	64,800	165,928				
Harrison.....	11	6	1,892,000	75,000	800	37,000	40,140				
Henry.....	22	22	2,058,000	88,814	28,443	5,500	86,770				
Howard.....	4	3	4,451,620	236,968	16,140	64,800	165,928				
Humboldt.....	22	22	1,892,000	75,000	800	37,000	40,140				
Ia.....	10	8	19,652,000	890,728	30,990	13,361	855,375				
Ida.....	5	1	3,595,000	152,600			152,600				
Iowa.....	5	1					156,000			2,100	153,900
Jackson.....	12	5	6,284,300	234,470	5,200	2,000	237,270	214,620		6,250	208,370
Jasper.....	9	8	10,036,000	424,530	5,780	23,870	394,880	108,000	600	7,500	96,900
Jefferson.....	6	4	6,970,300	290,961	14,580	16,475	229,706				
Johnson.....	5	3	1,945,000	43,840	1,900	600	40,340	30,000		8,000	42,000
Jones.....	18	15	57,878,000	2,545,968	83,831	86,770	2,376,305				
Keokuk.....	3	3	2,855,000	108,512		53,400	55,112				
Kossuth.....	21	18	48,112,880	2,105,999	170,398	39,613	1,910,688				
Lee.....	1	1									
Linn.....	24	13	24,719,000	954,975	50,175	64,280	861,520				
Louisa.....	3	2	1,368,000	59,440	4,160	44,224	11,056	75,000		24,000	51,000
Lucas.....	1	1	1,368,000	59,440	4,160	44,224	11,056				
Lyon.....	5	2	3,934,000	134,998	11,489		123,509				
Madison.....	2	1	1,300,000	54,254	2,700		20,000				
Mahaska.....	2	1						200,000		30,000	180,000
Marion.....	2	2						97,117		1,000	96,117
Marshall.....	6	4	2,250,000	90,000	2,200	10,850	77,120	445,019	2,000	40,000	401,015
Mills.....											
Mitchell.....	10	9	1,189,400	53,750	6,000		47,750	1,823,201	22,340	37,930	1,765,961
Monona.....	1	1	1,141,320	51,915	2,973	20,979	27,963				
Monroe.....	1	1									
Montgomery.....	1	1									
Muscatine.....	4	3	1,350,000	52,500	700	13,200	78,000	205,000	2,200	38,000	154,800
O'Brien.....	6	4	4,497,307	208,439	6,447	390	201,632				
Oceola.....	2	2									
Page.....	6	3	5,370,000	117,654	3,000	298,000	88,354				
Palo Alto.....	17	15	42,309,678	1,893,193	178,690	48,272	1,678,041				
Plymouth.....	11	8	14,894,146	611,773	34,648		571,130				
Pocahontas.....	9	6	11,462,000	488,373	29,220	9,000	458,103				
Polk.....	3	3	9,578,000	413,981	15,000	308,000	86,981				
Pottawattamie.....	6	4	3,029,636	130,243	5,800	24,050	100,493	303,000		20,000	283,000
Poweshiek.....	2	2	1,732,000	78,779	5,700	300	70,779	164,538		3,500	161,038
Ringgold.....	14	8	18,707,350	795,297	19,887	13,330	782,290				
Sac.....	3	2	1,322,000	54,770	850	54,000	129	16,000		10,000	6,000
Scott.....	8	6	12,314,000	570,750	15,677	1,700	559,373				
Shelby.....	8	5	9,539,000	395,102	9,938	16,225	388,539				
Sioux.....	15	12	31,237,000	1,382,691	74,624	54,837	1,253,239				
Story.....	5	3	5,635,000	241,986	12,200		229,786				
Tama.....	6	3									

TABLE No. 4—CONTINUED.

COUNTIES.	No. creameries in operation.	No. reporting.	POUNDS OF MILK RECEIVED AND SEPARATOR BUTTER MADE.			POUNDS OF MILK RECEIVED AND SEPARATOR BUTTER MADE.			GATHERED CREAM BUTTER REPORTED.		
			Pounds of milk received.	Pounds of separator butter made.	Pounds sold to patrons.	Pounds sold in Iowa.	Pounds shipped out of the state.	Pounds sold to patrons.	Pounds sold in Iowa.	Pounds shipped out of the state.	
Taylor.....	5	6	3,330,200	145,560	10,000	38,857	135,560	.....	.....	.....	
Union.....	5	6	23,091,600	1,194,888	42,779	15,000	1,113,252	.....	.....	.....	
Van Buren.....	4	4	700,000	25,000	.....	27,940	10,000	.....	81,000	43,700	
Wapello.....	4	4	720,000	30,950	730	57,560	31,000	.....	500	.....	
Warren.....	3	3	2,192,000	90,560	2,000	26,460	164,750	.....	48,000	237,000	
Washington.....	6	6	4,513,000	195,440	4,200	1,200	172,059	.....	.....	90,000	
Wayne.....	3	3	4,123,000	175,269	2,000	19,770	252,841	.....	.....	.....	
Webster.....	10	10	6,595,600	273,021	10,410	11,965	717,636	.....	.....	.....	
Winnebago.....	7	7	18,095,600	804,738	1,460	4,340	24,666	.....	.....	.....	
Winneshek.....	13	12	693,000	26,116	4,745	2,108	90,963	.....	5,000	1,337,151	
Woodbury.....	7	7	2,413,000	100,048	4,745	9,000	767,686	.....	.....	.....	
Worth.....	10	9	18,985,000	629,600	59,806	25,660	493,910	.....	800	199,500	
Wright.....	10	9	12,614,512	517,570	25,660	.....	.....	.....	.....	58,500	
Totals.....	779	557	1,268,269,763	54,646,866	3,122,308	2,720,542	48,804,016	8,255,576	63,544	407,477	7,781,555

Total consumed in Iowa, 6,313,871 pounds, or 10 per cent of all creamery butter; report of previous year showed but 6.7 per cent consumed in the state. Total butter manufactured in 557 creameries is 62,922,442 pounds. Average pounds butter made per creamery is 112,930. The total number of creameries, 779, must have made 87,972,470 pounds.

TABLE No. 5.  
Butter Shipments, as Reported by the Creameries

COUNTIES.	NEW YORK. 66 84 %.	CHICAGO. 12.04 %.	BOSTON. 7.39 %.	SOUTH. 4.18 %.	PHILA-DELPHIA. 2 51 %.	WEST. 1 55 %.	CLEVELAND. 1 34 %.
The state.....	35,033,429	6,419,855	3,981,040	2,242,000	1,354,400	836,120	722,000
Adair.....	.....	451,399	.....	.....	80,000	.....	.....
Adams.....	.....	322,000	.....	.....	.....	.....	.....
Allamakee.....	648,461	110,800	.....	.....	339,800	.....	.....
Audubon.....	305,000	91,800	267,400	.....	.....	.....	148,000
Benton.....	187,600	94,200	.....	.....	.....	.....	.....
Black Hawk.....	691,000	152,200	3,500	221,500	.....	.....	213,600
Boone.....	334,100	95,000	11,800	.....	.....	.....	.....
Bremer.....	1,723,060	192,300	219,200	.....	3,700	.....	227,000
Buchanan.....	1,307,460	121,670	170,000	40,000	5,000	14,000	.....
Buena Vista.....	213,000	.....	.....	74,000	.....	.....	.....
Butler.....	1,487,850	77,800	76,040	.....	.....	.....	.....
Calhoun.....	66,000	205,000	.....	.....	50,000	.....	.....
Carroll.....	499,610	21,000	.....	.....	.....	.....	.....
Cass.....	535,300	.....	.....	.....	.....	.....	.....
Cedar.....	136,000	161,000	.....	.....	.....	.....	.....
Cerro Gordo.....	80,000	21,500	.....	.....	.....	.....	.....
Cherokee.....	35,500	2,300	.....	.....	.....	.....	.....
Chickasaw.....	1,085,000	93,950	549,500	100,000	600	.....	.....
Clarke.....	.....	.....	.....	150,000	.....	.....	.....
Clay.....	300,500	16,000	.....	.....	.....	.....	.....
Clayton.....	1,622,600	127,000	130,000	230,000	39,500	.....	.....
Crawford.....	189,000	33,600	.....	.....	.....	.....	.....
Dallas.....	237,000	32,000	17,200	.....	.....	.....	.....
Davis.....	75,000	4,000	.....	.....	36,000	.....	.....
Delaware.....	2,196,300	50,000	44,200	17,000	41,800	.....	.....
Dickinson.....	310,000	.....	.....	.....	.....	.....	.....
Dubuque.....	1,109,200	12,700	70,200	.....	1,100	.....	.....
Emmet.....	297,700	6,000	.....	.....	.....	.....	.....
Fayette.....	1,600,250	403,551	231,000	96,500	15,000	.....	8,400
Floyd.....	566,200	48,000	.....	.....	.....	.....	.....
Franklin.....	341,000	11,800	.....	20,500	5,000	.....	.....
Greene.....	71,200	293,150	.....	.....	.....	120	.....
Grundy.....	718,100	82,505	92,000	.....	.....	.....	100,000
Guthrie.....	66,510	171,000	.....	46,500	.....	.....	.....
Hamilton.....	503,000	33,000	.....	.....	.....	.....	.....
Hancock.....	488,895	11,300	.....	.....	.....	.....	.....
Hardin.....	781,500	17,800	.....	.....	.....	.....	.....
Harrison.....	9,500	52,000	.....	.....	.....	.....	.....
Henry.....	32,000	.....	.....	.....	.....	500	.....
Howard.....	464,200	9,000	63,700	225,000	.....	.....	.....
Humboldt.....	696,600	150,000	.....	.....	.....	.....	.....
Ida.....	114,000	38,000	.....	.....	.....	.....	.....
Iowa.....	154,000	.....	.....	46,000	.....	.....	.....
Jackson.....	74,000	306,000	.....	.....	78,000	.....	.....
Jasper.....	272,000	10,000	.....	.....	.....	.....	.....
Jefferson.....	65,000	19,000	.....	.....	25,000	.....	.....
Johnson.....	56,000	24,500	.....	.....	.....	.....	.....
Jones.....	1,038,100	28,500	964,100	67,000	7,200	12,000	.....
Keokuk.....	119,250	2,000	.....	.....	.....	.....	.....
Kossuth.....	1,524,960	397,500	.....	.....	.....	.....	.....
Linn.....	473,000	21,500	108,600	114,000	.....	.....	.....
Louisa.....	39,600	15,000	.....	.....	.....	.....	.....
Lyon.....	64,421	.....	60,000	.....	.....	.....	.....
Madison.....	16,000	.....	.....	.....	60,000	.....	.....
Mahaska.....	60,000	.....	.....	.....	.....	.....	.....
Marion.....	17,300	.....	.....	.....	.....	.....	.....
Marshall.....	100,000	10,000	320,000	.....	.....	50,000	.....
Mitchell.....	1,082,750	716	.....	.....	.....	740,000	.....
Muscatine.....	20,900	1,800	.....	.....	5,500	.....	.....
.....	93,000	20,000	.....	115,000	15,000	.....	.....

TABLE No. 5—CONTINUED.

COUNTIES.	NEW YORK. 86 84 %.	CHICAGO. 12 04 %.	BOSTON. 7 39 %.	SOUTH. 4 18 %.	PHILA- DELPHIA. 2 51 %.	WEST. 1 55 %.	CLEVE- LAND. 1 34 %.
O'Brien	86,670	83,200					
Page	58,000	8,000				20,000	
Palo Alto	1,241,465	213,215	100,000				
Plymouth	426,787	150,000					
Pocahontas	317,100	76,500	22,000	22,000	22,000		
Polk	40,700						
Pottawattamie	174,400	202,200			37,000		
Poweshiek	33,000	111,000			16,000		
Ringgold	71,000	22,000		6,000			
Sac	303,960	52,380					
Scott		6,000					
Shelby	545,500	21,000	81,000				25,000
Sioux	221,140	32,200					
Story	976,530	103,000	11,000		2,000		
Tama	76,500	30,000					
Taylor	140,500						
Union	45,000	270,000		560,000			
Van Buren	19,000	15,000		15,000			
Wapello		2,300					
Warren	20,000				13,000		
Washington	212,700	99,000	78,000				
Webster	224,500	15,500	800		10,500		
Winnebago	606,900	4,000			2,600		
Winneshiek	459,000	6,400	293,000	100,000	277,600		
Woodbury	45,000	36,700			8,000		
Worth	871,400	5,000			83,000		
Wright	364,880	187,000					
Total	35,033,429	6,489,885	3,984,040	2,242,000	1,354,400	836,120	722,000

Total shipments reported 53,901,354 pounds.  
Shipments were also reported as follows:

Newark, N. J.	672,280
Pittsburg	369,300
Elgin	301,000
New Haven	240,600
Washington, D. C.	258,000
Massachusetts	197,000
Providence	174,000
Baltimore	153,700
Hartford	83,000
Exported	118,320

It will be noticed that the total of these shipments is but little more than half the make of the creameries of the state, and possibly complete statistics would somewhat change the totals for each destination.

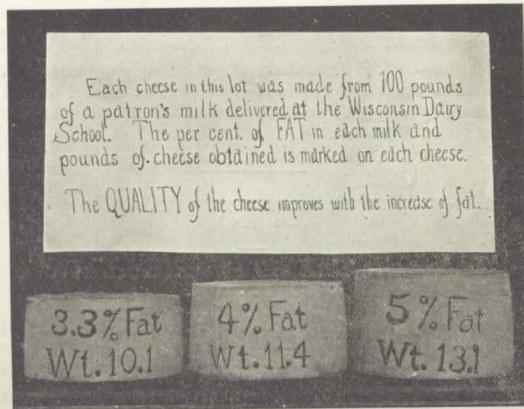
FINANCIAL STATEMENT FROM NOVEMBER 1, 1898, TO NOVEMBER 1, 1899.

Commissioner's salary	\$1,454.15
Commissioner's expense	447.24
Total	\$1,901.39
Clerk's salary	\$ 900.00
Extra office help	112.50
Total	1,020.50
Milk inspectors' fee account	\$1,581.00
Milk inspectors' expense	86.70
Milk inspectors' special work	59.27
Total	1,726.97
Special office expense	\$ 36.59
Chemical analyses	45.00
10,000 dairy law pamphlets	49.00
Total	130.59
Express account	41.78
Telegraph account	2.70
Total expense	\$4,823.93
Total receipts, for 676 milk permits	676.00
Balance of appropriation still available	2,759.84



## CHEESE-MAKING IN IOWA.

The accompanying cut, kindly furnished by Prof. John W. Decker, professor of dairying at the University of Wisconsin, is the text of the following. Only 15 of the 69 cheese factories in Iowa pay for milk according to the test of butter fat. Certainly the tendency on the part of the patron of a cheese factory that pays him for the weight of his milk regardless of the



quality of it, will be to produce the greatest weight of milk regardless of all other considerations. The quality of the milk as regards butter fat will certainly lessen under such incentive. The quality of the cheese made will also be poor if the fat content of the milk is low. A study of the above cut will show that the weights do not increase in the same proportion as the increase in butter fat, but nearly so; and when we consider that the quality of the richer cheese is better than that of the others, it is evident that the factory ought to pay for the milk in proportion to the amount of fat in the milk, in order to give every man what belongs to him. It is most difficult to understand why cheese factories and creameries will continue to pay for milk by weight, when it is so easy to test the milk and is so plainly the proper way to pay for it.

TABLE No. 6.

Cheese Factories, Their Value and Their Product.

COUNTIES.	No. of cheese factories.	No. reporting.	Total value as reported.	No. reporting.	Pounds of milk received.	Pounds cheese made.	No. reporting.	Sold in Iowa.	Shipped.
Appanoose.....	4	3	\$1,700	3	846,000	79,200	3	67,200	13,000
Benton.....	1	1	5,800	1	.....	.....	.....	.....	.....
Black Hawk.....	1	1	4,000	1	1,318,551	130,000	1	130,000	.....
Cerro Gordo.....	1	1	3,000	1	848,943	86,870	1	78,098	8,772
Floyd.....	1	1	7,500	1	1,892,480	203,810	1	185,810	20,000
Howard.....	2	2	2,800	2	640,000	64,000	2	64,000	8,000
Humboldt.....	4	4	3,900	3	323,600	34,978	3	21,978	13,000
Monroe.....	2	2	3,100	2	1,157,700	117,200	2	117,200	.....
Poweshiek.....	4	4	7,200	4	2,537,920	253,007	4	232,007	3,000
Taylor.....	1	1	3,300	1	1,790,000	174,000	1	94,000	80,000
Washington.....	1	1	2,700	1	1,293,950	127,680	1	119,780	7,900
Wayne.....	1	1	3,700	1	1,287,280	157,670	1	111,670	46,000
Bramer.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clayton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clarke.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dallas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Decatur.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greene.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grundy.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guthrie.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hancock.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hardin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Johnson.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk.....	32	19	34,250	17	9,940,930	980,514	17	938,334	42,180
Kossuth.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lee.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linn (3).....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marshall (2).....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montgomery.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muscatine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Page.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ringold (2).....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sac (3).....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Story.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wright.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	69	53	\$81,350	45	94,176,569	2,392,895	47	2,152,143	240,758

Reports from cheese factories show that the cows whose milk is sent to the factory produce about half as much milk as those whose milk is sent to the creameries; from which fact it is evident that the cheese factory is not an incentive to intensive dairying. There are perhaps a dozen factories in the state that are doing a good business and are of great benefit to the farmers in their communities. The others are in the main small affairs which have started as private factories and buy merely to accommodate the neighborhood. They are no doubt profitable to their owners and operators but do not compare in importance to the same number of creameries. The sixty-nine factories received 37,000,000 pounds of milk, which is about the same amount of milk as handled by fifteen average creameries.

Very likely the cheese-making industry will be of greater amount in Iowa when farms become smaller and the average farm of the state becomes more like that in eastern states.

Using the reports as given as a basis, the average value of the cheese factories is \$1,535. Their average production of cheese amounts to 53,175 pounds. The total value of sixty-nine factories would be \$105,915 and their total product 3,669,109 pounds of cheese, made from 37,070,733 pounds of milk, and worth \$350,000. Practically all of the cheese made is consumed in Iowa, only 11 per cent being shipped out of the state.

### CITY MILK INSPECTION.

The inspection of milk in the thirteen cities of the state having more than 10,000 population seems to meet with the approval of the people of these cities. Whereas several years ago when the inspection was first begun the quality of milk sold was not very good, it is now found that nearly all milk sold is fully up to the standard of butter fat, that it is clean and well handled, that nearly all the dairymen co-operate with this department in its efforts to secure to the consumer the best quality of unadulterated milk. During the past year the inspection in the several cities has been in able hands and this department has been able to use the inspectors in keeping track of oleomargarine matters as well as city milk inspection. The inspectors are as follows:

Burlington .....	W. B. McChesney
Cedar Rapids .....	Dr. J. W. Griffith
Clinton .....	Allen E. Rumble
Council Bluffs .....	W. A. Groneweg
Davenport .....	H. J. High
Des Moines .....	Currie C. Chase
Dubuque .....	Dr. B. Michel
Fort Madison .....	Camp Thomas
Keokuk .....	F. Harshman
Marshalltown .....	E. M. Singleton
Muscatine .....	A. K. Raff
Ottumwa .....	E. B. Hill
Sioux City .....	O. P. McCray

Attention is called to the matter of permits required by all who "sell milk from a wagon, depot, or store." It is the aim of this department to strictly enforce the law in regard to permits, since the strict enforcement is only justice to those who pay without any effort on the part of this department. The law plainly says that no one shall sell milk from a wagon, depot or store without the permit and that the permit shall expire on the fourth day of July each year. Hence any one so selling milk after the fourth day of July each year without renewing

the permit is violating the law and is liable to prosecution. There are always a few who intend to quit the milk business when the feed gets dry in the fall and so refrain from paying the permit fee in the hope that this department will not prosecute them after they have quit the business. Hereafter it will be the policy of this department to insist that the permits be paid before the fourth day of July, and failure to do so will be understood to mean that the delinquent does not intend to pay until compelled to do so. This will work no hardship upon any one except the wilful violators of the law. Some complaints have come to this office in regard to the injustice of compelling the dairymen to pay even one dollar for the right to sell milk; and the constitutionality of the law is questioned by a few. But it will readily be seen that the dairy commissioner has no choice but to enforce the law as it is on the statute books. It would be gratifying to this department if some one would stand suit on the matter so that a decision of the supreme court could be had. Of course there are many decisions in the older states which would apply to our permit law, but that does not prevent many complaints about the constitutionality of the law. Perhaps an Iowa decision would be of more force among Iowa dairymen.

By reference to another part of this report will be found some suggestions of value on the subject of feeding milch cows, and a table showing the proper green fodders and the time of sowing of each to insure green feed during the summer. There is always a shortage of milk in the late summer and milk is then scarce and high. It will pay city dairymen large profits to have green feed for their cows in July and August and later, so that the cows may be kept up to a full flow of milk all summer.

The subject of preservatives in milk is one that not all dairymen are agreed upon. However there is not the same disagreement upon the part of the consumers of milk. The laws against adulteration of milk are based upon the idea that when a man buys milk he expects to receive, and therefore has the right to receive, milk as it is drawn from the cow without addition or subtraction. The law forbids the sale of adulterated milk, and in defining what adulteration is says, "The addition of water or any other substance or thing to whole milk, or skimmed milk, or partially skimmed milk, is hereby declared an adulteration."

## PROSECUTIONS.

Early in May, 1899, the dairy commissioner secured the indictment of H. S. Chase & Co., of the city of Des Moines, for refusal to take out permits to sell milk, as required by the law. When the case came to trial the defendant plead ignorance of the law and was released on the payment of the costs in the case.

W. T. Wood, of Des Moines, was in the same month arrested and brought before Justice Halloran charged with the offense of selling milk without permit. On the refusal of the defendant to sign his own bail bond the court ordered him to be confined in jail to await preliminary trial. Through some misunderstanding between the jailor and the constable, he was released from jail to get a bond, since which time he has not been seen.

G. T. Schlenker was arrested in July, charged with the offense of selling adulterated milk. He was brought to trial in justice court and offered no defense, was convicted and fined \$25 and costs, the minimum fine. He immediately appealed the case to the district court, where the case is now pending.

At the time this report is being put in print, the decision of the district court on the appeal of the above mentioned case is at hand and is given in full below. The judge held that the statute is strictly within the constitution and that a successful prosecution must show either that the adulteration is harmful, or that the person buying the adulterated product did not know that that product was adulterated and so was defrauded. In this connection section 4986 of the pure food laws of the state, included in the same chapter as the milk statute, clearly indicates that the seller of adulterated foods, drinks, or medicines, must either sell the same in such a manner that the true name and the fact of its being adulterated is marked upon the container of the article, or the person purchasing the same must be fully informed by the seller of the true name of the ingredients at the time of making the sale. Read the section.

SEC. 4986. *Labeling.*—No person shall mix, color, powder, or stain any article of food, drink or medicine, or any article which enters into the composition of food, drink, or medicine, with any other ingredient, whether injurious to health or not, for the purpose of gain or profit, or sell or offer for sale the same, \* \* \* unless the same be so manufactured, used or sold or offered for sale, under its true and appropriate name, and notice that the same is mixed or impure is marked, printed or

stamped upon each package, roll, parcel, or vessel containing the same, so as to be and remain at all times readily visible, or unless the person purchasing the same is fully informed by the seller of the true names of the ingredients of such articles at the time of making the sale thereof or offering to sell the same.

The seller of adulterated milk may offer as a defense, according to this decision, that the buyer was informed by the seller at the time of making the sale of the true names and ingredients of the adulteration, the ingredients so used not being injurious to health. The dairy commissioner will appeal from the decision for the purpose of getting a supreme court ruling.

The judge says: "No person shall sell as pure milk that which has been diluted with water, or into which there has been introduced any foreign substance or thing, even though the foreign substance be positively beneficial, rather than deleterious."

The decision in full follows:

The defendant is charged with a violation of section 4989 of the code. That section provides in brief that if any person shall sell or expose for sale or deliver or bring to another for domestic or potable use or to be converted into any product of human food any unclean, impure, unhealthy, adulterated, unwholesome or skimmed milk, he shall be subject to a fine and be liable for double damages to the person or persons upon whom such fraud shall be committed. Section 4990 of the code immediately following provides that for the purpose of this chapter the addition of water or any other substance or thing to whole milk or skimmed milk is declared to be an adulteration.

This cause has been tried to a jury, resulting in a verdict of guilty, and it is before me now upon a motion in arrest of judgment and for a new trial. The facts in the case are that at the time complained of the defendant was a milk dealer in the city of Des Moines, and that for the purpose of preserving his milk from souring he added thereto a small quantity of boracic acid in solution.

The person named in the information to whom a sale of such milk was made had been told that defendant was using such solution of boracic acid in his milk. The uncontradicted testimony in the case was to the effect that the use of boracic acid in the quantities shown was absolutely harmless even to the most delicate infant. This testimony came from the chemist of the state board of health and from several of the most reputable physicians of the city, all agreeing upon the proposition, and the state making no effort to contradict the same. Upon the close of the testimony I instructed the jury, following the language of the statute literally, and said that if it appeared the defendant put anything into his milk he should be found guilty. I said, however, to counsel, that I would reserve for hearing in arrest or upon motion for new trial the questions in the case raised by counsel for the defendant which are now before me.

It is contended by the defendant that the statute is unconstitutional in that it was not competent for the legislature to place any such restriction

upon the dealing in milk into which a harmless preparation had been put, the design being to secure the preservation of the milk, and such only.

Now, it is a well known principle of construction often reiterated by the supreme court of this and other states, that a statute provision will not be held unconstitutional if, following any reasonable method of construction, its provisions can be made to harmonize with the provisions of the constitution. I am to assume that the legislature intended to frame an enactment in harmony with the constitution and not in opposition to it, and I am not to say that any particular statute is repugnant to the constitution save that upon any fair consideration thereof I am not able to reconcile it with the constitution. That is to say, the statute must be held to be void only when such statute and the constitution cannot both stand and be made operative together.

I am first to inquire whether it be within the province of the legislature to prohibit by statutory enactment the dealing in milk in which a preservative has been placed, harmless in itself and productive of no evil results when employed in connection with the milk. The statute in question is found in the criminal code, and under the general chapter heading, "Offenses against the public health." My motion is that the power of the legislature to interfere in the ordinary business transactions of mankind of the character and nature here in question is limited to two subjects. The general subject comes under the head of police regulations, and the power may be exercised whenever, in the judgment of the legislature, the doing of an act sought to be prohibited would operate as a fraud on the one hand, or would be injurious to the health of the citizens of the state on the other hand. To state the proposition somewhat differently, the legislature has power incident to its rights to make all needful or necessary police regulations, to prohibit anything which might be made an engine of fraud, or which might work harm to the health of the citizens.

I do not understand that the power of the legislature goes any further than that. It follows, therefore, that if by the statute under consideration the legislature has gone farther than the general power conferred upon it warrants, the acts must be held to be void. While there are some cases which seem to hold to the contrary, yet I think the weight of authority and certainly the better reasoning supports the doctrine that as between citizens of the state they may deal at their pleasure in legitimate commodities without legislative restriction, the rule being qualified always by the fact that no element of fraud appears, and there being nothing incident to the commodity dealt in which renders it injurious to the public health. In a number of cases it has been held, and this by the supreme court of the United States, as well as several of the courts of last resort in states, that there could be no restriction of the sale of oleomargarine, in itself harmless to the public health, provided that it was so labeled and offered for sale that the person buying it could not be deceived as to the true character of the article.

Applying that principle to the case at bar, I cannot conceive of any reason why a person who desired to buy milk containing a slight quantity of boracic acid should not be permitted to do so, nor can I conceive upon what principle the legislature, as against the rights reserved to the people in the constitution, could interfere with such a transaction. Nor did the

legislature intend here to so interfere. As I have said before, I am bound to hold in the negative if I can reasonably construe the statute to such an end. I think it is susceptible of such construction. Reading the section through, it clearly refers to sales of pure milk, and the thought of the statute seems to me to be that no person shall sell as pure milk that which has been diluted with water or into which there has been introduced any foreign substance or thing, even though such foreign substance may be positively beneficial, rather than deleterious. In other words, the proposition of the statute is to protect the people who desire to buy pure milk from having palmed off upon them milk which has been diluted or adulterated.

The design of the statute was to prevent fraud and it seems to me that this is clearly evidenced in the language of the statute itself, for in section 4989 I find that after prohibiting the sale, exchange or delivery of adulterated milk, the further provision appears in the same connection that the person so selling or delivering shall be liable for double damages to the person or persons upon whom such fraud shall be committed. Now, clearly if any person desiring to buy pure milk shall receive instead thereof milk into which has been introduced a compound of foreign substance even though not harmful to the health, the purchaser has not received that which he intended to buy. He may have intended, and surely it was his right, to buy milk which he desired to have sour in the ordinary course of nature, and therefore in which no preservative was desired. The sale, therefore, of preserved milk to him, even though harmless as to health, would be a fraud. To sum up, it seems to me the purpose of the state is simply to say to all dealers in milk, and other dairy products, or commodities designed to take the place thereof, that that which they offer for sale shall be exactly what it purports to be. If what is offered as pure milk is adulterated or impure in the sense that a foreign substance has been introduced therein the sale thereof is prohibited by statute. If, on the other hand, any milk be offered for sale into which there has been introduced a preservative, and it is offered for sale as such with the knowledge of the adulteration, then the sale thereof is not prohibited by the statute, save and except that it shall be ascertained and determined that the adulteration is not harmful to the public health.

I am constrained, therefore, to hold that the statute under consideration is not in conflict with the constitution, but that it means simply that dairy products and all imitations thereof not harmful to the public health may be exposed for sale and sold in this state, providing always that the commodity so offered for sale or sold is put upon the market for what it actually is, and consequently no room is left upon which to predicate a charge of fraud. Now, in this case, the person to whom it is charged the defendant sold milk in which the preservative complained of had been introduced knew what he was buying. There was no fraud, as far as he was concerned, and it being conceded that the adulteration was harmless in respect to the health of those who might use it, the defendant should not, therefore, have been found guilty of any criminal violation of the law.

The verdict of the jury will therefore be set aside and the defendant be discharged from any further liability in this case, and his bond exonerated.

Mr. A. D. Ehle, having been arrested on a warrant sworn out before Justice Halloran, came to trial on the 26th of July for the alleged crime of selling adulterated milk. The evidence of the prosecution, in brief, was to the effect that City Milk Inspector C. C. Chase, in the course of his duties, obtained samples of milk from the store of Ehle, took the same to Prof. S. R. Macy for analysis, who found boracic acid therein, and that the same was a preservative. The defense called as witnesses several physicians of the city who gave testimony to the effect that boracic acid in small quantities used as a preservative was not injurious to the health, but that in larger quantities might be deleterious. The defense, represented by Attorney Hume, of the city, and the attorney of the Chicago Preservative company, of which company Ehle was presumably the local agent, argued that boracic acid was not injurious and therefore could not be considered as an adulterant. This in the face of the plain statement in the law that "the addition of water or any other substance or thing to whole milk or skimmed milk or partially skimmed milk is hereby declared an adulteration."—Section 4990. They further argued that if it was so declared an adulterant that the law was unconstitutional as violating the rights of property.

Both the prosecution and the defense filed voluminous briefs with numerous citations of law and supreme court decisions and the justice, after a couple of weeks' deliberation, gave his decision. He held that the use of boracic acid, even if not injurious, was an adulteration; that it was used in the milk for the purpose of defrauding the buyer of it, and hence that the law was fully within the powers of the legislature to pass because it was intended to prevent fraud; that the defendant Ehle admitted under oath that he put boracic acid in the milk; that in order to avoid the penalty of the law a dealer must inform his patrons of the exact adulteration used. The last clause is based on section 4986, known as the labeling law, which applies to all adulterated food products, and requires that they be labeled as to their exact adulteration and that the customer shall be informed definitely just what he is buying.

It will be seen that the justice fully sustained the law in all its particulars and this department is confident that the high courts of this state will agree with this decision and similar decisions in other states to the same effect, as soon as a case is presented to them for adjudication.



BURLINGTON—CONTINUED.

NAME OF DEALER.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Below standard.	Cream.
H. D. Leak	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	23.2	23.2
F. Lichterberg	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	21.4	21.4
D. Mahalm	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
F. M. Parsons	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
J. W. Schupp	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
Henry Schwenker	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
Andrew Sentl	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
B. Sourwine	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
E. J. Swords	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
J. W. Smith	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
J. C. Upton	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
O. G. Van Winkle	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
S. H. Woodward	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
J. F. Wootten	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2
Fred Waelner	4.4	4.7	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	19.2	19.2

CEDAR RAPIDS—NUMBER OF PERMITS, 63.

L. U. Alt	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
George Batman	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
W. W. Bailey	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
W. T. S. Bear	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
L. Bemer	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
W. W. Brock	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
D. H. Bunker	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
B. J. Beary	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Cedar Valley Creamery	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
E. H. Cole	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
C. H. Davis	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
A. Dockery	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Theresa Dockery	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Peter Groat	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Ed Gibney	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
E. J. Hale	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
W. O. Hosmer	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Hubbard & Nye	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
A. Johnson	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Oscar Johnson	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
William E. Jordan	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
J. R. Kasper	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Fred Kilmeyer	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Klinger Brothers	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
John Kubacksy	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Adelbert Ling	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
J. C. Listerberg	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Frank Matouschek	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
K. M. McDowell	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Ed Miller	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Miner Brothers	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
William McLachlan	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Henry Murray	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
John Mongo	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
L. M. Martinek	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
G. W. Parks	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Frank Plisney	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
John S. Porter	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
William Prymek	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
J. E. Rawson	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Edgar Richmond	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Robb Brothers	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
J. H. Rooks	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Shafter & Hosmer	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
A. W. Schmatt	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Sloan Brothers	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
A. H. Smith	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
G. S. Smith	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
J. Stusak	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
S. W. Svec	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Joseph A. Usher	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Theo. Wendler	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
D. U. Wilant	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
Williams Brothers	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
E. A. Wilson	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1
J. Wohen	4.8	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	25.1	25.1

CLINTON—NUMBER OF PERMITS, 38.

NAME OF DEALER.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Below standard.	Cream.
W. C. Anderson	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	23.4	23.4
Joseph Baer	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	21	21
F. E. Bills	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
C. F. Caplan	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Richard Claussen	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Henry Fanger	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
D. Gertzen	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
John Gideonson	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
H. H. Greve	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
H. C. Heinsen	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Clinton Heath	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Gus Johnson	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
W. F. Kummrow	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Frank Krogman	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
O. L. Mallory	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
A. L. Martenson	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
M. O. Miller	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Chris Nielson	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
Chris Nissen	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
D. V. Olney	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	19.2	19.2
J. S. Olson	4.5	4.5	4.5	4.5										

DAVENPORT—NUMBER OF PERMITS, 87.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, June, Below standard, Cream. Lists dealers like Jess Armil, Mrs. Eliza Arp, G. S. Atkinson, etc.

DAVENPORT—CONTINUED.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, June, Below standard, Cream. Lists dealers like F. Taage, Paul Thiessen, Mrs. B. Von Tugl, etc.

DUBUQUE—NUMBER OF PERMITS, 56.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, June, Below standard, Cream. Lists dealers like M. Adam, Bobzien & Below, Casper Breke, etc.

DES MOINES—NUMBER OF PERMITS, 187.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, June, Below standard, Cream. Lists dealers like Jane Adamson, Aug. Anderson, P. S. Anderson, etc.





Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like J. W. Reelman, J. A. Burton, G. D. Conradt, etc.

KEOKUK—NUMBER OF PERMITS, 20.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like H. Driffield, F. N. Harshman, A. D. Hazen, etc.

MARSHALLTOWN—NUMBER OF PERMITS, 17.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like S. E. Bellus, Chas. W. Brown, Alvin Cole, etc.

MUSCATINE—NUMBER OF PERMITS, 19.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like Conrad Beegner, H. R. Bierman, John Dankert, etc.

MUSCATINE—CONTINUED.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like Peter W. Nagel, Lucy Richey, H. Schwaib, etc.

OTTUMWA—NUMBER OF PERMITS, 23.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like J. F. Bizer, Charles Burnett, D. E. Cundiff, etc.

\* C. E. Martenson, cream only—April, 15; May, 15; June, 15.
+ McClurg & Son, cream only—April, 18; May, 21; June, 20.

SIoux CITY—NUMBER OF PERMITS, 63.

Table with columns: NAME OF DEALER, July, August, September, October, November, December, January, February, March, April, May, Below standard, Cream. Lists dealers like Baby Dady, Jerry Banta, Roston Candy Store, etc.

SIOUX CITY—CONTINUED.

NAME OF DEALER.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Below standard.	Cream.
J. M. Pederson.....	..	..	3.84	..	..	4.23	3.65	3.94	3.24	4.44	..	..	..	..
Perraso & Giambardino.....	..	4	3.7	..	..	4.23	3.7	..	..	4.44	..	..	..	..
E. E. Perrin.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Louis Pfaff.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
O. B. Riess.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
N. J. Rowe.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
S. A. Swanson.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
E. D. Sherman.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
O. P. Sorenson.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
A. W. Storer.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
C. A. Stover.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
T. R. Taibot.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
T. P. Treadwell.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
E. C. Wendell.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
D. O. Wilcox.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Guy Wellman.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
A. C. Woodcox.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
A. L. Washington.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
E. D. Young.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..

## RAILROAD BUTTER SHIPMENTS.

All the railroads of the state, with the exception of the Chicago, Milwaukee & St. Paul, have furnished the dairy commissioner with statistics of the number of pounds of butter shipped out of the state for the year ending October 1, 1899.

It will be noticed that these statistics are the later by five months than the statistics of the creamery make which are contained in this book. They, therefore, contain the shipments of the summer of '99, while the figures on the creamery make of butter contain the pounds of butter made in the summer of '98. It has been generally supposed that the report of butter shipments would fall far short of the total of last year. The figures this year are complete, with the exception noted above, and in making up the following tables the report of the Milwaukee for '98, less 1 per cent, was used. The total net decrease in butter shipments is practically nothing. By a study of the following tables, it will be seen, however, that there have been decreases in dairy counties amounting to over 5,000,000 pounds, which decrease is compensated for by astonishing increases in some counties which have not heretofore shipped an extraordinary amount of butter, notably Woodbury, Wayne and Clinton. The shipments from Woodbury are almost altogether from Sioux City, and are, no doubt, shipments of packed or reworked butter. It is not so easy to account for the increase in shipments in other counties. For instance, why should Buchanan have increased in butter shipments to the amount of 409,740 pounds, while Delaware decreased 182,810, Black Hawk decreased 221,618, Fayette decreased 181,797, and Linn decreased 22,754?

While the total butter shipments of the state as given in the following tables is approximately correct, the same cannot be said as to the showing of the different counties. That is, not all the butter made in a county is shipped from it. An example of the way injustice is unavoidably done certain counties is found in Grundy. This county has one railroad running

through its center, and four other roads lie just outside of the county lines or cut across the corners. Hence the counties surrounding Grundy are reported as shipping considerably more butter, of which a part, at least, is made in Grundy, but taken across the line to be shipped. There is no reasonable way to avoid this inaccuracy, and so the figures as furnished by the railroads are compiled as received.

The reports are received from the railroads in gross, and in estimating net butter shipments 16 per cent is subtracted from the gross pounds. The office is under great obligations to the different freight agents and auditors who have furnished the statistics.

TABLE No. 6.

Table showing total net butter shipments of the state for the years 1890 to 1899, inclusive, from Iowa to points outside the state; also increase or decrease as compared with the year preceding.

YEARS ENDING OCTOBER 1.	Net pounds of butter shipped.	Increase over preceding year.	Decrease from preceding year.
1890	71,255,796		
1891	68,690,716		2,565,080
1892	69,112,931		8,577,785
1893	54,572,902		5,540,029
1894	54,509,417		63,485
1895	66,497,108	11,987,691	
1896	80,032,916	13,535,808	
1897	83,620,081	3,587,165	
1898	77,364,337		6,255,744
1899	77,013,875		350,462

TABLE No. 7.

COUNTIES.	NUMBER OF CREAMERIES FOR 1898 AND 1899, WITH INCREASE AND DECREASE.				GROSS POUNDS OF BUTTER SHIPPED OUT OF THE STATE FOR THE YEARS ENDING SEPTEMBER 30, 1898 AND 1899, SHOWING INCREASE AND DECREASE BY COUNTIES.			
	1898.	1899.	Increase.	Decrease.	1898.	1899.	Increase.	Decrease.
The state	954	997	92	79	92,099,211	91,683,184	5,152,430	5,568,457
Adair	12	12			598,835	591,738		7,097
Adams	7	7			694,512	676,552		17,960
Allamakee	9	11	2	1	1,300,924	1,394,913		36,011
Appanoose						12,280		12,280
Audubon	11	11			932,738	1,151,141		
Benton	13	14	1		899,295	900,496		218,403
Black Hawk	18	19	1		2,177,997	1,956,379		31,201
Boone	8	8		1	163,529	211,074		231,618
Bremer	26	24		3	3,270,856	3,037,085		48,145
Buchanan	17	18	1		2,959,480	3,309,220		233,771
Buena Vista	9	10	1		1,357,278	1,154,501		409,740
Butler	22	22			3,136,764	2,618,803		203,777
Calhoun	11	7		4	1,238,140	1,152,741		517,961
Carroll	13	13		1	991,537	985,413		83,399
Cass	7	7			614,485	481,977		6,124
Cedar	10	11	2	1	801,401	867,464		132,488
Cerro Gordo	12	9		3	1,587,072	1,442,380		66,083
Cherokee	9	10	1		476,636	348,800		144,682
Chickasaw	20	21	1		2,813,408	3,003,538		127,836
Clarke	5	6	1		248,898	248,354		190,130
Clay	9	9			807,677	799,590		2,456
Clayton	20	21	1		3,049,974	3,019,450		8,087
Clinton	14	14		1	644,925	1,162,636		30,494
Crawford	8	3		5	382,308	349,425		517,711
Davis	11	14	3		785,245	788,815		3,570
Decatur	3	4	1		108,205	126,386		21,181
Delaware	31	28		3	185,534	65,126		120,708
Des Moines	4	4			3,031,800	2,849,480		182,310
Dickinson	4	4			1,470	142,370		140,900
Dubuque	23	23			658,159	544,494		113,665
Emmet	6	7	1		2,652,231	2,399,321		252,910
Fayette	23	22		2	628,290	664,380		36,090
Floyd	7	7		1	2,872,749	2,690,952		181,797
Franklin	11	11		1	811,549	801,550		9,999
Fremont					793,000	776,099		43,099
Greene	9	9		1	4,380	2,696		1,684
Grundy	19	17		2	1,228,840	1,284,146		55,306
Guthrie	12	14	2		1,087,110	979,246		108,864
Hamilton	12	12		1	577,348	926,609		349,261
Hancock	11	11		1	2,090,914	1,963,613		127,301
Hardin	15	14		3	364,852	446,980		82,128
Harrison	4	5	2	1	1,848,059	1,985,222		137,163
Henry	4	3		1	189,623	136,805		52,758
Howard	4	3		1	132,868	70,248		62,620
Howland	9	9			1,381,543	1,372,330		9,213
Humboldt	9	11	2		1,081,938	1,068,691		13,247
Ida	5	5			459,821	511,369		52,048
Iowa	6	5		2	579,708	541,686		38,022
Jackson	19	22	5	2	1,048,755	1,115,668		66,913
Jasper	8	10	2		372,209	459,296		87,087
Jefferson	9	6		3	348,526	293,079		65,447
Johnson	8	9	2	1	203,702	106,608		97,034
Jones	30	29		3	3,373,055	3,192,254		180,801
Keokuk	3	3			204,373	171,208		33,165
Kossuth	21	21		1	2,047,260	2,043,190		4,070
Lee	1	1			318,677	594,981		276,304
Linn	30	29		1	1,752,876	1,730,122		22,754
Louisa	3	3			86,580	59,610		26,970
Lucas	1	2	1		33,806	71,511		37,705
Lyon	4	6	2		286,902	298,653		11,751
Madison	4	3		1	137,925	90,255		47,670
Mahaska	1	1			678,125	269,290		408,865
Marion	3	3		1	152,845	138,020		14,825
Marshall	11	12	2	1	770,262	815,262		45,000
Mills	4	3		1	72,447	51,528		20,919

TABLE No. 7—CONTINUED.

COUNTIES.	NUMBER OF CREAMERIES FOR 1898 AND 1899, WITH INCREASE AND DECREASE.				GROSS POUNDS OF BUTTER SHIPPED OF THE STATE FOR THE YEARS ENDING SEPTEMBER 30, 1898 AND 1899, SHOWING INCREASE AND DECREASE BY COUNTIES.			
	1898.	1899.	Increase.	Decrease.	1898.	1899.	Increase.	Decrease.
Mitchell.....	9	10	1	...	1,889,208	1,880,789	.....	8,419
Monona.....	1	1	.....	.....	68,277	23,060	.....	45,217
Monroe.....	1	1	.....	.....	20,400	22,525	2,125	.....
Montgomery.....	3	3	1	1	258,284	406,073	147,809	.....
Muscatine.....	5	5	1	1	281,915	214,463	.....	77,452
O'Brien.....	6	6	.....	.....	627,680	511,695	.....	115,985
Osceola.....	1	2	2	1	242,438	46,830	.....	195,608
Page.....	6	7	1	.....	214,538	209,634	.....	4,904
Palo Alto.....	17	18	1	.....	2,808,052	2,560,580	.....	247,472
Plymouth.....	11	11	1	1	882,907	747,540	.....	135,367
Pocahontas.....	9	13	6	.....	883,882	956,891	73,009	.....
Polk.....	8	7	1	2	206,754	198,590	.....	8,164
Pottawattamie.....	5	6	1	.....	693,412	569,960	.....	120,452
Poweshiek.....	6	8	2	.....	463,332	447,139	.....	26,193
Ringgold.....	3	3	.....	.....	124,349	121,450	.....	2,899
Sac.....	13	15	3	1	1,418,307	1,268,834	.....	149,473
Scott.....	3	3	.....	.....	141,210	131,978	.....	9,232
Shelby.....	8	9	1	.....	454,164	642,886	88,702	.....
Sioux.....	8	10	2	.....	923,734	892,214	.....	31,520
Story.....	15	15	1	1	2,053,615	1,987,384	.....	66,231
Tama.....	11	11	1	1	865,199	842,805	.....	22,394
Taylor.....	6	6	.....	.....	178,932	212,305	33,373	.....
Union.....	14	14	.....	.....	1,238,322	1,122,494	.....	115,828
Van Buren.....	4	4	1	1	53,257	83,035	29,778	.....
Wapello.....	4	4	1	1	686,450	559,761	.....	106,689
Warren.....	5	5	1	1	57,790	37,980	.....	19,810
Washington.....	6	6	.....	.....	575,395	627,070	51,675	.....
Wayne.....	8	6	.....	2	316,376	748,078	431,702	.....
Webster.....	9	12	3	.....	627,377	753,767	126,390	.....
Winnebago.....	15	15	1	1	1,802,565	1,274,253	.....	528,312
Winneshiek.....	17	13	4	.....	1,786,678	1,828,880	42,202	.....
Woodbury.....	9	7	1	3	1,113,131	2,292,265	1,179,134	.....
Worth.....	9	11	2	.....	1,033,948	1,005,978	.....	27,970
Wright.....	11	12	1	.....	1,123,163	1,128,219	5,056	.....
The state.....	954	967	92	79	92,099,211	91,683,184	5,266,206	5,568,457

Actual total decrease in butter shipments, 416,028.

TABLE No. 8.

NET BUTTER SHIPMENTS BY COUNTIES AND RANK—AREA OF COUNTIES.

Showing pounds of butter shipped per square mile and rank of counties; also total net butter shipments for the state and net pounds per square mile, for the year ending September 30, 1899.

COUNTIES.	Total net shipments of butter for the year.	Rank by total lbs. shipped.	Area of square miles in counties.	Pounds per square mile.	Rank by lbs. per square mile.
The state.....	77,013,875	.....	56,025	1,373	84
Adair.....	507,060	54	778	653	39
Adams.....	568,304	51	432	1,313	39
Allamakee.....	1,062,527	25	658	1,615	32
Appanoose.....	10,315	98	516	20	98
Audubon.....	966,958	29	443	2,183	19
Benton.....	756,417	39	720	1,051	50
Black Hawk.....	1,643,358	16	578	2,853	15
Boone.....	177,806	76	576	309	77
Bremer.....	2,551,151	3	432	5,905	1
Buchanan.....	2,330,145	1	576	4,913	3
Buena Vista.....	969,781	27	578	1,684	29
Butler.....	2,199,795	8	576	3,819	7
Calhoun.....	968,302	28	578	1,681	33
Carroll.....	827,747	35	576	1,437	35
Cass.....	404,861	63	576	703	63
Cedar.....	728,670	41	576	1,265	41
Cerro Gordo.....	1,211,608	20	576	2,103	22
Cherokee.....	292,992	69	576	509	68
Chickasaw.....	2,522,972	5	504	5,006	2
Clarke.....	208,617	73	432	483	70
Clay.....	607,656	50	578	1,066	44
Clayton.....	2,538,363	4	728	4,804	4
Clinton.....	978,614	26	698	1,399	36
Crawford.....	293,517	68	720	408	73
Dallas.....	682,605	45	588	1,127	48
Davis.....	106,164	84	502	211	82
Decatur.....	54,706	91	534	102	92
Delaware.....	2,393,572	6	576	4,155	6
Des Moines.....	119,591	80	415	288	78
Dickinson.....	457,375	58	404	1,132	45
Dubuque.....	2,015,430	10	601	3,353	10
Emmet.....	558,079	53	494	1,130	47
Fayette.....	2,280,400	7	720	3,139	12
Floyd.....	673,302	44	504	1,336	38
Franklin.....	651,922	46	575	1,132	46
Fremont.....	2,265	99	509	4	99
Greene.....	1,078,683	22	576	1,873	26
Grundy.....	822,567	36	504	1,632	31
Guthrie.....	778,352	38	593	1,313	40
Hamilton.....	1,649,438	15	576	2,863	14
Hancock.....	375,463	65	578	652	85
Hardin.....	1,687,589	14	576	2,895	13
Harrison.....	115,065	82	695	165	85
Henry.....	59,018	90	433	137	89
Howard.....	1,152,757	21	476	2,422	17
Howard.....	897,600	33	432	2,078	24
Humboldt.....	429,550	62	433	992	52
Ida.....	455,016	59	584	779	59
Iowa.....	937,161	32	638	1,467	34
Jackson.....	385,758	64	730	529	67
Jasper.....	237,786	71	432	550	66
Jefferson.....	89,601	86	618	145	87
Johnson.....	2,681,493	2	576	4,655	5
Jones.....	143,815	79	576	250	81
Keokuk.....	1,716,280	12	977	1,757	23
Kossuth.....	499,784	55	512	976	54
Lee.....	1,453,302	19	720	2,018	25
Linn.....	.....	.....	407	123	91
Louisa.....	50,072	92	.....	.....	.....

TABLE No. 8—CONTINUED.

COUNTIES.	Total net shipments of butter for the year.	Rank by total lbs. shipped.	Area of square miles in counties.	Pounds per square mile.	Rank by lbs. per square mile.
Lucas...	60,069	89	432	141	88
Lyon...	250,889	70	587	427	71
Madison...	75,814	87	576	132	90
Mahaska...	226,178	72	576	375	74
Marion...	115,937	81	576	201	83
Marshall...	684,820	43	576	1,189	43
Mills...	43,284	93	441	97	94
Mitchell...	1,579,863	17	473	3,340	11
Monona...	19,370	96	556	35	97
Monroe...	18,921	97	432	44	95
Montgomery...	341,118	67	432	790	58
Muscatine...	180,149	74	437	412	72
O'Brien...	429,784	61	576	746	61
Osceola...	39,337	94	400	98	93
Page...	176,093	77	557	316	76
Palo Alto...	2,150,887	9	576	3,734	8
Plymouth...	627,934	49	860	730	62
Pocahontas...	803,788	37	576	1,395	37
Polk...	166,816	78	585	285	79
Pottawattamie...	476,243	56	960	496	69
Poweshiek...	367,197	66	382	961	55
Ringgold...	102,018	85	542	188	84
Sac...	1,065,821	24	576	1,850	27
Scott...	114,222	83	455	251	80
Shelby...	455,007	60	590	771	60
Sioux...	749,460	40	769	949	56
Story...	1,669,403	13	576	2,904	18
Tama...	707,956	42	720	983	53
Taylor...	178,336	75	548	325	75
Union...	942,895	31	432	2,182	20
Van Buren...	69,749	88	484	146	86
Wapello...	470,200	57	432	1,089	49
Warren...	31,903	95	569	56	96
Washington...	564,539	52	566	997	51
Wayne...	628,386	47	523	1,201	42
Webster...	633,164	46	720	879	57
Winnebago...	1,070,273	23	403	2,656	16
Winneshiek...	1,536,260	18	694	2,113	21
Woodbury...	1,925,503	11	573	3,360	9
Worth...	845,022	34	402	2,102	23
Wright...	957,701	30	576	1,659	30
Total	77,013,875		56,025	1,373	

TABLE No. 9.

Showing twenty leading counties, according to rank in net shipments of butter per square mile; also net pounds shipped per square mile; also showing rank of same counties and shipments per square mile for preceding year.

COUNTIES.	Rank.	Pounds shipped.	Rank.	Pounds shipped.
Bremer	1	1899.	1	1898.
Chickasaw	2	5,905	3	6,361
Buchanan	3	5,006	6	4,689
Clayton	4	4,913	9	4,316
Jones	5	4,804	6	3,519
Delaware	6	4,655	2	4,919
Butler	7	4,155	5	4,421
Palo Alto	8	3,819	4	4,572
Woodbury	9	3,734	7	4,095
Dubuque	10	3,360	34	1,632
Mitchell	11	3,353	8	3,707
Fayette	12	3,340	10	3,355
Hardin	13	3,139	11	3,352
Hamilton	14	2,815	16	2,695
Black Hawk	15	2,863	13	3,049
Winnebago	16	2,853	12	3,176
Howard	17	2,656	15	2,715
Story	18	2,422	17	2,438
Audubon	19	2,204	14	2,995
Union	20	2,183	29	1,769
		2,182	18	2,408

Following is a table showing the twenty counties from which the greatest number of pounds of butter is shipped, and comparison with number of pounds shipped from each in previous period; the year ends October 1st of each year, figures given being for net shipments:

TABLE No. 10.

COUNTIES.	1899.		1898.	
	Rank.	Pounds.	Rank.	Pounds.
Buchanan	1	2,830,145	6	2,485,963
Jones	2	2,681,493	1	2,833,366
Bremer	3	2,551,151	2	2,747,519
Clayton	4	2,536,363	4	2,561,978
Chickasaw	5	2,522,972	8	2,363,263
Delaware	6	2,393,572	5	2,546,712
Fayette	7	2,280,400	7	2,413,109
Butler	8	2,199,795	3	2,634,822
Palo Alto	9	2,150,887	9	2,358,764
Dubuque	10	2,015,430	10	2,227,874
Woodbury	11	1,925,503	20	935,000
Kossuth	12	1,716,280	14	1,719,698
Story	13	1,669,403	13	1,725,037
Hardin	14	1,667,586	16	1,552,370
Hamilton	15	1,649,436	12	1,756,368
Black Hawk	16	1,643,358	11	1,829,518
Mitchell	17	1,579,863	15	1,586,935
Lincoln	18	1,536,260	17	1,500,810
Winneshiek	19	1,453,302	18	1,472,416
Cerro Gordo	20	1,211,608	19	1,333,141
Total		40,194,807		40,581,753

It will be noticed that the above counties, leaving out Woodbury, are the same nineteen counties that ranked first last year, but in different order. Also that there is a decrease in the amount of butter shipped from the twenty counties of 389,496 pounds, which is more than the total net decrease of the state. In the above list Woodbury, which is not a creamery county, shows a gain of nearly 1,000,000 pounds. Leaving out Woodbury, the nineteen chief dairy counties show a decrease of about 1,375,000 pounds, which is nearly compensated for by increases in counties not counted as being accustomed to ship large quantities of butter.

TOTAL NET WEIGHT 77,013,875 POUNDS

R-11 LYON 2,508,849	R-43 OSCEOLA 379,337	R-45 DICKINSON 457,373	R-47 EMMET 553,077	R-28 WINNEBAGO 1,070,279	R-16 WORTH 395,022	R-11 MITCHELL 1,572,663	R-17 HOWARD 1,527,757	R-21 WASHINGTON 1,536,260	R-32 ALPINE 1,062,527
R-56 SIOUX 799,440	R-61 O'BRIEN 429,749	R-44 CLAY 607,656	R-8 PALOALTO 2,150,887	KOSSUTH 1,162,280	R-65 HANCOCK 375,463	R-22 SIOUX 2,116,088	R-23 TLOYD 673,302	R-12 CHICKASAW 2,522,722	R-4 CLAYTON 2,531,363
R-61 PLYMOUTH 627,134	R-68 CHICKASAW 429,749	R-29 BUREAU 469,781	R-37 POCAHONTAS 403,718	R-24 HEMLOCK 377,600	R-30 WRIGHT 257,904	R-46 FRANKLIN 657,123	R-7 BUTLER 2,147,785	R-15 BREMER 2,531,757	R-3 FAYETTE 2,260,900
R-9 WOODBURY 1,925,503	R-52 IOWA 1,224,530	R-34 SAC 1,065,821	R-33 CALHOUN 468,302	R-57 WEBSTER 633,189	R-18 HAMILTON 1,649,436	R-13 HARDEN 1,449,386	R-31 GRUNDY 429,567	R-15 BLACK HAWK 1,693,358	R-3 DELAWARE 2,630,905
R-97 MONROE 11,370	R-73 CRAWFORD 283,517	R-35 CARROLL 627,747	R-26 GREENE 1,075,183	R-77 BOONE 1,775,806	R-5 STONE 1,684,903	R-49 MARSHALL 659,820	R-53 TAMA 7,017,936	R-50 BENTON 756,477	R-25 LINN 1,483,309
R-83 HARRISON 1,150,663	R-60 SHELBY 453,087	R-19 IUDON 444,931	R-40 OUTAHEE 778,352	R-45 DALLAS 669,605	R-72 POLK 46,016	R-67 JASPER 385,758	R-55 POWESHIEK 367,197	R-59 IOWA 5,330,016	R-57 JOHNSON 47,601
R-14 POTAWATOMIE 4,762,946	R-63 ADAMS 507,600	R-64 ADAIR 507,600	R-40 MADISON 710,274	R-40 WARREN 3,190,3	R-46 POLK 3,190,3	R-53 MARION 1,153,7	R-74 MAHASKA 226,178	R-81 KEOKUK 433,853	R-51 WASHINGTON 3,693,334
R-49 MILLS 4,328,4	R-55 MONROE 331,118	R-39 ADAMS 545,864	R-20 UNION 492,675	R-70 CLARKE 2,085,67	R-88 LUCAS 620,67	R-95 MONROE 187,1	R-44 WAPCILD 470,200	R-81 KEOKUK 433,853	R-51 WASHINGTON 3,693,334
R-49 FREMONT 2,265	R-76 PAGE 176,073	R-75 TAYLOR 176,336	R-84 HINGOLEE 102,015	R-22 DECATUR 547,06	R-48 WAYNE 625,386	R-48 WINDSOR 403,115	R-82 DAVIS 106,189	R-86 WABASH 67,777	R-51 WASHINGTON 3,693,334

VALUE, \$ 15,895,663

IOWA.  
1899

NET BUTTER SHIPMENTS TO PORTS OUTSIDE THE STATE

ALSO RANK OF COUNTIES IN SHIPMENTS PER 50 MILE.

A.  
New  
York  
PRICE  
PER  
POUND  
2064  
CENTS

CREAMERY LIST.

List of creameries in the state, alphabetically arranged according to counties and town near which creamery is located, together with information pertaining to each.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, cooperative, or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of receiv- ing milk - by the test or by the hundred.	No. of D. C. test bottle.	No. of D. C. pi- pette.
<i>Adair County.</i>											
1	Adair.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	1361	409
2	Arbor Hill.....	Hebron Creamery Co. (s)...	Ind...	A. R. Haskell.....	Hebron.....	Orient.....	.....	Sep'tr..	Test..	.....	.....
3	Berea.....	Blue Grass Cr'y Co. (s)...	Ind...	A. L. Stewart & Co.....	Fontanelle.....	.....	.....	Sep'tr..	Hd.....	.....	.....
4	Bridgewater.....	Blue Grass Cr'y Co.....	Ind...	A. L. Stewart & Co.....	Fontanelle.....	Bridgewater.....	J. E. Beck.....	Sep'tr..	Hd.....	1017	304
5	Canby.....	Blue Grass Cr'y Co. (s)...	Ind...	A. L. Stewart & Co.....	Fontanelle.....	Fontanelle.....	.....	Sep'tr..	Hd.....	.....	.....
6	Fontanelle.....	Blue Grass Cr'y Co.....	Ind...	A. L. Stewart & Co.....	Fontanelle.....	Fontanelle.....	W. F. Stewart.....	Sep'tr..	Hd.....	.....	.....
7	Greenfield.....	Blue Grass Cr'y Co.....	Ind...	A. L. Stewart & Co.....	Fontanelle.....	Fontanelle.....	Fred Johnson.....	Sep'tr..	Hd.....	.....	.....
8	Hebron.....	Hebron Creamery Co.....	Ind...	A. R. Haskell.....	Greenfield.....	Greenfield.....	D. F. Hammers.....	Sep'tr..	Hd.....	.....	.....
9	Holiday.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Hebron.....	Orient.....	.....	Sep'tr..	Test..	.....	.....
10	Howe.....	Howe Co-op. Cr'y Co.....	Co-op.	A. C. Curtis.....	Chicago, Ill.....	.....	J. F. Pease.....	Sep'tr..	Test..	1282	240
11	Orient.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Menlo.....	Stuart.....	.....	Sep'tr..	Test..	.....	.....
12	Richland.....	Blue Grass Cr'y Co. (s)...	Ind...	A. L. Stewart & Co.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	.....	.....
<i>Adams County.</i>											
13	Corning.....	Elgin Creamery Co.....	Ind...	O. Sands, Pres.....	Chicago, Ill.....	Corning.....	J. E. Anderson.....	Sep'tr..	Test..	1451	407
14	Carbon.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	1452	410

15	Carl.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	R27	R27
16	Mercer.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	.....	.....
17	Nodaway.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	.....	.....
18	Prescott.....	Prescott B. & C. Ass'n.....	Co-op.	W. H. Crammer, Pr's.....	Prescott.....	Prescott.....	C. E. Chawgo.....	Sep'tr..	Test..	.....	.....
19	Williamson.....	Prescott B. & C. Ass'n(s)	Co-op.	W. H. Crammer, Pr's.....	Prescott.....	.....	.....	Sep'tr..	Test..	.....	.....
<i>Allamakee County</i>											
20	Dorchester.....	Dorchester Creamery.....	Stk Co	L. Coppersmith, Mgr.....	Dorchester.....	New Albin.....	H. J. Foss.....	G. C.....	Test..	.....	.....
21	Lansing.....	Calhoun Creamery Co.....	Co-op.	J. Leppert, Sec.....	Church.....	Lansing.....	George Turner.....	G. C.....	Test..	.....	.....
22	Ludlow.....	Farmers Waukon Co-op. Creamery Company (s)	Co-op.	S. H. Opfer, Sec.....	Waukon.....	.....	.....	Sep'tr..	Test..	.....	.....
23	Postville.....	Postville F'r's Co-op. Cr'y	Co-op.	F. H. Weizel, Sec.....	Postville.....	Postville.....	Jas. A. Gordon.....	Sep'tr..	Test..	.....	.....
24	Postville.....	Farmers Waukon Co-op. Creamery Company (s)	Co-op.	S. H. Opfer, Sec.....	Waukon.....	.....	.....	Sep'tr..	Test..	.....	.....
25	Quandahl.....	Arctic Spring Cr'y.....	Ind...	I. D. Johnson.....	Quandahl.....	Spring Grove.....	I. Langlie.....	G. C.....	Test..	.....	.....
26	Village Creek.....	Village Creek Creamery	Co-op.	A. J. McCafferty, Sec.....	Lansing.....	Lansing.....	E. Baumann.....	G. O.....	Test..	.....	.....
27	Waterville.....	Farmers Co-op. Cr'y & Commercial Co.....	Co-op.	Adolph Asleson, Sec.....	Waterville.....	Waterville.....	A. Asleson.....	G. C.....	Test..	.....	.....
28	Waukon.....	Farmers Waukon Co-op. Creamery Company.....	Co-op.	S. H. Opfer, Sec.....	Waukon.....	Waukon.....	Fred Nagel.....	Sep'tr..	Test..	1000	369
29	Waukon.....	Ludlow Co-op. Cr'y Co.....	Co-op.	A. G. Winter, Sec.....	Waukon.....	Waukon.....	F. A. Piet.....	Sep'tr..	Test..	.....	.....
30	Waterville.....	Farmers Waukon Co-op. Creamery Company (s)	Co-op.	S. H. Opfer, Sec.....	Waukon.....	.....	.....	Sep'tr..	Test..	.....	.....
<i>Audubon County.</i>											
31	Audubon.....	Sharon Sep'tr Cr'y Co.....	Co-op.	J. R. Christensen, Sec.....	Audubon.....	Audubon.....	M. Andersen.....	Sep'tr..	Test..	.....	.....
32	Audubon.....	Danish Sep'tr Cr'y Co.....	Co-op.	Peter Lykke, Sec.....	Kimballton.....	Audubon.....	C. F. Jensen.....	Sep'tr..	Test..	.....	.....
33	Brayton.....	Oakfield Twp. Sep'tr Creamery Co.....	Co-op.	J. Nyman, Sec.....	Brayton.....	Brayton.....	H. Henrickson.....	Sep'tr..	Test..	1199	124
34	Brayton.....	Troublesome Valley Creamery Co.....	Co-op.	J. C. Hardman, Sec.....	Brayton.....	Brayton.....	J. P. Nielson.....	Sep'tr..	Test..	1328	286
35	Exira.....	Elgin Creamery Co. (s)...	Ind...	O. Sands, Pres.....	Chicago, Ill.....	.....	.....	Sep'tr..	Test..	.....	.....
36	Exira.....	Audubon Twp. Cr'y Co.....	Co-op.	H. P. Petersen, Sec.....	Exira.....	Exira.....	H. P. Petersen.....	Sep'tr..	Test..	1433	381
37	Exira.....	West Hamlin Sep'tr Cr'y Co.....	Co-op.	John Nielsen.....	Exira.....	Exira.....	John Nielsen.....	Sep'tr..	Test..	1316	264
38	Gray.....	Gray Creamery Co.....	Co-op.	Louis Groteluschen.....	Gray.....	Gray.....	M. J. Goodnow.....	Sep'tr..	Test..	1012	104
39	Hamlin.....	Blue Grass Sep'tr Cr'y Co.....	Co-op.	H. G. Rice, Sec.....	Hamlin.....	Hamlin.....	F. Helleman.....	Sep'tr..	Test..	1406	349
40	Ross.....	Ross Creamery.....	Co-op.	H. W. Stearns, Sec.....	Audubon.....	Ross.....	Jas. Smith.....	Sep'tr..	Test..	.....	.....
41	Viola Center.....	Ross Creamery Co. (s)...	Co-op.	J. Shingledecker, Sec.....	Audubon.....	.....	.....	Sep'tr..	Test..	.....	.....
<i>Benton County.</i>											
42	Atkins.....	Fremont Creamery.....	Co-op.	R. Simmer.....	Atkins.....	Atkins.....	V. Knuf.....	Sep'tr..	Hd.....	.....	.....
43	Belle Plaine.....	Springbrook.....	Ind...	John Newman Co.....	Elgin, Ill.....	Belle Plaine.....	O. W. Hicks.....	Sep'tr..	Test..	.....	.....
44	Blairstown.....	Katie's Creamery.....	Ind...	J. A. Duncalf.....	Blairstown.....	Blairstown.....	K. A. Duncalf.....	Sep'tr..	Test..	.....	.....
45	Mt. Auburn.....	Mt. Auburn Co-op. Cr'y Co.....	Co-op.	N. Schnoor, Sec.....	Mt. Auburn.....	Mt. Auburn.....	J. S. Smith.....	Sep'tr..	Test..	1330	291



CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, co-operative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER	Separator. gathered cream, or both.	Method of receiving milk — by the test or by the hundred.	No. of D. C. test bottle.	No. of D. C. pl-pette.
46	Gillespie	La Porte Co-op. Cr'y Co. (s)									
47	Norway	Norway Creamery	Co-op.	C. B. Gingrieh, Sec.	La Porte	Norway	Wm Rowse	Sep'tr	Test		
48	Shellsburg	Shellsburg Creamery	Ind	William Rowse	Norway	Shellsburg		Sep'tr	Test		
49	Shellsburg	Shellsburg Creamery (s)	Ind	M. Nietert	Shellsburg	Shellsburg		Sep'tr	Test		
50	Urbana	Farmers' Co-op Cr'y Co	Co-op	M. Nietert	Shellsburg	Shellsburg		Sep'tr	Test		
51	Van Horne	Katie's Diamond Cr'y	Co-op	A. B. Cramer, Sec.	Urbana	Center Point	Milton Briggs	Sep'tr	Test	1255	197
52	Van Horne	Benton County Cr'y Co	Ind	J. A. Wicke	Van Horne	Van Horne	Katie A. Wicke	Sep'tr	Test	998	433
53	Vinton	Vinton Creamery	Ind	L. C. Eggleston, Sec.	Vinton	Vinton	Geo. B. Gray	Sep'tr	Test	1505	432
54	Walford	Cedar Valley Cr'y Co (s)	Stk Co	A. M. Rowe, Sec.	Vinton	Vinton	Homer Barber	Sep'tr	Test	1449	404
55	Watkins	Watkins Creamery	Ind	G. L. Hubbell, Sec.	Cedar Rapids	Watkins		Sep'tr	J, Hd		
		Watkins Creamery	Ind	E. S. McDonald	Watkins	Watkins	E. S. McDonald	Sep'tr	Test	1273	236
<i>Black Hawk County.</i>											
56	Benson	Benson Dairy Co.	Co-op.	Wm. Morgan, Sec	Benson	Benson	Geo. W. Thayer	Sep'tr	Test	1320	270
57	Cedar Falls	Cedar Falls Co-op. Cr'y Ass'n	Co-op	L. A. Severin, Sec.	Cedar Falls	Cedar Falls	A. K. Smith	Sep'tr	Test		
58	Crain Creek	Crain Creek Creamery	Ind	F. A. Riedel, Prop.	Crain Creek	Waterloo	F. A. Riedel	Sep'tr	Hd.	131	72
59	De War	De War Dairy Ass'n	Co-op	G. S. Kleckner, Sec.	De War	De War	Wm. McKeen	Sep'tr	Test		
60	Dunkerton	Farmers' Cr'y Co.	Co-op	Hoxdorf & Miller	Dunkerton	Dunkerton	O.G. Alexander	Sep'tr	Test	1002	82
61	Dunkerton	Edwards' Creamery	Ind	T. J. Humphrey, Sec	Edwards	Dunkerton		Sep'tr	Test		
62	Eagle Center	Eagle Center Dairy As.	Co-op	J. C. Tribon, Sec	Eagle Center	Waterloo	Josiah Hill	Sep'tr	Test	1214	154
63	Fairbank	East Lester Cr'y Co.	Stk Co	A. A. Briggs, Sec.	Fairbank	Fairbank	J. T. Dietz	Sep'tr	Test	1444	395
64	Finchford	Union Creamery Co.	Co-op.	J. B. Kascht, Sec	Finchford	Winslow	I. R. Moon	Sep'tr	Test		
65	Gilbertville	Gilbertville Dairy Ass'n	Co-op.		Gilbertville	Washburn	C. R. Fuller	Sep'tr	Test	658	86
66	Hudson	Rock Creek Farmers' Dairy Association	Co-op	W. P. Thompson, Sec	Hudson	Hudson	Thos. Hansen	Sep'tr	Test	1033	268
67	Hudson	Hudson Co-op. Dairy Association	Co-op.	C. H. Brandhorst	Hudson	Hudson	G. B. Strayer	Sep'tr	Test	670	17
68	Jubilee	Jubilee Co-op. Cr'y Co.	Co-op.	H. G. Koob, Sec	Jubilee	Jesup	B. Lenius	Sep'tr	Test	1208	251
69	Janesville	Mt. Vernon Creamery	Co-op.	J. E. Rundles, Sec.	Boies	Janesville	M. J. Johnson	Sep'tr	Test	R14	R14
70	La Porte	La Porte Co-op. Cr'y Co	Co-op.	C. B. Gingrieh, Sec.	La Porte	La Porte	Oscar Harvey	Sep'tr	Test	1302	130
71	Waterloo	Waterloo Creamery	Ind	Engelking & Widdel	Waterloo	Waterloo	Engelking & Widdel	Sep'tr	Test		
72	Waterloo	The Fowler Co*	Ind	The Fowler Co	Waterloo	Waterloo	F. Wightman	S & G.O.	Test	1324	282
73	Waterloo	North Star*	Ind	The Fowler Co	Waterloo	Waterloo	Chas. Wood	Sep'tr	Test		
74	Waterloo	Farmers' Dairy Ass'n	Co-op.	D. F. Hoover, Sec.	Waterloo	Waterloo	R. W. Chadwick	Sep'tr	Test		
<i>Boone County.</i>											
75	Beaver	Beaver Creamery	Ind	J. P. Cummings, Prop	Beaver	Beaver	W. M. Yarges	S. & G.O.	Test		
76	Boone	Soenke Bros.' Cr'y	Ind	Peter & Geo. Soenke	Boone	Boone	P. F. Soenke & M. Kreitzer	Sep'tr	Test	1206	139
77	Bouton	Bouton Creamery	Ind	John J. Colvin	Bouton	Bouton		Sep'tr	Test	1503	431
78	Madrid	Madrid Creamery	Ind	N. Laborde, Mgr.	Madrid	Madrid	N. Laborde	Sep'tr	Test	111	342
79	Ogden	Ooon Valley Cr'ies (s)	Ind	Renner Bros.	Grand Jct			Sep'tr	Test		
80	Pilot Mound	John Colvin & Co.	Ind	Chas Muench, Mgr.	Pilot Mound	Pilot Mound		Sep'tr	Test		
81	Renner	Ooon Valley Creameries	Ind	Renner Bros.	Grand Jct	Grand Jct	Felix Scollon	Sep'tr	Test		
82	Rosendale	Rosendale Co-op. Cr'y Co	Co-op.	John J. Skaalure	Rosendale	Story City	M. B. Hershey	Sep'tr	Test	798	68
<i>Bremer County.</i>											
83	Bremer	Bremer Creamery Co.	Co-op	F. C. Kchagen	Bremer	Bremer	J. C. Pries	Sep'tr	Test	1339	294
84	Bremer	Western Douglass Cr'y Co	Co-op.	A Hoppenworth, Sec	Seigel	Bremer	Albert Betkke	Sep'tr	Test	R10	R10
85	Denver	Farrington Cr'y Co.	Co-op.	F. Garton	Janesville	Janesville	F. Bowdish	Sep'tr	Test		
86	Denver	First Maxfield Cr'y Co	Co-op.	Wm. Milens, Sec.	Denver	Waverly	Peter Hasler	Sep'tr	Hd.		
87	Frederika	Frederika Cr'y Ass'n	Co-op	J. H. McDonald, Sec	Frederika	Tripoli	F. Farwell	Sep'tr	Test	1173	98
88	Grovehill	Grovehill Creamery Co.	Stk Co	J. H. Benzing, Sec	Grovehill	Fairbank	F. D. Daniels	Sep'tr	Hd.		
89	Horton	Horton Stock Co.	Co-op.	R. G. Fraser, lessee.	Waverly	Waverly	Ora Lovejoy	Sep'tr	Test	791	140
90	Janesville	The Fowler Co*	Ind	The Fowler Co	Waterloo	Janesville	A. M. Royer	Sep'tr	Test		
91	Klinger	Klinger	Ind	C. H. Dickman, Prop	Klinger	Dunkerton	C. H. Dickmann	Sep'tr	Hd.		
92	Knittel	Maxfield Creamery Co.	Co-op.	J. Strottmann, Sec.	Knittel	Tripoli	Fred Wills	Sep'tr	Hd.		
93	Sumner	Little Valley Creamery	Stk Co	J. H. Schwake, Sec.	Buck Oreek	Sumner	F. M. Zeil	Sep'tr	Hd.		
94	Sumner	Climax Creamery Co.	Co-op	Henry Specht, Sec.	Sumner	Sumner	F. Engel	Sep'tr	Hd.		
95	Sumner	Excelsior Creamery Co.	Co-op.	H. E. Wuttke, Sec.	Sumner	Sumner	F. G. Huntley	Sep'tr	Test		
96	Sumner	Sumner Creamery Co.	Co-op.	M. Wescott, Sec.	Sumner	Sumner	Ben Winks	Sep'tr	Hd.		
97	Sumner	Spring Fount'n Cr'y Co.	Co-op.	Joseph Volker, Sec.	Sumner	Sumner	O. E. Myerhoff	Sep'tr	Hd.	1230	177
98	Tripoli	Potter's Siding Cr'y.	Co-op.	Wm. Bany, Sec.	Tripoli	Tripoli	W. Stegeman	Sep'tr	Hd.		
99	Tripoli	Seigel Creamery	Co-op.	E. Moeller, Sec.	Seigel	Tripoli	H. C. Braun	Sep'tr	Hd.		
100	Tripoli	Tripoli Creamery Co.	Co-op.	F. W. Hale, Sec.	Tripoli	Tripoli	F. C. Oitrogge	Sep'tr	Hd.		
101	Tripoli	Fremont Creamery Co.	Co-op.	A. D. Chapin, Sec.	Tripoli	Tripoli	W. W. Day	Sep'tr	Test	1338	293
102	Tripoli	Wapsie Valley Cr'y.	Ind	H. F. Lehmkuhl, Pr.	Wapsie	Tripoli	H. F. Lehmkuhl	Sep'tr	Hd.		
103	Waverly	Washington Cr'y Co.	Co-op	E. J. Thies, Sec	Waverly	Waverly	H. J. Frele	Sep'tr	Hd.		
104	Waverly	La Fayette Cr'y Co.	Co-op.	L. C. Oberdorf, Sec.	Waverly	Waverly	Henry Piegars	Sep'tr	Test	1233	215
105	Waverly	Condensed Milk Fact'y.	Ind	R. G. Fraser & Co.	Waverly	Waverly		Sep'tr	Test	1315	233
<i>Buchanan County.</i>											
106	Waverly	Ellislan Creamery Co	Ind	H Graening, Sec	Janesville	Waverly	H. A. Griese	Sep'tr	Test		
107	Aurora	Elliott & Speed	Ind	John Elliott, Sec	Lamont	Aurora	Speed	Sep'tr	Test		
108	Brandon	Brandon Creamery Co.	Co-op	W. W. Bain	Brandon	Mt. Auburn	Wm. P. Farmer	Sep'tr	Test		
109	Fairbank	Fairbank Farmers' Cr'y Co.	Co-op.		Fairbank	Fairbank	H. H. Opperm'n	Sep'tr	Test	1340	297
110	Hazelton	Hazelton F'mrs' Cr'y Co	Co-op.	E. Sanborn, Sec.	Hazelton	Hazelton	E. J. Short	Sep'tr	Test		

\*Manufacture butter and cheese.

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, cooperative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gathered cream, or both.	Method of receiving milk—the test or by the hand.	No. of D. C. test bottle.	No. of D. C. pette.
111	Independence	Independence Cr'y	Ind...	Weins & Shillinglaw	Independence	Independence		Sep'tr..	Test..		
112	Jesup	Jesup Creamery Co.	Co-op.	James Dalton, Sec.	Jesup	Jesup	A. Christensen	Sep'tr..	Test..	1154	10
113	Jesup	Jesup Hand Sep. Cr'y Co	Stk Co	J. N. Muncey, Sec.	Jesup	Jesup		G. C.	Test..		
114	Jesup	Vista Creamery Co. (s)	Co-op.	A. G. Brown, Sec.	Vista	Vista		G. C.	Test..		
115	Lamont	Lamont Creamery Co.	Co-op.	F. W. Sheldon, Sec.	Lamont	Lamont	F. Kleckper	Sep'tr..	Hd.	R 23	R 23
116	Otterville	Otterville Creamery Co.	Co-op.	O. L. Bright, Sec.	Otterville	Independence	Martin Yundt.	Sep'tr..	Test..		
117	Quasqueton	Winthrop Creamery (s)	Ind...	Plank Bros, Props.	Winthrop	Winthrop		Sep'tr..	Test..		
118	Rowley	Rowley Co-op Cr'y Co.	Co-op.	W. E. Brady, Sec.	Rowley	Rowley	John Polen	Sep'tr..	Test..		
119	Stanley	Stanley Creamery	Ind...	John Elliott	Lamont	Stanley	Frank Strong	Sep'tr..	Test..		
120	Vista	Vista Creamery Co.	Co-op.	A. G. Brown, Sec.	Vista	Independence	L. C. Burkner	Sep'tr..	Test..		
121	Walker	Hamerville Creamery	Ind...	W. W. Wilde	Walker	Independence	E. J. Ford	G. C.	Test..		
122	Winthrop	Winthrop Creamery	Ind...	Plank Bros, Props.	Winthrop	Winthrop	W. H. Plank	Sep'tr..	Test..	R 7	R 7
123	Winthrop	Gold Coin Creamery	Ind...	D. E. Coffin, Prop.	Winthrop	Winthrop	D. E. Coffin	Sep'tr..	Test..	1155	143
124	Winthrop	Winthrop Creamery Co	Ind...	John Hazelrigg, Pr.	Middlefield	Winthrop	M. C. Hazelrigg	Sep'tr..	Hd.		
<i>Buena Vista County.</i>											
125	Alta	Alta Creamery	Ind...	C. P. Cornelussen, Pr	Alta	Alta	W. H. Cline	Sep'tr..	Test..	1502	430
126	Marathon	Farmers Co-op Cr'y	Co-op.	E. R. Stangland, Sec.	Marathon	Marathon	P. O. Lindstrom	Sep'tr..	Test..		
127	Marathon	Fairfield Creamery Co.	Co-op.	C. G. England, Sec.	Marathon	Marathon	G. F. Langquist	Sep'tr..	Test..	1009	113
128	Newell	Newell Factory	Stk Co	E. W. Stetson	Newell	Newell	E. W. Geyer	Sep'tr..	Test..	1207	142
129	Newell	Coon River-Co-op Cr'y	Co-op.	Hans C. Kruse, Sec.	Newell	Newell	P. C. Flaskegr'd	Sep'tr..	Test..	797	274
130	Peterson	Crescent Creamery	Ind...	W. R. Montgomery Pr	Peterson	Peterson	O. H. Jordan	Sep'tr..	Test..	1223	164
131	Sioux Rapids	Sioux Rapids	Ind...	McKay & Soenke	Sioux Rapids	Sioux Rapids	H. D. Peck	Sep'tr..	Test..	1228	171
132	Storm Lake	Storm Lake Cr'y	Ind...	Henry Hustedt	Storm Lake	Storm Lake	John Linge	Sep'tr..	Hd.		
133	Sulphur Spr'gs	Springs Cr'y	Ind...	R. F. Beswick, Prop.	Fonda	Fonda		Sep'tr..	Test..		
134	Sulphur Spr'gs	Fairfield Cr'y Co. (s)	Co-op.	C. G. England, Sec.	Marathon			Sep'tr..	Test..		
<i>Butler County.</i>											
135	Aplington	Aplington	Stk Co	H. Patterson	Aplington	Aplington	H. Patterson	Sep'tr..	Hd.		
136	Aplington	Monroe Central Cr'y	Co-op.	A. Ontjes	Aplington	Aplington	Wm. Lenius	Sep'tr..	Hd.	1363	318
137	Austinville	White Rose Creamery	Ind...	S. Patterson	Austinville	Austinville	S. Patterson	Sep'tr..	Hd.		
138	Aredale	Dumont Creamery (s)	Stk Co	T. I. Laird, Sec.	Dumont	Dumont		Sep'tr..	Test..		
139	Bristow	Farmers' Cr'y Ass'n	Co-op.	M. G. Hull	Bristow	Bristow	Edwin Rector	Sep'tr..	Test..	42	232
140	Bristow	Hitesville	Ind...	James P. Johnston	Hitesville	Bristow	J. P. Johnston	Sep'tr..	Test..	1441	390
141	Butler Center	Butler Center	Ind...	W. J. Daniels	Butler Center	Allison	W. J. Daniels	Sep'tr..	Test..	1355	306
142	Clarkson	Clarksville Creamery	Stk Co	E. D. Wilcox	Clarksville	Clarksville	W. S. Barklew.	S & G. C.	Test..	1142	448
143	Coster	Isaac Hall & Co.	Ind...	Ed Olsen	Coster	Shell Rock	Ed Olsen	Sep'tr..	Test..		
144	Dumont	Cluterville Creamery	Co-op.	A. E. Hartson, Mgr.	Cluterville	Dumont	Wm. Kurtz	Sep'tr..	Test..		
145	Dumont	Dumont	Stk Co	T. I. Laird & Co.	Dumont	Dumont	John Carlson	Sep'tr..	Test..		
146	Greene	Coldwater Co-op. Dairy Association	Stk Co	O. S. Crandall	Greene	Greene	L. J. Sargent	S & G. C.	Test..	1434	382
147	Greene	Northern West Point Creamery Co	Ind...	H. Debner, Sec	Greene	Greene	H'rm'n Ladage	Sep'tr..	Test..	1356	311
148	New Hartford	Beaver Creamery Co.	Co-op.	D. L. Hurlbut, Sec.	New Hartford	New Hartford	J. A. Ranney	Sep'tr..	Test..	182	305
149	New Hartford	Crescent Co-op. Cr'y	Co-op.	C. E. Jamerson, Mgr.	New Hartford	New Hartford	George Palmer	Sep'tr..	Test..		
150	Parkersburg	Beaver Center Cr'y Co.	Co-op.	John R. Stow	Parkersburg	Parkersburg	George Larson	Sep'tr..	Test..	1160	81
151	Parkersburg	Parkersburg Creamery	Co-op.	A. Ontjes	Aplington	Parkersburg	A. J. Gradland	Sep'tr..	Test..	792	317
152	Prosper	Prosper Creamery	Stk Co	Carl Clausung	Prosper	Nashua		Sep'tr..	Test..		
153	Shell Rock	Shell Rock Cr'y Ass'n	Co-op.	Henry Shepard, Sec.	Shell Rock	Shell Rock	C. O. Towne	Sep'tr..	Test..	89	160
154	Shell Rock	Star Creamery	Co-op.	Harkin & Beal			Franklin Beal	Sep'tr..	Test..	1506	436
155	Swanton	Albion Creamery Co.	Co-op.	E. S. Philo	New Hartford	New Hartford	O. F. Courbat	Sep'tr..	Test..	1138	360
156	Shell Rock	Victory	Co-op.	J. M. Cass, Sec	Waverly	Shell Rock	W. H. Woodcock	Sep'tr..	Test..	1257	206
<i>Calhoun County.</i>											
157	Churdan	Coon Valley Cr'ies (s)	Ind...	Renner Bros	Grand Junct'n			Sep'tr..	Test..		
158	Elm Grove	Auburn Creamery Co (s)	Ind...	Parker & Fitzsimons	Auburn			Sep'tr..	Test..		
159	Fonda	Williams Creamery	Ind...	R. F. Beswick	Fonda	Fonda		Sep'tr..	Test..		
160	Lohrville	Coon Valley Cr'ies (s)	Ind...	Renner Bros	Grand Junct'n			Sep'tr..	Test..		
161	Manson	Manson Creamery	Ind...	G. B. Moon	Manson	Manson	G. B. Moon	Sep'tr..	Test..		
162	Pomeroy	Butler Center Co-op. Creamery Co	Co-op.	H. A. Albrecht, Sec	Pomeroy	Knoke	E. E. Dodge	Sep'tr..	Test..	1171	55
163	Pomeroy	Pomeroy Co-op. Cr'y	Co-op.	John Behrends, Sec.	Pomeroy	Pomeroy	E. F. Haven	Sep'tr..	Test..	1279	238
<i>Carroll County</i>											
164	Arcadia	Golden Star Cr'y Co	Co-op.	H. H. Sievers, Sec.	Arcadia	Arcadia	Stephen Jans	Sep'tr..	Test..	1327	785
165	Breda	Breda Creamery	Ind...	Ed Rehker, Sec.	Arcadia	Arcadia	W. Hinners	Sep'tr..	Hd.		
166	Coon Rapids	Coon Rapids Creamery	Ind...	H. L. Fest	Coon Rapids	Dedham	H. L. Fest	Sep'tr..	Test..	1036	247
167	Dedham	Coon Rapids Cr'y (s)	Ind...	H. L. Fest	Coon Rapids	Coon Rapids		Sep'tr..	Test..	1037	246
168	Dedham	Willey Creamery	Ind...	A. Witte	Willey	Dedham	W. B. Witte	Sep'tr..	Test..		
169	Glidden	First Glidden Cr'y	Ind...	Carl Hesse	Glidden	Glidden	Carl Hesse	Sep'tr..	Test..	1527	451
170	Halbur	Crackerjack (s)	Ind...	J. T. Stangl	Halbur	Halbur		Sep'tr..	Test..		
171	Halbur	Crackerjack	Ind...	J. T. Stangl	Halbur	Manning		Sep'tr..	Test..	1321	277
172	Manning	Manning Creamery	Ind...	W. F. Miller, Prop.	Manning	Manning	W. F. Miller	Sep'tr..	Test..		
173	Mt. Carmel	Mt. Carmel	Ind...	Ed Rehker	Arcadia	Breda	W. Hinners	Sep'tr..	Hd.		
174	Ralston	Ralston Creamery	Ind...	A. E. Adams	Ralston	Ralston		Sep'tr..	Test..		
175	Roselle	Rose Valley Creamery	Ind...	C. Kohorst	Roselle	Halbur	C. Kohorst	Sep'tr..	Hd.		
176	Templeton	Templeton Cr'y Co.	Stk Co	George Bierl	Templeton	Templeton	M. Wagner	Sep'tr..	Hd.		
<i>Cass County.</i>											
177	Atlantic	Elgin Creamery Co.	Ind...	O. Sands, Pres.	Chicago, Ill.	Atlantic	P. Williams	Sep'tr..	Test..	1450	406
178	Benton Center	Elgin Creamery Co. (s)	Ind...	O. Sands, Pres.	Chicago, Ill.			Sep'tr..	Test..	R 25	R 25

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, cooperative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of receiv-ing milk—by the test or by the hundred.	No. of D. C. test bottle.	No. of D. C. pi-pette.
179	Lewis .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	.....	.....	.....	.....
180	Lyman .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
181	Marne .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
182	Massena .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
183	Ostrus .....	Elgin Creamery Co (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
<i>Cedar County.</i>											
184	Bennett .....	Golden Star Cr'y (s) .....	Ind...	Aug. Hinricks & Co. ....	Lowden .....	.....	.....	S & G.C.	Hd.	.....	.....
185	Clarence .....	Golden Star Cr'y (s) .....	Ind...	Aug. Hinricks & Co. ....	Lowden .....	.....	.....	Sep'tr ..	Hd.	.....	.....
186	Clarence .....	Union Farmers' Cr'y .....	Stk Co	Henry Bunge, Sec. ....	Lowden .....	Clarence .....	Ernst Sieling ..	S. & G.C.	Test.	.....	.....
187	Durant .....	Durant B. and C. Ass'n ..	Stk Co	Chr. Sorgenfrey .....	Durant .....	Durant .....	.....	Sep'tr ..	Hd.	.....	.....
188	Lowden .....	Yankee Run Creamery ..	Ind...	Huxoll & Boettger .....	Lowden .....	Lowden .....	E. Huxoll .....	Sep'tr ..	Hd.	.....	.....
189	Lowden .....	Home Creamery .....	Ind...	G. F. Reinking .....	Lowden .....	Lowden .....	G. F. Reinking ..	G. C. ....	Inch.	.....	.....
190	Lowden .....	Golden Star Creamery ..	Ind...	Aug. Hinricks & Co. ....	Lowden .....	Bennett .....	W. H. Kroeger ..	Sep'tr ..	Hd.	.....	.....
191	Springdale .....	Hopewell Creamery (s) ..	Ind...	C. G. Eves .....	West Branch ..	.....	.....	Sep'tr ..	Hd.	.....	.....
192	Sunbury .....	Golden Star Cr'y (s) .....	Ind...	A. Hinricks & Co. ....	Lowden .....	.....	.....	Sep'tr ..	Hd.	.....	.....
193	Tipton .....	Cedar Creamery .....	Ind...	H. L. Dean .....	Tipton .....	Tipton .....	W. Johnson .....	G. C. ....	Inch.	.....	.....
194	West Branch .....	Hopewell Creamery .....	Ind...	C. G. Eves, Prop. ....	West Branch ..	West Branch ..	C. G. Eves .....	Sep'tr ..	Hd.	.....	.....
<i>Cerro Gordo County.</i>											
195	Mason City .....	Mason City .....	Ind...	G. H. Gurler, Prop. ....	De Kalb, Ill. ....	Mason City .....	A. E. Hoffman ..	Sep'tr ..	Test.	.....	.....
196	Plymouth .....	Plymouth Creamery Co. ..	Stk Co	R. J. Hemphill, Sec. ....	Plymouth .....	Plymouth .....	W. S. Halcomb ..	Sep'tr ..	Test.	1219	155
197	Portland .....	Portland Creamery .....	Ind...	W. F. Kehm, Prop. ....	Portland .....	Portland .....	A. J. Mitchell ..	Sep'tr ..	Test.	.....	.....
198	Owen .....	Owen Center .....	Ind...	Plel & Crepow .....	Owen .....	Owen .....	L. C. Crepow .....	Sep'tr ..	Test.	66	336
199	Rockwell .....	Rockwell .....	Ind...	Lakins & Gault .....	Rockwell .....	Rockwell .....	J. L. Lakins .....	Sep'tr ..	Test.	356	415
200	Rockwell .....	Rockwell Creamery Co. ..	Stk Co	J. Gerber, Sec. ....	Rockwell .....	Rockwell .....	J. Gerber .....	Sep'tr ..	Test.	291	313
201	Swaledale .....	Pleasant Valley Cr'y .....	Ind...	C. H. Cook, Mgr .....	Swaledale .....	Swaledale .....	C. H. Cook .....	Sep'tr ..	Test.	.....	.....
202	Thornton .....	Thornton .....	Ind...	G. W. Kennedy .....	Thornton .....	Thornton .....	Fred Crane .....	G. C. ....	Test.	.....	.....
203	Ventura .....	Model Co-op. Dairy A. (s) ..	Co-op.	F. A. Anderson, Sec. ....	Miller .....	.....	.....	Sep'tr ..	Test.	.....	.....
<i>Cherokee County.</i>											
204	Aurelia .....	Aurelia Creamery .....	Ind...	Knirtzew & Matson .....	Aurelia .....	Aurelia .....	P. Matson .....	Sep'tr ..	Hd.	1510	439
205	Baum .....	Meriden Creamery (s) .....	Ind...	O. C. Adams, Prop ..	Meriden .....	.....	.....	Sep'tr ..	Hd.	.....	.....
<i>Cleghorn County.</i>											
206	Cleghorn .....	Cleghorn Creamery .....	Ind...	O. C. Adams, Prop. ....	Meriden .....	Cleghorn .....	Ross Johnson ..	Sep'tr ..	Hd.	.....	.....
207	Cherokee .....	Shaul & Stanford's (s) ..	Ind...	Shaul & Stanford .....	Quimby .....	Quimby .....	.....	Sep'tr ..	Test.	.....	.....
208	Fielding .....	Marcus Creamery (s) .....	Ind...	B. O. Skewis .....	Marcus .....	Marcus .....	.....	Sep'tr ..	Test.	.....	.....
209	Larrabee .....	Larrabee Creamery .....	Ind...	A. Younger .....	Larrabee .....	Larrabee .....	A. Younger .....	Sep'tr ..	Test.	1254	194
210	Marcus .....	Marcus Creamery .....	Ind...	B. O. Skewis .....	Marcus .....	Marcus .....	J. S. Likens .....	Sep'tr ..	Test.	.....	.....
211	Meriden .....	Meriden Creamery .....	Ind...	O. C. Adams, Prop. ....	Meriden .....	Meriden .....	O. C. Adams .....	Sep'tr ..	Hd.	.....	.....
212	Quimby .....	Shaul & Stanford's .....	Ind...	Shaul & Stanford .....	Quimby .....	Quimby .....	A. J. Stanford ..	Sep'tr ..	Test.	1021	61
213	Washta .....	Washta Creamery Co. ....	Co-op.	Jas. Robertson, Jr. ....	Washta .....	Washta .....	C. D. Vanhorn ..	Sep'tr ..	Test.	.....	.....
<i>Chickasaw County.</i>											
214	Alta Vista .....	Alta Vista Far Cr'y Ass'n ..	Co-op	Wm. Vick, Mgr .....	Alta Vista .....	Alta Vista .....	C. C. Capper .....	Sep'tr ..	Test.	50	378
215	Bassett .....	Bassett Cr'y Ass'n .....	Co-op	T. J. McGettigan, Mgr ..	Bassett .....	Bassett .....	M. E. Benson .....	Sep'tr ..	Test.	638	329
216	Boyd .....	Boyd Cr'y Ass'n .....	Co-op	Wm. Denner, Sec. ....	Boyd .....	Boyd .....	P. E. Saxer .....	Sep'tr ..	Test.	.....	.....
217	Deerfield .....	Deerfield Creamery .....	Co-op	J. W. Kane, Sec. ....	Deerfield .....	Alta Vista .....	S. Butler .....	Sep'tr ..	Test.	.....	.....
218	Devon .....	Devon Far. Cr'y Ass'n .....	Co-op	E. P. Sheffield, Sec. ....	New Hampton ..	Devon .....	A. W. Kaericher ..	Sep'tr ..	Test.	1229	172
219	Fred'ricksburg .....	Dresden Creamery .....	Ind...	James Campbell .....	New Hampton ..	New Hampton ..	Jas. Campbell ..	Sep'tr ..	Test.	1426	384
220	Fred'ricksburg .....	Friedericksburg B. Fac. ....	Co-op	Wm. Bee, Sec. ....	Fr. d'ricksburg ..	Fred'ricksbg .....	J. H. Clark .....	Sep'tr ..	Test.	184	259
221	Ionia .....	Ionia Co-op. Cr'y Co. ....	Co-op	J. W. Cagley, Sec. ....	Ionia .....	Ionia .....	J. W. Cagley .....	Sep'tr ..	Test.	317	275
222	Jerico .....	Jerico Cr'y Ass'n .....	Co-op	Mike Kearney, Sec. ....	Jerico .....	New Hampton ..	J. P. Whalen .....	Sep'tr ..	Test.	.....	.....
223	Lawler .....	Lawler Cr'y Ass'n .....	Co-op	H. M. Kout, Sec. ....	Lawler .....	Lawler .....	Fred Zigler .....	Sep'tr ..	Test.	1275	225
224	Little Turkey .....	Little Turkey .....	Ind...	A. O. Elvidge .....	Elkader .....	Lawler .....	H. B. Fortney ..	Sep'tr ..	Test.	1221	161
225	Nashua .....	Moody-Sharples System ..	Ind...	C. L. Putney, Mgr .....	Nashua .....	Nashua .....	J. Waterbury ..	G. O. ....	Test.	.....	.....
226	Nashua .....	Nashua Butter Co. (s) .....	Stk Co	E. J. Graham, Mgr. ....	Nashua .....	Nashua .....	Riley Cagley .....	S & G.O.	Test.	.....	.....
227	Nashua .....	Nashua Butter Co. ....	Stk Co	E. J. Graham, Mgr. ....	Nashua .....	Nashua .....	E. H. Richards ..	S. & G.O.	Test.	.....	.....
228	Nashua .....	Republic Creamery .....	Stk Co	E. J. Graham, Mgr. ....	Nashua .....	Nashua .....	Hugh Wallace ..	Sep'tr ..	Test.	1424	372
229	New Hampton .....	New Hampton .....	Ind...	James Campbell .....	New Hampton ..	New Hampton ..	Jos. F. Bernier ..	Sep'tr ..	Test.	.....	.....
230	New Hampton .....	Nansen Co-op. Cr'y .....	Co-op	C. E. Pierce, Sec. ....	Nansen .....	New Hampton ..	H. B. Fortney ..	Sep'tr ..	Test.	1381	333
231	No. Washingt'n .....	No. Washington Cr'y Ass'n ..	Co-op	F. N. Gindorf, Sec. ....	No. Washingt'n ..	Devon .....	Ger. Koltthoff ..	Sep'tr ..	Test.	25	385
232	New Hampton .....	Williamstown .....	Ind...	James Campbell .....	New Hampton ..	New Hampton ..	P. S. Wesp. ....	Sep'tr ..	Test.	1479	447
233	New Hampton .....	Williamstown Cr'y Ass'n ..	Co-op	Julius Hall, Sec. ....	Williamstown ..	New Hampton ..	J. M. Zubrod .....	Sep'tr ..	Test.	.....	.....
234	Saude .....	Saude Co-op Cr'y .....	Co-op.	H. O. Natvig, Mgr. ....	Saude .....	Lawler .....	.....	.....	.....	.....	.....
<i>Clarke County.</i>											
235	Hopeville .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
236	Lacelle .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
237	Murray .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	.....	.....	Sep'tr ..	Test.	.....	.....
238	Murray .....	Elgin Creamery Co. (s) ..	Ind...	O. Sands, Pres. ....	Chicago, Ill. ....	Murray .....	R. P. Currie .....	Sep'tr ..	Test.	R20	R20
239	Osceola .....	MacRae Bros. (s) .....	Ind...	MacRae Bros. ....	Des Moines .....	.....	.....	Sep'tr ..	Test.	.....	.....
240	Woodburn .....	Woodburn Creamery .....	Ind...	Fred Mohler, Prop. ....	Woodburn .....	Woodburn .....	O. O. Mohler .....	Sep'tr ..	Test.	.....	.....
<i>Clay County.</i>											
241	Dickens .....	Sioux Valley Cr'y .....	Ind...	C. W. Parsons, Prop. ....	Dickens .....	Dickens .....	A. Vavrichek .....	Sep'tr ..	Test.	.....	.....
242	Dickens .....	Dickens Creamery .....	Ind...	R. J. Hargrave, Prop. ....	Dickens .....	Dickens .....	C. W. Parsons ..	Sep'tr ..	Test.	1058	38
243	Everly .....	Everly Creamery Co. ....	Stk Co	C. Petersen, Mgr. ....	Everly .....	Everly .....	C. Petersen .....	Sep'tr ..	Test.	R8	R8
244	Fostoria .....	Fostoria Creamery .....	Stk Co	B. D. Dunning, Mgr. ....	Fostoria .....	Fostoria .....	Frank Riley .....	Sep'tr ..	Test.	1134	182
245	Peterson .....	Star Creamery .....	Ind...	McKay & Soenke .....	Willow Creek ..	Peterson .....	Ira Stewart .....	Sep'tr ..	Test.	.....	.....

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, co-operative stock comp'ny.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gathered cream, or both.	Method of receiving milk—by test or by the hundred.	No. of D. C. test bottle.	No. of D. C. pl-pette.
246	Ruthven	Trumbull Lake Cr'y Co.	Ind.	C. M. Varney, Sec.	Clark	Ruthven	John Tonsfeldt	Sep'tr	Test.	1458	420
247	Spencer	Riverton Creamery Co.	Stk Co	O. B. Ross, Sec.	Spencer	Spencer	O. B. Ross	Sep'tr	Test.		
248	Spencer	Summit	Ind.	Johns'n&Chr'st's'n	Spencer	Spencer		Sep'tr	Test.		
249	Spencer	Spencer Creamery	Ind.	Johns'n&Chr'st's'n	Spencer	Spencer		Sep'tr	Test.		
<i>Clayton County.</i>											
250	Communia	Communia Cr'y Ass'n.	Co-op.	George Meyer, Sec.	Communia	Littleport	Peter Klink	Sep'tr	Test.	334	402
251	Edgewood	Fidelity	Ind.	H. F. Beyer	Edgewood	Edgewood	E. J. Whipple	Sep'tr	Test.		
252	Elkader	Elkader	Ind.	A. O. Elvidge, Prop.	Elkader	Elkader	B. J. Plomteaux	Sep'tr	Test.	1220	159
253	Elkport	Elkport	Ind.	H. F. Beyer	Edgewood	Elkport	Ole Hauge	Sep'tr	Test.	1256	400
254	Farmersburg	Farmersburg C. C. Co.	Co-op.	John Johnson, Sec.	Farmersburg	Farmersburg	C. J. Heimdal	Sep'tr	Test.	1168	136
255	Garnavillo	Garnavillo Far. Cr'y Co.	Co-op.	E. W. Kregel	Garnavillo	Clayton	C. B. Chandler	S & G.C.	Test.	R11	R11
256	Giard	Giard Creamery	Ind.	A. O. Elvidge, Prop.	Elkader	Froelich	L. Berdatz	Sep'tr	Test.	1213	152
257	Gunder	Clermont Valley C. Co. (s)	Co-op.	F. F. Ferguson, Sec.	Elkermont			Sep'tr	Test.		
258	Highland twp.	Highland Far. Cr'y Ass'n	Co-op.	H. Olson, Sec.	Elkader	Elkader	Wm Conboy	Sep'tr	Test.		
259	Littleport	Littleport Creamery	Ind.	H. F. Beyer	Edgewood	Littleport	D. Whipple	Sep'tr	Test.		
260	Luana	Luana Far. Co-op. Cr'y Co.	Co-op.	Emil Pfahl, Sec.	Luana	Luana	C. C. Clifton	Sep'tr	Test.		
261	McGregor	McGregor Creamery Co.	Stk Co	Lester Johnson, Sec.	McGregor	McGregor	C. C. Corlett	Sep'tr	Test.	1331	343
262	Mederville	Mederville Creamery	Ind.	A. O. Elvidge, Prop.	Elkader	Mederville	Lew Goodwin	Sep'tr	Test.	1188	105
263	Monona	Monona Creamery	Ind.	A. O. Elvidge	Elkader		Henry Larson	Sep'tr	Test.		
264	Osborne	Osborne	Ind.	A. O. Elvidge, Prop.	Elkader	Osborne	A. H. Peacock	Sep'tr	Test.	1163	43
265	Osterdock	Osterdock Creamery Co	Stk Co	E. A. Bush, Sec.	Osterdock	Osterdock	W. O. Wamsley	S & G.C.	Test.		
266	Read	Read Creamery Co.	Stk Co	H. W. Wilke, Sec.	Elkader	Elkader	F. W. Zahrud	Sep'tr	Test.	1283	241
267	St. Olaf	St. Olaf	Ind.	J. Larson & Son	St. Olaf	St. Olaf	I. Hendershot	S. & G.C.	Test.	161	452
268	Strawberry Pt.	Strawberry Pt. Farmers' Cr'y Ass'n	Co-op.	A. R. Carrier	Strawberry Pt.	Strawberry Pt.	H. R. Swartz	Sep'tr	Test.	R1	R1
269	Volga City	Volga City Farmers' Co-op. Creamery Co	Co-op.	A. L. Monts, Sec.	Volga City	Volga City	Joe Jones	Sep'tr	Test.		
270	Watson	Blue Grass Creamery	Co-op.	John Garaghty, Sec.	Watson	Monona	E. L. Geno	Sep'tr	Test.		
<i>Clinton County.</i>											
271	Teeds Grove	Springbrook	Ind.	John Newman Co.	Elgin, Ill.	Teeds Grove	M. P. Kramer	Sep'tr	Test.		
272	Brown	Springbrook (s)	Ind.	John Newman Co.	Elgin, Ill.			Sep'tr	Test.		
273	Charlotte	Springbrook	Ind.	John Newman Co.	Elgin, Ill.	Charlotte	F. H. Brinker	Sep'tr	Test.		

274	Delmar	Springbrook	Ind.	John Newman Co.	Elgin, Ill.	Delmar	A. H. Meyer	Sep'tr	Test.		
275	Delmar, No. 26	Diamond Cr'y Co. (s)	Ind.	Simpson, McL. & Co.	Boston, Mass.			Sep'tr	Test.		
276	Elwood	Springbrook	Ind.	John Newman Co.	Elgin, Ill.	Elwood	FWLeinbaugh	Sep'tr	Test.		
277	Grand Mound	Springbrook	Ind.	John Newman Co.	Elgin, Ill.	Grand Mound	Henry Vetter	Sep'tr	Test.		
278	Lost Nation, 19	Diamond Cr'y Co. (s)	Ind.	Simpson, McL. & Co.	Boston, Mass.			Sep'tr	Test.		
279	Lost Nation, 22	Diamond Cr'y Co. (s)	Ind.	Simpson, McL. & Co.	Boston, Mass.			Sep'tr	Test.		
280	Lost Nation, 28	Diamond Cr'y Co. (s)	Ind.	Simpson, McL. & Co.	Boston, Mass.			Sep'tr	Test.		
281	Olive T'nship	Springbrook (s)	Ind.	John Newman Co.	Elgin, Ill.	Quigley	EEMontgom'ry	Sep'tr	Test.		
282	Quigley	Springbrook Creamery	Ind.	John Newman Co.	Elgin, Ill.	Welton	C. H. Mower	Sep'tr	Test.		
283	Weldon	Springbrook Creamery	Ind.	John Newman Co.	Elgin, Ill.			Sep'tr	Hd.		
284	Wheatland	Yankee Run Cr'y (s)	Ind.	Huxoll & Boettger	Lowden			Sep'tr	Test.		
<i>Crawford County.</i>											
285	Charter Oak	Charter Oak Cr'y Co.	Co-op.	Paul F. Flane	Charter Oak	Charter Oak	M. M. Black	Sep'tr	Test.		
286	Odebolt	Stockholm Creamery	Ind.	Knut Mattson	Kiron	Odebolt	Knut Mattson	Sep'tr	Hd.	1488	442
287	West Side	Hayes Township Cr'y	Ind.	W. H. Pruter, Prop.	West Side	West Side	Chas. S. Axford	Sep'tr	Test.		
<i>Dallas County.</i>											
288	Adel	MacRae Bros' Cr'y (s)	Ind.	MacRae Bros.	Des Moines	Dallas Center		Sep'tr	Test.	1410	351
289	Dallas Center	Dallas Center B & C. Co.	Stk Co	D. E. Hoff, Sec.	Dallas Center	Dallas Center	W. H. Hall	Sep'tr	Test.	1238	190
290	Dawson	Rippey Creamery (s)	Ind.	H. D. Remington & Co.				Sep'tr	Test.		
291	Dexter	Dexter Co-op. Cr'y As'n	Co-op.	B. J. Hicks, Sec.	Ruthven	Dexter	J. B. Keachie	Sep'tr	Test.		
292	Granger	Granger Creamery	Ind.	M. W. Cooper, Prop.	Granger	Granger	M. W. Cooper	Sep'tr	Test.		
293	Lincoln Twp.	Park & Sons (s)	Ind.	Park & Sons	Yale			Sep'tr	Test.		
294	Linden	Park & Sons' Cr'y (s)	Ind.	Park & Sons	Yale			Sep'tr	Test.		
295	Minburn	MacRae Bros' Cr'y (s)	Ind.	MacRae Bros.	Des Moines			Sep'tr	Test.		
296	Panther	Dal. Center B & C. Co. (s)	Stk Co	D. E. Hoff, Sec.	Dallas Center			Sep'tr	Test.	1251	191
297	Perry	Red Star Creamery	Ind.	J. Moody	Perry	Perry	Fred French	Sep'tr	Test.		
298	Van Meter	MacRae Bros' Cr'y (s)	Ind.	MacRae Bros.	Des Moines			Sep'tr	Test.		
299	Waukee	Grimes B. & C. Co. (s)	Stk Co	W. J. Stewart, Sec.	Grimes	Woodward	H. P. and A. B. Calonky	Sep'tr	Test.	204	50
300	Woodward	Woodward Creamery *	Ind.	H. P. Calonky	Woodward			Sep'tr	Test.		
<i>Davis County.</i>											
301	Bloomfield	Bloomfield Creamery	Ind.	W. H. Davis	Bloomfield	Bloomfield	J. L. Herman	Sep'tr	Test.		
302	Drakesville	Bloomfield Creamery (s)	Ind.	W. H. Davis	Bloomfield			Sep'tr	Test.		
303	Pulaski	Pulaski Creamery	Ind.	J. J. Miller, Prop.	Pulaski	Pulaska	James Hunt	G. O.	Test.		
<i>Decatur County.</i>											
304	Grand River	Grand River Creamery	Ind.	Overholtzer & Covington	Grand River	Grand River	A. J. Taylor	Sep'tr	Test.	1495	423
305	Lamoni	Lamoni Co-op. Cr'y. Co.	Co-op.	B. D. Fleet, Sec.	Lamoni	Lamoni		Sep'tr	Test.		
306	Le Roy	Old Colony Creamery (s)	Ind.	T. G. Hyde, Mgr.	Humeston			Sep'tr	Test.		
307	Leon	Leon Creamery	Ind.	Wm. Doran, Prop.	Leon	Leon	A. McCartney	Sep'tr	Test.		

\*Manufacture butter and cheese.

CREAMERY LIST—CONTINUED.

Office record Number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, co-op or partnership.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER	Separator, gath-ered cream, or both.	Method of receiv- ing milk—by the separator, by the hand, or by the hand.	No. of D. C. test bottle.	No. of D. C. pt- per gal.
<i>Delaware County.</i>											
306	Almoral	Almoral Creamery Co.	Co-op	F. L. Carpenter, Sec.	Almoral	Almoral Sta.	F. A. Parkins	Sep'tr.	Test.		
309	Broadway	Broadway Creamery	Ind.	F. B. Dickey	Hazel Green	Ryan	W. L. McNairlin	Sep'tr.	Test.		
310	Colesburg	Colesburg Creamery Co.	Co-op	Rob't A. Gall, Sec.	Osterdock	Osterdock	A. L. Landis, Jr.	Sep'tr.	Test.		
311	Delaware	Delaware Creamery Co.	Co-op	O. A. Pierce, Sec.	Delaware	Delaware	P. F. Madden	Sep'tr.	Test.		
312	Delhi	Silver Spring Cr'y Co.	Co-op	E. R. Stone, Sec.	Delhi	Delhi	Chas. Howard	Sep'tr.	Test.	1305	148
313	Dundee	Dundee	Ind.	F. P. Boyer, Prop.	Edgewood	Dundee	Fred Stevenson	Sep'tr.	Test.		
314	Earlville	Gilt Edge	Ind.	J. M. Duan, Prop.	Earlville	Earlville	O. G. Siddons	Sep'tr.	Test.	1259	212
315	Earlville	Earlville Creamery Co.	Co-op	W. W. Ham, Mgr	Earlville	Earlville	Geo. Gould	Sep'tr.	Test.		
416	Ehler	Adams Creamery	Ind.	Henderson's Wabber	Ehler	Ehler	H. C. Webber	Sep'tr.	Test.		
417	Greeley	Greeley Frms' Cr'y Co.	Co-op	J. C. Matthews, Sec.	Greeley	Greeley	F. J. Kleckner	Sep'tr.	Test.		
318	Hazel Green	Hazel Green Creamery	Ind.	F. B. Dickey & Co.	Hazel Green	Ryan	F. J. Honuser	Sep'tr.	Test.		
319	Hopkinton	Hopkint'n Co-op. Cr'y Co.	Co-op	M. L. McGlade, Sec.	Hopkinton	Hopkinton	J. H. Griffith	Sep'tr.	Test.		
320	Manchester	Spring Branch Co-op. Co.	Co-op	W. J. Davis, Sec.	Manchester	Manchester	A. A. Palmer	Sep'tr.	Test.	76	45
321	Manchester	Barryville Co-op. Assn.	Co-op	C. O. Barry, Sec.	Barryville	Manchester	W. S. Smarso	Sep'tr.	Test.	1387	339
322	Manchester	Kenyon Cr'y Co.	Ind.	H. H. Scherbring, S.	Manchester	Manchester	C. D. Eider	Sep'tr.	Test.	1010	42
323	Masonville	Masonville Creamery	Ind.	Taylor & O'Hagan	Masonville	Masonville	J. D. Spars	Sep'tr.	Test.		
324	Masonville	Kenyon Cr'y Co.	Ind.	R. W. Kenyon & Co.	Masonville	Masonville	N. N. Kenyon	Sep'tr.	Test.		
325	Masonville	Kenyon Cr'y Co.	Ind.	B. W. Kenyon & Co.	Masonville	Masonville	Corwin Cross	Sep'tr.	Test.		
326	Onelda	M. Richmond & Co.	Ind.	S. P. Helse, Prop.	Onelda	Onelda	S. P. Helse	Sep'tr.	Test.	1146	207
327	Petersburgh	Bear Grove	Co-op	F. H. Klosterman, S.	New Vienna	Dyersville	Geo. Domayer	Sep'tr.	Test.		
328	Petersburgh	Petersburgh Cr'y Co.	Co-op	H. H. Scherbring, S.	Petersburgh	Dyersville	Jacob Schmidt	Sep'tr.	Test.		
329	Ryan	Willow Grove	Ind.	F. B. Dickey	Hazel Green	Ryan	Wm. Kenney	Sep'tr.	Test.		
330	Ryan	Hazel Gr'n Co-op. Cr'y Co.	Co-op	F. B. Dickey	Hazel Green	Dyersville	J. W. Atwood	Sep'tr.	Test.		
331	Ryan	Ryan Creamery	Ind.	F. B. Dickey	Hazel Green	Ryan	O. M. Wright	Sep'tr.	Test.		
332	Ryan	Silver Creek	Co-op	Patrick & Lillbridge	Silver Creek	Ryan	Geo. E. Packer	Sep'tr.	Test.		
333	Sand Spring	Sand Spring Co-op. Co.	Co-op	F. K. Wood, Jr., Sec.	Sand Spring	Sand Spring	H. Williams	Sep'tr.	Test.	96	39
334	Thorpe	Thorpe	Ind.	H. F. Bayer	Edgewood	Thorpe	W. K. Pollard	Sep'tr.	Test.	72	201
335	Worthington	Central Creamery Co.	Co-op	J. H. White, Sec.	Worthington	Hopkinton	Anton Smith	Sep'tr.	Test.		
<i>Dickinson County.</i>											
336	Everly	Westport Creamery	Ind.	J. S. Winton	Everly	Everly	E. J. Hall	Sep'tr.	Test.	346	440
337	Milford	Milford Frms' B. & C. A.	Co-op	G. E. Blunt, Sec.	Milford	Milford	G. E. Blunt	Sep'tr.	Test.	1105	116
338	Spirit Lake	Spirit Lake Creamery	Ind.	Painter & Stoaks	Spirit Lake	Spirit Lake	Painter & Stk's	Sep'tr.	Test.	875	141
339	Terrill	Terrill Co-op. Cr'y Co.	Co-op	W. H. Blunt, Sec.	Milford	Milford	W. H. Blunt	Sep'tr.	Test.	1264	320
<i>Dubuque County.</i>											
340	Balltown	Balltown Co-op. Cr'y Co.	Co-op	C. D. Harrington, S	Balltown	Waupaton	Henry Koehler	Sep'tr.	Test.	1234	242
341	Cascade	Cascade Co-op. Cr'y Co.	Co-op	T. A. Hamil, Sec.	Cascade	Cascade	C. T. Elliott	Sep'tr.	Test.	1233	150
342	Cascade	Butterfield Creamery	Ind.	J. G. Bader	Cascade	Cascade	J. G. Bader	Sep'tr.	Test.	1190	211
343	Dyersville	Frms Golden Star Co.	Co-op	Henry Tegeler	Dyersville	Dyersville	P. H. Kieffer	Sep'tr.	Test.		
344	Dyersville	Pin Oak	Co-op	M. P. Leibold, Sec.	Holy Cross	Dyersville	J. P. Crippes	Sep'tr.	Test.		
345	Dyersville	Hickory Valley Cr'y Co.	Co-op	L. F. Tegeler	Dyersville	Dyersville	C. H. Arnold	Sep'tr.	Test.		
346	Epworth	Epworth Co-op. Cr'y Co.	Co-op	J. D. Burrell, Sec.	Epworth	Epworth	C. P. Stockwell	Sep'tr.	Test.		
347	Farley	Farley Creamery Co.	Co-op	J. F. Schoonover, Mgr	Farley	Farley	Thos. Landis	Sep'tr.	Test.	670	208
348	Farley	Farley's Creek	Ind.	A. K. Heald & Son	Farley	Farley	O. Bartholmew	Sep'tr.	Test.		
349	Farley	Pleasant View	Ind.	A. K. Heald & Son	Farley	Farley	Oran Dubbs	Sep'tr.	Test.		
350	Fillmore	Fillmore Co-op. Cr'y Co.	Co-op	Wm. Craft, Sec.	Fillmore	Fillmore	N. B. Francis	Sep'tr.	Test.		
351	Lattners	Lattner's Spring Cr'y Co.	Stk Co	Ernest Hauser, Mgr.	Lattners	Graf	Samuel Struf.	Sep'tr.	Test.		
352	Lore	Lore	Co-op	G. Kemp, Sec.	Lore	Lore	Wm. Kaehler	Sep'tr.	Test.	245	300
353	Luxemburg	Globe	Co-op	Mathias Endros, Sec.	Luxemburg	Dyersville	Nicklaus Just	Sep'tr.	Test.	719	132
354	New Vienna	New Vienna Cen. Co. Co.	Stk Co	Bernard Herbers, S.	New Vienna	Dyersville	Mathias Kant.	Sep'tr.	Test.		
355	Peosta	Highland	Ind.	George Franke	Peosta	Peosta	George Franke	Sep'tr.	Test.		
356	Rickardsville	Fair Creamery Co.	Stk Co	John Fisher, Sec.	Rickardsville	Wauapaton	John Farnl	Sep'tr.	Test.		
357	O'Neill	Oak Grove	Co-op	John L. Cooney, Sec.	O'Neill	Wauapaton	W. H. Maginnis	Sep'tr.	Test.	444	208
358	Rockdale	Columbian	Ind.	Laude Bros	Rockdale	Dubuque	Ed Waiters	Sep'tr.	Test.	1222	121
359	Sherrill	Sherrill Creamery Cr'y Co.	Co-op	J. C. Boleyn, Sec.	Sherrill	Sherrill	Specht's Ferry	Sep'tr.	Test.		
360	Worthington	Spring Valley Co-op Co.	Co-op	Jac. N. Kremer, Sec	Worthington	Worthington	H. P. Bancroft	Sep'tr.	Test.		
361	Worthington	Worthington Creamery	Ind.	W. Lattner, Mgr	Worthington	Worthington	Crist. Bahler	Sep'tr.	Test.		
362	Zwingle	Lamotte Creamery (S).	Ind.	Nemmers & Butler.	Lamotte	Lamotte	S. & G.O.	Sep'tr.	Test.		
<i>Emmet County.</i>											
363	Armstrong	Farmers' Creamery	Co-op	W. C. Richmond, Sec	Armstrong	Armstrong	H. Chronholm.	Sep'tr.	Test.		
364	Armstrong	Forsythe Creamery	Co-op	H. A. Gaarde, Sec.	Armstrong	Armstrong	Ed Kreslin	Sep'tr.	Test.	633	803
365	Armstrong	Danmark Co-op. Cr'y Co.	Co-op	H. F. Pink, Sec	Ringsted	Armstrong	G. Jensen	Sep'tr.	Test.	1285	244
366	Estherville	Estherville Creamery	Ind.	M. C. Peterson, Prop.	Estherville	Estherville	M. C. Petersen	Sep'tr.	Test.		
367	Hoprig	Hoprig Farmers' Cr'y.	Co-op	Geo. L. Doughty	Hoprig	Graettinger	John N. Bruck	Sep'tr.	Test.		
368	Swan Lake	Estherville Cr'y (S)	Ind.	M. C. Peterson, Prop	Estherville	Wallingford	B. Louning	Sep'tr.	Test.	1425	374
369	Wallingford	Wallingford Cr'y Co.	Stk Co	F. G. Miller, Sec.	Wallingford	Wallingford		Sep'tr.	Test.		
<i>Fayette County.</i>											
370	Alpha	Alpha Farmers' Cr'y Co.	Co-op	A. L. Davis	Alpha	Waucoma	O. N. Beach	Sep'tr.	Test.		
371	Arlington	Brush Creek Frms C.A.	Stk Co	Guy L. Lawson	Arlington	Arlington		Sep'tr.	Test.		
372	Clermont	Clermont Valley Cr'y Co.	Co-op	F. P. Ferguson, Sec.	Clermont	Clermont		Sep'tr.	Test.		
373	Clermont	Burr Oak	Co-op	Henry Smith	Clermont	Clermont	B. C. Liff	Sep'tr.	Test.		
374	Eldorado	Eldorado Creamery	Stk Co	Gardner & Miller.	Eldorado	West Union	J. N. Gardner.	Sep'tr.	Test.	1412	354
375	Elgin	Elgin Farmers Dairy Co.	Co-op	Melch. Luchsinger, S	Elgin	Elgin	Le J. Ford	Sep'tr.	Test.	1204	137
376	Fayette	Fayette Cr'y Ass'n.	Co-op	J. M. Edmunds, Sec.	Fayette	Fayette	I. L. Moss	Sep'tr.	Test.	156	435
377	Fayette	Union Creamery Co. (S)	Stk Co	E. B. Shaw, Sec.	West Union	West Union		Sep'tr.	Test.		
378	Hawkeye	Hawkeye	Ind.	A. P. Bortner	Hawkeye	Hawkeye	A. P. Bortner.	Sep'tr.	Test.		

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by an operator or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER	Separator, gath-er, cream, or both.	Method of receiving the test, or by the hundred.	No. of D. C. test bottles.	No. of D. C. p-p-ette.
379	Maynard.....	Harlan Creamery Co.	Co-op.	F. E. Blethen, Sec.	Maynard.....	Maynard.....	A. D. Farnham	Sep'tr.	Test.	R16	R16
380	Minkler.....	Gran Creamery Co.	Co-op.	E. E. Shipuy	Mokler.....	Fairbank.....	W. H. Johnson	Sep'tr.	Test.	R24	R24
381	Oelwein.....	Jefferson.....	Co-op.	J. H. Meyer, Sec.	Oelwein.....	Oelwein.....	A. H. Ford	Sep'tr.	Test.		
382	Oelwein.....	Oelwein Farm's Cr'y Co	Co-op.	E. E. Day, Sec.	Oelwein.....	Oelwein.....	F. Wheeler	Sep'tr.	Test.	102	243
383	Randalla.....	Randalla Creamery Co.	Co-op.	J. C. Darnell, Sec.	Randalla.....	Randalla.....	Frank Billings	Sep'tr.	Test.	250	96
384	Richfield.....	Richfield.....	Co-op.	G. W. Niemann, Sec.	Richfield.....	Richfield.....		Sep'tr.	Test.		
385	St. Lucas.....	Farmers' Co-op Cr'y	Co-op.	John J. Mihm, Sec.	St. Lucas.....	Waucoma.....	Math Blong	Sep'tr.	Test.	1038	36
386	Summer.....	Center Valley Cr'y Co.	Co-op.	A. E. Fridley, Sec.	Summer.....	Summer.....	R. K. Waite	Sep'tr.	Test.		
387	Wadena.....	Riverside.....	Ind.	J. J. Hollister	Wadena.....	Wadena.....	A. W. Sackett	Sep'tr.	Test.	1131	379
388	Waucoma.....	Waucoma Frms Cr'y Co	Co-op.	A. H. Bender, Sec.	Waucoma.....	Waucoma.....	L. J. Gibbs	Sep'tr.	Test.	1187	288
389	Westgate.....	Westgate Cr'y Co.	Co-op.	C. L. Mcweeney	Westgate.....	Westgate.....	Robt. Mallie	Sep'tr.	Test.		
390	West Union.....	West Union Frms D. C.	Co-op.	C. L. Dwyer, Sec.	West Union.....	West Union.....		Sep'tr.	Test.		
391	West Union.....	Union Creamery Co	Stk Co	E. B. Shaw, Sec.	West Union.....	West Union.....		Sep'tr.	Test.		
<i>Floyd County.</i>											
392	Carrville.....	Carrville Creamery.....	Ind.	George Carr, Prop.	Carrville.....	Carrville.....	O. E. Carr	Sep'tr.	Test.	1182	89
393	Charles City.....	Charles City Creamery	Stk Co	J. C. Daly, Prop.	Charles City.....	Charles City.....	Fred Jones	Sep'tr.	Test.		
394	Charles City.....	Flood Creek Creamery	Stk Co	Chas. Bartz, Mgr	Charles City.....	Charles City.....	John Haefner	Sep'tr.	Test.	1190	118
395	Marble Rock.....	Marble Rock Co-op. D. Ass'n.	Co-op.	O. L. Crowell, Mgr.	Marble Rock.....	Marble Rock.....	R. L. Buchholz	G. C.	Test.		
396	Niles.....	Niles Creamery.....	Co-op.	Ma-latt & Clark	Eldora.....	Charles City.....	Joe Weltzin	Sep'tr.	Test.	1178	77
397	Nora Springs.....	Oottage Grove Cr'y	Ind.	R. C. Kennedy	Nora Springs.....	Nora Springs.....	R. C. Kennedy	G. C.	Test.		
398	Powersville.....	Nashua Butter Co	Stk Co	E. J. Graham Mgr.	Nashua.....	Nashua.....		Sep'tr.	Test.	1040	310
399	Rockford.....	Rockford Co-op. D. Ass'n	Co-op.	G. E. McElroy, Mgr.	Rockford.....	Rockford.....	W. J. Grimes	Sep'tr.	Test.		
<i>Franklin County.</i>											
400	Ackley.....	Edna.....	Ind.	J. Martin & Son	Ackley.....	Ackley.....	C. Strassburg	S & G O	Test.	1442	301
401	Alexander.....	Alexander Creamery.....	Ind.	G. H. Gurler	De Kalb, Ill.	Alexander.....	H. J. Kelper	Sep'tr.	Test.		
402	Burdette.....	Alden Co-op. Cr'y Co.	Co-op.	E. C. Stringer, Mgr.	Alden.....	Alden.....		Sep'tr.	Test.		
403	Chapin.....	Chapin.....	Ind.	G. H. Gurler	De Kalb, Ill.	Chapin.....	J. D. Gibt	Sep'tr.	Test.	1209	147
404	Dows.....	Farmers' Co-op. Cr'y Co	Co-op.	T. H. Smith, Mgr.	Dows.....	Dows.....	J. N. Bovsott	Sep'tr.	Test.	1040	310
405	Faulkner.....	Edna (s)	Ind.	J. Martin & Son	Ackley.....	Ackley.....		Sep'tr.	Test.		
406	Hampton.....	Hampton Creamery	Ind.	A. Juhl, Mgr.	Hampton.....	Hampton.....	Lake Juhl	G. C.	Test.		
407	Latimer.....	Latimer Co-op. Cr'y Co.	Co-op.	Fred Rodemeyer, Sec.	Hampton.....	Latimer.....	L. C. Cochran	Sep'tr.	Test.		
408	Latimer.....	Hamilton Cr'y Co-op. Co	Co-op.	Fred Rodemeyer, Sec.	Hampton.....	Latimer.....		Sep'tr.	Test.		
409	Popejoy.....	Popejoy Co-op. Cr'y Co.	Co-op.	W. A. Pascoe, Sec.	Popejoy.....	Popejoy.....	W. H. Baker	Sep'tr.	Test.		
410	Sheffield.....	Sheffield.....	Ind.	G. H. Gurler	De Kalb, Ill.	Sheffield.....	H. Davenport	Sep'tr.	Test.		
<i>Greene County.</i>											
411	Adaza.....	Adaza Co-op. Cr'y	Stk Co	M. M. Reading, Mgr.	Adaza.....	Adaza.....	D. E. Whitney	Sep'tr.	Test.		
412	Cooper.....	Coon Valley Cr'les (s)	Ind.	Renner Bros	Jefferson.....	Cooper.....		Sep'tr.	Test.		
413	Farlin.....	Crystal Creamery.....	Ind.	C. F. Hastings, Mgr.	Farlin.....	Farlin.....	W. H. Maloy	Sep'tr.	Test.	1198	120
414	Gr'nd Junction.....	Coon Valley Cr'les.	Ind.	Renner Bros	Grand Junc'n	Grand Junc.	Warren Adams	Sep'tr.	Test.		
415	Jefferson.....	Coon Valley Cr'les.	Ind.	Renner Bros	Grand Junc'n	Grand Junc.	H. W. Haber	Sep'tr.	Test.		
416	Paton.....	Paton Creamery.....	Ind.	Geo. E. White, Prop.	Paton.....	Paton.....	Geo. E. White	Sep'tr.	Test.	1375	368
417	Rippey.....	Rippey Creamery.....	Ind.	H. D. Remington	Ruthven.....	Rippey.....	E. Tuttle	Sep'tr.	Test.		
418	Scranton.....	Scranton Creamery Co.	Stk Co	Fey & Hay	Scranton.....	Scranton.....	W. E. Fey	Sep'tr.	Test.		
419	Schill.....	Coon Valley Cr'les (s)	Ind.	Renner Bros	Grand Junc'n	Schill.....		Sep'tr.	Test.		
<i>Grundy County.</i>											
420	Ackley.....	Johnson.....	Ind.	J. U. Johnson	Ackley.....	Ackley.....	P. L. Laurine	Sep'tr.	Test.	1438	388
421	Aplington.....	Buck Grove.....	Ind.	M. M. Slight	Aplington.....	Aplington.....	F. E. Dilzer	Sep'tr.	Test.	1291	213
422	Beaman.....	Beaman Creamery.....	Ind.	P. McNelly	Beaman.....	Beaman.....	P. McNelly	Sep'tr.	Test.	1192	111
423	Conrad.....	Beaman Creamery (s)	Ind.	P. McNelly	Beaman.....	Beaman.....		Sep'tr.	Test.		
424	Dairyville.....	Dairyville.....	Ind.	J. H. Sperry	Grundy Center	Grundy Cent.	J. Christensen	Sep'tr.	Test.	1234	183
425	Fredsville.....	Fredsville Co-op. G. Co.	Co-op.	Eric Peterson, Sec.	Fredsville.....	Cedar Falls		Sep'tr.	Test.		
426	Grundy Center.....	J. H. Sperry.....	Ind.	J. H. Sperry	Grundy Center	Grundy Cent.	A. Baugbman	Sep'tr.	Test.		
427	Grundy Center.....	J. H. Sperry.....	Ind.	J. H. Sperry	Grundy Center	Grundy Cent.	Louis Cedar	Sep'tr.	Test.		
428	Investor.....	J. H. Sperry.....	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
429	Lincoln.....	Marshall Cr'y Co. (s)	Ind.	N. O. Chase, Sec.	New Hartford	New Hartford	Wm. Graham	Sep'tr.	Test.		
430	Morrison.....	Marshall Cr'y Co. (s)	Ind.	Wright & Packard	Reinbeck.....	Reinbeck.....	J. D. Ferguson	Sep'tr.	Test.		
431	New Hartford.....	Fairfield Co-op. Cr'y Co	Co-op.	E. Stevens, Sec.	Reinbeck.....	Reinbeck.....	E. Stevens	Sep'tr.	Test.	680	137
432	Reinbeck.....	Grant Twp. Cr'y Co.	Ind.	Shelber & Merrick	Reinbeck.....	Reinbeck.....	W. H. Shalder	Sep'tr.	Test.		
433	Reinbeck.....	Red Bird Cr'y Co.	Co-op.	J. H. Sperry	Grundy Center	Wellsburg		Sep'tr.	Test.		
434	Reinbeck.....	Reinbeck Creamery.....	Ind.	J. H. Sperry	Grundy Center	Wellsburg		Sep'tr.	Test.		
435	Wellsburg.....	Wellsburg Cr'y Co.	Ind.	J. H. Sperry	Grundy Center	Wellsburg		Sep'tr.	Test.		
436	Wellsburg.....	Wellsburg (s)	Ind.	J. H. Sperry	Grundy Center	Wellsburg		Sep'tr.	Test.		
<i>Guthrie County.</i>											
437	Bagley.....	Silver Lake Cr'y (s)	Ind.	Andrew Wood	Guthrie Center	Guthrie Center		Sep'tr.	Test.		
438	Bayard.....	Silver Lake Cr'y (s)	Ind.	Andrew Wood	Guthrie Center	Guthrie Center		Sep'tr.	Test.		
439	Casey.....	Elgin Creamery Co. (s)	Ind.	O. Sands, Pres.	Chicago, Ill.	Casey.....		Sep'tr.	Test.	1504	427
440	Casey.....	Casey Creamery Co.	Co-op.	S. D. Hutt, Sec.	Casey.....	Casey.....		Sep'tr.	Test.		
441	Dale City.....	Silver Lake Cr'y (s)	Ind.	Andrew Wood	Guthrie Center	Guthrie Center		Sep'tr.	Test.	1063	266
442	Guthrie Center.....	Silver Lake Cr'y	Ind.	Andrew Wood	Guthrie Center	Guthrie Cent.	H. I. Keester	Sep'tr.	Test.		
443	North Branch.....	Silver Lake Cr'y (s)	Ind.	Andrew Wood	Guthrie Center	Guthrie Cent.		Sep'tr.	Test.		
444	North Adair.....	Elgin Creamery Co. (s)	Ind.	O. Sands, Pres.	Chicago, Ill.	Panora.....	A. Kelsey	Sep'tr.	Test.	1144	129
445	Menlo.....	Menlo Creamery Co.	Stk Co	A. O. Curtis, Sec.	Menlo.....	Menlo.....	F. F. Wilcox	Sep'tr.	Test.	1212	151
446	Panora.....	Wilcox Creamery.....	Ind.	F. F. Wilcox	Panora.....	Panora.....	A. Cochran	Sep'tr.	Test.		
447	Stuart.....	Stuart D. Dixon	Co-op.	Chas. H. Dixon	Stuart.....	Stuart.....		Sep'tr.	Test.		
448	Stuart.....	Stuart Co-op. Cr'y Co. (s)	Co-op.	Chas. H. Dixon	Stuart.....	Stuart.....		Sep'tr.	Test.		

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by an individual or cooperative, or stock comd by.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER	Separation method used cream, or both.	Method of receiving milk or by the test or by No. of D. C. test bottles.	No. of D. C. p-pette.
449	Wichita	Silver Lake Cr'y (s)	Ind	Andrew Wood	Guthrie Center			Sep'tr	Test	
450	Yale	Yale & Sons	Ind	Park & Sons	Yale	Yale	D. C. Barthlan	Sep'tr	Test	1149 4
<i>Hamilton County.</i>										
451	Blairsburg	Blairsburg Co-op. Cr'y	Co-op	S. S. Morrison, Sec.	Blairsburg	Blairsburg	W. P. Plumleigh	Sep'tr	Test	1362 316
452	Ellsworth	Ellsworth Co-op. C. A'n	Co-op	Ole O. Eittrheim	Ellsworth	Ellsworth	H. V. McNary	Sep'tr	Test	1332 180
453	Jewell	Jewell Creamery	Ind	H. K. Gronbeck	Jewell	Jewell	H. K. Gronbeck	Sep'tr	Test	
454	Kamrar	Gold Nugget	Ind	A. O. Blow	Kamrar	Kamrar	W. W. Bond	Sep'tr	Test	
455	Radcliffe	Lincoln Creamery Co.	Co-op	S. Steenberg, Sec.	Radcliffe	Radcliffe	Peter Larson	Sep'tr	Test	
456	Randall	Randall Farmers Cr'y	Co-op	Jens Clausen, Sec.	Randall	Randall	H. N. Miller	Sep'tr	Test	9 35
457	Stanhope	Stanhope Creamery	Ind	N. C. Blow	Stanhope	Stanhope	N. C. Blow	Sep'tr	Test	1382 334
458	Stratford	Stratford Creamery	Ind	C. Nelson, Mgr.	Stratford	Stratford	Thos. Daniels	Sep'tr	Test	
459	Webster City	Prarie Queen Cr'y Co.	Stk Co	J. F. Knudsen, Sec.	Webster City	Webster City	H. E. Ford	Sep'tr	Test	
460	Webster City	Poplar Grove Cr'y	Ind	Geo. G. Howard	Poplar Grove	Webster City	G. G. Howard	Sep'tr	Test	1457 418
461	Rose Grove	Ellsworth Co-op. C. A'n	Co-op	Ole O. Eittrheim	Ellsworth	Ellsworth	Wm. Evans	Sep'tr	Test	
462	Williams	Payne's Model	Ind	F. E. Payne	Williams	Williams	Wm. Evans	Sep'tr	Test	
<i>Hancock County.</i>										
463	Britt	Crystal Creamery Co.	Co-op	J. C. Nelson, Sec.	Britt	Britt	L. A. Nelson	Sep'tr	Test	90 193
464	Britt	Britt Co-op Cr'y Co.	Stk Co	E. W. Burgett, sec.	Britt	Britt	T. H. Kenyon	Sep'tr	Test	1061 9
465	Corwith	Corwith Creamery	Ind	S. P. Drennan, Mgr.	Corwith	Corwith	S. P. Drennan	Sep'tr	Test	1771 80
466	Duncan	Duncan Co-op Cr'y.	Co-op	F. Randa, Sec.	Duncan	Duncan	L. Anderson	Sep'tr	Test	1373 153
467	Forest City	Madison Creamery Co.	Co-op	W. W. Wright, Sec.	Forest City	Forest City	J. H. Moment	Sep'tr	Test	
468	Garner	Concord Creamery Co.	Co-op	H. C. Schurz, Sec.	Garner	Garner	C. B. Conway	Sep'tr	Test	1047 87
469	Goodell	Belmond Cr'y Co. (s)	Ind	E. M. Lamos, Sec.	Belmond	Belmond	N. L. Palmer	Sep'tr	Test	
470	Klemme	Klemme Creamery Co.	Co-op	Louis Sampson, Sec.	Klemme	Klemme	N. L. Palmer	Sep'tr	Test	
471	Miller	Model Co-op. D. Ass'n	Co-op	P. A. Anderson, Sec.	Miller	Miller	J. C. Waughtal	Sep'tr	Test	
472	Stilson	Corwith Creamery (s)	Ind	S. P. Drennan, Mgr.	Corwith	Corwith	T. F. Clark	Sep'tr	Test	
473	West Lake	West Lake Cr'y Ass'n.	Co-op	A. A. Lein, Sec.	West Lake	Coodell	J. Natland	Sep'tr	Test	1185 97
<i>Hardin County.</i>										
474	Alden	Alden Co-op. Cr'y Co.	Co-op	G. E. Stringer, Mgr.	Alden	Alden	R. M. Risworth	Sep'tr	Test	1023 115
475	Buckeye	Radcliffe Creamery (s)	Stk Co	F. L. Chamberlain	Waterloo	Waterloo		Sep'tr	Test	
<i>Harrison County.</i>										
476	Cleves	Cleves	Ind	J. Martin & Son	Ackley	Cleves	W. T. Gime	Sep'tr	Test	
477	Ottawa	Radcliffe Creamery (s)	Stk Co	F. L. Chamberlain	Waterloo	Waterloo		Sep'tr	Test	
478	Eldora	Marshall Cr'y Co. (s)	Ind	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr	Test	
479	Hubbard	Hubbard Co-op. C. Co.	Co-op	J. V. White	Hubbard	Hubbard	D. W. Mohler	Sep'tr	Test	1200 138
480	Hubbard	Sprler Branch	Co-op	L. B. Mills, Sec.	Hubbard	Hubbard	John L. Clark	Sep'tr	Test	
481	Iowa Falls	Iowa Falls Cr'y Co.	Co-op	G. L. Whinnery, Sec.	Iowa Falls	Iowa Falls	A. P. Buchanan	Sep'tr	Test	1165 29
482	New Providence	New Providence C. Co.	Stk Co	W. T. Kersey, Sec.	N. Providence	Lawn Hill	B. J. Talbot	Sep'tr	Test	1339 193
483	Radcliffe	Concord & Scotts Co-op. Creamery Co.	Co-op	Oscar Sampson, Sec.	Radcliffe	Radcliffe	M. J. Mansager	Sep'tr	Test	
484	Radcliffe	Radcliffe	Stk Co	F. L. Chamberlain	Waterloo	Radcliffe	N. M. Johnston	Sep'tr	Test	107 210
485	Robertson	Robertson Creamery Co.	Co-op	S. P. Patten	Robertson	Robertson	S. O. Windecker	Sep'tr	Test	
486	Union	Union Creamery Co.	Stk Co	Thos. E. Culp	Union	Union	S. & G. C.	Sep'tr	Test	280 444
487	Whitten	Whitten Creamery	Ind	B. J. Evans	Whitten	Whitten	B. J. Evans	Sep'tr	Test	
<i>Henry County.</i>										
488	Dunlap	Dunlap B. & C. Co.	Co-op	F. W. Shellman, Mgr.	Dunlap	Dunlap	F. W. Shellman	Sep'tr	Test	
489	Garret	Little Sioux Cr'y (s)	Ind	M. H. Tellman & Co.	Mo. Valley	River Sioux	E. J. Ellis	Sep'tr	Test	R42 R17
490	Little Sioux	Little Sioux Creamery	Ind	M. H. Tellman & Co.	Mo. Valley	River Sioux	E. J. Ellis	Sep'tr	Test	R9 R9
491	Magnolia	Magnolia Creamery Co.	Co-op	F. H. Cadwell, Sec.	Logan	Logan	Geo. F. Scott	Sep'tr	Test	
492	Missouri Valley	Mo. Valley B. & C. Co.	Co-op	M. H. Tellman & Co.	Mo. Valley	Mo. Valley	Mrs. Tellmann	Sep'tr	Test	
<i>Howard County.</i>										
493	Mt. Pleasant	Mt. Pleasant Creamery	Ind	B. S. Parker	Mt. Pleasant	Mt. Pleasant	S. B. Parker	Sep'tr	Test	
494	Trenton	Mt. Pleasant Cr'y (s)	Ind	W. G. Clark	Mt. Pleasant	Mt. Pleasant		Sep'tr	Test	
495	Winfield	Winfield Creamery	Ind	J. A. Eicher	Winfield	Winfield	H. Cooper	Sep'tr	Test	
<i>Howard County.</i>										
496	Acme	Acme Creamery	Stk Co	A. J. Dilly	Acme	Lowther	A. P. Mott	Sep'tr	Test	1276 156
497	Bonair	Lime Springs Cr'y (s)	Ind	A. O. Elvidge	Elkader	Elkader	S. & G. O.	Sep'tr	Test	
498	Chester	Farmers Co-op. C. Ass'n	Co-op	L. Lassell	Chester	Chester	E. Hoopman	Sep'tr	Test	
499	Oresco	Oresco Creamery	Ind	W. R. Owen	Oresco	Oresco	J. A. Barker	Sep'tr	Test	
500	Elma	Elma Co-op. Creamery	Co-op	A. A. Carter	Elma	Elma	B. H. Arness	Sep'tr	Test	1416 362
501	Lime Springs	Lime Springs Creamery	Ind	A. O. Elvidge	Elkader	Lime Springs	S. & G. O.	Sep'tr	Test	1343 188
502	Lourdes	Lourdes Creamery	Ind	W. R. Owen	Oresco	Oresco	Geo. Hatter	Sep'tr	Test	
503	Maple Leaf	Maple Leaf	Ind					Sep'tr	Test	
504	Frostville	Frostville Creamery Ass'n	Co-op	J. A. Custal	Peotone	Peotone	J. A. Dostal	Sep'tr	Test	
505	Saratoga	Saratoga Cr'y	Ind	A. O. Elvidge	Elkader	Lime Springs	G. O.	Sep'tr	Test	
<i>Humboldt County.</i>										
506	Arnold	Grove Co-op. Cr'y Co.	Co-op	F. D. Arnold, Sec.	Grove	Arnold Sta.	E. M. Vargison	Sep'tr	Test	1267 323
507	Bode	Bode Creamery Ass'n.	Co-op	C. A. Rossing, Sec.	Bode	Bode	W. H. Rossing	Sep'tr	Test	691 223
508	Bradgate	Bradgate Co-op. Cr'y A.	Co-op	J. L. Van Horn	Bradgate	Bradgate	W. L. Dilger	Sep'tr	Test	
509	Hardy	McMurdy Bros. (s)	Ind	McMurdy Bros.	Goldfeld	Goldfeld		Sep'tr	Test	
510	Humboldt	Humboldt Cr'y Co.	Co-op	G. L. Cruikshank, S.	Humboldt	Humboldt	J. C. Hall	Sep'tr	Test	50 37
511	Ottosen	Wacousta Cr'y Ass'n.	Co-op	F. J. Clare, Sec.	Ottosen	Ottosen	L. J. Shurson	Sep'tr	Test	

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, co-operative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gathered cream, or both.	Method of receiving milk — by the test or by the hundred.	No. of D. O. test bottle.	No. of D. O. pette.
512	Owl Lake .....	Farmers' Mutual Co-op. Creamery Ass'n.....	Co-op.	L. M. Michaelson, S.	Owl Lake .....	Goldfield .....	C. M. Clausen..	Sep'tr ..	Test..	1446	396
513	Pioneer .....	Pioneer Cr'y Co.....	Co-op.	W. D. Simpson ..	Pioneer .....	Pioneer .....	John Baltinger	Sep'tr ..	Test..		
514	Renwick .....	Renwick Cr'y Co.....	Co-op.	Aug. Griebel, Sec.	Renwick .....	Renwick .....	WG. Stultzback	Sep'tr ..	Test..		
515	Rutland .....	Rutland Cr'y Ass'n.....	Co-op.	W. J. Brown, Sec.	Rutland .....	Rutland .....	M. Beck .....	Sep'tr ..	Test..	1172	12
516	Thor .....	Clover .....	Stk Co	Lewis Olsen, Sec.	Thor .....	Thor .....	Peter Peterson	Sep'tr ..	Test..	152	40
<i>Ida County.</i>											
517	Arthur .....	Arthur Creamery .....	Ind...	I. G. Arthur, Mgr.	Arthur .....	Arthur .....	I. G. Arthur...	Sep'tr ..	Test..	1271	321
518	Battle Creek...	Battle Creek Cr'y.....	Ind...	Switzer & Baltinger.	Battle Creek ..	Battle Creek.	John Switzer ..	Sep'tr ..	Hd ..		
519	Galva .....	Galva Creamery .....	Ind...	Hopkins & Hubbard.	Holstein .....	Galva .....	Matt Conklin..	Sep'tr ..	Test..	1159	28
520	Holstein .....	Holstein Creamery .....	Ind...	Hopkins & Hubbard.	Holstein .....	Holstein .....		Sep'tr ..	Hd ..	1169	57
521	Ida Grove .....	Ida Grove Creamery .....	Ind...	J. A. Smith, Mgr.	Ida Grove .....	Ida Grove .....	J. A. Smith .....	G. C .....	Hd ..	1226	166
<i>Iowa County.</i>											
522	Conroy .....	Shimer Creamery Co....	Co-op.	Homer Glass, Sec.	Conroy .....	Conroy .....	W. F. Reid .....	Sep'tr ..	Test..		
523	Genoa Bluff.	Genoa Bluff .....	Ind...	Geo. R. Howard .....	Genoa Bluff...	Marengo .....	G. R. Howard..	G. C .....	Test..		
524	Marengo .....	Marengo Produce Co....	Ind...	H. C. Brown .....	Marengo .....	Marengo .....	J. W. Howard..	G. C .....	Test..		
525	North English.	North English .....	Ind...	S. P. Chiles .....	North English.	N'th English..		G. C .....	Test..		
526	Williamsburg.	Williamsburg .....	Ind...	Joseph Felver.....	Williamsburg..	Williamsburg	F. McKusker ..	G. C .....	Test..		
<i>Jackson County.</i>											
527	Andrew .....	Andrew Lily Cr'y .....	Ind...	W. H. Geistfeld .....	Andrew .....	Maquoketa...	W. H. Geistfeld	Sep'tr ..	Test..		
528	Baldwin No 27.	Diamond Cr'y Co (s)....	Ind...	Simpson, Mc. I & Co.	Boston, Mass..			Sep'tr ..	Test..		
529	Bernard .....	Austin Co-op. Cr'y Co.	Co-op.	J. H. Dunn .....	Hugo .....	Bernard .....	Jas Church .....	Sep'tr ..	Hd ..		
530	Cottonville .....	Lamotte Creamery (s)...	Ind...	Peter Butler, Mgr.	Lamotte .....			S & G. C	Test..		
531	Fulton .....	Fulton Co-op. Cr'y Co.	Co-op.	G. E. Delley .....	Fulton .....	Maquoketa...	Chas. Vath .....	Sep'tr ..	Test..		
532	Jackson .....	Springbrook Cr'y Co (s)	Ind...	O. M. Kegler .....	Springbrook ..	Bellevue .....	Geo. Wadler ..	S & G. C	Test..		
533	Lamotte .....	Lamotte Creamery .....	Ind...	Peter Butler, Mgr.	Lamotte .....	Lamotte .....	Peter Butler ..	S & G. C	Test..		
534	Lamotte .....	Lamotte Creamery (s)...	Ind...	Peter Butler, Mgr.	Lamotte .....	Lamotte .....		S & G. C	Test..		
535	Lamotte .....	Sterling Sep'tr Cr'y ..	Ind...	N. A. Hoffman.....	Lamotte .....	Lamotte .....	John Hoffman.	S & G. C	Test..		
536	Maquoketa .....	Farmers' Union Co-op. Creamery .....	Co-op.	W. M. Miller, Sec.	Maquoketa .....	Switce .....		Sep'tr ..	Test..		
537	Monmouth .....	Emeline .....	Ind...	W. Brady & Son.....	Emeline .....	Monmouth .....	Henry Brady ..	Sep'tr ..	Test..		
<i>Jasper County.</i>											
538	Monmouth .....	Monmouth Co-op. Cr'y Co	Co-op.	Geo. Sokol, Sec.....	Monmouth .....	Monmouth .....	Sam Conley .....	Sep'tr ..	Test..	R21	R21
539	Preston .....	Springbrook .....	Ind...	Jno. Newman & Co.	Elgin, Ill .....	Preston .....	A. J. Negus .....	Sep'tr ..	Test..		
540	Preston .....	Preston City Ass'n .....	Co-op.	S. N. Howard, Sec.	Preston .....	Preston .....	W. G. Clark .....	Sep'tr ..	Test..		
541	Spragueville .....	Springbrook Cr'y (s)...	Ind...	C. M. Kegler .....	Springbrook ..			S & G. C	Test..		
542	Springbrook .....	Springbrook (s) .....	Ind...	Jno. Newman & Co.	Elgin, Ill .....			Sep'tr ..	Test..		
543	St. Donatus .....	Lamotte Creamery (s)...	Ind...	Peter Butler, Mgr.	Lamotte .....			S & G. C	Test..		
544	Union Center..	Springbrook (s) .....	Ind...	Jno. Newman & Co.	Elgin, Ill .....			Sep'tr ..	Test..		
545	Zwingle .....	Laible Bros .....	Stk ..	Geo. Laible .....	Otter Creek .....	Zwingle .....	Geo. Laible .....	Sep'tr ..	Test..	R 5	R 5
<i>Jasper County.</i>											
546	Baxter .....	Baxter Dairy Co .....	Co-op.	H. Kramp, Jr., Sec.	Baxter .....	Baxter .....	R. E. Itskin ..	Sep'tr ..	Test..		
547	Baxter .....	Horne Creamery .....	Ind...	Harris & Co .....	Jesup .....	Baxter .....	A. Tait .....	S & G. C	Test..		
548	Ira .....	Ira Creamery .....	Ind...	Harris & Co .....	Jesup .....	Ira .....	Nix Mass .....	Sep'tr ..	Test..		
549	Kellogg .....	Iowa Creamery Co .....	Ind...	K. C. Pierce .....	Kellogg .....	Kellogg .....	S. H. Payne .....	Sep'tr ..	Test..		
550	Monroe .....	Monroe Creamery .....	Ind...	M. C. Chase, Mgr.	Monroe .....	Monroe .....	John Murray ..	Sep'tr ..	Test..	1272	231
551	Newton .....	Malaka Creamery .....	Ind...	H. D. Parsons .....		Baxter .....		S & G. C	Test..		
552	Newton .....	Palo Alto Dairy Co (s)	Stk Co	W. E. Caldwell, Mgr.	Reasnor .....	Newburg .....	W. H. Graham ..	Sep'tr ..	Test..		
553	Newburg .....	Newburg Creamery Co.	Stk Co	G. D. Alden, Sec.	Newburg .....	Newburg .....	W. E. Caldwell	Sep'tr ..	Test..	1032	192
554	Reasnor .....	Palo Alto Dairy Co....	Stk Co	W. E. Caldwell, Mgr.	Reasnor .....	Reasnor .....		Sep'tr ..	Test..		
555	Valeria .....	Marshall Cr'y Co (s)...	Ind...	Marshall Cr'y Co ..	Marshalltown.			Sep'tr ..	Test..		
<i>Jefferson County</i>											
556	Fairfield .....	Fairfield Cr'y Co .....	Stk Co	H. A. Hoopes, Sec.	Fairfield .....	Fairfield .....	G. Y. Ross .....	Sep'tr ..	Test..	1231	179
557	Four Corners.	Four Corners Co-op. Cr'y	Co-op.	J. L. Collman, Mgr.	Four Corners..	Lockridge .....	J. L. Collman..	Sep'tr ..	Test..	153	123
558	Germanville .....	Germanville Cr'y Ass'n	Stk Co	Chris Mann, Sec.	Brighton .....	Brighton .....	J. H. Johnson..	Sep'tr ..	Test..	882	356
559	Lockridge .....	Lockridge Creamery .....	Ind...	Edward Hartman ..	Lockridge .....	Lockridge .....	Ed Hartman ..	Sep'tr ..	Test..		
560	Packwood .....	Packwood Creamery .....	Ind...	J. D. Eicher, Prop.	Packwood .....	Packwood .....	O. B. Myers .....	Sep'tr ..	Test..		
561	Salina .....	Salina Creamery Co .....	Stk Co	Henry Goers, Mgr.	Salina .....	Beckwith .....	Henry Goers ..	Sep'tr ..	Test..	116	30
<i>Johnson County.</i>											
562	Amish .....	Dear Creek Mills Cr'y ..	Stk Co	J. D. Guengerich Mgr	Amish .....	Wellman .....	L J Guengerich	Sep'tr ..	Test..		
563	Danforth .....	Norway Creamery (s)...	Ind...	Wm. Rowse .....	Norway .....			Sep'tr ..	T&Hd		
564	Danforth .....	Cedar Valley Cr'y Co (s)	Stk Co	G. L. Hubbell, Sec.	Cedar Rapids..	Lone Tree .....	E. Hildebrand.	Sep'tr ..	Test..		
565	Lone Tree .....	Hildebrand Creamery ..	Ind...	Emmett Hildebrand	Lone Tree .....	Lone Tree .....		G. C .....	Test..		
566	Lone Tree .....	Iowa Creamery Co .....	Stk Co	F. E. Guptill .....	Toledo .....	Cedar Rapids..		Sep'tr ..	Test..		
567	Newport .....	Cedar Valley Cr'y Co.(s)	Ind...	Ced. Valley Cr'y Co.	North Liberty.	Iowa City .....	J. W. Andele..	Sep'tr ..	Test..		
568	North Liberty.	North Liberty Cr'y .....	Ind...	J. W. Andele .....	Cedar Rapids..	Solon .....		Sep'tr ..	Test..		
569	Oasis .....	Cedar Valley Cr'y Co.(s)	Ind...	Ced. Valley Cr'y Co.	Solon .....			Sep'tr ..	Test..		
570	Solon .....	Cedar Creamery .....	Ind...	N. P. Nielson, Prop.				Sep'tr ..	Test..		
<i>Jones County.</i>											
571	Amber .....	Amber Creamery .....	Ind...	W. H. Sanford .....	Amber .....	Amber .....	J. M. Cleveland	Sep'tr ..	Test..	85	297
572	Amber .....	Jackson Creamery .....	Ind...	W. H. Sanford .....	Amber .....	Amber .....	J. W. Evans ..	Sep'tr ..	Test..	83	280
573	Amber .....	Hazel Green Creamery.	Ind...	J. S. Condit .....	Anamosa .....	Anamosa .....	Andrew Porter	Sep'tr ..	Test..		
574	Anamosa .....	Fawn Creek .....	Ind...	J. S. Condit .....	Anamosa .....	Anamosa .....	Port Wilkinson	Sep'tr ..	T&Hd		
575	Anamosa .....	Anamosa Creamery .....	Ind...	Vinton Smith, Prop.	Anamosa .....	Anamosa .....	Vinton Smith..	Sep'tr ..	Test..	295	202

THIRTEENTH ANNUAL REPORT OF THE

STATE DAIRY COMMISSIONER.



CREAMERY LIST—CONTINUED.

Offices record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual or cooperative stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath. cream, or both.	Method of testing the test or by the hundred.	No. of D. C. test bottles.	No. of D. C. pt. pette.
576	Anamosa	Cass Center Creamery	Ind.	S. M. Muzzey	Anamosa	Anamosa	S. M. Muzzey	Sep'tr	Test	1365	334
577	Cascade	Temple Co-op Cr'y Co.	Co-op	Jos Gavia	Cascade	Cascade	G. Adamson	Sep'tr	Test	1333	281
578	Center Jct.	Center Junct. Cr'y	Co-op	W. H. Sanford	Amber	Center Junct.	C. E. Mills	Sep'tr	Test	125	217
579	Hale	Hale Creamery Co.	Stk Co	C. E. Walston	Hale	Hale	W. H. Brownell	Sep'tr	Test	221	183
580	Langworthy	Langworthy Co-op Cr'y	Co-op	R. H. Hanken	Langworthy	Langworthy	J. H. Batchelder	Sep'tr	Test	233	107
581	Martelle	Martelle Creamery	Ind.	Batchelder Bros.	Martelle	Martelle	S. & G. Batchelder	Sep'tr	Test	1313	291
582	Monticello	Clover Leaf Creamery	Co-op	Geo. Mandorf	Monticello	Amber	Wm. Crabb	Sep'tr	Test		
583	Anamosa, No. 4	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.	Monticello		Sep'tr	Test		
584	Lang'w'by, 2 G	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
585	Mont'cello	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.		G. L. Phettep'ce	Sep'tr	Test		
586	M't'cello, No. 1	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
587	M't'cello, 2 D	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
588	M't'cello, No. 5	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
589	M't'cello, No. 6	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
590	M't'cello, No. 8	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
591	M't'cello, No. 10	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
592	M't'cello, No. 14	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
593	Orfd. Jc. No. 20	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
594	Wyom'g No. 15	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.	Monticello	D. A. Palmer	Sep'tr	Test	1225	163
595	Monticello	Farmers Co-op Cr'y Co.	Co-op	J. L. Arduser, Sec.	Monticello	Monticello	O. W. Brazleton	Sep'tr	Test		
596	Monticello	Star Creamery Co.	Co-op	John Ambuhl, Sec.	Boston, Mass.		I. H. Smith	Sep'tr	Test		
597	Oltn	Oltn	Ind.	Condit & Swansen	Anamosa	Oltn	T. Swanson	Sep'tr	Test	R15	R15
598	Wyoming	Wyoming Co-op Cr'y Co.	Co-op	J. W. Rhodes	Wyoming	Wyoming	La. H. Smith	Sep'tr	Test		
599	Scotch Grove	Scotch Grove Co-op Cr'y Co.	Co-op	H. K. Jacobs, Sec.	Scotch Grove	Scotch Grove	Alex. Schuize	Sep'tr	Test		
<i>Keokuk County.</i>											
600	Delta	Delta Creamery	Ind.	Jas. Dickson	Delta	Delta	H. S. Wood	Sep'tr	Test		
601	Keota	Keota Creamery	Stk Co	S. E. Reisman, Mgr.	Keota	Keota	Julius Granzow	Sep'tr	Test		
602	What Cheer	What Cheer Cr'y Co.	Ind.	F. L. Emery	What Cheer	What Cheer	F. L. Emery	G. C.	Test		
<i>Kossuth County.</i>											
603	Algona	Plum Creek Creamery	Co-op	C. W. Hopkins	Algona	Algona	L. J. Tokheim	Sep'tr	Test	1494	421
604	Algona	Algona Co-op Cr'y Co.	Co-op	A. W. Sterzbach, Sec.	Algona	Algona	A. W. Sterzbach	Sep'tr	Test		
605	Bancroft	Bancroft Co-op Cr'y Co.	Co-op	John Haupt, Sec.	Bancroft	Bancroft	Aug. Johnson	Sep'tr	Test		
606	Bancroft	Seneca Co-op Cr'y Co.	Co-op	W. W. Alcorn	Seneca	Bancroft	John Tibbetts	Sep'tr	Test		
607	Titonka	Burlingame Cr'y Co.	Co-op	C. Reisman, Sec.	Titonka	Titonka	E. A. Bacon	Sep'tr	Test		
608	Burt	Burt Co-op Cr'y Co.	Co-op	W. A. Chipman, Sec.	Burt	Burt	D. L. Driver	Sep'tr	Test	677	132
609	Burt	Fenton Co-op Cr'y Co.	Co-op	Geo. W. Newell, Sec.	Fenton	Burt	H. W. Pettibone	Sep'tr	Test		
610	German Valley	German Valley Co-op Creamery Co.	Co-op	P. E. Johnston, Sec.	Titonka	Titonka	N. C. Hansen	Sep'tr	Test		
611	Germania	Germania Creamery	Ind.	Josva Morck, Sec.	Germania	Germania	Josva Morck	Sep'tr	Test	1443	394
612	Hobart	Hobart Co-op Cr'y Co.	Co-op	A. Gilmore, Sec.	Hobart	Hobart	Aug. Narell	Sep'tr	Test	306	269
613	Irrington	Irrington Co-op Cr'y Co.	Co-op	S. E. Roney, Sec.	Irrington	Irrington	J. H. Reid	Sep'tr	Test	1386	388
614	Ledyard	Farmers Co-op Cr'y Co.	Co-op	E. J. Skinner, Sec.	Ledyard	Ledyard	Anton Baake	T. & H.	1167	14	
615	Lone Rock	Lone Rock Cr'y Co.	Co-op	John Bernhard, Sec.	Lone Rock	Burt	J. K. Schwan	Sep'tr	Test	128	176
616	Laverne	Laverne Co-op Cr'y Co.	Co-op	John Brown, Sec.	Laverne	Laverne	Geo. L. Minkler	Sep'tr	Test	1150	102
617	Sexton	Sexton Co-op Cr'y Co.	Co-op	E. A. E. Laage, Sec.	Sexton	Sexton	Frank O. Bacon	Sep'tr	Test		
618	St. Joseph	St. Joseph Dairy Ass'n	Co-op	Frank Peyton, Sec.	St. Joseph	Livermore	Fred Bacon	Sep'tr	Test	1317	157
619	Swea City	Swea City Co-op Cr'y Co.	Co-op	John E. Peterson, Sec.	Swea City	Swea City	Fred Erickson	Sep'tr	Test		
620	Wesley	Wesley Co-op Creamery	Co-op	Peter E. Skow, Sec.	Wesley	Wesley	W. J. Dieckman	Sep'tr	Test	1308	237
621	West Bend	Garfield Creamery Co.	Co-op	R. Bermingham, Sec.	West Bend	West Bend	E. E. Keld	Sep'tr	Test	208	295
622	Whittemore	Whittemore Cr'y Co.	Co-op	Thos. Carmody, Sec.	Whittemore	Whittemore	Edward Walsh	Sep'tr	Test	1054	32
623	Whittemore	Lott's Creek Co-op Cr'y Co.	Co-op	Aug. Boettcher, Sec.	Lott's Creek	Burt	Mark Dyer	Sep'tr	Test	1422	370
<i>Lee County.</i>											
624	Argyle	Argyle	Stk Co	O. O. Newbery, Sec.	Argyle	Argyle	Ed. J. Boland	Sep'tr	Test		
<i>Linn County.</i>											
625	Alburnett	Lafayette Creamery	Ind.	Carl Lissner, Prop.	Lafayette	Alburnett	Carl Lissner	Sep'tr	Hd.		
626	Bertram	Cedar Valley Cr'y Co. (S)	Stock	Cedar Val'y Cr'y Co.	Bertram	Bertram		Sep'tr	T. Hd.		
627	Oedar Rapids	Oedar Valley Cr'y Co.	Stock	G. L. Hubbell, Sec.	Oedar Rapids	Oedar Rapids	G. L. Hubbell	Sep'tr	T. Hd.		
628	Center Point	Center Point Creamery	Ind.	George L. Weeks	Center Point	Center Point	Jno. Derfinger	Sep'tr	Test		
629	Central City	Central City Creamery	Ind.	P. W. Sawyer, Mgr.	Central City	Central City	P. W. Sawyer	Sep'tr	Test		
630	Central City	Valley Farm Creamery	Ind.	E. G. Henderson	Central City	Central City	St. E. Wright	Sep'tr	Test		
631	Central City	Burlingham Creamery	Co-op	F. J. Richards, Sec.	Central City	Anamosa	I. P. Minehart	Sep'tr	Test		
632	Oggon	North Side Creamery	Co-op	Fred Lehman, Sec.	Oggon	Oggon	Fred Lehman	Sep'tr	Test		
633	Oggon	Nickel Plate Cr'y	Stock	McAravey Bros.	Oggon	Oggon	S. S. McAravey	Sep'tr	Hd.		
634	Oggon	Oggon Creamery Co.	Stock	L. W. Burt, Sec.	Oggon	Oggon	Howard Bliss	Sep'tr	Test		
635	Oggon	Phillips Co-op Cr'y Co.	Co-op	P. Betzer, Sec.	Oggon	Oggon	D. F. French	Sep'tr	Hd.		
636	Elmont	Elmont Creamery	Ind.	E. H. Hill, Prop.	Elmont	Elmont	S. B. Mills	Sep'tr	Hd.		
637	Ely	Ely & Western Cr'y	Stock	J. C. Dvorak, Sec.	Ely	Ely	Z. L. Wright	Sep'tr	Test	364	175
638	Fairfax	Scotch Grove Cr'y	Ind.	Thomas McLelland	Fairfax	Fairfax	Thos McLelland	Sep'tr	Test		
639	Fairfax	Scotch Grove Cr'y (S)	Ind.	Thomas McLelland	Fairfax	Fairfax		Sep'tr	Test		
640	Lisbon	Lisbon Creamery	Ind.	W. H. Thompson, Proprietor.	Lisbon	Lisbon	W. H. Thompson	Sep'tr	Test		
641	Marion	Marion	Ind.	W. W. Gray, Mgr.	Marion	Marion	C. A. Cline	Sep'tr	Test	765	186
642	Prairieburg, No. 3	Diamond Cr'y Co. (S)	Ind.	Simpson, McI. & Co.	Boston, Mass.			Sep'tr	Test		
643	Prairieburg	Minehart & Cook's	Ind.	L. E. Minehart, Mgr.	Prairieburg	Oggon	H. T. Cook	Sep'tr	Hd.		
644	Robins	Eureka Creamery	Stock	J. R. Holsinger, Sec.	Robins	Robins		Sep'tr	Test		
645	Springville	Phonix	Ind.	A. L. Cory	Springville	Springville	A. L. Cory	Sep'tr	Test	381	265
646	Springville	Phonix (S)	Ind.	A. L. Cory	Springville	Springville		Sep'tr	Test		

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by an individual, co-stock comp. or by.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of receiv- ing milk—by the brand, by the brand, or by the brand.	No. of D. C. test bottles.	No. of D. C. pl- parts.
647	Toddville	Monroe Creamery	Stock	C. M. Fisher, Sec.	Toddville	Toddville	C. M. Fisher	Sep'tr.	Test.	1201	128
648	Troy Mills	Troy Mills	Ind.	E. G. Gard, Prop.	Troy Mills	Walker	Chas. Walton	Sep'tr.	Hd.		
649	Troy Mills	Highland Creamery Co.	Co-op	John Tehl	Walker	Walker	J. M. Tupper	Sep'tr.	Hd.		
650	Walker	Walker Creamery	Ind.	H. J. Nietert	Walker	Walker	S. W. Laird	Sep'tr.	Test.		
651	Waubeek	Waubeek Creamery	Ind.	Bates & Hemenway	Waubeek	Central City	H. C. Hemenway	Sep'tr.	Hd.		
652	Waubeek	Waubeek Creamery	Ind.	A. L. Corry	Waubeek	Central City	A. L. Corry	Sep'tr.	Hd.		
653	West'n College	Ely & Western Cr'y (s).	Stock	J. C. Dvorak, Sec.	Ely	Ely		Sep'tr.	Test.		
<i>Louisa County</i>											
654	Fredonia	Fredonia Creamery	Ind.	Thomas Carey	Fredonia	Fredonia	E. W. Kelly	G. C.	Test.		
655	Letts	Letts Creamery	Ind.	J. M. Hildebrand	Letts	Letts	J. M. Hildebrand	G. C.	Test.		
656	Wapello	Wapello Creamery	Ind.	F. P. Briehtbock	Wapello	Wapello	F. P. Briehtbock	G. C.	Test.		
<i>Lucas County</i>											
657	Derby	Old Co'onry Cr'y (s)	Ind.	T. G. Hyde, Mgr.	Humeston			Sep'tr.	Test.		
658	Russell	Russell Creamery Co.	Stock	W. J. Marshall, Sec.	Russell	Russell	W. J. Marshall	Sep'tr.	Test.		
<i>Lyon County</i>											
659	George	George	Ind.	M. M. Lewis, Prop.				Sep'tr.	Test.		
660	Inwood	Inwood Creamery	Ind.	Ax Nordmark	Inwood	Inwood	Ax Nordmark	Sep'tr.	Test.	636	96
661	Klondyke	Inwood Creamery (s)	Ind.	Ax Nordmark	Inwood	Inwood	Ax Nordmark	Sep'tr.	Test.		
662	Larchwood	Larchwood Co-op Cr'y A	Stk Co	C. E. Martin, Sec.	Larchwood	Larchwood	Geo Gardner	Sep'tr.	Test.		
663	Lester	Lester Creamery Co.	Co-op	L. W. Billings	Lester	Lester	L. W. Billings	Sep'tr.	Hd.	137	234
664	Rock Rapids	Rock Rapids Creamery	Ind.	H. E. Morrow, Mgr.	Rock Rapids	Rock Rapids	H. E. Morrow	Sep'tr.	Test.	1429	377
<i>Madison County</i>											
665	Barney	Barney	Ind.	W. A. Marlatt, Sec.	Algona	Barney	John De Lay	Sep'tr.	Test.	1179	78
666	Earlham	Earlham	Ind.	McRae Bros.	Des Moines			Sep'tr.	Test.		
667	Pitzer	Jackson Creamery Co.	Co-op	W. Epperd, Pres.	Pitzer	Winterset	Carpenter	Sep'tr.	Test.		
<i>Mahaska County</i>											
668	New Sharon	New Sharon Produce Co	Stk Co	F. E. Crawford, Sec.	New Sharon	New Sharon	H. Martin	G. C.	Test.		
<i>Marion County</i>											
669	Calera	Warren County Cr'y (s)	Ind.	E. Haldeman	Indianola			Sep'tr.	Test.		
670	Knoxville	Knoxville Creamery	Ind.	J. J. Bousquet, Prop	Pella	Knoxville	W. H. Lister	G. C.	Test.		
671	Pella	Pella Creamery	Ind.	J. J. Bousquet, Prop	Pella	Pella	T. Smorenburg	G. C.	Test.		
<i>Marshall County</i>											
672	Clemons	Minerva Valley Cr'y Co	Co-op	A. D. McCormack, S.	Clemons	Clemons	Henty Nolte	G. C.	Test.		
673	Gilman	Marshall Cr'y Co. (s)	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
674	Green Mount'n	Green Mount'n Cr'y A.	Co-op	R. B. Wallace, Sec.	Green Mount'n	Green Mount'n	O. W. Dillon	S. & G C	Test.	1275	331
675	Green Mount'n	Beaman Creamery (s)	Ind.	F. McNelly	Beaman			Sep'tr.	Test.		
676	Haverhill	Marshall Cr'y Co. (s)	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
677	Liscomb	Marshall Cr'y Co. (s)	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
678	Marshalltown	Marshall Creamery Co.	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
679	Melbourne	Marshall Cr'y Co. (s)	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
680	Melbourne	Farmers Co-op. Cr'y A.	Co-op	Y. VanHorn, Sec.	Melbourne	Melbourne	C. S. Woods	Sep'tr.	Test.		
681	Rhodes	Marshall Cr'y Co. (s)	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.		
682	State Center	State Center Farmers' Creamery Assn.	Co-op	G. T. Shaunce, Mgr.	State Center	State Center	G. T. Shaunce	G. C.	Test.		
683	St. Anthony	St. Anthony Cr'y Co.	Co-op	J. C. Evans, Sec.	St. Anthony	St. Anthony	C. M. Balsley	Sep'tr.	Test.		
<i>Mills County</i>											
684	Emerson	Blue Grass	Ind.	W. M. Tolander	Essex	Essex	F. A. Tolander	G. C.	Test.		
685	Malvern	Malvern Creamery	Ind.	Boehner & Barnes	Malvern	Malvern	T. J. Beats	G. C.	Test.	1369	35
686	Silver City	Malvern Creamery (s)	Ind.	Boehner & Barnes	Malvern	Malvern		G. C.	Test.		
<i>Mitchell County</i>											
687	Bailey	Lawn Spring	Co-op	F. D. Griffin, Pres.	Bailey	Bailey	K. Houge	G. C.	Test.		
688	Little Cedar	Little Cedar Cr'y Co.	Co-op	C. F. Hockens, Mgr.	Little Cedar	Little Cedar	O. R. French	G. C.	Test.		
689	Merca	Rock Cr. Co-op. Cr'y An	Co-op	S. J. Fosholdt, Sec.	Merca	Merca	L. Klemesrud	G. C.	Test.		
690	Newhaven	Farmers Co-op. Cr'y An	Co-op	P. J. Carroll, Sec.	Newhaven	Newhaven	H. C. Thomas	G. C.	Test.		
691	Orchard	Farmers Co-op. Cr'y An	Co-op	J. W. C. C. y, Pres.	Orchard	Orchard	MV P'rbrother	G. C.	Test.		
692	Osage	Osage Co-op. Cr'y Co.	Co-op	Albert Bartle	Osage	Osage	D. McDugall	G. C.	Test.		
693	Riceville	Riceville Co-op. Cr'y An	Co-op	C. Smock, Pres.	Riceville	Riceville	George Miller	G. C.	Test.		
694	Stacyville	Stacyville Creamery	Ind.	Jas. Spensley & Sons	Stacyville	Stacyville	G. M. Spensley	Sep'tr.	Test.	1609	438
695	St. Ansgar	Farmers Co-op. Cr'y	Co-op	L. E. Kittleson	St. Ansgar	St. Ansgar	E. Merenus	G. C.	Test.		
696	Toeterville	Toeterville Cr'y Co.	Co-op	L. C. Baker, Sec.	Toeterville	Toeterville	S. H. Nelson	Sep'tr.	Test.		
<i>Monona County</i>											
697	Whiting	Whiting Creamery	Co-op	N. Danielson, Sec.	Whiting	Whiting	N. Danielson	Sep'tr.	Test.	1235	185

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by an individual, co-stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of recov-ering milk—by the hundred, bottle, or other.	No. of D. C. test.	No. of D. C. pi-pet.
<i>Monroe County.</i>											
698	Albia.....	Albia Creamery.....	Ind...	S. D. Thompson, Prop.	Albia.....	Albia.....	S. D. Thompson	Sep'tr...	Test..	1322	278
<i>Montgomery County.</i>											
699	Elliott.....	Elgin Creamery Co.....	Ind...	O. Sands, Pres.....	Chicago, Ill.....	Elliott.....	J. H. Baldwin.	Sep'tr...	Test..	R26	R26
700	Stanton.....	Elgin Creamery Co. (s).	Ind...	O. Sands, Pres.....	Chicago, Ill.....	Stanton.....	J. H. Baldwin.	Sep'tr...	Test..		
701	Villisca.....	Elgin Creamery Co. (s).	Ind...	O. Sands, Pres.....	Chicago, Ill.....	Villisca.....	J. H. Baldwin.	Sep'tr...	Test..		
<i>Muscatine County.</i>											
702	Atalissa.....	Iowa Creamery Co.....	Stk Co	F. E. Gupthill.....	Toledo.....	Atalissa.....	James T. Stars	G. C.....	Test..		
703	Moscow.....	Nickel Plate Cr'y (s).....	Ind...	Geo. W. Kelley, Mgr.	Wilton Junct'n.....	Moscow.....	James T. Stars	S. & G. O.	Id.		
704	West Liberty.....	Cedar Valley Creamery	Ind...	L. B. Pickering.....	West Liberty.....	West Liberty	James T. Stars	S. & G. O.	Id.		
705	West Liberty.....	Iowa Creamery Co.....	Stk Co	F. E. Gupthill.....	Toledo.....	West Liberty	Fred W. Hessel	S. & G. O.	Both.		
706	Wilton.....	Nickel Plate Creamery.	Ind...	Geo. W. Kelley, Mgr.	Wilton Junct'n.....	Wilton.....	Geo. E. Crooker	S. & G. O.	Id.		
<i>O'Brien County.</i>											
707	Germantown.....	Caledonia Creamery Co	Stk Co	Wm. Gehrls.....	Germantown.....	Paullina.....	Wm. Gehrls.....	Sep'tr...	Id.	29	310
708	Hartley.....	Hartley Creamery.....	Ind...	H. D. Kemington & Co	Ruthven.....	Hartley.....	A. L. Remington	Sep'tr...	Test..	1341	298
709	Paullina.....	Union Creamery.....	Stk Co	Wm. Strampe, Mgr.	Paullina.....	Paullina.....	Wm. Strampe	Sep'tr...	Id.		
710	Primghar.....	Pleasant Park Cr'y.....	Ind...	Younger & Speed.....	Primghar.....	Primghar.....	Charles Speed	Sep'tr...	Id.	1274	230
711	Sheldon.....	H. C. Lane.....	Ind...	H. C. Lane.....	Sheldon.....	Sheldon.....	Charles Speed	Sep'tr...	Test..	1211	149
712	Sutherland.....	Sutherland Creamery.....	Ind...	Younger & Speed.....	Primghar.....	Sutherland.....	Morris Adams.	Sep'tr...	Id.		
<i>Osceola County.</i>											
713	Ashton.....	Ashton Creamery.....	Ind...	Frank Thorn.....	Ashton.....	Ashton.....	Ira O'Neel....	Sep'tr...	Test..	1352	301
714	Ocheyedan.....	Ocheyedan Creamery.....	Ind...	Rishworth, Rogers & Co.	Ocheyedan.....	Ocheyedan.....	Ira O'Neel....	Sep'tr...	Test..	1352	301
<i>Page County.</i>											
715	Blanchard.....	Blanchard Creamery.....	Ind...	J. J. Thompson.....	Blanchard.....	Blanchard.....	H. W. Weber....	Sep'tr...	Test..		
<i>Shelby County.</i>											
716	Olarinda.....	Wall Street Cr'y Co.....	Stk Co	B. J. Sunderman, Sec.	Olarinda.....	Olarinda.....	I. N. Clark.....	Sep'tr...	Test..		
717	College Springs	Blanchard Creamery (s)	Ind...	J. J. Thompson.....	Blanchard.....	Blanchard.....	I. N. Clark.....	Sep'tr...	Test..		
718	Essex.....	Essex Creamery Co.....	Stk Co	T. K. Elliott, Sec.	Essex.....	Essex.....	I. N. Clark.....	Sep'tr...	Test..		
719	Shambaugh.....	Shambaugh Cr'y Co.....	Stk Co	G. R. Redman, Sec.	Shambaugh.....	Shambaugh.....	Olas Gillispie	Sep'tr...	Test..		
720	Shenandoah.....	Shenandoah R. & C. Co	Co-op.	C. G. Voltz.....	Shenandoah.....	Shenandoah.....	O. G. Voltz.....	Sep'tr...	Test..		
721	Yorktown.....	Yorktown B. & C. Ass'n.	Stk Co	B. S. Loy, Sec.....	Yorktown.....	Yorktown.....	Wm. Kimble....	Sep'tr...	Test..		
<i>Palo Alto County.</i>											
722	Ayrshire.....	Silver Lake Cr'y Co.....	Co-op.	J. H. Murton.....	Ayrshire.....	Ayrshire.....	N. H. Tremble.	Sep'tr...	Test..	1007	314
723	Curlew.....	Curlew Creamery Co.....	Co-op.	G. W. Downs, Sec.	Curlew.....	Curlew.....	N. H. Tremble.	Sep'tr...	Test..	1008	32
724	Curlew.....	Curlew Cr'y Co (s).....	Co-op.	G. W. Downs, Sec.	Curlew.....	Curlew.....	N. H. Tremble.	Sep'tr...	Test..		
725	Cylinder.....	Cylinder B. & C. Ass'n.	Co-op.	Theo. De Mouth, Sec.	Cylinder.....	Cylinder.....	W. W. Board....	Sep'tr...	Test..	1409	352
726	Depew.....	Maple Leaf Cr'y Co.....	Co-op.	C. E. Erickson, Sec.	Depew.....	Cylinder.....	W. W. Board....	Sep'tr...	Test..	1368	325
727	Emmetsburg.....	Emmetsburg Cr'y Co.....	Stk Co	L. Stuehmer, Sec.	Emmetsburg.....	Emmetsburg.....	N. Natson.....	Sep'tr...	Test..	994	157
728	Emmetsburg.....	Nevada Co-op. Cr'y Co	Co-op.	Thomas Kirby.....	Emmetsburg.....	Emmetsburg.....	T. R. Wilson....	Sep'tr...	Test..		
729	Whitemore.....	Fairville Cr'y Co.....	Co-op.	Aug. Stahl.....	Fairville.....	Whitemore.....	A. C. Kressin..	Sep'tr...	Test..		
730	Graettinger.....	Lost Island Cr'y Co.....	Co-op.	L. C. Christenson, Sec.	Fallow.....	Graettinger.....	Christ Mark....	Sep'tr...	Test..	672	290
731	Graettinger.....	Farmers' Co-op. Cr'y Co	Co-op.	F. L. Lamb.....	Graettinger.....	Graettinger.....	A. J. Johnson....	Sep'tr...	Test..	1163	53
732	Mallard.....	Mallard B. & C. Ass'n.	Co-op.	E. Sawyer.....	Mallard.....	Mallard.....	Christ Mark....	Sep'tr...	Test..	740	108
733	Osgood.....	Osgood Creamery Co.....	Co-op.	E. P. McEvoy, Sec.	Osgood.....	Osgood.....	E. Chadwick....	Sep'tr...	Test..	746	178
734	Rodman.....	Rodman Co-op. Cr'y Co.	Co-op.	O. J. Frye, Sec.....	Rodman.....	Rodman.....	Fred Hacker....	Sep'tr...	Test..		
735	Ruthven.....	Ruthven Creamery Co.....	Co-op.	G. R. Bookman, Sec.	Ruthven.....	Ruthven.....	O. Peterson.....	Sep'tr...	Test..		
736	Ruthven.....	Highland Butter Ass'n.	Co-op.	L. Pilkington, Sec.	Ruthven.....	Ruthven.....	W. H. Haller....	Sep'tr...	Test..	1237	169
737	Ruthven.....	Farmers' Co-op. Cr'y Co	Co-op.	H. D. Remington.....	Ruthven.....	Ruthven.....	E. J. Remington	Sep'tr...	Test..	1354	398
738	West Bend.....	West Bend Co-op. Cr'y Co	Co-op.	Geo. W. Brown, Sec.	West Bend.....	West Bend.....	T. A. Clark.....	Sep'tr...	Test..	365	355
739	West Bend.....	Eureka Creamery Co.....	Co-op.	Henry Dunn.....	West Bend.....	West Bend.....	H. G. Carpenter	Sep'tr...	Test..	1236	184
<i>Plymouth County.</i>											
740	Ellendale.....	Ellendale Creamery ..	Co-op.	J. F. Gorman.....	Ellendale.....	Merrill.....	Wm. Anderson.	Sep'tr...	Test..	1258	209
741	Hinton.....	Hinton.....	Stk Co	W. G. Pearson.....	Hinton.....	Hinton.....	Wm. Anderson.	Sep'tr...	Test..		
742	Le Mars.....	Le Mars Co-op. Cr'y Co.	Co-op.	C. Rhoaron.....	Le Mars.....	Le Mars.....	J. B. Deitering	Sep'tr...	Test..	753	300
743	Merrill.....	Merrill Creamery Co.....	Stk Co	R. M. Crouch, Sec.	Merrill.....	Merrill.....	C. B. Horrocks.	Sep'tr...	Test..		
744	Milnersville.....	Milnersville Cr'y Co.....	Stk Co	J. F. Banks, Sec.	Milnersville.....	Sioux City.....	C. B. Horrocks.	Sep'tr...	Test..		
745	Neptune.....	Neptune Co-op. Cr'y Co	Co-op.	Dan O'Brien.....	Neptune.....	Le Mars.....	C. Mikkelson..	Sep'tr...	T. Hd.	1164	33
746	Oyens.....	O'Leary Creamery Co.....	Co-op.	R. S. Eyles, Sec.....	O'Leary.....	Oyens.....	A. J. Freese....	Sep'tr...	Test..	1418	366
747	Oyens.....	Oyens Co-op. Cr'y Ass'n.	Co-op.	P. E. Hickey, Sec.	Oyens.....	Oyens.....	J. C. Mortison..	Sep'tr...	Test..	1163	46
748	Remsen.....	Remsen Co-op. Cr'y Co.	Co-op.	Peter Arns, Mgr.....	Remsen.....	Remsen.....	H. Hasenbank..	Sep'tr...	Id.	293	276
749	Struble.....	Grant Twp. Cr'y Co.....	Co-op.	H. F. Maust, Sec.	Struble.....	Dalton.....	K. Hadenbank..	Sep'tr...	Test..	R 3	5 3
750	Struble.....	Struble Creamery Co.....	Co-op.	Garret Lewis.....	Struble.....	Struble.....	Andy Stenum....	Sep'tr...	Test..		
<i>Pocahontas County.</i>											
751	Fonda.....	Lilly Creamery.....	Co-op.	J. D. Fitzgerald.....	Lilly.....	Fonda.....	B. M. Lamb.....	Sep'tr...	Test..	7	248
752	Fonda.....	Rosebud.....	Ind...	R. F. Beswick, Prop.	Fonda.....	Fonda.....	B. M. Lamb.....	Sep'tr...	Test..		
753	Havelock.....	Laurens Creamery (s).....	Ind...	W. & J. G. Hinn.....	Laurens.....	Laurens.....	Peter M. Jern..	Sep'tr...	Test..	1151	294
754	Laurens.....	Laurens Creamery Co.....	Ind...	W. & J. G. Hinn.....	Laurens.....	Laurens.....	Peter M. Jern..	Sep'tr...	Test..	1329	289
755	Lizard.....	Lizard Creamery.....	Stk Co	Geo. Siebels, Sec.	Manson.....	Manson.....	Peter M. Jern..	Sep'tr...	Test..		
756	Mud Lake.....	Laurens Cr'y Co. (s).....	Ind...	W. & J. G. Hinn.....	Laurens.....	Laurens.....	Peter M. Jern..	Sep'tr...	Test..		

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by an individual or operated by stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-cream, or both.	Method of receiving the test or by the hundred.	No. of D. C. test.	No. of D. C. pints.
757	Pocahontas.	Pocahontas Creamery.	Ind.	Hlan Bros.	Laurens.	Rolfe.	C. R. Johnson	Sep'tr.	Test.	1480	440
758	Pomeroy.	Bretholz Creamery.	Ind.	E. C. M. Bretholz, Prop.	Pomeroy.	Pomeroy.	Wm. Bretholz.	Sep'tr.	Test.	1056	359
759	Pomeroy.	B. Fisher's Creamery.	Ind.	B. Fisher, Prop.	Pomeroy.	Pomeroy.	B. Fisher.	Sep'tr.	Test.		
760	Rolfe.	Gilt Edge.	Ind.	W. & Rogers, Prop.	Rolfe.	Rolfe.	Will Kuckler.	Sep'tr.	Test.	1158	33
761	Rusk.	Gilt Edge.	Co-op.	E. O. Christeson, Sec.	Maxwell.	Pomeroy.	H. C. Graustet.	Sep'tr.	Test.	1385	337
762	Sac City.	Rossbud (s).	Ind.	R. F. Beswick, Prop.	Fonda.			Sep'tr.	Test.		
<i>Polk County.</i>											
763	Bondurant.	Marshall Cr'y Co. (s).	Stk Co.	W. D. Collyer, Mgr.	Marshalltown.			Sep'tr.	Test.		
764	Campbell.	Grimes B. & C. Co. (s).	Stk Co.	W. J. Stewart, Sec.	Grimes.			Sep'tr.	Test.		
765	Des Moines.	Crystal Springs.	Ind.	MacRae Bros.	Des Moines.	Des Moines.	R. S. Storek.	Sep'tr.	Test.	1388	241
766	Grimes.	Grimes B. & C. Co.	Stk Co.	W. J. Stewart, Sec.	Grimes.	Grimes.	S. M. Geyer.	Sep'tr.	Test.	1330	230
767	Maxwell.	Keystone Creamery.	Ind.	Joe Romine, Mgr.	Maxwell.			Sep'tr.	Test.		
768	Mitchellville.	Mitchellville Cr'y Ass'n	Co-op.	George E. Roller	Mitchellville.	Mitchellville.	Geo. E. Roller	Sep'tr.	Test.		
769	Walnut.	Walnut Creamery.	Ind.	N. C. Madsen, Prop.	Walnut.		N. C. Madsen.	Sep'tr.	Test.		
<i>Pottawattamie County.</i>											
770	Avoca.	Avoca Creamery.	Ind.	R. Frost, Prop.	Avoca.	Avoca.	Chr. Sorensen	G. C.	Test.		
771	Hancock.	Silver Valley.	Ind.	H. C. Brandes, Prop.	Hancock.	Hancock.	S. F. Millhiser.	G. C.	Hd.		
772	Macedonia.	Macedonia Cr'y Ass'n.	Stk Co.	S. M. Geyer, Mgr.	Macedonia.	Macedonia.	S. M. Geyer.	Sep'tr.	Test.		
773	Minden.	Minden Creamery Co.	Co-op.	Samuel Bieme, Sec.	Minden.	Minden.	P. P. Jensen's	Sep'tr.	Test.	1490	439
774	Minden.	York Creamery Ass'n	Co-op.	B. Eichenberger, Sec.	Minden.	Minden.	John Doehla.	Sep'tr.	Hd.		
775	Treynor.	Treynor Creamery Co.	Ind.	F. G. Silvey.	Treynor.	Council Bluffs.	J. N. Keivners.	Sep'tr.	Test.	R12	R12
<i>Poweshiek County.</i>											
777	Brooklyn.	Brooklyn Creamery.	Ind.	M. A. Height, Mgr.	Brooklyn.	Brooklyn.	J. W. Height.	G. C.	Test.		
778	Deep River.	Deep River.	Ind.	Hatter & Baird, Pr's.	Deep River.	Deep River.	Edw. Kinsler.	G. C.	Test.		
779	Grinnell.	Fowler.	Ind.	J. W. Fowler.	Grinnell.	Grinnell.	A. Christiansen	Sep'tr.	Test.		
779	Grinnell.	Marshall Cr'y Co. (s).	Ind.	Marshall Cr'y Co.	Marshalltown.			Sep'tr.	Test.		
780	Guernsey.	Guernsey Creamery.	Ind.	A. L. Minchert, Sec.	Guernsey.	Guernsey.	A. L. Minchert	Sep'tr.	Test.		
781	Hartwick.	Spring Brook Creamery	Ind.	John Newman Co.	Elgld, Ill.	Hartwick.	D. E. Murphy.	Sep'tr.	Test.		
782	Malcom.	Malcom Creamery Co.	Ind.	Alexander & Vohs.	Malcom.			Sep'tr.	Test.	1407	347
783	Montezuma.	Montezuma Creamery.	Co-op.	John Hall, Jr., Sec.	Montezuma.			Sep'tr.	Test.		
<i>Ringgold County.</i>											
784	Knowlton.	Elgin Creamery Co. (s).	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.		
785	Shannon.	Redding Creamery.	Ind.	D. M. Rich, Mgr.	Redding.	Redding.	D. M. Rich.	G. C.	Test.		
786	Shannon City.	Union Creamery Co.	Co-op.	C. S. Osmond, Sec.	Shannon City.	Shannon City.	J. C. Comstock	Sep'tr.	Test.	1482	393
<i>Sac County.</i>											
787	Auburn.	Auburn Creamery.	Ind.	Parker & Fitzsim's	Auburn.	Auburn.	J. J. Fitzsim's	Sep'tr.	Test.		
788	Carnarvon.	Seaman & Hoon.	Ind.	Seaman & Hoon.	Carnarvon.	Carnarvon.	Seaman & Hoon	Sep'tr.	Hd.		
789	Early.	Delaware Center Cr'y Co.	Co-op.	C. N. Searles, Sec.	Leota.	Early.	J. W. Wright.	Sep'tr.	Test.	1128	82
791	Early.	Early.	Ind.	J. W. Wright.	Early.	Early.	J. W. Wright.	Sep'tr.	Test.		
792	Lake View.	Lake View.	Ind.	G. W. Pattee.	Early.	Early.	H. C. Best.	Sep'tr.	Test.		
793	Odebolt.	Lake View.	Ind.	D. W. Branton, Mgr.	Lake View.	Lake View.	A. M. Granger.	Sep'tr.	Test.	1287	249
794	Odebolt.	Farmers' Creamery Co.	Stk Co.	J. A. Cranston, Sec.	Odebolt.	Odebolt.	E. McParlane.	Sep'tr.	Test.	683	101
795	Sac City.	Blue Grass B. & C. F. Y's	Ind.	I. Hillman.	Sac City.	Sac City.	F. Hillman.	Sep'tr.	Test.		
796	Sac City.	Ooon Valley.	Ind.	W. H. Pettis, Prop.	Pettis.	Sac City.	W. H. Pettis.	Sep'tr.	Test.		
797	Sac City.	Pearl Creamery.	Ind.	D. C. Earley, Prop.	Sac City.	Sac City.	G. M. Culp.	Sep'tr.	Test.		
798	Schaller.	Pearl Creamery (s).	Ind.	D. C. Earley, Prop.	Sac City.	Sac City.	G. M. Culp.	Sep'tr.	Test.		
799	Schaller.	Schaller Creamery.	Ind.	C. F. Schroeder.	Schaller.	Schaller.	Geo. A. Bristo	Sep'tr.	Test.		
800	Wall Lake.	Wall Lake Creamery.	Ind.	Brunton & Ahern.	Wall Lake.	Wall Lake.	T. Deacon.	Sep'tr.	Test.	711	305
801	Weed.	Rose Valley Creamery.	Ind.	Ahern & Wright, Pr's	Wall Lake.	Wall Lake.	M. E. Wright.	Sep'tr.	Test.	355	272
801	Weed.	Gold Crown Creamery.	Ind.	Wright & Son.	Wall Lake.	Wall Lake.		Sep'tr.	Test.		
<i>Scott County.</i>											
802	Amity.	Amity Creamery.	Ind.	Wm. Koberg, Prop.	Amity.	Davenport.	Wm. Koberg.	Sep'tr.	Test.		
803	Donahue.	Donahue Eagle Cr'y.	Ind.	Frank Keppy.	Donahue.	Donahue.	L. A. Keppy.	Sep'tr.	Test.	1029	135
804	Long Grove.	Star.	Ind.	Geo. W. Curtis, Prop.	Long Grove.	Long Grove.	J. W. B. Blair.	G. C.	Ink't.		
<i>Shelby County.</i>											
805	Earling.	Earling Creamery Co.	Co-op.	Frank Thelle, Sec.	Earling.	Earling.	Geo. Kohles.	Sep'tr.	Hd.		
806	Elk Horn.	Danish Centr. Cr'y Co.	Stock.	Geo. James, Sec.	Elk Horn.	Brayton.	Christ Johnson	Sep'tr.	Test.	1281	239
807	Harlan.	Council Bluffs Cr'y Co.	Ind.	W. G. Morris, Mgr.	Harlan.	Harlan.		Sep'tr.	Test.	1498	436
808	Irwin.	Irwin Creamery.	Ind.	Sweger & Pruter.	Aspnhall.	Irwin.	H. C. Hays.	Sep'tr.	Test.		
809	Jacksonville.	Buck Valley.	Co-op.	R. Rasmussen, Sec.	Jacksonville.	Kirkman.	A. P. Vilthen.	Sep'tr.	Test.		
810	Kirkman.	Danway Co-op. Cr'y Co.	Co-op.	B. Dahlhoff, Sec.	Kirkman.	Kirkman.	J. Anderson.	Sep'tr.	Test.		
811	Portsmouth.	Portsmouth Creamery.	Co-op.	M. A. Sorenson, Prop.	Portsmouth.	Portsmouth.	M. A. Sorenson	Sep'tr.	Test.		
812	Walnut.	Prairie Rose Cr'y Co.	Co-op.	J. D. Lorentzen, Sec.	Harlan.	Walnut.	N. C. Madsen.	Sep'tr.	Hd.		
813	Westphalia.	Earling Cr'y Co. (s).	Co-op.	Frank Thelle, Sec.	Earling.	Walnut.		Sep'tr.	Test.		
<i>Stout County.</i>											
814	Alton.	Alton Creamery.	Ind.	Geo. R. Mueller.	Alton.	Alton.	Geo. R. Mueller	Sep'tr.	Test.	1042	73
815	Granville.	Northwestern Cr'y Co.	Stk Co.	Thos. Berry, Sec.	Granville.	Granville.	H. Karhoff.	Sep'tr.	Hd.		
816	Hawarden.	Hawarden Cr'y Ass'n.	Co-op.	J. M. Lynn.	Hawarden.	Hawarden.	G. A. Crowther	Sep'tr.	Test.		
817	Hesper.	Hesper Creamery.	Stk Co.	P. Tanager, Sec.	Hesper.	Hesper.	C. L. Taylor.	Sep'tr.	Test.		
818	Hull.	Welcome Creamery (s).	Stk Co.	A. D. Rozeboom.	Sioux Center.			Sep'tr.	Hd.		
819	Hull.	Stensvad Bros. Cr'y.	Ind.	Rud Stensvad, Mgr.	Hull.	Hull.	Rud Stensvad.	Sep'tr.	Hd.		

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by an individual, co-stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER	Separator, gath-ered cream, or both.	Method of receiv-ing milk—by the hundred, No. of D. C. test bottle.	N. D. C. pl-plate.
820	Rock Valley.	Rock Valley Creamery.	Ind.	O. A. Stensvad	Rock Valley	Rock Valley	O. A. Stensvad	Sep'tr.	Hd.	
821	Sioux Center.	Welcome Creamery	Stk Co	A. D. Roseboom	Sioux Center	Sioux Center	A. D. Roseboom	Sep'tr.	Hd.	
822	Sioux Center.	Sioux Center Creamery	Ind.	John Stensvad	Sioux Center	Sioux Center	John Stensvad	Sep'tr.	Hd.	
823	Sioux Center.	Welcome Creamery (6).	Stk Co	A. D. Roseboom	Sioux Center	Sioux Center	A. D. Roseboom	Sep'tr.	Hd.	
<i>Story County.</i>										
824	Ames	Ia. Agr'l College Cr'y.	State.	Geo. L. McKay, Mgr.	Ames	Ames	Henry Evins.	Sep'tr.	Test.	
825	Cambridge.	Cambridge Farmers' Co-op. Creamery Co.	Co-op.	Oliver Hill, Sec.	Cambridge	Cambridge	Wm. Hommel.	Sep'tr.	Test.	R32
826	Collins.	Frmrs' Co-op. Cr'y Ass'n	Co-op.	A. G. Armstrong, Sec.	Collins	Collins	A. G. Armstrong	Sep'tr.	Test.	629 64
827	Colo.	Fairview Creamery	Ind.	L. M. Kelly	Colo	Colo	L. M. Kelly	Sep'tr.	Test.	
828	Gilbert Station.	Gilbert Creamery	Ind.	Peter Jensen, Prop.	Gilbert Station	Gilbert Sta.	Peter Jensen	Sep'tr.	Test.	1163 27
829	Huxley.	Huxley Farmers' Cr'y.	Co-op.	John Stenberg, Sec.	Huxley	Huxley	J. F. Burrets.	Sep'tr.	Test.	
830	Kelly.	Kelley Frms' Cr'y Co.	Stk Co	J. F. Gerbracht, Sec.	Kelley	Kelley	Raymond Erb.	Sep'tr.	Test.	1439 411
831	Maxwell.	Maxwell Creamery	Ind.	Jas. Romine, Mgr.	Maxwell	Maxwell	Jas. Romine	Sep'tr.	Test.	
832	McCallsburg.	McCallsburg Creamery	Ind.	Boardman Bros.	Nevada	Nevada	T. B. Russell.	Sep'tr.	Test.	120 200
833	Nevada.	Nevada Creamery	Ind.	E. W. Kimble, Sec.	Roland	Roland	L. Shepard	Sep'tr.	Test.	
834	Roland.	Indian Hill Creamery	Stk Co	E. J. Evenson, Sec.	Roland	Roland	F. J. Keeder	Sep'tr.	Test.	
835	Roland.	Roland Farm's Cr'y Co	Co-op.	Ole Langland, Sec.	Slater	Slater	John Freland	Sep'tr.	Test.	
836	Slater.	Slater Farmers' Cr'y Co	Co-op.	Alex Henderson, Sec.	Story City	Story City	Geo. Wicks.	Sep'tr.	Test.	720 70
837	Story City.	Story City Frms' Cr'y Co	Co-op.	J. O. Burkhart, Sec.	Zearing	Zearing	J. J. Ross	Sep'tr.	Test.	
838	Zearing.	Zearing Creamery Co.	Co-op.							
<i>Tama County</i>										
839	Berlin.	Marshall Cr'y Co. (6).	Ind.	Marshall Cr'y Co.	Marshalltown	Marshalltown		Sep'tr.	Test.	1183 93
840	Chelsea.	Chelsea Creamery	Ind.	John Newman Co.	Elgin, Ill.	Ohelsea	Robert Allee.	Sep'tr.	Test.	
841	Dinsdale.	Dinsdale Creamery	Ind.	Sheiber & Merrick.	Reinbeck	Dinsdale	C. L. Schelber	Sep'tr.	Test.	1297 252
842	Dysart.	Goldust B. & C. Pac'y	Ind.	R. E. Fairbanks.	Koperville	Dysart	F. J. Keeder	Sep'tr.	Test.	
843	Eberon.	John Newman Co.	Ind.	John Newman Co.	Elgin, Ill.	Eberon	Kas. Kucera.	Sep'tr.	Test.	
844	Gladbrook.	Beaman Creamery (6).	Ind.	F. McNelly.	Beaman	Eberon		Sep'tr.	Test.	
845	Gladbrook.	Gladbrook Creamery	Ind.	F. McNelly.	Beaman	Gladbrook	Burton Owens	Sep'tr.	Test.	1191 112
846	Montour.	Marshall Cr'y Co. (6).	Ind.	Marshall Cr'y Co.	Marshalltown	Montour		Sep'tr.	Test.	
847	Toledo.	Toledo Creamery	Ind.	Davidik & Akin	Toledo	Toledo	J. G. Golden	Sep'tr.	Test.	
848	Traer.	Traer (6).	Ind.	J. B. O'Connor.	Traer	Traer	L. L. A. Wood.	Sep'tr.	Test.	
849	Traer.	Traer (6).	Ind.	J. B. O'Connor.	Traer	Traer		Sep'tr.	Test.	
<i>Taylor County</i>										
850	Bedford.	Bedford Creamery	Ind.	W. A. Geithman	Bedford	Bedford	W. A. Geithman	Sep'tr.	Test.	690 227
851	Clearfield.	Clearfield Cr'y Co.	Stk Co	Joseph Donbet, Sec.	Clearfield	Clearfield	Geo. W. McNair	Sep'tr.	Test.	
852	Conway.	Blue Grass Creamery	Ind.	W. A. Geithman	Conway	Conway	F. W. Ketch.	Sep'tr.	Hd.	
853	Guss.	Old Spring Creamery	Co-op.	H. B. Moats, Sec.	Guss.	Gorning	C. E. Askren	Sep'tr.	Test.	
854	Guss.	Maple Grove Cr'y	Ind.	E. Schoonover.	Guss.	Nodaway	E. Schoonover	Sep'tr.	Test.	
855	Lenox.	Elgin Creamery Co. (6).	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.	
<i>Union County</i>										
856	Afton.	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago	Afton	G. W. Kelly	Sep'tr.	Test.	R38 R31
857	Arispee.	Farmers' Co-op. Cr'y Ass'n	Co-op.	S. Clough, Jr., Sec.	Arispee	Arispee	Thos. L. Case	Sep'tr.	Test.	
858	Creston.	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago	Creston	R. T. & McCall	Sep'tr.	Test.	1453 411
859	Cromwell.	Elgin Creamery Co. (6).	Ind.	O. Sands, Pres.	Chicago			Sep'tr.	Test.	R29 R29
860	Dodge.	Elgin Creamery Co. (6).	Ind.	O. Sands, Pres.	Chicago			Sep'tr.	Test.	
861	Kent.	Prescott B. & C. Ass'n (6)	Co-op.	W. H. Urammer, Pres.	Prescott			Sep'tr.	Test.	
862	Lincola.	Elgin Creamery Co. (6).	Ind.	O. Sands, Pres.	Chicago			Sep'tr.	Test.	
863	Lorimer.	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago	Lorimer	Geo. Beckman	Sep'tr.	Test.	934 294
864	Leasant.	Elgin Creamery Co. (6).	Ind.	O. Sands, Pres.	Chicago			Sep'tr.	Test.	1454 412
865	Talmage.	Talmage Creamery	Stk Co	A. C. White, Mgr.	Talmage	Talmage	M. B. Thomp.	Sep'tr.	Test.	352 321
866	Talmage, No. 1	Talmage Creamery (6).	Stk Co	A. C. White, Mgr.	Talmage			Sep'tr.	Test.	
867	Talmage, No. 2	Talmage Creamery (6).	Stk Co	A. C. White, Mgr.	Talmage			Sep'tr.	Test.	
868	Talmage, No. 3	Talmage Creamery (6).	Stk Co	A. C. White, Mgr.	Talmage			Sep'tr.	Test.	
869	Thayer.	Elgin Creamery (6).	Ind.	O. Sands, Pres.	Chicago			Sep'tr.	Test.	
<i>Van Duren County.</i>										
870	Cantril.	Cantril B. & O. Co.	Stk Co	O. P. DeFord, Sec.	Cantril	Cantril	Wm. Cook	G. C.	Inch.	
871	Farmington.	Farmington Cr'y Co.	Ind.	Wells-Sherman Co.	Farmington	Farmington	T. Merrick	S & G. O.	Test.	
872	Milton.	Milton Creamery	Ind.	Woodward & Cooley	Milton	Milton	V. F. Kooley	G. C.	Test.	
873	Leando.	Leando Creamery Co.	Ind.	Klinehan & Pence.	Leando	Leando	F. J. Klinehan	Sep'tr.	Test.	1497 425
<i>Wapello County.</i>										
874	Agency.	Agency Creamery	Ind.	C. E. Mortenson	Agency	Agency	C. E. Mortenson	Sep'tr.	Test.	
875	Blakesburg.	Blakesburg Creamery	Ind.	Nelson & Fritz	Blakesburg	Blakesburg	E. Jacobson	Sep'tr.	Test.	1184 95
876	Dudley.	Dudley Creamery	Ind.	F. G. Buxton	Ottumwa	Dudley		Sep'tr.	Test.	
877	Kirkville.	Kirkville Creamery	Ind.	Lykins & Pelham	Kirkville	Kirkville		Sep'tr.	Test.	
<i>Warren County.</i>										
878	Indianola.	Warren County Cr'y.	Ind.	E. Haldeman	Indianola	Indianola	Geo. Babbitt.	Sep'tr.	Test.	
879	New Virginia.	New Virginia Cr'y Co.	Stk Co	W. H. Keiser, Sec.	New Virginia.	New Virginia.		Sep'tr.	Test.	1408 318
880	Milo.	Warren County Cr'y (6).	Ind.	E. Haldeman	Indianola			Sep'tr.	Test.	
881	Norwalk.	MacRae Bros. (6)	Ind.	MacRae Bros.	Des Moines.			Sep'tr.	Test.	
882	Prole.	Prole Creamery	Ind.	E. H. Perkins	Prole.	Prole.	E. H. Perkins.	Sep'tr.	T.	

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by an individual, co-stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath- send cream, or both.	Method of receiving milk by the hundred.	No. of D. C. test bottles.	No. of U. C. D. test bottles.
<i>Washington County.</i>											
883	Brighton.....	Brighton Creamery Co.	Co-op.	H. J. Kientz, Mgr.	Brighton.....	Brighton.....	F. G. Cullip.....	Sep'tr.	Test.		
884	Kalona.....	Kalona Creamery.....	Ind.	W. G. Brooke.....	Kalona.....	Kalona.....	W. G. Brooke.....	G. O.	Test.		
885	Noble.....	Oak Ridge Creamery.....	Ind.	E. J. Eicher, Mgr.	Noble.....	Noble.....	E. J. Eicher.....	Sep'tr.	Test.	903	125
886	Riverside.....	Riverside Creamery.....	Ind.	E. Nicola.....	Riverside.....	Riverside.....	Wm. Miles.....	G. O.	Test.		
887	Washington.....	Washington.....	Ind.	T. L. Emery & Son.	Brighton.....	Washington.....	Washington.....	Sep'tr.	Test.		
888	Weilman.....	Weilman Creamery Co.	Stk Co	P. J. Greigg, Mgr.	Weilman.....	Weilman.....	S. S. Stones.....	Sep'tr.	Test.		
<i>Wayne County.</i>											
889	Allerton.....	Allerton Creamery.....	Ind.	Elder Bros.....	Allerton.....	Allerton.....	Elder Bros.....	Sep'tr.	Test.	682	121
890	Cambria.....	Old Colony Cr'y (s).....	Ind.	T. G. Hyde, Mgr.	Humeston.....	Humeston.....		Sep'tr.	Test.		
891	Corydon.....	Old Colony Cr'y (s).....	Ind.	T. G. Hyde, Mgr.	Humeston.....	Humeston.....		Sep'tr.	Test.		
892	Humeston.....	Old Colony Cr'y.....	Ind.	T. G. Hyde, Mgr.	Humeston.....	Humeston.....	J. H. Way.....	Sep'tr.	Test.	1197	110
893	Lewisburg.....	Old Colony Cr'y (s).....	Ind.	T. G. Hyde, Mgr.	Humeston.....	Humeston.....		Sep'tr.	Test.		
894	Seymour.....	Seymour Creamery Co.	Stk Co	H. Brokaw.....	Seymour.....	Seymour.....	H. Brokaw.....	Sep'tr.	Test.	727	11
<i>Webster County.</i>											
895	Badger.....	Badger Creamery.....	Ind.	G. W. Gillman.....	Badger.....	Badger.....	G. W. Gillman.....	Sep'tr.	Test.		
896	Burnside.....	Burnside Co-op Cr'y Co.	Co-op	C. W. Swenson, Sec	Burnside.....	Burnside.....	H. H. Cummings.....	Sep'tr.	Test.	1307	256
897	Calender.....	Geon Valley Cr'ys (s).....	Ind.	R. Emery Bros.....	Grand Junction.....	Grand Junction.....		Sep'tr.	Test.		
898	Clare.....	Clare Creamers.....	Ind.	A. Scheidemann, Pr.	Clare.....	Clare.....	J. A. Blakeman.....	Sep'tr.	Test.	1319	269
899	Dayton.....	Willow Brook.....	Ind.	W. S. Gould, Prop.	Dayton.....	Dayton.....	W. G. Gould.....	Sep'tr.	Test.		
900	Duncombe.....	Duncombe Creamery.....	Ind.	Clelland Bros.....	Duncombe.....	Duncombe.....	Wm. Clelland.....	Sep'tr.	Test.		
901	Barnum.....	Barnum Creamery.....	Ind.	G. B. Moon & Co.	Manson.....	Barnum.....	E. D. Rogers.....	Sep'tr.	Test.		
902	Ft. Dodge.....	Oakdale Creamery.....	Ind.	C. B. Williams, Mgr.	Ft. Dodge.....	Ft. Dodge.....	F. S. Whirry.....	Sep'tr.	Test.		
903	Gowrie.....	Gowrie Creamery.....	Ind.	R. E. Gould, Prop.	Gowrie.....	Gowrie.....	R. E. Gould.....	S. & G. O.	Test.		
904	Moorland.....	Moorland Creamery.....	Ind.	D. J. Skinner.....	Moorland.....	Moorland.....	D. J. Skinner.....	Sep'tr.	Test.		
905	Moorland.....	Oakdale Creamery (s).....	Ind.	C. B. Williams, Mgr.	Ft. Dodge.....	Ft. Dodge.....		Sep'tr.	Test.		
906	Vincent.....	Vincent Creamery.....	Ind.	O. J. Page, Prop.	Vincent.....	Vincent.....	O. J. Page.....	Sep'tr.	Test.		
<i>Winnepago County.</i>											
907	Buffalo Center	Farmers' Co-op, Cr'y Co.	Co-op.	E. R. Overbaugh, Sec.	Buffalo Center	Buffalo C'n't	O. E. Gaffin.....	Sep'tr.	Test.	1306	319
<i>Dahls' Church.</i>											
908	Dahls' Church.	Lake Mills Cr'y Co. (s).....	Co-op.	Ole T. Groe, Mgr.	Lake Mills.....	Lake Mills.....	Lewis Richards.....	Sep'tr.	Test.		
909	Forest City.....	Forest City Co-op Cr'y Association (s).....	Co-op.	Peter Isaacson, Sec.	Forest City.....	Forest City.....	Lewis Richards.....	Sep'tr.	Test.	1455	413
910	Hollandale.....	Thompson Co-op Cr'y Co. (s).....	Co-op.	J. S. Higinbotham, S	Thompson.....	Thompson.....	Thompson.....	Sep'tr.	Test.		
911	Lake Mills.....	Lake Mills Cr'y Co.....	Co-op.	Ole T. Groe, Mgr.	Lake Mills.....	Lake Mills.....	T. A. Storvik.....	Sep'tr.	Test.	269	328
912	Lake Mills.....	Logan Butter Factory.....	Co-op.	G. N. Johnson, Pres.	Grytte.....	Lake Mills.....	J. M. Tapager.....	Sep'tr.	Test.		
913	Lake Mills.....	Logan Butter Factory (s).....	Co-op.	G. N. Johnson, Pres.	Grytte.....	Lake Mills.....	J. M. Tapager.....	Sep'tr.	Test.		
914	Linden.....	Thompson Co-op Cr'y Co. (s).....	Co-op.	J. S. Higinbotham, S	Thompson.....	Thompson.....	Thompson.....	Sep'tr.	Test.		
915	Mt. Valley.....	Fertile Co-op, D. Co (s).....	Co-op.	B. G. Richardson, M.	Fertile.....	Fertile.....	Thompson.....	Sep'tr.	Test.		
916	Mt. Valley.....	Forest City Co-op Cr'y Association (s).....	Co-op.	Peter Isaacson, Sec.	Forest City.....	Forest City.....	Thompson.....	Sep'tr.	Test.		
917	Moan.....	Norman Creamery (s).....	Co-op.	Axel Arneson, Mgr.	Norman.....	Norman.....	R. S. Bergsaber.....	Sep'tr.	Test.	1132	24
918	Norman.....	Norman Creamery.....	Co-op.	Axel Arneson, Mgr.	Norman.....	Norman.....	R. S. Bergsaber.....	Sep'tr.	Test.		
919	Thompson.....	Thompson Co-op Cr'y Co.....	Co-op.	J. S. Higinbotham, S	Thompson.....	Thompson.....	M. M. Tapager.....	Sep'tr.	Test.	1175	74
920	Thompson.....	Eden Co-op Cr'y Ass'n	Co-op.	David Skutle, Sec.	Amund.....	Thompson.....	L. J. Erdal.....	Sep'tr.	Test.	1181	84
921	Thompson.....	Thompson Co-op Cr'y Co. (s).....	Co-op.	J. S. Higinbotham, S	Thompson.....	Thompson.....	Thompson.....	Sep'tr.	Test.		
<i>Winneshiek County.</i>											
922	Burr Oak.....	Silver Creek Cr'y Co.....	Co-op.	C. A. Reed, Mgr.	Burr Oak.....	Decorah.....	C. A. Reed.....	G. O.	Test.	1306	322
923	Festina.....	Festina Creamery Co.....	Co-op.	Wm. Schrandt, Sec.	Festina.....	Dalmar.....	Henry Hesse.....	S. & G. O.	Test.	1222	162
924	Ft. Atkinson.....	Ft. Atkinson.....	Ind.	A. O. Elvidge, Prop.	Elkader.....	Ft. Atkinson.....	Hans Foss.....	S. & G. O.	Test.	1440	403
925	Hesper.....	Anchor Creamery.....	Ind.	J. H. Miller.....	Hesper.....	Mable.....	E. T. Halsey.....	G. O.	Test.		
926	Highlandville.....	Rock Spring Cr'y Co.....	Ind.	V. V. Johnson, Mgr.	Highlandville.....	Spring Grove.....	Y. V. Johnson.....	G. O.	Test.		
927	Highlandville.....	Highlandville Cr'y.....	Ind.	Bjorge, Props	Highlandville.....	Highlandville.....	P. J. Bidue.....	G. O.	Test.	74	428
928	Jackson Jet.....	Jackson Creamery Co.....	Stk Co	A. Webster, Pres.	Waucoma.....	Waucoma.....	E. M. Barbour.....	S. & G. O.	Test.		
929	Nordness.....	Nordness Creamery.....	Stk Co	J. N. Bragstad, Mgr.	Nordness.....	Nordness.....	G. H. Thune.....	G. O.	Test.		
930	Nordness.....	Red Oak Cr'y Co.....	Stk Co	O. G. Haugen, Sec.	Nordness.....	Nordness.....	Eric Clement.....	G. O.	Test.		
931	Ossian.....	Silver Spring Cr'y Co.....	Stk Co	T. Scheidemann, M	Ossian.....	Ossian.....	Wm. Spelcher.....	G. O.	Test.		
932	Ridgeway.....	Lincoln Farmers' Co-op Cr'y Ass'n.....	Co-op.	H. James Paley, Sec.	Ridgeway.....	Ridgeway.....	G. A. Bakken.....	G. O.	Test.		
933	Ridgeway.....	Ridgeway.....	Ind.	L. T. Fasse, Prop.	Ridgeway.....	Ridgeway.....	L. T. Fasse.....	S. & G. O.	Test.		
934	Spillville.....	Spillville Cr'y Co.....	Stk Co	Henry Henser.....	Spillville.....	Conover.....	J. A. Dostal.....	G. O.	Test.		
<i>Woodbury County.</i>											
935	Anthion.....	Anthion Creamery Co.....	Stk Co	G. W. Fitchner, Sec.	Anthion.....	Anthion.....	A. B. Barnett.....	Sep'tr.	Hd.	1237	180
936	Climbing Hill.....	Climbing Hill Cr'y.....	Ind.	DeWitt Goodrich.....	Climbing Hill.....	Luton.....	DeW. Goodrich.....	Sep'tr.	Test.		
937	Correctionville.....	Correctionville Cr'y.....	Stk Co	T. B. Roanoke.....	Cushing.....	Cushing.....	John Wilson.....	Sep'tr.	Hd.		
938	Cushing.....	Cushing Creamery.....	Ind.	Wilson & Ohlsen.....	Cushing.....	Cushing.....	Wm. Servage.....	Sep'tr.	Test.	1417	265
939	Danbury.....	Danbury Creamery.....	Co-op.	W. C. Hayden.....	Danbury.....	Danbury.....	Marius Jensen.....	Sep'tr.	Test.	1437	386
940	Kingsley.....	Rutland Creamery Co.....	Stk Co	Renton Potter, Mgr.	Kingsley.....	Kingsley.....	Marius Jensen.....	Sep'tr.	Test.	1413	357
941	Emthard.....	Sioux Valley Creamery.....	Ind.	N. R. Hathaway.....	Sioux City.....	Smithland.....	W. H. Olen.....	Sep'tr.	Test.		

CREAMERY LIST—CONTINUED.

Office record number	LOCATED AT OR NEAR	NAME OF CREAMERY.	Operated by an individual, co-op. or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER	Separator, gath-er-up, cream, or both.	Method of receiving the test or by the hundred.	No. of D. C. test	No. of D. U. pl-pette.
<i>Worth County</i>											
942	Bolan .....	Bolan Creamery.....	Ind...	Marlatt & Clark.....	Eldora .....	Bolan .....	J. L. Blunt.....	Sep'tr..	Test.		
943	Bristol.....	Norman Creamery (9).....	Co-op.	Axel Arneson, Mgr.....	Norman.....			Sep'tr..	Test.		
944	Fertile.....	Fertile Co-op. Dairy Co.....	Co-op.	B. G. Richardson, M.....	Fertile.....	Manly Jct.....	J. A. Johnson.....	Sep'tr..	Test.	1419	967
945	Grafton .....	Grafton Cr'y Ass'n.....	Ind...	M. Buehrer, Mgr.....	Grafton.....	Grafton.....	Y. H. Eckstein.....	Sep'tr..	Test.	1176	75
946	Kensett .....	Danville Co-op. Cr'y A.....	Co-op.	E. E. Thoen, Sec.....	Kensett.....	Kensett.....	Gilbert Olson.....	Sep'tr..	Test.		
947	Lake Mills.....	Nordland Cr'y.....	Co-op.	H. G. Burtness, Pres.....	Nordland.....		H. G. Gulbrand-son.....	Sep'tr..	Test.		
948	Manly .....	Farmers' Co-op. Cr'y.....	Co-op.	W. H. Meldrim, Sec.....	Manly.....	Manly Jct.....	J. F. Coochouour.....	Sep'tr..	Test.		
949	Northwood .....	Brookfield Cr'y Ass'n.....	Co-op.	J. B. Thompson, M.....	Northwood.....	Northwood.....	A. Gulbranson.....	Sep'tr..	Test.		
950	Silver Lake .....	Hartland Dairy Ass'n.....	Co-op.	Ole N. Grefshelm, S.....	Silver Lake.....	Northwood.....	G. G. Rugland.....	Sep'tr..	Test.	1414	378
951	Northwood .....	Farmers' B. & C. Ass'n.....	Co-op.	A. W. Colladay, Sec.....	Northwood.....	Northwood.....	J. Siverling.....	Sep'tr..	Test.	1481	450
952	Northwood .....	Tenold Cr'y Ass'n.....	Co-op.	O. G. Anderson, Sec.....	Tenold.....	Northwood.....	N. O. Dahlen.....	Sep'tr..	Test.		
<i>Wright County</i>											
953	Belmond.....	Belmond Creamery.....	Ind...	E. M. Lamos, Sec.....	Belmond.....	Belmond.....	E. E. Gates.....	Sep'tr..	Test.	1429	876
954	Bruce.....	Norway Co-op. Cr'y.....	Co-op.	H. Baxter, Sec.....	Bruce.....	Belmond.....	W. L. Channer.....	Sep'tr..	Test.	1353	375
955	Clarion.....	Clarion Creamery Ass'n.....	Co-op.	O. P. Morton, Sec.....	Clarion.....	Clarion.....	J. D. Denison.....	Sep'tr..	Test.	1435	384
956	Drew.....	McMurty Bros (9).....	Ind...	McMurty Bros.....	Goldfield.....			Sep'tr..	Test.		
957	Eagle Grove.....	Eagle Grove Cr'y.....	Co-op.	Sam Middleton, Pro.....	Eagle Grove.....	Eagle Grove.....	Sam Middleton.....	Sep'tr..	Test.	1294	219
958	Florence.....	Florence Co-op. Cr'y Co.....	Co-op.	W. E. Hensly, Sec.....	Florence.....	Florence.....	Fred Gingerich.....	Sep'tr..	Test.	1161	52
959	Galt.....	Galt Creamery.....	Co-op.	John Heiden, Pres.....				Sep'tr..	Test.		
960	Goldfield.....	Fountain B. & C. Fac.....	Ind...	B. P. Scott.....	Goldfield.....	Goldfield.....	B. P. Scott.....	Sep'tr..	Test.	1187	108
961	Goldfield.....	Fountain B. & C. Fac. (9).....	Ind...	B. P. Scott.....	Goldfield.....	Goldfield.....		Sep'tr..	Test.		
962	Goldfield.....	McMurty Bros.....	Ind...	McMurty Bros.....	Goldfield.....	Goldfield.....	John Campbell.....	Sep'tr..	Test.	1156	20
963	Palsville.....	Palsville Creamery Co.....	Co-op.	A. W. Finch, Sec.....	Palsville.....	Palsville.....	Chas. O. Way.....	Sep'tr..	Test.		
963	Rowan.....	Rowan Co-op. Cr'y Co.....	Co-op.	J. H. Dix, Sec.....	Rowan.....	Rowan.....	E. V. Campbell.....	Sep'tr..	Test.	628	417

IOWA CHEESE FACTORY LIST.

Arranged alphabetically according to counties and towns near which factory is located, together with information pertaining to each.

Office record number	LOCATED AT OR NEAR	NAME OF CHEESE FACTORY	Operated by individual, co-op. or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of receiving the test or by the hundred.	No. of D. C. test	No. of D. U. pl-pette.
<i>Appanoose County.</i>										
1	Iconium.....	Iconium.....	Stk Co	H. A. Thompson, Sec.....	Iconium.....	Moravia.....	Jos. Elswick.....	Hd.		
2	Moravia.....	Star Cheese Co.....	Stk Co	Sam Johnson, Sec.....	Moravia.....	Moravia.....	R. E. Stoops.....	Hd.		
3	Moulton.....	Moulton Cheese Factory.....	Ind...	A. Dickson.....	Moulton.....	Moulton.....	A. Dickson.....	Hd.		
4	Ray.....	Ray Cheese Co.....	Stk Co	R. F. Main, Sec.....	Ray.....	Main Station.....	A. Webster.....	Hd.		
<i>Benton County.</i>										
5	Atkins.....	Brookside.....	Ind...	A. C. Stewart, Mgr.....	New Hall.....	Atkins.....	F. W. Johnson.....	Hd.		
6	New Hall.....	Model.....	Ind...	A. C. Stewart, Mgr.....	New Hall.....	New Hall.....	J. H. Huyck.....	Hd.	1380	944
7	Rogerville.....	Excelsior Cheese Factory*.....	Ind...	R. E. Fairbanks.....	Rogerville.....	Garrison.....	R. E. Fairbanks.....	Hd.		
<i>Black Hawk County.</i>										
8	Waterloo.....	Waterloo Cheese Factory.....	Stk Co	The Fowler Co.....	Waterloo.....	Waterloo.....	F. Wightman.....	Test.		
9	Waterloo.....	Waterloo*.....	Stk Co	The Fowler Co.....	Waterloo.....	Waterloo.....	F. Wightman.....	Test.		

IOWA CHEESE FACTORY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CHEESE FACTORY.	Operated by individual, co-operative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of receiving milk or cream by the hundred.	No. of D. C. test bottle.	No. of D. C. O. plate.
	<i>Bremer County.</i>									
10	Janesville..... <i>Clayton County.</i>	Janesville*.....	Stk Co	The Fowler Co.....	Waterloo.....	Janesville....	A. M. Royer....	Test.		
11	Edgewood..... <i>Cerro Gordo County.</i>	Edgewood Cheese Factory.	Ind...	H. E. Willard.....	Edgewood.....	Edgewood....	H. E. Willard..	Test.		
12	Burchinal.....	Burchinal Cheese Factory.	Ind...	T. R. Coates, Prop.....	Burchinal.....	Burchinal...	Louis Hoffman	Hd.		
13	Mason City.... <i>Clarke County.</i>	Lincoln Dairy Co.....	Co-op.	R. Pethick, Sec.....	Mason City...	Mason City...	Will Dutton...	Hd.		
14	Weldon..... <i>Dallas County.</i>	Weldon Cheese Factory....	Ind...	L. M. Parr & Co.....	Weldon.....	Weldon.....	L. M. Parr.....	Hd.		
15	Woodward..... <i>Decatur County.</i>	Woodward*.....	Ind...	H. P. Calonkey, Prop.....	Woodward....	Woodward....	A. B. Calonkey	Test.		
16	Bracewell..... <i>Floyd County.</i>	Snow's Cheese Factory.....	Ind...	A. A. Snow, Prop.....	Bracewell...	Lineville.....	A. A. Snow.....	Hd.		
17	Charles City... <i>Greene County.</i>	Elm Spring.....	Ind...	H. D. White, Mgr.....	Charles City...	Charles City.	H. D. White....	Hd.		
18	Charles City... <i>Greene County.</i>	St. Charles Creamery Ass'n	Co-op.	C. Wilcox, Sec.....	Charles City...	Charles City.	F. M. Huyck...	Hd.		
19	Dana.....	Dana Co-op. Cr'y Co.....	Co-op	W. J. Elling, Sec.....	Dana.....	Dana.....	W. J. Elling....	Test.		

	<i>Grundy County.</i>									
20	Reinbeck..... <i>Guthrie County.</i>	Reinbeck*.....	Stk Co	The Fowler Co.....	Waterloo.....	Reinbeck....	G. A. Place....	Test.		
21	Jamaica..... <i>Hancock County.</i>	A. H. Chadsey.....	Ind...	A. H. Chadsey.....	Jamaica.....	Jamaica.....	A. H. Chadsey.	Hd.		
22	Britt..... <i>Hardin County.</i>	Britt Dairy—B. & C.....	Ind...	Geo. P. Hardwick, Prop...	Britt.....	Britt.....	G. P. Hardwick			
23	Ellis..... <i>Henry County.</i>	Ellis Cheese Factory.....	Stk Co	W. I. Clark, Mgr.....	Iowa Falls....	Iowa Falls...	E. Clark.....	Hd.		
24	Mt. Pleasant.. <i>Howard County.</i>	Pleasant Hill.....	Ind...	Neal Campbell.....	Mt. Pleasant..	Mt. Pleasant..	E. J. Elmer.			
25	Cresco.....	Cresco Cheese Factory.....	Ind...	Wm. Kellow, Jr.....	Cresco.....	Cresco.....	W. N. Lathrop	Test.	1423	371
26	Cresco.....	Clover Leaf Cheese Factory	Ind...	J. J. House.....	Cresco.....	Cresco.....	J. J. House....	Hd.	1447	397
	<i>Humboldt County.</i>									
27	Renwick.....	Fred Klasse Factory.....	Ind...	Barbara Klasse.....	Renwick.....	Renwick.....	J. Rotenbluer.	Hd.		
28	Renwick.....	Fred Spielch.....	Ind...	Fred Spielch.....	Renwick.....	Renwick.....	John Alleman.	Hd.		
29	Renwick..... <i>Jefferson County.</i>	Elmer Factory.....	Ind...	Conrad Elmer.....	Renwick.....	Renwick.....	Fred Fabray.	Hd.		
30	Pleasant Plain <i>Johnson County.</i>	Pleasant Plain.....	Co-op.	Joseph Ginther, Sec.....	Pleasant Plain	Pleasant Pl'n	W. J. Alter....	Test.		
31	Iowa City... <i>Keokuk County.</i>	Sharon Cheese Co.....	Co-op.	J. T. Jones, Sec.....	Iowa City.....	Iowa City....	W. D. Berkey.	Hd.		
32	Talleyrand... <i>Kossuth County.</i>	Talleyrand.....	Stk Co	L. M. Tucker, Sec.....	Talleyrand...	Keota.....	O. Tucker....	Test.		
33	Luverne.....	D. Marty's*.....	Ind...	D. Marty.....	Luverne.....	Luverne.....	Mary Marty...	Hd.		
34	Luverne.....	Pioneer Cheese Co.....	Stk Co	S. B. Hefty, Sec.....	Renwick.....	Luverne.....	Elbert Staffin.	Hd.		



IOWA CHEESE FACTORY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CHEESE FACTORY.	Organized by individual, co-op., or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of receiving milk — by the use of by the use of by the use of by the use of	No. of D. C. test bottle.	No. of D. C. C. pette.
	<i>Lee County.</i>									
35	Denmark .....	Denmark .....	Ind...	Thos. G. Currier.....	Fort Madison..	Fort Madison.	W. R. Griffith.	Hd.		
	<i>Linn County.</i>									
36	Louisa .....	Louisa Cheese Factory.....	Ind...	R. G. Fairbank.....	Louisa.....	Louisa.....	Mrs. W. R. Carol.	Hd.		
37	Marion.....	Gray's.....	Ind...	Edw. C. Clark.....	Cedar Rapids..	Cedar Rapids..	W. R. Carol...	Hd.		
38	Springville... <i>Marshall County.</i>	Springville .....	Ind...	Edw. C. Clark.....	Cedar Rapids..	Cedar Rapids..	W. R. Carol...	Hd.		
39	Luray .....	Luray .....	Ind...	Parsons Bros .....	Luray .....	Luray.....	William Mayo.	Hd.		
40	La Moille..... <i>Monroe County.</i>	Linn Brook.....	Ind...	D. Campbell, Mgr.....	La Moille.....	La Moille.....	William Mayo.	Hd.		
41	Albia.....	S. G. Bone.....	Ind...	S. G. Bone.....	Albia.....	Albia.....	Merle Bone....	Hd.		
42	Albia.....	Mantuan Cheese Ass'nt.....	Co-op.	J. M. M. Roberts, Sec.....	Albia.....	Blakesburg....	L. King.....	Hd.		
43	Albia.....	Selection Cheese Factory.....	Ind...	Daniel Gholson, Prop.....	Albia.....	Albia.....	S. F. Gholson..	Hd.		
44	Albia.....	Hinton.....	Ind...	Sam. G. Hinton.....	Albia.....	Albia.....	Sam G. Hinton	Hd.		
45	Albia.....	J. C. Hollingshead.....	Ind...	J. C. Hollingshead.....	Albia.....	Albia.....	J. Hollingshead	Hd.		
46	Albia.....	Griffin.....	Ind...	H. Griffin.....	Albia.....	Albia.....	H. Griffin.....	Hd.		
47	Albia.....	Pharis.....	Ind...	Harry Pharis.....	Albia.....	Albia.....	Harry Pharis..	Hd.		
48	Albia..... <i>Montgomery County.</i>	Mt. Carmel Cheese Factory.....	Ind...	F. W. Crouch.....	Albia.....	Albia.....	M. R. Crouch..	Hd.		
49	Grant..... <i>Muscatine County.</i>	Grant Cheese Factory.....	Ind...	John Hinton, Prop.....	Grant.....	Elliott.....	John Hinton...	Hd.		
50	Muscatine.....	Muscatine French Ch. Fac.	Ind...	Herman Schulz, Prop.....	Muscatine.					
	<i>Page County.</i>									
51	Northboro..... <i>Poweshiek County.</i>	Northboro.....	Ind...	W. H. Hatfield.....	Northboro....	Northboro....	W. H. Hatfield.	Hd.		
52	Grinnell.....	Chester Center .....	Ind...	W. W. Sherman, Prop ..	Chester Center	Grinnell.....	W. W. Sherman	T&Hd	1049	271
53	Grinnell.....	Noel's Cheese Factory...	Ind...	J. E. Noel, Prop.....	Grinnell.....	Grinnell.....	J. E. Bortell..	Test.		
54	Jacobs.....	Jacobs.....	Ind...	A. C. Payne, Prop.....	Jacobs.....	Jacobs Switch	K. Buhuly.....	Test.		
	<i>Ringgold County.</i>									
55	Mt. Ayr.....	Liberty Cheese Co .....	Co-op.	J. E. Main, Sec.....	Mt. Ayr.....	Mt. Ayr.....	Guy C. Imus...	Test.		
56	Tingley..... <i>Sac County.</i>	Tingley Cheese Factory.....	Ind...	Charles Reiffaer.....	Tingley.....	Tingley.....				
57	Kiron.....	Otter Valley Creamery.....	Ind...	Aug. Sundell.....	Kiron.....	Kiron.....	M. Blaser.....	Test.		
58	Sac City..... <i>Story County.</i>	Blue Grass B. & C. Factory*	Ind...	I. Hillman.....	Sac City.....	Sac City.....	F. Hillman....			
59	Ames..... <i>Tama County.</i>	I. A. C. Cheese Factory*...	State.	G. L. McKay, Mgr.....	Ames.....	Ames.....	G. L. McKay...	Test.		
60	Dysart..... <i>Taylor County.</i>	Gold Dust Factory.....	Ind...	R. E. Fairbanks.....	Rogerville....	Dysart.....	P. B. Fairbanks	Hd.		
61	Sharpsburg... <i>Warren County.</i>	Sharpsburg Cheese Factory	Ind...	Eastlack Bros. Prop'trs..	Sharpsburg...	Sharpsburg...	G. S. Eastlack	Hd.		
62	Guss.....	Maple Grove.....	Ind...	E. Schoonover.....	Guss.....	Nodaway.....	E. Schoonover	Test.		
63	Milo..... <i>Washington County.</i>	Belmont Cheese Factory...	Ind...	John Keller.....	Milo.....	Milo.....	John Keller...	Hd.		
64	Clay.....	Clay Cheese Co .....	Ind...	O. Meacham, Sec.....	Clay.....	Vac.....	O. W. Hoke...	Test.		
65	Dublin.....	Dublin Cheese Factory...	Stk Co	H. Dickson.....	Dublin.....	Washington..	M. L. Doane...	Hd.		
66	West Chester.. <i>Wayne County.</i>	West Chester Cheese Fac.	Co-op.	W. E. Leet, Mgr.....	West Chester..	West Chester		Hd.		
67	Lineville..... <i>Wright County.</i>	Lineville Cheese Factory..	Ind...	Matthew De Haan.....	Lineville.....	Lineville....	Mat. De Haan	Hd.		
68	Promise City..	Promise City Cheese Co....	Co-op.	C. Frank, Sec.....	Promise City..	Promise City	Jas. P. Brown	Hd.		
69	Clarion.....	Wall Lake Cheese Factory	Ind...	Benjamin Umbreit.....	Morhain.....	Galt.....	B. W. Umbreit.	Test.	1406	434

\* Makes both butter and cheese.

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