

TENTH ANNUAL REPORT

OF THE

STATE DAIRY COMMISSIONER

TO THE

GOVERNOR OF THE STATE OF IOWA,

FOR THE YEAR 1896.

W. K. BOARDMAN,

State Dairy Commissioner.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

DES MOINES:
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1897.

REPORT OF THE STATE DAIRY COMMISSIONER.

To His Excellency, Hon. Francis M. Drake, Governor of Iowa:

I have the honor to transmit to you herewith, my annual report for the year ending October 31, 1896, in accordance with law, the tenth annual report of the office of state dairy commissioner. Respectfully,

W. K. BOARDMAN,
State Dairy Commissioner.

OLEOMARGARINE.

But one special internal revenue tax for the sale of oleomargarine was issued during the fiscal year ending June 30, 1896. This was issued September 11, 1895, and was referred to in my last report. No business in oleomargarine was carried on by the person having this special tax, during the balance of the year.

The records of the internal revenue department show that no special tax or license for the present fiscal year, beginning July 1, 1896, has been issued in Iowa. Nevertheless, we were able to detect and convict two violators of our state anti-color law.

The first case was *State of Iowa, Clinton County v. The Armour Packing Co., and J. G. Grove, Manager of Said Company*. The state milk inspector for the city of Clinton, Allen E. Rumble, on May 5, 1896, filed an information charging J. G. Grove, agent for the Armour Packing Co., with the offense of selling imitation butter. Warrant was issued, defendant arrested, and on the 6th day of May, 1896, he plead guilty to the charge, and was fined \$100 and costs. I called the attention of the internal revenue officer, located at Clinton, to the case, which resulted in Mr. Grove's appearance before the United States commissioner at Dubuque, and he was bound over on the charge of violating the internal revenue law, to appear at the September term of the federal court at Cedar Rapids, at which time he was dismissed. I had a desire to be fully informed in regard to this case, as it was of much interest and importance to know whether this kind of guerrilla warfare could be practiced and agents be established in Iowa to supply dishonest hotel, restaurant and boarding house keepers with an unlawful product. I therefore concluded to investigate, and the following correspondence was the result:

DES MOINES, IOWA, October 22, 1896.

Hon. Cato Sells, United States District Attorney, Vinton, Iowa:

DEAR SIR—I have been officially informed that the case of James G. Grove, manager of the Clinton branch of the Armour Packing Co., which was to have been called in the September term of the federal court at Cedar Rapids, was dismissed at your recommendation. The facts pertaining to the case are as follows: P. T. Goulden, of Clinton, Iowa, on or about the 19th day of March, 1896, called at the office of the Armour Packing Co., and inquired for a tub of oleomargarine; the agent, Mr. Grove, stated that they had none on hand, but he could order a ten-pound tub for him from the Kansas City house; he further stated that it would be there in a few days and for him to call for it. On the 24th day of March, 1896, Mr. Goulden, accompanied by A. E. Rumble, called at the office of said company at Clinton, and the agent, J. G. Grove, stated that the tub of oleomargarine was there and proceeded at once to another part of the building and brought out a ten-pound tub. Before receiving the package, Mr. Goulden requested to see the goods and examine the same, and the package was then opened and the quality inspected by both Goulden and Rumble, whereupon Mr. Goulden paid him \$1.60 for the package.

The Armour Packing Co. had paid no special tax for the manufacture or sale of oleomargarine in Iowa. The goods above referred to were delivered by and the money received by Mr. Grove, the authorized agent for the Armour Packing Co. I cannot conceive how such a transaction can be legally considered anything but a genuine purchase and sale in the state of Iowa. The internal revenue officer at Clinton, to whom I imparted the evidence, so considered it, and gave me to understand that it was a strong case. He saw the package of oleomargarine after it had been delivered to me. The commissioner at Dubuque considered the evidence sufficient to bind the party over to appear at the term of court previously referred to. I wish to know upon what grounds you recommended the dismissal of this case? I request this, because I wish to be informed so that in the future I may know in case similar transactions are brought to my attention, what action, if any, to take. I may state here, the state case against the Armour Packing Co. and Mr. Grove terminated by Mr. Grove pleading guilty to the violation of the state law. An early reply is requested. Very respectfully,

W. K. BOARDMAN,
State Dairy Commissioner.

Hon. Cato Sells replied, directing me to correspond with Hon. W. H. Stackhouse, collector of internal revenue, at Burlington, Iowa. I sent a copy of my letter to Mr. Sells to the revenue collector, and received the following reply:

BURLINGTON, IOWA, November 12, 1896.

Hon. W. K. Boardman, State Dairy Commissioner, Des Moines, Iowa:

DEAR SIR—Replying to your letter of the 22d ult. to U. S. Attorney Sells, enclosed in your favor of yesterday to this office, referring to the dismissal of the case in the federal court against J. G. Grove for alleged violation of the internal revenue law, I have to inform you that a thorough investigation of this case developed the fact that in this instance, as well as

in all others where said J. G. Grove delivered packages of oleomargarine, he was in no wise a dealer in such article, but simply took orders for the Armour Packing Co., of Kansas City, Kan., manufacturers of oleomargarine; the manufacturers then filled the orders, marked the goods in the name of the purchaser—in this instance J. P. Goulden—and shipped the goods to their agent in Clinton, J. G. Grove, for delivery.

As Mr. Grove was simply in the employ of the Armour Packing Co. as their agent at Clinton, whose duty it was to solicit orders, deliver the goods he received from the said Armour Packing Co. marked to the purchaser, collect for the same and remit to said Armour Packing Co., he in no wise incurred liability as a dealer in oleomargarine under the internal revenue laws of the United States. Upon being informed of the facts in the case, the department immediately ordered the dismissal of the same. Yours truly,

(Signed) W. H. STACKHOUSE,
Collector.

I did not feel satisfied with this construction of the law and view of the case, and after consulting with able attorneys, I addressed the following letter to Hon. W. S. Forman, United States commissioner of internal revenue:

DES MOINES, IOWA, November 24, 1896.

Hon. W. S. Forman, Commissioner of Internal Revenue, Washington, D. C.:

DEAR SIR—Herewith find a correspondence with United States Attorney Cato Sells, of Vinton, Iowa, and W. H. Stackhouse, revenue collector, Burlington, Iowa, pertaining to the dismissal of a case in the federal court against one J. G. Grove. The facts in the case are presented in my letter above referred to, addressed to Hon. Cato Sells. These facts and the reason given by the collector do not appear to me to warrant the dismissal of the case. Mr. Goulden visited the office of the Armour Packing Co. at Clinton, Iowa, to purchase some butterine. Mr. Grove stated he did not have any, but would send to the Kansas City house, and get him a tub. When Mr. Goulden called again in a few days, the tub was produced, whereupon Mr. Goulden requested Mr. Grove to open it so that he might examine the goods. This was done, and as the color was satisfactory, the sale was completed at this time by Mr. Goulden receiving the tub and paying Mr. Grove \$1.60 for the same. There is nothing to show that the tub was shipped from Kansas City in the name of Goulden, neither did Mr. Goulden pay any freight or receive a receipt for any freight paid. From first-class legal authorities of this state, I am informed that the transaction at Clinton constituted a genuine sale and purchase of goods. The grounds upon which this case was dismissed would permit any manufacturer of oleomargarine placing agents in any or all towns and cities of the United States, thereby doing away entirely with the necessity of the wholesale dealer's special tax, provided the manufacturer paid his special tax.

I do not contend that where an order is sent directly, or through the agent, to the manufacturer, and the goods are shipped directly to the purchaser, and the money or draft remitted direct to the manufacturer, that a violation of the revenue law would take place, but this is an entirely different case, and I deem it of so much importance that I feel called upon to

bearing the matter to your attention, so the entire subject may be reviewed, to the end that a ruling may be rendered. Trusting that this may meet with your prompt consideration I remain,

Yours respectfully,

W. K. BOARDMAN,
State Dairy Commissioner.

The following reply was received, accompanied by circular No. 339, pertaining to the subject:

TREASURY DEPARTMENT,
OFFICE OF COMMISSIONER OF INTERNAL REVENUE,
WASHINGTON, D. C.

Hon. W. K. Boardman, State Dairy Commissioner, Des Moines, Iowa:

Sir—I have received your letter of the 23d ult., enclosing copies of correspondence, which you have had with the collector of internal revenue, at Burlington, Iowa, and with the United States district attorney for the northern district of Iowa, relating to the dismissal, at the suggestion of this office, of the case of the *United States v. J. G. Grove*, wherein the defendant was charged with having carried on business as a wholesale dealer in oleomargarine, at Clinton, Iowa, without having paid special tax therefor, he having delivered an original stamped package of oleomargarine to P. T. Goulden, upon an order received by him from Mr. Goulden. You express the opinion that the dismissal of this case was not warranted by the facts, viz: "Mr. Goulden visited the office of the Armour Packing Co., at Clinton, Iowa, to purchase some butterine. Mr. Grove stated he did not have any, but would send to the Kansas City house and get him a tub. When Mr. Goulden called again in a few days, the tub was produced, whereupon Mr. Goulden requested Mr. Grove to open it so that he might examine the goods. This was done, and as the color was satisfactory, the sale was completed at this time, by Mr. Goulden receiving the tub, and paying Mr. Grove \$1.60 for the same. There is nothing to show that the tub was shipped from Kansas City in the name of Goulden. Neither did Mr. Goulden pay any freight, or receive a receipt for any freight paid."

From affidavits and statements filed in this office, by the Armour Packing Co., at Kansas City, it appears that the order given by Mr. Goulden to their agent, Mr. Grove, at Clinton, Iowa, for this oleomargarine, was sent by Mr. Grove to them, and that, upon their receipt of the order, a ten-pound package of oleomargarine was marked and set aside in their factory in Kansas City, as the property of Goulden, and was so charged and entered on their books, and sent out in their car, billed and invoiced for delivery to him; and that upon its arrival at Clinton, Iowa, the package was delivered to Mr. Goulden by Mr. Grove, their agent, who collected and remitted to them the amount of the bill therefor.

Upon this state of facts under the ruling of this office, neither the Armour Packing Co. nor Mr. Grove, their agent, could be lawfully held liable for special tax at Clinton, Iowa.

It is held that where an oleomargarine manufacturer's agent who keeps on hand no oleomargarine for sale, receives orders for oleomargarine, if all orders thus taken are sent to their factory and there filled, and the stamped packages of oleomargarine, are there set apart as the property of the person ordering, and billed to them, and these packages are sent out, each

bearing a tag or label giving the name or address of the purchaser, upon their arrival at their destination the agent of the manufacturer may (whether he be paid a salary or commission) receive and deliver them, and collect and remit the money therefor, without involving either himself or his principal in special tax liability. Respectfully yours,

W. S. FORMAN,
Commissioner.

CIRCULAR NO. 339.

MODIFYING CIRCULAR NO. 285, CONCERNING SHIPMENTS OF SPIRITS, ETC., MARKED C. O. D.

TREASURY DEPARTMENT,
OFFICE OF INTERNAL REVENUE,
WASHINGTON, D. C., January 13, 1896.

To Collectors of Internal Revenue:

Circular No. 285, relating to shipments of distilled spirits to be paid for on delivery, issued by this office March 5, 1895, is hereby modified as follows:

When an offer is made *bona fide* by any person to purchase distilled spirits or any other goods for the sale of which special tax is required to be paid by the internal revenue laws, and an order therefor is given by him, with a request that the price be collected at the time and place of the delivery of the goods, and such order is accepted by the seller, and the goods are separated from the other goods of the seller, at his place of business authorized by the internal revenue laws of the United States, and are there set apart as the property of the person ordering, and so delivered to the carrier, with instructions to deliver them to the purchaser at the place named by him and to collect the purchase money at that place, it is held that the place of sale is the place where such order is received and the goods are set apart and delivered to the carrier, and that special tax is not required by these laws to be paid at the place where the delivery is made by the carrier, and the purchase money collected in accordance with the purchaser's request.

JOHN W. MASON,
Commissioner.

We were much disappointed with this ruling, but as it is of long standing, made in relation to the sale of spirituous liquors, we must conclude that it is in accordance with the best construction of law. Therefore the only remedy lies in increased vigilance on the part of state and other officials whose duty it is to enforce state laws governing and regulating the traffic.

The other violation was one of a different character. During September, of the present year, Frank M. Brown, state milk inspector, of Cedar Rapids, was in Oelwein, Iowa, on business, and while in the office of the United States Express Co., noticed several tubs of oleomargarine consigned to Wood Bros., contractors, who were doing extensive grading for the Chicago Great Western railway, at that place. Mr. Brown informed

me regarding the discovery, and on September 29, I made a visit to Oelwein, and the Wood Bros. camp, where I found quite a large boarding establishment. I discovered empty oleomargarine tubs with government revenue stamps affixed thereon, and enough of the original contents remaining inside to show that it was of a yellow color. I swore out a search warrant and with the constable, made a search of the premises, securing the necessary sample. Mr. Frank Wood was present, and after I read the law to him, he stated that this was his first intimation that there was such a law, and that he had no intention of violating any state law, and was willing to settle the case without further costs. I immediately filed information in the justice court at Oelwein, and Wood Bros. plead guilty. The record is as follows:

In Justice Court, Oelwein Township, Fayette county. Before W. M. Irvine,
Justice of the Peace.
 THE STATE OF IOWA, }
 vs. }
 JOHN WOOD & BROS. }

JOHN JAMISON,
Attorney for Plaintiff.

Be it remembered, that on this 30th day of September, 1896, came W. K. Boardman, state dairy commissioner, and filed as his cause of action, a complaint against the defendants, and accusing the defendants of using in their boarding house, oleomargarine, colored and being imitation of butter, and serving same to their employes. Said W. K. Boardman applied for a search warrant, which was issued by me, and put in the hands of G. R. Spensley, constable, who returned the same duly served with a portion of the substitute for butter in his possession, and delivered the same to me. An information was then filed by W. K. Boardman, and a warrant was issued for the arrest of said Wood Bros. and put in the hands of G. R. Spensley, constable, for service, who arrested John Wood, who appeared for Wood Bros. The information was read to him, and he plead guilty to the charge set forth in the information. And now, after hearing the evidence in the case, the court has adjudged that the defendants be fined in the sum of \$25, and costs of the prosecution, taxed by me at \$5.70, which fine and costs were paid by defendants and said defendant discharged by the court. Given under my hand this 30th day of September, 1896.

W. M. IRVINE,
Justice of the Peace.

PROTECTIVE LAWS.

The progress of the dairy interests in securing both state and national legislation to protect itself against the oleomargarine fraud has been reasonably successful. It has so far met with but two failures of any great importance since the fight began in earnest. I refer to its absolute defeat in Illinois, and

its partial success in Michigan. In the states of Delaware, Pennsylvania and Virginia, the sale and manufacture of imitation butter and cheese are absolutely prohibited. In Montana, a license tax of 10 cents per pound is required, which is practically prohibition. The states of Vermont, Minnesota and West Virginia have the pink color law, and the anti-color law is in force in the states of California, Connecticut, Iowa, New Hampshire, New Jersey, New York, Ohio, Oregon, Maine, Massachusetts, Missouri, Nebraska and Wisconsin. There is no law upon the subject in Georgia, Kansas, Nevada, South Carolina, South Dakota, Texas and Wyoming. Most of the states not mentioned above have some laws upon the subject. They permit the sale of oleomargarine, but attempt to regulate it so as to prevent deception in its sale and use. Our experience in Iowa under such laws justifies us in stating that they are of no value whatsoever, and are not worth, to the interests which they are intended to protect, the paper upon which they are printed, but are simply made to be violated, and no state, for any length of time, will furnish the means and officials necessary to undertake to enforce them. Most of these laws require the branding and marking of the article offered for sale. In some cases the consumer must be notified; in others signs must be placed in the room where the article is sold or consumed. The following are states not enumerated and a digest of their laws:

Alabama—Manufacture and sale as genuine butter prohibited.
 Arkansas—Sale allowed if branded.
 Colorado—License law. Manufacturers must pay \$250; wholesale dealers, \$125; retail dealers, \$25. Consumer must be notified.
 District of Columbia—Manufacture and sale allowed if branded and marked.
 Florida—Penalty for knowingly selling or serving as butter.
 Idaho—Misdemeanor to manufacture without branding, or to sell as butter.
 Illinois—Knowingly manufacture or sell as butter or cheese, without stamping name. Must notify consumer.
 Indiana—Can sell if labeled with appropriate name.
 Kentucky—Can sell if package is marked.
 Louisiana—Can sell if package is marked.
 Maryland—Can manufacture and sell if package is marked and consumer notified.
 Michigan—Prohibits manufacture and sale as butter; can manufacture and sell as oleomargarine, with signs.

Mississippi—Can manufacture and sell if package is marked and a tax of \$50 is paid.

North Carolina—Can sell if labeled.

North Dakota—Can sell if sold for what it is.

Rhode Island—Can sell if branded.

Tennessee—Can manufacture and sell under true name if marked.

Utah—Cannot manufacture yellow colored oleomargarine, but can sell that imported if marked.

Washington—Can manufacture and sell if sold for what it is.

This completes the list of states and gives a general idea of the kind of protection the dairy interests of the country and the consumer enjoy.

MEANS OF ENFORCEMENT.

Several of the states are without dairy or food commissioners, or other state officers whose special duty it is to enforce the laws for the protection of the dairy interests and the people against fraud and deception, in the sale of imitation butter and cheese. The states having such officials are California, Colorado, Connecticut, Iowa, Maine, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Washington and Wisconsin. There is another group of states in which the dairy interest is obliged to depend upon dairy associations to enforce the laws made for its protection. In some cases these associations have done good work. The states without a dairy commissioner, but having a dairy association, are: Alabama, Georgia, Illinois, Indiana, Kansas, Missouri, Nebraska, New Hampshire, North Carolina, South Dakota, Utah and Vermont. The states having neither commissioner nor dairy association are: Arkansas, Delaware, Florida, Idaho, Kentucky, Louisiana, Maryland, Mississippi, Montana, Nevada, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wyoming and District of Columbia.

EFFECT OF LEGISLATION.

Having now reviewed the laws, and the machinery for their enforcement, it will be of interest, and I trust of some profit, to notice the effect legislation has had in lessening the manufacture and sale of imitation and fraudulent substitutes for butter. It was not until the latter part of 1886 that there was

any reliable means of knowing the amount of the output of oleomargarine, butterine, and other products of the same nature.

The law requiring the payment of a special tax, for manufacturing and selling the product itself, was passed August 2, 1886, and became effective November 1, of the same year. Since that time the internal revenue department at Washington has had a complete record of the manufacture and sale of all these compounds which, in the national law, are grouped together under the name of oleomargarine. From this source I obtain most of the figures that are used in this article.

The following table of production of oleomargarine for each fiscal year since November 1, 1886, the date the law took effect, is interesting as showing the extent of its operation in the country, the fiscal year ending June 30:

	POUNDS.
On hand November 1, 1886	181,090
1887	21,513,637
1888	34,325,527
1889	35,664,026
1890	32,324,032
1891	44,392,409
1892	48,364,155
1893	67,224,298
1894	69,622,246
1895	56,968,165
1896	50,853,234
Total	461,422,659

There was a gradual increase in the production of oleomargarine up to and including 1894, when the amount produced for that year was nearly 70,000,000 pounds. During the past two years there has been a marked decrease, amounting to about 13,000,000 pounds for 1895, and 6,000,000 for 1896. The decrease during the fiscal year 1895 was all that could be expected under the circumstances, for but few of the states which had passed the prohibitory or restrictive laws were able to enforce them prior to the decision of the supreme court of the United States in the *Benjamin A. Plumley v. The Commonwealth of Massachusetts* case, rendered by Justice Harlan December 10, 1894. This important decision was promulgated about the middle of the fiscal year ending June 30, 1895, and its full meaning was not felt and fully understood by many retail dealers until months afterwards, hence a decrease of 13,000,000 pounds during that fiscal year should be considered very satisfactory, but

a decrease of only 6,000,000 pounds during the fiscal year ending June 30, 1896, must be considered a great disappointment, and it is this fact that led me to make investigation and look up the facts and figures upon this very important subject. Another table of much interest is the following:

TABLE No. II.

Statement showing the quantity of oleomargarine produced, withdrawn tax-paid, for export, for exposition purposes, and lost or destroyed in manufactories monthly, from November 1, 1886, to June 30, 1896:

MONTHS.	Quantity re- turned to fac- tories—lbs.	Quantity pro- duced—lbs.	Withdrawn tax-paid—lbs.	Withdrawn for export—lbs.	Lost or de- stroyed—lbs.	Withdrawn for exposition purposes—lbs.
On hand Nov. 1, 1886.		181,090				
November	3,182,361	2,866,547	6,777	6,777	10,978	
December	3,073,293	2,959,527	67,189	67,189	208	
1887.						
January	2,804,696	2,730,233	144,533	3,054		
February	2,776,850	2,716,759	60,500	9,182		
March	3,568,294	3,513,138	96,499	12,472		
April	3,839,326	3,793,937	149,888	6,363		
May	1,885,027	1,769,954	136,323	2,210		
June	1,875,423	1,801,168	62,791	6,507		
July	1,393,628	1,178,136	33,510	1,141		
August	3,423,226	2,396,326	110,950	401		
September	3,704,256	3,258,007	68,917	262		
October	3,483,983	3,915,018	92,301	1,979		
November	3,603,715	3,562,321	148,809			
December	3,256,028	3,130,363	78,500			
1888.						
January	3,058,953	3,918,868	117,751			
February	3,057,149	3,063,315	126,195			
March	3,441,727	3,850,773	133,701			
April	3,373,458	3,023,396	251,994	1,307		
May	3,185,127	3,817,262	327,136			
June	3,130,315	3,630,311	174,019			
July	2,094,317	1,925,762	153,230	185		
August	2,301,769	2,239,752	133,283	727		
September	2,733,465	2,707,893	147,587			
October	3,462,123	3,363,418	80,765			
November	3,736,878	3,569,408	173,965			
December	3,161,713	3,463,356	192,363	10		
1889.						
January	3,097,793	3,363,359	137,123			
February	3,363,359	3,368,245	28,411	1,000		
March	3,847,873	3,977,831	70,424			
April	3,037,841	2,898,481	285,944			
May	3,310,943	3,114,478	129,419	20		
June	1,573,362	1,514,639	58,579			
July	1,406,739	1,412,054	65,689			
August	1,974,773	1,910,716	49,889	4,073		
September	2,274,456	2,139,945	167,386			
October	4,073,333	3,663,057	180,265	688		
November	3,183,737	3,114,448	131,639			
December	3,072,028	3,010,319	93,770			
1890.						
January	3,328,340	3,033,375	117,900	3,692		
February	3,011,670	3,012,219	104,018	256		
March	3,863,080	3,627,214	213,689			
April	2,871,274	2,719,123	134,119			
May	1,864,746	1,795,963	219,052			
June	1,994,826	1,862,257	85,213	90		
July	2,723,966	1,873,796	197,408	66		
August	3,282,548	2,185,414	192,176	66		
September	3,391,817	3,130,316	145,283			
October	3,026,055	3,482,142	95,650	3,256		
November	3,615,704	3,615,142	71,490			
December	4,373,447	4,328,778	21,900			

TABLE No. II.—CONTINUED.

MONTHS.	Quantity re- turned to fac- tories—lbs.	Quantity pro- duced—lbs.	Withdrawn tax-paid—lbs.	Withdrawn for export—lbs.	Lost or de- stroyed—lbs.	Withdrawn for exposition purposes—lbs.
1891.						
January	3,064,473	3,064,473	3,709,844	36,158		
February	4,386,139	4,386,139	4,943,264	45,230		
March	3,733,222	3,733,222	4,277,293	32,173		
April	4,975,178	4,975,178	4,443,065	288,965	1,000	
May	4,005,212	4,005,212	3,507,827	20,994		
June	1,986,522	1,986,522	2,044,156	70,494		
July	2,824,287	2,824,287	3,426,144	38,970		
August	3,378,028	3,378,028	3,275,289	104,008		
September	3,550,418	3,550,418	3,438,318	112,100		
October	4,941,373	4,941,373	4,828,721	71,988	113	
November	4,975,152	4,975,152	4,813,457	61,960		
December	4,563,912	4,563,912	4,570,597	68,700		
1892.						
January	4,777,319	4,777,319	4,563,358	63,908		
February	4,864,227	4,864,227	4,472,287	218,570		
March	5,916,871	5,916,871	5,711,768	180,090		
April	4,800,322	4,800,322	4,711,450	122,533		
May	3,160,611	3,160,611	3,088,407	73,198		
June	3,067,326	3,067,326	2,665,622	137,394		
July	2,634,022	2,634,022	2,398,328	284,558		
August	3,748,321	3,748,321	3,571,323	144,870		
September	3,116,308	3,116,308	4,608,549	148,838		
October	5,195,351	5,195,351	5,229,316	218,238		
November	5,311,563	5,311,563	6,107,850	80,732		
December	6,541,521	6,541,521	6,202,107	281,058		
1893.						
January	7,853,457	7,853,457	7,696,232	233,053	4,203	
February	6,363,115	6,363,115	6,068,923	233,648		
March	6,738,848	6,738,848	6,533,813	205,937	1,939	
April	6,423,756	6,423,756	5,660,195	294,392		1,214
May	4,842,760	4,842,760	3,358,551	215,660		
June	3,663,387	3,663,387	3,350,258	293,894	1,000	
July	6,014,242	6,014,242	4,716,112	223,204		
August	7,123,560	7,123,560	6,738,254	269,669		823
September	3,319,000	3,319,000	3,731,547	378,147	228	
October	7,401,263	7,401,263	7,370,822	302,445	450	
November	6,808,258	6,808,258	6,787,823	177,233		
December						
1894.						
January	6,556,141	6,556,141	6,213,278	295,289		
February	6,345,843	6,345,843	5,317,563	297,491	643	
March	5,869,497	5,869,497	5,639,414	416,549	61	
April	5,413,302	5,413,302	4,656,192	328,561		
May	3,451,901	3,451,901	445,917	858,711	2,691	
June	2,332,791	2,332,791	2,337,000	339,199		
July	6,026,890	6,026,890	5,616,739	297,749		
August	5,429,015	5,429,015	4,796,713	292,679		
September	5,629,318	5,629,318	5,808,293	311,741	100	100
October	7,044,429	7,044,429	6,616,017	338,673		
November	6,653,846	6,653,846	6,337,613	324,434		
December	5,975,024	5,975,024	4,834,587	242,803		
1895.						
January	5,630,333	5,630,333	4,900,591	344,102	4,029	
February	4,903,301	4,903,301	4,623,399	211,471		
March	4,818,572	4,818,572	4,021,362	323,253	10,428	
April	3,967,461	3,967,461	4,289,675	256,985		
May	3,295,660	3,295,660	3,018,270	297,199		
June	3,399,222	3,399,222	3,192,368	296,800	4,440	
July	3,003,913	3,003,913	2,659,369	301,633		
August	3,547,363	3,547,363	3,249,263	275,650		
September	3,697,131	3,697,131	3,323,650	260,000	300	
October	4,266,906	4,266,906	4,397,001	359,129		
November	3,265,905	3,265,905	3,959,014	315,798		
December	5,493,226	5,493,226	5,033,087	398,318	1,760	

TABLE No. II—CONTINUED.

MONTHS.	Quantity re- turned to fac- tories—lbs.	Quantity pro- duced—lbs.	Withdrawn tax-paid—lbs.	Withdrawn for export—lbs.	Lost or de- stroyed—lbs.	Withdrawn for exportation purpose—lbs.
1888.						
January.....		4,830,851	4,735,497	228,960		
February.....		4,501,891	4,376,561	354,827	40	
March.....		4,605,718	4,545,951	351,696		
April.....		3,741,983	3,630,634	347,343		
May.....		2,929,122	2,907,323	341,251		
June.....		2,632,870	2,563,945	353,795	330	
Total.....	778	461,482,659	456,963,242	20,938,797	123,413	1,542
On hand June 30, 1896.....						396,494

From this table the average monthly exportation is compiled:

During the eight months ending June 30, 1887..... 90,506 POUNDS.

DURING THE FISCAL YEAR ENDING JUNE 30TH—

1888.....	140,516
1889.....	145,746
1890.....	134,856
1891.....	102,425
1892.....	107,981
1893.....	232,124
1894.....	283,890
1895.....	278,123
1896.....	258,850

The exportation for the last four years has been very uniform, and amounted to between 3,000,000 and 3,500,000 pounds per year. This is far less than has been generally supposed by those interested along dairy lines. It has also been thought that the production and consumption of oleomargarine was confined mostly to winter months. This also is a great mistake, for while the largest monthly production is in the fall and winter months, the amount produced in the spring and summer is not far behind. Since 1891 the production of no single month has fallen below 2,000,000 pounds. During the last four years the various months have averaged about as follows:

	POUNDS.
June and July.....	3,060,000
May.....	4,060,000
August.....	4,500,000
March and April.....	5,000,000
September and February.....	5,500,000
January and December.....	6,000,000
November.....	6,500,000
October.....	7,000,000

Oleomargarine has been manufactured by regular established factories during some portion of the time since 1886 in the following fifteen states:

California: 1893, 1 factory; 1894, 2 factories.
Connecticut: 1887, 1 factory; 1888, 7 factories; 1889, 7 factories; 1890 and 1891, 4 factories.

Illinois: 1886, 11 factories, and each year since 6, 7 or 8.

Colorado: 1886, 2 factories, and 1 each year up to and including 1893.

Indiana: 1886, 1 factory, and 1 each year since with the exception of 1891

Iowa: 1891, 1 factory; 1893, 1 factory.

Kansas: 1886, 2 factories; 1887-1892, inclusive, 2 factories each year; 1893 and 1894, 3 factories; 1896, 2 factories.

Massachusetts: 1886-1891, inclusive, 1 factory each year.

Missouri: 1890, 2 factories; 1891-1896, inclusive, 1 each year.

Nebraska: 1891, 1 factory; 1892, 2 factories; 1893-1896, inclusive, 1 each year.

New Jersey: 1896, 1 factory.

New York: 1886, 6 factories; 1887, 1 factory; 1888, 1 factory.

Ohio: 1886, 4 factories; 1887, 1 factory; 1888, 4 factories; 1889-1896, inclusive, 2 each year.

Pennsylvania: 1886, 5 factories; 1887-1890, inclusive, 3 each year; 1891-1895, inclusive, 1 each year; 1896, 2 factories.

Rhode Island: 1886, 5 factories; 1887, 4 factories; 1892 and 1893, 3 each year; 1894, 1895 and 1896, 4 each year.

There are but four states that have been producers of oleomargarine continually each year since 1886. They are Illinois, Kansas, Ohio and Pennsylvania. The following states have dropped out of the list and are non-producers: California, Connecticut, Colorado, Iowa, Massachusetts, and New York. California ceased to manufacture at the end of the fiscal year 1894, Colorado 1893, Connecticut 1891, Iowa 1894, Massachusetts 1891, and New York in 1889. Missouri first manufactured in 1890, Nebraska in 1891, Rhode Island in 1886, but had no factories during 1888 to 1891 inclusive, but commenced operation again in 1892. New Jersey's first factory began operation during the year ending June 30, 1896. The number of manufacturers' special tax paid each year, have ranged from thirty-seven in 1886, to eighteen in 1892, the lowest number issued in any one year under the present law. The number issued during the last four years respectively, is twenty-two in 1893, twenty-three in 1894, twenty-one in 1895, and twenty-two in 1896.

The product of these manufactories has largely been consumed in this country, as less than 5 per cent has been exported.

TABLE No. III.

The following statement by districts shows the quantity, in pounds, of oleomargarine produced at manufactories, the quantity withdrawn therefrom tax-paid, for export and for exposition purposes, and the quantity lost or destroyed at manufactories during the two fiscal years ended June 30, 1895, and June 30, 1896, respectively; also the stock remaining on hand at the close of each year:

DISTRICT.	FROM JULY 1, 1894, TO JUNE 30, 1895.						
	Returned to factory.	Produced.	Withdrawn tax-paid.	Withdrawn for export.	Lost or destroyed.	Withdrawn for exposition purposes.	Remaining in factory June 30, 1895.
First California.....		223,389	197,710		29,380	4,009	.....
Connecticut a.....		9,019,299	6,403,525		2,641,497		17,886
First Illinois.....	100	31,863,471	31,263,541		356,871	4,580	100 244,744
Sixth Indiana.....		653,663	663,642				3,247
Kansas b.....		7,189,335	7,110,208		73,990	19,448	60,985
Sixth Missouri.....		1,018,544	961,517				48,383
Nebraska c.....		3,000,810	3,004,330		5,000		.....
Fifteenth Ohio.....		1,553,292	1,549,010				8,888
Eighteenth Ohio.....		1,200,169	1,318,903				5,445
First Pennsylvania.....		663,113	347,446		238,446		8,190
Total.....	100	74,958,105	53,636,543		3,307,486	28,097	100 363,567

DISTRICT.	FROM JULY 1, 1895, TO JUNE 30, 1896.						
	Returned to factory.	Produced.	Withdrawn tax-paid.	Withdrawn for export.	Lost or destroyed.	Withdrawn for exposition purposes.	Remaining in factory June 30, 1896.
Connecticut a.....		8,644,890	6,396,020		2,236,585		20,840
First Illinois.....		29,172,122	28,591,110		584,879	2,000	238,790
Sixth Indiana.....		631,455	833,017				4,661
Kansas b.....		5,936,333	5,836,112		99,943	40	71,123
Sixth Missouri.....		928,487	790,383				32,997
Nebraska c.....		1,611,240	1,609,010		1,000	300	.....
Fifth New Jersey.....		67,254	52,014		2,850		2,390
Fifteenth Ohio.....		2,180,753	2,195,666				3,333
Eighteenth Ohio.....		1,748,833	1,738,296				12,794
First Pennsylvania.....		177,023	4,565		180,050		.....
Total.....		50,553,214	47,741,700		4,108,204	2,430	395,404

a Including the state of Rhode Island. No oleomargarine was manufactured in the state of Connecticut.

b Including the Indian Territory and Territory of Oklahoma; but no oleomargarine was manufactured in either of these territories.

c Including the states of North Dakota and South Dakota; but no oleomargarine was manufactured in either of these states.

As it is of much interest to the dairy people to know where the manufacturers of oleomargarine have found and are finding markets in this country for their compound, the following comprehensive table which gives this information is worthy of our careful study:

TABLE

Statement, by states and territories, showing the number of persons paying special taxes on manufactures of oleomargarine, from October 31, 1886, to

STATES AND TERRITORIES.	OCTOBER 31, 1886, TO APRIL 30, 1887.			MAY 1, 1887, TO JUNE 30, 1887.			1888.			1889.			1890.		
	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.
Alabama	2	11	1	3	1	9	1	9	2	20	2	66	1	11	1
Alaska															
Arizona															
Arkansas		6	67	2	20	21	1	9	26	1	24	1	24	1	
California (a)	2	12	30	30	13	2	1	1	1	1	1	1	1	1	
Colorado (a)															
Connecticut (a)		181	1	1	1	1	1	1	1	1	1	1	1	1	
Delaware		20	1	1	1	1	1	1	1	1	1	1	1	1	
Dist. of Columbia		20													
Florida		1													
Georgia		1													
Idaho															
Illinois	11	24	10	11	20	10	10	10	10	10	10	10	10	10	10
Indiana		1													
Indian Territory															
Iowa		1													
Kansas		133	1	1	1	1	1	1	1	1	1	1	1	1	1
Kentucky		127	1	1	1	1	1	1	1	1	1	1	1	1	1
Louisiana (a)		19													
Maine		3													
Maryland (a)		20													
Massachusetts	1	3,077	1	1	1	1	1	1	1	1	1	1	1	1	1
Michigan		234	7	123	1	1	1	1	1	1	1	1	1	1	1
Minnesota		3	4												
Mississippi		5	5												
Missouri		173	3	5	17	115	1	1	1	1	1	1	1	1	1
Montana (f)	10	24	1	1	1	1	1	1	1	1	1	1	1	1	1
Nebraska (g)		41													
Nevada		1													
N. Hampshire (h)		24		15	1	29									
New Jersey		174		13											
New Mexico (a)		3		1											
New York	6	18	34	1	1	1	1	1	1	1	1	1	1	1	1
North Carolina		2													
North Dakota															
Ohio	4	12	272	1	1	109	4	6	200	3	12	361	2	13	414
Oklahoma															
Oregon (a)															
Pennsylvania	5	25	512	3	43	3	110	3	6	141	3	7	160		
Rhode Island		18	404	4	258										
South Carolina															
South Dakota															
Tennessee		10	20	2	16										
Texas		9	20	3	10	5	13	9	21	5	23	5	23		
Utah															
Vermont		1													
Virginia		1	10												
Washington															
West Virginia															
Wisconsin	11	61		3	26	11	44	5	83	3	102	3	102		
Wyoming															
Total	21	288	1,977	22	74	1,428	30	155	2,116	24	150	1,982	22	170	2,205

- (a) Including the state of Nevada.
 (b) Including the territory of Wyoming.
 (c) Including the state of Rhode Island.
 (d) Including the state of Mississippi.
 (e) Including the state of Delaware, District of Columbia, and the counties of Accomack and Northampton, Virginia.
 (f) Including the territories of Idaho and Utah.
 (g) Including Dakota.
 (h) Including the states of Maine and Vermont.
 (i) Including the states of Maine and Vermont.
 (j) Including the territory of Arizona.
 (k) Including Alaska and Washington.

No. IV.

special taxes on manufacturers of and dealers in oleomargarine, from October 31, 1886, to

	1887.			1888.			1889.			1890.			1891.		
	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.	Manufac- turers.	Wholesale	Retail.
1887	4	20	5	5	20	10	10	10	10	10	10	10	10	10	10
1888	4	20	5	5	20	10	10	10	10	10	10	10	10	10	10
1889	4	20	5	5	20	10	10	10	10	10	10	10	10	10	10
1890	4	20	5	5	20	10	10	10	10	10	10	10	10	10	10
1891	4	20	5	5	20	10	10	10	10	10	10	10	10	10	10
Total	21	288	1,977	22	74	1,428	30	155	2,116	24	150	1,982	22	170	2,205

This table shows a yearly increase (with one or two exceptions) in the number of wholesale and retail dealers from 1887 to the end of the fiscal year, June 30, 1894, at which time the number of retail special tax issued reached 7,554, the largest number issued in any one year. During the last two years there has been a decrease of 1,582 in 1895 over that of 1894, and 1,592 in 1896 over that of 1895, in the number of special tax issued. This decrease, though marked, is not as large as it should have been for the fiscal year of 1896. The United States supreme court declared the anti-color law constitutional in December, 1894, which gave state dairy commissioners, or other special state officials, several months before the beginning of the fiscal year 1896 in which to compel compliance with their prohibitory and restrictive laws. The officials in some of the states having anti-color and other effective laws, were very successful in their efforts, and these states show a large falling off in the number of dealers during the year 1896, while in others having equally as strong laws, the decrease in the number of special tax issued was small. In order to see more clearly the situation in this respect, I have prepared two tables; one composed of the states having anti-color or other effective laws, and the other of states having no laws, or such as are practically non-enforceable. In each of these tables the number of special tax issued in each state in the years 1894, 1895 and 1896, respectively, is given:

TABLE No. V.

Showing the states that have effective laws prohibiting the sale of yellow colored oleomargarine and the number of retail licenses issued during the fiscal years of 1894, 1895 and 1896

STATES.	YEARS.		
	1894.	1895.	1896.
California	28	15	2
Connecticut	49	12	12
Delaware	49	47	8
Iowa	125	81	2
New Jersey	197	190	165
New York	65	59	45
Ohio	509	447	379
Oregon	3	2	2
Pennsylvania	383	503	361
Vermont	1	1	1
Virginia	59	50	56
Maine	50	18	5
Massachusetts	254	197	40
Minnesota	35	28	7
Missouri	68	43	113
Montana	63	72	4
Nebraska	83	51	32
New Hampshire	10	6	1
West Virginia	90	72	59
Wisconsin	181	138	38
Total	2,937	2,399	1,858

TABLE No. VI.

Showing the states without effective laws prohibiting the sale of yellow colored oleomargarine and the number of retail licenses issued during the fiscal years of 1894, 1895 and 1896.

STATES.	YEARS.		
	1894.	1895.	1896.
Alaska	97	48	29
Arkansas	65	34	29
Alabama	3	3	3
Arizona	90	80	83
Colorado	83	85	83
District of Columbia	144	115	94
Florida	71	66	35
Georgia	1	1	1
Idaho	2,678	1,605	1,227
Illinois	360	151	139
Indiana	41	25	19
Indian territory	178	101	73
Kansas	158	125	150
Kentucky	65	67	58
Louisiana	37	35	26
Maryland	529	429	394
Michigan	4	4	4
Mississippi	15	15	8
Nevada	19	9	5
North Carolina	2	2	4
New Mexico	2	1	4
North Dakota	32	17	49
Oklahoma	341	320	34
Rhode Island	49	24	14
South Carolina	3	2	2
South Dakota	72	45	30
Tennessee	105	88	56
Texas	11	5	4
Utah	63	45	16
Washington	15	14	6
Wyoming	1	1	1
Total	4,617	3,573	3,022

There are twenty states having effective laws; some have absolute prohibition, some the pink law, and others the anti-color law. Thirty states and territories have practically no laws upon the subject, that is, thirteen of these states have absolutely no laws and the other seventeen have laws permitting yellow colored oleomargarine to be sold if branded, marked, and customers in some cases notified of its true character. Such laws are of no practical value. Their enforcement is out of the question, and if not made to be violated, are, nevertheless, violated with impunity in all the states having them on their statute books. Every special tax issued to the retailer is evidence of this fact, for it has been absolutely demonstrated in Iowa that no retailer will pay the special tax if the opportunity for deception is removed by compelling oleomargarine of some other color than yellow to be his stock in trade. No friends of the dairy should ever again allow themselves to be deceived into thinking that they have accomplished anything for the

industry by assisting to place any such law on the statute books of their state, for such laws are nothing but a delusion and a snare. Of the twenty states having effective laws, all but four have a state officer, or some association to enforce them; of the other thirty states and territories, twelve have officers and associations. As before stated, the largest number of retail special tax was issued in 1894, being 7,554. Of this number, 2,937 were issued in the twenty states having effective laws, and 4,617 in the thirty states and territories having defective laws. In the two following years, 1895 and 1896, the 2,937 special tax have decreased to 1,358, or 54 per cent, and the 4,617 have been reduced to 3,022, or 34 per cent. There can be no question but what the prohibitory and restrictive laws in these states have been a very strong factor in decreasing the number of special tax issued and the amount of oleomargarine sold and consumed, but there is another influence that must not be overlooked, and that is the low price butter has commanded during this period. This undoubtedly has had much to do in lessening the demand for the better grades of oleomargarine, but has not, we believe, affected the cheaper grades that are used by many chop houses, cheap restaurants and boarding houses. This is shown by the fact as pointed out before, of the large consumption during the summer months, when the price of choice creamery butter was within the reach of all. Another fact worthy of note, is that while the decrease in the number of retail dealers during 1895 was 1,582, and during 1896, 1,592, showing remarkable uniformity, the decrease of oleomargarine consumed was 12,459,816 pounds in 1895, and only 5,894,449 pounds in 1896. This is accounted for in the increase in the amount sold on the average by each retail dealer. In 1894 the average was 8,750 pounds; in 1895, 8,981 pounds; in 1896, 10,900 pounds, being an increase of 231 pounds per dealer in 1895 as compared with 1894, and 1,919 pounds per-dealer in 1896 as compared with 1895.

Undoubtedly the profit from the sale of a pound of oleomargarine, to the retailer, is larger than can be realized on a pound of butter, and the manufacturer has made it an object for him to push the trade to the fullest extent possible.

By consulting table No. IV it will be seen that the states in the group having effective laws, where the largest number of special tax were issued during 1896, are Ohio, Pennsylvania, New Jersey and Missouri. A few special tax were issued in

Virginia and West Virginia; the first has prohibition and the other the pink law, but unfortunately neither has a state official whose special duty it is to look after dairy interests. If the laws in these states were honestly and vigorously enforced, it is not unreasonable to believe that 1,000 more special tax licenses would drop from the list, which would mean a decrease of about 11,000,000 pounds, and if in addition effective laws could be passed and enforced in Illinois, Michigan, Rhode Island, Kentucky, Indiana, Kansas and the District of Columbia, 2,000 more retail dealers would be dispensed with and there could be an additional decrease of fully 22,000,000 pounds in the consumption of oleomargarine.

This would practically remove from competition this dishonest and fraudulent compound, and furnish in these states a larger market, by 38,000,000 pounds, for honest butter. No state in the union is more interested in having this accomplished than Iowa. Our state holds first rank in the dairy industry of this country, and every factory and person financially interested should not hesitate to assist in any practical plan that will bring about this result. The National Dairy Union has met with great success, and, in fact, to a far greater extent than its most active members believed possible, in securing national attention and legislation, and it should be encouraged and assisted, as there is yet plenty of work to be done in this direction. The great western dairy territory including Iowa, Illinois, Wisconsin, Minnesota, Nebraska, Kansas and Missouri should unite for mutual protection, and render valuable aid to such states as are without effective laws in securing them, and giving assistance to all states that need help in vigorously enforcing such laws as they may have.

The development and rapid growth of the dairy industry in the great northwest makes it the imperative duty of this region to do everything possible, in a legitimate way, to regain that part of the markets of this country of which the oleomargarine traffic has robbed it, for 50,000,000 pounds of oleomargarine forced from the markets of this country would make room for at least a part of the rapidly growing increase of creamery butter, and be worth many millions of dollars to the farmers of this country during the years to come.

FILLED CHEESE.

In the last annual report of this department some twenty pages were devoted to the filled cheese question. The investigations made during the year 1895, and recorded therein, have attracted more or less attention, and have been of service in convincing our law-makers at Washington that the dairy interest needed their assistance in the enactment of a law upon this subject. The advance signatures of the last report upon the subject of filled cheese, were furnished to each member of the Iowa delegation in congress, and also sent to each member of the different committees that considered filled cheese legislation. To the credit of Iowa, all members of the Iowa delegation supported this movement, and each member informed this department that the information furnished demonstrated the importance of a national law taxing the manufactured product and licensing the manufacture and sale of filled cheese.

It is with much satisfaction that we are able to report that just such a law was enacted by congress, and became operative September 4, 1896.

The benefit of such a law was discussed at the annual meeting of the National Dairy Union, in January, 1895, and it assumed a definite shape at the last annual meeting at Chicago in January, 1896. This meeting was well attended and all the western dairy states were represented by able and earnest men.

The following resolutions were reported by the committee on legislation, and unanimously adopted:

That it is hereby recommended that this Union shall present to the congress of the United States, a bill to limit the effect of the commerce clause of the constitution with respect to oleomargarine and filled cheese, being substantially the Hill-Apsley-Grout bill of the Fifty-third Congress.

That it further recommends that the Union present a bill to congress to regulate the manufacture and the sale of filled cheese.

It is further recommended that the Union present a bill to congress providing for the registering of state trade-marks.

President W. H. Hatch, of Missouri, James Hewes, of Maryland, and H. C. Adams, of Wisconsin, were appointed a

committee to look after national legislation. Also a committee, with George W. Linn, of Chicago, as chairman, was appointed to promote dairy legislation in Illinois. Later, the New York Produce and Mercantile Exchange appointed a committee to assist in procuring national legislation. Thos. F. Shields, and W. B. Smith of New York City, were its active members, and are entitled to be remembered for the good work they have accomplished. Hon. W. H. Hatch, president of the National Dairy Union, gave much of his time to the cause, and Hon. H. C. Adams, and ex-Governor Hoard, of Wisconsin, visited Washington, and appeared before the ways and means committee of the senate, in the interest of filled cheese legislation. Bills upon this subject were introduced and referred to the committee on ways and means early in January, and passed through the usual course of postponements and delays.

The friends of the different bills were strong and earnest in advocating their favored measures, and the customary differences of opinion, jealousies and disagreement, were indulged in by congressional rivals and their respective supporters and the dairy press, but the earnestness of those directly interested was so strong that these differences were swept aside, and after a thorough investigation, the committee reported a substitute for all bills, which was passed without amendment by both the house and senate. The fight on this measure as is usually the case when the bill is a popular one, and the legislator desires to avoid making a damaging record, was made before the committees. The bill first passed the house, and on June 4th the senate gave it favorable consideration, and it was signed by President Cleveland on June 6th, becoming operative September 4, 1896. It passed the house by a vote of 140 to 58, and the senate by a vote of 37 to 13 against. The bill is as follows:

An Act defining cheese, and also imposing a tax upon and regulating the manufacture, sale, importation and exportation of "filled cheese."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purposes of this act, the word "cheese" shall be understood to mean the food product known as cheese, and which is made from milk or cream and without the addition of butter, or any animal, vegetable, or other oils or fats foreign to such milk or cream, with or without additional coloring matter.

SEC. 2. That for the purposes of this act certain substances and compounds shall be known and designated as "filled cheese," namely: All substances made of milk or skimmed milk with the admixture of butter, animal oils or fats, vegetable or any other oils or compounds foreign to such milk, and made in imitation or semblance of cheese.

SEC. 3. That special taxes are imposed as follows: *

Manufacturers of filled cheese shall pay \$400 for each and every factory per annum. Every person, firm or corporation who manufactures filled cheese for sale shall be deemed a manufacturer of filled cheese. Wholesale dealers in filled cheese shall pay \$250 per annum. Every person, firm or corporation who sells or offers for sale filled cheese in the original manufacturer's packages for resale, or to retail dealers as hereinafter defined, shall be deemed a wholesale dealer in filled cheese. But any manufacturer of filled cheese who has given the required bond and paid the required special tax, and who sells only filled cheese of his own production, at the place of manufacture, in the original packages, to which the tax-paid stamps are affixed, shall not be required to pay the special tax of a wholesale dealer in filled cheese on account of such sales.

Retail dealers in filled cheese shall pay \$12 per annum. Every person who sells filled cheese at retail, not for resale, and for actual consumption, shall be regarded as a retail dealer in filled cheese, and sections 3232, 3233, 3234, 3235, 3236, 3237, 3238, 3239, 3240, 3241, 3243 of the revised statutes of the United States are, so far as applicable, made to extend to and include and apply to the special taxes imposed by this section and to the persons, firms or corporations upon whom they are imposed: *Provided*, That all special taxes under this act shall become due on the 1st day of July in every year, or on commencing any manufacture, trade or business on which said tax is imposed. In the latter case the tax shall be reckoned proportionately from the first day of the month in which the liability to the special tax commences to the 1st day of July following.

SEC. 4. That every person, firm or corporation who carries on the business of a manufacturer of filled cheese without having paid the special tax therefor, as required by law, shall, besides being liable to the payment of the tax, be fined not less than \$400 and not more than \$3,000; and every person, firm or corporation who carries on the business of a wholesale dealer in filled cheese without having paid the special tax therefor, as required by law, shall, besides being liable to the payment of the tax, be fined not less than \$250 nor more than \$1,000; and every person, firm or corporation who carries on the business of a retail dealer in filled cheese without having paid the special tax therefor, as required by law, shall, besides being liable for the payment of the tax, be fined not less than \$40 nor more than \$500 for each and every offense.

SEC. 5. That every manufacturer of filled cheese shall file with the collector of internal revenue of the district in which his manufactory is located such notices, inventories and bonds, shall keep such books and render such returns of materials and products, shall put up such signs and affix such number to his factory, and conduct his business under such surveillance of officers and agents as the commissioner of internal revenue, with the approval of the secretary of the treasury, may by regulation require. But the bond required of such manufacturer shall be with sureties satisfactory to the collector of internal revenue, and in a penal sum of not less than \$5,000; and the amount of said bond may be increased from time to time, and additional sureties required, at the discretion of the collector or under instructions of the commissioner of internal revenue. Any manufacturer of filled cheese who fails to comply with the provisions of this section or with the regulations herein authorized, shall be deemed guilty of

a misdemeanor and upon conviction thereof shall be fined not less than five hundred dollars nor more than one thousand dollars.

SEC. 6. That filled cheese shall be packed by the manufacturers in wooden packages only, not before used for that purpose, and marked, stamped and branded with the words "filled cheese" in black-faced letters not less than two inches in length, in a circle in the center of the top and bottom of the cheese; and in black-faced letters of not less than two inches in length in line from the top to the bottom of the cheese, on the side in four places equidistant from each other, and the package containing such cheese shall be marked in the same manner, and in the same number of places, and in the same description of letters as above provided for the marking of the cheese; and all sales or consignments made by manufacturers of filled cheese to wholesale dealers in filled cheese or to exporters of filled cheese shall be in original stamped packages. Retail dealers in filled cheese shall sell only from original stamped packages, and shall pack the filled cheese when sold in suitable wooden or paper packages, which shall be marked and branded in accordance with rules and regulations to be prescribed by the commissioner of internal revenue with the approval of the secretary of the treasury. Every person who knowingly sells or offers to sell, or delivers or offers to deliver, filled cheese in any other form than in new wooden or paper packages, marked and branded as hereinbefore provided and as above described, or who packs in any package or packages filled cheese in any manner contrary to law, or who falsely brands any package or affixes a stamp on any package denoting a less amount of tax than that required by law, shall upon conviction thereof be fined for each and every offense not less than fifty dollars and not more than five hundred dollars or be imprisoned not less than thirty days nor more than one year.

SEC. 7. That all retail and wholesale dealers in filled cheese shall display in a conspicuous place in his or their salesroom a sign bearing the words "Filled cheese sold here" in black-faced letters not less than six inches in length, upon a white ground, with the name and number of the revenue district in which his or their business is conducted; and any wholesale or retail dealer in filled cheese who fails or neglects to comply with the provisions of this section shall be deemed guilty of a misdemeanor, and shall on conviction thereof be fined for each and every offense not less than fifty dollars and not more than two hundred dollars.

SEC. 8. That every manufacturer of filled cheese shall securely affix by pasting on each package containing filled cheese manufactured by him, a label on which shall be printed, besides the number of the manufactory and the district and state in which it is situated, these words: "Notice—The manufacturer of the filled cheese herein contained has complied with all the requirements of the law. Every person is cautioned not to use either this package again or the stamp thereon again, nor to remove the contents of this package without destroying said stamp, under the penalty provided by law in such cases." Every manufacturer of filled cheese who neglects to affix such label to any package containing filled cheese made by him or sold or offered for sale by or for him, and every person who removes any such label so affixed from any such package, shall be fined fifty dollars for each package in respect to which such offense is committed.

SEC. 9. That upon all filled cheese which shall be manufactured there shall be assessed and collected a tax of 1 cent per pound, to be paid by the

manufacturer thereof; and any fractional part of a pound in a package shall be taxed as a pound. The tax levied by this section shall be represented by coupon stamps; and the provisions of existing laws governing the engraving, issue, sale, accountability, effacement and destruction of stamps relating to tobacco and snuff, as far as applicable, are hereby made to apply to stamps provided for by this section.

SEC. 10. That whenever any manufacturer of filled cheese sells or removes for sale or consumption any filled cheese upon which the tax is required to be paid by stamps, without paying such tax, it shall be the duty of the commissioner of internal revenue, within a period of not more than two years after such sale or removal, upon satisfactory proof, to estimate the amount of tax which has been omitted to be paid and to make an assessment therefor and certify the same to the collector. The tax so assessed shall be in addition to the penalties imposed by law for such sale or removal.

SEC. 11. That all filled cheese as herein defined imported from foreign countries shall, in addition to any import duty imposed on the same, pay an internal revenue tax of 8 cents per pound, such tax to be represented by coupon stamps; and such imported filled cheese and the packages containing the same shall be stamped, marked, and branded, as in the case of filled cheese manufactured in the United States.

SEC. 12. That any person who knowingly purchases or receives for sale any filled cheese which has not been branded or stamped according to law, or which is contained in packages not branded or marked according to law, shall be liable to a penalty of fifty dollars for each such offense.

SEC. 13. That every person who knowingly purchases or receives for sale any filled cheese from any manufacturer or importer who has not paid the special tax herein provided for shall be liable, for each offense, to a penalty of one hundred dollars and to a forfeiture of all articles so purchased or received, or of the full value thereof.

SEC. 14. That whenever any stamped package containing filled cheese is emptied it shall be the duty of the person in whose hands the same is to destroy the stamps thereon; and any person who wilfully neglects or refuses so to do shall, for each such offense, be fined not exceeding fifty dollars or imprisoned not less than ten days nor more than six months.

SEC. 15. That the commissioner of internal revenue is authorized to have applied scientific tests, and to decide whether any substances used in the manufacture of filled cheese contain ingredients deleterious to health. But in case of doubt or contest his decision in this class of cases may be appealed from to a board hereby constituted for the purpose, and composed of the surgeon-general of the army, the surgeon-general of the navy, and the secretary of agriculture, and the decision of this board shall be final in the premises.

SEC. 16. That all packages of filled cheese subject to tax under this act that shall be found without stamps or marks as herein provided, and a filled cheese intended for human consumption which contains ingredients adjudged as hereinbefore provided to be deleterious to the public health, shall be forfeited to the United States.

SEC. 17. That all fines, penalties, and forfeitures imposed by this act may be recovered in any court of competent jurisdiction.

SEC. 18. That the commissioner of internal revenue, with the approval of the secretary of the treasury, shall make all needful regulations for the carrying into effect the provisions of this act.

SEC. 19. That this act shall go into effect on the ninetieth day after its passage, and all wooden packages containing ten or more pounds of filled cheese found on the premises of any dealer on and after the ninetieth day succeeding the date of the passage of this act, shall be deemed to be taxable under section 9 of this act, and shall be taxed, and shall have affixed thereto the stamps, marks, and brands required by this act or by regulations made pursuant to this act; and for the purpose of securing the affixing of the stamps, marks, and brands required by this act, the filled cheese shall be regarded as having been manufactured and sold or removed from the manufactory for consumption or use on or after the day this act takes effect; and such stock on hand at the time of the taking effect of this act may be stamped, marked, and branded under special regulations of the commissioner of internal revenue, approved by the secretary of the treasury; and the commissioner of internal revenue may authorize the holder of such packages to mark and brand the same and to affix thereto the proper tax-paid stamps.

Approved June 6, 1896.

During the consideration of this bill before the ways and means committee of the house there were some remarks made that are worthy of careful consideration. In the discussion of the subject of protective dairy laws, the question of class legislation is most certain to be used by the opposition, and during this investigation before the committee, Governor Hoard, of Wisconsin, spoke upon the subject as follows:

The point that this bill is class legislation is not well taken. It is simply an attempt to legislate against fraud. Filled cheese is an imitation. An imitation is a counterfeit, and a counterfeit is a fraud. We are not asking legislation against a legitimate industry, but against a deception. Filled cheese is conceived in fraud, executed in fraud, and depends for success and sale upon the deception of the honest consumer. To legislate against a fraud cannot fairly be called class legislation. All the dairy interests of the country are asking that congress shall show by appropriate legislation that it is on the side of honest and legitimate industry and against fraud and deception.

The question whether the coloring of butter and cheese was not a deception, was asked. Governor Hoard replied:

Butter is not colored to represent something else than butter, while oleomargarine or filled cheese is colored to represent something else than what it is. The coloring of honest butter or cheese is simply a question of taste in color to suit the consumer. In the other case, it is used to deceive the consumer.

Thos. F. Shields, member of the committee of the New York Produce and Mercantile Exchange, discussed the entire subject

of filled cheese in a most able manner. His remarks are here given:

I have the honor of representing the New York Produce Exchange, being one of a committee of three appointed by the president of our Exchange at the request of the members present at a meeting held a few days ago to discuss the bill which is now before you. At that meeting resolutions indorsing this bill were adopted and copies were ordered sent to each member of congress and the senate. The members of our Exchange who are engaged in the cheese trade take a very deep interest in this bill, for they feel, in the rapidly increasing manufacture of this substitute for cheese, which is really what this article is and should be called, that it is a question of but a short time before the legitimate industry will be entirely paralyzed, if not completely destroyed.

For many years American cheese was very popular in England and throughout Great Britain and exported from this country in large quantities; and with this continued good demand, together with a constantly growing home trade in all our large cities, prices were well maintained and the manufacturers, and through them the dairy farmers, received a fair return for their product. In our own city, within ten years, we had at one time over forty different exporters whose business was almost entirely confined to the purchasing and exporting of cheese to Great Britain, and many, if not all of these gentlemen, were sent over here by the large importing houses in Liverpool, London and other cities as their agents to buy and ship cheese to them. Unfortunately, within the past few years this has all changed. The filled cheese made its appearance in England, having been shipped over there by some enterprising western dealers as fine, full cream cheese. At first the English buyer was deceived. To be sure the filled cheese did not taste the same to him, nor have the keeping qualities of the genuine article, though for a time the deception was kept up. But gradually it dawned upon the buyer that large quantities of adulterated cheese were being exported from this country and sold to him as pure, full cream cheese; and soon it was discovered that all cheese imported from the United States was more or less suspected of being adulterated. The English dairy farmer was not slow to use this to his advantage, for he had long felt the competition of our fine, full cream cheese, and he was only too glad to be able to discredit our goods if possible. Through their efforts laws were passed in Great Britain compelling, under penalty of the forfeiture of the goods, that all cheese imported into the United Kingdom from the states must bear on the package in plain letters the words, "Product of the United States." American cheese was already discredited in England; there was no longer the demand that there had been; but to more completely discredit and prevent the sale of the genuine article on its merits those laws were passed, so that intending purchasers would be affected by the prejudice against our goods which existed in the minds of the English buyers.

The result has been a continued decrease in our export business. Where ten years ago we had forty exporters in our city ready at all times to buy our goods, to-day we have not over ten. While we exported in 1879 from New York city to England 2,775,800 boxes of cheese valued at over \$16,560,000, we have decreased every year, until this year our total exports

from the city of New York will not be over 600,000 boxes, valued at \$3,000,000, a falling off in the valuation of our exports of over \$13,000,000 in seventeen years. When you consider the percentage of this shrinkage it is astonishing—a falling off of over 80 per cent in seventeen years. There must be some good reason for this great decrease in our exports. I do not think I will be contradicted when I say that the explanation of this is the discredit which has been cast on our goods by unscrupulous dealers who have sent the substitute abroad and sold it to unsuspecting buyers as the pure full cream article. The low cost of producing these substitutes and the prospective large profits in selling them as the genuine article have furnished a strong temptation to conscienceless dealers, and thus the evil has grown. It can not be said that the English people are not using as many cheeses as formerly.

Like the English dairy farmer, Canada was not slow to help us along in our decreasing exports. The Canadian government passed laws prohibiting the manufacture for export of anything but full cream cheese. It appropriated large sums of money to foster and encourage the manufacture of cheese among the farmers. It sent into our state and hired at liberal salaries, American expert cheesemakers to teach the Canadian farmers and manufacturers how to reach our high standard of quality.

It went further than this and fitted out perfectly equipped cheese factories on large wagons and traveled from town to town, teaching the farmer how to care for his milk and how to manufacture the cheese, until now, from Montreal to the Detroit river, west, there are thousands of Canadian cheese factories running regularly, not to mention those around Quebec, Prince Edward Island and even Manitoba. Their efforts have borne good results, for while the exports of cheese from Montreal for the year 1879 were 525,000 boxes, valued at \$3,150,000, they have increased every year until this year they foot up the enormous total of 2,148,854 boxes valued at nearly \$13,000,000. What a tremendous increase in seventeen years; and what a lesson to us!

This cheese all goes to England and is all consumed by the English people. Thus we see that from our export of 2,775,829 boxes valued at over \$16,000,000, in 1879, we have dwindled down to a paltry 600,000 boxes this year, valued at \$3,000,000; while Canada, from an export of 525,000 boxes, valued at \$3,150,000 in 1879, has steadily increased every year until now it has shipped the year just past 2,148,854 boxes, valued at nearly \$13,000,000. Canada has increased every year and we have declined, until now there is so little business passing in this article for export that it is almost a waste of time to engage in it.

So far I have confined myself to the export part of the business; but there is also another part of it which has suffered from the inroads of the substitute. The people in the southern states have been, until the past few years, large consumers of our New York state full cream cheese. New York with her splendid fleet of coast steamers leaving our harbor every day, has been the national market for the southern buyer to send his orders to. Until the advent of filled cheese their orders did come here, and it was a large part of the business of the New York merchant to fill them; but this is now all changed. Filled cheese floods the markets of the south now to such an extent that, I am told, in many of the cities it is impossible to buy anything else, as the margin of profit is so much larger in these goods

that the dealers are tempted to force the trade on them although by doing so they restrict the sale of the pure goods. In saying the sale is restricted I come to the most important part of my remarks. I have no hesitancy in saying that the consumption of cheese is restricted and diminished by the sale of the substitute. No consumer ever goes to a store and asks for "a pound of filled cheese or a substitute for cheese." He asks for a pound of cheese; the substitute is handed to him. It has all the semblance of cheese in make and color, and he believes it is cheese. When he partakes of it, however, there is no taste of cheese to it. The fine flavor and delicate taste of the pure article is lacking. The result is it is distasteful to him and he condemns all cheese, and he buys no more. Thus the sale of an article which in itself is healthy and nutritious, is discouraged and restricted by the unscrupulous retailer. It may be claimed that these substitutes are sold for what they are. Perhaps they are sold for what they are to the wholesaler, and perhaps he so sells them to the retailer; but the retailer *never* sells them to the consumer for anything but full cream cheese; and here is where all the harm is done and where the real pure goods suffer. The dairy laws of New York state are very stringent and I am happy to say that they are rigidly enforced, and there is no filled or adulterated cheese sold in our market, but our merchants can visit the principal receiving depots of our city any day and see thousands of these filled cheeses unloaded from the cars, many of them branded "N. Y. State Full Cream Cheese," "Fine Cream Cheese," and other misleading brands, piled on the docks awaiting shipment to the south on the various steamers.

Now, Mr. Chairman and gentlemen of the committee, I know that your minds are engrossed with grave matters of state and this bill is but one of the many measures you have to consider; but I want to impress on you that this bill is of very serious moment to the merchants of our city and to the farmers throughout the whole country. The continuation of the manufacture of this substitute for cheese, with the sale of it for the genuine article, means the total destruction of the cheese industry in this country, eventually. I have shown you by figures which cannot be disputed how our export business has been almost ruined; how our southern business has been restricted; and I say to you, gentlemen, it is but the question of a very short time when the legitimate business will be entirely stamped out by this substitute. The bill which is now before you meets with the approval of the trade generally in our city. The members of our produce exchange endorse it heartily, and we ask that it meet with your favorable consideration and approval, and that it will soon become a law, so that this substitute may be sold for what it is, and the consumer be protected against the dishonest practices of the dealer. I thank you, gentlemen, for your patient hearing.

Hon. D. F. Wilber, member of the house of representatives, from New York, was in attendance at the last meeting of the National Dairy Union, and consulted with and received advice from the strong and experienced men of the organization, becoming fully informed of the needs and wishes of the dairy people upon this important subject. He deserves special

mention for the persistent and untiring efforts made by him in the interest of this measure.

The output of cheese in Iowa is not large, but no delegation in congress gave this bill more willing, effective and united support than the members from Iowa. Iowa had a representative on the ways and means committee in the person of Hon. J. P. Dolliver, who rendered valuable assistance when the measure was under consideration by that committee, and advocated the passage of the bill reported before the house in the following strong and comprehensive speech:

MR. DOLLIVER: Mr. Chairman, what has been said by the gentleman from Ohio [Mr. Grosvenor] in charge of the bill and by my colleague from Minnesota [Mr. Tawney] makes it unnecessary for me to occupy the attention of the committee in talking about the constitutionality of this measure or about the general character of the article of commerce commonly called "filled cheese." I think the committee understands exactly what problem we have to deal with. So far as I am personally concerned, I intend to speak with absolute candor of the phases of this matter that are involved in the debate. I have nothing to conceal from anybody on the filled-cheese question. I intend to support this bill for three different reasons, each one of them, in my judgment, good and sufficient; and the first reason is that the enactment of the bill will have a tendency to bring into the public treasury additional revenue.

Again, I support the bill because it offers an appropriate legal protection against the adulteration of the people's food. In the process of taxation it identifies a fraud and escorts a notorious swindle into the light of day. [Applause.] You have read the precept of Scripture which exhorts you to take no thought of what ye shall eat or what ye shall drink or wherewithal ye shall be clothed. That Scripture will need a new interpretation unless we can in some way manage to rescue the food and drink and clothing of the people of the United States from the hands of the counterfeiters. As the case now stands neither the clothes on our backs nor the food on our tables nor the common weapons for fighting thirst between meals have escaped suspicion. In this carnival of deceit the rich and the poor alike suffer.

Now, Mr. Chairman, I undertake to say that this world in which we live will not go on permanently under a system like that. It will not go on forever buying coffee grains delicately molded out of blue mud. [Laughter.] It will not go on buying tea that has been generously commingled with the dried leaves of the forest. [Laughter.] It will not go on drinking wine that has been manufactured in a cellar without the intervention of grapes, nor those other and more penetrating beverages that have entered into partnership with such a fatal assortment of explosive chemicals as to greatly facilitate the descent of our fellow citizens, as the old negro preacher expressed it, down the lubricated steps to the opaque profundity of damnation. [Great laughter.]

Oh, but says the gentleman from Tennessee, this is a matter for the states. Well, that is partly true. I admit that it is a matter for the states,

and right manfully the states are grappling with the question. But, Mr. Chairman, it is a matter for this house also; and wherever congress can get a legal hold on it, it comes within the jurisdiction of the representatives of the United States. I have great respect for the doctrine of state jurisdiction, though so far as the old-fashioned doctrine of state rights is concerned, the gentleman from Tennessee ought to know that thirty years ago that doctrine was so disabled by a collision with the United States of America that in 1890, on this very question, even the despised American cow was able to kick it into a cocked hat. [Laughter.] That was on the oleomargarine bill. Fortunately for the public health, every principle upon which this bill stands has been already justified at the bar of our highest court. There is not one of those principles that is any longer open to dispute. The business of manufacturing filled cheese is a fraud. I do not mean to say that the manufacturers are all guilty of fraud—

MR. McMILLIN: Then this bill is not for the purpose of taxation for revenue, but for the purpose of suppressing this business?

MR. DOLLIVER: I am now engaged in telling the gentleman the three things that this bill is for, and before I get through he and the house will understand them perfectly. I do not say that all the manufacturers in the present stage of the industry are guilty of fraud. I will not even go so far as to say that all the wholesalers habitually perpetrate a fraud. But I do say that the evidence is sufficient to show that the business itself is a fraud, and for one I am here for the purpose of looking a little to the rights of the man who orders "Iowa full cream cheese" and is furnished by the wholesale dealer with a spurious and inferior article. I am here looking to the rights of the citizens of this country who go into a store for the purpose of buying cheese and take home with them an objectionable admixture of skimmed milk and soap grease. [Laughter.]

I am speaking here for the victims of the American boarding-house system who eat cheese for the purpose of promoting the digestion of pie, and then have to take another pie in order to secure the digestion of the cheese. [Laughter.] The American dairymen understand this question thoroughly. The dairy commissioner of my own state, Mr. W. K. Boardman, has been especially vigilant in the investigation of this question, and I will read an extract from his letter received this day indorsing this bill and urging the friends of American agriculture to stand by it in exposing the commercial fraud known as "filled cheese":

You will be performing a great service to the people of Iowa by championing this bill when it is before the house for final action. I have this day received from the chemist of the experiment station of the Iowa Agricultural college a report of two analyses of samples of cheese which was being sold in this city. The cheese that these samples represent was purchased from Chicago parties by wholesalers here as full cream cheese. The sample of one of the cheeses was branded on the outside in red letters, "Wisconsin full cream." Both samples are pronounced filled cheese by the chemist. Following are the words used by the chemist for the analysis of the cheese marked "Wisconsin full cream": "From the above result I would say that this sample of cheese was made from milk having its contents of butter fat almost entirely removed and replaced by an animal fat of the nature of lard. It is, in other words, a filled cheese."

I give you this information in order to show no matter how closely this business is watched the dealers at Chicago will, through deception and other means, get their fraudulent goods before the people. With the provisions of the bill now before congress enacted into a law, the branding and stamping of such cheeses would at once make known its true character, and no jobber or retailer could then be deceived.

That is the fraud which has become bold and naked in the commerce of this country, which this bill, by the process of taxation, the only jurisdiction we have in the matter, aims to identify and thereby in some degree seeks to arrest.

So far as the licenses and penalties provided by the bill are concerned, nobody need be troubled about them. They are barely sufficient to induce the trade to keep clear of the fraud.

But somebody says here that the real object of this bill is not to raise revenue, nor even to identify a fraudulent article of commerce, but to protect the interests of the American dairy against a new business which injuriously competes with the old one. And that enables me to speak very briefly (for I have only six minutes left) of the final reason that leads me to give my hearty support to this bill.

The morbid researches of modern chemistry have been able to do some very curious things. They have substituted a cheap vegetable oil for the old-fashioned pork fat, and put it upon the American market under the label of "prime steam lard," and at the same time they have taken the animal fats out of milk and substituted neutral animal oils and made two products, one of which for the sake of its color they call "butter," and the other for the sake of its shape they call "cheese." [Laughter.] Now, butter has had friends enough in the past to take care of it and protect it by law with more or less success. The law has been a little more slow in coming to the protection of cheese—probably because many varieties of cheese have been thought able to take care of themselves. [Laughter.] It would seem, for example, that limburger cheese, now safely domesticated in the district from which my friend Sauerhering comes, is endowed by nature with means of defense that require very little assistance from an act of congress. [Laughter.]

It is not necessary for me to deny on this floor that the possible effect of this bill will be to give an advantage to American agriculture. The bill is not objectionable to me on that account. On the contrary, every profound student of human affairs teaches us that agriculture is the basis of civilization itself, and that no possible prosperity can exist in this world under conditions that do not yield to the cultivation of the soil a fair return. So that if a new business, begotten in the laboratory of the chemist, by false pretenses, threatens to narrow the opportunities of the American farm by occupying its market place at home or by destroying its reputation abroad, as my friend from Minnesota indicated, and the law comes in and levies a tax on that new business, it does not alarm me that the tax may operate in some measure, at least, to promote the welfare of the most ancient and honorable occupation of the human race. [Applause.]

One-half the American people live on the farm, and nearly all the rest of them that are worth mentioning were born there. [Laughter.] The general welfare, to provide for which our institutions were established, requires that the food-producing millions should be secure in their pursuits, nor should any adroit imposition, however backed by money, be allowed to take from the farm any portion of its legitimate earnings. "Oh, but," says one, "this business which you are condemning and complaining of has simply taken the butter fat out of milk and substituted lard, therefore this is a fight between the cow and the hog." Now, I happen to represent a state that is first in the production of swine, and first in the production of

Improved milk kine, and I feel authorized for one to say that the American hog does not ask my friend from Tennessee, who has already, for the sake of cotton-seed oil, helped to drive him out of the lard business—does not ask him to repair the injustice by trying to stick his nose into the butter and cheese business.

MR. McMILLIN: We ask you to keep yours out of it. [Laughter.]

MR. DOLLIVER: I was making no reference to my friend's nose; but the law, for the protection of the public, proposes to put its nose in because the integrity of the business concerns the American people. I say, give the American cow a fair chance. She has been the faithful servant of man. She landed with our ancestors at Plymouth Rock [laughter]; and, tied behind the old, weather-beaten, emigrant wagon, she has marched, with the household goods of the pioneers who have taken possession of this continent, from ocean to ocean. [Applause.] She has increased and multiplied and replenished the earth, until to-day the industries which she has made possible contribute annually to the wealth of the world more money than the great combinations of modern capital—more than iron and steel, more than lumber and coal, more than cotton and wheat, more than all the looms of New England, more than all the mysterious riches of gold and silver. Yet there are men in this house whom I have heard to-day sneering at this bill who spend most of their time trying to get protection for some insignificant local enterprise, or "talking through their hats" in the silver debate. [Laughter.] I say, give the American cow a fair chance! For myself, I am in favor, Mr. Brumm, of her monopoly—a monopoly that God gave her—in the production of butter and cheese. [Laughter.]

MR. BRUMM: Then you ought to encourage the production of her cheese rather than cut it down.

MR. DOLLIVER: That is one monopoly that I am in favor of. And if every man in this house, who in the days of his boyhood, got up at daylight to feed the cows and stayed up after dark in order to milk them; if every man who has churned actual cream with a reliable upright churn, and has watched with a boy's enthusiasm the old-fashioned process of making cheese in the days of its honor and repute, will stand by this bill, we will drive from the American barnyard the horde of counterfeiters and cheats at common-law and keep them out "till the cows come home." [Long-continued applause.]

In the senate Hon. John H. Gear made a strong speech in favor of the bill, which is here given:

MR. President, I am certain in my own mind that the article of filled cheese is not so nutritive and healthful as the genuine article of dairy cheese. It is a serious damage to the people of the state which I in part represent. There are a million people in Iowa engaged in farming. They own in round numbers 1,500,000 dairy cows. The value of a large amount of cheese manufactured in that state is seriously endangered by the permission to ship into it from other states the article called filled cheese.

The senator from Ohio [Mr. Sherman] has stated that he does not understand that filled cheese is falsely branded by the persons who manufacture it. I beg to differ with him. It is in evidence, given to me by the dairy commissioner of my state, that filled cheese is shipped into Iowa marked

"First-class Iowa cheese," "Full cream cheese," "Dairy cheese," and so on, and as such it is sold and has been sold in numerous and numberless instances to the people whom I in part represent.

MR. GALLINGER: And it is going on all over the country.

MR. GEAR: And, as the senator from New Hampshire says, it is going on all over the country. Yes; that is so.

Now, I hold myself that when filled cheese comes in conflict with and is sold for the genuine article, as oleomargarine was sold for pure butter, it is wrong. The people who make it have a perfect right to manufacture it if they wish to, but they should be compelled not only by state but by national law to brand it exactly what it is.

The farmers in my state suffer each and every year to the extent of nearly \$3,000,000 by the adulteration of lard by the introduction into the manufacture of lard of cotton-seed oil produced in the south. I do not doubt that lard manufactured or adulterated in that way is healthful. I know it is. I know that cotton-seed oil properly prepared is a healthful product; but the fraud comes in in marking it as first-class leaf lard and pure family lard.

It is an evil which my people will not stand if they can prevent it. The result of the manufacture of filled cheese on the farmers of this country is very damaging. A few years ago we exported an immense amount of cheese to Europe, especially to England. Let me call the attention of the senate to a table prepared by a friend in the other house regarding the exportation of dairy cheese. Early in the fifties, sixties, and seventies the United States constantly increased the amount of her dairy products and their exportation. Canada at that time, our neighbor on the north, had but a small export trade in this article. From 1881 to 1885 we exported each year on the average 118,831,985 pounds, while Canada exported 61,502,949 pounds. The export trade from the United States has gone on declining each and every year until 1895, when we exported only 60,448,421 pounds, while Canada exported 146,094,750 pounds. That, it seems to me, shows that it is a damage to the American farmer, and if we can prevent it by legislation we certainly ought to do so, in my judgment.

The result has been that we are falling off constantly in our exports, and the reason why Canada gains is that she prohibits by enactment of her parliament the manufacture of filled cheese or any product of that kind. I think we owe it to the farmers of this country, who are getting so little legislation in these days, and who have got so little in the past, that we should protect them by all means that we can, and should pass the pending bill without amendment.

It is simply, in my opinion, a bill to regulate this industry, not so much for revenue, for revenue is an incident, and I am frank to say that we take advantage of that clause of the constitution which gives us the police regulation of these matters to impose a small revenue, so that congress can control it. I think we should exercise that power in every way we can to protect the farmers. It makes a vast difference to the people of this country. The oleomargarine act has been a great measure for Iowa and a great measure for this country. The value of dairy products in my state one year with another amounts to nearly as much as the silver product of this country, and in one year exceeded the value of silver.

Congress has no right, in my judgment, to strike a blow at the farmers of Iowa and of this country by the non-passage of an act of this kind. The sale of filled cheese has been prohibited by stringent regulations in Iowa, and you can not now buy a pound of filled cheese in that state, notwithstanding it has been shipped into the state in the past and came in competition with our own dairy products, being branded as "Cream cheese" and "Iowa dairy cheese."

REGULATIONS ISSUED BY THE INTERNAL REVENUE DEPARTMENT UPON THE SUBJECT OF FILLED CHEESE.

Regulations for the enforcement of the act imposing a tax on filled cheese, and regulating its manufacture, sale, importation, and exportation, were issued prior to September 4, 1896, the day that the act became a law. These regulations were similar to those made for the enforcement of the oleomargarine law, and such as were necessary to set the law in operation.

The first attack upon the law was made by S. R. Udell & Co., of Chicago, who applied to the department for a decision upon the question as to whether the law permitted the manufacture of filled cheese for export without paying the internal revenue taxes. Section 9, of article 1, of the Constitution of the United States, provides that, "no tax or duty shall be laid on exports from any state." And it was claimed that the provisions of the new filled cheese law were in conflict with the Constitution and could not therefore apply to filled cheese manufactured for export. Acting Commissioner G. W. Wilson, answered attorneys of S. R. Udell & Co., as follows:

Your letter of the 24th inst., has been received concerning your clients, the firm of S. R. Udell & Co., of Chicago, who desire that regulations may be made under which they can export filled cheese without unnecessary embarrassment.

You refer to the provision of section 9, article 1, of the constitution of the United States, that "no tax or duty shall be laid on articles exported from any state," and suggest that, in the light of this provision, it must be assumed that congress did not intend by the said act to attempt to levy any tax on articles so exported.

This is true as to articles actually exported; but a general tax laid on an article in the factory and before its removal therefrom (as in the case of filled cheese by sections 9 and 10 of the act of June 6, 1896) and not levied on the article in the course of exportation, nor because of its intended exportation, is not within the constitutional prohibition. A statement that the article is about to be exported cannot warrant the collecting officer in permitting its removal without the payment of the tax; and he must, therefore, collect the tax and affix the required stamps to each package upon its removal from the factory, leaving it for the exporter, after the landing of the goods in a foreign country, to furnish proof of

such landing and make claim for return of the tax paid thereon, except where there is a special provision (such as that in section 16 of the act of August 2, 1886, with reference to oleomargarine removed for export) for the acceptance of any export bond as to the packages intended for exportation "without payment of tax or affixing stamps thereto." There is no such provision with reference to filled cheese intended for export; and in view of the general provisions of sections 5 and 9 of the act, every manufacturer of filled cheese, even though he manufactures it solely for export, must be required to give bond and pay tax upon all the filled cheese manufactured by him and sold or removed for sale or consumption. Where any such filled cheese is actually exported by him and landed in a foreign country and evidence thereof is in his possession, he is, of course, entitled to submit the claim hereinbefore mentioned, supported by this evidence.

The day before the filled cheese law went into effect, or on September 3d, a more direct decision was received. It held that the filled cheese law does not come under the constitutional inhibition and that claims for rebate, as mentioned in the letter given above, would be unwarranted. Following is the second letter from Mr. Wilson:

With reference to the imposition of tax on filled cheese intended to be, or actually, exported, and particularly to the constitutional provision that "no tax or duty shall be laid on articles exported from any state," I have to say that this office has given the law and suggestions you urge careful consideration.

The language of the supreme court * * * seems to us to admit but one construction. The court says:

The prohibition * * * has reference to the imposition of duties on goods by reason or because of their exportation, or whilst they are being exported. That would be laying a tax or duty on exports within the meaning of the constitution. But a general tax, laid on all property alike, and not levied on goods in course of exportation, nor because of their intended exportation, is not within the constitutional prohibition.

If the supreme court be right in this holding, the filled cheese law does not come under the constitutional inhibition. Whether the manufactured product is afterwards exported or not, it is none the less taxable.

From the language of the case referred to it would seem that it is within the power of the federal government to tax in a mass any article manufactured within its borders, and it is only where special legislation authorizes exports to be exempt from tax that they can be so exempt.

The ruling heretofore suggested that, under the law as it stands, tax is required to be paid on all filled cheese manufactured in the United States must be adhered to.

And even the regulations suggested in my former letter as to claims for rebate of any tax paid would be unwarranted.

This law in regard to exporting filled cheese is much more complete and far superior to the law governing oleomargarine, which permits that article to be withdrawn and tax refunded when exported.

FANCY CHEESE.

There are several forms of fancy cheese offered for sale upon our domestic markets under various names and brands, some of which are made by mixing full cream cheese with one or more of various articles, such as olive oil, cotton seed oil, melted butter, the mixture being flavored with a little wine or brandy. The dairy division of the bureau of animal industry was asked if this class of cheese could be manufactured and sold without complying with the law regulating the manufacture and sale of filled cheese. This division in turn submitted the question to the internal revenue department. The correspondence, together with a circular letter issued immediately upon receipt of the decision by this department and forwarded to all wholesale dealers and jobbers of cheese in Iowa, are as follows:

CORRESPONDENCE DEFINING "FILLED CHEESE"

UNITED STATES DEPARTMENT OF AGRICULTURE.
BUREAU OF ANIMAL INDUSTRY.
WASHINGTON, D. C., September 1, 1896.

Correspondents of the dairy division of this bureau having inquired as to the effect of the recent congressional legislation known as "the filled cheese law" upon the comparatively new industry of putting up good, full cream, factory cheese for retail in various fancy forms and small packages the subject was laid before the commissioner of internal revenue of the treasury department, that official being charged with the execution of the new law and with making regulations for its enforcement.

In reply the following letter has been received, and as the decision thus made is of interest to numerous persons, it is printed herewith for the information of all concerned.

D. E. SALMON,
Chief of Bureau of Animal Industry.

Approved:
CHAS. W. DABNEY, JR.,
Acting Secretary.

TREASURY DEPARTMENT.
OFFICE OF THE COMMISSIONER OF INTERNAL REVENUE.
WASHINGTON, D. C., August 25, 1896.

SIR—Your letter of the 10th instant has been received inquiring as to any ruling that has been made by the treasury department with reference to the effect of the "filled cheese" law (the act approved June 5, 1896) on the manufacture of several fancy forms of cheese upon our domestic markets.

You describe this cheese as of "high grade and quality, put up in small packages of paper, wood or porcelain, and sold at high prices," under such names as "Club House Cheese," "Meadow Sweet Cheese," "American Cheese Food," etc., and you say, "While the best New York and Wisconsin state factory cheese is the basis and forms the bulk of these articles, they are variously prepared and contain olive oil, cotton-seed oil, butter fat and

why syrup, always added in very small quantities, and solely for the purpose of improving the consistency of the preparation and its keeping quality. In some cases a little wine or brandy is added to increase the flavor."

There has not been up to this date, a case presented from any collection district with samples of this fancy cheese for examination. But it appears from an examination of the first and second sections of the act of June 5, 1896, imposing tax on "filled cheese," and special tax on manufacturers thereof and dealers therein, that the fancy cheese which you describe must be held to be "filled cheese" within the meaning of this act.

The language is such as apparently leaves no room for any other construction, the definition of cheese in the first section precluding every "food product" from being regarded as cheese except that "which is made from milk or cream without the addition of butter, or any animal, vegetable, or other oils or fats foreign to such milk or cream;" and the definition of "filled cheese" in the second section, requiring that every substance or compound in the form of cheese shall be regarded as "filled cheese" when it is "made of milk or skimmed milk, with the admixture of butter, animal oils or fats, vegetable or any other oils, or compounds foreign to such milk."

To hold that cheese, as it is defined by the first section of the act, may be broken up and manipulated and mixed with olive oil, or cotton-seed oil, or butter fat and why syrup, even in small quantities, and still be regarded as cheese and not as "filled cheese," would, seems to me to be a construction for which it would be difficult, if not absolutely impossible, to find warrant in the plain terms of the statute, and which would inevitably lead to operations tending to the defeat of the "filled cheese" law.

Respectfully yours,

G. W. WILSON,
Acting Commissioner.

D. E. SALMON, Esq.,
*Chief Bureau of Animal Industry,
Department of Agriculture, Washington, D. C.*

DES MOINES, September 19, 1896.

To Wholesalers and Jobbers of Cheese:

The bureau of animal industry of the United States department of agriculture has been asked to give information pertaining to the manufacture of cheese, with a view to pointing out distinctly what allowances are made for the production of cheese not wholly made from milk or cream without the addition of butter, or any animal, vegetable, or other oils or fats foreign to such milk or cream. As a large number of these inquiries have been received the department of agriculture requested a ruling by the treasury department, bearing upon this subject. This ruling is of great importance to all who are directly interested in the cheese traffic. It will materially affect the manufacture and sale of certain fancy brands of cheese not generally recognized as "filled cheese" as the law will compel all such to be branded "filled cheese."

In addition to the United States government law, in Iowa such cheese must be branded "substitute for cheese" and sold as such, and in no event can it have a yellow or any shade of yellow color. Wholesale and retail dealers should be on their guard, for samples of fancy branded cheese have

recently been subjected to chemical analysis and found to be "filled cheese" the sale of which is now prohibited or regulated by both state and national law. They should carefully note the points brought out in the treasury department ruling, a copy of which is herewith given.

Very respectfully,

W. K. BOARDMAN,
State Dairy Commissioner.

By an examination of the internal revenue records, of both districts, we find that no special tax has been issued for the manufacture, sale (wholesale or retail) of filled cheese in Iowa. By request, through the Hon. John H. Gear, United States senator from Iowa, we received the following information relating to the number and location of all special tax issued in the United States under the filled cheese law:

SM—In reply to the inquiry contained in your letter of the 15th inst., I have the honor to inform you that the following number of persons and firms have been reported to this office as having qualified as manufacturers of, and dealers in, filled cheese, for the fiscal year ending June 30, 1897: Manufacturers 2, located in the first district of Illinois; wholesale dealers 18; located in the first district of Illinois 1; district of Louisiana 15, and sixth district of Missouri 2. Only one retail dealer located in the first district of Illinois has thus far been reported.

Respectfully yours,

G. W. WILSON,
Acting Commissioner of Internal Revenue.

It will be seen from this that the law has nearly put an end to this disreputable business, but the profits from the illegitimate sale of this class of goods are so much in excess of what can be made by the handling of honest cheese, that some scheme is likely to be devised, which will deceive the public and enable them to work their goods off on the unsuspecting consumer, and it will be well for all parties interested in the dairy industry to give some attention to the operations of this new law. It will be remembered that those interested in the production and sale of butter congratulated themselves, as well they should, upon the passage of the original oleomargarine law in 1886, but unfortunately gave the subject but little attention, relying upon the law for protection, but finally they realized that the oleomargarine people, by the rapid increase in the manufacture of imitation butter and in spite of the national law, were absolutely destroying and usurping the markets for pure and honest butter, and ruining the dairy interests of this country. This is a lesson which should make it unnecessary for those interested in the manufacture of cheese to pass through a similar experience. "Eternal vigilance is the price of liberty."

CONDITIONS OF THE BUTTER INDUSTRY.

The following is a statement of the number of net pounds of butter shipped to points outside of the state as reported for corresponding periods of twelve months each, ending on the 30th day of September of each year:

1890	71,255,796
1891	68,490,716
1892	60,112,931
1893	54,672,902
1894	54,509,417
1895	66,497,108
1896	80,032,916

The year 1896 shows an increase over the previous year of 13,535,808 pounds, which is the largest increase for any one year of which there is any record in the history of the state. The large exportation of butter made in 1890 has again been reached and passed, besides supplying the increased home demand made by an increase of about 200,000 consumers. This large increase is due, we think, to the favorable conditions existing during the year; the winter of 1895 and 1896 was mild, feed plenty and cheap, the spring early, and the summer months, July, August and September, were favored with sufficient rainfall. Pasturage came on in April, and full grass butter was made early in May; there was but little interruption of the fine pasturage until the frost set in. The increase in the state's shipments for this year was 20.4 per cent, and from figures in the tables in this report we find that there was an average increase in quantity of milk per cow of about 20 per cent as compared with the previous year. These tables do not show any material change in the number of creameries or number of cows furnishing them with milk, and while the gradual improvement in the grade of milk cows may have something to do in increasing the production of butter in the state, we conclude that most of this increase is due to the favorable conditions mentioned. The same condition with which Iowa was

favored prevailed to a more or less extent in the entire north-west, except in the arid regions of the Dakotas, Nebraska and Kansas, and a corresponding increase in the output of butter in this large territory was the result. In order to get an intelligent idea of the amount of this increase we obtained the tonnage of butter as reported by the Western Weighing association of Chicago, for the years ending November 1, 1895 and 1896. This tonnage includes all shipments that pass through or originated in Chicago, and is made up almost entirely from butter shipments originating in Iowa, Wisconsin, Illinois, Minnesota, North and South Dakota, Nebraska, and a part of Kansas and Missouri, and when reduced to net pounds it is as follows:

TABLE No. VII.

Showing net pounds of butter forwarded by railroads, east from Chicago by months, and for the years ending November 1, 1895 and 1896, and increase for 1896.

MONTHS.	1895.	1896.	INCREASE.
For year.....	139,815,280	168,903,680	29,088,400
November.....	8,106,030	8,880,320	774,290
December.....	8,741,040	9,205,130	464,090
January.....	11,111,520	15,969,840	4,858,320
February.....	8,661,380	13,714,650	5,053,270
March.....	8,697,360	16,850,430	8,153,070
April.....	7,912,008	16,454,480	8,542,472
May.....	13,822,240	17,650,090	3,827,850
June.....	17,359,440	19,919,040	2,559,600
July.....	15,831,720	20,956,560	5,124,840
August.....	15,560,060	19,741,680	4,181,620
September.....	16,616,800	13,944,630	3,427,350
October.....	13,251,680	15,257,530	1,965,850
Total.....	139,815,280	168,903,680	29,088,400

In the year 1895, there passed through Chicago for the eastern and export markets, nearly 140,000,000 pounds of butter, and in 1896, about 170,000,000 pounds, making an increase from about the same territory of nearly 30,000,000 pounds, or 21 per cent. The increase by months ranged from 500,000 pounds in December to 4,500,000 in August. The next highest increase was 4,347,840 pounds in May.

The effect of an abundance of cheap feed and mild weather for winter dairying is shown by an average increase of 2,000,000 of pounds for the months of January, February and March. The bountiful pastures and fine fall feed gave an increase ranging from 2,000,000 to 4,500,000 pounds for each of the summer and fall months.

NEW YORK BUTTER MARKET.

TABLE No. VIII

The following table gives the average monthly price of western fancy creamery butter for each month during the last six years, in the New York market, and average price for each month for the six years, and the average price for the entire period.

MONTH.	Twelve months ending Nov. 1, 1891.		Twelve months ending Nov. 1, 1892.		Twelve months ending Nov. 1, 1893.		Twelve months ending Nov. 1, 1894.		Twelve months ending Nov. 1, 1895.		Twelve months ending Nov. 1, 1896.		Average price for years.
	1891.	1892.	1892.	1893.	1893.	1894.	1894.	1895.	1895.	1896.	1896.		
November.....	3740	3590	3160	3190	3710	3530	3530	3770	3710	3530	3530	3770	3710
December.....	3912	3687	3112	3240	3440	3500	3500	3490	3440	3500	3500	3490	3490
January.....	2812	3075	3387	3561	3819	3598	3598	3570	3598	3598	3598	3570	3570
February.....	4862	3275	3075	3100	3294	3288	3288	3288	3288	3288	3288	3288	3288
March.....	3730	3985	3625	3290	3070	3185	3185	3185	3185	3185	3185	3185	3185
April.....	3094	3669	3112	3287	3000	3050	3050	3050	3050	3050	3050	3050	3050
May.....	3280	3125	3435	3465	3193	3178	3178	3178	3178	3178	3178	3178	3178
June.....	1893	1944	3111	3131	3174	3159	3159	3159	3159	3159	3159	3159	3159
July.....	1500	3210	3160	1850	1470	1505	1505	1505	1505	1505	1505	1505	1505
August.....	3390	3210	3190	3263	3189	3181	3181	3181	3181	3181	3181	3181	3181
September.....	3478	3525	3750	3540	3185	3190	3190	3190	3190	3190	3190	3190	3190
October.....	3000	3587	3341	3510	3234	3180	3180	3180	3180	3180	3180	3180	3180
Average value per pound for each year.....	3530	3594	3276	3330	3190	3182	3182	3182	3182	3182	3182	3182	3182
Average value of butter per pound for the period of six years.....													3378

The average price for this year was 18.82 cents, a decrease of 3.08 cents per pound as compared with last year, and 5.03 cents per pound lower than the average for the six years covered by the above table. During the month of July, of both years, prices reached the lowest point and were 17.70 cents last year, and 15.05 cents this year, a decrease of 2.65 cents per pound; 26.70 cents was the highest average price for any month last year, which was in March, and the highest this year was 25 cents in December.

The large increase in the supply, due mostly to the favorable conditions existing during the year, was the principal cause of the low prices. The decline in values during the hard times through which this country is passing is affecting the butter trade as well as other branches of business. The demands of our home market have lessened because of the inability of the industrial classes to buy, but the low prices prevailing has been a stimulus to the retail trade and more butter has been consumed by those having the means to buy than would have been had the prices of former years been asked. The extreme prices realized for fine creamery butter during the winter months in the past is not likely to be repeated in the future, owing to the fact that the growth of the dairy industry and the improvements in the progress of manufacture and the

advancements in the training and education of the butter-maker, have materially increased the supply of the higher grades of butter, and the number of persons who can afford to pay high prices for this class of goods has greatly lessened—in other words, the candle has been burning at both ends. There is, and always will be, a class of people in this country who use none but the best of butter for all purposes, and whenever the supply is limited and not equal to the demand higher prices will be paid, but we believe the time has now come when the quantity of first class butter is so large that the high prices realized in 1893, and the years prior thereto, need not be expected.

No doubt the low price of dairy products during the past year has caused the thoughtful dairyman to give the subject much study. The prices of all kinds of farm produce have been ruinously low and most of the bountiful crops of 1895 and 1896 still remain unsold in the cribs and granaries throughout our state. The supply of feeding cattle is short, and sickness and disease have killed off a large share of the hogs. Under these circumstances it is not surprising that but little complaint of the low prices of butter and cheese has been heard. This great industry has brought into Iowa larger profits in cash during 1896 than any other department of the farm. The cow, the queen of the farm, has again been the mainstay of the farmer; then our dairy districts are the most prosperous, bank deposits are larger, money circulates more freely, and the people are feeling the hard times less than in other localities of the state. The average price paid for milk and received for butter and cheese, has been the lowest ever known for any year in the history of Iowa since creameries have been established, but the amount realized per bushel from the grain fed to milch cows has been much larger than could have been received for the grain disposed of in any other way, and without question the dairy farmers, as a class, have fared better during the year 1896 than those engaged in other agricultural pursuits.

We do not believe that the dairyman has any reason to feel discouraged when the question of price is thoroughly understood. The large proportionate make of butter of the past year is not likely to be duplicated for some time to come.

The combination of circumstances, the large rainfall, fine pastures, and abundance of feed lasting until late into the fall, and the mild open winter are not likely to frequently occur all

in the same year. If the welfare and protection of the industry is well guarded by those who are appointed by the states and national government to watch its interests, there is no reason for the extreme low prices of the past year to continue permanently. The enforcement of anti-oleomargarine laws have decreased the output of that product during the last two fiscal years about 20,000,000 pounds, and the export of butter to Great Britain has reached in the past two years about the same amount,—20,000,000 pounds,—three-fourths of which which was shipped during the last twelve months. The export of butter to Great Britain for the four years previous to June 30, 1895, averaged about 5,000,000 pounds per year; the expansion of the market from these two sources has been of great assistance in taking care of the large increased production of the past two years. We have endeavored to show that the over-production of the past year was due to a combination of circumstances and that no alarm need be sounded on account of it. But there is another influence at work which should warn us that the permanent enlargement of our butter market is a future necessity; we refer to the growth and expansion of the dairy industry. Other states have been watching the progress made by Iowa in this direction and are now giving more attention to the development of this branch of agriculture. This is particularly true of Nebraska and Kansas, and our rival on the north, Minnesota, is making rapid strides to overtake Iowa, while North and South Dakota are also being developed along this line. The western farmer has discovered that the cost of transportation is making grain farming unprofitable, and that it is necessary for him to ship the products of his farm to market in a more concentrated form. Corn converted into butter is as profitable a way to market it as can be found. Not only has this fact impressed itself upon the farmer, but the railroads of the west now realize the absolute necessity of this change in the manner of farming, and are becoming interested in bringing about a better condition of affairs. The Chicago, Rock Island & Pacific railway is making a special effort to encourage the industry in Kansas. Mr. J. Meyer, traveling freight agent for this railway in Kansas, organized a party in May last, consisting of Hon. F. D. Coburn, secretary of the state board of agriculture of Kansas; H. M. Brandt and J. K. Forney, president and secretary of the Kansas State Dairy Association, and made a tour of inspection of a part of the dairy districts of Iowa and

Minnesota. By an invitation from Mr. I. Mitchell, dairy agent for the Burlington, Cedar Rapids & Northern railway, I accompanied the party from the time it left Cedar Rapids, Iowa, until its return. Mr. Mitchell had charge of the delegation from that point, covering a distance of 2,000 miles. Mr. E. F. Farmer, traveling freight agent for the Minneapolis & St. Louis railway, over which line we traveled in Minnesota, was one of the party. The dairy press was represented by Mr. Fred. L. Kimball, of the Creamery Journal.

The object on the part of the railway company in this trip was to show the representatives of Kansas the possibilities of dairying and the practical operation of the creamery system in the dairy sections of this country. The Kansas members returned well satisfied with the tour and full of new ideas and enthusiasm for the dairy industry. They are taking hold of the subject in their state and we may expect Kansas to make notable progress in this direction in the near future.

The railways in Iowa having in the past neglected the butter traffic are now realizing its importance and are making efforts to establish creameries along their lines. An official of one of the largest systems in the state, while consulting with us in regard to the matter, said that "Our road has attended to the dairy interests the same as an old lady attends to her knitting—that is, when she has nothing else to do; but in the near future it shall have all the attention and assistance that is necessary to its development along the line of our entire system in the state." There is a large territory in southern and western Iowa that is reached by these roads. How much the developing of new territory is going to affect the supply of butter no one can tell. The population of the country is continually on the increase, but the increase in the number of dairy cows to each 1,000 of population has not varied to a great extent in the past fifty years. There were 275 cows for each 1,000 inhabitant in 1850, and 264 in 1890. The number fell to 232 in 1870, and has not yet reached the maximum number of the earlier times; but while the cow has not been increasing in number per capita, her production of butter has increased nearly 50 per cent in the past forty years. From the United States census we find that the total production of butter on farms (there were no creameries to speak of before 1880) in 1849 was 13.51 pounds per capita of population; in 1859, 14.63 pounds per capita; in 1869, 13.33 pounds; in 1879, 15.50 pounds on the farm, and .58 pounds

by the creameries for each inhabitant, and in 1889, the year upon which the last national census is based, production on the farm averaged 16.33 pounds per capita, and that of the creameries 2.91 pounds, making 19.24 pounds per unit of population. There can be no doubt but the improvements that have been going on during the present decade in our dairy herds, by carefully testing the individual members and through select breeding, have, along with perfecting the separator system of conducting creameries, increased very materially the production of butter per capita. The most important question now confronting the dairy business is how to expand the markets for butter so as to take care of the increase and realize a reasonable profit from its production. We can no longer depend wholly upon our home market to consume our entire output. An improvement in quality undoubtedly will increase the amount used per capita in our eastern markets; a return of prosperity, when the industrious and wage-earning classes can again have steady employment, will greatly improve the demand and make prices better, but the most direct assistance in expanding the markets in this country will come with the suppression of the manufacture and sale of oleomargarine. The production of oleomargarine during the last fiscal year amounted to 50,000,000 pounds, every pound of which took the place of a pound of honest butter. The largest part of this oleomargarine was consumed in states having large cities and manufacturing towns. Illinois, Ohio, Pennsylvania, Michigan, Rhode Island, New Jersey, Kentucky, Indiana and Missouri had during the fiscal year ending June 30, 1896, 3,338 retail oleomargarine dealers, out of a total for the United States of 4,380. From these figures it is reasonable to assume that 75 per cent of all the oleomargarine manufactured was consumed in these states. Ohio, Pennsylvania, New Jersey and Missouri have sufficient law, if enforced, to practically redeem the markets in these states for the benefit of honest butter, and successful warfare in the other states enumerated, along with the enforcement of the present laws, would increase the demand for butter over 40,000,000 pounds. The National Dairy Union is organized to assist in all such matters and should have the hearty co-operation of the dairy interests of Iowa, for our state supplies from 30 to 40 per cent of all the butter shipped beyond the state lines in which it is made, but with all the improvements that these changes can make in our home market, there will still be a surplus of butter

seeking a market in other countries. This fact leads us to the consideration of this most important subject—our export trade:

TABLE No. IX.

EXPORTS OF BUTTER FROM THE UNITED STATES.

The following are the exports of butter during six fiscal years, with destination.

DESTINATION.	BUTTER IN POUNDS.					
	1891.	1892.	1893.	1894.	1895.	1896.
Great Britain and Ireland	4,903,190	5,915,193	5,999,549	5,403,794	595,815	11,246,611
Continent of Europe	5,515,209	1,434,350	115,978	1,371,565	431,470	3,558,568
British North America	744,867	2,251,917	454,519	744,021	309,083	573,341
West Indies and South America	8,469,638	4,781,353	4,092,265	3,713,638	3,428,036	3,596,124
Other countries	350,098	295,830	577,973	327,073	490,400	625,434
Total pounds	15,187,114	15,047,343	14,930,107	11,812,097	5,598,512	19,574,183

EXPORT MARKETS.

From table No. IX it will be seen that our exports of butter, for the year ending June 30, 1896, was the largest during the present decade, and that the increase was in the amount exported to Great Britain and the continent of Europe. The countries of Europe, not including England, which are our largest customers, are Denmark, which took about 2,000,000 pounds; Germany, 1,000,000 pounds, and Sweden and Norway, 500,000 pounds. Our exports since June 30, of this year, to Great Britain and the continent have been larger than during the same months last year, with prospects of the export for the present fiscal year ending June 30, 1897, being the largest on record. Great Britain has taken, as shown by the table, an average of about 5,000,000 pounds per year from 1891 to 1894, inclusive, when the amount dropped in 1895 to less than 1,000,000 pounds. This large decrease was caused by an unusually large export from Great Britain's colonies, the increase coming mostly from Australia, where the fall and winter of 1894 and 1895 were very favorable.

The rapid growth of the creamery system in that country has made the production of butter one of the principal occupations of her agricultural people. The favorable conditions were reversed last year. Australia was visited by a severe and protracted drouth during her most productive months, and her butter exports to England fell off some 12,000,000 pounds, and the United States increased her exports to England

about a corresponding amount. By reference to the table it will be noticed that the exports to the balance of the countries have been very uniform for the last four years, amounting to between 4,000,000 and 5,000,000 pounds; the two years preceding (1891 and 1892), they were between 6,000,000 and 7,000,000 pounds. Great Britain is the largest and most important foreign market for our surplus butter. The consumption of her large population far exceeds her home production. It is stated that her people consume 500,000,000 pounds of butter per year, and her home production is only about 200,000,000, leaving a balance of 300,000,000 pounds to be supplied by other countries. Her colonies, Australia, Canada and New Zealand, furnish about 50,000,000 pounds per annum; Denmark is the largest contributor and ships about 125,000,000 pounds each year; France, 50,000,000 pounds; Germany and Holland, 30,000,000 pounds; Sweden about the same, and the balance of the countries, including the United States, about 30,000,000 pounds. Of this last amount, the United States has furnished an average of 5,000,000 pounds per year, except the last fiscal year, when the conditions mentioned before enabled this country to more than double her exports of butter to England. The United States is a very small factor in supplying this enormous market, and there can be no doubt that the time has come for the dairy interests of this country to take some steps to secure a much larger share of this trade. England is the common dumping ground for the surplus butter of all countries, but her people have definite notions and tastes which must be consulted and catered to if any material headway is made by this country in supplying her wants in dairy products. Our competitors in this great market have been carefully studying for some time its requirements, and by both private and governmental efforts developing the dairy resources of their countries so as to be able to supply the people of England with the particular kind of goods they demand.

DENMARK, NORWAY AND SWEDEN.

Danish butter ranks first in both quality and quantity; the French sells as high, because of the nearness to London it can be placed upon the market a few hours after churning, and is sold to the very fancy trade. Denmark is a small country, her pastures are rich, well supplied with water, her people are very intelligent and thrifty, the herds are high bred, most of them

large in number, well cared for and properly fed. The government employs instructors, and the most improved machinery and methods are used in the creameries and by the farmers. The nearness to the English market makes it possible to furnish fresher and less salted butter than would be safe to risk from countries located farther away. The Danish government guards with jealous care the reputation of her export butter. The butter shipped from this country to Denmark is of a cheap grade and used by their own people while the home product is sold at much higher prices. Norway and Sweden supply England with much fine butter. They are not as far advanced in the science and art of butter-making as their Danish neighbors, but are close imitators of them. Sweden has about 1,500 dairies and Norway 300 or 400, and education in dairy lines is being pushed. Government experts are employed to travel around and instruct the people. In Norway it is reported that ten such officials are now engaged in this work.

BRITISH COLONIES—AUSTRALIA AND NEW ZEALAND.

England makes great pretensions of being a free trade country, nevertheless, true to her own interests and those of her colonies, she influences them to look after and encourage such industries, the products of which can find a market in the mother country. While not more than 10 per cent of her foreign butter now comes from her colonies, it was scarcely ten years ago when but little, if any, came from Canada, Australia and New Zealand. Now from these countries she receives from 40,000,000 to 50,000,000 pounds per annum, and each is making great efforts to still farther increase their exports in this direction, encouraged by England in every way possible. The first yearly exportation from Australia amounting to more than 1,000,000 pounds was in 1890, and the increase has been rapid, reaching in favorable seasons as high as 40,000,000 pounds a year. New Zealand began shipping her butter to England about the same time, and while the growth has not been as large, it, nevertheless, amounts to about 7,000,000 pounds per year. The butter from these countries is all made in creameries largely operated on the co-operative plan. The process of manufacturing is about the same as in this country. Refrigerator cars transport it to the seaboard, where it is held in government cold storage: From there it is shipped to England in refrigerators, its temperature being kept near

freezing point. Government inspectors visit factories, enforce cleanliness and proper sanitary methods, and in addition, the government supports experimental schools during the winter and the attendance of all dairy managers is expected. A corps of instructors is also employed whose duty consists in visiting each factory, giving information in new and improved methods. All butter is examined by government inspectors, before being exported, and again on reaching England, and its condition reported by cable to the consignee. That country is well adapted for the production of first-class butter, having healthy cattle, a mild climate, good pastures, modern creameries, and the industry is fostered and encouraged by the government.

CANADA.

The Canadian government is alive to the benefits to be derived by her people from a prosperous and growing dairy business, and has adopted a plan for assisting localities in establishing creameries by loaning money for the building and equipping of factories and assuming charge of the management, manufacturing and selling the output at a small cost per pound to the patron, advancing two-thirds of the value of milk delivered at the end of each month and making full settlements after returns for the month's business have been received from England. A sinking fund is created by taking 1 cent per pound on the output to be applied in liquidating the government loan, the government continuing in control at least three years unless the loan is repaid sooner. Canada has discovered that the English people like fresh goods, and the government is assisting in establishing refrigeration at the creamery, on the railway lines and on steamship, so that Canadian butter can be delivered in England as fresh and sweet as possible, to compete with Denmark and other continental countries. The dairy commissioner of Canada has a large corps of assistants whose entire time is devoted to the improvement of the dairy industry. The steamship lines from Montreal reserve their refrigerator space for Canadian shippers, and shipments from the states are not taken unless the room is not all engaged for Canadian butter.

It will be seen that those countries having but a small home market have been compelled to conform to the demands and tastes of the people of England in order to dispose of their butter at fair prices. The dairy people of the United States

must soon learn, if they expect a business of any magnitude with Great Britain, that it is absolutely necessary that the demand of the English market in regard to quality, color, salt and package be recognized, and that the most approved methods of transportation across the ocean shall in some manner be at the command of our exporters. A system of trade-marks, and a system of government inspection for their protection should be established.

DEMANDS OF THE ENGLISH MARKET.

QUALITY, COLOR AND SALT.

The English trade requires for table use pure, sweet butter, but not the fancy, high-flavored article that the larger markets of this country demand; the butter must be of good grain, solid and free from an excessive amount of water, which is considered in that market an adulteration; the salt must be mild, not more than 60 per cent of the amount in general use in this country, and the color much less than is the custom here—a pale yellow is all that is required. June butter should be free from any artificial color, as high colored and heavily salted butter is not wanted, and even if of good flavor will not command a fair price, but will severely injure the reputation of the American product.

PACKAGE.

The Australian box is in great favor in England as a package for fine butter. It was first introduced by the Australian shippers, as it is nearer air-tight than the tub, and the shape permits it to be stored in the refrigerators of the ship in a more compact form, and economizing space. The appearance of the butter on the retailer's counter after the package has been stripped of its contents pleases the dealer and his customers. This style of package for table butter has a firm hold in the English market, and we are unable to see why its introduction in our home markets should not be as well received if proper pains are used in the manufacture of the box and by dealers in showing its advantages. The butter comes from this package in a square form and can be divided and sub-divided, keeping the same shape until it reaches the table, avoiding loss by crumbling and waste, and always presenting an attractive appearance. A box should be practically twelve inches square

and twelve inches deep, inside measurements. If slightly larger at the top than the bottom, it would assist in stripping the package from the butter. The butter should be so packed as to weigh, when stripped and placed upon the scales in England, just fifty-six pounds, which is one-half of an English hundred weight, and is one of the things which the English trade particularly demands. These boxes are made of a peculiar white wood grown in that country; we can see no reason why the white wood or spruce of this country will not answer every purpose and make a perfectly satisfactory package. Each package should be lined with heavy parchment paper; none but the best quality should be used. The advantage of paper lining is to make the package more nearly air-tight, keeping the butter sweet and allowing the sides and bottom to be free from any wood taste or odor. The parchment paper prevents bleaching, sticking to the wood and loss in weight, all of which places the butter in the hands of the retailer in better condition, adding materially to its value. When tubs are used, its use is just as essential, as the same advantages will be gained. For the lining of boxes we see no reason why parchment paper cannot be made in such a shape so that it may be cheaply and easily handled, and when required for use be unfolded in the shape of the package and slipped into it snugly, fitting close to the bottom and sides, leaving sufficient length above the butter so that when folded over it will cover the top. This particular form would be more convenient to handle, nearer air-tight, and would reduce the shrinkage to a minimum, and the package would be delivered in a dryer and cleaner condition. The importance of this style of package being adopted for export use cannot be over-estimated. During the present season boxed butter sold for from two to three cents per pound more than equally as good in tubs.

These are the conditions with which this country will have to comply if we successfully meet the competition in the English market. There can be no doubt but what the conditions in this country as to grade of cows, richness of feed, and skill in manufacturing are equal to those of any country.

The present creamery system in this country has developed under peculiar circumstances. Before 1880, this great country was supplied with butter wholly from the farm; its quality was generally poor, and that portion of it sent to the eastern cities

was first sold by the farmer to the storekeeper, and by him shipped to a packer, where it was reworked and shipped, reaching the eastern consumer through the commission men in the large cities. This class of butter never gave satisfaction, but was the best that could be secured in sufficient quantities to supply the trade. It was under these favorable conditions that the creamery system came into existence. The demand for fine creamery butter was so great that high prices were paid for it, and the creamery manager had no trouble in disposing of his product. The agents of the large commission houses solicited his consignments at the creamery door, and the question of looking for, or preparing his goods for other markets than that of our own country, had never entered the minds of most of our creamery managers. Managers and butter-makers in this country have been guided to a large extent in the matter of quality, salt, color and style of package, by the demand of the eastern market, which advice has usually been received through their respective commission merchants.

Shipments are made by most of the creameries weekly to New York, Chicago, Boston, Philadelphia, or some smaller market, and advice is received weekly, with instruction if any change in manner of producing goods is desired. Most of these shipments are small, and it is an accident if the quality of any of them will answer the requirements of the English market for table butter.

There was a time in the history of our creamery system when large factories operated on the gathered cream plan had an output during the flush of the season of a carload of 20,000 pounds, in not to exceed ten days. This made it easy for the middleman or speculator to secure long lines of fresh goods of uniform quality from one party, but this class of creameries are now few in number; they have given way before the rapidly moving idea of co-operation which is taking a strong hold of the farmers in the creamery territory of the west. The advent of the separator made the co-operative system possible, and resulted in the multiplication of smaller whole milk factories, several of which do not produce as much butter per day as one of the gathered cream plants of former days.

The average production at the present time of the Iowa creamery is from 400 to 500 pounds per day, or 3,000 pounds per week, which is manufactured and sold generally for immediate use; therefore, it is with much difficulty that the

exporter can secure enough butter of uniform quality, salt and color, to say nothing of package, to make a fair sized exportation to the English market. The fact is, that with the exception of a few shipments made in 1896, no manufacturer of fine creamery butter has made and prepared any butter especially for the English market.

The result has been that our fine grades of creamery butter have not been exported, unless a shortage caused by failure of some other country to send England its usual supply of table butter, made it possible for our exporters to place our fancy brands in that market. This was done during the fall and winter of 1895, owing to the short make in Australia, and has been continued to a small extent the past fall, but the largest part of our exports to England in the past has consisted chiefly of ladies and low grade creameries, which were sold to bakers and cheap trade in general; this is not an envious position for this country to occupy with the butter trade of England, but is, nevertheless, true.

The exporters of New York and Boston have been asking for fine butter suitable for the English market, but have received only a limited supply, and what they have bought has been at reduced prices, and sold in London at correspondingly lower prices compared with that from other countries. It is difficult to understand how this matter could be otherwise when we consider that no one in this western country has made a business of manufacturing butter for exportation, neither can they afford to do so. Not being in a position to judge of the conditions of the foreign market, and knowing that butter put up for the English market will not meet with favor with the dealers and consumers of our eastern states, still we have noticed for some time a gradual change going on in this country in favor of lighter colored and milder salted butter, and it is within the range of possibilities that such changes will take place in the tastes and notions of the people of this country so that the particular butter desired by our English cousins will be acceptable by our own people.

The more perfect refrigeration, and the absolute freezing of held butter, makes heavy salting unnecessary, and the question of color is merely a fad, but we can not afford to wait for such gradual changes in order to supply suitable butter for shipments to England on which to build up a reputation and establish a permanent trade. It would seem that this important

matter should be taken hold of and something done in this direction during the coming season. There are three months during the year that Australia does not ship butter to England, and four more in which her shipments are comparatively small. The butter season in that country begins with September and closes in May. The first shipments arrive in London during the latter part of October, and the last shipments reach England in June. The factories of that country are closed in June, July and August, their winter months, and but little butter is shipped in the first and last two months of the season, namely, September, April and May.

The markets of Great Britain are practically free from Australian butter from the month of May to November, and it would seem that under the proper arrangements we should export to England some of the large surplus of our factories during the summer months, in place of putting it in cold storage to be a factor in establishing prices later on the fresh made goods. This can be accomplished in two ways: The large increase in this country should take the lead. It is only those having a large county to collect milk from, or have several skim stations furnishing them with cream, that can take the risk. The output of such factories is large and the management has complete control of the manner of manufacturing and all requirements of the English market can be met with, and also sufficient attention given to the matter so that the undertaking will meet with success.

The second method is for the exporters or speculators to contract for the make of several creameries, and have a suitable person superintend the manufacture and packing for all of the factories, insuring a uniformity of quality, salt, color and packing, thereby getting control of a *long line* of goods suitable for the desired market. If the exporter or speculator has absolute control of the making and packing of the butter, he can cater to the distinctive requirements and notions of different foreign markets, as the cities of England and the continent differ in this respect the same as do the markets of our own country. It is absolutely necessary that we consult the wishes of the customers if we succeed in establishing a permanent demand for our goods in England or in any other country. In addition to procuring a supply of butter suitable for export, there is the question of quick and safe transportation that must be arranged. The transportation facilities from the west to

the seaboard are very satisfactory, the different fast freight lines furnishing rapid transit and good refrigeration, and if the factories are able to put their butter into these refrigerators in suitable condition, it will arrive at the seaboard in first-class order. Our export trade in the past has not consisted of fine goods, and suitable provisions have not been made for the handling of first-class butter after it arrives at the seaport and before it is placed on shipboard. First-class cold storage must be provided by the fast freight lines or ocean steamship lines, or by their joint action. The refrigerator service of the trans-Atlantic steamers are confined to two or three lines, and is altogether too meagre to take care of such an export trade as the dairy industry of this country demands should be built up. The kind of butter that has been sent to London, Liverpool, Glasgow and other cities of Great Britain, and the shipping of much of it outside of refrigerators, has given American goods a very poor reputation in these markets, and created a prejudice in England against butter from the states. It has only been during the last two seasons that any of our fine creamery butter has reached the English market in reasonably fair condition. Rates should be established by our fast freight and steamship lines for the through shipments of butter from the creameries of the west to the principal cities of Great Britain and the continent, and a guarantee made that such facilities in the line of refrigeration would be provided, and such care in handling be taken, that the goods would arrive in Europe in as fine shape and practically as fresh as when they left the factory in Iowa or the west. This has been accomplished for the butter of Canada and Australia by the aid of their respective governments, and butter is sent from the factories of Australia on a voyage of some five or six weeks and across the tropical zone held at a temperature near freezing point during the entire time, and arrives in the English market in a fresh and sweet condition. The government of Australia subsidizes the steamship lines furnishing this excellent refrigeration. The Canadian government has discovered the necessity, in competing with their remote sister colonies, of thorough refrigeration and is now assisting the steamship lines that transport butter from Montreal in providing it for the use of the export butter of the Dominion. How far our government can go in this direction we are unable to state, but what can, should be done. The entire subject of foreign exportation of dairy products should

be taken up by the department of agriculture and the co-operation of other governmental departments secured wherever necessary to enforce our methods and protect and advance our interests. The agricultural department, so far as the dairy industry of this country is concerned, has been conducted along educational and scientific lines, and while we are not making any criticism of the class of work done, we do believe that the time has now come when the commercial side of this great industry should have the attention and assistance of this department of the government. Some system of inspection and branding of our export butter should be devised in order that the low grades will not stand in the way of building up a reputation for our fine butter. We need a national law regulating and governing the use of trade marks. This country is exporting about 5,000,000 pounds per year of oleomargarine, and undoubtedly it is being sold for American butter and ruining the reputation of one of our most valuable products. This should be prevented as much as possible. Special agents from the agricultural department should be constantly at work guarding and encouraging the dairy interest and preventing frauds being committed in its name.

There is a large surplus of farm butter made each year that is bought by packers, reworked and put upon the market under the names of ladles, factory and imitation creamery, and in many instances the word "imitation" is omitted, and it is palmed off as creamery butter. This class of butter has always been with us, but it is growing proportionately less each year. Our government regulations should be so strong that it could only be exported for what it is, and under such conditions so as to reach the consumer under its true name, and to not injure the reputation of our fancy creamery butter. Our creamery people know but little about the question of exporting butter, and no doubt the agricultural department could take the matter up and ascertain facts and gather information that would be of much value to our dairymen. The exports which now amount to between 4,000,000 and 5,000,000 of pounds of butter per year to countries other than Europe, principally to Central and South America and West Indies, should have some attention by the government, and it will probably find that by honest dealing and catering to the various demands of these countries we could increase this trade many fold and probably find a market for much of the surplus cheaper grades of butter which we are obliged to dispose

of in some other manner. It would now seem as if our government could act along these lines and materially aid the dairy people of this country in establishing new markets for the rapidly increasing surplus. The great dairy interests of this country are largely located in northern states and are carried on by an industrious, thrifty people. They have believed in and upheld for many years the theory of home protection that has been the policy of this country most of the time for the past thirty years, and have rejoiced to see the industrious and manufacturing sections of this country develop and grow rich, and have borne without a murmur any additional burdens that the policy may have inflicted upon them. They are not unmindful of the favors shown them in the support of experiment stations and agricultural and dairy schools by the government, such as has made it possible for Professor Babcock to give to the dairy industry the milk test that bears his name, which has revolutionized the entire creamery system as effectively as did the cotton gin change and advance the production of cotton. They feel that such good use has been made of all the aid so far furnished by the government that the supply of their products has outgrown the markets of this country and they now believe that a share of its revenue should be used in developing other markets, so that this important industry can be carried on at a fair profit, and permitted to grow and flourish.

IOWA CREAMERIES.

In another part of this report will be found tables No. X, XI and XII, and creamery list, and the following information is gathered from the compilation:

Ninety five counties in the state have one or more creameries within their borders. Appanoose, Fremont, Monroe, and Woodbury are without creameries; Harrison county in the last report had no creameries, but now has 2; Decatur with 2, and Des Moines with 1 to their credit last year, are now among those without creameries. As compared with last year's report there are 36 more creameries and skim stations, which would indicate an increase larger than facts justify, for a number of skim stations not reported in the last report are now included in the total number of 810 creameries and skim stations. Since our last annual report there have been 69 creameries and 19 skim stations, a total of 88, built in 48 counties, and 29 remodeled in 23 counties. Twenty creameries, located in 14 counties, have burned; 9 of this number have been rebuilt and are included in the number reported as built.

Of the 810 creameries in operation November 1, 1898, 424 are conducted by individuals, 81 by stock companies, and 804 on the co-operative plan. As compared with the last report there are 43 more individual plants; 28 more co-operative, and 35 less stock companies. Of the 810 creameries and skim stations, 725 are fully equipped creameries, manufacturing butter, and 85 are skim stations, where only milk is received and the cream separated and delivered at the main factory.

Of the total number of creameries and skim stations, 641 are operated as separator, 95 as gathered cream and 74 as combined separator and gathered cream. This is a decrease from last year of 31 gathered cream plants and 33 combined, and an increase for the separator system of 101. This, however, includes the skim stations, about 20 in number, which were in operation last year and not reported to this department, therefore the net increase in number of separator plants would be about 81.

There are 715 creameries and skim stations receiving milk; 573 receive on the test plan, which is according to the amount of butter fat the milk contains; 127 receive by the hundred weight; 15 make no report. This shows a rapid change in the right direction, as there is a large increase of creameries adopting the test plan.

The information in these tables, such as number of patrons, number of cows, and amount of butter made, etc., is based upon the number of factories; a skim station is but a feeder for the factory. All information belonging thereto is compiled with that of the factory with which it is connected.

Butter is manufactured in 725 factories. Of this number, 563 report having 60,944 patrons and 517,508 cows, which is an average of 108 patrons and 919 cows for each creamery, and an average of 7 cows for each patron. Taking these figures as a basis, there would be for the 725 creameries 78,300 patrons and 686,275 cows.

Three hundred and sixty-six creameries report on the numerical condition of dairy herds as compared with last year; 208 report an increase in the number, 108 as having no change and 50 as decreasing.

Five hundred and sixteen report the value of their plants as \$2,083,705, which is an average of \$4,088 for each creamery. This would show a valuation for the 725 creameries of \$2,927,350. Eighty-three skim stations report a valuation of \$127,150, an average of \$1,532 each, and the 85 would be \$130,220, making the total valuation \$3,057,770 for the 810 creameries and skim stations.

Of these factories, 658 report on the time operated during the year. Five hundred and sixty were in operation the entire year, 78 six months or more, and 20 less than six months. The average time for those reporting is 10.4 months.

For the year ending May 1, 1896, the information pertaining to the number of persons employed and amount of wages paid is as follows: Six hundred and forty-six creameries report having 646 butter-makers. Wages paid for different seasons of the year: Winter months, \$41.80; summer months, \$52.66, but when employed for the entire year the average permonth was \$51.82. The total amount paid butter-makers by the creameries reporting was \$459,875, which is a yearly average of \$711 for each butter-maker. At this ratio the 725 creameries paid \$515,475 to butter makers. There were reported 354 first assistants,

with average monthly wages of \$27.80, and 27 second assistants, \$30.05. The latter were employed usually a short time during the season when the receipts of milk or cream were especially large. The total amount paid assistants is \$99,520, which would be \$154 for each creamery and skim station, or \$124,740 for the 810 creameries and skim stations, making a total of \$640,215 paid to help for inside creamery work.

The 411 creameries report 2,520 persons engaged in collecting milk and cream, which would be an average of 6 to each, or 4,860 for the 810 creameries and skim stations. Three hundred and twenty-nine creameries report \$555,820 paid for the collection of milk and cream. This is equal to \$1,780.60 for each creamery and skim station, or \$1,442,286 for the 810 creameries and skim stations. If to this amount be added \$640,215, the sum paid for inside help, we have a total of \$2,062,501 as paid for all employes. Milk for the greater number of creameries and skim stations is delivered without direct compensation by the patrons, otherwise the amount paid for collecting milk and cream, and the amount paid all employes, would be much larger. The cost, either direct or indirect, connected with the delivery of milk and cream to our factories, is one that deserves more attention than is usually given it. How to have the milk reach the factory to be converted into butter or cheese, at the lowest possible cost to the farmer, is one of the questions of future dairying that must be solved. It now costs, where milk is not delivered by the patrons themselves, more per pound for collecting it than the cost of transportation of the butter manufactured to our eastern markets and the expense connected with its sale.

AMOUNT AND VALUE OF THE OUTPUT OF IOWA CREAMERIES.

On May 1, 1896, there were 715 creameries and skim stations where milk was received. Of this number 630 were fully equipped creameries and 85 were skim stations. Four hundred and seventy-nine report on the number of pounds of milk received, which is 1,006,964,031 pounds, or 2,102,221 pounds per factory. With this as a basis, the 715 received 1,503,088,015 pounds of milk. There was reported made, from the milk received by the 479 factories, 44,324,279 pounds of separator butter, requiring an average of 22.7 pounds of milk for each pound of butter.

The total number of creameries where butter was manufactured was 725. Five hundred and sixty of this number report

the pounds and different kinds of butter manufactured for the year ending May 1, 1896, to be: Separator, 44,224,294 pounds; gathered cream, 11,954,973 pounds, and 1,452,770 pounds of combined separator and gathered cream, making a total of 57,732,040 pounds. Of the total amount manufactured, the percentage of each kind is as follows: Separator, 76.8 per cent; gathered cream, 20.7 per cent; combined, 2.5 per cent. If the total amount reported manufactured by the 560 creameries is to be taken as a basis, the average amount for each factory is 103,092 pounds and a total for the 725 factories where churning was done, 74,741,700 pounds. Seventy-six and eight-tenths per cent of this amount, or 57,401,623 pounds, was separator; 20.7 per cent, or 15,471,532 pounds, was gathered cream, and 2.5 per cent, or 1,868,542 pounds, was combined separator and gathered cream.

The 560 factories report the value of the output for the same period to be \$10,207,646.88, or equal to an average of \$18,227.94 for each, which would make \$13,215,256.50 for the 725 creameries. This amount divided by the total pounds of butter manufactured gives a valuation of 17.7 cents per pound, net, at the creamery.

It may be of interest to know what disposition was made of this vast production of butter. As reported by 572 of the manufacturing plants, 1,917,372 pounds was furnished to their patrons; 1,759,792 pounds was sold in Iowa markets, and 54,000,876 pounds was shipped to points outside of the state. Further consideration of these figures shows that an average of 3,446 pounds was sold to the patrons of each of the 572 factories, and likewise an average of 3,076 pounds was sold in Iowa markets, and an average of 94,407 pounds was shipped to points outside of the state by each of the factories reporting. Upon this basis 725 factories furnished 2,498,360 pounds to their patrons; 2,230,100 pounds to markets in Iowa, and 68,445,750 pounds to outside markets. By adding together the estimated number of pounds of gathered cream butter (15,471,523) and the combined separator and gathered cream (1,868,542), and allow twenty-five pounds of milk as a basis for each pound of butter, we have 438,507,825 pounds of milk required to produce this amount of butter, and by adding the pounds of milk used in the manufacture of separator butter (1,503,088,015) we will have 1,930,589,840 as the total pounds of milk manufactured into creamery butter during the year ending May 1, 1896.

THE IOWA CHEESE INDUSTRY.

The production of cheese in Iowa has made but little progress for a number of years. Most of our farmers prefer to sell their milk to the creameries, where they can have returned to them the separator milk and buttermilk for their calves and hogs. The hog is one of the greatest live stock interests of this state, and barring disease, is very profitable to the farmer.

Tables XVIII and XIX, and the cheese factory list in another portion of this report gives information from which the following is a summary: There are 71 cheese factories reported in the state. Last year there were 81, showing a decrease of 10. Of these 71 factories, 15 of them manufacture butter as well as cheese. The 55 factories reporting give the total amount of cheese manufactured by them for the year ending May 1, 1896, as 3,187,186 pounds, or an average of 57,950 pounds for each factory. Taking these figures as a basis, the 71 factories made 3,916,450 pounds, and of this amount 84 per cent, or 3,289,818 pounds, was sold in Iowa, and 16 per cent, or 626,632 pounds, was shipped outside of the state.

The 55 factories report the value of their cheese as \$272,342.28. On this basis the value for the output of the 71 factories was \$334,656.48, making an average value of 8.55 cents per pound.

The 55 factories reporting received 30,797,697 pounds of milk, the average per factory was 559,958 pounds, and would make a total for the 71 factories of 39,757,118 pounds. The milk received at the 55 factories made 1,231,655 pounds of cheddar and Young America, 116,745 pounds of Swiss, 99,000 pounds of limberger, and 1,739,786 pounds of which the variety was not designated. It required 10.16 pounds of milk in the manufacture of a pound of cheese. There were 58 factories reporting upon the value of their plants, and the amount was \$98,000, an average of \$1,691, and an investment of \$130,061 for the 71 factories.

There are 38 counties having cheese factories, and the largest number in any one county is 12, which is that of Monroe; Humboldt has 5 factories, Appanoose 4, Johnson, Sac and Wayne have each 3, while nine other counties have each 2, and the remaining 23 but 1 each. Of the 55 factories reporting, 40 pay for milk by the 100 pounds and 15 by the test. It will be seen from this that there is not much improvement among the cheese factories in the manner of receiving milk, for most of them do not seem disposed to adopt the Babcock test in connection with their business. Of 60 reporting, 26 operate the entire year, 28 six months or more, 6 less than six months, making an average for the 60 of 9.4 months.

Sixty-two of the factories report having 62 cheese-makers, 29 assistants, and 91 employed in collecting milk, making a total of 183 employed in the 62 factories of about 210 in the 71 factories.

There are 53 factories reporting 1,540 patrons and 16,150 cows, an average of 29 patrons and 305 cows per factory. On this average 71 factories had 2,059 patrons and 21,635 cows, which is 10.5 cows for each patron. There are but three factories reported built during the year and one as being remodeled.

These figures do not indicate that the cheese industry is making any material progress in Iowa, but the cheese business of this country has been going through that demoralized condition on account of filled cheese that the butter industry suffered a few years ago from the unrestrained sale of oleomargarine. The outlook for its future is much brighter since the passage of the filled cheese law that became operative on September 4, 1896. Reports indicate that the business is picking up and that American cheese is finding a profitable market across the water in England.

The great injury to the business caused by the filled cheese frauds in the past few years closed a large number of cheese factories in Wisconsin, New York and other states, and many of them, especially in Wisconsin, were changed into creameries. But it is to be hoped that the honest cheese-maker now has sufficient protection so that he can afford to reopen his factories, or build new ones, and pursue his honorable calling with a benefit to the cheese consuming public and profit to himself.

We have no reliable figures on the question of home consumption of cheese, but from the returns made by our cheese factories, there is but about one and one-half pounds of Iowa

cheese consumed annually, per capita, by the people of our state. There is certainly a large market in Iowa for home-made cheese, and where the conditions are favorable, as much, if not more profit can be had in the production of cheese than by converting the same amount of milk into butter, and it would seem that the low price of butter would be the cause of establishing more cheese factories in some of our large dairy districts. The people have been fed upon such vile stuff when demanding full cream cheese that the appetite for cheese, in a great measure, has been ruined. We believe, however, with the return of first-class goods and better times the demand for cheese will be ample to take care of a much larger portion of the milk of the cows of the American dairyman, and assist more than it has in the last few years in sustaining the dairy business and in guaranteeing a reasonable profit.

WHERE IOWA CREAMERY BUTTER IS SOLD.

The amount of butter shipped annually from Iowa has been reported by the railway companies to this department from year to year since 1890, and includes all grades of butter, but never before has this department collected information showing the amount of creamery butter shipped to the different markets of this country. The creamery managers of the state were asked, upon blanks furnished them by this department, to report: "What amount of butter was shipped to the following markets: New York, Chicago, Boston, Philadelphia, Pittsburg, Cincinnati, Washington, D. C., Pacific coast, and other cities." In response, 455 creamerymen reported, and table No. XIII was compiled from their answers.

It would seem that every creamery should have a system of bookkeeping, so that this information could be furnished without much trouble, and the total shipments obtained from the entire state without having to estimate for a large number of creameries. I have been informed by many creamerymen that hereafter accounts will be so kept, that not only this, but other information needed, could be satisfactorily given.

The combined shipments, from the 455 creameries reporting, were billed to the following cities:

CITY AND STATE.	NET POUNDS SHIPPED.
New York, N. Y.	30,295,633
Chicago, Ill.	5,680,288
Boston, Mass.	5,307,350
Philadelphia, Penn.	1,543,939
New Orleans, La.	277,544
Cleveland, Ohio	270,532
New Haven, Conn.	159,474
Pittsburg, Penn.	147,105
Elgin, Ill.	145,979
Pacific coast (Cal. and Oregon)	142,880
St. Louis, Mo.	125,906
Cincinnati, Ohio	49,579
Washington, D. C.	40,228
Moline, Ill.	39,618

CITY AND STATE.	NET POUNDS	
	SHIPPED.	
Galesburg, Ill.	38,900	
New Bedford, Mass.	28,500	
Newark, N. J.	20,788	
Butte, Mont.	18,000	
Anaconda, Mont.	12,636	
Rock Island, Ill.	9,876	
Aurora, Ill.	4,233	
Detroit, Mich.	3,540	
Blockton, Mass.	1,500	
Total	44,264,108	

From these figures we calculate that New York received 68.6 per cent of the creamery butter shipped from Iowa during the year ending May 1, 1896; Chicago, 12.6 per cent; Boston, 12 per cent; Philadelphia, 3.4 per cent, and all the other cities combined, 3.4. The average number of pounds for each creamery reported is 97,284. At this rate the 725 creameries of the state shipped 70,530,800 pounds. If the balance of the creameries, not reported, divided their shipments in the same proportion as those reported among the cities named, the amount received in the principal ones was as follows:

CITY.	NET POUNDS	
	PER CENT.	RECEIVED.
New York	68.6	48,384,129
Chicago	12.6	8,886,881
Boston	12	8,463,696
Philadelphia	3.4	2,398,047
Other cities	3.4	2,394,047
Total		70,530,800

The creamery butter of Iowa was shipped direct into but fourteen out of the fifty-one states and territories, but without question large quantities were re-shipped from New York, Chicago, Boston and Philadelphia into the cities and manufacturing towns of the middle, eastern and southern states.

From the data in table No. XIII it may be seen that we have but four large markets for our Iowa butter, New York standing far in the lead, with Chicago and Boston almost a tie for second place, and Philadelphia fourth.

The 455 creameries reporting on these shipments are located in 83 counties of the state, thus showing that the information obtained covers almost the entire state. New York receives shipments from 79 counties, Chicago from 74, Boston from 47

and Philadelphia from 39. None of the other cities receive shipments from more than 4 counties.

There were about 10,000,000 pounds of dairy and lard butter shipped from Iowa the past year. Of this amount probably 8,000,000 or 9,000,000 pounds was lard butter and the balance dairy goods made and shipped by the individual farmers. The lard stock was largely sent to the eastern markets and the dairy butter found a market in Chicago and other western cities.

IOWA MILK AND THE BABCOCK TEST.

The information in table No. XIV has never before been compiled by this department, nor do we know of any figures of this kind having been gathered on so large a scale by anyone, and we trust these will be of considerable interest to the dairy people. This office has received many inquiries asking what should be the proper test for milk delivered to creameries at different seasons of the year, and to what extent and for what reason the tests of milk differ from month to month.

These inquiries were so numerous that we decided to ascertain from the best source possible some information pertaining to this subject, and in the blanks forwarded to all the creameries we asked the managers having records of tests made for each month during the preceding year, for a report upon this question.

One hundred and ninety-one creameries, located in fifty-five different counties of the state, complied with the request and it is to be regretted that more were not able, or did not consider it important enough to make the report. Some sent a report for different months, but only those could be used that reported for each of the twelve months.

Sac county, with four creameries reporting, has an average test of 4.06 for the twelve months and ranks first. Bremer, with seven creameries reporting, has an average test of 4.02 and ranks second, and Chickasaw third, with nine creameries reporting, and a test of 4.01. The lowest average is from Audubon county, with two creameries reporting, and a test of 3.46, exactly one-half pound below the highest. Clarke and Clay counties, with one creamery reporting in each, have a test of 3.50, and all other counties reporting and not mentioned above have an average test above 3.50 and below 4.

The average test of all the creameries reporting in the fifty-five counties for the twelve months is 3.84. If 15 per cent is

allowed for salt, water, etc., the average yield of butter for 100 pounds of milk for the year would be 4.42 pounds. There are five months that have higher tests than 3.84, enumerated according to the average, beginning with the highest: December has 4.12, November has 4.05, January, 4.02; October, 3.96, and February, 3.89. Seven of the months have tests lower than the average and are, beginning with the lowest, June, 3.65; July, 3.67; May, 3.69; April, 3.71; August, 3.79; September, 3.80; March, 3.81. A comparison of the footings of table No. XIV will show a gradual increase in the tests each month from June to December, and a gradual decrease from December to June.

The above tests are for butter fat. To these add 15 per cent for overrun, and the result in tabular form shows the average yield of butter for each month during the year.

TABLE No. XV.

MONTH	BUTTER FAT—	
	ADDING 15 PER CENT.	YIELD OF BUTTER.
June	3.65	4.20
July	3.67	4.22
August	3.79	4.36
September	3.80	4.37
October	3.96	4.59
November	4.05	4.66
December	4.12	4.74
January	4.02	4.62
February	3.89	4.47
March	3.81	4.38
April	3.71	4.27
May	3.69	4.24
Average for the year	3.84	4.42

From the above table we find that it required 23.8 pounds of milk to make a pound of butter in June, and 21.4 pounds in December, and the average for the year was 22.6 pounds of milk for each pound of butter. These figures are based upon the reports from 191 creameries as shown in table No. XIV. In table No. XI, 479 separator creameries report 1,006,964,081 pounds of milk received, and 44,324,297 pounds of butter made therefrom, which is 22.7 pounds of milk for each pound of butter. The results from these two different sources are nearly the same, and indicate that 15 per cent is about the correct amount to allow for the overrun.

The figures in table No. XIV show a remarkable uniformity in the quality of milk delivered to the factories in different counties of the state, and indicate there is no particular part of the state having a natural advantage over other portions in the production of milk as far as quality is concerned. Before the invention of the Babcock test it was impossible to obtain information of this kind. The importance and great advantages of the milk testing system for determining the value of milk is every day impressing itself upon those engaged in commercial dairying. While this is true, we are sorry to note the rapid increase in the number of complaints made to this office of its supposed abuse. The complaints are of two classes—first, those from the patrons of creameries claiming that their milk is not being correctly tested, or that proper credit is not given them. The second class are complaints made by creamery managers charging that some creameries jockey with their tests and attempt to gain favor with their patrons by dishonest and false representations. Granting that the party making the tests is honest, all just reasons for complaint are caused by carelessness in taking and preserving samples to be tested, or in manipulating the tests, by poor acid, worn out testing machines, or incorrect pipettes and bottles. The complaints originating from creameries are usually brought about by some manager who attempts to increase his patronage by pretending to get larger results than his neighbors, but in reality is not paying any more per hundred weight for milk of the same quality.

The Babcock test shows the number of pounds of butter fat in 100 pounds of milk of which the sample is a part. A sample of the milk delivered by each patron each day to the creamery is taken and placed in a glass jar containing a preservative and a sample of this composite is tested at the end of two or more weeks. At the time of each settling period these individual tests are averaged and the monthly yield of butter fat is determined. A large number of creameries settle with their patrons on the basis of the butter fat found in the composite sample. A factory has made so much butter during the month, and received a certain sum of money for the same, over and above the expense of making and selling it; this net amount is usually distributed among the patrons in proportion to the amount of butter fat in their milk as shown by the test of their composite sample. This is determined by multiplying

the number of hundred pounds of milk delivered by the patron by the average amount of butter fat, as shown by each patron's composite test. It will be seen that if the butter fat, as shown by each composite test, is cut a certain per cent, the aggregate amount of butter fat to be settled for will be reduced, and as the amount to be distributed remains the same, the rate per pound of butter fat will be larger. The factories doing this kind of work seek to gain a reputation for making larger returns to their patrons than they really do. Other creamery managers have reversed this manner of deception by reporting a larger test of butter fat than the patron is entitled to, and at the same time decreasing the returns by the same per cent per pound on butter fat. In both these cases there is no loss to the patrons, as each gets his share of the returns for the month, but such practices are demoralizing to the creamery business in general. The honest, straightforward creamery operator is kept in hot water, as it were, all the time, and the seeds of discontent and discord are sown among the patrons of all neighboring creameries. Reports of these large yields, or large returns per hundred weight of milk, find their way into the columns of our county newspapers and dairy press and create suspicion of dishonesty and unfair dealing between patron and honest manager in many of the creameries scattered over the state. The patrons do not understand why their manager cannot return to them as high a yield of butter fat, or as much per pound, as these jockeying and advertising competitors do to their patrons.

As an illustration of this condition of affairs we reprint the following, which was published in a county paper printed in one of our largest dairy counties:

At the creamery for November, the average test was 3.65. Twenty-eight cents was paid for butter fat, and the yield was 5 pounds of butter for each 100 pounds of milk.

Accompanying a clipping of the above item, I received the following letter of explanation, which is to the point:

W. K. Boardman, State Dairy Commissioner, Des Moines, Iowa:

DEAR SIR—I enclose you a clipping from the, showing what creamery paid for November. Now, I would like to know if it is lawful for a creamery company to do business that way? It seems to me that their test is rather low for the yield. This kind of work is causing a great deal of trouble among the creameries in this section. I cannot see what good the Babcock test is, if the secretaries are allowed to cut the test down in this way just to pay more for butter fat. It makes trouble for a

creamery giving an honest test. If there is no law to prohibit such test-cutting, I think there should be, and if there is, I should like to see it enforced at once. Yours respectfully,

.....
The difference between the butter fat in this case and the yield of butter per 100 pounds of milk, shows an overrun for the churn of 37 per cent, whereas the usual overrun is about 15 per cent. The dairy laws in regard to the testing of milk provides for correct testing and an honest use of the test as between patrons and factory, but the author of the law did not foresee the deception and dishonest manner in which the results of the tests could be used so as to make trouble between upright creamery operators and their patrons. All these difficulties point to the necessity of careful creamery inspection, which was so strongly advocated in my last report. However, if this advanced step can not soon be taken, the law should be so amended as to authorize the dairy commissioner, or some person chosen by him, to have the right to enter any creamery operated under the test system in this state, and that he should be authorized to test any composite samples found therein.

THE IOWA DAIRY COW.

The managers of creameries reporting to this department experience a great deal of difficulty in accurately determining the average number of cows per patron, and the figures given upon this subject in our tables are not entirely satisfactory. Many of the cows reported are heifers being in milk their first season and farrow cows not having calved for one or two years, so that the Iowa dairy cow does not make a creditable showing in the quantity of milk produced. Our tables show that there is an average of 919 cows to each creamery, and each creamery makes an average of 103,000 pounds of butter per year, or 112 pounds per cow. To this amount should be added the home consumption of butter and milk by the patron's family. The number of cows per patron is small, being but 7 in number, and the average size of the farmer's family, including help, is large, and as a rule, the housewife on the farm makes free use of butter and milk, so that an estimate of 150 pounds of butter per cow per year on the average is about correct for cows furnishing milk to our creameries. The quality of milk furnished to our creameries is good, as shown by the yearly average production of butter, which is 4.42 for each 100 pounds of milk. The yield of butter fat of the milk from our Iowa cow is very satisfactory, but the quantity, not over 3,500 pounds on the average per cow, for the milking period of—say 300 days, or about 11 pounds per day for each cow, is altogether too small. A large per cent of our cows must be short milkers, calving in the spring and becoming dry in the hot and dry months of the summer. It is in this direction that the dairyman must look for improvement and a decrease in the cost of production of dairy products. The dairyman of Iowa should not be satisfied until the standard of the Iowa cow has been raised to at least a yearly average of 5,000 pounds per cow. Since the low prices of dairy products have become established it is absolutely necessary for the farmer who would continue to make money in dairying, to study the individual members of

his herd and weed out the unprofitable and improve the short milkers. In order to present this matter to the dairy farmers of our state, and give them the ideas of one of our most careful students, advanced thinkers and investigators upon this branch of dairy farming, C. F. Curtiss, professor of agriculture at the Iowa Agricultural college, was requested to prepare an article upon the subject of the dairy cow. He complied with the request, and we take great pleasure in presenting it to the readers of this report, with the most hearty endorsement of this department.

THE DAIRY COW.

BY C. F. CURTISS.

The cow is necessarily the prime factor in the dairy problem. More advance has been made within the last decade in perfecting the work in the creamery than has been effected in the fundamental problem of improving the dairy herds. The creamery manager is generally in advance of the cow manager, yet no creamery can ever reach the full measure of success without a generous patronage of successful patrons. The patron's business is in need of some of the exact business management and the application of some of the scientific skill that has characterized the progress made in the creamery.

Every cow is a creature of her surroundings, and every breed of cows is just what the surroundings make it. The intelligent, practical and scientific way to study a breed then is to look into the environment and conditions surrounding the breed in its place of origin. It is well to begin by studying geography, climatology, soil and products, and following that, the treatment, care and handling of the dairy cow under native influences. We must study the agriculture of a country in all of its relations if we would fully understand its live stock. As a preliminary to the consideration of the several types and breeds, I can only call attention briefly to some of the factors that have entered into their formation.

The dairy cow, like all other domestic animals, attains the highest perfection in the hands of the most skillful breeders. The North American Indians, as a class, have a peculiar dislike for milk and all of its products. The inhabitants of China use but very little cow's milk even in the present day, while the Arabians rely principally on the mare for their supply. The Anglo Saxon population of the British Isles and the United States, however, consume the products of the dairy in large quantities. The United States now has about 17,000,000 dairy cows.

Originally, cattle were kept principally for the purpose of labor and for milk. The ancients had superstitious views about eating the flesh of the

ox. It is hardly more than a century since there were no special beef breeds of cattle in England. All were developed for the dairy as well as for the block. The milk giving qualities of the original Shorthorn were unsurpassed by any breed of England. Even the beefy Hereford, until affected by the blood of the Tompkins fat cows in the latter part of the eighteenth century, was highly prized by the Herefordshire farmer as a dairy animal.

The principal dairy breeds have been developed in the Channel Islands, Germany, Holland and Switzerland. In studying these breeds in their native localities, this one significant fact is noticeable in every case—wherever you find a good dairy cow, you find her systematically bred, carefully and kindly handled, comfortably housed and well fed. Good cows do not come by chance, nor by haphazard methods. The husbandman of Jersey Island will neglect everything he has to take care of his cow. Nothing is too good for her.

The Channel Islands, of which the Jersey, Guernsey and Alderney cattle are native, are located in the English Channel, near the coast of France. They are known as Jersey, Guernsey, Alderney, Sark, Jethou and Herm. Geographically these islands belong to France, and in habits and characteristics the people are essentially Norman, notwithstanding the fact that they are loyal subjects of the British crown. These islands are intensely interesting, though but a mere dot on the globe's surface, the entire six being hardly half the size of the smallest county in the state of Iowa, and not more than two-thirds of that subject to cultivation. Their rugged outline and granite peaks rising sometimes 400 feet high and lashed by the beating waves and surgent tides until at times they appear to be almost submerged, present a landscape that at first appears almost barren and directly the opposite of a quiet, pastoral scene. The southern slope of these ranges, however, is intersected with numerous ravines and streams, the valleys of which are exceedingly fertile, and the climate is so mild and equable that tropical flowers bloom there the year round, and snow and frost are practically unknown. The wintry blasts and summer's suns are equally tempered, for the highest temperature rarely exceeds 80°. The average daily range of the thermometer in ten years is only about 8°. Rain falls about 160 days in the year, though the sun shines generously during the day.

Jersey Island has a population of about three persons per acre. Dairying, market gardening and fruit raising are almost the sole occupations of the inhabitants of the island. Close proximity to the great markets of London and Paris render these occupations highly profitable. As high as \$300 is paid for the rent of a single acre of land in one season. The potato is the chief crop. It is not uncommon for the Jersey farmer to realize \$1,000 per acre from this crop, then manure heavily with barnyard and commercial manures, or sea weed, and take a second crop the same season averaging two-thirds as much. A large part of all their fruit and vegetables is grown under glass. The farms average only seven acres each and many of them contain only one or two acres.

The Jersey herds likewise usually number not more than two to a half-dozen cows. The Jersey breeder grows for his herd a liberal supply of roots, clover and beans, and in addition cider and spices are fed to a limited extent as tonics. The cow is so well cared for and so judiciously fed that she gives the highest possible returns. The intensive system of agriculture prevails in the highest degree. For over half a century it was a crime

to import a single animal of the cattle kind from any foreign country, and even yet the importation of cattle is prohibited except under the most rigid regulation. This explains why Jersey cattle are so much alike, so purely bred and so prepotent. The breeding of the celebrated Jersey bull Sicks Pogis III is said to trace forty times to the same ancestor.

In Holland, the home of the Holstein cow, we find essentially the same care bestowed upon the dairy stock. There the soil is lower lying and moister and the vegetation very rank. Much of the tillable land has been reclaimed from the ocean by the erection of dikes and the operation of large pumps and windmills to carry off the surplus water. The farms still lie several feet below the level of the sea. This is an exceedingly rich and productive area. Sometimes as high as three and four crops are taken off in a year. Ten acres of good land supports twenty large cows the year round, and sometimes more. In the seventeenth century, the historian Motley wrote concerning the Netherlands, "On that scrap of solid ground rescued by human energy from the ocean, were the most fertile pastures in the world. On these pastures grazed the most famous cattle in the world. The cows produced two and three calves and the sheep four and five lambs at a time. In a single village 4,000 kine were counted. Holland alone, at one time, supplied nearly the whole of continental Europe with butter and cheese."

Here, as in the home of the Jersey, the cow is the object of special attention, and the dairy herds are largely under the management of women. The unparalleled development of the Holstein cow is due to the careful, painstaking and industrious wife of the Hollander and German more than to any other influence. The vegetation grows ranker and more abundant in Holland than on the Channel Islands, and the cows are consequently larger. The feed is not so rich and is more watery, and the same is true of the milk. The cow is never exposed to inclement weather and the stables are kept, it is said, as clean as the dwelling, and both are under the same roof. The cows are even blanketed when turned out at certain seasons of the year, to protect them from the chilling winds from the sea.

Across on the opposite side of the North Sea, in the northeastern part of England, is a fertile valley that has become famous as the home of the Shorthorn breed of cattle. This is along the River Tees in Durhamshire. These cattle were first known as the old Teeswater cattle, and later the Durham, and finally both names were superseded by the term shorthorn. That this is a fertile region, peopled by thrifty farmers and good feeders, is fully attested by the records of such specimens as the White heifer, the Durham ox, and great numbers of the early and modern representatives of the breed. These cattle are fed liberally and were originally developed for the dairy as well as for beef. They were for many years the leading dairy cattle of England, and while many of the modern Shorthorns have been bred exclusively for beef, the old dairy trait is yet a characteristic of the breed and capable of a good degree of development at any time by right methods.

The Red Polls are native of Norfolkshire, not far from Durham, and their surroundings and characteristics do not differ greatly from the Shorthorns, except that the dairy qualities are perhaps a little more uniform, and hardly as much excellence has been attained in beef.

Over across the border in the county of Ayrshire, in southwestern Scotland, we find the home of another breed, the Ayrshire. This locality has a thinner soil, a scantier vegetation, and a more rigorous climate. These factors have exerted an influence on the breed and we have in the Ayrshire the so-called poor man's cow, created primarily for the production of the cheese that has become so widely known throughout Great Britain. This cow is also adapted to furnishing the tenant farmer his milk, butter and meat.

The rugged little country of Switzerland is also the home of several dairy breeds, the principal ones being the Brown Swiss and the Simmenthal. These are large cattle and they are rich and heavy milkers. Here, as in Holland, the dairy herds are largely in the hands of the women, and the importance of comfort and protection is so fully realized that many of the best herds pass the entire winter in large stone barns into which frost never enters. The arrangements for lighting, ventilation and cleanliness are so complete as to afford the most perfect conditions.

These are briefly the conditions under which the principal dairy breeds have been developed. The lesson from the history of the dairy cow is that whatever developed to any degree of excellence she has been well fed and highly cared for, and it is useless for us to expect good results without a corresponding degree of good treatment.

The adaptation of these breeds to meet our requirements will depend primarily upon the conformity of our conditions to those that have given rise to these cattle, though all of the breeds are susceptible of more or less modification, and in a measure capable of adjustment to new conditions. We have a greater abundance of rich feed than any of the localities we have been considering, and all of these breeds may be and are improved by liberal feeding and generous treatment in the Mississippi valley states. As an instance it is generally known that the American Jersey is larger and harder and a better producer than her foreign ancestors, and likewise the Holstein becomes a richer milker and consequently a better producer. Holstein milk averages nearly 1 per cent richer to-day than when this breed of cattle was first introduced. A patron of the college creamery at Ames has a herd of Holsteins that averages 4 per cent butter fat, and he tells me that several of them run up as high as 5 per cent. The Ayrshires in the hands of the best American breeders become better milkers and furnish better carcasses for the block, than when developed on their native heath in Scotland.

The selection of dairy breed involves, not alone the qualities and characteristics of the breeds, but in large measure the individual consideration of the dairyman or farmer, the locality and character of the farm, and the purpose to which it is to be put. These can only be determined individually by each man and upon each farm. For special dairy farming it is unquestionably advisable to select a special dairy breed and exclude everything else. If, however, feed and pasture are abundant and dairying without abandoning beef production is the object, then it is equally clear that a breed possessing both qualities must be selected. There is no longer any question about the advisability of this course. There may be localities where dairying, to be made profitable, must be done exclusively with special dairy breeds, but Iowa does not come in that class. For special dairying the Jersey, Holstein, and Guernseys are justly entitled to

the prominent rank they occupy in the west; and for milk and beef combined, the Shorthorns and Red Polls are entitled to first consideration. One point I wish to impress here, and it is of vital importance, viz.: Profitable dairying and beef production combined cannot be accomplished with either an exclusive beef or dairy herd. Shorthorns and Red Polls used for this purpose must be selected for the dairy as well as for the block, and on the other hand, no man ever succeeds in producing beef from a dairy breed.

A mistake is often made in supposing that because a breed is large and capable of making a rapid gain, it possesses beef merit. This is a fatal error. The Holsteins, for instance, are a special dairy breed, and as such they take high rank, but they are entitled to no consideration whatever as a beef breed. I am aware that this is contrary to the claims of some of the friends of this breed, and I will concede that it is possible to make, at a given age, practically, if not fully, as great weight and as rapid gains in the feed lot from Holsteins as from the beef breeds, but no man can afford to make a business of producing beef from dairy Holsteins, in these days of close competition and narrow margins. I say a dairy Holstein because a dairy Holstein is the only kind worth keeping. It will cost fully as much, and generally more, to make a pound of beef from the dairy than from the beef breeds, and the work of the Iowa experiment station clearly demonstrates that when produced under the same conditions, the dairy beef is worth on the market from 15 to 25 per cent less—enough to more than wipe out all the profits. It would be easier to secure a profitable dairy herd in the beef breeds than to do a successful beef business with the dairy bred cattle, though it would be extreme folly to undertake either. The lesson, however, is that when beef-making and dairying are to be combined, only well selected herds from combined breeds can be used with profit.

And after all, while it is a good thing to study dairy breeds, it is even better to study dairy cows. Success with the cow is the fundamental problem in dairying. The dairy industry in a good many sections of the west has made about as much improvement as it can make under present conditions, until the cow and her management is improved. It is universally recognized that our butter-makers rank among the foremost of the world, but our dairy herds as a class, fall far behind. One of the first essentials is to be able to distinguish a good dairy cow from one that is not a dairy cow at all. It will be observed that there is a wider range of variation between the individual cows in any one breed than between the breeds themselves, so the selection of a breed is only the initial step in dairying. Generally there is a wider relative variation between the cows of a single dairy herd than between the several dairy breeds. I recently saw the record of an individual list of forty-one cows in a private herd in Denmark, that little competitor of ours over there that leads every nation of the globe in the skill attained in the dairy and the superiority of its products. In this herd the cost of producing a pound of butter from the poorest six cows was just double what it cost to produce a pound from the best six, about 17½ cents from the latter and about 35 cents from the former, and what is more, the expense of producing a pound of butter from the poorer cows was about 10 cents above the average price of butter on the Danish market. These results were translated from a Danish report by J. H. Monrad and published in the Breeders' Gazette. The chief difference between the foreign dairyman and the American is that the Dane takes steps to arrive at these

bottom facts, and immediately puts his herd on a paying basis, while we are content to go groping in the dark and be satisfied with the average results. We are too often content with securing cows of some of the approved dairy types or breeds, and leaving the results to take care of themselves. It is well to study dairy characteristics and to have an ideal type, but it is a better thing to study facts. Find out what a cow is producing and what it costs to produce it, and make that the basis of selection. Discard the cow of any breed, type, or ancestry that falls short of the line of reasonable profit. Not all of the good cows are in any one breed, nor all of the cows of any breed good ones. I believe in developing breeds, but not in following breeds blindly.

Cows differ greatly in their capacity to assimilate feed and convert it into dairy products. In a recent test made at the Pennsylvania experiment station, it was found that a cow in their herd that produced 296 pounds of butter in a year, only gave a profit of \$31, while another cow that produced only 279 pounds of butter gave a profit of \$90 a year; so we need to look at even more than the product of a cow to have an exact knowledge of what she is doing.

When one of the best practical dairymen of the west first applied the Babcock test to his herd, he reports that he not only had unprofitable cows, but that it was taking all of the profits of another cow that produced 265 pounds of butter in a year to compensate for the loss of one of these that fell below. When two of these cows were kept together they just paid expenses, and returned neither profit nor loss. When the poorer one was sold, the other returned a profit of \$13.65. This is the report of H. B. Gurler, of DeKalb, Ill. We have all heard about the man who makes two blades of grass grow where one grew before being a public benefactor. In this case, the man who makes two cows grow where one grows better alone is neither a public nor a private benefactor. It is a losing business.

Professor Haecker has admirably illustrated the difference in cost of producing a pound of butter from good cows and those that are not. He has shown that the cost in the Minnesota experiment station herd ranged from 10.8 cents to 18.2 cents. All of these figures go to show the necessity of close attention to the details in the management of a dairy herd. The author of a late humorous story has put it in this way. He says: "The old adage is put not all of your eggs in one basket, but I say unto you put all of your eggs in one basket, and then watch that basket."

This is rapidly becoming an age of specialization and of intensive application; and whether we believe in special farming or not, there never was a time when the basket containing our invested capital required closer attention than now, and not only closer attention, but abler direction and more skillful management. That is where we are in dairying today and we need to "watch that basket." Dairying possesses many advantages entitling it to the consideration of the Iowa farmer, and it is a branch of agriculture that this state is eminently adapted to, but I would advise no man to go into it who is not prepared to do the work thoroughly and in the most intelligent manner.

I wish in closing to refer briefly to the subject of selection of dairy cows—selection within one breed and among all the breeds. I say briefly because this subject is of such importance as to merit an extended discussion.

I have learned that there is a very wide diversity of opinion about what constitutes a good cow. About a year ago I wished to revise the score card or standard of excellence that I was using in my class work on this subject, and I took occasion to submit an outline of my proposed standard to some of the leading dairy authorities, and invited their criticism and suggestions. There was far less uniformity of opinion than I had anticipated. In fact, I know of no question pertaining to animal husbandry that admits of so wide a range of judgment. This and other evidence furnishes conclusive proof to me of one fact, that is, that the prevailing ideas of what constitutes a good dairy cow are very much broader than they formerly were. This is as it should be. It is well to recognize a good cow from any source, no matter what her color, form, character, size or breed. The tendency is to pay less attention to the points of fancy and theory and simply look for utility, and a good cow, leaving all speculation aside. The lessons of recent investigation have taught that there is no narrow, inflexible type of dairy cow, as has sometimes been claimed. The only way to be absolutely certain of the capacity of a dairy cow is to make careful use of the feed measure, the milk scales and the Babcock test. There are, however, certain varying but reasonably infallible indications of dairy merit. In other words there is a well-defined, broad, general, dairy type. This type should be familiar to the dairyman. It should be cultivated to the highest degree, and perpetuated in the herd.

The following is a copy of the score card, or standard of excellence, that my classes are now using in studying dairy cattle. Many of the characteristics are of minor importance and need only to be considered in a general way. I will here discuss only some of the more essential characteristics of a dairy cow, without going into details:

IOWA AGRICULTURAL COLLEGE—DEPARTMENT OF
AGRICULTURE
STUDENT'S SCORE CARD—DAIRY CATTLE.

SCALE OF POINTS		Possible score.	POINTS DEFICIENT.
		Student's estimate.	Revised.
(a)	GENERAL APPEARANCE: 20.		
	Weight—estimated..... lbs.; actual..... lbs.	7	
	Form, wedge shaped as viewed from front, side and top.....	0	
	Quality, hair fine, soft; skin mellow, loose, medium thickness.....	4	
	Secretion yellow; bones clean.....	1	
	Temperament, nervous, indicated by lean appearance.....	1	
	Objections, thick fleshy horns, coarse coat, or hard handling.....	1	
(b)	HEAD AND NECK: 10.		
	Muzzle, clean cut; mouth large; nostrils open.....	1	
	Eyes, full, solid, and bright.....	1	
	Forehead, broad, face lean.....	1	
	Ears, medium size, yellow inside, fine texture.....	1	
	Neck, fine, lean, thin, medium length; throat clean.....	1	
	Horns, small at base, fine texture.....	1	
	Objections, masculine or meaty head, coarse horns or dull eyes.....	1	
(c)	FOREQUARTERS: 5.		
	Withers, lean, thin.....	1	
	Shoulders, light, lean, oblique.....	1	
	Legs, straight, short; shank fine.....	1	

STUDENT'S SCORE CARD—Continued.

SCALE OF POINTS.	Possible score.	POINTS DEFICIENT.	
		Student's estimate.	Revised.
60 Body: <i>W.</i>			
Chest, deep, low, wide.....	10	.....	.....
Ribs, broad, long, wide apart; large barrel.....	10	.....	.....
Back, lean, nearly straight, open jointed.....	10	.....	.....
Loins, broad and strong.....	10	.....	.....
Neck, large and firm.....	10	.....	.....
Osselets, narrow chest, close ribs, fleshy back or weak loins.....	10	.....	.....
66 HEADQUARTERS: <i>H.</i>			
Hips, wide apart, strong.....	10	.....	.....
Pump, long, wide, giving roomy pelvic arch.....	10	.....	.....
Tail, long, slim, fine switch.....	10	.....	.....
Thighs, thin, spare, long.....	10	.....	.....
Excelsions, spreading over ribs; high and wide.....	10	.....	.....
Udder, long, flat under surface, attached high, full behind.....	10	.....	.....
Quarters large and even, but not fleshy.....	15	.....	.....
Tufts, large, evenly placed and of good form.....	10	.....	.....
Milk Veins, large, tortuous.....	10	.....	.....
Milk Wells, large and open.....	10	.....	.....
Legs, straight, far apart, shank fine.....	10	.....	.....
Osselets, narrow hips and ramp, small scutcheon, deep or contracted udder, teats close together or uneven; milk veins and wells small, legs coarse or close together.....	10	.....	.....
Total.....	100	.....	.....

Animal.....Owner.....
 Student.....Date.....

In the first place it will be noticed that a good cow always has the same general form, known as the wedge shape. This form is the result of milking capacity rather than milking capacity being the result of form. In other words, the cow that milks well must necessarily take on the wedge form, but not all cows of this form are good milkers. There are occasional and not very rare exceptions in which cows have sprung from good dairy ancestry and inherited dairy forms without inheriting dairy capacity; consequently form is not infallible evidence of dairy excellence. It is, however, an almost unvarying accompaniment of dairy excellence, regardless of breed. This is true by reason of the fact that the demands on the highest type of dairy cow are such that development of udder, depth and capacity of barrel, width of pelvis and loins, and spring of hind ribs are a necessity. These are the maternal and milk forming organs, and their development and expansion is essential to the highest development of the milking function of the cow. The operation of this principle is plainly apparent in the representatives of breeds that are of entirely distinct type, such as the Jersey, Holstein and Shorthorn, as shown by the accompanying illustrations. This depth, expansion, and capacity of the vital dairy organs, together with a good udder and milk veins, and a maximum digestive capacity, are the prime essentials of a good dairy cow. They indicate the two principal factors that are of greater significance in determining dairy merit than all others together; first, that the cow is capable of converting her feed into milk, and second, that she is capable of making good use of a large quantity of feed. These are the points upon which practical utility and



SHORTHORN COW—BELLE OF SQUAW CREEK, Vol. 8.
 Milk record, 77-day test, 84 pounds per day. Milk test, 77-day period, 3.21 per cent. Butter record, 77-day test, 1.16 pounds per day.



Milk record, 17-day test, 83.3 pounds per day. Milk test, 17-day period, 5.49 per cent. Butter record, 17-day test, 1.87 pounds per day.

John W. Mills.

HOLSTEIN COW, FIDELITY OF BLACK HAWK, No. 2008.

Milk test, 17-day period, 5.49 per cent. Butter record, 17-day test, 1.87 pounds per day.



Milk record, 17-day test, 16 pounds per day. Milk test, 17-day period, 4.89 per cent. Butter record, 17-day test, 1.46 pounds per day.

JERSEY COW, NICOLETTE, No. 4001.

Milk record, 17-day test, 16 pounds per day. Milk test, 17-day period, 4.89 per cent. Butter record, 17-day test, 1.46 pounds per day.

John W. Mills.

profit turn. I have enumerated a number of other characteristics in the score card presented, all of which are deserving of more or less attention, but they are merely contributory to the same ultimate end, viz. that of the highest practical return for a generous ration. For instance, I regard a thin spare thigh, as of vital importance, but this is only a necessary accompaniment of a good udder, for it is impossible to have a good development of udder with a full, round meaty thigh. The one precludes the other. As a further indication I like to see a richly colored mellow skin, a clear, prominent eye, a thin neck, a clean head, lean shoulders, prominent spinal column, and strong nervous organization, together with good respiratory and circulatory organs and other minor marks of dairy capacity, but these are all subordinate to the tangible and practical evidence furnished in the first named qualifications.

The Shorthorn illustration represents a cow that combines beef and dairy qualities in a profitable degree. I prefer to use the term combination cow. General purpose is too vague and misleading. By combination I mean just two things—beef and milk. I do not claim that it is possible to obtain the highest degree of excellence of each in the same animal, but it is possible and practicable under given conditions to obtain a profitable degree of excellence in both. I want also to state that I regard it more difficult to breed and maintain a herd of this character than one of the special breeds. It will require closer study and attention, and a higher degree of skill. One reason for this is that comparatively few herds have been intelligently and systematically developed for the combination purpose, and the combination traits are not yet well established.

This cow was one of eight taken from the college herd for an experiment, the object of which was not to test the capacity of the cows but to test the relative value of different feeds, particularly roots. She was put into a seventy-seven day test, January 1, 1895, having been in milk since November 7th previous. During this seventy-seven day period, her average daily yield of milk was 31.4 pounds, containing 3.71 per cent of butter fat. This is equivalent to 1.16 pounds of butter fat, or 1.35 pounds of butter per day for seventy-seven days, under conditions, owing to the nature of the experiment, that were not altogether favorable. In this test there were two Shorthorns, two Jerseys, and four Holsteins. The Jerseys made butter at a cost of 10.4 cents per pound for feed consumed; the Shorthorns at 12.7 cents, and the Holsteins at 12.9 cents. All feeds were charged at the high prices prevailing in 1895. During this test, however, the Shorthorns gained forty-five pounds each, and the Holsteins forty-one pounds each, while the Jerseys just held their own. All were fed the same kind of a ration. The Holsteins were a little farther advanced in their period of lactation than either of the other breeds. A more nutritious and succulent ration for the Holsteins and Shorthorns would doubtless have made more milk and less gain. More care is necessary in feeding a combination animal for milk than one of a special purpose, as the former has more of an inherited tendency toward flesh, and when milk is wanted it is necessary to feed for milk. One reason why many cows of the combination type never milk profitably is that they are never fed properly for milk. The Holsteins averaged 1.25 pounds of butter per day, and the Jerseys and Shorthorns 1.26 pounds per day. The yield was practically the same in all cases; the difference in cost was due to the varying amounts of feed consumed.

The Shorthorn cow here illustrated is a good average representative of the combination cow. She is capable of taking on flesh readily when dry, and her male calves, when finished for the block, are capable of topping the market. She has the dairy form to a fair degree, though she is not deep enough from loin to udder to indicate the highest dairy capacity. Other cows in the college herd excel her in this respect. This illustration, however, was made from a photograph taken when the cow had been in milk seven months, and when the udder was only about half filled. While she is broad at the loin and hind quarter she is thin and sharp at the crops and top of shoulder, and has a lean neck and spare flat thighs, giving room for udder development and elaboration of milk. Her head and eye indicate good vigor and character, and her chest capacity and vital organs are good. She presents rather too much flesh to be in the best dairy form but was photographed, as stated, when well along in her period of lactation. When a cow of this breed though, for that matter, of any breed, presents that thick, blocky, well-rounded form, full and deep at the thighs and flanks and broad and meaty over the crops, shoulder and neck, it will be useless to look for milk in that animal. These are the characteristics of the capacity for beef-making to the exclusion of all others. All breeds and all herds require careful selection.

The Jersey cow illustrated here is a good representative of the special dairy type. Her average yield of milk in the test referred to was eighteen pounds per day, and the test during this time showed an average of 6.93 per cent of fat. The conformation and udder development of this cow do not indicate a large yield, but the richness of her milk is quite remarkable. She produced butter more economically than any other cow in the herd, though it will be seen that her daily average was hardly as large as that of the Holstein cow illustrated here. This difference was doubtless mainly due to the better digestive and assimilative powers of the Jersey, and to some extent, perhaps, to the fact that the Jersey required less feed for maintenance than the Holstein. The latter principle furnishes basis for the claim sometimes advanced, that among cows of the same type, the smaller animals are always the more economical producers. This claim, however, is not fully sustained by facts. Economical production depends on other facts quite as much, or even more, than on size. A case in evidence is furnished by the records of the Columbian dairy test in which we find that the best five cows in the Jersey herd of 25 averaged 983 pounds in weight when they came out of the 15-day cheese test, while the poorest five cows, from the standpoint of economical production, in the same herd averaged, when they came out of this test only 884 pounds, or 99 pounds less; and in the 90-day butter test the best five cows in the Jersey herd averaged 1,038, while the poorest five cows averaged only 921, or 117 pounds less. Thus it will be seen that the records of this important test furnished a notable exception to the claim that small cows are necessarily the most economical producers.

The Holstein cow illustrated is also a good representative of her type. Her depth and capacity of barrel and development of udder and milk veins, indicate a strong flow and good yield of milk. Her record for the 77 days was 29.2 pounds of milk daily, containing an average of 3.45 per cent of fat. This record is equivalent to 1.57 pounds of butter per day. All of these cows had been in milk from one to three months at the beginning of

the experiment, January 1st, and the test was made during the winter months. Had they been tested when fresh and on green feed the records would doubtless have been considered higher. The Jersey cow had been one month in milk at the time of entering the experiment, the Shorthorn two months, and the Holstein three months. These cows very creditably represent the respective types and breeds to which they belong. The Holstein and Jersey belong to the special purpose class, while the Shorthorn represents the combination or double purpose class.

BUTTER SHIPMENTS.

INFORMATION FROM THE RAILWAYS.

I take great pleasure in once more expressing for this department, and for the dairy people of Iowa, our appreciation of the help and valuable assistance rendered the dairy interests by the railways of Iowa. Most of the various lines in the state are alive to the value of the development of the great dairy industry in every suitable territory, and all the railways operating through the best creamery sections of the state, find it advantageous for them to keep special representatives looking after the demands and requirements of this class of products.

Many of the railways that in the past did not pay much attention to this traffic, now have special agents at work encouraging the erection of factories and establishment of creameries along their respective routes. These representatives of the railways and eastern fast freight lines are men of push and ability, and are generally well-posted on the subject of dairying. They do a great deal of good as they go from creamery to creamery, and keep the busy managers and butter-makers posted as to what is going on in the larger fields in this line of work.

They are a help in the various associations organized to protect and advance the dairy industry. They faithfully represent and look after one of the most important branches of the industry, namely—the transportation of our dairy products to the markets. This is done with noteworthy rapidity, and is watched with greater care than any other step in the entire process of supplying the people with fine butter.

This year the railways reported to this department upon the amount of butter billed to points outside of the state, cheerfully and promptly, and from these reports a table has been compiled showing the gross pounds of butter shipped from each county during the year ending September 30, 1896, as compared with the shipments of the previous year, and showing also the increase or decrease by counties.

TABLE No. XVI.

Iowa railway shipments compiled by counties.

COUNTIES.	NUMBER OF CREAMERIES FOR YEARS 1895 AND 1896 SHOWING INCREASE OR DECREASE BY COUNTIES.				GROSS POUNDS OF BUTTER SHIPPED OUT OF THE STATE FOR THE YEARS ENDING SEPTEMBER 30, 1895 AND 1896, SHOWING INCREASE OR DECREASE BY COUNTIES.			
	1895.	1896.	Increase.	Decrease.	1895.	1896.	Increase.	Decrease.
The State	774	810	89	53	70,141,775	95,277,281	17,793,500	1,658,063
Adair	5	5			229,949	406,075	166,126	
Adams	5	5	1		298,801	477,317	160,420	
Allamakee	14	13		1	1,235,415	1,285,653	50,419	
Appanoose					85	88		47
Audubon	6	5		1	937,491	658,125	228,634	
Benton	10	11	1		610,871	590,225		50,646
Black Hawk	22	22			2,031,624	2,324,853	490,919	
Boone	5	5			183,139	217,610	34,471	
Bremer	22	22			2,127,341	3,379,179	1,251,838	
Buchanan	16	17	1		2,605,083	3,883,215	961,183	
Buena Vista	6	6	3		642,627	1,102,147	319,220	
Butler	17	16		1	2,355,776	2,088,122	728,346	
Calhoun	6	7	1		820,319	1,031,200	212,690	
Carroll	6	6			698,618	999,853	308,835	
Cass	1	5	4		328,143	253,414		66,727
Cedar	10	6		4	957,690	1,116,959	159,269	
Cerro Gordo	12	10		2	1,983,342	1,298,031	183,569	
Cherokee	4	6	2		372,063	461,534	89,441	
Chickasaw	19	19			1,126,313	3,071,915	54,029	
Clarke	1	4	3		106,421	56,556		8,950
Clay	10	6		4	799,955	1,081,978	281,983	
Clayton	22	20		2	3,211,315	3,299,683	16,862	
Clinton	10	15	5		750,524	715,837		34,687
Crawford	5	6	1		944,544	284,829		59,725
Dallas	8	6		2	961,956	1,141,646	169,590	
Davis	4	3		1	92,340	175,105	75,765	
Decatur	2	2			7,011	14,919	7,908	
Delaware	26	27	1		3,938,941	3,501,902	533,931	
Des Moines	2	2			709,124	825,998	116,874	
Dickinson	1	2	1		139,685	328,758	189,073	
Dubuque	27	26		1	2,906,635	3,213,973	217,338	
Emmet	5	5			2,325,920	422,909	78,070	
Fayette	23	24	1		2,260,695	3,348,878	1,154,883	
Floyd	7	8	1		900,689	915,385	165,705	
Franklin	5	9	4		496,783	718,371	22,488	
Fremont	6	6			44,776	1,076		45,600
Greene	17	15		2	1,194,275	1,807,264	192,866	
Grundy	17	15		2	1,150,959	1,407,589	256,730	
Hathrie	8	8			143,301	378,112	194,811	
Hamilton	8	8			1,723,057	2,048,661	325,554	
Hancock	7	12	5		314,256	228,438		85,818
Hardin	9	9			1,275,000	1,679,994	263,964	
Harrison	9	9			7,549	33,410	26,870	
Henry	3	3			83,311	72,347		10,964
Howard	7	6		1	1,723,263	1,747,111	15,858	
Humboldt	7	7			747,425	691,451	944,625	
Ia	3	3			139,110	351,760	92,641	
Iowa	5	5			421,779	639,642	208,872	
Jackson	13	13			1,143,256	1,021,226		122,030
Jasper	10	10			494,840	673,199	208,550	
Jefferson	4	7	3		339,597	351,552	41,963	
Johnson	7	6		1	263,120	245,980		17,140
Jones	21	20		1	2,554,795	3,102,990	147,235	
Keokuk	6	5		1	569,783	484,189		81,594
Kossuth	17	19	2		1,682,321	2,170,398	488,697	

TABLE No. XVI—CONTINUED.

COUNTIES.	NUMBER OF CREAMERIES FOR YEARS 1895 AND 1896 SHOWING INCREASE OR DECREASE BY COUNTIES.				GROSS POUNDS OF BUTTER SHIPPED OUT OF THE STATE FOR THE YEARS ENDING SEPTEMBER 30, 1895 AND 1896, SHOWING INCREASE OR DECREASE BY COUNTIES.			
	1895.	1896.	Increase.	Decrease.	1895.	1896.	Increase.	Decrease.
Lee	4	4			711,602	1,404,100	622,498	
Linn	2	2			2,133,937	2,472,643	119,246	
Louis	4	4			159,345	83,979		45,375
Lucas	1	1			74,880	128,775	51,965	
Lyon	2	2			275,229	337,425	62,196	18,919
Madison	4	5	1		71,170	136,965	127,825	
Malaka	3	4	1		384,638	220,900		70,738
Marion	4	4			272,485	226,284		21,899
Marshall	2	2			728,744	665,217		391,474
Mills	1	1			77,468	147,796	70,327	
Mitchell	10	10			1,738,485	1,735,350	36,925	
Monona	1	1			21,491	25,880	7,389	
Monroe	3	3			625	4,178	1,856	
Montgomery	3	3			338,479	244,131		94,337
Muscatine	6	6			474,100	478,215	1,115	
O'Brien	5	5			674,727	673,100		1,627
Oceola	3	3			64,310	67,015		7,706
Page	5	5			307,087	204,844		2,512
Palo Alto	10	10			1,172,193	2,118,118	1,686,523	
Plymouth	4	7	3		420,560	588,475	406,973	
Pocahontas	4	5	1		391,009	666,209	604,301	69,530
Polk	6	6			290,559	226,515		69,530
Pottawattamie	4	4			196,542	674,093	417,381	
Preble	4	4			115,769	109,566		146,294
Ringgold	3	3			143,923	101,259		42,961
Sac	14	14			1,275,443	1,424,831	149,200	
Sadler	5	5			90,628	128,373	37,648	
Shelby	3	3			54,437	230,388	159,851	
Sioux	7	9	2		639,963	914,991	234,028	
Story	15	14		1	1,624,667	1,357,115		369,992
Tama	7	6		1	613,680	639,985	4,366	
Taylor	8	6		2	117,178	106,425		39,770
Union	1	2	1		447,500	958,453	504,273	
Van Buren	1	2	1		66,189	35,788		30,484
Wapello	4	5	1		1,437,555	1,404,098		33,457
Warren	3	3			5,769	35,810	50,090	
Washington	8	7		1	601,384	677,190		14,214
Wayne	5	6	1		554,289	747,494	213,314	
Webster	10	7		3	738,696	938,041	109,343	
Winnebago	9	14	5		1,112,610	1,079,990		41,620
Winnebeck	19	21	2		1,773,341	2,022,796	309,345	
Woodbury	1	1			149,457	1,803,651	284,855	
Worth	1	1			863,079	1,054,447	221,566	
Wright	5	4		1	885,355	851,500		33,856
Total	774	810	89	53	70,141,775	95,277,281	17,793,500	1,658,063

The table shows in detail the number of creameries and skim stations to be 810, an increase over 1895 of 86. Forty-nine counties had an increase of 89, and 83 counties a decrease of 53 creameries. The total gross pounds billed out of the state was 95,277,281. Deduct 10 per cent for weight of the package, and the net pounds is 80,032,916. Last year the net shipments amounted to 68,479,108 pounds. These figures give 1896

an increase of 13,553,808 net pounds, over that of last year, which is equal to about 20 per cent. In 68 counties there was an increase of 14,946,582 net pounds, and in 31 counties there was a decrease of 1,392,794 net pounds.

In the report of last year comparisons were made of the counties shipping 1,000,000 or more gross pounds of butter. Below is given a complete table of all the counties with net shipments. The first column gives the number of net pounds shipped from each county, the second the rank of each county upon this basis, the third column gives the number of square miles in each county, following which is the number of net pounds per square mile shipped from each county, and the last gives the rank of each county upon the basis of shipments per square mile.

TABLE XVII.

COMPILED BY COUNTIES.

Showing total net shipments of butter from each county, and rank; area in each county; pounds per square mile for each county and rank. Also total shipment for the state with net pounds per square mile, for the year ending September 30, 1896.

COUNTIES.	Total net shipments of butter for year.	Rank by total lbs. shipped.	Area of square miles in county.	Pounds per square mile.	Rank by lbs. per square mile.
The State	80,082,916		56,025	1,429*	
Adair	141,163	61	779	502	68
Adams	493,944	48	433	928	59
Allamoree	1,076,817	24	858	1,037	32
Appanoose	32	99	318	101	99
Ashtabula	559,245	54	443	1,262	42
Benton	470,889	58	720	654	62
Black Hawk	1,129,535	10	578	3,990	10
Boone	279,992	72	578	961	73
Bremer	2,338,510	4	433	5,370	1
Buchanan	1,320,910	1	578	5,693	2
Butts	975,226	27	578	1,695	31
Calhoun	1,519,022	9	570	4,454	7
Carroll	897,596	34	578	1,550	56
Cass	831,476	38	578	1,443	58
Cedar	55,579	87	458	124	85
Cerro Cordo	107,910	39	578	1,024	34
Cherokee	1,094,221	35	578	1,848	27
Chickasaw	387,689	60	578	673	61
Clarke	1,979,904	8	504	5,118	3
Clay	685,882	31	458	1,494	48
Clayton	3,769,189	5	578	5,178	3
Crawford	601,135	49	698	861	53
Dallas	239,256	80	730	322	75
Davis	925,658	36	558	1,659	43

* Plus.

TABLE No. XVII—CONTINUED.

COUNTIES.	Total net shipments of butter for year.	Rank by total lbs. shipped.	Area of square miles in county.	Pounds per square mile.	Rank by lbs. per square mile.
Davis	147,088	81	502	294	79
Decatur	12,359	95	534	24	94
Delaware	2,941,673	3	578	5,107	4
Des Moines	68,082	82	415	166	87
Dickinson	258,394	68	454	708	65
Dubuque	2,689,737	6	601	4,482	6
Emmet	217,023	75	484	438	74
Fayette	2,973,285	2	2,232	4,137	6
Floyd	785,923	40	704	1,126	47
Franklin	694,188	46	578	1,200	45
Frederick	904	99	500	2	98
Greene	1,140,153	21	576	1,979	23
Grundy	1,467,610	19	504	2,949	19
Harrison	217,614	65	595	358	80
Harrison	1,780,152	14	970	3,987	14
Hamilton	271,500	67	578	475	67
Hancock	1,443,025	20	578	2,497	17
Hardin	28,084	94	695	40	95
Harrison	21,107	96	431	141	96
Henry	1,462,533	18	410	3,079	13
Howard	823,789	38	432	1,928	24
Humboldt	194,075	75	432	450	69
Iowa	639,822	47	554	907	52
Jackson	257,514	55	628	1,245	49
Jasper	563,479	51	730	775	56
Jefferson	320,503	64	413	743	67
Johnson	207,463	73	518	399	74
Jones	2,008,171	7	578	4,334	5
Keokuk	406,652	52	578	707	69
Keosau	1,829,665	15	977	1,871	39
Lee	870,324	35	512	1,700	30
Lehigh	2,077,030	11	720	2,885	15
Linn	24,538	98	578	42	97
Louis	108,491	84	432	247	83
Lucas	338,149	70	567	598	72
Lyon	167,196	80	576	290	81
Madison	193,506	76	576	331	76
Mahaska	245,533	68	576	422	75
Marion	831,782	37	578	1,444	35
Marshall	124,147	82	441	279	82
Mills	1,508,994	17	473	3,198	11
Mitchell	24,229	95	556	44	94
Monroe	2,567	97	628	4	97
Monroe	208,012	74	439	474	81
Montgomery	899,193	50	517	913	51
Muscatine	564,564	53	576	980	60
O'Brien	57,015	91	400	119	91
Oscola	173,473	78	70	437	89
Pace	1,843,659	13	576	3,149	12
Palo Alto	701,799	45	595	1,185	58
Plymouth	702,816	43	576	1,207	54
Pocahontas	165,233	77	565	317	77
Polk	965,287	39	500	930	41
Pottawattamie	350,845	63	563	677	65
Poweshiek	85,143	85	543	157	85
Ringgold	1,108,766	21	970	2,078	22
Sac	157,749	83	595	267	84
Salt Lake	174,009	79	591	291	80
Shelby	798,962	41	759	940	40
Sioux	1,056,917	33	578	1,828	28

TABLE No. XVII—CONTINUED.

COUNTIES.	Total net ship- ment for year.	Rank by total lbs. shipped.	Area of territory in square miles.	Pounds per square mile.	Rank by lbs. per square mile.
Tama	511,790	85	730	711	58
Taylor	54,380	134	254	214	101
Union	828,200	42	422	1,961	32
Van Buren	30,000	140	82	365	104
Wapello	1,170,442	32	432	2,709	16
Warren	44,000	138	85	518	102
Washington	299,221	50	362	826	62
Wayne	84,800	132	100	848	94
Webster	702,720	44	465	1,511	41
Winnebago	690,020	46	465	1,484	44
Winnebuck	1,107,540	15	694	2,460	17
Woodbury	1,395,475	12	572	2,794	14
Worth	31,500	142	484	650	106
Wright	712,360	44	570	1,250	45
Total	90,032,916		19,025	4,728	

From this table it may be seen that there was an average shipment of 798,812 pounds per county, and 1,428 pounds for each square mile of territory in the state. Buchanan county ranks first in the amount shipped, and second in shipments per square mile; Fayette ranks second in amount shipped, but eighth in pounds per square mile; Delaware ranks third in amount, and fourth in shipments per square mile; Bremer ranks fourth in amount, but first in the shipments per square mile. The counties shipping more than 3,000 pounds per square mile are as follows:

COUNTY.	LBS. PER SQ. MILE.
1. Bremer	6,570
2. Buchanan	5,663
3. Chickasaw	5,118
4. Delaware	5,107
5. Jones	4,824
6. Dubuque	4,492
7. Butler	4,356
8. Fayette	4,137
9. Clayton	3,904
10. Black Hawk	3,680
11. Mitchell	3,188
12. Palo Alto	3,149
13. Howard	3,073

CREAMERY LIST.

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

Office number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	OPERATED BY INDIVIDUAL OR SINGLE COMPANY.	NAME OF PROPRI- ETOR, OR MANAGER.	F. O. ADDRESS OF PROPRI- ETOR, OR MANAGER.	SHIPPER BY NAME OR BRAND.	NAME OF MILK CONDENSER.	REPAIRS, PATH- WAY, OR METHOD OF TESTING.	Method of test- ing milk—by thermo-lactometer or other.	Test.	Butter number.
1	Adair County.	Adair Creamery	Ind.	Burwell & Beck	Adair	Adair	J. E. Beck.	Sept. 11.	Test.	43	
2	Bridgewater	Blue Grass Creamery	Ind.	A. L. Stevens & Co.	Fountainville	Bridgewater	Albion Hyatt.	Sept. 11.	Test.	44	
3	Fountainville	Blue Grass Creamery	Ind.	A. L. Stewart & Co.	Fountainville	Fountainville	W. F. Stewart.	Sept. 11.	Test.	45	
4	Greenfield	Greenfield Creamery	Ind.	J. W. Darcy	Greenfield	Greenfield	J. C. Sanders.	Sept. 11.	Test.	46	
5	Holston	Holston Creamery	Ind.	E. M. Lamm	Stuart	Stuart	L. B. Wain.	Sept. 11.	Test.	47	
6	Orient	Eight Creamery Co.	Ind.	O. Bards	Chicago, Ill.	Orient	E. W. Cowperthwaite.	Sept. 11.	Test.	48	
7	Adair County.	Eight Creamery Co.	Ind.	O. Bards, Pres.	Chicago, Ill.	Corning	Chas. Johnson.	Sept. 11.	Test.	49	
8	Carlton	Eight Creamery Co.	Ind.	O. Bards, Pres.	Chicago, Ill.	Carlton	Chas. Johnson.	Sept. 11.	Test.	50	
9	Carlton	Eight Creamery Co.	Ind.	O. Bards, Pres.	Chicago, Ill.	Carlton	Chas. Johnson.	Sept. 11.	Test.	51	
10	Mirror	Eight Creamery Co.	Ind.	O. Bards, Pres.	Chicago, Ill.	Carlton	Chas. Johnson.	Sept. 11.	Test.	52	
11	Swadlow	Eight Creamery Co.	Ind.	O. Bards, Pres.	Chicago, Ill.	Carlton	Chas. Johnson.	Sept. 11.	Test.	53	
12	Adair County.	Ice Cave Creamery Co.	Ind. Co.	Ice Cave Creamery Co.	Doonah.	New Adair.	E. J. Foss.	U. C.	U. C.	54	
13	Doonah	Ice Cave Creamery Co.	Ind. Co.	Ice Cave Creamery Co.	Doonah.	Laurens	Jackson Smith.	U. C.	U. C.	55	

Ind. with stations designated by initials.

*Manufacturers' book bottles and closures.

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual or cooperative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	F. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-er, ball, cream, or both.	Method of receiving milk from the test or by the hundred.	Dairy commis-sioner's number.	Office record number.
14	Almonace County, Lausling.....	Calhoun Creamery Co.	Co-op.	A. J. McCafferty, Sec.	Lausling.....	Lausling.....	Geo. Turner.....	G. C.			
15	Lausling.....	Calhoun Creamery Co.	Co-op.	A. J. McCafferty, Sec.	Lausling.....	Lausling.....	Geo. Turner.....	G. C.			
16	New Albion.....	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'my Co.	Decorah.....	New Albion.....	E. S. Rice.....	G. C.			
17	Postville.....	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'my Co.	Decorah.....	Postville.....	Tom Hyde.....	S. & G. G.			
18	Postville.....	Postville Farm's Co-op.	Co-op.	O. Ellison, Sec.	Postville.....	Postville.....	J. A. Gordon.....	Sep'tr.	Test.		8
19	Quandah.....	Arctic Spring Creamery	Ind.	J. D. Johnson.....	Quandah.....	Spring Grove.....	John H. Gnare.....	G. C.			
20	Rossville.....	Rossville Co-op. Cr'my	Co-op.					G. C.			
21	Village Creek.....	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'my Co.	Decorah.....	Lausling.....	K. Munson.....	G. C.			
22	Waterville.....	Fry's Co-op. Cr. & Cum. Co.	Co-op.	A. Asleson, Sec.	Waterville.....	Waterville.....	A. Asleson.....	G. C.			
23	Waukon.....	Ludlow Co-op. Cr'y Co.	Co-op.	A. G. Winter, Sec.	Waukon.....	Waukon.....	F. Flet.....	Sep'tr.	Test.		
24	Waukon.....	Oak Leaf Creamery.....	Stk Co.	G. L. Hubbell.....	Waukon.....	Waukon.....	K. V. Ferris.....	G. C.			175
25	Audubon County, Audubon.....	Snaron Creamery.....	Co-op.	R. Jenson, Sec.	Audubon.....	Audubon.....	B. Jenson.....	Sep'tr.	Test.		
26	Kimballton.....	Danish Sep'r Cr'y Co.	Co-op.	C. Christian, Sec.	Kimballton.....	Audubon.....	Julius Anderson.....	Sep'tr.	Test.		
27	Brayton.....	Oakfield Sep'r Cr'y Co.	Co-op.	Jesse Nyman.....	Brayton.....	Brayton.....	A. S. Stone.....	Sep'tr.	Test.		
28	Extra.....	W. Hamlin Sep. Cr. Co.	Co-op.	H. P. Peterson.....	Extra.....	Extra.....	H. P. Peterson.....	Sep'tr.	Test.		
29	Extra.....	Extra Creamery.....	Ind.	F. F. Wilcox.....	Extra.....	Extra.....	F. F. Wilcox.....	Sep'tr.	Test.		
30	Belle Plaine County, Belle Plaine.....	Wintergreen Creamery	Ind.	Boody, A. W. & W. J.	Belle Plaine.....	Belle Plaine.....		Sep'tr.	Test.		
31	Blairtown.....	Katie's Creamery.....	Ind.	Katie A. Duncalf.....	Blairtown.....	Blairtown.....	Katie A. Duncalf.....	Sep'tr.	Test.		
32	Cedar Rapids.....	Fremont Creamery Co.	Stk Co.	F. A. Lucas, Sec.	Cedar Rapids.....	Atkins.....	C. P. Lako.....	Sep'tr.	Test.	285	
33	Garrison.....	Star Creamery Ass'n.....	Co-op.	Geo. H. Speck, Sec.	Garrison.....	Garrison.....	F. M. Hageck.....	Sep'tr.	Test.	7	
34	Shellsburg.....	Shellsburg Creamery.....	Ind.	W. B. McGregor, Sec.	Shellsburg.....	Shellsburg.....	W. B. McGregor.....	Sep'tr.	Test.	30	
35	Shellsburg.....	Louisville.....	Ind.	W. R. McGregor, Sec.	Shellsburg.....	Shellsburg.....		Sep'tr.	Test.	34	
36	Urbana.....	Farmers' Co-op. Cr. Co.	Co-op.	A. B. Cramer, Sec.	Urbana.....	Center Point.....	C. M. Fisher.....	Sep'tr.	Test.	26	
37	Van Horn.....	Van Horn.....	Co-op.	Gardner & McKenna	Van Horn.....	Van Horn.....	Geo. Gardner.....	S. & G. G.	Test.	99	
38	Vinton.....	Vinton Creamery.....	Ind.	Rowe Bros.....	Vinton.....	Vinton.....	Homer Barber.....	G. C.			
39	Walford.....	Walford Creamery.....	Co-op.	Novak & Jiler.....	Walford.....	Walford.....	W. H. Lewis.....	Sep'tr.	Test.	73	
40	Johnson County, Danforth.....	Danforth.....	Co-op.	Novak & Jiler.....	Walford.....	Walford.....		Sep'tr.	Test.		
41	Boles.....	Mt. Vernon Cr'y Co.	Co-op.	J. E. Handley, Sec.	Boles.....	Janesville.....	Wm. True.....	Sep'tr.	Test.	181	
42	Cedar Falls.....	Cedar Falls Co-op. Cr. As	Co-op.	L. H. Sevidin, Sec.	Cedar Falls.....	Cedar Falls.....	A. W. Pierce.....	Sep'tr.	Test.	60	
43	Cedar Falls.....	Benson Dairy Co.	Co-op.	H. R. Brown.....	Benson.....	Benson.....	Geo. W. Thayer.....	Sep'tr.	Test.	830	
44	Cedar Falls.....	Black Hawk Cr'y Co.	Co-op.	J. O. Filkins, Sec.	Cedar Falls.....	Cedar Falls.....	John Smith.....	Sep'tr.	Test.	99	
45	DeWar.....	Pless, Val. Dairy Ass'n	Co-op.	W. P. Garrett, Sec.	DeWar.....	DeWar.....	W. H. Graham.....	Sep'tr.	Test.	83	
46	Dunkerton.....	Lester.....	Ind.		Dunkerton.....	Dunkerton.....	G. W. Meyerhoff.....	Sep'tr.	Test.	271	
47	Dunkerton.....	Farmers' Cr'y Ass'n.....	Co-op.	G. S. Kieckhefer, Sec.	Dunkerton.....	Dunkerton.....	O. G. Alexander.....	Sep'tr.	Test.	1,002	
48	Eagle Center.....	Eagle Center Dairy As.	Co-op.	T. J. Humphrey, Sec.	Eagle Center.....	Waterloo.....	Jon. Hill.....	Sep'tr.	Test.	322	
49	Finchford.....	Union Creamery Co.	Co-op.	J. P. Churchill, Sec.	Finchford.....	Winslow.....	A. K. Smith.....	Sep'tr.	Test.	1,001	
50	Fredsville.....	Fredsville Creamery.....	Co-op.	J. J. Thason, Sec.	Fredsville.....	Cedar Falls.....		Sep'tr.	Test.		
51	Gilbertville.....	Gilbertville Dairy As.	Co-op.	E. Marlon.....	Gilbertville.....	Washburn.....	L. I. Chase.....	Sep'tr.	Test.	638	
52	Hudson.....	Rock Crk Fr's D'y Ass'n	Co-op.	W. P. Thompson.....	Hudson.....	Hudson.....	Thomas Hanson.....	Sep'tr.	Test.	870	
53	Hudson.....	Hudson Co-op. D'y Ass'n	Co-op.	D. Bedford, Sec.	Hudson.....	Hudson.....	B. C. Knudsen.....	Sep'tr.	Test.	870	
54	Jubilee.....	Co-op. Cr. Co. of Jubilee	Co-op.	H. G. Koeb, Sec.	Jubilee.....	Jesup.....	H. B. Kanouse.....	Sep'tr.	Test.	875	

CREAMERY LIST—CONTINUED.

Office record number	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized 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-er-er, cream, or both.	Method of receiving the milk or cream, the test or % of fat in the milk, and the number of bottles or cans.	Number of bottles or cans.
55	Black Hawk County, La Porte City.	La Porte Co-op. Cr'y Co.	Co-op.	Wesley Fegles, Sec.	La Porte City.	La Porte City.	Oscar Harvey.	Sep'tr.	Test.	343
56	Louis.	Louise Co-op. Cr'y Co.	Co-op.	John J. Largo, Sec.	La Porte City.	La Porte City.	N. W. Johnson.	Sep'tr.	Test.	277
57	Reinbeck.	Red Bird Creamery Co.	Stk Co.	Albert Vitum, Sec.	Reinbeck.	Reinbeck.	E. S. Stevens.	Sep'tr.	Test.	680
58	Waterloo.	Crain Creek.	Ind.	F. A. Riedell.	Crain Creek.	Waterloo.	F. A. Riedell.	Sep'tr.	Hd.	131
59	Waterloo.	Edwards.	Ind.	Wm. Widdel.	Edwards.	Waterloo.	S. P. Doty.	Sep'tr.	Test.	230
60	Waterloo.	Farmers' Dairy Ass'n.	Co-op.	Fowler Co.	Waterloo.	Waterloo.	Samuel Swietnor.	Sep'tr.	Test.	722
61	*Waterloo.	North Star.	Stk Co.	Fowler Co.	Waterloo.	Waterloo.	Chas. Wood.	Sep'tr.	Test.	
62	*Waterloo.	Waterloo Creamery.	Stk Co.	Fowler Co.	Waterloo.	Waterloo.	F. Wightman.	Sep'tr.	Test.	
63	Bonne County, Madrid.	Madrid.	Ind.	N. Laborde.	Madrid.	Madrid.	N. Laborde.	Sep'tr.	Test.	111
64	Ogden.	Ogden Creamery.	Ind.	J. P. Cumming.	Ogden.	Ogden.	F. E. Lewis.	Sep'tr.	G. O.	
65	Remner.	Remner's.	Ind.	Remner Bros.	Grand Junct'n	Ogden.	G. O.	Sep'tr.	Test.	
66	Story City, Story Co.	Rosendale Co-op.	Co-op.	J. J. Skaulre, Sec.	Rosendale.	Story City.	Peter F. Soenke.	Sep'tr.	Test.	798
67	Bremer County, Bremer.	Bremer Creamery Co.	Co-op.	F. C. Fohagan.	Bremer.	Bremer.	John Prier.	Sep'tr.	Test.	327
68	Bremer.	Bremer.	Co-op.	F. C. Fohagan.	Bremer.	Bremer.		Sep'tr.	Test.	
69	Bremer.	Western Douglas.	Co-op.	Aug. Hogysenworth.	Seigel.	Bremer.	A. F. Saddler.	Sep'tr.	Test.	
70	Denver.	Farrington Cr'y Co.	Co-op.	Henry Steege.	Waterloo.	Waterloo.	M. J. Johnson.	Sep'tr.	Test.	
71	Denver.	First Maxwell Cr'y Co.	Co-op.	Wm. Millins.	Denver.	Waverly.	W. McKeen.	Sep'tr.	Hd.	250

72	Frederica.	Douglas Center Cr'y Co.	Co-op.	D. D. Cronkrite, Sec.	Frederica.	Tripoli.	Frank Finch.	Sep'tr.	Test.	
73	Frederica.	Frederica.	Ind.	Gardner Murphy.	Boston, Mass.	Tripoli.	Robert Maultle.	Sep'tr.	Hd.	
74	*Janesville.	Janesville Creamery.	Ind.	Fowler Company.	Janesville.	Janesville.	A. M. Royce.	Sep'tr.	Test.	
75	Klinger.	Klinger Creamery.	Ind.	C. H. Dickman.	Kilgus.	Dankerton.	C. H. Dickman.	Sep'tr.	Hd.	
76	Maxfield.	Artisan Creamery Co.	Co-op.	H. Graening, Sec.	Maxfield.	Waverly.	H. A. Grison.	Sep'tr.	Hd.	
77	Plainfield.	Horton Cr'y Stock Co.	Stk Co.	H. S. Ingham, Pres.	Horton.	Plainfield.	E. Potter.	Sep'tr.	Test.	635
78	Plainfield.	Cedar Vale Cr'y Co.	Co-op.	F. W. Meier, Sec.	Plainfield.	Plainfield.	O. E. Gaffin.	Sep'tr.	S. & G. O.	791
79	Sumner.	Climax Creamery Co.	Stk Co.	Henry Specht, Sec.	Sumner.	Sumner.	Fred Engel.	Sep'tr.	Hd.	
80	Sumner.	Little Valley Cr'y Co.	Co-op.	John Schwake, Sec.	Buck Creek.	Sumner.	F. M. Zell.	Sep'tr.	Hd.	
81	Sumner.	Spring Fountains.	Stk Co.		Sumner.	Sumner.	Otter Meyerhoff.	Sep'tr.	Hd.	
82	Tripoli.	Crain Creek Cr'y Co.	Co-op.	C. Holm, Pres.	Tripoli.	Tripoli.	Wm. Ducker.	Sep'tr.	Hd.	
83	Tripoli.	Fremont Creamery Co.	Co-op.	A. D. Chapin, Sec.	Tripoli.	Tripoli.	W. W. Day.	Sep'tr.	Test.	782
84	Tripoli.	Golden Key.	Ind.	Wm. H. Meyerhoff.	Key.	Tripoli.	H. J. Meyerhoff.	Sep'tr.	Hd.	
85	Tripoli.	Maxfield.	Co-op.	C. Jaluk, Sec.	Tripoli.	Tripoli.	Henry Thier.	Sep'tr.	Hd.	
86	Tripoli.	Potter's Siding Cr'y Co.	Co-op.	Wm. Bany.	Tripoli.	Tripoli.		Sep'tr.	Test.	
87	Tripoli.	Tripoli Creamery Co.	Co-op.	F. W. Meier, Sec.	Tripoli.	Tripoli.	F. C. Oltrogge.	Sep'tr.	Hd.	766
88	Tripoli.	Waple Valley Cr'y Co.	Co-op.	O. McCumber, Pres.	Waple.	Tripoli.	Daniel Bleuer.	Sep'tr.	Hd.	150
89	Waverly.	La Fayette.	Co-op.	B. Cornforth.	Waverly.	Waverly.	Henry Pigors.	Sep'tr.	Test.	154
90	Waverly.	Biverside.	Ind.	Edward Brala.	Waverly.	Waverly.	Edward Brala.	Sep'tr.	Test.	228
91	Waverly.	Washington Cr'y Co.	Co-op.	E. J. Thies, Sec.	Waverly.	Waverly.	H. J. Freie.	Sep'tr.	Test.	687
92	Aurora.	Elliott & Speed.	Ind.	Elliott & Speed.	Aurora.	Aurora.	W. A. Speed.	Sep'tr.	Test.	350
93	Brandon.	Brandon Creamery.	Ind.	Wm. Brady.	Brandon.	St. Auburn.	Henry Brady.	Sep'tr.	Test.	149
94	Fairbank.	Fairbank F'm's Cr'y Co.	Co-op.	E. Snoborn, Sec.	Fairbank.	Fairbank.	Marvin Higby.	Sep'tr.	Test.	710
95	Hazleton.	Hazleton F'm's Cr'y Co.	Co-op.	L. A. Brash, Sec.	Hazleton.	Hazleton.	M. W. Ashby.	Sep'tr.	Test.	54
96	Independence.	Independence.	Ind.	Weins-Shillinglaw.	Independence.	Independence.	James McBride.	Sep'tr.	Test.	

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by an individual, cooperative, stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator installed, cream, or both.	Method of receiving milk—by the barrel, by the hundred.	Dairy commissioner's license number.
97	Buchanan County, Independence.	Vista	Co-op	W. H. Cook, Sec.	Independence.	Independence.	Wm. Evens.	Sep'tr.	Test.	
98	Jesup.	Jesup Creamery Co.	Co-op.	James Dalton, Sec.	Jesup.	Jesup.	C. R. Fuller.	Sep'tr.	Test.	150
99	Lamont.	Lamont Creamery Co.	Co-op.	J. T. Trezona, Sec.	Lamont.	Lamont.	C. Massey.	Sep'tr.	Test.	174
100	Masonville.	Mont.	Ind.	J. A. Donnelly.	Lamont.	Lamont.	C. Massey.	Sep'tr.	Test.	781
101	Newton Center.	Newtonville Sp'r Cr'y.	Ind.	J. A. Donnelly.	Monti.	Masonville.	J. A. Donnelly.	Sep'tr.	Hd.	
102	Otterville.	Otterville Creamery Co.	Co-op.	W. W. Pratt, Pres.	Otterville.	Winthrop.	M. S. Cook.	Sep'tr.	Hd.	267
103	Rowley.	Rowley Co-op. Cr'y Co.	Co-op.	A. F. Bosworth, Sec.	Rowley.	Independence.	Martin Yundt.	Sep'tr.	Test.	187
104	Stanley.	Stanley Creamery Co.	Co-op.	W. C. Pond, Pres.	Stanley.	Rowley.	Jonathan Polan.	Sep'tr.	Test.	743
105	Walker Lins Co.	Homer Creamery.	Ind.	W. W. Wilde.	Walker.	Walker.	Frank Strong.	Sep'tr.	Test.	
106	Winthrop.	North Byron.	Ind.	S. M. Hazelrigg.	Winthrop.	Walker.	John Hasner.	Sep'tr.	Test.	
107	Winthrop.	Winthrop Creamery.	Ind.	Plank Bros.	Winthrop.	Winthrop.	S. M. Hazelrigg.	Sep'tr.	Test.	
108	Winthrop.	Quasqueton	Ind.	Plank Bros.	Winthrop.	Winthrop.	W. H. Plank.	Sep'tr.	Test.	113
109	Zheno Vista Alta.	County.	Ind.		Winthrop.			Sep'tr.	Test.	
110	Marathon.	Fairfield Creamery Co.	Co-op.	C. G. England.	Marathon.	Alta.	E. K. Gurnsey.	Sep'tr.	Test.	313
111	Marathon.	Marathon.	Ind.	E. K. Stangland.	Marathon.	Marathon.	J. A. Smith.	Sep'tr.	Test.	
112	Newell.	Ocon River Co-op. Cr'y.	Co-op.	Hans C. Krus.	Marathon.	Marathon.	P. Lindstrom.	Sep'tr.	Test.	30
113	Newell.	Newell Creamery.	Ind.	C. Nielson.	Newell.	Newell.	P. O. Flarkegaard.	Sep'tr.	Test.	797
					Newell.	Newell.	Geo. Ellison.	Sep'tr.	Test.	253

114	Newell.	Boze	Ind.	C. Nielson	Newell.			Sep'tr.	Test.	
115	Newell.	Colo.	Ind.	C. Nielson	Newell.			Sep'tr.	Test.	
116	Peterson, Clay.	Crescent.	Ind.	Pick & Collins	Peterson, Clay.	Peterson.	E. W. Collins.	Sep'tr.	Hd.	
117	Storm Lake.	Storm Lake Creamery.	Ind.	Huck Bros.	Storm Lake.	Storm Lake.	Chas. Hack.	Sep'tr.		
	Butler County, Aplington.	Aplington Creamery.	Ind.	John Iblings.	Aplington.	Aplington.	John Iblings.	Sep'tr.	Hd.	
119	Aplington.	Hitesville Creamery.	Ind.	James P. Johnston.	Hitesville.	Bristow.		Sep'tr.	Hd.	
120	Aplington.	Monroe Central Cr'y.	Co-op.	A. Dufjes.	Aplington.	Aplington.	Wm. Lentas.	Sep'tr.	Hd.	17
121	Austinville.	White Rose.	Ind.	Paterson & Hodel Bros.	Austinville.	Austinville.	Sam Peterson.	Sep'tr.	Hd.	
122	Bristow.	Clover Lawn.	Ind.	Haven & Moorehead.	Bristow.	Bristow.	E. E. Jones.	Sep'tr.	Test.	42
123	Bristow.	Arnsite.	Ind.	Haven & Moorehead.	Bristow.			Sep'tr.	Test.	24
124	Clarksville.	Oak Grove Cr'y Ass'n.	Co-op.	C. Doty, Pres.	Clarksville.	Clarksville.	E. D. Wilcox.	S. & G. G.	Test.	
125	Durmont.	Clinterville Creamery.	Co-op.	A. B. Watson, Sec.	Clinterville.	Durmont.	James Santon.	Sep'tr.	Test.	508
126	Greens.	Cold Water Co-op. D. A.	Stk Co.	J. W. Williams, Sec.	Greens.	Greens.	L. J. Sargent.	G. C.		
127	New Hartford.	Beaver Creamery Co.	Co-op.	D. L. Huslib, Sec.	New Hartford.	New Hartford.	J. A. Banney.	Sep'tr.	Test.	182
128	New Hartford.	New Hartford.	Ind.	Walt & Curtis.	New Hartford.	New Hartford.	W. C. Curtis.	Sep'tr.	Hd.	
129	Parkersburg.	Parkersburg Creamery.	Ind.	Oodner & Palmer.	Parkersburg.	Parkersburg.	W. H. Colner.	Sep'tr.	Hd.	702
130	Parkersburg.	Star.	Ind.	W. J. Daniels.	Parkersburg.	Parkersburg.	W. J. Daniels.	Sep'tr.	Test.	30
131	Shell Rock.	Columbia Creamery.	Ind.	Isaac Hull.	Ooster.	Shell Rock.	Isaac Hull.	Sep'tr.	Hd.	
132	Shell Rock.	Shell Rock Creamery.	Co-op.	H. R. Goodsell, Sec.	Shell Rock.	Shell Rock.	Jas. Richardson.	Sep'tr.	Test.	89
133	Shell Rock.	Star Co-op. Creamery.	Co-op.	L. H. Mead.	Shell Rock.	Shell Rock.	J. H. Kublanck.	Sep'tr.	Hd.	
134	Shell Rock.	Victory.	Co-op.	J. M. Cass, Sec.	Waverly.	Shell Rock.	O. E. Austin.	Sep'tr.	Test.	314
135	Swanton.	Aldon Creamery.	Co-op.	E. S. Philo, Sec.	Swanton.	New Hartford.	Otis Courbate.	Sep'tr.	Test.	
	Swanton County, Lake City.	Elm Grove Creamery.	Ind.	Fritsimmons & Bate.	Elm Grove.	Lake City.	J. J. Fritsimmons.	Sep'tr.	Test.	832
137	Fonda.	Williams' Creamery.	Ind.	R. P. Beswick.	Fonda.	Fonda.		Sep'tr.	Test.	311

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, gub., cream, or both.	Method of receiving milk or by the test or by the hundred.	Dairy license number & test-bottle number.
138	Calhoun County, Jolley	Plannet	Ind.	H. A. Albrecht	Pomeroy	Knocke	John Knocke	Sep'tr	Hd.	
139	Manson	Manson	Ind.	G. B. Moon, Mgr.	Manson	Manson	G. B. Moon	Sep'tr	Test.	
140	Pomeroy	Twin Lake Co-op. Cr'y.	Co-op.	C. J. Hartling, Sec.	Pomeroy	Pomeroy	Olen Olson	Sep'tr	Hd.	
141	Pomeroy	Pomeroy Co-op. Cr'y.	Co-op.	J. H. Hanken, Pres.	Pomeroy	Pomeroy	Nan'e A. Hanken	Sep'tr	Test.	328
142	Rockwell City	Rockwell City B. & C. Co.	Co-op.	T. C. Gregg, Sec.	Rockwell City.	Rockwell City.	T. E. Garity	G. C.		366
143	Carroll County, Arcadia	Arcadia	Ind.	Ed. Rehker	Arcadia	Arcadia	Crist Madison	Sep'tr	Hd.	360
144	Breda	Breda	Ind.	Ed. Rehker	Arcadia	Breda		Sep'tr	Hd.	
145	Dedham	Dedham Creamery	Ind.	Hoelker Bros.	Dedham	Dedham	H. L. Fest	Sep'tr	Test.	490
146	Halbur	Excelsior	Ind.	Hoelker Bros.	Halbur	Halbur	A. Hoelker	Sep'tr	Hd.	294
147	Manning	Manning Creamery	Ind.	Ed. Rehker	Manning	Manning	W. T. Miller	Sep'tr	Hd.	
148	Mt. Carmel	Mt. Carmel Creamery	Ind.	U. Kohorst	Arcadia	Breda		Sep'tr	Hd.	
149	Roselle	Rose Valley	Ind.	G. Kohorst	Roselle	Halbur	C. Kohorst	Sep'tr	Hd.	
150	Willey	Willey Creamery Co.	Stk Co	B. Gresteman, Sec.	Willey	Dedham	George Allard	Sep'tr	Test.	489
151	Cass County, Cumberland	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr	Test.	
152	Mansens	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr	Test.	
153	Wetota	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr	Test.	
154	Lewis	Lewis Creamery	Co-op.			Lewis	Proprietor	G. C.		
155	Marne	Marne Co-op. Cr'y Co.	Co-op.	J. A. Walsh, Pres.	Atlantic	Marne	H. Henrickson	G. C.		200
156	Clear Lake	Clear Lake B. & C. Cr'y.	Ind.	G. W. Kennedy	Thornton	Clear Lake	G. W. Kennedy	Sep'tr		713
157	Bennett	Golden Star Creamery	Ind.	Aug. Hinrichs & Co. (Mand. Sec.)	Lawden	Bennett	W. H. Kroeger	S. & G. C.	Hd.	
158	Bennett	Golden Star and Bennett	Ind.	Aug. Hinrichs & Co. (Mand. Sec.)	Lawden			S. & G. C.	Hd.	117
159	Lowden	Union Farmers' Cr'y Co.	Co-op.	Henry Schwanger	Lowden	Lowden		Sep'tr	Hd.	774
160	Springdale	Hopewell	Ind.	C. G. Eves	Springdale	West Branch	C. G. Eves	S. & G. C.	Hd.	41
161	Tipton	Cedar Creamery	Ind.	H. L. Dean	Tipton	Tipton	H. L. Dean	G. C.		
162	Clear Lake	Clear Lake B. & C. Cr'y.	Ind.	G. W. Kennedy	Thornton	Clear Lake	G. W. Kennedy	Sep'tr		713
163	Clear Lake	Model Co-op. Dairy A'n.	Co-op.	W. Specht	Clear Lake	Ventura	C. R. Conway	Sep'tr	Test.	297
164	Mason City	Mason City Creamery	Ind.	H. J. Turner	Mason City	Mason City	J. V. Tyler	Sep'tr	Test.	350
165	Owen Center	Owen Center Creamery	Ind.	Fish & Colvin	Rockford	Rockford	C. T. Fish	Sep'tr	Test.	306
166	Plymouth	Plymouth	Ind.	S. Hactong	Plymouth	Plymouth	S. Hactong	Sep'tr	Test.	744
167	Portland	Portland	Ind.	Chas. R. Fleck	Portland	Portland	A. J. Michle	Sep'tr	Test.	66
168	Rock Falls	Maydower	Ind.	J. F. Cochenour	Rock Falls	Rock Falls	J. F. Cochenour	S. & G. C.	Test.	165
169	Rockwell	Rockwell Creamery Co.	Co-op.	G. H. Fuller, Sec.	Rockwell	Rockwell	John Gerber	Sep'tr	Test.	291
170	Swaledale	Pleasant Valley	Ind.	Food & Woodward	Swaledale	Swaledale	Geo. Leonard	S. & G. C.	Hd.	
171	Thornton	Thornton	Ind.	G. W. Kennedy	Thornton	Thornton	Guy Thomas	S. & G. C.	Test.	778
172	Aurelia	Aurelia	Ind.	Kultriss & Matson	Aurelia	Aurelia	P. Matson	Sep'tr	Hd.	266
173	Cleghorn	Cleghorn Creamery	Ind.	Robinson Bros.	Cleghorn	Cleghorn	C. W. Stevens	Sep'tr	Hd.	
174	Larrabee	Larrabee	Ind.	Alex Younger	Larrabee	Larrabee	Alex Younger	Sep'tr	Hd.	
175	Marcus	Marcus Creamery	Ind.	O. S. Knoes	Marcus	Marcus	G. Sniens	Sep'tr	Hd.	
176	Meriden	Meriden Creamery	Ind.	Fuller & Adams	Meriden	Meriden	Proprietor	Sep'tr	Hd.	
177	Quimby	Shaul & Stanford's Cr'y.	Ind.	Shaul & Stanford	Quimby	Quimby	A. J. Stanford	Sep'tr	Hd.	

CREAMERY LIST—CONTINUED.

ORDER NUMBER	LOCATED AT OR NEAR	NAME OF CREAMERY.	Organized by an individual or Co-op.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPING STATION.	NAME OF BUTTER-MAKER.	Separator, Wash. or both.	Method of receiving the milk or the buttermilk.	Bottle number.
175	Chickamaug County	Alma Vista Farm Cty Ass'n	Co-op.	Wm. Vick, Sec.	Alma Vista.	Alma Vista.	C. C. Capper.	Sept'r.	Test.	55
176	Bassett.	Cloverdale Creamery.	Co-op.	L. J. Young, Sec.	Bassett.	Bassett.	Seymour Butler	Sept'r.	Test.	68
179	Boyd	Boyd Farmers Cfy.	Co-op.	J. De Battiglion, Sec.	Boyd.	Boyd.	L. Gibbs	Sept'r.	Test.	675
181	Deerfield.	Deerfield.	Co-op.	Geo. Brown, Sec.	Deerfield.	Alma Vista.	Chas Meader.	Sept'r.	Test.	301
182	Devon	Devon Fm Cfy Ass'n.	Co-op.	E. F. Sheffield, Sec.	New Hampton.	Devon.	Geo. D. Holdren.	Sept'r.	Test.	184
183	Friedericksburg	Dresden Creamery	Ind.	John H. Kothhoff.	Williamstown.	New Hampton.	C. Struble.	Sept'r.	Test.	108
184	Friedericksburg	Friedericksburg Cfy.	Co-op.	William Bee, Sec.	Friedericksburg.	Friedericksburg.	E. F. Beebe.	Sept'r.	Test.	104
185	Ionia	Ionia Farmers Cfy Co.	Co-op.	J. F. Coxley, Mgr.	Ionia.	Ionia.		Sept'r.	Test.	58
186	Jacksonville.	Jacksonville Co-op. Cfy	Co-op.	C. E. Pierce, Sec.	Lawler.	New Hampton.	R. E. White.	Sept'r.	Test.	58
187	Jerico	Jerico's Creamery	Co-op.	W. F. Beed, Sec.	Jerico.	New Hampton.	John P. Whalen.	Sept'r.	Test.	64
188	Lawler.	Lawler Creamery Ass'n	Co-op.	Peor O'Brien, Pres	Lawler.	Lawler.	John Sullivan.	Sept'r.	Test.	284
189	Little Turkey	Little Turkey Cty Ass'n	Co-op.	A. D. Kishman, Sec.	Little Turkey.	Lawler.	T. S. Larson.	Sept'r.	Test.	60
190	Nashua.	Fremont Creamery Co.	Stk. Co.	A. M. Bonkko, Mgr.	Prosper.	Nashua.	W. J. Simmons.	Sept'r.	Test.	97
191	Nashua.	Nashua Creamery	Co-op.	E. V. B. Hall, Pres.	Nashua.	Nashua.	W. A. Bliss.	S. & G. O.	Test.	90
192	New Hampton.	New Hampton Cfy	Ind.	John B. Kothhoff.	Williamstown	New Hampton.	Ph. Wesp.	Sept'r.	Test.	22
193	N. Washington	N. Washington's Cfy Ass'n	Co-op.	Geo. Radolph, Sec.	N. Washington.	Devon.	Frank Bracy.	Sept'r.	Test.	40
194	Republic.	Republic Co-op. Cfy Co	Co-op.	J. W. Pierce, Sec.	Republic.	Nashua.	J. J. Ross.	Sept'r.	Test.	25
195	Williamstown.	Williamstown Cream'y	Ind.	J. H. Kothhoff.	Williamstown.	New Hampton.	F. G. Kothhoff.	Sept'r.	Test.	

196	Williamstown.	Williamstown's Cty Ass'n	Co-op.	H. H. Bailey, Pres	Williamstown.	New Hampton.	W. K. Ledwith.	Sept'r.	Test.	718
197	Glouce County	Murray	Ind.	O. South, Pres.	Chicago, Ill.	Murray	James Currie.	Sept'r.	Test.	239
198	Murray	Hopewell.	Ind.	O. South, Pres.	Chicago, Ill.			Sept'r.	Test.	331
199	Murray	Washington.	Ind.	O. South, Pres.	Chicago, Ill.			Sept'r.	Test.	323
200	Woodbury.	Farmers' B. & U. Ass'n	Co-op.	H. P. Halling.	Woodbury.	Woodbury.	H. W. Bassinger.	Sept'r.	Test.	186
201	City County	Stark Valley	Ind.	C. W. Parsons.	Dickens.	Dickens.	A. V. Veitch.	Sept'r.	Test.	27
202	Every	Spring Creek Cfy Co.	Co-op.	Ed. Mueller, Sec.	Every.	Every.	Chris Peterson.	Sept'r.	Test.	206
203	Foresta	Foresta Creamery Co.	Co-op.	Joe. O'Brien, Pres.	Foresta.	Foresta.	H. A. Stahlacker.	Sept'r.	Test.	211
204	Marathon	Mad Lake Creamery Co.	Co-op.	L. Wesche, Sec.	Marathon.	Marathon.	F. DeLong.	Sept'r.	Test.	257
205	Peterson.	Star	Ind.	Digger & Beach.	Willow Creek.	Peterson.	W. J. Digger.	Sept'r.	Test.	202
206	Spencer.	Everton Creamery Co.	Stk. Co.	A. J. Padlock, Sec.	Spencer.	Spencer.	O. B. Ross.	Sept'r.	Test.	129
207	Camden County	Communita Cty Ass'n	Co-op.	Henry Watrick, Sec.	Communita.	Littletop.	John Stromer.	Sept'r.	Test.	334
208	Edgewood	Bear Creek	Ind.	H. F. Boyer.	Edgewood.	Edgewood.	A. B. Jones.	Sept'r.	Test.	212
209	Edgewood	Fidelity	Co-op.	H. F. Boyer.	Edgewood.	Edgewood.	Ed. J. Whipple.	Sept'r.	Test.	190
210	Elkader	Highland Cty Ass'n	Ind.	F. J. Orr.	Elkader.	Elkader.	D. Whipple.	Sept'r.	Test.	207
211	Elkader	Elkader Creamery	Ind.	A. O. Ervige.	Elkader.	Elkader.	L. Bernat.	Sept'r.	Test.	199
212	Engert	Elkader Creamery Co.	Co-op.	A. O. Ervige.	Farmersburg.	Farmersburg.	Oth Houser.	Sept'r.	Test.	217
213	Farmersburg.	Farmersburg Co-op. Cfy	Co-op.	C. W. Meier.	Garnaville.	Clayton.	P. J. Dumbacher.	Sept'r.	Test.	218
214	Garnaville.	Garnaville Farmers'	Ind.	E. W. Krepl, Sec.	Elkader.	Freshick.	C. B. Chandler.	Sept'r.	Test.	27
215	Grant.	Grant	Ind.	A. O. Ervige.	Elkader.	Elkader.	A. C. Kinsbury.	Sept'r.	Test.	206
216	Littletop.	Littletop	Ind.	A. O. Ervige.	Elkader.	Elkader.	George Gould.	Sept'r.	Test.	21
217	Leana.	Leana	Co-op.	Emil Prebakt, Sec.	Leana.	Leana.	W. H. Gould.	Sept'r.	Test.	21
218	McGregor	McGregor	Co-op.	W. I. Kuntin, Sec.	McGregor.	McGregor.	C. C. Corbit.	Sept'r.	Test.	21
219	Moererville.	Moererville	Ind.	Wm. Brickhouse	Moererville.	Moererville.	O. Walker.	Sept'r.	Test.	21

CREAMERY LIST—CONTINUED.

Office Record	LOCATED AT OR NEAR	NAME OF CREAMERY.	Owned by or operated by	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS FOR RECEIPT OF MILK OR BUTTER.	SHIPPING OR RECEIVING STATION.	NAME OF BUTTER-MAKER.	Separator, date of test, or both.	Method of testing the milk or butter.	Test of the milk or butter.	Dairy Commissioner's office number.
220	Clinton County	Osborne	Ind.	A. O. Elyidge	Elkader	Osborne	F. J. Schneider	Sep'r	Test	Test	242
221	Oswestock	Oswestock Cream Co.	Co-op.	E. A. Bush	Oswestock	Oswestock	Wm. Wamsley	Sep'r	Test	Test	243
222	Road	Road Creamery	Sta Co.	H. W. Wilke, Sec.	Elkader	Elkader	G. G. Smith	Sep'r	Test	Test	244
223	St. Olaf	St. Olaf Creamery	Ind.	A. O. Elyidge	Elkader	St. Olaf	Giles Carter	S. A. O. C.	Test	Test	245
224	Strawberry Pt.	Strawberry Pt. Farmers' Co-op. Cr'y Co.	Co-op.	James Newberry	Strawberry Pt.	Strawberry Pt.	H. R. Schwab	Sep'r	Test	Test	246
225	Volga City	Farmers' Co-op. Cr'y Co.	Co-op.	O. A. Phillips, Sec.	Volga City	Volga City	B. Jones	Sep'r	Test	Test	247
226	Watson	Blue Grass Farm Cr'y Co.	Co-op.	Zins, Geraghty, Sec.	Watson	Watson	Geo. Terent	Sep'r	Test	Test	248
227	Adover	Adover	Ind.	John Newman	Elgin, Ill.	Adover	A. H. Meyer	Sep'r	Test	Test	249
228	Charlottesville	Shady Knob	Ind.	John Newman	Elgin, Ill.	Charlottesville	T. H. Brinker	Sep'r	Test	Test	250
229	Delmar	Delmar	Ind.	John Newman	Elgin, Ill.	Delmar	G. O. Lehman	Sep'r	Test	Test	251
230	Elwood	Elwood	Ind.	John Newman	Elgin, Ill.	Elwood	F. Lembaugh	Sep'r	Test	Test	252
231	Brown	Brown	Ind.	John Newman	Elgin, Ill.	Elgin, Ill.	Sep'r	Test	Test	Test	253
232	Elwood No. 2	Diamond Creamery Co.	Ind.	Stimpson, McIntire & Co.	Elgin, Ill.	Elgin, Ill.	Sep'r	Test	Test	Test	254
233	Goose Lake	Goose Lake Creamery	Ind.	Kranz & Jensen	Goose Lake	Goose Lake	R. L. Allen	Sep'r	Test	Test	255
234	Grand Mount	Gr. Mount Co-op. Cr'y Co.	Sta Co.	C. J. Schuster, Sec.	Grand Mount	Grand Mount	Henry Vetter	Sep'r	Test	Test	256
235	Grand Mount	Grand Mount	Sta Co.	C. J. Schuster, Sec.	Grand Mount	Grand Mount	Sep'r	Test	Test	Test	257
236	Grand Mount	Grand Mount	Sta Co.	C. J. Schuster, Sec.	Grand Mount	Grand Mount	Sep'r	Test	Test	Test	258
237	Low Ngr. No. 26	Diamond Creamery Co.	Ind.	Stimpson, McIntire & Co.	Elgin, Ill.	Low Ngr. No. 26	Sep'r	Test	Test	Test	259

237	Quincy	Deep Creek	Ind.	John Newman	Elgin, Ill.	Quincy	G. H. Bower	Sep'r	Test	Test	260
238	Shedd/Cross No. 27	Diamond Creamery Co.	Ind.	Stimpson, McIntire & Co.	Elgin, Ill.	Shedd/Cross No. 27	Sep'r	Test	Test	Test	261
239	So. Grove No. 27	Diamond Creamery Co.	Ind.	Stimpson, McIntire & Co.	Elgin, Ill.	So. Grove No. 27	Sep'r	Test	Test	Test	262
240	Teed's Grove	Cliver Leaf	Ind.	Chas. Allen, Sec.	Teed's Grove	Teed's Grove	Chas. Allen	Sep'r	Test	Test	263
241	Weldon	Weldon Creamery	Ind.	E. C. Hensley	Weldon	Weldon	F. Mulberry	S. A. O. C.	Test	Test	264
242	Cherryland	Cherryland Creamery	Ind.	Chas. E. Craft	Dominion	Dominion	Chas. E. Craft	Sep'r	Test	Test	265
243	Elron	Stockholm	Ind.	East Mattson	Elron	Odbloch	East Mattson	Sep'r	Test	Test	266
244	Kron	Old Valley	Ind.	East Mattson	Kron	Kron	Sep'r	Test	Test	Test	267
245	Maadilla	Maadilla	Ind.	Wm. Prater	West Side	Maadilla	L. E. Ashby	Sep'r	Test	Test	268
246	West Side	Hays Township Cr'y Co.	Ind.	Wm. Prater	West Side	West Side	Hans Behrer	Sep'r	Test	Test	269
247	Appanel	Appanel	Ind.	Wm. Prater	West Side	West Side	Sep'r	Test	Test	Test	270
248	Dallas Center	Dallas Center	Co-op.	W. H. Ball	Dallas Center	Dallas Center	James Coleman	S. A. O. C.	Test	Test	271
249	Trener	Trener Creamery	Ind.	E. C. Piper	Dexter	Dexter	H. E. Pines	Sep'r	Test	Test	272
250	Perry	Red Star Creamery	Ind.	Wm. Zedman & Son	Perry	Perry	J. W. Morgan	S. A. O. C.	Test	Test	273
251	Van Meter	Zieman Creamery	Ind.	Wm. Zedman & Son	Van Meter	Van Meter	B. C. Houch	S. A. O. C.	Test	Test	274
252	Waukon	Waukon Co-op. Cr'y Co.	Co-op.	J. S. Shannon	Waukon	Waukon	H. O. Crispin	Sep'r	Test	Test	275
253	Woodward	Woodward	Ind.	H. P. Oulinsky	Woodward	Woodward	H. P. Oulinsky	Sep'r	Test	Test	276
254	Blountfield	Blountfield	Ind.	W. H. Dwyer	Blountfield	Blountfield	W. H. Dwyer	S. A. O. C.	Test	Test	277
255	Floris	Floris Creamery	Ind.	G. B. Caldwell & Son	Floris	Floris	W. P. Caldwell	Sep'r	Test	Test	278
256	Polaski	Polaski	Ind.	J. J. Miller	Polaski	Polaski	W. B. Storcer	S. S. G. C.	Test	Test	279
257	Adover	Adover	Sta Co.	F. L. Carpenter, Sec.	Adover	Adover	Ed. M. Newcomb	Sep'r	Test	Test	280
258	Appanel No. 11	Diamond Creamery Co.	Ind.	Stimpson McIntire & Co.	Dominion	Appanel No. 11	Sep'r	Test	Test	Test	281
259	Barryville	Barryville Co-op. Cr'y Co.	Co-op.	G. C. Barry, Sec.	Barryville	Barryville	Thos. Sheldon	Sep'r	Test	Test	282

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized 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.	Separation method used, cream, or both.	Method of receiving milk — by first milk or by the haulage.	Dairy commissioner's test number.
250	Delaware County, Colesburg	Colesburg Creamery	Co-op	R. C. Currie, Sec.	Colesburg	Osterdock	A. Landis, Jr.	Sep'tr.	Test.	23
261	Delaware	Delaware Creamery Co	Co-op	C. A. Pierce, Sec.	Delaware	Delaware	P. F. Madden	Sep'tr.	Test.	86
262	Delhi	Pleasant Valley Cr'y	Ind.	Allison Bros.	Delhi	Earlville	F. E. Munn	Sep'tr.	Test.	870
263	Delhi	Silver Spring	Stk Co	F. S. Beal	Delhi	Delhi	G. A. Howard	Sep'tr.	Test.	141
264	Earlville	Earlville	Ind.	T. Dickson	Earlville	Earlville	A. C. Bender	Sep'tr.	Test.	130
265	Earlville	Gilt Edge Creamery	Ind.	J. M. Dunn & Co.	Earlville	Earlville	J. M. Dunn	Sep'tr.	Test.	
266	Earlville	Liswood Creamery Co.	Co-op	Wm. Wenderhoff	Petersburgh	Earlville	Frank Scott	Sep'tr.	Hd.	
267	Ehler	Henderson Creamery	Ind.	J. Henderson & Sons	Ehler	J. Henderson	Ehler	Sep'tr.	Test.	
268	Ehler	Willow Grove Creamery	Co-op	E. C. Dolan, Sec.	Ehler	Ehler	S. S. McCready	Sep'tr.	Test.	161
269	Golden	Golden Creamery	Ind.	Ancott & Cowl.	Golden	Golden	A. E. Ancott	Sep'tr.	Test.	22
270	Greeley	Greeley Farmers Cr'y	Co-op	B. A. Barker, Sec.	Greeley	Greeley	F. J. Kleckner	Sep'tr.	Test.	370
271	Hazel Green	Hazel Green Creamery	Ind.	Frank B. Dickey	Hazel Green	Ryan	F. L. Houston	Sep'tr.	Test.	230
272	Hazel Green	Broadway	Ind.	Frank B. Dickey	Hazel Green			Sep'tr.	Test.	
273	Hopkinton	Hazel Green Co-op. Cr'y	Co-op	E. R. File, Sec.	Hazel Green	Hopkinton	Wm. Kenney	Sep'tr.	Test.	115
274	Hopkinton	Hopkinton Co-op. Cr'y Co	Co-op	M. L. McGlade, Sec.	Hopkinton	Hopkinton	J. H. Griffith	Sep'tr.	Test.	284
275	Hopkinton	Keystons	Ind.	J. W. Merrill	Cedar Falls	Hopkinton	L. R. Burnham	Sep'tr.	Hd.	
276	Manchester	Manchester Co-op. Cr'y	Co op.	F. J. Shelden, Sec.	Manchester	Manchester	C. D. Elder	Sep'tr.	Test.	718
277	Manchester	Mead's Creamery	Ind.	C. W. Mead & Son	Manchester	Thorpe	W. D. Mead	Sep'tr.	Test.	93
278	Manchester	Spring Branch Co-op.	Co-op.	W. J. Davis, Sec.	Manchester	Manchester	A. A. Palmer	Sep'tr.	Test.	76
279	Petersburgh	Bear Grove Creamery Co.	Co-op	Joseph Gebhardt	Petersburgh	Dyersville	Jacob Schmidt	Sep'tr.	Test.	641
280	Petersburgh	Petersburgh Co-op. Cr'y	Co-op.	F. J. Klostermann, Sec.	Petersburgh	Dyersville	Frank Bably	Sep'tr.	Hd.	
281	Sand Spring	Sand Spring Co-op. Cr'y	Co-op.	F. E. Wood, Jr.	Sand Spring	Sand Spring	W. R. Crabbs	Sep'tr.	Test.	96
282	Thorpe	Honey Creek	Ind.	H. F. Beyer	Edgewood	Edgewood	W. K. Pellard	Sep'tr.	Test.	72
283	Thorpe	Thorpe	Ind.	Harris & Co.	Jesup	Thorpe	J. Schaum	Sep'tr.	Test.	
284	Dickinson County, Evely	Westport Creamery	Ind.	C. C. Painter	Evely	Evely	O. R. Foster	Sep'tr.	Test.	246
285	*Spiritt Lake	Spiritt Lake B. & C. P'y	Ind.	Painter & Painter	Spiritt Lake	Spiritt Lake	C. A. Painter	Sep'tr.	Test.	875
286	Dubuque County, Balltown	Balltown Co-op. Cr'y Co	Co-op.	C. Harrington, Sec.	Balltown	Balltown	Joseph Platt	Sep'tr.	Test.	
287	Bernard	Austis	Co-op.	David Stanton, Sec.	Cascade	Bernard	Chas. Hunter	Sep'tr.	Hd.	705
288	Cascade	Cascade Co-op. Cr'y Co	Co-op.	T. A. Hamil, Sec.	Cascade	Cascade	S. M. Adamson	Sep'tr.	Hd.	885
289	Cascade	Hazel Creamery	Ind.	W. C. Aitchison	Cascade	Cascade	W. C. Aitchison	Sep'tr.	Hd.	
290	Cascade	Spring Valley Cr'y Co.	Co-op.	E. M. Kearney, Sec.	Cascade	Worthington	H. P. Bancroft	Sep'tr.	Test.	190
291	Cascade	Crystal Falls	Ind.	Dehner & Kay	Cascade	Cascade	C. L. Kay	Sep'tr.	Hd.	832
292	Dyersville	Farmers' Golden Star	Co-op.	J. H. Prier, Sec.	Dyersville	Dyersville	A. Stoeck	Sep'tr.	Hd.	148
293	Dyersville	Pin Oak Creamery	Co-op.	John Chippen, Sec.	Pin Oak	Dyersville	Jay B. Smith	Sep'tr.	Test.	674
294	Epworth	Epworth Creamery Co.	Co-op.	A. B. Wright	Epworth	Epworth	Perry Stockwell	Sep'tr.	Hd.	859
295	Farley	Farley Creamery Co.	Ind.	J. F. Schoonover	Farley	Farley	C. E. Minehart	Sep'tr.	Test.	
296	Farley	John's Creek Creamery	Co-op.	Vibber & Heald	Farley	Farley	C. Bartolmeaw	Sep'tr.	Hd.	
297	Farley	Pleasant View	Ind.	Vibber & Heald	Farley	Farley	John Higz	Sep'tr.	Hd.	
298	Fillmore	Fillmore Co-op. Cr'y Co	Co-op	Wm. Craft, Sec.	Fillmore	Fillmore	N. B. Francols	Sep'tr.	Hd.	202
299	Lattners	Lattners Sp. Co-op. Cr.	Co-op.	E. Hansen, Sec.	Lattners	Graf	Samuel Strelf.	Sep'tr.	Hd.	
300	Lore	Lore Creamery Co.	Co-op.	C. Kenet, Sec.	Lore	Graf	J. W. Ford	Sep'tr.	Hd.	
301	Luxemburgh	Globe	Co-op.	Michael Linck, Mgr.	Luxemburgh	Dyersville	Jake Friedman	Sep'tr.	Test.	245

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by an individual, corporation, or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, path-strewn cream, or both.	Method of separating milk—by hand or by the separator.	Dairy commissioner's test.	Volume in pounds.
202	Dubuque County	Sherrill	Co-op.	J. C. Boleyn, Sec.	Sherrill	Sherrill	Fred Kostler	Sep'tr	Hd.		
300	New Vienna	New Vienna Cen'l Cr. Co.	Co-op.	Jos. Schermel, Sec.	New Vienna	Dyersville	Mathias Kaut	Sep'tr	Hd.	719	
304	Peosta	Highlands	Ind.	Geo. Frank	Peosta	Peosta	Geo. Frank	Sep'tr	Test	238	
305	Rickardsville	Farm Creamery	Ind.	John Fisher, Sec.	Rickardsville	Durango	Joseph Farn	Sep'tr	Hd.		
307	Rickardsville	Oak Creamery	Co-op.	M. E. Regan	Rickardsville	Waupeton	August Bany	Sep'tr	Hd.		
307	Rockdale	Columbian	Ind.	Laude Bros.	Rockdale	Dubuque	Peter Haaler	Sep'tr	Hd.	361	
308	Tivoli	Hickory Valley Cr'y Co.	Co-op.	L. F. Tegeler	Dyersville	Dyersville	C. H. Arnold	Sep'tr	Hd.		
300	Worthington	Central Co-op. Cr'y Co.	Co-op.	J. H. White, Sec.	Worthington	Hopkinson	H. F. Lehmuhl	Sep'tr	Hd.		
310	Worthington	Worthington Creamery	Ind.	W. Lattner	Worthington	Worthington	Orist Bahler	Sep'tr	Hd.		
311	Zwingle	Zwingle Sep'tr Cr'y	Ind.	Laude Bros.	Dubuque	Zwingle	S. & G. C.	Test			
312	Emmet County	Farmers' Creamery Co.	Ind.	G. Stewart	Armstrong	Armstrong	Fred Wilcox	Sep'tr	Test	620	
313	Armstrong	Forsythe Creamery	Co-op.	H. A. Gaarde, Sec.	Armstrong	Armstrong	Sewart Gordon	Sep'tr	Test	606	
314	Eatherville	Eatherville	Co-op	H. W. Words, Sec.	Eatherville	Eatherville	J. A. Reid	Sep'tr	Test	631	
315	Eatherville	Bagan's	Co-op	H. W. Words, Sec.	Eatherville	Eatherville	J. A. Reid	Sep'tr	Test	631	
316	Wallingford	Wallingford Co-op Cr'y	Co-op	P. Miller, Sec.	Wallingford	Wallingford	Ben Lonning	Sep'tr	Test	310	
317	Fayette County	Alpha Farmers' Cr'y Co.	Co-op.	A. L. Davis	Alpha	Waucoma	C. N. Beach	Sep'tr	Test	63	
318	Arlington	Brush Creek Farmers'	Co-op.	C. H. Day	Allington	Arlington	C. H. Day	Sep'tr	Test		
319	Aurora	Gundlach Creamery	Ind.	A. O. Kingsley	Clayton Co Strawberry Pt (makes Co. Postville, Ala- (makes Co. Postville, Ala-	Strawberry Pt	Irving Tyson	Sep'tr	Test	575	
320	Clermont	Clermont Valley Cr'y Co.	Co-op	A. L. Rasmussen	Postville, Ala- (makes Co. Postville, Ala-	Clermont	A. Erickson	Sep'tr	Test		
321	Gandi, Clayton	Clermont Valley Cr'y Co.	Co-op	A. L. Rasmussen, Sec	Postville, Ala- (makes Co. Postville, Ala-	Clermont	A. Erickson	Sep'tr	Test		
322	Dover Mills	Burr Oak	Co-op	Henry Smith, Sec.	Clermont	Clermont	S. H. Payne	Sep'tr	Test	734	
323	Elgin	Elgin Farmers Dairy Co	Co-op.	A. S. Houg, Sec.	Elgin	Elgin	Ed Hanson	Sep'tr	Test		
324	Fairbank	Oran Creamery Co.	Co-op	J. Kleemann	Minkler, Brem	Fairbank	E. E. Shippy	Sep'tr	Hd.		
325	Fayette	Fayette Cr'y Ass'n	Co-op	J. M. Edmunds	Fayette	Fayette	J. M. Speer	Sep'tr	Test	307	
326	Hawkeye	Hawkeye	Ind.	Bortner & Wilkening	Hawkeye	Hawkeye	A. P. Bortner	Sep'tr	Test	166	
327	Maynard	Harlan Co-op.	Co-op.	A. F. Crawford, Sec.	Maynard	Maynard	A. D. Fasham	Sep'tr	Test	302	
328	Oelwein	Jefferson	Co-op.	J. H. Meyer, Sec.	Oelwein	Oelwein	C. H. McQueen	Sep'tr	Test	140	
329	Oelwein	Oelwein Farmers' Cr'y.	Co-op.	E. E. Day, Sec.	Oelwein	Oelwein	H. A. Miller	Sep'tr	Test	102	
330	Randalla	Fairview Creamery Co.	Co-op	S. A. Dietel, Sec.	Sumner, Brem	Randalla	Chas. Bracy	Sep'tr	Test	15	
331	Randalla	Randalla Creamery	Co-op.	G. D. Torrey, Sec.	Randalla	Randalla	F. C. Billings	Sep'tr	Test	290	
332	Richfield	Richfield Creamery Co.	Co-op	G. W. Niemann, Sec.	Richfield	Waucoma	G. E. Murphy	Sep'tr	Test		
333	St. Lucas	Farmers' Co-op. Cr'y.	Co-op	J. J. Milnes, Sec.	St. Lucas	Waucoma	H. Goshier	Sep'tr	Test	173	
334	Stanley	Stanley Creamery	Co-op.	Geo. Brooks, Sec.	Stanley	Stanley	F. W. Strong	Sep'tr	Test		
335	Waucoma	Bethel	Stk Co	A. Webster	Waucoma	Waucoma	C. O. Peffer	Sep'tr	Test		
336	Waucoma	Waucoma	Stk Co	A. Webster, Pres.	Waucoma	Waucoma	R. M. Harbour	Sep'tr	Test	75	
337	Westgate	Westgate Creamery Co.	Co-op.	Thos. Becher	Westgate	Westgate	E. L. Bracy	Sep'tr	Test	373	
338	West Union	Farmers' Dairy Co.	Co-op.	L. W. Wilbur	West Union	West Union	W. L. Tillson	Sep'tr	Test	40	
339	West Union	Union Creamery	Stk Co	E. B. Shaw, Sec.	West Union	West Union	S. Peterson	S. & G. C.	Test	202	
340	West Union	Idipin	Stk Co	E. B. Shaw, Sec.	West Union	West Union	S. & G. C.	Test			
341	Floyd County	Charles City Cr'y Co.	Ind.	J. C. Daly	Charles City	Charles City	J. C. Daly	S. & G. C.	Test	164	
342	Charles City	Flood Creek Sep'tr Cr'y	Stk Co	M. A. Hirsch, Sec.	Charles City	Charles City	John Haefner	Sep'tr	Test		

CREAMERY LIST—CONTINUED.

Office record.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by an individual or Co-op.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPING STATION.	NAME OF HUTTENBARGER.	Separator, Crib or both.	Method of receiving milk—by the cans or by bottles.	Bakery commiss. bottle number.
340	Floyd County	Floyd	Ind.	Winks & Day	Floyd	Marble Rock	C. A. Day	S. & G. O.	Test.	63
341	Marble Rock	Marble Rock	Ind.	Walker & Thomas	Marble Rock	Marble Rock	W. J. Emerson	Sep'tr.	Test.	64
342	Niles	Niles	Ind.	W. A. Sadart	Algona	Charlie City	Fred Madart	Sep'tr.	Test.	71
343	Nora Springs	Nora Springs	Ind.	B. C. Kennedy	Nora Springs	Nora Junction	B. C. Kennedy	Sep'tr.	Test.	10
344	Powersville	Pleasant Grove Cr'y. Ass'n	Ind.	Powers & Weston	Powersville	Nashua		Sep'tr.	Test.	
345	Rockford	Rockford Co-op. Dairy	Co-op.	O. L. Crowell, Sec.	Rockford	Rockford	W. J. Orfines	Sep'tr.	Test.	
346	Sheldon County	Sheldon	Ind.	J. Karta & Son	Ackley	Ackley	C. Strassburg	S. & G. O.	Ed.	70
347	Chapin	Chapin Creamery	Ind.	C. Nieter	Chapin	Chapin	C. Nieter	S. & G. O.	Test.	77
348	Faulkner	Faulkner	Ind.	Zemman Bros	Faulkner	Faulkner	Emma Zemman	Sep'tr.	Test.	81
349	Genova	Genova Creamery	Ind.	L. W. Myers	Hampton	Genova	B. Peterson	S. & G. O.	Test.	
350	Hampton	Hampton Creamery	Ind.	Julie & Kennedy	Hampton	Hampton	J. Kennedy	S. & G. O.	Test.	
351	Hampton	Pleasant Ridge	Ind.	McKeller & Cochran	Hampton	Hampton	L. C. Cochran	Sep'tr.	Ed.	
352	Leahon	Hampton Cr'y Co-op. Co.	Co-op.	F. Roldenmeyer & Son	Hampton	Hampton	Geo. Jorgensen	Sep'tr.	Test.	113
353	Poppy	Poppy Co-op. Cr'y Co.	Co-op.	J. A. Iversen, Sec.	Dows	Poppy	J. M. Tupper	Sep'tr.	Test.	185
354	Sheffield	Sheffield Co-op. Cr'y Co.	Co-op.	L. B. Carhart, Sec.	Sheffield	Sheffield	O. Triplett	Sep'tr.	Test.	
355	Greene County	Adams Co-op. Cr'y Co.	Co-op.	M. M. Reeding, Sec.	Adams	Adams	W. S. Foy	Sep'tr.	Test.	703
356	Adams	Furlin Co-op. Cr'y Co.	Co-op.	J. M. Tolliver	Furlin	Furlin	A. J. Davis	Sep'tr.	Test.	244
357	Furlin									
358	Paton	Paton Creamery	Ind.	George E. White	Paton	Paton	R. M. Lamb	Sep'tr.	Test.	277
359	Grand Junction	Remond's Creamery	Ind.	Remond Bros	Grand Junction	Grand Junction	C. L. Remond	Sep'tr.	Test.	118
360	Biggip	Biggip	Ind.	Richardson & Blum	Biggip	Biggip	E. Tuttle	Sep'tr.	Test.	254
361	Seranton	Seranton Creamery	Sik-Co.	L. B. Adams, Sec.	Seranton	Seranton	L. B. Adams	Sep'tr.	Test.	121
362	Greene County	Adams	Ind.	J. N. Johnson	Ackley	Ackley	T. Newman	S. & G. O.	Ed.	100
363	Ackley, Har Co.	Beaman	Ind.	P. McNelly	Beaman	Beaman	F. McNelly	S. & G. O.	Test.	207
364	Conrad	Conrad Creamery	Ind.	N. H. Blum	Conrad	Conrad		Sep'tr.	Test.	
365	Dairyville	Dairyville	Ind.	Graham Bros	Dairyville	New Hartford	Proprietor	Sep'tr.	Test.	146
366	Fredsville	Fredsville Co-op. Co.	Co-op.	Charles Olson, Sec.	Fredsville	Oedar Falls	A. K. Smith	Sep'tr.	Test.	266
367	Grundy Center	J. H. Sperry	Ind.	J. H. Sperry	Grundy Center	Grundy Center	Louis Cook	Sep'tr.	Test.	248
368	Grundy Center	J. H. Sperry	Ind.	J. H. Sperry	Grundy Center	Grundy Center	George Norton	Sep'tr.	Test.	253
369	Holland	Colfax Creamery	Co-op.	Geo. Schwarzack, Sec.	Ivester	Eldora	E. E. Burt	Sep'tr.	Test.	273
370	Holland	Colfax Creamery Co.	Co-op.	Geo. Schwarzack, Sec.	Ivester	Eldora	E. E. Burt	Sep'tr.	Test.	273
371	Holland	Holland Creamery	Ind.	J. H. Sperry	Holland	Holland	Ed. Wright	Sep'tr.	Test.	287
372	Morrison	Lincoln Spring	Ind.	Patrick & Campbell	Lincoln	Morrison	G. H. Patrick	Sep'tr.	Test.	452
373	Morrison	Morrison Creamery	Ind.	H. P. Jacobson & Bro	Morrison	Morrison	J. F. Jacobson	Sep'tr.	Test.	
374	New Hartford	Fairfield Twp. Cr'y	Ind.	Graham Bros.	New Hartford	New Hartford	George Graham	Sep'tr.	Test.	
375	Wainibock	Wainibock Cheese Pack's	Sik-Co.	Foyler Co.	Wainibock	Wainibock	G. A. Foyler	Sep'tr.	Test.	
376	Wellsburg	Wellsburg	Ind.	Martin & Faxon	Wellsburg	Wellsburg		Sep'tr.	Ed.	
377	Wellsburg	East Extra Creamery	Ind.	F. F. Wilcox	Extra	Extra	J. F. Niplan	Sep'tr.	Test.	
378	Wellsburg	Guthrie Center Cr'y	Ind.	Andrew Wood	Guthrie Center	Guthrie Center	A. Wood	Sep'tr.	Ed.	
379	Wellsburg	Wellsburg	Ind.	Andrew Wood	Guthrie Center	Guthrie Center		Sep'tr.	Ed.	
380	Stuart	Stuart Creamery	Ind.	E. M. Lawson	Stuart	Stuart	E. E. Gains	Sep'tr.	Test.	

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by an individual, corporation, or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gravity cream or both.	Method of receiving milk—by the hands of the farmer or by the milkmaid.	Factory commission test.	State commission test.
384	Guthrie County, Stuart.	Arbor Hill.	Ind.	E. M. Lomas.	Stuart.						
385	Yale.	Yale Creamery.	Ind.	Park & Son.	Yale.	Yale.	C. D. Barthlew.	Sep'tr.	Test.		1,003
386	Hamilton County, Ellsworth.	Ellsworth Co-op C'y A's.	Co-op.	John Thorsen, Pres.	Ellsworth.	Ellsworth.	K. T. Naa.	Sep'tr.	Test.		282
387	Kamrar.	Gold Nugget.	Ind.	D. G. Bailey.	Kamrar.	Kamrar.	D. G. Bailey.	Sep'tr.	Test.		35
388	Poplar Grove, (in Co. Madison, Har-)	Poplar Grove.	Ind.	Geo. G. Howard.	Poplar Grove.	Poplar Grove.	Geo. G. Howard.	Sep'tr.	Hd.		45
389	Madellie, Har-	Lincoln Creamery Co.	Co-op.	Martin Christian, P.	Madellie, Har-	Madellie, Har-	Peter Larson.	Sep'tr.	Test.		9
390	Randall.	Randall Farmers' C'y.	Co-op.	Jens Clausen, Sec.	Randall.	Randall.	H. N. Miller.	Sep'tr.	Test.		87
391	Stanhope.	Stanhope Creamery.	Ind.	N. C. Blow.	Stanhope.	Stanhope.	N. C. Blow.	Sep'tr.	Test.		90
392	Hancock County, Britt.	Crystal Creamery Co.	Co-op.	Ed Peterson, Sec.	Britt.	Britt.	L. C. Peterson.	Sep'tr.	Test.		
393	Britt.	Britt.	Ind.	L. S. Potter.	Corwith.	Britt.	F. Crofte.	S. & G. C.	Test.		
394	Corwith.	Corwith.	Ind.	L. S. Potter.	Corwith.	Corwith.	A. B. Adams.	S. & G. C.	Test.		
395	Corwith.	Kubley.	Ind.	L. S. Potter.	Corwith.	Corwith.		S. & G. C.	Test.		
396	Corwith.	Stallens.	Ind.	L. S. Potter.	Corwith.	Corwith.		S. & G. C.	Test.		
397	Corwith.	Harrigroce.	Ind.	L. S. Potter.	Corwith.	Corwith.		S. & G. C.	Test.		
398	Garner.	Garner.	Stk Co.	S. S. Whitney.	Garner.	Garner.	W. L. Channer.	S. & G. C.	Test.		
399	Crystal Lake.	Northern Iowa C'y Co.	Stk Co.	S. E. Allen, Pres.	Forest C'y, Win-	Forest C'y, Win-		S. & G. C.	Test.		
400	Ellington.	Northern Iowa C'y Co.	Stk Co.	S. E. Allen, Pres.	Forest C'y, Win-	Forest C'y, Win-		S. & G. C.	Test.		

401	German Valley.	Northern Iowa C'y Co.	Stk Co.	S. E. Allen, Pres.	Forest C'y, Win-	Forest C'y, Win-		S. & G. C.	Test.		
402	Klemme.	Klemme Creamery Co.	Co-op.	L. Sampson, Sec.	Klemme.	Klemme.	W. L. Palmer.	G. C.			
403	Madison.	Madison Creamery Co.	Co-op.	G. B. Hanner, Sec.	Forest C'y, Win-	Forest City.	Lewis Richards.	Sep'tr.	Test.		749
404	Hardin County, Alden.	Alden Co-op C'y Co.	Co-op.	H. L. Bottino, Sec.	Alden.	Alden.	Robt. Richworth.	Sep'tr.	Test.		197
405	Alden.	Buckeye.	Ind.	Carl Clausung.	Alden.	Alden.	Carl Clausung.	Sep'tr.	Test.		216
406	Eldora.	Hughes.	Ind.	M. E. Hanson.	Hughes.	Hughes.	M. E. Hanson.	Sep'tr.	Test.		604
407	Iowa Falls.	Sloans Springs C'y.	Ind.	M. I. Powers.	Iowa Falls.	Iowa Falls.		Sep'tr.	Test.		51
408	Lawn Hill.	Lawn Hill.	Ind.	Geo. B. Strayer.	Lawn Hill.	Lawn Hill.	Geo. B. Strayer.	G. C.			890
409	Radcliffe.	Concordia & Co-op C'y Co.	Co-op.	T. L. Thompson.	Radcliffe.	Radcliffe.	A. Berven.	Sep'tr.	Test.		259
410	Robertson.	Robertson.	Ind.	J. Windecker & Sons.	Robertson.	Robertson.	S. O. Windecker.	Sep'tr.	Hd.		
411	Union.	Union Creamery Co.	Co-op.	Thos. E. Culp, Sec.	Union.	Union.	Thos. E. Culp.	Sep'tr.	Test.		
412	Whitten.	Whitten Creamery Co.	Co-op.	Geo. N. Carr, Sec.	Whitten.	Whitten.	George N. Carr.	G. C.			
413	Harrison County, Little Sioux.	Little Sioux Creamery.	Co-op.	W. F. Arthur, Sec.	Little Sioux.	River Sioux.	F. T. Eyon.	Sep'tr.	Hd.		
414	Magnolia.	Magnolia Creamery Co.	Co-op.	Henry Cadwell, Sec.	Magnolia.	Logan.	E. A. McFale.	Sep'tr.	Test.		
415	Henry County, Wayland.	[Dairy Ass'n's] Hickory Grove Fm'ty.	Co-op.	C. H. Eyles, Sec.	Wayland.	Wayland.	David Rich.	Sep'tr.	Test.		901
416	Winfield.	Winfield Creamery.	Ind.	Eicher Bros.	Winfield.	Winfield.	J. A. Eicher.	Sep'tr.	Test.		
417	Howard County, Chester.	Chester Co-op. C'y Co.	Co-op.	E. O. Green.	Chester.	Chester.	E. D. Capper.	G. C.			
418	Cresco.	Cresco Creamery.	Ind.	W. B. Owens.	Cresco.	Cresco.		S. & G. C.	Test.		663
419	Elma.	Elma Creamery.	Stk Co.	Carster & Dunn.	Elma.	Elma.		S. & G. C.	Test.		778
420	Lime Springs.	Ice Cave Creamery Co.	Stk Co.	Ice Cave C'y Co.	Lime Springs.	Lime Springs.	A. Gulbranson.	S. & G. C.	Test.		285
421	Protivin.	Protivin Cream'y Ass'n.	Co-op.	J. J. Lukes, Sec.	Protivin.	Cresco.	W. J. Kadbo.	G. C.			759
422	Saratoga.	Saratoga Coop. C'y Ass'n.	Co-op.	W. H. Tashman, Sec.	Saratoga.	Chester.	G. J. Hoopman.	G. C.			

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by an individual, or 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, gash-board, cream, or both.	Method of receiving the milk or by the tank or by the hand.	Dairy commission bottle number.
423	Humboldt County.	Bode Creamery Ass'n	Co-op.	T. O. Hanson, Sec.	Bode	Bode	H.C. Granseth, Jr.	Sep'tr.	Test.	254
424	Bradgate	Bradgate Creamery	Co-op.	J. L. Van Horn	Bradgate	Bradgate	E. M. Vargason	Sep'tr.	Test.	261
425	Humboldt	Humboldt B. & C. Ass'n	Co-op.	O.L. Crinkhank, Sec.	Humboldt	Humboldt	J. C. Hall	Sep'tr.	Test.	26
426	Livermore	Livermore	Stk Co.	L. S. Potter	Corwith	Livermore	E. Underwood	S. & G.C.	Test.	
427	Ottosen	Waconsta Cr'y Ass'n	Co-op.	Louis J. Clave	Ottosen	Ottosen	L. Hoppstead	Sep'tr.	Test.	278
428	Renwick	Renwick	Ind.	W. T. Drennen & Son	Renwick	Renwick	S. P. Drennen	S. & G.C.	Test.	263
429	Thor	Clover Creamery	Stk Co.	Lewis Olson, Sec.	Thor	Thor	L. J. Tokheim	Sep'tr.	Test.	153
430	Ida County.	Arthur Creamery	Ind.	Robert Clayton	Arthur	Arthur	Robt. Clayton	Sep'tr.	Test.	
431	Battle Creek	Maple Valley Creamery	Ind.	Nelson & Jorgensen	Battle Creek	Battle Creek	A. Crawford	G. C.		
432	Galva	Galva	Ind.	Robert Jorgensen	Galva	Galva	Robt. Jorgensen	Sep'tr.	Hd.	
433	Holstein	Holstein Creamery	Ind.	Perpritz & Bischof	Holstein	Holstein	Perpritz	Sep'tr.	Hd.	
434	Ida Grove	Ida Grove Creamery	Ind.	Alfred D. Saunders	Ida Grove	Ida Grove	A. D. Saunders	Sep'tr.	Hd.	
435	Genoa Bluff	Genoa Bluff	Ind.	Geo. R. Howard	Genoa Bluff	Marengo	C. E. Stanfield	G. C.		151
436	North English	North English	Ind.	Magoon & O'Brien	North English	North English	Dick O'Brien	G. C.		
437	South Amama	Clover Creamery	Ind.	D. Sanderfeld	South Amama	Hornstead	D. Sanderfeld	G. C.		128
438	Victor	Victor	Ind.	A. L. Minehart, Mgr.	Victor	Victor	A. L. Minehart	G. C.		
439	Williamsburg	Williamsburg	Ind.	J. M. Matthews	Williamsburg	Williamsburg	J. M. Matthews	G. C.		

440	Jackson County.	Andrew Lily Creamery	Ind.	C. B. Bell	Andrew	Maquoketa	Bert Ayers	S. & G.C.	Test.	
441	Baldwin, No. 2	Diamond Creamery Co.	Ind.	Stump's, M. Lutz & Co.	Boston, Mass.	Belleve	F. H. Estlinger	G. C.	Test.	
442	Bellevue	Rose Valley Cr'y Co.	Co-op.	N. C. Blador	Bellevue	Bellevue	Chas. Hunter	Sep'tr.	Test.	
443	Doque Co.	Bernard	Co-op.	David Stanton	Cascade	Bernard	N. H. Loven	Sep'tr.	Test.	
444	Emeline	Brandon Co-op. Cr'y Co.	Co-op.	N. H. Loven, Sec.	Emeline	Maquoketa	F. D. Finch	Sep'tr.	Test.	736
445	Fulton	Fulton Co-op. Cr'y Co.	Co-op.	S. D. Hold, Sec.	Fulton	Maquoketa	Peter Butler	S. & G.C.	Test.	265
446	La Motte	La Motte Creamery	Ind.	Nemmers & Butler	La Motte	La Motte	M. J. Hoffman	S. & G.C.	Test.	71
447	La Motte	St. Donatus	Ind.	Nemmers & Butler	La Motte	La Motte	M. J. Hoffman	S. & G.C.	Test.	98
448	La Motte	Sterling Separator	Ind.	Hoffman & Kettler	La Motte	La Motte	George Sizer	G. C.	Test.	124
449	La Motte	Sterling Separator	Ind.	Hoffman & Kettler	La Motte	La Motte	George Sizer	G. C.	Test.	98
450	Miles	Pioneer Creamery	Stk Co.	O. W. Heyner	Miles	Miles	O. H. Mowers	Sep'tr.	Test.	781
451	Monmouth	Monmouth Co-op. Cr'y Co.	Co-op.	Geo. Sokol, Sec.	Monmouth	Monmouth	A. J. Nagas	Sep'tr.	Test.	761
452	Preston	Preston	Ind.	John Newman Co.	Elgin, Ill.	Preston	Joseph Bly	Sep'tr.	Test.	266
453	Union Center	Union Center	Ind.	John Newman Co.	Elgin, Ill.	Preston	E. R. Dunkan	Sep'tr.	Test.	761
454	Spragueville	Spragueville	Ind.	A. Von Oven	Miles	Preston	E. R. Dunkan	Sep'tr.	Test.	761
455	Spragueville	Spragueville	Ind.	John Newman Co.	Elgin, Ill.	Preston	E. R. Dunkan	Sep'tr.	Test.	761
456	Springbrook	Springbrook Creamery	Ind.	C. M. Kegler	Springbrook	Bellevue	Joseph Bly	G. C.	Test.	765
457	Jasper County	Baxter Dairy Co.	Co-op.	H. Krampe, Jr., Sec.	Baxter	Baxter	Ralph Heikla	Sep'tr.	Test.	145
458	Baxter	Baxter	Ind.	Harris & Co.	Baxter	Baxter	G. F. Harris	Sep'tr.	Test.	269
459	Baxter	Baxter	Ind.	Harris & Co.	Baxter	Baxter	G. F. Harris	Sep'tr.	Test.	269
460	Baxter	Baxter	Ind.	Harris & Co.	Baxter	Baxter	G. F. Harris	Sep'tr.	Test.	269
461	Ira	Ira Creamery	Ind.	Harris & Co.	Ira	Ira	C. Stevenson	Sep'tr.	Test.	269
462	Kellogg	Kellogg Creamery	Ind.	Quaintance & Beatty	Jasper	Kellogg	J. O. Quaintance	G. C.	Test.	
463	Monroe	Monroe	Ind.	Chase & Stoops	Monroe	Monroe	E. L. Grodat	Sep'tr.	Test.	228
464	Newton	Malaka Creamery	Ind.	N. D. Parsons	Newton	Newton	A. H. Hale	S. & G.C.	Test.	228

CREAMERY LIST—CONTINUED.

Office Record Number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by an individual or stock company.	NAME OF PROPRIETOR, PARTNER OR MANAGER.	V. O. ADDRESS OF PROPRIETOR, PARTNER OR MANAGER.	SHIPPING OR STATION.	NAME OF BUTTER-MARK.	Separator, bath, or both.	Method of packing the milk or by the hand.	Number of bottles.
464	Jasper County Prairie City	Prairie City Creamery.	Ind.	G. W. Cooper.....	Prairie City.....	Prairie City.....	G. W. Cooper.....	G. C.	Test..	781
466	Beaconsayer	Palo Alto Dairy Co.	Stk Co	W. E. Caldwell, Mgr	Beaconsayer	Beaconsayer	F. E. Beck.....	Sep '12.	Test..	609
468	Valerita	Fris Co-op. Cr'y Ass'n	Co-op	J. M. Inglis, Sec.	Valerita	Valerita	H. W. Patterson	Sep '12.	Test..	681
467	Beaconsayer	Bellevue Creamery Co.	Ind.	J. Kumbolt & Sons	Salina	Beaconsayer	Frank Kumbolt	S. A. G. C.	Test..	653
468	Fairfield	Fairfield	Ind.	John McLean	Fairfield	Fairfield	John McLean	Sep '12.	Test..	609
469	Four Corners.	Kanfman Creamery	Ind.	A. M. Kaufman	Four Corners.	Lockridge	W. O. Smith	Sep '12.	Test..	681
470	Germanville.	Germanville Cr'y Ass'n	Co-op	J. F. Craft, Manager	Germanville	Brighton	J. H. Johnson	Sep '12.	Test..	653
471	Lockridge	Lockridge	Ind.	Edward Hartman	Lockridge	Lockridge	Edw. Hartman	Sep '12.	Test..	682
472	Packwood	Packwood Creamery	Ind.	J. D. Esler	Packwood	Packwood	Paul Hines	Sep '12.	Test..	662
473	Salina	Salina Creamery Co.	Co-op	J. H. Altender, Sec.	Salina	Beckwith	Henry Goetz	Sep '12.	Test..	116
474	Johnson County North Liberty	North Liberty Cr'ing	Ind.	J. W. Anshel	North Liberty	Iowa City	S. A. G. C.	S. A. G. C. Test..	Test..	22
475	Greenfield	Greenfield	Ind.	J. W. Anshel, Sec.	North Liberty	Oasis	H. Gaymon	S. A. G. C.	Test..	686
476	Oasis	Oasis Creamery Co.	Ind.	V. D. Bumgardner	Oasis	Oasis	J. A. Belle	S. A. G. C.	Test..	686
477	Oxford	Oxford Creamery Co.	Ind.	J. A. Bell	Oxford	Oxford	J. J. Flah.	Sep '12.	Test..	686
478	Solon	Cedar Co-op. Cr'y Ass'n	Co-op	Joe. Krob, Sec.	Solon	Solon	J. J. Flah.	Sep '12.	Test..	686
479	Solon	Solon Creamery	Ind.	Fisher & Beck	Solon	Solon	D. C. Stemann	G. C.	Test..	686

480	James County Amber	Amber	Ind	W. H. Sanford	Amber	Amber	Jan. Overland	Sep '12.	Test..	85
481	Amber	Hart's Green Co-op. Cr. Co.	Co-op	T. I. Plattner, Sec.	Amber	Amber	A. E. Porter	Sep '12.	Test..	700
482	Amber	Jackson	Ind	J. H. Sanford	Amber	Amber	J. W. Evans	Sep '12.	Test..	81
483	Ammon	Fawn Cr'yk	Ind	J. S. Condit	Ammon	Ammon	P. Wilkison	Sep '12.	Test..	207
484	Ammon	Franklin	Ind	Vinton Smith	Ammon	Ammon	Vinton Smith	Sep '12.	Test..	205
485	Oas Center Oas Center	Center Creamery	Ind	Thomas & Massey	Oas Center	Ammon	Ammon	Sep '12.	Test..	307
486	Oas Center Oas Center	Temple Hill Co-op. Cr. Co.	Co-op	M. E. Carr, Pres.	Oas Center	Cascade	Todd Swanson	Sep '12.	Test..	307
487	Center Junction	Low Creamery	Ind	C. M. Hanna	Center Junction	Center Junction	W. H. Brownell	Sep '12.	Test..	215
488	Halma	Enterprise Co-op	Co-op	H. R. Bowman, Sec.	Halma	Halma	W. H. Brownell	Sep '12.	Test..	215
489	Longworth	Clover Leaf Cr'y Co.	Co-op	Stimpson, McIndry & Co.	Longworth	Longworth	C. Plattner	Sep '12.	Test..	220
490	Monticello	Monticello Creamery Co.	Ind.	Stimpson, McIndry & Co.	Monticello	Monticello	G. L. Pheasant	Sep '12.	Test..	220
491	Monticello No. 2	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Monticello	Monticello	G. L. Pheasant	Sep '12.	Test..	220
492	Longworth No. 2	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Longworth	Longworth	G. L. Pheasant	Sep '12.	Test..	220
493	Longworth No. 3	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Longworth	Longworth	G. L. Pheasant	Sep '12.	Test..	220
494	Monticello No. 3	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Monticello	Monticello	G. L. Pheasant	Sep '12.	Test..	220
495	Monticello No. 4	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Monticello	Monticello	G. L. Pheasant	Sep '12.	Test..	220
496	Monticello No. 5	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Monticello	Monticello	G. L. Pheasant	Sep '12.	Test..	220
497	Wyanburg No. 20	Diamond Creamery Co.	Ind.	Stimpson, McIndry & Co.	Wyanburg	Wyanburg	G. L. Pheasant	Sep '12.	Test..	220
498	Marcella	Marcella	Ind.	James Sinclair	Marcella	Marcella	James Sinclair	Sep '12.	Test..	221
499	Marcella	Brookside	Ind.	Wm. Landis	Brookside	Brookside	Wm. Landis	Sep '12.	Test..	221
500	Marcella	Downtownville Co-op. Cr. Co.	Co-op	Geo. Ambush, Sec.	Downtownville	Monticello	F. G. Parkins	Sep '12.	Test..	706
501	Marcella	Star Co-op. Cr'y Co.	Co-op	Condit & Swanson	Star	Star	O. W. Brauntion	Sep '12.	Test..	679
502	Monticello	Leveon Creamery	Ind.	Condit & Swanson	Monticello	Monticello	O. W. Brauntion	Sep '12.	Test..	221
503	Otis	Otis Creamery	Ind.	Condit & Swanson	Otis	Otis	C. L. Paumier	Sep '12.	Test..	221
504	Otis	Otis Creamery	Ind.	Condit & Swanson	Ammon	Ammon	C. L. Paumier	Sep '12.	Test..	221

CREAMERY LIST—CONTINUED.

Office record number	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by as individual or cooperative stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BATTERY-MAKER.	Separator, gath-cream, or both.	Method of receiving the milk or by the test or by the hundred.	Dairy number of bottles number.
505	Johns County Onslow	Coral Creamery	Ind	J. L. Bader	Clayford	Onslow	J. L. Bader	Sep'tr	Test	97
506	Onslow	Clay Valley Co-op. Cr. As	Co-op	C. L. Butler, Sec.	Onslow	Onslow	F. A. Corrier	Sep'tr	Test	
507	Scotch Grove	Rose Creamery	Ind	O. M. Hanna, Sec.	Scotch Grove	Scotch Grove		Sep'tr	Test	856
508	Wyoming	Wyoming Co-op. Cr'y As	Co-op	J. W. Rhodes, Sec.	Wyoming	Wyoming	Isaac H. Smith	Sep'tr	Test	
509	Kosuth County Delta	Delta Creamery	Ind	James Dickson	Delta	Delta	H. S. Wood	Sep'tr	Hd	24
510	Hedrick	Hedrick Creamery	Ind	C. Hines	Hedrick	Hedrick	E. S. Barnes	Sep'tr	Test	616
511	Keswick	Keswick Creamery	Ind	C. W. Wilson, Sec.	Keswick	Keswick	C. W. Wilson	G. C.		
512	What Cheer	What Cheer Creamery	Ind	Emery & Frink	What Cheer	What Cheer	F. L. Emery	S. & G. C.	Test	
513	What Cheer	Barnes City	Ind	Emery & Frink	What Cheer	What Cheer	F. L. Emery	S. & G. C.	Test	
514	Kosuth County Algona	Algona Co-op. Cr'y Co.	Co-op	M. Schenk, Sec	Algona	Algona	A. W. Sturgbeck	Sep'tr	Test	226
515	Bancroft	Bancroft Co-op. Cr'y	Co-op	W. W. Wolcott, Sec.	Bancroft	Bancroft	Aug. Johnson	Sep'tr	Test	
516	Bancroft	Seneca Co-op. Cr'y Co.	Co-op	M. Jensen, Sec.	Bancroft	Bancroft	Leo Tibbets	Sep'tr	Test	
517	Buffalo Fork	Buffalo F'k Co-op. Cr. Co.	Co-op	J. P. Stow, Sec.	Buffalo Fork	Burt	F. Vavrickek	Sep'tr	Test	622
518	Burt	Burt Co-op. Cr'y Co.	Co-op	Geo. A. Angus, Sec.	Burt	Burt	D. L. Driver	Sep'tr	Test	697
519	Burt	Fenton Co-op. Cr'y Co.	Co-op	G. W. Nowel, Sec.	Fenton	Burt	H. W. Pettibone	Sep'tr	Test	348
520	Burt	Lone Rock Creamery	Co-op	John Bernhard, Sec	Lone Rock	Burt	L. C. Adams	Sep'tr	Test	128
521	Germania	Germania	Ind	J. Morck, Manager.	Germania	Germania	Josea Morck	Sep'tr	Test	
522	German Valley	German Val. Co-op. Cr. Co.	Co-op	F. E. Johnson, Sec.	German Valley	Bancroft	E. Bacon	Sep'tr	Test	203
523	Hobart	Hobart Co-op. Cr'y Co.	Co-op	A. Gilmour, Sec.	Hobart	Hobart	Aug. Nurrell	Sep'tr	Test	229
524	Irvington	Irvington Co-op. Cr. Co.	Co-op	S. H. Honey, Sec.	Irvington	Irvington	M. F. Bordwell	Sep'tr	Test	
525	Ledyard	Farmers' Co-op. Cr. As	Co-op	Chas. G. Lewis	Ledyard	Ledyard	E. K. Junkins	Sep'tr	Test	241
526	Lotts Creek	Lotts Cr'k Co-op. Cr. Co.	Co-op	F. L. Hamey, Sec.	Lotts Creek	Burt	Fred Holeman	Sep'tr	Test	
527	Sexton	Sexton Co-op. Cr'y Co.	Co-op	E. A. E. Looy, Sec.	Sexton	Sexton	Frank G. Huron	Sep'tr	Test	
528	St. Joseph	St. Joseph Dairy Ass'n.	Co-op	Frank Peyson, Sec.	St. Joseph	Livermore	M. H. Halfen	Sep'tr	Test	226
529	Swoa City	Swoa City Co-op. Cr. Co.	Co-op	John E. Peterson	Kosuth	Kosuth	J. A. Cronholm	Sep'tr	Test	202
530	Wesley	Wesley Co-op. Cr'y	Co-op	Nels Johnson	Wesley	Wesley		Sep'tr	Test	265
531	West Bend	Garfield Creamery Co.	Co-op	E. Berninghoff, Sec	West Bend	West Bend	J. L. Reid	Sep'tr	Test	137
532	Whittemore	Whittemore Co-op. Cr. Co.	Co-op	Thos. Carmusly, Sec	Whittemore	Whittemore	R. C. Schaudal	Sep'tr	Test	
533	Lee County Fl. Madison	Fl. Madison Creamery	Ind	T. G. Currier	Fl. Madison	Fl. Madison	Ray Currier	Sep'tr	Hd.	
534	West Point	West Point C. & C. Pac'y	Ind	Pogge & Stain	West Point	West Point	Henry Pogge	G. C.		607
535	Lincoln County Alburnett	Alburnett	Stk Co	J. M. Robles, Sec.	Bobbs	Alburnett	E. E. Gould	Sep'tr	Test	
536	Center Point	Center Point Creamery	Ind	G. L. Weeks	Center Point	Center Point		Sep'tr	Test	5
537	Central City	Central City	Ind	Henderson & Nietert	Central City	Central City	John Nietert	Sep'tr	Test	91
538	Central City	Valley Farm	Ind	P. G. Henderson	Central City	Central City	St. Elmo Wright	Sep'tr	Test	
539	Coggon	Coggon Creamery	Stk Co	M. L. Ware, Sec.	Coggon	Coggon	F. J. Cruseberry	Sep'tr	Hd.	
540	Coggon	Deep Spring	Ind	Henderson & Bowser	Coggon	Coggon	J. B. Bowser	Sep'tr	Test	331
541	Coggon	Nickle Plate Co-op. Cr'y	Co-op	M. F. LeClair, Mgr.	Frairieburg	Coggon	Janns Church	Sep'tr	Hd.	654
542	Coggon	North Side Creamery	Co-op	C. J. Johnson, Sec.	Coggon	Coggon	Fred Lehman	Sep'tr	Hd.	
543	Elmont	Elmont Creamery	Ind	S. B. Mills	Elmont	Central City	S. E. Mills	Sep'tr	Hd.	254
544	Ely	Ely and Western Cr'y	Stk Co	J. C. Dvorak	Ely	Ely	L. J. Ford	Sep'tr	Test	
545	Ely	Ely and Western Cr'y	Stk Co	J. C. Dvorak, Sec.	Ely	Ely		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, gath-er, cream, or both.	Method of recov-ery of cream, or the test or by the hundred.	Lacty counts per bottle number.
546	Lyon County, Fairfax.....	Scotch Grove Creamery	Ind..	Henderson & Babe'k	Fairfax.....	Cedar Rapids.	A. J. Babcock.....	Sep'tr..	Hd.	
547	Lafayette.....	Lafayette Creamery Co.	Co-op.	D. W. Neighbor, Sec.	Lafayette.....	Alburett.....	H. S. Loveland.....	Sep'tr..	Test.	
548	Lisbon.....	W. S. Furnas Cr'y Co..	Ind..	W. H. Hunkle, Sec.	Lisbon.....	Lisbon.....	Clyde Hoover.....	G. C.		
549	Marion.....	W. W. Gray Cr'y Co..	Ind..	W. W. Gray Cr'y Co.	Marion.....	Marion.....	O. A. Gilne.....	Sep'tr..	Test.	765
550	Bertrand.....	W. W. Gray Creamery Co.	Ind..	W. W. Gray Cr'y Co.	Marion.....	Marion.....	Maries.....	Sep'tr..	Test.	
551	Prairieburg, No. 18, Prairieburg, No.	Diamond Creamery Co..	Ind..	Simpson, McIntire & Co.	Boston, Mass.	Boston, Mass.		Sep'tr..	Test.	
552	Prairieburg.....	Oak Leaf Creamery	Ind..	Minehart & Cook	Prairieburg.....	Prairieburg.....	L. E. Minehart.....	Sep'tr..	Hd.	765
553	Robins.....	Bareka.....	Ind..	J. M. Robins	Robins.....	Robins.....	S. E. Gould.....	Sep'tr..	Test.	
554	Springville.....	Phoenix.....	Ind..	Irwin Paul.....	Springville.....	Springville.....	Irwin Paul.....	Sep'tr..	Test.	381
555	Springville.....	Lyon Groce.....	Ind..	Irwin Paul.....	Springville.....	Springville.....		Sep'tr..	Test.	
556	Toddville.....	Monroe.....	Ind..	J. Johnson.....	Toddville.....	Toddville.....	O. Lissnes.....	Sep'tr..	Test.	310
557	Troy Mills.....	Troy Mills.....	Ind..	Gard & Oedler	Troy Mills.....	Walker.....	John Oedler.....	Sep'tr..	Hd.	
558	Troy Mills.....	Highland Creamery Co.	Co-op.	H. Horak, Sec.	Walker.....	Walker.....	Thomas Nietert.....	Sep'tr..	Hd.	
559	Walker.....	Walker.....	Co-op.	H. J. Nietert.....	Walker.....	Walker.....	S. W. Laird.....	Sep'tr..	Test.	18
560	Waubek.....	Burlington Cr'y Co..	Co-op.	F. J. Richards, Sec.	Anamosa.....	Central City.....	W. W. Ross.....	Sep'tr..	Test.	
561	Waubek.....	Crown.....	Ind..	J. G. Fox.....	Waubek.....	Central City.....	H. C. Hemenway.....	Sep'tr..	Hd.	
562	Waubek.....	Waubek.....	Ind..	A. L. Corey.....	Waubek.....	Viola.....	A. L. Corey.....	Sep'tr..	Hd.	

563	Lyon County, Fredonia.....	Fredonia.....	Ind..	Thomas Carey	Fredonia.....	Fredonia.....	E. W. Kelly.....	G. C.		
564	Letts.....	Letts Creamery	Ind..	J. M. Hilderbrand	Letts.....	Letts.....	J. M. Hilderbrand.....	G. C.		
565	Wapello.....	Wapello.....	Ind..	T. Dreitdough	Wapello.....	Wapello.....	T. Dreitdough.....	G. C.		
566	Lucas County, Derby.....	Derby.....	Ind..	B. S. Spidler, Mgr.	Hamaston, Way Co.	Russell.....	W. J. Marshall.....	Sep'tr..	Test.	84
567	Russell.....	Russell Creamery Co.	Co-op.	W. J. Marshall, Sec.	Russell.....	Russell.....		Sep'tr..	Test.	636
568	Lyon County, Inwood.....	Inwood.....	Stk Co.	G. M. Anderson	Inwood.....	Inwood.....	Alex. Nordmark.....	Sep'tr..	Hd.	
569	Larchwood.....	Larchwood Creamery	Ind..	E. O. Wright.....	Larchwood.....	Larchwood.....	E. O. Wright.....	Sep'tr..	Test.	
570	Lester.....	Lester Co-op. Cr'y Co.	Co-op.	J. McCarthy	Lester.....	Lester.....	J. McCarthy.....	Sep'tr..	Test.	
571	Madison County, East Peru.....	Farmers' Creamery	Co-op.	E. M. Lamos	Stuart.....	East Peru.....	Bert Sheer.....	Sep'tr..	Test.	87
572	Macksburg.....	Cook Creamery Co.	Ind..	E. M. Lamos	Stuart.....	Lorimer.....	W. Way.....	Sep'tr..	Test.	817
573	Patterson.....	Patterson.....	Ind..	Chas. H. Smith	Patterson.....	Patterson.....	Chas. H. Smith.....	Sep'tr..	Test.	
574	Pfizer.....	Jackson Creamery Co.	Ind..	E. M. Lamos	Stuart.....	Stuart.....	A. E. Chran.....	Sep'tr..	Test.	
575	Winterset.....	Cloverdale.....	Ind..	Joseph Henry	Winterset.....	Winterset.....	A. M. Chaste.....	G. C.		
576	Madison County, New Sharon.....	New Sharon.....	Stk Co.	F. E. Crawford	New Sharon.....	New Sharon.....		G. C.		
577	Union Mills.....	Union Mills B. Co.	Ind..	James H. Allen.....	Union Mills.....	New Sharon.....	Willis Fry.....	Sep'tr..	Test.	
578	Madison County, Durham.....	Firm's B. & C. Mfg. Co.	Stk Co.	C. H. Durham, Sec.	Durham.....	Durham.....	Fred Larwood.....	Sep'tr..	Test.	878
579	Gosport.....	Gosport Co-op. B. and C	Co-op.	D. F. Gheslet, Sec.	Gosport.....	Knoxville.....	P. B. Gavit.....	Sep'tr..	Test.	
580	Knoxville.....	Knoxville.....	Ind..	J. J. Bousquet	Pella.....	Knoxville.....	W. H. Litor.....	G. C.		
581	Pella.....	Garden City.....	Ind..	J. J. Bousquet	Pella.....	Pella.....	A. J. Rhymer.....	G. C.		
582	Marshall County, Clemmons.....	Mineral Valley Cr'y Co.	Co-op.	Zno. Van Meter, Sec.	Clemmons.....	Clemmons.....	Henry Nolte.....	G. C.		
583	Haverhill.....	Columbia Creamery Co.	Co-op.	Albert Imholt.....	Haverhill.....	Haverhill.....	George Marcus.....	Sep'tr..	Test.	23
584	Haverhill.....	Haverhill Creamery	Ind..	Mayer Bros.	Haverhill.....	Haverhill.....	George Mayer.....	G. C.		

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by individual or stock company.	NAME OF PROPRIETOR OR MANAGER.	K. O. ADDRESS OF PROPRIETOR OR MANAGER.	SHIPPING STATION.	SAME OF BUTTER-MAKER.	REPAIRS ON CANS OR BOTH.	Method of pasteurizing the milk or the test of it.	Dairy Commissioner's test number.
586	Marshfield County Le Grand	Le Grand B and C. A. & Co.	Ind.	J. E. Moody	Le Grand	Le Grand	John E. Moody	Sep'tr	Test	778
588	Liscomb	Liscomb B. and C. Co.	Stk Co	C. F. Biersborn, Sec.	Liscomb	Liscomb	C. F. Biersborn	Sep'tr	Test	780
587	Melbourne	Farmers' Co-op. Co'y	Co-op.	E. L. Poffenberger, Sec.	Melbourne	Melbourne	Frank J. Mahle	Sep'tr	Test	781
589	Rhodes	Eden	Ind.	Anthony Rhodes	Rhodes	Rhodes	C. A. Weeks	G. C.	Test	16
590	State Center, McIntire County	State Center Farmers'	Co-op.	E. G. Swift	State Center	State Center	H. B. Norris	G. C.	Test	782
591	Emerson	Blue Grass Creamery	Ind.	W. M. Tolander	Emerson	Emerson	W. M. Tolander	G. C.	Test	
592	Glenwood	Golden Hill Dairy	Ind.	W. M. Mickelwait	Glenwood	Glenwood	W. M. Mickelwait	Sep'tr	Test	
593	Malvern	Malvena Creamery	Ind.	J. P. Norton	Malvern	Malvern		G. C.	Test	
594	Malvern	Laws Spring	Co-op.	T. J. Wheeler, Pres.	Malvern	Malvern	M. M. Blandin	G. C.	Test	
595	Little Cedar	Little Cedar Cry Co.	Stk Co	Edward Hill, Sec'y	Little Cedar	Little Cedar	Chas. B. French	G. C.	Test	
596	McIntire	Ice Cave Cry Co.	Stk Co	Ice Cave Cry Co.	McIntire	McIntire	Kaute Hoag	Sep'tr	Test	
598	Morva	Rock Creek Co-op. Cry Co.	Co-op.	S. J. Foholdt, Sec'y	Morva	Osaage	L. McLaren	G. C.	Test	
597	Orchard	Farmers' Co-op. Ass'n	Co-op.	W. R. Turner	Orchard	Orchard	Van Fambrother	G. C.	Test	
599	Osaage	Farmers' Co-op. Cry Co.	Co-op.	M. Hunt, Secretary	New Haven	Osaage	T. Trim	G. C.	Test	
600	Roseville	Osaage Co-op. Cry Co.	Co-op.	Albert Bartle, Sec'y	Osaage	Osaage	McDougal	G. C.	Test	
601	Saint Ansgar	Roseville Co-op. Cry Co.	Co-op.	P. J. Carpenter, Sec'y	Roseville	Roseville	George Miller	G. C.	Test	
602	Saint Ansgar	Farmers' Co-op. Cry Co.	Co-op.	T. M. Tolchom, Sec'y	St. Ansgar	St. Ansgar	M. G. Dyrbe	G. C.	Test	
603	Stacyville	Stacyville Creamery	Ind.	E. J. Oxtoby	Stacyville	Little Cedar	Thomas Oxtoby	Sep'tr	Test	
604	Blanco	Blanco	Ind.	Geo. Franker	Blanco	Blanco	Pease Beck	Sep'tr	HL	
605	Elliot	Elliot	Ind.	E. G. Barnes, Sec'y	Elliot	Elliot	J. H. Ballard	Sep'tr	Test	119
606	Stanton	Stanton Creamery	Ind.	Edin Creamery Co.	Chicago, Ill.	Stanton		Sep'tr	Test	607
607	Atalissa	Atalissa	Ind.	Jacob Long	Atalissa	Atalissa	J. J. Blair	S. & G. C.	HL	
608	West Liberty	West Liberty Creamery	Ind.	S. B. Picketing	West Liberty	West Liberty	Wm. Mathew	S. & G. C.	HL	
609	West Liberty	West Liberty	Ind.	S. J. Picketing	West Liberty	West Liberty	S. & G. C.	HL		
610	West Liberty	West Liberty	Ind.	H. H. Hildebrand	West Liberty	West Liberty	E. H. Hildebrand	G. C.		599
611	Wilson Junction	Wilson Junction	Ind.	Geo. W. Kelly	Wilson Junction	Wilson Junction	C. E. Kelly	S. & G. C.	HL	
612	Paullina	Paullina	Ind.	Geo. W. Kelly	Wilson Junction	Paullina		S. & G. C.	HL	
613	Paullina	Paullina	Ind.	Wm. Gehelis, Sec.	Germanstown	Paullina	Wm. Gehelis	Sep'tr	HL	29
614	Paullina	Paullina	Ind.	Adams Bros.	Rutherford	Rutherford	R. H. Tibbels	Sep'tr	Test	67
615	Ocheyedan	Ocheyedan	Ind.	Geo. Wells, Sec.	Saunder	Saunder	George Wells	Sep'tr	Test	92
616	Blanchard	Blanchard B. & C. Co.	Stk Co	E. L. Kenyon, Sec.	Ocheyedan	Ocheyedan	H. E. Richardson	S. & G. C.	Test	
617	Charlton	Charlton	Ind.	Charles Hove	Blanchard	Charlton	J. J. Thompson	Sep'tr	HL	
618	Shambaugh	Shambaugh Creamery	Stk Co	R. A. Hawkins, Sec.	Shambaugh	Shambaugh	S. A. Hawthorne	Sep'tr	Test	177
619	Paullina	Paullina	Co-op.	T. O. Hurd, Sec.	Ayrshire	Ayrshire	J. A. Rickman	Sep'tr	Test	282
620	Ayrshire	Ayrshire	Co-op.	S. P. Frederickson	Oregon	Oregon	W. G. Starbuck	Sep'tr	Test	283
621	Oregon	Oregon	Co-op.	Geo. W. Doran, Sec.	Oregon	Oregon	C. P. Charbach	Sep'tr	Test	150
622	Oregon	Oregon	Co-op.	J. K. Tyler, Pres.	Cylinder	Cylinder	L. M. Cleveland	Sep'tr	Test	285
623	Duport	Duport	Co-op.	A. Lohmann, Sec.	Duport	Cylinder	E. B. Robt.	Sep'tr	Test	159

CREAMERY LIST—CONTINUED.

Office Record Number	LOCATED AT OR NEAR	NAME OF CREAMERY.	Owned by an Individual, Co-op or Other	NAME OF PROPRIETOR, MANAGER OR MANAGER.	F. O. ADDRESS OF PROPRIETOR, MANAGER OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Kind of Cream—Ordinary or both.	Method of Test—By the milk or by the butterfat.	Lot Number
134	W. W. Alto County	Emmetsburg City Co.	Co-op	Lewis Steinhilber, Sec	Emmetsburg	Emmetsburg	N. Knutson	Sep'tr	Test	994
135	Emmetsburg	Nevada Creamery Co.	Co-op	— Hilkins	Mallard	Emmetsburg	Emmetsburg	Sep'tr	Test	200
137	Fairville	Fairville Creamery Co.	Co-op	C. H. Blockweir, Sec	Fairville	Whittemore	Albert Krasin	Sep'tr	Test	663
138	Graettinger	Graettinger Cr'y Co.	Co-op	A. K. Fahnstock, Sec	Graettinger	Graettinger	John Brink	Sep'tr	Test	340
139	Graettinger	Leat Island Cr'y Co.	Co-op	Lars C. Christensen	Graettinger	Graettinger	M. C. Peterson	Sep'tr	Test	37
140	Mallard	Mallard B. & C. Ass'n.	Co-op	Theo. Retanders, Sec	Mallard	Mallard	J. W. Fimmel	Sep'tr	Test	746
141	Osgoe	Osgoe Creamery Co.	Co-op	L. P. Stillman	Osgoe	Osgoe	E. W. Field	Sep'tr	Test	223
142	Rodman	Rodman Co-op. Cr'y Co	Co-op	C. J. Frye, Sec	Rodman	Rodman	Jesse Kold	Sep'tr	Test	742
143	Ruthven	Highland Butter Ass'n.	Co-op	T. J. Brennan, Sec	Ruthven	Ruthven	W. H. Halter	Sep'tr	Test	395
144	Ruthven	Ruthven Creamery	Ind	H. D. Remington	Ruthven	Ruthven	E. J. Remington	Sep'tr	Test	780
145	Ruthven	Trumbull Lake	Ind	H. D. Remington	Ruthven	Ruthven	A. L. Remington	Sep'tr	Test	700
146	West Bend	West Bend Co-op. Cr'y Co	Co-op	L. E. Temple, Sec	West Bend	West Bend	Thomas Clark	Sep'tr	Test	685
147	Windsor County	Alcon & Blunk Valley Cr'y Co	Co-op	G. F. Horton, Sec.	Alcon	Alcon	G. Chisworth	Sep'tr	Test	355
148	Ellendale	Ellendale	Co-op	J. F. Gorman, Sec	Ellendale	Merrill	Wm. Anderson	Sep'tr	Test	355
149	Le Mars	Le Mars Co-op. Cr'y Co.	Co-op	Thos. Langel, Sec.	Le Mars	Le Mars	J. C. Barbridge	Sep'tr	Test	700
150	Le Mars	Grant Township Cr'y Co	Co-op	H. F. Maust, Sec.	Struble	Dutton	E. W. Geyer	Sep'tr	Test	685
151	Merrill	Merrill Creamery Co.	Co-op	R. M. Couch, Sec.	Merrill	Merrill	C. R. Horrocks	Sep'tr	Test	685

152	Remsen	Remsen Co-op. Cr'y Co.	Co-op	A. Withering, Sec.	Remsen	Remsen	D. W. Mohan	Sep'tr	Test	411
153	Struble	Struble Creamery Co.	Co-op	E. C. Stool	Struble	Struble	B. Thorpeison	Sep'tr	Test	780
154	Fonda	Fonda	Ind.	R. F. Bewick	Fonda	Fonda		Sep'tr	Test	780
155	Havelock	Havelock Creamery	Ind.	F. W. Shellman	Plover	Havelock	T. J. Beals	Sep'tr	Test	780
156	Laurens	Laurens Creamery Co.	Ind.	T. J. Beals	Laurens	Laurens	E. W. Shellman	Sep'tr	Test	300
157	Plover	Plover Creamery	Ind.	F. W. Shellman, Mgr	Plover	Plover	W. R. Rogers	Sep'tr	Test	277
158	Boile	Boile	Ind.	W. R. Rogers	Boile	Boile		Sep'tr	Test	240
159	Boile	Frs Co-op. Cr'y Ass'n.	Co-op	B. T. Rodbeck, Sec.	Bondurant	Bondurant	Alex Galbraith	Sep'tr	Test	240
160	Grimes	Grimes Rut. & Cl. Co.	Stk Co.	L. W. Brigg	Grimes	Grimes	G. A. Sorvart	Sep'tr	Test	240
161	Maxwell	Keystone	Ind.	Frank W. Hill	Maxwell	Maxwell	F. S. Whiry	Sep'tr	Test	168
162	Mitchellville	Mitchellville Cr'y Ass'n	Co-op	Wm. Richards, Sec.	Mitchellville	Mitchellville	Geo. E. Rollar	Sep'tr	Test	277
163	Polk City	Tip-Top Butter Co.	Stk Co.	John McLean, Pres.	Polk City	Polk City	J. L. Wilson	Sep'tr	Test	277
164	Runnells	Runnells	Co-op	L. C. West, Sec	Runnells	Runnells	H. L. Coak	Sep'tr	Test	361
165	Runnells	Avoca Creamery	Ind	H. Frost	Avoca	Avoca	M. A. Sorvansen	G. C.	Test	685
166	Hancock	Silver Valley	Ind	H. C. Braudens	Hancock	Hancock	Chas Pemberton	Sep'tr	Test	685
167	Macedonia	Macedonia Cr'y Co.	Stk Co.	C. H. McCready, Sec.	Macedonia	Macedonia	S. M. Geyer	Sep'tr	Test	685
168	Minon	Minon Creamery	Co-op	Wm. Spans, Pres.	Minon	Minon	S. P. Jorgensen	Sep'tr	Test	685
169	Traylor	Traylor Creamery Co.	Co-op	Fred Holtz	Traylor	Council Bluffs	F. O. Winchel	Sep'tr	Test	685
170	Brooklyn County	Brooklyn Creamery	Ind	C. B. Galloway, Sec	Brooklyn	Brooklyn	Chas R Galloway	G. C.	Test	685
171	Deep River	Deep River	Ind	H. M. Hater	Deep River	Deep River	E. A. Smith	Sep'tr	Test	685
172	Grinnell	Fowler Creamery	Ind	J. W. Fowler	Grinnell	Grinnell	J. W. Fowler	Sep'tr	Test	685
173	Gurneey	Boon Farm Creamery	Ind	J. W. Bose	Gurneey	Gurneey	J. W. Rose	G. C.	Test	685
174	Hartwick	Hartwick Creamery Co.	Ind	Isaac Hakeman	Hartwick	Hartwick	J. C. Emery	G. C.	Test	685

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR YEAR.	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, cultured cream, or both.	Method of receiving milk—by hand or by the hundred.	Dairy companies' names & test-bottle number.	
664	Poweshot Co. unty. Jacob Creamery	Jacob Creamery	Ind.	A. C. Payne	Jacob	Jacob Switch		Sep'tr.	Test.		
665	Ringold County Kellerton Creamery	Kellerton Creamery	Ind.	J. D. Campbell	Kellerton	Kellerton		Sep'tr.	Test.		
666	Knoveton	Knoveton	Ind.	O. Sonda, Pres.	Knoveton, Ia.			Sep'tr.	Test.		
667	Redding	Redding Creamery	Stk Co.	D. M. Rich, Sec.	Redding	Redding	D. M. Rich	G. C.			
668	Sac County Auburn	Auburn Creamery	Ind.	Boardman Bros. & Co.	Nevada	Auburn	Walter Bennett	Sep'tr.	Hd.	151	
669	Carnarvon	Carnarvon Creamery	Ind.	Boardman Bros. & Co.	Nevada	Carnarvon	S. O. McCoy	Sep'tr.	Hd.	152	
670	Carnarvon	Carnarvon Creamery	Ind.	W. A. Straman	Carnarvon	Carnarvon	W. A. Straman	Sep'tr.	Hd.		
671	Early	Delaware Center Cr'y Co.	Co-op.	Clark N. Searle, Sec.	Early	Early	A. I. Grotland	Sep'tr.	Test.	13	
672	Early	Early Creamery	Ind.	George W. Pattee	Early	Early	Geo. W. Pattee	Sep'tr.	Test.	367	
673	Early	Gold Medal	Ind.	J. W. Wright	Early	Early	J. W. Wright	Sep'tr.	Test.	191	
674	Lake View	Lake View	Ind.	Donahue & Ahern	Lake View	Lake View	Jeff Hoon	Sep'tr.	Test.	549	
675	Odebolt	Farmers Creamery Co.	Stk Co.	J. A. Cranston, Sec.	Odebolt	Odebolt	Wm. Kilne	Sep'tr.	Test.	683	
676	Odebolt	Rose Valley	Ind.	G. Fuhlendorf	Odebolt	Odebolt	M. S. Trautman	Sep'tr.	Test.	535	
677	*Sac City	Blue Grass B. & C. F'y.	Ind.	L. Hillman	Sac City	Sac City	Fred Hillman	Sep'tr.	Test.		
678	Sac City	Coon Valley Creamery	Ind.	Elwood & Pettis	Sac City	Sac City	W. H. Pettis	Sep'tr.	Test.		
679	Sac City	Pearl Creamery	Ind.	H. H. Underhill	Sac City	Sac City	Chas. M. Culp	Sep'tr.	Test.	227	
680	Schaller	Eureka	Ind.	C. F. Schroeder	Schaller	Schaller		Sep'tr.	Hd.	331	
681	Wall Lake	Wall Lake	Ind.	Donahue & Ahern	Wall Lake	Wall Lake	T. Ahern	Sep'tr.	Test.	711	
682	Scott County Davenport	Donahue F're Bst. Co.	Stk Co.	F. Kappy, Sec.	Donahue	Donahue		Sep'tr.	Hd.		
683	Eldridge	Farmers Co-op. Cr'y	Ind.	W. J. Bryson	Eldridge	Eldridge		Sep'tr.	Test.	278	
684	Long Grove	Star Creamery	Ind.	G. W. Curtis	Long Grove	Long Grove	G. W. Curtis	G. C.			
685	Shelby County Elkhorn	Danish Central Cr'y Co.	Ind.	Geo. James, Sec.	Elkhorn	Brayton	P. K. Peterson	Sep'tr.	Test.		
686	Harlan	Harlan Creamery	Ind.	C. E. Jeurgensen	Harlan	Harlan	C. E. Jeurgensen	G. C.			
687	Harlan	Rock Valley Creamery	Co-op.	R. Rasmussen, Sec.	Harlan	Kirkman	M. P. Henricksen	Sep'tr.	Test.	151	
688	Walton Co. Walton, Vista	Frailie Rose	Co-op.	Stans Lencoh	Walton	Walton	N. C. Madsen	Sep'tr.	Hd.		
689	Sioux County Alton	Alton Co-op. Cr'y	Co-op.	J. P. Fritz, Sec.	Alton	Alton	G't'ed Kruepff	Sep'tr.	Test.	704	
690	Granville	Northwestern Cr'y Co.	Stk Co.	John Balberg, Mgr.	Granville	Granville	Fred Koppe	Sep'tr.	Hd.		
691	Hospers	Hospers Creamery Co.	Co-op.	J. J. De Boer, Sec.	Hospers	Hospers	F. W. Johnson	Sep'tr.	Test.		
692	Hawarden	Hawarden Cr'y Ass'n	Co-op.	J. M. Lynn, Sec.	Hawarden	Hawarden	G. A. Crowther	Sep'tr.	Test.	129	
693	Hull	Hull Creamery	Ind.	L. E. Bourquin	Hull	Hull	L. E. Bourquin	Sep'tr.	Hd.	334	
694	Rock Valley	Rock Valley	Ind.	John Conlin	Rock Valley	Rock Valley	G. Kottman	Sep'tr.	Test.	157	
695	Sioux Center	Welcome Cr'y Co.	Co-op.	T. Prins, Sec.	Sioux Center	Sioux Center	Wm. Edes	Sep'tr.	Test.	749	
696	Sioux Center	Sioux Center Cr'y	Ind.	G. H. Schoy	Sioux Center	Sioux Center	A. D. Rosetoom	Sep'tr.	Test.	967	
697	Sioux Center	Sioux Center Western	Ind.	G. H. Schoy	Sioux Center			Sep'tr.	Test.		
698	Story County Ames	Iowa Agricul. Col. Cr'y		State of Iowa	Ames	Ames	G. L. McCay	Sep'tr.	Test.	304	
699	Ames	Milford F'm's Cr'y Co.	Co-op.	W. J. Gilmore	Ames	Ames	W. M. Young	Sep'tr.	Test.	308	
700	Cambridge	Spring Valley Creamery	Ind.	B. F. Erb	Cambridge	Cambridge	B. J. Talbert	Sep'tr.	Test.	308	
701	Cambridge	Spring Valley Creamery	Ind.	B. F. Erb	Cambridge			Sep'tr.	Test.		
702	Collins	F'rmen's Co-op. Cr'y Co.	Co-op.	E. W. Shear, Pres.	Collins	Collins	J. N. Rosset	Sep'tr.	Test.	626	
703	Colo	Estreivou	Ind.	L. M. Kelley	Colo	Colo		Sep'tr.	Test.	614	

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized 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, graded cream, or both.	Method of receiving milk—by the hundred, by the hundred, or by the hundred.	Dairy commission number.	Butter bottle number.
704	Story County, Gilbert Station	Gilbert Station Cr'y	Ind	Thomas B. Jones	Gilbert Station	Gilbert Station	Peter Jensen	Sep'tr	Test	1,000	
705	Iowa Center	Iowa Center	Ind	J. Q. Moore	Iowa Center	Maxwell	M. Mortensen	Sep'tr	Test	212	
706	Maxwell	Maxwell	Ind	Frank W. Hill	Maxwell	Maxwell	S & G. O.	Test		233	
707	McCallsburg	McCallsburg R. & C. Fac.	Ind	F. Schwaper, Pres.	McCallsburg	McCallsburg	O. O. Snyder	Sep'tr	Test	240	
708	Roland	Indian Hill Cr'y Co.	Co-op	H. Kimble, Pres.	Roland	Roland	E. Binton	Sep'tr	Test	681	
709	Roland	Farmers' Cr'y Co.	Co-op	E. J. Evenson, Sec.	Roland	Roland	J. F. Burrets	Sep'tr	Test	43	
710	Roland	Roland Creamery	Ind	Boardm'n Bros & Co.	Nevada	Roland	N. O. Johnson	Sep'tr	Test	130	
711	Story City	Story City Fm's Cr'y	Co-op	L. R. Larson	Story City	Story City	W. H. Scheiber	Sep'tr	Test	120	
712	Tama County, Dinsdale	Dinsdale Co-op. Cr'y Co.	Co-op			Dinsdale		Sep'tr	Test		
713	Dysart	Dysart	Stk Co	Rowes Bros.	Vinton	Dysart		G. C.			
714	Elibron	Elibron Creamery	Ind	John Skroble	Elibron	Elibron	E. P. Skroble	G. C.			
715	Garwin	Garwin	Stk Co	H. J. Stevens	Garwin	Garwin	E. F. Johnson	G. C.			
716	Montour	Montour Creamery	Ind	J. M. Lawyer	Montour	Montour	J. M. Lawyer	G. C.			
717	Traer	Traer	Ind	J. B. O'Conner	Traer	Traer	J. B. O'Conner	S & G. O.	Test		
718	Taylor County, Blockton	Blockton B. & C. Ass'n	Ind	Fred Longwell	Blockton	Blockton	Fred Longwell	S & G. O.	Hd.		
719	Clearfield	Clearfield Cr'y Co.	Stk Co	D. B. Porter, Sec.	Clearfield	Clearfield	S. B. Huyck	Sep'tr	Test	400	
720	Coungy	Elgin Creamery Co.	Ind	Elgin Creamery Co.	Coungy			Sep'tr	Test		
721	Lenox	Lenox Creamery Co.	Ind	Elgin Creamery Co.	Lenox	Lenox	A. M. Snyder	Sep'tr	Test	661	
722	Guss	Cold Spring Creamery	Co-op	H. B. Mast	Guss	Coring	A. C. Morse	Sep'tr	Hd.	60	
723	Guss	Maple Grove	Ind	I. Schoonover, Mgr.	Guss	Nodaway	E. Schoonover	Sep'tr	Hd.		
724	Afton	Afton	Ind	O. Sands, Pres.	Chicago, Ill.	Afton	G. W. Kelley	Sep'tr	Test	711	
725	Afton	Lincoln	Ind	O. Sands, Pres.	Chicago, Ill.			Sep'tr	Test		
726	Afton	Dodge	Ind	O. Sands, Pres.	Chicago, Ill.			Sep'tr	Test		
727	Afton	Plumant	Ind	O. Sands, Pres.	Chicago, Ill.			Sep'tr	Test	666	
728	Arlapex	Farmers' Co-op. Cr'y	Co-op	A. C. Gross	Chicago, Ill.	Arlapex	Fred Farwell	Sep'tr	Test	722	
729	Creston	Creston	Ind	O. Sands	Chicago, Ill.	Creston	E. T. McColl	Sep'tr	Test		
730	Cromwell	Cromwell	Ind	Elgin Creamery Co.	Chicago, Ill.			Sep'tr	Test	677	
731	Lorimer	Lorimer	Ind	O. Sands, Pres.	Chicago, Ill.	Lorimer	Geo. Beckman	Sep'tr	Test	22	
732	Talmage	Talmage Co-op. Cr'y Co.	Co-op	J. W. Beebe, Sec.	Talmage	Talmage	J. W. Alexander	Sep'tr	Test		
733	Talmage	Gripp	Co-op	J. W. Beebe, Sec.	Talmage	Talmage		Sep'tr	Test		
734	Van Buren County, Farmington	Farmington Cr'y Co.	Ind	H. G. Kelley, Pres.	Farmington, Van Buren Co., Paired, Jeffer	Farmington		S & G. O.	Test		
735	Stockport	Fairfield Creamery	Ind	Geo. M. Lane				Sep'tr	Test		
736	Wayzola County, Agency	Agency B. & C. Co.	Co-op	John Engert, Sec.	Agency	Agency	C. E. Perkins	Sep'tr	Test		
737	Blakesburg	Blakesburg Cr'y	Ind	Nelson & Walters	Blakesburg	Blakesburg		Sep'tr	Test		
738	Dudley	Dudley Cr. & Milling As.	Ind	A. J. Gardner, Pres.	Eddyville	Dudley		Sep'tr	Test		
739	Kirkville	Kirkville	Ind	Lytins & Myers	Kirkville	Kirkville	U. G. Myers	Sep'tr	Test		
740	So. Ottumwa	South Ottumwa Cr'y	Ind	E. C. McKinney	So. Ottumwa	So. Ottumwa	J. G. Myers	Sep'tr	Test	633	
741	Warren County, Milo	Warren Co.	Ind	E. Haldman	Hemeston		C. D. Haldman	Sep'tr	Test		
742	Norwalk	Norwalk	Co-op	G. Monow, Sec.	Des Moines	Norwalk	Geo. Swartzell	Sep'tr	Test		
743	Prole	Prole Creamery	Ind	L. Gates, Sec.	Prole	Prole		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, gub. or test.	Method of pasteurization, by this test or by the hundred.	Butter content, minimum percent.
744	Washington County, Kalona		Ind.	M. G. Brooke & Son.	Kalona	Kalona	M. G. Brooke	G. C.		
745	Kiota, Keosauqua	Keota Creamery	Stk Co.	S. E. Reisman	Keota, Keokuk (Co.)	Keota	W. W. Carpenter	Sep'tr.	Test.	108
746	Noble	Oak Ridge	Ind.	Lydia Elcher	Noble	Noble	Joseph Witting	Sep'tr.	Test.	90
747	Riverside	Riverside	Ind.	E. Nicola	Riverside	Riverside	Wm. Miles	G. C.		
748	Washington	Washington Creamery	Ind.	Hise Bros.	Washington	Washington	Aug. Viking	Sep'tr.	Test.	876
749	Wellman	Daytonville	Ind.	G. O. Nichols	Wellman	Wellman	J. F. Fee	Sep'tr.	Test.	883
750	Wellman	Deer Creek Mills Dairy	Co-op	S. D. Guengerich, Sec	Amish	Wellman	L. J. Guengerich	Sep'tr.	Test.	656
751	Wayne County, Allerton	Allerton Creamery	Ind.	I. N. Haldeman	Allerton	Allerton	N. Rasmussen	Sep'tr.	Test.	822
452	Humeston	Wayne Co. Cr'y Co.	Ind.	H. D. Snyder, Mgr.	Humeston	Humeston	Fred Taylor	Sep'tr.	Test.	964
753	Cambria	Wayne Co. Cr'y Co.	Ind.	H. D. Snyder, Mgr.	Humeston			Sep'tr.	Test.	865
754	Leadbury	Wayne Co. Cr'y Co.	Ind.	H. D. Snyder, Mgr.	Humeston			Sep'tr.	Test.	
755	Leroy	Wayne Co. Cr'y Co.	Ind.	H. D. Snyder, Mgr.	Humeston			Sep'tr.	Test.	968
756	Seymour	Seymour Creamery	Ind.	B. S. Parker, Mgr.	Seymour	Seymour	Herbert Brohas	Sep'tr.	Hd.	737
757	Wabasha County, Badger	Badger Creamery	Ind.	G. W. Gillman	Badger	Badger	G. W. Gillman	Sep'tr.	Test.	228
758	Callender	Callender	Ind.	— Bishop	Callender	Callender		S. & G. C.	Test.	
759	Dayton	Willow Brook	Ind.	J. M. Daniels & Son	Dayton	Dayton	J. M. Daniels	G. C.		218
760	Gowrie	Gowrie	Ind.	F. S. Davis	Gowrie	Gowrie	Geo. Holtclaw	G. C.		
761	Kalo	Payne's Model	Ind.	F. H. Payne	Kalo	Fert Dodge	F. H. Payne	Sep'tr.	Test.	165
762	Moorland	Moorland	Ind.	D. J. Skinner	Moorland	Moorland	D. J. Skinner	Sep'tr.	Test.	132
763	Vincent	Vincent Creamery Co.	Ind.	D. C. Miller	Vincent	Vincent	L. Manson	Sep'tr.	Test.	113
764	Winneshock County, Buffalo Center	Buffalo Center	Stk Co.	S. S. Whitney, Sec.	Forest City	Buffalo Center	John Panukuk	Sep'tr.	Test.	
765	Dows	Northern Iowa Cr'y Co.	Stk Co.	S. E. Allen, Sec.	Forest City		Frank Croft	S. & G. C.	Test.	731
766	Forest City	Northern Iowa Cr'y Co.	Stk Co.	S. E. Allen, Sec.	Forest City		John Mine	S. & G. C.	Test.	
767	Amund	Northern Iowa Cr'y Co.	Stk Co.	S. S. Whitney, Sec.	Forest City			Sep'tr.	Test.	
768	Linder	Northern Iowa Cr'y Co.	Stk Co.	S. S. Whitney, Sec.	Forest City			Sep'tr.	Test.	
769	Noden	Northern Iowa Cr'y Co.	Stk Co.	S. S. Whitney, Sec.	Forest City			Sep'tr.	Test.	368
770	Lincoln	Northern Iowa Cr'y Co.	Stk Co.	S. E. Allen, Sec.	Forest City			Sep'tr.	Test.	
771	Leland	Northern Iowa Cr'y Co.	Stk Co.	S. E. Allen, Sec.	Forest City			Sep'tr.	Test.	209
772	Lake Mills	Logan Butter Factory	Co-op	J. J. Lande, Pres.	Lake Mills	Lake Mills	J. M. Tapager	Sep'tr.	Test.	735
773	Norman	Norman	Co-op	S. G. Hony	Norman	Norman	N. S. Engstrom	Sep'tr.	Test.	
774	Norman	Bratol	Co-op	S. G. Hony	Norman			Sep'tr.	Test.	
775	Norman	Moon	Co-op	S. G. Hony	Norman			Sep'tr.	Test.	750
776	Lake Mills	Winneshock & World Co.	Co-op	Ole T. Gros, Pres.	Lake Mills	Lake Mills	Thos. E. Bolton	S. & G. C.	Test.	
777	Lake Mills	Winneshock & World Co.	Co-op	Ole T. Gros, Pres.	Lake Mills			S. & G. C.	Test.	
778	Winneshock County, Burr Oak	Silver Creek Cr'y Co.	Co-op	M. D. Whitney, Sec.	Burr Oak	Decorah	Clayton A. Bead	G. C.		
779	Calmar	Calmar Creamery	Ind.	Boe & Nelson	Calmar	Calmar	Proprietor	G. C.		163
780	Castalia	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'y Co.	Decorah	Castalia		S. & G. C.	Test.	164
781	Conover	Crystal Springs	Ind.	C. J. Murer	Decorah	Conover	L. Lyase	Sep'tr.	Test.	683
782	Decorah	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'y Co.	Decorah	Decorah	Ira Riwa	G. C.		
783	Fl. Atkinson	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'y Co.	Decorah	Vt. Atkinson	L. H. Lee	Sep'tr.	Test.	170
784	Franklin	Ice Cave Creamery Co.	Stk Co.	Ice Cave Cr'y Co.	Decorah	Oslan		S. & G. C.	Test.	

CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned 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 receiving milk for by the hundred.	Dairy combi-ness bottle number.
	Winnebago County.									
785	Hesper.....	Anchor.....	Ind...	J. H. Miller.....	Hesper.....	Mable.....		G. C.		
786	Highlandville.....	Kjomerie Spring Cr'y.....	Ind...	N. N. Larson.....	Highlandville.....	Spring Grove.....	N. N. Larson.....	G. C.		
787	Kendallville.....	Kendallville.....	Ind...	Boe & Nelson.....	Calmar.....	Cresco.....	Ed Holmes.....	G. C.		
788	Nassett.....	Ice Cave Creamery Co.....	Stk Co	Ice Cave Cr'y Co.....	Decorah.....	Decorah.....	Hans Foss.....	Sep'tr	Test.	
789	Nordness.....	Ice Cave Creamery Co.....	Stk Co	Ice Cave Cr'y Co.....	Decorah.....	Nordness.....	E. G. Opdahl.....	G. F.		
790	Nordness.....	Nordness Cr'y Co.....	Stk Co	J. J. Bunning.....	Nordness.....	Nordness.....	Geo. H. Thune.....	G. C.		
791	Nordness.....	Red Oak.....	Co-op	O. G. Haugen, Sec.....	Nordness.....	Nordness.....	Erik Clement.....	G. C.		
792	Ossian.....	Ice Cave Creamery Co.....	Stk Co	Ice Cave Cr'y Co.....	Decorah.....	Ossian.....	Iver Iverson.....	S. & G. O.	Test.	
793	Ossian.....	Washington Prairie Cr.....	Ind...	P. O. Nasse.....	Ossian.....	Ossian.....	P. O. Nasse.....	G. C.		
794	Ossian..... <i>(ette Co)</i>	Scheidebantle Cr'y.....	Ind...	H. Scheidebantle.....	Ossian.....	Ossian.....	John Hickley.....	G. C.		159
795	Eldorado, Puy.....	Scheidebantle Cr'y.....	Ind...	Henry Scheidebantle.....	Ossian.....	Ossian.....		G. C.		
796	Ridgeway.....	Lincoln Fmr's Co-op Cr.....	Co-op	James Paley, Sec.....	Ridgeway.....	Ridgeway.....	O. P. Sjobakkian.....	G. C.		
797	Ridgeway.....	Ice Cave Creamery.....	Stk Co	Ice Cave Cr'y Co.....	Decorah.....	Ridgeway.....	L. T. Fosse.....	G. C.		
798	Spillville.....	Spillville Creamery Co.....	Ind...	J. A. Dostal.....	Spillville.....	Conover.....	J. A. Dostal.....	G. C.		215
	Worth County									
799	Fertile.....	Fertile Co-op Dairy Co.....	Co-op	B. G. Richardson.....	Fertile.....	Manly Junct'n.....	Peter Onverson.....	Sep'tr	Test.	
800	Grafton.....	Grafton Cr'y Ass'n.....	Co-op	M. Bucher.....	Grafton.....	Grafton.....	H. H. Opperman.....	Sep'tr	Test.	725
801	Kensett.....	Fmr's Co-op. Cr'y Ass'n.....	Co-op	O. N. Kjerland.....	Kensett.....	Kensett.....	Peter P. Nalg.....	S & G. C.	Test.	198
	Freight County									
802	Manly Jet.....	Manly Co-op Creamery.....	Co-op	A. E. Miller.....	Manly.....	Manly Junct'n.....	Henry Knowles.....	G. C.		245
803	Nordland.....	Nordland Cr'y Ass'n.....	Co-op	A. C. Kittleson, Sec.....	Nordland.....	Kensett.....	C. H. Cleveland.....	Sep'tr	Test.	752
804	Northwood.....	Brookfield Cr'y Ass'n.....	Co-op	E. A. Tenold, Sec.....	Northwood.....	Northwood.....	N. C. Sverling.....	Sep'tr	Test.	756
805	Northwood.....	Hartland Dairy Ass'n.....	Co-op	Omes Beyerson, Sec.....	Silver Lake.....	Northwood.....	N. O. Dolan.....	Sep'tr	Test.	304
806	Northwood.....	Farmers' B. & C. Ass'n.....	Co-op	L. G. Mallen, Sec.....	Northwood.....	Northwood.....	J. Sverling.....	Sep'tr	Test.	
807	Belmond.....	Belmond Iowa Cr'y.....	Ind...	S. S. Whitney, Sec.....	Forest City.....	Belmond.....	W. H. Barker.....	G. C.		
808	Clarion.....	Clarion.....	Ind...	J. D. Denton.....	Clarion.....	Clarion.....	J. D. Denton.....	G. C.		
809	Goldfield.....	Fountain B. & C. Fac.....	Ind...	B. P. Scott & Co.....	Goldfield.....	Goldfield.....	B. P. Scott.....	Sep'tr	Test.	
810	Rowan.....	Rowan.....	Co-op	J. H. Dix.....	Rowan.....	Rowan.....	E. V. Campbell.....	Sep'tr	Test.	225

TABLE No. X—CONTINUED.

COUNTIES.	NUMBER OF CREAM-ERIES AND SKIM STATIONS, SHOWING THE VALUE OF CREAM AND STOCK COM-PARTS.		NUMBER OF CREAM-ERIES AND SKIM STATIONS, SHOWING THE VALUE OF CREAM AND STOCK COM-PARTS.		NUMBER OF PATRONS FURNISHING MILK AND CREAM, NUMBER COWS OWNED, AND THE VALUE OF MILK DELIVERED TO CHEMISTS, BY AN AVERAGE NUMBER TO EACH CREAMERY PATRON.		NUMERICAL COM-PARISONS OF CREAM-ERIES AS COMP-ARED WITH LAST YEAR.		NUMBER OF CREAM-ERIES AND SKIM STATIONS OPERATING DURING THE YEAR ENDING NOVEMBER 1, 1906.			
	Total No. of creameries and skim stations.	Value of cream in tons.	Value of skim in tons.	No. of creameries.	No. of skim stations.	Total number of patrons.	Average number of cows per creamery.	Average number of cows per patron.	As last year.	Number reported.	Number of creameries.	Number of skim sta-tions.
Palo Alto.....	1	100	100	1	1	1	1	1	1	1	1	
Plymouth.....	1	100	100	1	1	1	1	1	1	1	1	
Polk.....	1	100	100	1	1	1	1	1	1	1	1	
Polk, with taxable milk.....	1	100	100	1	1	1	1	1	1	1	1	
Poweshok.....	1	100	100	1	1	1	1	1	1	1	1	
Preble.....	1	100	100	1	1	1	1	1	1	1	1	
Scott.....	1	100	100	1	1	1	1	1	1	1	1	
Shelby.....	1	100	100	1	1	1	1	1	1	1	1	
Stonox.....	1	100	100	1	1	1	1	1	1	1	1	
Stonox, with taxable milk.....	1	100	100	1	1	1	1	1	1	1	1	
Tama.....	1	100	100	1	1	1	1	1	1	1	1	
Union.....	1	100	100	1	1	1	1	1	1	1	1	
Van Buren.....	1	100	100	1	1	1	1	1	1	1	1	
Wapello.....	1	100	100	1	1	1	1	1	1	1	1	
Warren.....	1	100	100	1	1	1	1	1	1	1	1	
Wayne.....	1	100	100	1	1	1	1	1	1	1	1	
Webster.....	1	100	100	1	1	1	1	1	1	1	1	
Winneshok.....	1	100	100	1	1	1	1	1	1	1	1	
Winneshok, with taxable milk.....	1	100	100	1	1	1	1	1	1	1	1	
Wright.....	1	100	100	1	1	1	1	1	1	1	1	
Total.....	810	850,434,200	81,810,641	95	74,700,575	187,278,550	60,944,108	417,558,975	7	260,300,190	49,310,137	30

NOTE.—Creamery at experiment station. Areas not classified under this heading, it being property of state. * Creameries burned and rebuilt, 11.

TABLE No. XI.

Creamery list arranged by counties, showing number of creameries and skim stations, together with value, months operated, persons employed, monthly wages, with total wages paid, for the year ending May 1, 1896.

COUNTIES.	NUMBER, VALUE AND TOTAL VALUE OF CREAM AND SKIM STATIONS.		NUMBER OF CREAM-ERIES AND SKIM STATIONS.		TOTAL NUMBER OF PERSONS EMPLOYED, AMOUNT PAID BUTTER-MARKERS' ASSISTANTS, AND FOR COLLECTING MILK FOR ALL EMPLOYEES, FOR YEAR ENDING MAY 1, 1896.		TOTAL NUMBER OF PERSONS EMPLOYED, AMOUNT PAID BUTTER-MARKERS' ASSISTANTS, AND FOR COLLECTING MILK FOR ALL EMPLOYEES, FOR YEAR ENDING MAY 1, 1896.		
	Number of creameries.	Value of cream in tons.	Value of skim in tons.	Number of creameries.	Number of skim stations.	Number of persons employed.	Amount paid in dollars.	Number of persons employed.	Amount paid in dollars.
State.....	72,316	8,088,707	864,112	70,255	6,670,575	1,029,271	1,029,271	1,029,271	1,029,271
Adair.....	4	20,000	2,000	4	40,000	40	40	40	40
Adams.....	1	5,000	500	1	5,000	5	5	5	5
Albany.....	13	29,975	3,000	13	47,000	62	62	62	62
Alfalfa.....	1	10,000	1,000	1	10,000	10	10	10	10
Anderson.....	5	12,000	1,200	5	12,000	50	50	50	50
Benewah.....	2	20,000	2,000	2	20,000	20	20	20	20
Black Hawk.....	1	5,000	500	1	5,000	5	5	5	5
Bloomington.....	1	5,000	500	1	5,000	5	5	5	5
Boone.....	1	5,000	500	1	5,000	5	5	5	5
Boyd.....	1	5,000	500	1	5,000	5	5	5	5
Buchanan.....	1	5,000	500	1	5,000	5	5	5	5
Burns.....	1	5,000	500	1	5,000	5	5	5	5
Burns, with taxable milk.....	1	5,000	500	1	5,000	5	5	5	5
Butler.....	1	5,000	500	1	5,000	5	5	5	5
Callison.....	1	5,000	500	1	5,000	5	5	5	5
Cass.....	1	5,000	500	1	5,000	5	5	5	5
Castro.....	1	5,000	500	1	5,000	5	5	5	5
Cedar.....	1	5,000	500	1	5,000	5	5	5	5
Cedar, with taxable milk.....	1	5,000	500	1	5,000	5	5	5	5
Cerro Gordo.....	1	5,000	500	1	5,000	5	5	5	5
Cherokee.....	1	5,000	500	1	5,000	5	5	5	5
Chickasaw.....	1	5,000	500	1	5,000	5	5	5	5
Chicksee.....	1	5,000	500	1	5,000	5	5	5	5
Clay.....	1	5,000	500	1	5,000	5	5	5	5
Clayton.....	1	5,000	500	1	5,000	5	5	5	5
Clayton, with taxable milk.....	1	5,000	500	1	5,000	5	5	5	5
Crawford.....	1	5,000	500	1	5,000	5	5	5	5
Dallas.....	1	5,000	500	1	5,000	5	5	5	5

TABLE NO. XII.

Creamery list arranged by counties, showing number of creameries and skim stations receiving milk and total pounds received, and the number of creameries manufacturing butter, together with kinds and total pounds made, for the year ending May 1, 1896; also disposition of the butter.

COUNTIES	NUMBER OF CREAMERIES RECEIVING AND TOTAL POUNDS OF MILK RECEIVED TO MAY 1, 1896.		NUMBER OF CREAMERIES MANUFACTURING BUTTER, TOTAL POUNDS MADE AND VALUE OF ALL BUTTER MANUFACTURED FROM MAY 1, 1896, TO MAY 1, 1896, BY NAME OF SEPARATORS, GATHERED CREAM, AND CONDENSED SEPARATION AND OTHERWISE.		TOTAL POUNDS OF BUTTER, KINDS MANUFACTURED AND SHIPPED TO POINTS OUTSIDE OF THE STATE.	
	Number creameries	Number pounds	Number reported	Total pounds	Number reported	Number pounds
The State	113	4,708,864.01	725	11,676,575	523	14,008,725
Adair	0	6,887.63	0	256,659	0	524,706
Allamore	4	11,577,529	0	642,570	0	1,143,749
Anderson	0	1,037,753	0	327,000	0	396,086
Beaumont	1	4,062,397	1	38,254	1	396,000
Benton	1	775,914	1	314.5	1	115,198
Bloomington	11	21,634,314	24	1,111,100	4	1,397,000
Brown	1	30,414,049	1	2,725,440	1	143,525
Bureau	1	6,095,117	1	207,267	1	94,677
Butler	0	3,906,000	0	709,400	0	6,600
Cadiz	0	6,906,000	0	275,694	0	3,729
Callahan	0	3,705,258	0	130,176	0	2,800
Cherokee	0	1,575,000	0	6,000	0	23,000
Chickasaw	0	9,755,000	0	2,150,254	0	114,005
Chickokee	0	311,566	0	10,730	0	13,850
Citron	0	6,931,674	0	267,670	0	30,040
Clay	0	2,520,478	0	138,074	0	61,223
Crawford	0	4,257,000	0	17,002	0	4,200
Dallas	0	4,097,367	0	225,000	0	3,411

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COUNTIES	NUMBER OF CREAMERIES RECEIVING AND TOTAL POUNDS OF MILK RECEIVED TO MAY 1, 1896.		NUMBER OF CREAMERIES MANUFACTURING BUTTER, TOTAL POUNDS MADE AND VALUE OF ALL BUTTER MANUFACTURED FROM MAY 1, 1896, TO MAY 1, 1896, BY NAME OF SEPARATORS, GATHERED CREAM, AND CONDENSED SEPARATION AND OTHERWISE.		TOTAL POUNDS OF BUTTER, KINDS MANUFACTURED AND SHIPPED TO POINTS OUTSIDE OF THE STATE.	
	Number creameries	Number pounds	Number reported	Total pounds	Number reported	Number pounds
The State	113	4,708,864.01	725	11,676,575	523	14,008,725
Adair	0	6,887.63	0	256,659	0	524,706
Allamore	4	11,577,529	0	642,570	0	1,143,749
Anderson	0	1,037,753	0	327,000	0	396,086
Beaumont	1	4,062,397	1	38,254	1	396,000
Benton	1	775,914	1	314.5	1	115,198
Bloomington	11	21,634,314	24	1,111,100	4	1,397,000
Brown	1	30,414,049	1	2,725,440	1	143,525
Bureau	1	6,095,117	1	207,267	1	94,677
Butler	0	3,906,000	0	709,400	0	6,600
Cadiz	0	6,906,000	0	275,694	0	3,729
Callahan	0	3,705,258	0	130,176	0	2,800
Cherokee	0	1,575,000	0	6,000	0	23,000
Chickasaw	0	9,755,000	0	2,150,254	0	114,005
Chickokee	0	311,566	0	10,730	0	13,850
Citron	0	6,931,674	0	267,670	0	30,040
Clay	0	2,520,478	0	138,074	0	61,223
Crawford	0	4,257,000	0	17,002	0	4,200
Dallas	0	4,097,367	0	225,000	0	3,411

COUNTIES	NUMBER OF CREAMERIES RECEIVING AND TOTAL POUNDS OF MILK RECEIVED TO MAY 1, 1896.		NUMBER OF CREAMERIES MANUFACTURING BUTTER, TOTAL POUNDS MADE AND VALUE OF ALL BUTTER MANUFACTURED FROM MAY 1, 1896, TO MAY 1, 1896, BY NAME OF SEPARATORS, GATHERED CREAM, AND CONDENSED SEPARATION AND OTHERWISE.		TOTAL POUNDS OF BUTTER, KINDS MANUFACTURED AND SHIPPED TO POINTS OUTSIDE OF THE STATE.	
	Number creameries	Number pounds	Number reported	Total pounds	Number reported	Number pounds
The State	113	4,708,864.01	725	11,676,575	523	14,008,725
Adair	0	6,887.63	0	256,659	0	524,706
Allamore	4	11,577,529	0	642,570	0	1,143,749
Anderson	0	1,037,753	0	327,000	0	396,086
Beaumont	1	4,062,397	1	38,254	1	396,000
Benton	1	775,914	1	314.5	1	115,198
Bloomington	11	21,634,314	24	1,111,100	4	1,397,000
Brown	1	30,414,049	1	2,725,440	1	143,525
Bureau	1	6,095,117	1	207,267	1	94,677
Butler	0	3,906,000	0	709,400	0	6,600
Cadiz	0	6,906,000	0	275,694	0	3,729
Callahan	0	3,705,258	0	130,176	0	2,800
Cherokee	0	1,575,000	0	6,000	0	23,000
Chickasaw	0	9,755,000	0	2,150,254	0	114,005
Chickokee	0	311,566	0	10,730	0	13,850
Citron	0	6,931,674	0	267,670	0	30,040
Clay	0	2,520,478	0	138,074	0	61,223
Crawford	0	4,257,000	0	17,002	0	4,200
Dallas	0	4,097,367	0	225,000	0	3,411

TABLE No. XII.—CONTINUED.

COUNTY.	NUMBER OF CREAMERIES AND MILK STATIONS RECEIVED, AND TOTAL POUNDS OF MILK RECEIVED, FROM MAY 1, 1896, TO MAY 1, 1896			NUMBER OF CREAMERIES MANUFACTURING BUTTER, TOTAL POUNDS AND VALUE OF ALL BUTTER MANUFACTURED, FROM MAY 1, 1896, TO MAY 1, 1896, GIVING POUNDS OF SEPARATOR, GATHERED CREAM, AND COMBINED SEPARATOR AND GATHERED CREAM.					TOTAL POUNDS OF BUTTER FURNISHED TO FOREIGN MARKETS, IN 1896, AND SHIPPED TO POINTS OUTSIDE OF THE STATE.					
	Number receiving milk.	Number reported.	Number pounds of milk received.	No. of creameries manufacturing.	Number reported.	Total pounds separator.	Gathered cream.	Combined separator and gathered cream.	Total pounds manufactured.	Total value of all butter manufactured.	Number reported.	Number pounds furnished to foreign countries.	Number pounds shipped in lots.	Number pounds shipped in parcels outside of the state.
Plymouth	0	0	7,893,707	5	5	344,237	390,070	344,237	344,237	32,844.83	15,962	5,000	223,280	
Pocahontas	3	3	10,770,850	5	5	450,241	485,241	450,241	450,241	35,122.86	10,302	3,000	615,111	
Polk	1	1	7,488,165	5	5	301,969	358,788	301,969	301,969	24,038.98	10,302	305,105	87,662	
Pottawattamie	1	1	1,860,532	5	5	69,253	243,000	69,253	212,508	24,191.60	11,420	12,000	290,500	
Poweshiek	1	1	1,022,500	5	5	40,000	232,320	40,000	273,110	43,000.94	636	1,807	364,618	
Ringgold	2	2	2,396,304	3	3	108,131	200,000	108,131	200,000	12,000.00	11	24,963	700,000	
Scott	3	3	3,217,917	14	12	200,000	200,000	200,000	20,500	3,485.00	305	12,375	504,973	
Shelby	3	3	3,061,421	4	4	218,927	200,000	218,927	218,927	30,004.27	1,120	1,120	218,927	
Sioux	3	3	3,061,421	4	5	401,813	200,000	401,813	401,813	71,291.31	4,633	2,160	366,019	
Story	14	11	22,300,100	13	11	1,200,250	20,000	1,270,250	1,270,250	22,856.02	11	20,180	1,207,516	
Tama	1	1	1,108,152	3	3	82,900	402,333	82,900	491,233	35,818.08	1	1,631	300,000	
Taylor	1	1	1,108,152	3	3	82,900	402,333	82,900	491,233	11,000.74	1	1,631	300,000	
Union	10	10	5,560,310	3	3	238,121	200,000	238,121	238,121	23,170.11	17,807	9,000	301,064	
Van Buren	1	1	1,108,152	1	1	1,108,152	200,000	1,108,152	1,108,152	200,000.00	1	1,108,152	200,000	
Wapello	3	3	2,471,000	3	3	145,969	145,969	145,969	145,969	20,314.93	3	2,118	16,000	70,245
Warren	3	3	1,560,000	3	3	45,643	45,643	45,643	45,643	1,000.00	3	3,000	45,643	
Washington	3	3	3,014,464	3	3	200,100	245,300	200,100	245,300	30,415.40	3	3,000	45,750	
Wayne	3	3	7,800,000	3	3	321,910	300,000	321,910	321,910	49,800.00	3	3,000	3,000	
Weaver	3	3	1,283,500	7	6	77,301	150,000	77,301	236,301	21,933.40	6	5,870	9,274,707	
Winnebago	14	4	7,409,984	6	3	338,507	139,891	338,507	1,377,988	250,525.65	5	63,300	1,318,708	
Winnebago	14	4	7,409,984	6	3	338,507	139,891	338,507	1,377,988	250,525.65	5	63,300	1,318,708	
Woodbury	3	3	1,108,152	3	3	1,013,028	200,000	1,013,028	200,000	30,855.80	3	3,000	3,000	
Worth	3	3	1,108,152	3	3	379,034	201,803	379,034	871,467	149,423.79	3	20,879	6,000	
Wright	3	3	1,108,152	3	3	15,981	15,000	15,981	15,981	12,370.68	3	3,000	64,681	
Lucas	1	1	1,108,152	3	3	123,171	18,000	123,171	141,707	25,045.78	1	3,870	25,172	
Monroe	1	1	1,108,152	3	3	123,171	18,000	123,171	141,707	25,045.78	1	3,870	25,172	
Montgomery	1	1	1,108,152	3	3	123,171	18,000	123,171	141,707	25,045.78	1	3,870	25,172	
Total	715	479	1,008,924,631	785	560	44,333,337	11,594,979	1,482,579	27,733,040	\$ 10,897,666.88	312	1,971,372	1,700,792	54,000,870

* The information from counties having but one creamery reported is shown collectively in the brace.

TABLE No. XIII.

Compiled by counties, showing destination and amounts of butter shipments from 455 Iowa creameries to the principal markets of the United States, together with percentage of the whole amount billed to each market, for the year ending May 1, 1896.

COUNTY.	No. creameries reporting.	New York—65 per cent.	Chicago—22 per cent.	Boston—13 per cent.	Philadelphia—14 per cent.	Evans, Ill.—20 per cent.	Pittsburg—23 per cent.	St. Louis—25 per cent.	Cleveland—49 per cent.	New Orleans—41 per cent.	Pacific coast—22 per cent.	New Haven, Ct.—34 per cent.
The state	455	30,238,623	5,880,286	5,307,869	1,540,930	144,970	147,100	138,900	370,532	377,341	142,980	100,474
Adair	2	221,877	32,000									
Adams	2	608,796	208,489	271,779	106,119							
Allamakee	1	79,313	7,900	220,905								
Appanoose	4	100,264	63,354	2,680	1,300			5,736				
Audubon	15	1,174,156	117,820	26,800	717	17,370	6,710	5,736	121,168			
Benton	1	20,330	59,947									
Black Hawk	1	1,972,609	85,112	63,024	19,730							
Bloom	9	1,708,428	22,900						148,784			
Bureau Vista	3	179,890	18,000		30,000							
Butler	10	736,477	18,100	119,313	569			14,833				
Calhoun	4	30,500	49,511									
Carroll	4	97,558	35,479		1,171							
Cass	3	12,000	73,000	1,000								
Cedar	3	67,882	246,044		8,130							
Cerro Gordo	7	271,908	45,480		238			104,615				
Chariton	1											
Chickasaw	10	1,130,674	87,611	130,707	1,300	96,932						
Clark	1		12,137		903			6,320				
Clay	5	150,825	11,541		500							
Clayton	18	1,601,921	30,895	52,000	590							
Clinton	1	30,500	49,511									
Crawford	1	84,742	78,171									
Dallas	1	95,900	7,807									
Davis	1	15,770										
Decatur	1											
Delaware	18	1,447,000	44,314	53,773	10,180	31,801					150	
Des Moines	1										1,000	
Dickinson	1	43,881										

TABLE No. XIII—CONTINUED.

COUNTIES.	No. creameries reporting.	New York—66.6	Chicago—12.6	Boston—12 per cent.	Pittsburgh—14 per cent.	St. Louis—25 per cent.	Cleveland—20 per cent.	New Orleans—31 per cent.	Pacific coast—32 per cent.	New Haven, Ct.—34 per cent.
Dubuque.....	1	1,084,485	47,627	75,625	42,075					
Emmet.....	1	107,267	1,270	126,625	100,215					
Franklin.....	1	110,829	162,054	3,319	300					
Fremont.....	1	106,738	22,524							
Greene.....	1	36,028	75,000	36,000						
Hamilton.....	1	31,600	10,510	10,510	31,600					
Hancock.....	1	307,853	15,200	15,000	35,400					
Hardin.....	1	227,273	4,247							
Henry.....	1	271,928	56,398		230					
Howard.....	1	518,734	44,850	122,352	3,330					
Humboldt.....	1	227,152	139,342	7,540	18,500					
Idaho.....	1	126,058	11,727	103,000						
Jackson.....	1	126,245	874,679	31,728						
Jasper.....	1	198,628	74,757							
Jefferson.....	1	275,000	5,619	61,000	300					
Johnson.....	1	37,862	67,461	5,000						
Knox.....	1	31,010	35,425	1,023,115	3,000					
Kosciusko.....	14	983,390	281,113	5,000	12,000					
Leas.....	14	561,645	139,918	185,110	30,000					100,000
LeFlore.....	1	21,000	35,712	1,000						
Lynn.....	1	1,350	1,350	33,741						
Madison.....	4	48,020	6,000		374,850					
Madison.....	4	26,315	8,800	12,251	124,500					
McClain.....	1	75,144	11,120	427,468						
McClain.....	1	30,000	70,000		1,000					

Madison.....	4	917,445	5,719	26,000							119,000
Madison.....	4	33,320	64,671	33,320	31,554						
Madison.....	4	216,025	64,671	33,320	31,554						
Madison.....	4	67,011	67,440		13,200						171,227
Madison.....	4	32,000	6,000								
Madison.....	4	21,115	80,625								
Madison.....	4	227,115	100,000	54,000							133,237
Madison.....	4	4,773	36,250								
Madison.....	4	30,000	194,000	30,749							
Madison.....	4	11,000	96,101	2,000							
Madison.....	4	11,000	96,101	2,000							
Madison.....	4	608,600	4,220	303,700	43,000						
Madison.....	4	30,000	125,000								
Madison.....	4	1,201,000	10,000	11,000							
Madison.....	4	1,201,000	306,051	61,433	35,000						
Madison.....	4	30,000	147,200	53,000	14,000						
Madison.....	4	45,445	47,200								
Madison.....	4	12,000	1,300								
Madison.....	4	30,000	151,600								
Madison.....	4	82,000	316,000	4,800	6,000						6,000
Madison.....	4	448,705	7,000								
Madison.....	11	628,254	53,300	413,621	109,543						
Madison.....	11	604,221	100	7,604	74,000						
Madison.....	11	31,251		400	300						
Total.....	459	30,279,623	5,689,739	5,307,350	1,544,028	148,579	147,108	125,976	277,541	141,500	100,000

Note.—The cities receiving shipments aggregating less than 100,000 pounds are here given, together with the amount billed to each: Cincinnati, 49,779; Washington, D. C., 49,229; Moline, Ill., 39,041; Galusha, Ill., 30,900; New Bedford, 26,200; Newark, N. J., 25,793; Batavia, Mont., 19,000; Ansonia, Mont., 12,000; Aurora, Ill., 4,231; Detroit, Mich., 1,247; Stockton, Mass., 1,000. Total, 277,000 pounds, which is 2 per cent of 1 per cent of the total shipments reported.

TABLE No. XIV.

Compiled by counties, showing the average per cent of butter fat in milk for each month and the average for the twelve months ending June 1, 1896, in the different counties, together with the total average per cent for 191 creameries reported, and for each month and for the entire year.

COUNTIES.	Creameries reporting													
	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	Average for year.	
The state	191.3	185.3	181.7	179.3	180.2	181.4	182.4	183.4	184.4	185.4	186.4	187.4	188.4	189.4
Adair	182.4	183.4	184.4	185.4	186.4	187.4	188.4	189.4	190.4	191.4	192.4	193.4	194.4	195.4
Adams	186.4	187.4	188.4	189.4	190.4	191.4	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4
Alfalfa	187.4	188.4	189.4	190.4	191.4	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4
Almon	188.4	189.4	190.4	191.4	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4
Anderson	189.4	190.4	191.4	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4
Antelope	190.4	191.4	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4
Apache	191.4	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4
Armstrong	192.4	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4
Asa	193.4	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4
Aurora	194.4	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4
Avila	195.4	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4
Avon	196.4	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4
Barber	197.4	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4
Barrow	198.4	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4
Basin	199.4	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4
Baxter	200.4	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4
Beck	201.4	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4
Beckham	202.4	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4
Bellevue	203.4	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4
Belt	204.4	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4
Benson	205.4	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4
Berkeley	206.4	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4
Bethany	207.4	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4
Bethel	208.4	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4
Bethesda	209.4	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4
Bethesda	210.4	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4
Bethesda	211.4	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4
Bethesda	212.4	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4
Bethesda	213.4	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4
Bethesda	214.4	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4
Bethesda	215.4	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4
Bethesda	216.4	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4
Bethesda	217.4	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4
Bethesda	218.4	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4
Bethesda	219.4	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4
Bethesda	220.4	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4
Bethesda	221.4	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4
Bethesda	222.4	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4
Bethesda	223.4	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4
Bethesda	224.4	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4
Bethesda	225.4	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4
Bethesda	226.4	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4
Bethesda	227.4	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4
Bethesda	228.4	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4
Bethesda	229.4	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4
Bethesda	230.4	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4
Bethesda	231.4	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4
Bethesda	232.4	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4
Bethesda	233.4	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4
Bethesda	234.4	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4
Bethesda	235.4	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4
Bethesda	236.4	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4
Bethesda	237.4	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4
Bethesda	238.4	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4
Bethesda	239.4	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4
Bethesda	240.4	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4
Bethesda	241.4	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4
Bethesda	242.4	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4
Bethesda	243.4	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4
Bethesda	244.4	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4
Bethesda	245.4	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4
Bethesda	246.4	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4
Bethesda	247.4	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4
Bethesda	248.4	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4	261.4
Bethesda	249.4	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4	261.4	262.4
Bethesda	250.4	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4	261.4	262.4	263.4
Bethesda	251.4	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4	261.4	262.4	263.4	264.4
Bethesda	252.4	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4	261.4	262.4	263.4	264.4	265.4
Bethesda	253.4	254.4	255.4	256.4	257.4	258.4	259.4	260.4	261.4	262.4	263.4	264.4	265.4	266.4
Bethesda	254.4	255.4	256.4	257.4	258.4	259								

CITY MILK INSPECTION.

When the system of city milk inspection was first established in Iowa, samples of milk were sent from dealers in cities of this state having more than 10,000 population, to Des Moines, and were tested by this department in the office laboratory. It was found that such a plan was not to the best advantage, for after the sample had been shipped 100 miles or more, and was two or three days old, a fair test could not be made of it. Following this difficulty the dairy commissioner furnished each agent in the different cities with a complete apparatus for making the tests. During the past year, since issuing the last report, two more cities have been added to the list, having reached the required population of 10,000, according to law.

Following is a list of the cities and agents:

Burlington.....	W. B. McChesney
Cedar Rapids.....	F. M. Brown
Clinton.....	Allen E. Rumble
Council Bluffs.....	Rupert Fleming
Davenport.....	Dr. A. W. Cantwell
Des Moines.....	C. C. Chase
Dubuque.....	Dr. B. Michel
Fort Madison.....	Camp Thomas
Keokuk.....	Frank Harshman
Marshalltown.....	W. W. Rodwax
Muscatine.....	Emil Kranz
Ottumwa.....	E. B. Hill
Sioux City.....	O. P. McCray

During the month of April, Frank H. McCray, milk agent for Sioux City, resigned. O. P. McCray was appointed to succeed him. During the month of September, N. B. Rehkopf, milk agent for Des Moines, and E. W. Edgar, milk agent for Burlington, each resigned. The resignations were caused by the removal of these agents from the cities of their inspection. C. C. Chase was appointed to succeed Mr. Rehkopf as city milk agent for Des Moines, and W. B. McChesney succeeded E. W. Edgar as city milk agent for Burlington. All of the agents

have been prompt in the discharge of their duties and watchful over the interest intrusted to their care.

The strict and uniform enforcement of the law has resulted in a general improvement along the line, and the wilful and careless violators of the law are very few. This department has not had occasion to prosecute a single case during the past year.

MILK TESTS.

The total number of tests from dealers made in the thirteen cities for the year ending October 31, 1896, was 5,871; in 1895, 4,633, being an increase of 1,238 tests, of which 137 were made in Ft. Madison and 456 in Marshalltown, leaving a net increase in the other cities of 665. This was caused by the increase in the number of dealers, as shown by the following figures:

Whole number of dealers in 1895, 438; in 1896, 535, an increase of 97, of which 26 belong to Fort Madison and Marshalltown, leaving a net gain of 71 dealers in the other cities. The benefits of constant enforcement of the law upon the quality of milk sold, is shown in the following table, which gives the number of tests below 3 per cent standard in each city for the period of six months in 1894, and twelve months in the years 1895 and 1896:

CITIES.	No. tests below 3 per cent—1894.		No. tests below 3 per cent—1895.		No. tests below 3 per cent—1896.	
	6 months.	12 months.	6 months.	12 months.	6 months.	12 months.
Burlington.....	0	0	0	0	0	0
Cedar Rapids.....	0	0	0	0	0	0
Clinton.....	0	0	0	0	0	0
Council Bluffs.....	0	0	0	0	0	0
Davenport.....	13	29	0	0	0	0
Des Moines.....	4	4	0	0	0	0
Dubuque.....	0	0	0	0	0	0
Keokuk.....	0	0	0	0	0	0
Marshalltown.....	0	0	0	0	0	0
Muscatine.....	0	0	0	0	0	0
Ottumwa.....	0	0	0	0	0	0
Sioux City.....	0	0	0	0	0	0
Total.....	17	33	0	0	0	0

In Fort Madison there were two tests below standard; none in Marshalltown.

The improvement during the past year has been worthy of notice. The number of tests out of 5,871 falling below standard of 3 per cent was but 20, for all cities. Last year, as will be seen in the above table, there were 51 tests below the standard, out of a total of 4,633. Of the 20 tests below standard in

1896, 10 were in Council Bluffs, and most of the dealers having them, retired from business soon after being notified.

Des Moines, during the year 1895, had 28 of the 51 tests below standard, and this year had but 6, out of 1,064 tests made.

The gradual improvement in the quality of milk sold in our cities under rigid enforcement of the milk testing law of the state is shown in the following table:

A comparison of total number of tests made in each city yearly, with average per cent of butter fat for each year, and average for the four years ending October 31, 1896.

CITIES	1892.		1894.		1895.		1896.		Average for four years.
	No. tests made.	Average test.	No. tests made.	Average test.	No. tests made.	Average test.	No. tests made.	Average test.	
Burlington.....	227	3.73	444	3.75	456	3.75	402	3.84	3.77
Cedar Rapids.....	486	3.79	361	4.02	252	3.49	350	4.16	3.86
Clinton.....	236	3.71	371	3.88	300	3.71	401	3.77	3.77
Council Bluffs.....	403	3.53	320	3.62	505	3.64	500	3.85	3.66
Davenport.....	251	3.62	327	3.56	394	3.58	502	3.77	3.67
Des Moines.....	545	3.37	655	3.41	1,029	3.70	1,664	3.96	3.68
Dubuque.....	425	3.35	356	3.51	400	3.90	542	4.06	3.65
Keokuk.....	216	3.56	297	4.32	319	4.41	280	4.40	4.17
Muscatine.....	83	3.69	266	3.80	435	3.91	315	3.99	3.85
Ottumwa.....	78	3.97	193	3.87	237	3.95	174	4.26	4.18
Sioux City.....	323	3.71	403	3.67	462	3.67	506	3.88	3.73
Marshalltown.....							456	3.95	3.95
Fort Madison.....							137	4.15	4.15
Total and average test for each year.....	3,925	3.59	3,984	3.70	4,846	3.82	5,971	4.00	
Av. test for entire period.....									3.86
Total tests made in thirteen cities during entire period.....									18,620

The first complete record under the milk testing law was made in the year 1893, and the average test for that year was 3.59; for 1894, 3.79; for 1895, 3.82; and for 1896, 4.00. This showing is very satisfactory and has fully demonstrated the benefit to the city milk consumers, of the present system of city milk inspection. We do not expect there will be much more improvement in the average richness of the milk sold in our cities. Milk testing 4 per cent butter fat, which is about

4½ pounds of butter on an average for each 100 pounds of milk, is of high quality. The improvement in the milk supply of our cities in the future should be in the direction of better sanitation. We treated this subject at some length in our last report and do not feel called upon to go over the matter again at this time, but will simply state that an enlargement of the powers of this department and a thorough official inspection and regulations of the sources of the supply of milk, is what the healthfulness and safety of the people of our growing cities need and should have without unnecessary delay.

SANITATION AND HEALTH.

The secretary of the state board of health, Dr. J. F. Kennedy, in the September number of the Health Bulletin, writes upon this subject the following article:

A large and most important part of the "living" in any family who can afford it, is milk and butter. In this western country there are few of our wage-earners, however low their wages, but what have their table supplied more or less with these dairy products.

It is essential to good health that all food should be pure and free from contamination by anything containing disease germs. Milk is especially liable, if the greatest care is not observed, to be thus contaminated. If typhoid fever, scarlet fever, or diphtheria are present in a family of a dairyman the milk is almost sure to become infectious, and many epidemics of those diseases have been traced to such sources. Milk from cows that are tuberculous should never be used for human food—even though boiled, as there is, even if there should not be any menace to the public health, something revolting in using meat or milk from animals that are known to be diseased. Typhoid fever and scarlet fever germs most frequently get into the milk can through contaminated water used for washing the cans, or for other purposes. In scarlet fever the fine scales that are thrown off during convalescence, floating in the air, gain access to the milk supply and the germs producing the disease rapidly multiply and sometimes whole communities are infected by using the milk and are stricken down with the disease.

It is reasonable to suppose that if the milk is from diseased animals, or has been infected, because of the presence of an infectious disease in the family of the dairyman or of some employe connected with the dairy, the butter will be more or less affected also.

The milking is often done in a careless and filthy manner. No pains are taken to wash the udder and teats, and the hands are soiled, and as a result the milk is polluted, has a barnyard taste and soon "spoil."

If there are several cows to be milked some one should go ahead of the milker and wash and thoroughly dry the udder, so that the hands of the milker, previously thoroughly cleansed, cannot be soiled.

We have often witnessed the milking as it was too often practiced. In the morning the cows get up with the sides and "bag" soiled with their "droppings," the milkers hastily brush off what they can and proceed to

work; or in the evening the cows come from the slough, where they have been seeking the scanty water supply and fighting the flies, and the "bag" and belly are covered with mud.

The "straining" of the milk shows in the pail a large amount of sediment—mud or filth, as the case may be. Such milk is not only repulsive to the taste and smell, but is positively dangerous. Hence the importance and necessity of cleanliness.

We are sure a great improvement has taken place in this respect within the last few years. Dairymen are vying with each other in their efforts to secure for their families and their patrons the cleanest and best milk and butter that can be produced. The dairies supplying milk to town and city markets should be often visited, and their methods and environments carefully and impartially, as well as intelligently, inspected, and where their supplies are from dairies properly managed from a sanitary and hygienic standpoint they should have certificates showing the fact, and those dairies where these desirable conditions are not found should be prohibited from selling their wares until they come up to a safe sanitary standard. The state dairy commissioner is untiring in his efforts not only to have the people of the state supplied with a superior quality of milk, from a butter-fat standpoint, but is endeavoring to ascertain the physical condition of the cows supplying the milk, and their sanitary surroundings. Any weakness in the law by which such beneficent efforts may be defeated should be corrected.

The present law provides that the person selling skimmed milk as such, or unclean, impure or unhealthy milk, or milk taken from cows having disease, sickness, ulcers, abscesses or running sores, shall, upon conviction thereof, be fined not less than \$25 nor more than \$100; but no provision is made for the enforcement of any of these provisions except that of skimmed milk, and the other provisions are of service only in such aggravated cases as attract the attention of the people. The dirty and filthy condition under which much of the city milk is produced still continues to exist as much as if we had no law upon the subject. In regard to skimmed milk the law is explicit. The law defines skimmed milk, as milk that will not test by any reliable method, three pounds of butter fat to 100 pounds of milk; prohibits its sale unless sold as such; makes it the duty of the dairy commissioner to enforce this provision of the act and authorizes the appointment of agents for the collection of milk samples, but gives the agent no further authority, nor provides for any compensation except for gathering samples of milk to be tested.

With the much needed power to inspect dairy herds and dairy farms, where our milk supply is produced, this department expects to improve in the sanitations and healthfulness of the milk production as well as in the other directions as pointed

out in this report. Agents take pains and trouble to ascertain the condition of the dairy herds yet, the allowance made them for the tests, which is \$3 per day, with not more than two to five days employed per month, according to the size of the city, it is not expected they shall achieve much good from this line of work.

We are satisfied that the matter of city milk inspection is not fully understood by the people of our cities and therefore we deem it best to explain the system in detail.

MAKING THE TESTS.

The apparatus with which each milk agent makes tests of samples of milk, sold by city milk dealers, consists chiefly of a centrifugal machine, certified D. C. test bottles and pipettes. The dairy commissioner has given each personal instruction in the manner of making the tests and in the use of the machine.

COLLECTING SAMPLES.

It is the common idea among our city milk patrons that samples of milk are procured direct from the dairy herd and tested by the single bottle test. Correcting this impression, it may be understood, that should the test be taken direct from the herd, the time and disposition of the milk thereafter would allow any changes to be made so as to increase the quantity and decrease the quality. In order to obtain the best results, the agent secures a sample from a dealer, while he is in the act of delivering milk to one of his patrons, thus procuring positively a sample of milk which is used by the patron. In testing this sample the actual quality of milk sold is ascertained. For the collection of samples the agent is supplied with a number of small, round cans which contain about one-half pint of milk. This can has a screw top and each is numbered, no two having the same numbers. An average of about fifteen samples are collected by the agent in one day. In order to identify one sample from another, throughout the process of testing, this department has furnished the agent with a small record book which he carries with him in making the collections. The pages of the book are printed especially for this purpose, and allow a space for the name of the dealer, number of his permit, number of the sample can, and number of the D. C. test bottle, together with a space for the test itself, the latter two being inserted after the agent has finished his work.

Samples of milk are frequently collected of both morning and night's supply, and oftentimes the result of a test discloses a wide difference between the two, the latter being usually the poorer in quality.

TESTING APPARATUS.

The method of testing milk is interesting, as it is particular. This department is often called upon to explain the manner of testing milk, and the reliability of the test. For all Iowa cities the Babcock system is used. This consists of the centrifugal machine, test bottles, pipettes, acid measures, thermometers and sulphuric acid hydrometers. The centrifugal machine is a simple contrivance. A wheel between twelve and twenty inches in diameter, according to the size of the machine, is poised upon a smaller wheel about one-fourth the size of the larger, which is set directly under the other, and by means of a cog wheel between the two the larger one is caused to revolve at a great speed varying from 700 to 1,200 revolutions per minute. Attached to the larger wheel, are small cups, into which the test bottles are placed. A cover is used to keep the bottles from being broken or being thrown from these cups.

The hand centrifugal machine used by this department is made to carry as many as fifteen bottles, according to the size of the machine, but these bottles must be so placed as to balance each side of the larger wheel. The Babcock test bottles are made of heavy glass, and are about the shape of an ordinary round bottle, except that the stem is much longer than the body, and is very small. On the stem of the bottle is a graduated scale, by which the butter fat, when separated from the milk, is measured. These bottles contain up to the neck, not less than 40 c. c. Each division of the graduated scale represents .04 c. c., and 5 of these divisions are equal to 1 per cent of butter fat when 18 grams of milk are used in the test, it being assumed that the specific gravity of butter fat at the temperature of 120° F. is 0.9. The graduation extends from 0 to 10 per cent, which is sufficient for all ordinary tests of milk. The graduation of these bottles is tested with mercury which, when the weight is used as a key, is the most positive way of arriving at a correct measurement, and each of the bottles are numbered and marked at the top with the letters "D. C.," which represents Dairy Commissioner, a solution of acid being used to insert the numbers and letters according to the needs of the office.

This department has already issued to the city milk agents, creameries and cheese factories, 1,003 of the bottles which are numbered from one up to the number given; a record of each is kept in the office. The agent having the bottle is required to keep it clean and free from any substance which would adhere to the inside so as to cause an effect upon the sample of milk or solution which is used for the test. On account of the strength of the glass the bottles are not easily broken, and one set usually lasts six or eight months.

The pipette or milk measure, is one of the useful contrivances used in testing milk. It is in form, a long tube, with a bulb in the center. One end of the pipette is small at the very tip, while the other end is the same size the full length. The pipette will hold by the measurements which are marked thereon, when correct, 17.6 c. c. of milk which, if the milk has the average of specific gravity of 1.032, will weigh 18 grams. The pipette is tested by the same means as the bottle, and is used only as a measure. The operator places one end of the pipette in a thoroughly mixed sample of milk, and by drawing the milk into the other end as in a compression of air, is enabled to secure a correct measurement of 18 grams of milk. It must be understood, then, that the 18 grams of milk is the measurement of 100 pounds of milk which is tested. This department has arranged for procuring a large number of these pipettes and each will be tested by a competent chemist. It is the expectation that each creamery having obtained a test bottle from this department shall receive one of these pipettes at a low price.

The acid measure is another particular implement necessary in making the tests. This instrument is made of glass also, and is but a small measure with the graduated scale upon its surface. Sulphuric acid is used to dissolve the casine of the milk. The measure in itself is used only to obtain the correct amount of acid to be used in the test, which is 17.5 c. c. Absolute correctness in measuring the acid is not necessary, as a small variation will not affect the result of its action upon the milk.

With such an apparatus as described the agent is fitted for his work. To the credit of all agents in this state, they have followed the instructions given and found results unquestioned, as taught by the department.

SAMPLES—HOW TESTED.

After having collected samples of milk from the dealers while the milk was placed on sale or in the act of being sold, the agent is ready for the test. His first work is to bring the milk to a proper temperature and then measure it by use of the pipette, and pour it into the bottle, which is done as explained before; drawing a measurement of milk into the pipette by means of suction, and then placing one end of the pipette in the bottle, allowing the milk to run from tube to bottle. Then the correct measurement of acid having the proper temperature and strength is made, and that also poured into the bottle. This solution is well shaken, and causes the substance to change from white to a dull reddish color. The bottle is then ready for the whirl in the centrifugal machine. The agent may prepare all of his samples and whirl them at one time. The centrifugal machine is made to revolve for five minutes, which is equal to between 3,500 and 6,000 revolutions, according to the size of the machine: then a small quantity of hot water is added, and the machine whirled again for one minute. After this process the butter fatty contents of the milk, being of an oily character, according to the provisions of nature, gathers in the top or the stem of the bottle, and in such a position that it may be measured by means of the graduated scale. The measurement shows the contents of butter fat in 100 pounds of milk of which the sample tested is a part. In another part of this report will be found a list of all Iowa milk dealers. Appended to the name of the dealer and his manner of selling milk, is the yearly average of tests of milk he has sold. These tests range from below 8 per cent up to as high as 7.00, or seven pounds, the average for the state being 4.00, or four pounds of butter fat for each 100 pounds of milk. This table is interesting, and should be studied by all who depend upon the city milk dealers for their supply of the dairy cow's much relished product—the milk.

In some cases, as may be seen, the tests have fallen below the average of 3.00, but any milk testing below this standard is considered as skimmed or partly skimmed milk, the sale of which is prohibited unless advertised and sold as such. The cause of the failure to reach the average is rarely found to be with the cow. There are many occasions when the hand of the unscrupulous and greedy dealer has had a part in rendering the quality of milk he sells poorer than it really was.

This department has been fortunate in avoiding or meeting occasions where prosecutions for the sale of skimmed milk is advisable. Yet we have done much to forestall any and all attempts to sell skimmed milk to our city patrons.

The dealer is as much interested in the city milk test and its results as the consumer, and more often is the one most interested, especially while his milk is advertised in the monthly average as published by local agents. Dealers have been willing and helpful in securing samples for testing. Since they do not know one day from another when the agent is likely to call for a sample of their milk, they usually keep their best quality constantly on sale. This has proven almost invariably true, for many of the tests run about the same, or uniform, the season through.

TESTS OF CREAM.

By referring to the list of dealers and results of cream tests following this article, it will be shown that fifty-nine cream tests have been made during the past year. This is a new feature of the work connected with city milk tests. Frequently agents are requested to test samples of cream. The law does not prescribe a cream test, yet as a matter of education a limited number of tests have been permitted during the past year. There are 278 dealers of the state who sell more or less cream, and from these the fifty-nine samples were taken and tested. These tests are made very much on the same principle as milk tests. The lowest test was 9 per cent, which is, that 9 per cent of 100 pounds of cream was butter fat. The highest test was 27 per cent, and the average for the fifty-nine tests 18.84 per cent. Last year in the report of this department 15 per cent was recommended as the correct standard for cream sold by city milk dealers. It will be shown conclusively that this percentage is reasonable.

NAME OF DEALER.	Date of test.	Test.
<i>Burlington.</i>		
F. M. Parsons.....	Jan. 7	22.00
F. M. Parsons.....	Feb. 10	21.00
<i>Color Rapids.</i>		
C. G. Smith.....	Jan. 22	27.90
W. J. Fatman.....	May 23	21.00
Thomas Jewell.....	May 23	17.00
Williams Bros.....	June 9	9.00
J. Koutney.....	June 9	11.00
<i>Council Bluffs.</i>		
J. Ellsworth.....	Feb. 1	19.20
<i>Davenport.</i>		
H. Wendelhausen.....	June 23	21.00
M. Baum.....	June 22	20.40
T. Ogilts.....	June 22	16.20
H. J. Koep.....	June 22	21.00
Howell & Prinz.....	June 22	21.00
O. Raehman.....	June 22	21.00
John Timon.....	June 22	22.00
<i>Des Moines.</i>		
Des Moines Dairy Company 5.....	Nov. 16	13.20
Des Moines Dairy Company 4.....	Feb. 21	13.50
Des Moines Dairy Company 4.....	Feb. 24	15.50
Des Moines Dairy Company 1.....	Feb. 24	15.30
Des Moines Dairy Company 5.....	Feb. 24	15.50
E. B. Duane 1.....	Feb. 21	21.00
E. B. Duane 2.....	Feb. 21	21.00
J. Crulckshank.....	Feb. 21	17.40
F. West.....	Feb. 21	20.70
Bragdon Bros.....	Feb. 24	14.40
F. G. Patton.....	Feb. 24	19.50
M. E. Young.....	Feb. 24	17.10
H. Pickering.....	Feb. 24	21.00
F. M. Blackman.....	Feb. 24	13.80
G. T. Schlencker.....	May 21	18.00
W. C. Howell.....	May 21	18.90
W. Stubbs.....	May 21	20.40

NAME OF DEALER.	Date of test.	Test.
<i>Des Moines.</i>		
E. B. Young.....	May 21	15.00
E. B. Young.....	May 25	12.60
W. H. Thomas.....	May 24	21.30
W. H. Thomas.....	May 24	14.30
J. R. Wilson 1.....	March 18	15.50
J. R. Wilson 2.....	May 23	15.50
Iowa Dairy Company 1.....	May 23	18.20
Iowa Dairy Company 2.....	May 25	25.80
W. Stubbs.....	May 19	18.50
W. F. Carter.....	May 26	21.00
W. F. Carter.....	May 26	20.10
Iowa Dairy Company 2.....	June 23	20.10
L. J. Van Der Linden.....	June 22	18.50
F. West.....	June 30	18.00
J. P. Van Stubbs.....	June 19	17.50
Bragdon Bros. 1.....	July 23	18.00
Bragdon Bros. 2.....	Aug. 20	19.80
A. W. Harding.....	July 28	16.60
G. W. Felt.....	Aug. 20	22.00
A. Terry.....	Sept. 21	15.30
Terry & West.....	Oct. 14	17.10
F. West.....	Aug. 20	19.50
<i>Sioux City.</i>		
A. O. Woodcock.....	Aug. 14	16.20
<i>Marshalltown.</i>		
E. Winchell.....	July 25	22.00
Varnum Bros.....	Sept. 21	17.40
<i>Fert Madison.</i>		
W. B. Smith.....	Aug. 11	18.30
W. B. Smith.....	Sept. 23	18.00

Total number tests, 99; average of all tests, 18.84.

DEPOTS AND STORES.

One particular feature of the city milk trade which has developed in the past year is the rapidly increasing number of depots where milk is sold. There are many families in the larger

cities who do not find it convenient to receive their supply of milk at a certain time every day. For the accommodation of this class, dealers established depots at different points along their route, from which milk may be bought at any time of the day or evening. Previously, bakeries and restaurants were the principal depots, but in the past year they may be found in meat markets and grocery stores as well. The trade in this particular has increased and proven popular, inasmuch that merchants themselves have established departments where milk is sold in their stores or their markets. Each depot has a permit for the sale of milk, as required by law. One of the strong indications of increase in this traffic has been shown in the number of permits issued.

INFORMATION PERTAINING TO CITY MILK SUPPLY.

Following is a table of information compiled from blanks received by this department in the form of applications for permits from city milk dealers. This table shows the number of wagons and depots operated in each city; the manner of distributing milk, and the number selling skimmed milk and cream; the number of families, hotels, restaurants, etc., supplied by city milk dealers; the yearly value of all milk sold; number and grade of cows from which the city milk supply is taken; total number of cows in each city, together with the yearly average per cow. Since this table is compiled by cities, the direct information as pertains to each city is given:

CITY.	PERMITS ISSUED UNDER ACT OF APRIL 12, 1897.		MANNER OF DISTRIBUTION OF MILK.		KIND OF MILK SOLD.			NUMBER OF FAMILIES, HOTELS AND RESTAURANTS SUPPLIED.		Yearly value of milk sold.	NUMBER DIFFERENT KINDS OF COWS FROM WHICH MILK SUPPLY IS OBTAINED.										Yearly average per cow.			
	Wagons.	Depots.	Total.	Dipped or poured from cans.	Drawn from fountains in cans.	Drawn from fountains in small individual cans, jars or bottles.	Whole milk.	Cream.	Skimmed milk.		Number of persons employed.	Private families.	Hotels, restaurants, etc.	Jergens.	Grade Jerseys.	Holsteins.	Grade Holsteins.	Rhodesians.	Grade Short-horns.	Common or not horned.		Total of all breeds.		
Burlington.....	55	5	60	59	1	11	48	12	81	88	69	55	21	62	53	1	5	5	1	131	553	67	49	
Cedar Rapids.....	59	5	64	62	2	2	42	22	64	66	4,617	10	11	21	25	5	5	5	5	101	505	55	75	
Clinton.....	24	4	28	27	1	8	20	9	29	29	1,875	47	47	43	22	12	45	45	37	357	507	72	246	
Council Bluffs.....	21	5	26	25	1	8	18	10	28	28	1,772	49	49	49	30	30	31	31	47	141	470	84	69	
Davenport.....	29	2	31	30	1	12	18	39	51	111	5,516	55	55	55	35	35	35	49	101	146	1,406	57	453	
Des Moines.....	22	119	141	140	1	159	67	59	129	6,583	159	159	159	159	171	171	171	227	569	1,431	91.5	61	91.5	
Dubuque.....	46	10	56	55	1	8	36	40	46	47	4,727	11	11	11	11	11	11	4	5	57	554	82.4	61	82.4
Fort Madison.....	22	2	24	24	1	14	7	2	26	1,206	11	11	11	11	11	11	11	5	5	119	329	100	12	100
Keokuk.....	19	19	38	37	1	19	19	8	43	1,791	68	68	68	68	68	68	68	49	49	119	329	100	12	100
Marshalltown.....	10	2	12	12	0	7	12	10	29	1,281	50	50	50	50	50	50	50	50	50	49	303	101.5	61	101.5
Muscatine.....	13	2	15	15	1	13	13	1	17	1,151	19	19	19	19	19	19	19	19	19	41	305	86.5	61	86.5
Ottumwa.....	17	17	34	33	1	17	17	5	45	1,671	59	59	59	59	59	59	59	59	59	59	396	96.19	61	96.19
Stout City.....	50	5	55	53	2	5	35	35	80	1,423	75	75	75	75	75	75	75	75	75	128	477	94.00	61	94.00
Total.....	455	82	537	529	110	61	538	278	608	36,037	890	890	890	890	890	890	890	1,081	4,008	9,101	168.75	61	168.75	

From this table it will be seen that the cities under the milk inspection system, have a population of more than 300,000 people, about one-seventh of the whole population of the state. The people are supplied by 535 licensed dealers and are classified as follows: Number of wagons from which milk is sold, 453; depots and stores, 82. There are 36,667 families and 580 hotels and restaurants supplied with milk from wagons; the sales from depots are generally transient, and the customers can not be counted upon as regular. There are 888 persons reported employed in the dairy business, at the dairy farm and elsewhere, in connection with the sale and production of milk for the thirteen cities under control of this department. The value of milk sold for the year ending June 30, 1896, is reported to be \$713,802.

The number of cows supplying milk for the city patrons is 8,031; 50 per cent of these are reported as common grade cows or breed not reported: 20 per cent are Shorthorn, 17 per cent Jersey and 13 per cent Holstein. The cows belonging to the milk dealers of the city of Keokuk yield \$108.93 per head, the largest of any of the 13 cities. The smallest yield, \$72.65 per head, is reported by the dealers of Clinton. The average returns for the 8,031 cows is \$88.75.

The business of supplying milk to the city trade is reasonably profitable, and the class of men engaged in this business in our cities are good citizens and show a commendable spirit toward the law. They realize the better the quality of milk, the more will be its use. In the report last year we advocated licenses of a higher rate than is now in force, for city milk dealers, which with the increased revenue will pay the expense of a carefully devised system of inspection of everything connected with the business, from the cow, her home and her surroundings, to the delivery of her product to the consumers. This is the right plan to carry out, and we trust that it may be accomplished before many more reports have been issued from this office. Give the people of Iowa this kind of protection and milk that is as rich in quality as it now is, and they will have nothing to complain of along that line.

The manner of delivering milk from either the dairy direct, or from the whole supply as carried by the dealer in his wagon, has been improved from year to year by the introduction of new utensils. Among these we find that glass jars have become more or less desired for the delivery of milk, and when well filled with fresh milk, may be delivered to the customer

unopened from the time it left the dairy, and free from churning or dust, or other disagreeable substances, thereby adding to its purity when ready for use. By the use of glass jars there is some risk of contracting and spreading disease, unless the most scrupulous care is taken to thoroughly wash and cleanse jars when emptied each day. In some cases paper corks are used, and oftentimes more than once. This is one objection to the use of the paper cork, for after being used once it is not fit for a second time.

LIST OF CITY MILK DEALERS.

Following is a tabulated list of all milk dealers in the state of Iowa having permits for the year ending July 4, 1896 and 1897. The cities and the names of dealers are arranged alphabetically. This table shows the manner of selling milk, total number of tests had during the year, the highest test, lowest test, average test, and the number, if any, below standard.

BURLINGTON.

Number.	NAME.	Manner of selling milk.	Permit number—1896.	Permit number—1897.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
1	Bents, George	Depot	451	2	4.00	3.80	3.90		
	Blader Bros	Wagon	307	11	4.00	3.00	3.62		
3	Blader, Thomas	Wagon	306	185	3.00	4.30	3.65		
4	Boeher, H.	Depot	430	2	3.00	5.20	4.40		
5	Bowman, H. C.	Wagon	498	310	3.00	4.00	3.00	1	
6	Brooks, H. E.	Wagon		1	5.10	5.10	5.10		
7	Buhrmaster, F. W.	Wagon		2	4.00	5.00	4.50		
8	Chester, C. F.	Wagon	431	514	3.80	6.00	5.20		
9	Dalley, C.	Wagon	309	4	3.20	5.20	3.75		
10	Davis, M. H. & Co.	Depot		518					
11	Duckstein, F.	Wagon	126	325	2.40	4.20	3.48	1	
12	Eggleston, C.	Depot	450	2	3.50	5.20	4.35		
13	Enzler, C.	Store	345	1	3.00	3.50	3.50		
14	Ernst, F.	Wagon	152	384	3.00	3.90	3.44		
15	Ernst, C. G.	Wagon	316	410	3.75	4.40	3.75		
16	Grabenkamp, F.	Store	125	5	3.20	5.00	3.60		
17	Glickson, M.	Store	486	2	3.70	7.00	5.35		
18	Hacker, A.	Wagon	270	9	3.00	4.10	3.00		
19	Hall's Jersey Dairy	Wagon	468	3	5.00	4.50	5.03		
20	Hartman, K.	Store	345	1	4.00	4.00	4.00		
21	Haskell, C. L.	Wagon	485	70	4.00	5.20	4.80		

BURLINGTON—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1896.	Permit number—1897.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
22	James, Joe	Wagon	351	419	19	4.00	3.00	3.70	
	Johnson, C.	Wagon	408	8	9	4.00	3.30	3.73	
24	Johnson, H.	Wagon		1	1	4.00	4.00	4.00	
25	Kestner, H. C.	Wagon	350	405	13	5.00	3.20	4.60	
26	Klien, C.	Wagon		1	1	4.50	4.50	4.50	
27	Leak, George S.	Wagon	427	452	9	5.20	3.00	3.85	
28	Leak, H. D.	Wagon	297	3	14	4.40	3.00	3.80	
29	Lentz, A.	Wagon		515	5	4.00	3.10	3.60	
30	Lichtenburg, F.	Wagon	185	1	12	4.30	3.40	3.90	
31	Liedholm, H.	Depot		513					
32	Merihan, D.	Depot	389	2	2	4.20	3.00	4.50	
33	Newman, George.	Wagon	481						
34	Parsons, F. M.	Wagon	19	445	20	5.20	3.60	3.90	
35	Pierson, A.	Wagon		1	1	4.10	4.10	4.10	
36	Prait, Charles	Wagon No. 1.	24	5	20	5.20	3.60	3.90	
37	Prait, Charles	Wagon No. 2.		7	19	4.00	3.00	3.70	
38	Runge, E.	Wagon	206		7	5.00	3.00	4.10	
39	Schupp, J. W.	Store	485	3	3	5.20	5.00	5.10	
40	Schwacker, C.	Depot	487	3	3	4.40	4.20	4.30	
41	Smith, E. H.	Wagon	458	3	3	3.75	3.80	4.00	
42	Sommerfeld, W.	Depot	458	3	3	3.50	3.20	3.35	
43	Sourles, B.	Wagon	35	2	18	4.20	3.00	3.75	
44	Button, M. C.	Wagon		3	3	5.10	4.90	5.00	
45	Swords, E. J.	Wagon	185	256	16	4.20	3.00	3.60	
46	Tennity, E. J.	Wagon	400	302	18	4.10	3.00	3.62	
47	Upton, J. C.	Depot	498	3	3	4.30	4.00	4.20	
48	Van Winkle, O. G.	Wagon	88	314	25	4.20	3.00	3.62	
49	Vaughan, S. T.	Wagon	270	328	18	4.60	3.20	3.75	
50	Vogelsang, H.	Wagon	345	472	18	4.40	3.00	3.63	
51	Wotten, J. T.	Wagon	517	15	8	5.40	4.00	4.80	
52	Woodward, S. H.	Wagon	380	491					
53	Wuellner, F.	Wagon	325	185	7	4.20	3.70	3.96	
	Total				463	5.40	3.00	3.84	1

CEDAR RAPIDS.

Number.	NAME.	Manner of selling milk.	Permit number—1906.	Permit number—1906.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
1	Aik, L. W.	Wagon	531						
2	Bear, W. T. S.	Wagon	362	5	4.80	4.40	4.60		
3	Berry & Bear	Wagon	97	100	9	4.60	3.60	4.10	
4	Berry & Bear	Wagon	101						
5	Bevins, S. A.	Wagon			1	4.40	4.40	4.40	
6	Bremer, F.	Wagon	62	102	6	4.90	3.80	4.37	
7	Bremes, J. F.	Wagon	301	378	3	4.30	3.40	3.80	
8	Brock, R. E.	Wagon	99	166	7	4.80	3.80	4.37	
9	Buck, Carl	Wagon	461		3	4.20	3.60	4.00	
10	Bunger, E. W.	Wagon	100	98	10	5.40	3.20	4.34	
11	Caldor, L. B.	Wagon	403	54	11	4.40	3.00	4.02	
12	Clarke, Jas.	Wagon	73	225	18	4.60	3.60	4.10	
13	Crowe, S. H.	Wagon	367		2	4.40	4.20	4.30	
14	Crowe, H. L.	Wagon	415						
15	Davis, C. H.	Wagon	489	340	7	5.00	3.00	4.03	
16	Dockery, A.	Depot	505	3	4.80	4.20	4.50		
17	Garmon, G. B.	Wagon	520	481	8	4.00	3.20	4.02	
18	Hawkins, H.	Wagon	483		1	5.00	5.00	5.00	
19	Heibig, H. A.	Wagon	377	300	9	4.80	3.70	4.10	
20	Kilmeyer, F.	Wagon	94	212	5	4.40	3.80	4.10	
21	Kitterman, J. S.	Wagon	129	97	11	5.60	3.60	4.70	
22	Klinger, V.	Wagon	369	35	10	4.80	3.40	4.06	
23	Koutney, J.	Wagon	95	157	11	4.80	3.20	4.10	
24	Lewis, H.	Wagon	526						
25	Leusch, W.	Wagon	86		9	4.60	3.00	3.70	
26	Ling, A.	Wagon	331	379	4	4.60	4.40	4.45	
27	Listenbarger, I. G.	Wagon	48	6	5.20	4.40	4.60		
28	McDowell, E. E.	Wagon	158	133	15	4.80	3.00	4.39	
29	Mergo, Geo.	Wagon	468		13	5.60	3.00	4.10	
30	Miller Bros.	Wagon	51	74	11	4.60	3.80	4.20	
31	Milnes, J. C.	Wagon	393	398	11	4.60	3.40	4.00	
32	Planey, F.	Wagon	458	351	8	5.00	3.40	4.10	
33	Parks, G. W.	Store	131	7	5.00	4.00	4.45		
34	Patman, Geo.	Wagon	361						
35	Porter, J. S.	Wagon	216	235	12	5.60	3.80	4.40	
36	Putman, W. J.	Store	303		2	4.40	4.00	4.20	

CEDAR RAPIDS—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1906.	Permit number—1906.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
37	Richmond, E.	Wagon	31	17	6	5.00	4.00	4.80	
38	Rawson, J. H.	Wagon	474	4	4.20	3.80	3.90		
39	Reynolds, D. W.	Wagon	99	5	5.40	4.00	4.70		
40	Robb Bros.	Wagon	288	246	20	4.60	3.20	4.10	
41	Smith, A. H.	Wagon	33		1	4.00	4.00	4.00	
42	Smith, H. G.	Wagon	128	33	12	4.60	3.40	4.20	
43	Sloan Bros.	Wagon	470						
44	Stewart, F. C.	Wagon			2	4.40	4.00	4.20	
45	Strakota, Mrs. A.	Depot	504		4	5.00	3.00	4.40	
46	Taft, C.	Wagon	344		1	3.80	3.60	3.70	
47	Thompson, C.	Wagon	100	132	5	4.80	3.00	4.10	
48	Trator, D.	Wagon			1	5.00	5.00	5.00	
49	Umbsenstock, W.	Wagon	253	265	7	4.60	3.00	3.90	
50	Usher, J. S.	Wagon	169	328	13	6.00	3.20	4.60	
51	Upp, C. S.	Wagon	533		4	4.00	3.00	3.75	
52	Victorium, J.	Wagon	89		1	4.00	4.00	4.00	
53	Wendler, T.	Wagon		464	2	4.40	4.20	4.30	
54	Wiliant Bros.	Wagon		501	2	4.00	3.00	3.50	
55	Willey, W.	Wagon	381						
56	Williams Bros.	Wagon	87	310	9	5.00	3.80	4.35	
57	Wolten, J.	Store	92	336	3	4.60	3.60	4.10	
	Total				380	1.70	3.67	4.16	

CLINTON.

1	Assenmaker, G.	Wagon	229		3	4.40	3.80	4.13	
2	Bach, John	Wagon	115	447	12	3.80	3.20	3.62	
3	Baer, John	Wagon	376	363	14	4.40	3.80	3.90	
4	Baker, J. P.	Depot	356	237	19	4.30	3.00	3.40	
5	Boynton, G. L.	Wagon	23	299	26	5.60	3.00	3.80	
6	Caplan, C. F.	Wagon	210	373	13	4.50	3.10	3.78	
7	Carpenter, P.	Wagon	342	324	9	4.00	3.50	3.75	
8	Clausen, K.	Wagon	200	130	13	4.00	3.50	3.78	
9	Clinton Cream Depot	Depot	519		1	4.00	4.00	4.00	
10	Everman, H.	Wagon	286	305	13	4.60	3.00	3.70	
11	Fanger, H.	Wagon	373	459	13	3.80	3.20	3.40	

CLINTON—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1908.	Permit number—1909.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
12	Freda, M. C.	Depot	197	227	12	4.40	3.30	3.80	
14	Fritz, F.	Wagon			1	3.50	3.50	3.50	
16	Gertzen, D.	Wagon	258	281	13	5.20	3.90	3.90	
18	Gidjenson, J.	Wagon	429	378	13	4.00	3.30	3.75	
16	Haring, W. G.	Wagon	29	213	13	4.90	3.00	3.75	
17	Heath & Stockwell.	Wagon	258	103	13	4.20	3.00	3.76	
19	Johnson, Nels.	Wagon	320	71	13	4.20	3.10	3.60	
19	Johnson, Gus.	Wagon	378	236	9	3.90	3.10	3.64	
20	Klinge, T. C.	Wagon	323	420	13	4.20	3.10	3.78	
21	Kennedy, J. J.	Wagon		493	5	4.50	3.70	4.14	
22	Krogman, F.	Wagon	516	289	8	4.00	3.00	3.54	
23	Letts, F.	Wagon		213	11	4.30	3.00	3.70	
24	Miller, M. C.	Wagon	211	328	13	5.40	3.40	4.10	
25	Morrissey, O.	Wagon	430	397	13	4.20	3.30	3.76	
25	Nissen, C.	Wagon	363	294	13	4.40	3.00	3.74	
27	Nielson, C.	Wagon	325	245	8	5.00	3.50	4.30	
28	Oleson, S.	Wagon	114	104	13	4.20	3.00	3.60	
29	Oleson, J. S.	Wagon	240	228	13	5.00	3.20	4.10	
30	Paulson, C.	Wagon	93	171	13	4.70	3.00	3.60	
31	Person, N.	Wagon	264	106	12	4.40	3.00	3.60	
32	Peterson, O.	Wagon	320	329	10	4.20	3.20	3.66	
33	Peterson, H. T.	Wagon		277	4	4.60	3.60	3.80	
34	Rasmussen, F.	Wagon			1	3.76	3.70	3.70	
35	Sallsbury, N. L.	Wagon		371	1	4.30	4.20	4.30	
36	Schmidt, P.	Wagon	18	165	11	3.90	3.00	3.40	
37	Seesor, Charles.	Wagon	280	248	13	4.40	3.30	3.80	
38	Shirk, E. E.	Depot	321	433	9	4.70	3.00	3.65	
39	Simmons, S.	Wagon	212	238	13	5.50	3.40	4.30	
40	Thompson, O.	Wagon	432	352	7	4.40	3.00	3.90	
41	Wilson, P. & Co.	Wagon	340	457					
	Total.				421	4.37	3.23	3.77	

COUNCIL BLUFFS.

Number.	NAME.	Manner of selling milk.	Permit number—1908.	Permit number—1909.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
1	Arnold, F. J.	Wagon	302	313	22	4.20	3.50	3.92	
2	Baker, W. W.	Wagon	157	234	19	4.40	3.20	3.80	
3	Cheeseborough, C. J.	Store	535						
4	Cook & Co.	Store		13	1	3.10	3.10	3.10	
5	Droge, H.	Wagon	402		14	4.40	3.00	3.66	
6	Easdale, E.	Wagon No. 1.	291	158	29	4.30	3.00	3.78	
7	Easdale, E.	Wagon No. 2.	358	150	29	4.50	3.00	3.60	
8	Ellsworth, J.	Wagon	322	316	29	4.60	3.20	3.84	
9	Ellsworth, A. C.	Wagon	342	315	15	4.00	3.30	4.12	
10	Erickson, A. S.	Wagon	68	161	19	5.00	3.00	4.36	
11	Green, Chas.	Wagon	369	300	20	4.60	2.80	3.44	1
12	Harding, G. J.	Wagon		12	1	3.40	3.50	3.50	
13	Johnson Bros.	Wagon	202	233	19	4.50	2.80	3.60	1
14	Johnson, S.	Wagon	70	100	25	4.60	3.20	3.80	
15	Lavenburg, A.	Wagon		75	23	4.40	2.60	3.60	1
16	Leonard, H.	Wagon No. 1.	334	377	30	4.10	2.80	3.74	1
17	Leonard, H.	Wagon No. 2.		479	2	4.00	3.20	3.60	
18	Leonard, H.	Depot 3.		480	2	4.40	3.20	3.50	
19	Letner, C. F.	Wagon	543	317	14	4.60	3.20	3.70	
20	Lewis, N. & Son.	Wagon			12	3.60	3.00	3.40	
21	Martin, H. H.	Wagon No. 1.	302	301	20	4.30	3.40	3.98	
22	Martin, H. H.	Wagon No. 2.	304	302	20	4.30	3.60	3.78	1
23	Marquette, Mrs. V.	Wagon	473	197	19	4.60	3.60	3.63	1
24	McCarthy, J. B.	Wagon		458	3	4.20	3.60	3.60	
25	McMullen, J. H.	Wagon		367	1	3.60	3.60	3.60	
26	Millard, F. O.	Wagon			12	4.00	3.20	3.20	
27	Murphy, Harry	Wagon		510	2	4.00	3.40	3.70	
28	Nelson, P.	Wagon	253	214	17	4.20	3.10	3.60	
29	Nelson, N. P.	Wagon	191	314	22	4.60	3.80	4.06	
30	Pratt, C. F.	Wagon	501	316	16	4.20	3.30	3.60	
31	Ray, Jas.	Wagon	393	312	19	4.80	3.50	4.50	
32	Reid, A. H.	Wagon	295	407	15	4.00	2.50	3.54	1
33	Richardson, Mrs. J.	Wagon		413					
34	Robinson, Mrs. M. M.	Wagon	201	89	15	5.00	4.30	5.20	
35	Rherrer, Chas.	Wagon	204	215	7	4.80	3.60	3.95	
36	Skodesholm, O.	Wagon	219	224	21	4.00	3.00	3.71	

COUNCIL BLUFFS—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1908.	Permit number—1909.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
37	Stevens, Jas.	Wagon	410	.....	8	4.20	3.80	4.00	.....
38	Wiatt, J. & Co.	Wagon No. 1.	16	168	23	4.40	2.80	3.48	12
39	Wiatt, J. & Co.	Wagon No. 2.	169	1	4.20	4.20	4.30	.....	.....
40	Wiatt, J. & Co.	Depot	170	4	4.28	3.40	3.90	.....	.....
41	Wiatt, M. E.	Wagon	374	2	4.00	4.00	4.00	.....	.....
42	Waterloo Creamery Co.	Depot	149	.....	18	4.20	2.80	3.78	1
	Total	.....	.....	.....	693	4.23	3.28	3.83	10

DAVENPORT.

1	Abraham, H. T.	Wagon	75	138	8	4.40	3.00	3.88	.....
2	Aukerson & Haick	Store	485	263	6	3.80	3.50	3.65	.....
3	Armill, J.	Wagon	104	291	4	4.00	3.00	3.80	.....
4	Arp, Hans	Wagon	30	39	6	4.50	3.70	3.97	.....
5	Baker, Frank	Wagon	490	350	7	4.00	3.00	3.60	.....
6	Bargholtz, J.	Wagon	67	196	13	4.19	3.40	3.63	.....
7	Barraclough, G.	Wagon	479	244	6	4.69	3.40	3.82	.....
8	Berger, F. E.	Wagon	.....	489	.....	.....	.....	.....	.....
9	Beyer, B.	Depot	105	40	4	4.20	3.00	3.95	.....
10	Bertram, P. H.	Wagon	522	.....	1	4.00	4.00	4.00	.....
11	Bumer Bros.	Wagon	63	82	11	3.90	3.20	3.60	.....
12	Booth, C. H.	Wagon	27	47	10	4.40	3.60	3.79	.....
13	Brahn, H.	Wagon	236	193	7	4.20	3.40	3.80	.....
14	Brahn, L.	Depot	.....	3	10	4.00	3.40	3.70	.....
15	Carsterson, A.	Wagon	504	.....	.....	.....	.....	.....	.....
16	Christenson, C.	Wagon	361	81	8	4.00	3.20	3.80	.....
17	Coughlin, Thos.	Wagon	58	36	12	6.00	3.70	4.24	.....
18	Cowiezell, J.	Wagon No. 1.	297	261	11	4.20	3.30	3.73	.....
19	Cowiezell, J.	Wagon No. 2.	298	262	5	4.00	3.60	3.72	.....
20	Cowiezell, Jacob	Wagon	.....	411	10	4.80	3.00	3.88	.....
21	Diamer, W.	Wagon	385	323	10	4.60	3.20	3.82	.....
22	Drier, F.	Wagon	810	467	8	3.90	3.30	3.66	.....
23	Eckstriten, F.	Wagon	.....	.....	6	3.60	3.20	3.43	.....
24	Eggers, Hans	Wagon	.....	.....	4	4.60	3.60	3.82	.....
25	Einfeldt, E.	Wagon	342	.....	.....	.....	.....	.....	.....
26	Fellows, John.	Wagon	.....	.....	1	3.20	3.20	3.20	.....

DAVENPORT—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1908.	Permit number—1909.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
27	Fleming, P. H.	Wagon	445	134	8	4.40	3.40	3.82	.....
28	Gerdas, John	Wagon	502	204	2	3.70	3.60	3.65	.....
29	Gankler, John	Wagon	217	135	8	4.00	3.40	3.70	.....
30	Gankler, Joe	Depot	.....	136	9	4.40	3.50	3.95	.....
31	Goetsch, H. J.	Depot	107	110	6	4.20	3.80	4.00	.....
32	Harnes, H.	Wagon	426	258	10	4.20	3.20	3.90	.....
33	Hasse, H.	Wagon	394	62	12	4.50	3.60	3.90	.....
34	Harrison, J. W.	Wagon	150	58	8	4.30	3.20	3.76	.....
35	Hemmings, Mrs. D.	Depot	256	441	8	4.20	3.60	4.00	.....
36	Heuer, John	Wagon	49	22	10	3.88	3.50	3.67	.....
37	Heuer, Claus	Wagon	102	78	10	3.80	3.40	3.68	.....
38	Herriman, H. O.	Wagon	289	629	7	4.20	2.40	3.51	1
39	Hinselman, H.	Wagon	435	197	8	4.40	3.50	3.71	.....
40	Howell & Prins.	Wagon	46	.....	6	4.00	3.40	3.70	.....
41	Juergenson, J.	Wagon	165	128	12	4.40	3.00	3.66	.....
42	Kelling, F.	Wagon	103	237	7	4.00	3.70	3.92	.....
43	Kellogg, H.	Wagon	48	254	6	4.80	4.00	4.30	.....
44	Koch, John	Wagon	235	263	12	4.00	3.40	3.62	.....
45	Lablie, J. F.	Depot	599	404	6	4.00	3.50	3.65	.....
46	Lange, J.	Wagon	209	191	7	4.00	3.60	3.84	.....
47	Larson, A.	Wagon	614	97	5	4.20	3.40	3.84	.....
48	Maves, John	Wagon	396	.....	8	4.70	3.00	3.74	.....
49	Mess, Henry	Wagon	21	200	7	4.20	3.30	3.81	.....
50	Moffat, G. A.	Wagon	.....	1	3.80	3.60	3.60	.....	.....
51	Mueller, A.	Wagon	512	304	11	4.40	3.40	3.85	.....
52	Nagel, H.	Wagon	295	300	16	4.00	3.50	3.80	.....
53	Neuman, E. H.	Wagon	473	1	3.40	3.40	3.40	.....	.....
54	Nichols, Mrs. J. C.	Wagon	427	119	3	3.40	3.30	3.30	.....
55	Peterson, P.	Wagon	425	251	9	4.80	3.20	3.92	.....
56	Peterson, Hans	Wagon	522	192	1	3.40	3.40	3.40	.....
57	Pignitta, A.	Wagon	478	194	9	4.00	3.40	3.73	.....
58	Prins, Charles	Wagon	.....	315	5	3.70	3.40	3.55	.....
59	Raum, Max	Wagon	198	137	10	4.20	3.50	3.79	.....
60	Riesman, C.	Wagon	326	.....	2	3.50	3.40	3.45	.....
61	Rouudy, F. W.	Wagon	.....	64	1	5.10	5.10	5.10	.....
62	Ruch, P.	Wagon	47	109	10	4.20	3.40	3.83	.....

DAVENPORT—CONTINUED.

Number.	NAME.	Manure of milking milk.	Permit number—1905.	Permit number—1906.	Number of milks.	Highest test.	Lowest test.	Average test.	Number below standard.
60	Ruchman, O.	Wagon	398	336	13	3.50	3.20	3.60	...
64	Schladitz, A.	Wagon	365	76	13	4.40	3.90	3.75	...
65	Schmidt, John.	Wagon	10	18	9	4.70	3.40	3.70	...
66	Schnoor, C.	Wagon	50	37	10	4.50	3.80	4.05	...
67	Schrumer, M.	Wagon	205	297	12	3.90	3.30	3.50	...
68	Severston, C. F.	Wagon	105	242	8	4.70	3.40	3.75	...
69	Springhorn, P.	Wagon	326	406	7	3.90	3.40	3.53	...
70	Steer, F.	Wagon	337	...	3	4.30	3.40	3.95	...
71	Thlassen, P.	Wagon	275	301	11	4.50	3.80	4.00	...
72	Tison, John	Wagon	513	414	8	3.90	3.30	3.53	...
73	Waage, M.	Wagon	307	...	...	...	...	...	...
74	Walk, John	Wagon No. 1.	89	79	8	4.20	3.40	3.95	...
75	Walk, John.	Wagon No. 2.	80	...	...	...	...	...	...
76	Weise, R.	Wagon	206	1	3.40	3.40	3.40	...	...
77	Wendelhausen, H.	Wagon	196	137	5	4.00	3.30	3.81	...
78	Willers, H.	Wagon	227	185	7	4.30	3.30	3.81	...
79	Wolf, W. W.	Depot	530	1	3.80	3.50	3.80	...	...
80	Zarn & Fambo	Wagon	541	159	9	4.10	3.40	3.73	...
81	Zinger, George.	Wagon	44	323	1	4.50	3.40	3.70	...
	Total	...	...	503	4.11	3.40	3.77	3	...

DES MOINES.

1	Allman, T. G.	Wagon	361	...	1	3.80	3.00	3.70	...
2	American Dairy	Wagon	...	...	3	3.40	3.40	3.40	...
3	Anderson, A.	Wagon	309	30	2	4.10	4.10	4.10	...
4	Arthur, R. C.	Wagon	148	160	12	5.10	3.20	4.00	...
5	Berger, H.	Wagon	393	...	...	...	...	...	...
6	Bennett, R. S.	Wagon	427	4	4.40	4.50	4.52	...	...
7	Bentrip, C. W.	Wagon	520	130	12	5.00	2.90	3.90	1
8	Blackman, F. M.	Wagon	172	35	11	4.90	3.70	4.15	...
9	Breeding, G. J.	Store	146	...	...	...	...	...	...
10	Burke, U. J.	Store	391	...	11	4.30	3.00	3.73	...
11	Borgenson, A.	Wagon	...	...	2	3.10	3.00	3.05	...
12	Brown & Mosekith	Store	119	295	9	4.30	3.10	3.52	...
13	Braddon Bros.	Wagon No. 1.	321	92	15	4.30	3.40	3.80	...

DES MOINES—CONTINUED.

Number.	NAME.	Manure of milking milk.	Permit number—1905.	Permit number—1906.	Number of milks.	Highest test.	Lowest test.	Average test.	Number below standard.
14	Braddon Bros.	Wagon No. 2.	322	84	12	4.50	3.40	3.90	...
15	Campbell, E.	Wagon	531	200	11	4.00	3.30	3.61	...
16	Churchman, W. W.	Wagon	60	152	9	4.50	4.10	4.07	...
17	Calkins, O. H.	Wagon	...	...	1	5.30	3.90	3.90	...
18	Carlen, George F.	Wagon	435	1	3.70	3.10	3.10	...	...
19	Carter, W. F.	Wagon	524	256	10	4.60	3.40	4.00	...
20	Cohen, N. B.	Wagon	433	...	3	4.30	3.40	3.85	...
21	Clark, H. S.	Depot	337	179	9	5.20	3.00	3.55	...
22	Crickshank, J.	Wagon	132	442	16	4.70	3.00	4.00	...
23	Denny, J.	Wagon	493	...	...	...	...	...	...
24	Des Moines Dairy Co.	Wagon No. 1.	77	19	16	5.20	3.20	3.95	...
25	Des Moines Dairy Co.	Wagon No. 2.	19	20	17	5.10	3.40	4.15	...
26	Des Moines Dairy Co.	Wagon No. 4.	70	21	22	4.90	3.30	3.85	...
27	Des Moines Dairy Co.	Wagon No. 5.	80	22	15	5.10	3.10	4.00	...
28	Des Moines Dairy Co.	Wagon No. 6.	...	...	...	...	...	...	...
29	Des Moines Dairy Co.	Depot	79	24	24	5.00	3.10	3.85	...
30	DeYore, J. E. & Co.	Store	879	...	10	4.30	3.20	3.83	...
31	Dippell, L.	Store	418	154	5	3.70	3.20	3.44	...
32	Dunne, E. B.	Wagon No. 1.	399	14	5	4.80	3.30	3.83	...
33	Dunne, E. B.	Wagon No. 2.	...	...	15	5.40	3.40	3.80	...
34	Dunne, E. B.	Depot	...	...	16	5.40	3.40	3.80	...
35	Ehle & Ehle	Depot	229	161	9	5.40	3.30	4.30	...
36	Erb, Charles	Wagon	494	...	...	...	...	...	...
37	Fagolis & Harris	Store	454	425	10	4.70	3.80	3.70	1
38	Falbo, F.	Store	395	...	5	4.30	3.70	3.90	...
39	Felt, O. W.	Wagon	311	334	11	4.70	3.90	4.10	...
40	Fingerald, Kate	Wagon	450	3	7.30	4.90	5.20	...	...
41	Flook, W. A.	Wagon	...	512	...	...	...	...	...
42	France, E. M.	Store	371	338	7	4.10	3.40	3.80	...
43	France, L. E.	Store	...	...	2	4.10	3.40	3.75	...
44	Gell, F. M.	Wagon	398	180	9	4.40	3.60	4.04	...
45	Gordon, William	Store	175	327	9	4.40	3.30	3.90	...
46	Graham, M. J.	Store	62	313	9	4.70	3.10	3.92	...
47	Hartus, F. C.	Wagon	459	...	...	...	...	...	...
48	Hawks Bros.	Store	245	511	10	4.70	3.50	3.90	...
49	Harding, A. W.	Depot	890	389	11	4.30	3.00	3.80	...

DES MOINES—Continued.

Number.	NAME.	Manure of sell- ing milk.	Permit number —1916.	Permit number —1915.	Number of tons.	Highest test.	Lowest test.	Average test.	Number below standard.
80	Hockersmith, J. S.	Store	389	149	6	4.00	3.20	3.50	
81	Harrison, S. C.	Wagon	423						
82	Hervey, Wm.	Wagon	505	125					
83	Howells, W. C.	Wagon	292	55	14	4.20	3.00	3.88	
84	Hunston, H. M.	Wagon			5	4.00	3.00	3.50	
85	Hawkeye Milk Co.	Wagon	499		2	4.10	4.40	4.60	
86	Iowa Dairy Co.	Wagon No. 1.	526	36	13	4.40	3.50	4.10	
87	Iowa Dairy Co.	Wagon No. 2	537	37	3	3.80	3.30	3.60	
88	Iowa Dairy Co.	Depot.	526	36	11	4.50	2.90	3.68	1
89	Johnson, C. R.	Wagon	24	434	19	4.90	3.00	3.91	
90	Jones, L.	Wagon	187		5	5.00	3.90	4.73	2
91	Kamplosky, J.	Wagon	3	162	5	4.40	3.40	4.20	
92	Kamplosky, J.	Wagon		163					
93	Lane, A. C.	Wagon	65	118	2	3.90	3.40	3.50	
94	Lowe, F. J.	Depot.	330		4	3.80	3.00	3.30	
95	Lunn, D. J.	Wagon	552		2	3.60	2.40	3.50	
96	Malone, J.	Wagon			2	4.10	3.50	3.80	
97	Maple, M. C.	Wagon	170		2	4.40	4.10	4.25	
98	Markley, J. C.	Wagon	373						
99	McConnell Bros.	Wagon	214		8	4.30	3.40	3.90	
70	McKowan Bros.	Wagon	312		11	4.50	3.60	4.00	
71	McKowan, F. M.	Wagon	309		6	4.40	3.10	3.53	
72	Miller, M. J.	Depot.	365	125	7	4.30	3.60	3.91	
73	Miller, M. H.	Store	279	417	3	4.60	3.70	3.98	
74	Moore, M. E.	Wagon	361		2	4.40	3.20	3.80	
75	Moyer, J. C.	Store	502	142	4	4.50	3.30	3.85	
76	Moore, F. A.	Store	476	316	9	5.30	3.50	4.87	
77	Moore, J. E.	Store	497		2	3.80	3.70	3.75	
78	Mustler, J. M.	Wagon	232	304	11	4.80	3.20	3.73	
79	Olson, J.	Wagon	50	51	13	5.30	3.20	3.96	
80	Pago, G. D.	Wagon		298					
81	Patton, H. A.	Depot	141	173	10	4.00	3.00	3.40	
82	Patton, F. G.	Wagon	209		8	4.40	4.00	4.21	
83	Paul, P.	Store	387		2	4.40	4.30	4.35	
84	Payton, W. W.	Wagon	233	400	16	4.70	3.70	4.08	
85	Peterson, F.	Wagon			2	4.80	4.00	4.43	

DES MOINES—Continued.

Number.	NAME.	Manure of sell- ing milk.	Permit number —1916.	Permit number —1915.	Number of tons.	Highest test.	Lowest test.	Average test.	Number below standard.
86	Pickering, H.	Wagon	173	440	11	4.80	3.40	4.05	
87	Pickering, O. B.	Wagon	411	172	9	4.30	3.60	3.84	
88	Proctor, Geo.	Wagon	162	246	10	4.70	3.40	3.90	
89	Pugh, Mrs. H. A.	Depot	398	418	9	4.20	3.00	3.50	
90	Quist, Frank.	Wagon	558	366	2	3.90	3.00	3.75	
91	Rhen, E. E.	Wagon	412		1	4.00	4.00	4.00	
92	Ritz, F. M.	Wagon	370	650	15	4.70	3.80	3.87	
93	Rogers, H.	Store	248	300	9	4.20	3.30	4.00	
94	Reynolds, Mrs. J. F.	Store			11	4.50	3.20	3.85	
95	Redman, C.	Wagon	501		4	4.50	3.60	4.00	
96	Ricketts, W. E.	Wagon	411	102	16	4.50	3.30	3.82	
97	Robb, Geo. F.	Wagon			2	3.60	3.10	3.45	
98	Sanders, H.	Store	247	361	9	4.60	3.00	3.80	
99	Sanders & Johnson	Store	480	421	8	3.90	3.00	3.35	
100	Sarchfield, J. P.	Wagon	371		1	4.20	4.00	4.20	
101	Schlenker, Charles	Wagon	374		2	4.00	3.80	3.90	
102	Schlenker, George F.	Wagon	90	31	12	5.40	3.40	3.94	
103	Schoefeldt, G.	Wagon	293	443	7	3.50	3.00	3.25	
104	Scott, A. W. & Co.	Depot	177	269	9	4.50	3.90	3.93	
105	Siders, H. A.	Depot	138	322	5	4.00	3.10	3.54	
106	Smith, J. S.	Wagon	275	147	11	4.80	3.10	3.93	
107	Smith, Ed.	Wagon	449		2	4.10	4.00	4.13	
108	Smith, Mrs. M. G.	Wagon		178					
109	Statt, S. S.	Wagon	227		5	4.30	3.00	3.58	
110	Stookey, D. M.	Wagon No. 1.	178	155	30	4.50	2.80	3.82	
111	Stookey, D. M.	Wagon No. 2	400	156	11	4.00	3.00	4.06	
112	Stradley, W. W.	Wagon	372		7	4.60	3.40	3.98	
113	Stiebina, W.	Wagon	335		3	4.40	3.50	3.90	
114	Streckland, L. M.	Wagon	189	264	10	5.80	3.00	4.10	
115	Starks, J. H.	Wagon	489	151	10	4.50	3.40	3.98	
116	Starks, C. L.	Wagon	444	267	14	4.60	3.40	3.98	
117	Stables, William	Wagon No. 1.	134	174	9	5.10	3.80	4.30	
118	Stables, William	Wagon No. 2.	173		9	4.50	3.30	4.05	
119	Terry, M. M.	Wagon	182		1	3.70	3.70	3.70	
120	Terry & West	Wagon	41	304	4	3.90	3.30	3.70	
121	Terry, George	Wagon	161		4	3.90	3.30	3.60	

DES MOINES—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1906.	Permit number—1907.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
122	Terry, A.	Wagon	39	454	9	4.30	3.50	3.86	
123	Terry, A.	Depot	40	455	8	4.30	3.30	3.80	
124	Terry Bros.	Wagon			1	3.90	3.90	3.90	
125	Thomas, W. H.	Wagon	477	462	13	4.00	3.10	3.58	
126	Tyler, J.	Wagon	187	164	11	4.30	3.90	4.00	
127	Vall's Dairy Depot	Depot	229	430	5	4.50	3.60	4.03	
128	Vall's Dairy Depot.	Wagon	358	431	2	3.50	3.10	3.30	
129	Van Der Linden, L. J.	Depot	113	125	9	4.40	3.10	3.58	
130	Von Stueben, J. P.	Wagon No. 1.	404	453	11	3.50	3.90	4.20	
131	Von Stueben, J. P.	Wagon No. 2.	405	454	14	4.40	3.60	4.02	
132	Weitons, S. & Co.	Store	520	346	6	4.00	3.50	3.96	
133	West, C. P.	Wagon	112	177	1	5.00	5.00	5.00	
134	West, F.	Wagon	120	178	14	4.70	3.40	3.81	
135	Wessinger & Co.	Store	383	409	5	4.40	3.30	3.73	
136	Williamson, James	Wagon	349		1	4.10	4.10	4.10	
137	Wilson & Co.	Wagon	225	305	9	4.40	3.60	3.78	
138	Wilson & Co.	Wagon	729	367	9	4.00	3.60	3.80	
139	Wilson & Co.	Wagon	530		4	4.50	3.40	4.00	
140	Wilson & Co.	Depot	531		3	3.90	3.00	3.30	
141	Wilson, M. I.	Wagon			1	4.30	4.30	4.30	
142	Wilson, D. F. & Bro.	Wagon			3	4.30	3.75	3.96	
143	Wellbridge, F.	Wagon	297	347	7	3.80	2.50	3.26	1
144	Wood, W. T.	Store	109	449	7	4.30	3.40	3.77	
145	Wormslerdorf, T. H.	Store	60	400	10	4.60	3.30	3.85	
146	Young Bros.	Wagon	349		6	4.30	3.40	3.73	
147	Young, E. B.	Wagon	154	86	9	4.60	3.30	3.89	
148	Young, M. E.	Wagon	175		7	4.40	3.50	3.85	
149	Zickafoos, W. C.	Wagon	434		2	4.10	4.00	4.05	
150	Zim, D.	Store	140	330	7	4.40	3.20	3.98	
	Total.	Store			1,064	4.30	3.40	3.90	5

DUBUQUE.

Number.	NAME.	Manner of selling milk.	Permit number—1906.	Permit number—1907.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
1	Adam, M.	Store	289	432	11	4.40	3.40	4.00	
2	Albrecht, G.	Wagon			3	4.00	3.80	3.90	
3	Avery, H. L.	Wagon			484	2	3.80	3.30	3.50
4	Bahl & Kukch.	Store			308	8	4.00	3.00	4.07
5	Barrett, John	Wagon	304	521	13	4.50	3.00	3.40	
6	Bolsler & Bulow	Wagon	243	382	15	4.80	3.40	3.93	
7	Breedebender, Mrs.	Store	300		10	4.80	3.30	3.90	
8	Breuke, C.	Wagon	418	522	12	5.70	3.40	4.66	
9	Buckingham, T.	Wagon No. 1.	267	336	6	4.60	4.00	4.30	
10	Buckingham, T.	Wagon No. 2.	268	337	12	4.30	3.00	3.60	
11	Carroll, T. R.	Wagon	494		5	4.40	3.30	3.96	
12	Consett, A.	Wagon	277	250	10	5.00	4.00	4.48	
13	Cushing Creamery Co.	Wagon	420	509	14	4.30	3.40	3.90	
14	Cushing Creamery Co.	Wagon	421	510	13	4.40	3.30	3.84	
15	Eagle Butter and Egg Co.	Depot	32						
16	Elgin, M.	Wagon	481		6	4.20	3.80	4.00	
17	Enzler, Mrs. M.	Store	500	292	8	4.30	3.30	4.00	
18	Feusch, J. & Son	Wagon No. 1.	350	130	10	4.20	3.00	3.50	
19	Feusch, J. & Son	Wagon No. 2.	350	121	9	4.50	3.30	3.78	
20	Feusch, J. & Son	Depot No. 1.	361	122	11	4.50	3.30	4.00	
21	Feusch, J. & Son	Depot No. 2.	122		10	5.00	3.50	3.92	
22	Feusch, J. & Son	Depot No. 3.	124		3	4.00	3.40	3.70	
23	Fleish, C.	Wagon	482		3	4.80	4.60	4.60	
24	Ford, James.	Wagon	341		4	4.60	4.00	4.20	
25	Gadient, John.	Wagon	417	59	12	4.80	3.80	4.23	
26	Garner, A.	Wagon	225	450	13	4.80	3.00	3.65	
27	Getting, D. F. & Son.	Wagon	493		13	4.20	3.20	3.65	
28	Hackers, A.	Wagon	435	36	8	4.80	3.90	4.30	
29	Heinne, E.	Wagon No. 1.	116		30	4.60	3.60	3.98	
30	Heinne, E.	Wagon No. 2.	147		16	4.40	3.60	4.00	
31	Herros, H. L.	Wagon	392	247	10	5.20	3.80	4.60	
32	Hoferlin J.	Wagon	184	496	9	5.00	3.80	4.46	
33	Hulk, M.	Wagon	507		6	4.80	3.40	4.53	
34	Jacklin, J. H.	Wagon No. 1.	130	45	10	5.00	3.40	4.00	
35	Jacklin, J. H.	Wagon No. 2.	242	46	11	4.30	3.00	3.70	
36	Knockle, A.	Wagon	490	389	12	4.80	3.40	3.98	

DOBUQUE—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1905.	Permit number—1906.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
37	McKinsey, C.	Wagon	439		6	4.23	3.90	4.05	
38	Mottel Bros.	Store		445	1	3.80	3.80	3.80	
39	Meyer, H.	Wagon	119	80	12	5.20	4.40	4.80	
40	Meyer, H.	Wagon	119	87	12	5.45	4.40	4.86	
41	Miller, J. O.	Wagon		378	2	4.00	3.90	3.90	
42	Mueller, C.	Wagon No. 1.	142	217	11	5.00	4.60	4.80	
43	Mueller, C.	Wagon No. 2.	143	218	9	4.80	3.20	4.00	
44	Musler, C.	Depot		219	3	4.70	4.40	4.50	
45	Murphy, J. J.	Wagon		436					
46	Mussel, F.	Wagon		415	401	1	4.20	4.20	4.20
47	Ohrn Bros.	Wagon		433	10	4.40	3.60	4.00	
48	Paley, F.	Wagon		327	508	5	4.40	3.25	3.62
49	Paley, A.	Wagon		135	200	9	4.30	3.40	3.80
50	Park Grocery Co.	Store		444	1	3.80	3.80	3.80	
51	Pfoll, L. J.	Wagon		435	508	1	4.00	4.00	4.00
52	Prysis, R.	Wagon		108	198	6	4.20	3.30	4.00
53	Quinan, John.	Wagon		437	5	4.80	3.60	3.84	
54	Rozyan, G. H.	Wagon		315		3	4.80	4.20	4.50
55	Schlegel, M.	Wagon		474	13	4.40	3.20	3.80	
56	Seeman, P.	Wagon		37	199	9	5.00	3.80	4.40
57	Sheridan, B.	Wagon		333	572	11	5.20	4.00	4.60
58	Spinetsky, A.	Wagon		180	426	11	5.20	4.80	4.60
59	Supple, M. F.	Depot		81	201	7	4.65	3.40	4.00
60	Sutter, L.	Wagon		422	445	7	4.80	3.80	4.17
61	Thorman, G. A.	Wagon No. 1.	296	293	10	4.20	3.20	3.50	
62	Thorman, G. A.	Wagon No. 2.	297	294	11	4.20	3.00	3.80	
63	Thorman, G. A.	Depot		298	305	9	4.25	3.80	4.02
64	Walker, C. H.	Wagon		169	90	12	4.60	2.80	4.10
65	Weist, H.	Wagon		414		3	4.60	4.00	4.40
66	Willard, A.	Wagon		459	249	9	5.00	4.00	4.30
67	Ziegler, C.	Wagon		424	56	8	4.65	3.40	4.02
	Total				542	4.63	3.74	4.18	

FORT MADISON.

Number.	NAME.	Manner of selling milk.	Permit number—1905.	Permit number—1906.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
1	Beelman, G. H.	Wagon		43	11	4.40	3.00	3.75	
2	Beelman, J. W.	Wagon		50	13	5.20	2.80	4.14	
3	Burton, James	Wagon		47	18	7.00	4.80	5.93	
4	Conradt, George	Wagon		41	11	7.60	3.20	4.45	
5	Currier, T. G.	Wagon No. 1.		256	3	5.80	3.80	4.55	
6	Currier, T. G.	Depot No. 2.		259					
7	Freshmier, B.	Wagon		460	9	5.00	3.40	3.95	
8	Freshmier, B.	Wagon		290	10	4.60	3.20	3.90	
9	Jansen, H.	Wagon		545	10	4.80	3.00	3.94	
10	Knapp & Benner	Wagon		38	12	5.20	3.60	4.30	
11	Manshien, J.	Wagon		117	11	4.40	2.00	3.78	1
12	Manshien, Mrs. B.	Wagon		143	12	6.00	3.40	4.35	
13	Shirk, Frank	Wagon		58	9	4.00	3.20	3.73	
14	Smith, W. B.	Wagon		146	10	5.20	3.80	4.50	
15	Troji, Frank	Wagon			1	3.00	3.00	3.00	
16	Wyman, H.	Wagon			2	4.00	3.00	3.65	
	Total				197	5.00	3.40	4.19	1

KEOKUK.

1	Driffield, H.	Wagon		17	278	22	5.00	4.00	5.00	
2	Emerson, M. E.	Wagon		423	365	30	5.20	3.90	4.62	
3	Ferris, B., Jr.	Wagon		530	1	4.90	4.90	4.90		
4	Hunt, H. A.	Wagon		110	120	16	5.20	4.00	4.30	
5	Keokuk Dairy Company	Wagon		252	383	15	5.00	3.50	4.10	
6	Ketterson & Koss	Wagon		284	111	21	6.50	4.00	4.84	
7	Knox, John	Wagon		221	202	19	5.20	3.20	4.40	
8	Lang, Fred	Wagon		58	23	15	5.20	3.80	4.50	
9	Nelson, C. G.	Wagon		222	49	10	6.00	3.80	4.60	
10	O'Brien, P.	Wagon		473	1	5.00	5.00	5.00		
11	Patterson, D.	Wagon		465	13	5.00	3.80	4.08		
12	Raber, C. N.	Wagon		192	463	19	5.00	3.80	4.78	
13	Rein, H.	Wagon		487	311	14	4.80	3.70	4.07	
14	Safford, C. O.	Wagon		190	34	20	5.00	3.80	4.40	
15	Sample, J. L.	Wagon		193	330	18	5.40	3.60	4.10	
16	Shappach, W. J.	Wagon		86	402	16	6.00	3.40	4.32	

KEOKUK—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1906.	Permit number—1907.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
17	Snyder, B.	Wagon	456						
18	Ulrich, E. C.	Wagon		266	3	5.10	5.00	5.05	
19	Weyland, W. G.	Wagon			3	5.30	5.00	5.10	
20	Wright, C. A.	Wagon	94	113	15	4.10	3.40	3.80	
21	Yonawine, H. W.	Wagon	159	113	16	5.10	4.00	4.53	
	Total								

MARSHALLTOWN.

1	Beilus, S. E.	Wagon	467	145	32	5.20	3.50	3.90	
2	Cole, Alvin	Wagon	459	95	33	4.50	3.30	3.90	
3	Griffiths, H.	Wagon							
4	Hansen, W.	Wagon	496	210	30	5.00	3.10	3.87	
5	McCord, D.	Wagon No. 1.	484	355	35	4.30	3.20	3.70	
6	McCord, D.	Wagon No. 2.		353	37	4.90	3.10	3.93	
7	McCord, D.	Depot	493	354					
8	Melcher, F. W.	Wagon			4	3.90	3.30	3.60	
9	Pimh, J. M.	Wagon	417	44	41	5.80	3.20	4.32	
10	Roandy Bros.	Wagon	498	211	50	6.00	3.40	4.30	
11	Triefery, G.	Wagon	461	222	45	5.90	3.00	4.10	
12	Varnum Bros.	Wagon No. 1.	453	72	20	4.90	3.00	3.90	
13	Varnum Bros.	Wagon No. 2.		45	18	4.90	3.70	4.30	
14	Wilson, W. R.	Wagon	452	33	40	5.10	3.20	3.90	
15	Winschell, E.	Wagon	451	478	30	4.60	3.00	3.69	
	Total			456	494	321	3.95		

MUSCATINE.

1	Begner, C.	Wagon	318	283	28	4.20	2.00	3.20	
2	Berman, H. R.	Wagon	30	72	28	5.40	3.40	4.15	
3	Brandt, J.	Hand			3	5.00	3.60	4.30	
4	Daskert, John	Wagon	56	114	28	4.60	3.40	4.15	
5	Greenaway, Mrs. J.	Depot	302	199	11	4.40	3.00	3.80	
6	Harris Bros.	Wagon	303	115	27	4.40	3.00	3.80	
7	Jarvis & Son	Wagon	55		10	5.50	4.00	4.37	
8	Jansen, H. E.	Wagon	303		9	4.30	3.90	4.10	
9	Lake, P. B.	Wagon	8	96	27	5.40	3.50	4.30	

MUSCATINE—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1906.	Permit number—1907.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
10	Leferre, G. W.	Wagon	491	69	19	5.20	3.20	4.20	
11	Luendeker, C.	Wagon	390	220	23	5.00	3.40	4.10	
12	Mittman Bros.	Wagon	54	303	23	5.00	3.90	3.76	
13	Ogilvie, W. J.	Wagon	120		4	3.90	3.20	3.45	
14	Scott, J. M.	Wagon	32						
15	Sidebottom, A. E.	Wagon	527		3	4.40	3.40	3.90	
16	Thomas, J. J.	Wagon	67	302	5	4.45	3.20	3.73	
17	Trick, M.	Hand			8	5.30	3.40	4.70	
18	Will, C. H.	Wagon	9	289	20	5.00	3.30	3.91	
19	Will Bros.	Wagon	304	307	25	4.90	3.90	3.72	
20	Wintermonte, B. D.	Depot	255	167	9	5.00	3.00	4.30	
21	Washburn, F.	Wagon	433		3	3.90	3.20	3.60	
	Total				218	4.75	3.27	3.91	

OTTUMWA.

1	Biser, J. F.	Wagon	311						
2	Burns, E. F.	Wagon	368	118	12	4.80	3.90	3.80	
3	Chrisman, W. F.	Wagon	322		11	5.00	3.90	4.34	
4	Codiff, D. E.	Wagon	420	304	6	5.00	3.40	4.40	
5	Daggert, E.	Wagon	179	325	12	5.20	3.50	4.30	
6	French, Mrs. E. K.	Wagon	74	120	12	5.20	3.60	4.50	
7	Fullmer, O. E.	Wagon	36	305	12	4.70	3.90	3.84	
8	Harsh, J.	Wagon	111	281	12	6.00	4.90	5.30	
9	Huffman, H. & Bro.	Wagon	449		4	4.70	3.30	4.00	
10	Hutton, T. L.	Wagon	166	341	10	5.20	3.10	4.32	
11	Krueger, J. G.	Wagon	163		1	3.50	3.70	3.70	
12	Michael, B. F.	Wagon	264	167	14	6.00	3.40	4.34	
13	Montague, H.	Wagon	163	263	12	5.30	3.40	4.78	
14	Newman, G. W.	Wagon	71	263	15	6.20	3.10	4.16	
15	Noble, T. H.	Wagon	496	399	10	5.00	3.90	4.90	
16	Rush, D. J.	Wagon	320		1	4.80	4.10	4.69	
17	Rupe, J. A.	Wagon	313	303	2	3.40	3.40	3.20	
18	Stimmons, N. C.	Wagon	272	390	12	5.00	3.90	4.30	
19	Spaankower, L. L.	Wagon	45	274	12	7.00	3.30	4.74	
20	Spear, W.	Wagon	466		5	4.10	3.30	3.52	
	Total				176	5.21	3.81	4.38	

SIOUX CITY.

Number.	NAME.	Manner of selling milk.	Permit number—1908.	Permit number—1906.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
1	Akronson, A.	Wagon	337	303	1	3.45	3.43	3.40	
2	Baby Milk Dairy	Wagon	163	305	11	4.60	3.00	3.50	
3	Bradstreet, C. O.	Wagon	408	442	8	4.10	3.30	3.60	
4	Bradstreet, A. J.	Wagon No. 1	343	93	7	3.93	3.50	3.64	
5	Bradstreet, A. J.	Wagon No. 2	344	94	8	4.00	2.00	2.60	
6	Bradstreet, T. E.	Wagon	329	265	19	4.10	3.00	3.50	
7	Clark, J. M.	Wagon	345		5	4.00	3.60	3.76	
8	Clark, H. D.	Wagon	386		3	3.60	3.50	3.60	
9	Fetterson, Andrew	Wagon	561	141	1	3.00	3.00	3.00	
10	Francis, L.	Wagon	339		4	3.80	3.80	3.80	
11	Franklin, S. J.	Wagon	544	433	5	4.00	2.00	3.44	
12	Frisbie, W.	Wagon	407	415	4	4.60	2.00	3.50	
13	Hansen, Anna	Wagon	527		1	3.80	3.60	3.60	
14	Heath, D. B.	Wagon	400	92	11	4.00	3.10	3.79	
15	Herman, W. M.	Wagon	392	209	12	4.00	3.00	3.51	
16	Howell, E. P.	Wagon	519		4	3.80	3.20	3.50	
17	Inglodue, J. S.	Wagon	336						
18	Jensen & Fresse	Wagon No. 1	347	470	16	4.00	3.40	3.76	
19	Jensen & Fresse	Wagon No. 2	348	477	18	4.00	3.00	3.50	
20	Johnson, C.	Wagon	455	63	19	3.80	3.10	3.50	
21	Johnson, A. B.	Wagon	369	475	14	4.30	3.00	3.75	
22	Johnson, J.	Wagon	446		6	5.00	3.80	4.23	
23	Kruman, L.	Wagon	106	525	17	4.20	3.00	3.57	
24	Lamb, W.	Wagon	504						
25	Lynn Bros.	Wagon	67		4	3.80	3.50	3.75	
26	Lynn, Irwin	Wagon	463		2	4.00	3.20	3.60	
27	Mahoney, W.	Wagon	400	526	3	5.00	3.40	4.00	
28	McNamara, R. E.	Wagon	302	372	15	4.00	3.40	3.76	
29	Miller, W. E.	Wagon	442		4	4.50	3.00	3.65	
30	Morgan, C. H.	Depot	30	209	16	4.20	3.20	3.80	
31	Moultin, W. H.	Wagon	591	378	18	4.40	3.20	3.80	
32	Newguard, A.	Wagon	307	381	12	4.00	3.20	3.65	
33	Olson, F. & Son	Wagon	188	208	19	4.00	3.00	3.67	
34	Olson, Eric	Wagon	554	232	1	3.90	3.00	3.00	
35	Perruso & Gambreno	Store	319	321	9	4.20	3.00	3.61	
36	PfoId, L.	Wagon	121	207	19	4.00	3.40	3.68	

SIOUX CITY—CONTINUED.

Number.	NAME.	Manner of selling milk.	Permit number—1908.	Permit number—1906.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
37	Ray, W. D.	Wagon	443	498	8	4.20	3.00	3.55	
38	Reise, C. B.	Wagon	457	142	7	3.80	3.20	3.64	
39	Reynolds, C. C.	Wagon		91	2	4.40	3.00	3.74	
40	Robinson, C. M.	Wagon	346	56	17	4.80	4.00	4.28	
41	Rowe, N. J.	Wagon	405	536	9	4.10	3.00	3.76	
42	Scheiker, W. O.	Wagon	401		4	4.00	3.80	3.90	
43	Sellan, J. J.	Store	367		1	3.00	3.50	3.50	
44	Severson, S. A.	Wagon	533	570	8	4.00	3.10	3.43	
45	Severson, S. A.	Wagon	397	330	17	4.00	3.60	3.43	
46	Sherman, E. D.	Depot	354	240	11	4.00	3.00	3.54	
47	Smithers, T. H.	Wagon	406		6	5.00	3.40	4.23	
48	Sorenson, O.	Wagon	560	384	16	4.20	3.00	3.73	
49	Springer, C. P.	Wagon	502	143					
50	Storror, A. W.	Wagon No. 1	14	60	9	4.20	3.20	3.80	
51	Storror, A. W.	Wagon No. 2	15	61	8	4.20	3.40	3.75	
52	Stutcliffe, Jas.	Wagon	167						
53	Talbot, T. H.	Wagon	349	395	5	4.00	3.00	3.56	
54	Treadwell, T. P.	Wagon	62	360	9	4.40	2.00	3.68	
55	Upton, J. L.	Wagon	164	144	7	4.00	3.40	3.60	
56	Vigars, John	Wagon	606	323	3	4.00	3.00	3.67	
57	Washington, A. L.	Wagon	395	931	12	4.40	3.00	3.71	
58	Wells, C.	Wagon	523						
59	Wellman, G.	Wagon	438	379					
60	Wilcox, D. O.	Wagon	361	65	20	4.80	3.50	3.67	
61	Woodcock, A. C.	Wagon No. 1	5	29	13	3.00	3.40	3.26	
62	Woodcock, A. C.	Wagon No. 2	6		8	4.20	3.60	3.90	
63	Woodcock, A. C.	Wagon No. 3	7		3	4.00	3.60	3.83	
	Total				600	4.10	3.41	3.58	

In order to compare the number of tests, and the tests by months, during the past four years, the following table has been prepared. The end of each fiscal year designated, is October 31st:

BURLINGTON.

MONTHS.	1903.		1904.		1905.		1906.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	10	4.04	24	3.81	41	3.65	56	3.43
December.....	48	3.81	61	3.95	85	3.63	71	3.64
January.....	22	3.37	35	3.79	38	3.70	20	3.78
February.....	69	3.30	49	3.74	59	3.75	44	3.40
March.....	52	3.61	57	4.05	47	3.68	49	4.09
April.....	42	3.70	33	3.53	37	3.74	9	3.74
May.....	53	3.90	47	3.76	57	3.43	42	3.50
June.....	51	3.97	.....	.....	23	2.84	37	3.91
July.....	27	3.97	38	3.61	56	3.74	24	3.94
August.....	23	4.07	42	3.78	.....	.....	31	4.05
September.....	45	3.41	33	3.74	31	3.53	20	4.15
October.....	42	3.23	34	3.22	26	4.20	37	4.30
Total and average.....	527	3.73	444	3.73	456	3.73	622	3.84

CEDAR RAPIDS.

November.....	66	3.74	17	4.04	25	3.94	31	4.09
December.....	71	3.91	43	4.12	.....	.....	12	4.00
January.....	15	3.94	14	3.94	39	3.77	.....	.....
February.....	.....	.....	59	3.98	19	4.05	34	3.98
March.....	39	3.78	16	4.18	33	3.86	18	4.12
April.....	19	3.98	30	4.03	.....	.....	45	4.07
May.....	60	3.50	.....	.....	.....	.....	.....	.....
June.....	65	3.60	37	3.84	29	3.61	43	4.03
July.....	25	3.73	86	3.90	102	3.83	20	4.25
August.....	24	3.78	33	3.95	.....	.....	29	4.30
September.....	45	3.92	.....	.....	.....	.....	49	4.31
October.....	31	4.08	49	4.04	41	4.18	68	4.24
Total and average.....	480	3.78	281	4.00	281	3.88	390	4.19

CLINTON.

MONTHS.	1903.		1904.		1905.		1906.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	14	4.14	47	4.04	.....	.....	30	4.20
December.....	.....	.....	29	4.17	29	4.01	38	4.19
January.....	.....	.....	29	3.94	21	3.58	32	3.85
February.....	.....	.....	56	3.85	30	4.37	32	3.64
March.....	.....	.....	44	3.73	24	3.31	23	3.80
April.....	37	3.67	.....	.....	21	3.69	25	3.79
May.....	43	3.50	13	3.53	23	3.61	21	3.34
June.....	43	3.38	.....	.....	14	3.39	21	3.34
July.....	27	4.51	30	4.42	51	3.97	34	3.50
August.....	22	3.61	35	3.57	37	3.54	69	3.70
September.....	29	3.85	20	4.29	33	3.37	32	3.80
October.....	23	3.94	.....	.....	31	3.75	35	4.04
Total and average.....	323	3.71	271	3.88	309	3.71	423	3.77

COUNCIL BLUFFS.

November.....	14	3.52	26	3.82	13	3.69	39	3.82
December.....	22	3.54	40	3.90	49	3.61	34	3.90
January.....	40	3.44	38	3.87	38	3.54	35	3.80
February.....	43	3.41	12	3.72	22	3.52	55	3.60
March.....	58	3.40	38	3.68	64	3.50	71	3.67
April.....	75	3.32	14	3.67	67	3.50	81	3.84
May.....	49	3.49	14	3.20	61	3.53	57	3.60
June.....	50	3.30	.....	.....	32	3.54	80	3.74
July.....	40	3.45	15	3.67	72	3.74	39	3.74
August.....	13	3.90	61	3.62	34	3.43	39	3.80
September.....	31	3.43	15	3.73	23	3.77	31	3.91
October.....	37	3.65	47	3.60	22	3.90	51	3.93
Total and average.....	492	3.53	302	3.65	606	3.64	593	3.83

DAVENPORT.

November.....	41	3.64	40	3.64	35	3.81	35	3.79
December.....	26	3.92	38	3.64	14	3.25	40	3.94
January.....	.....	.....	23	3.33	14	3.68	45	3.84
February.....	26	3.91	23	3.87	29	3.96	30	3.96

DAVENPORT—CONTINUED.

MONTHS.	1893.		1894.		1895.		1896.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
March.....	47	3.95	15	3.95	40	3.76	49	3.90
April.....	14	3.61	43	3.46	36	3.62	35	3.84
May.....	69	3.61	14	3.75	30	3.62	60	3.70
June.....	70	3.45	.....	.....	35	3.66	48	3.75
July.....	37	3.66	18	3.32	107	3.60	91	3.73
August.....	48	3.32	49	3.99	.....	.....	80	3.54
September.....	49	3.51	42	3.97	31	3.76	70	3.72
October.....	30	3.87	30	3.65	34	3.73	72	3.71
Total and average.....	501	3.65	337	3.66	394	3.58	522	3.77

DES MOINES.

November.....	14	4.03	24	3.43	53	3.60	70	4.09
December.....	10	3.80	18	3.81	72	3.55	80	4.04
January.....	57	3.86	85	3.97	60	3.90	78	4.00
February.....	36	3.50	44	3.72	76	3.67	84	3.80
March.....	27	3.44	21	3.73	30	3.56	14	3.70
April.....	56	3.50	75	3.53	89	3.90	116	3.70
May.....	190	3.32	48	4.12	118	3.78	36	3.80
June.....	91	3.69	66	3.90	91	3.66	90	4.34
July.....	64	3.66	68	4.21	118	3.70	103	3.82
August.....	31	3.61	69	4.21	80	3.71	117	3.96
September.....	73	3.56	72	4.20	81	3.84	112	4.10
October.....	.....	.....	63	3.49	92	3.73	131	4.04
Total and average.....	545	3.37	655	3.81	1,029	3.70	1,064	3.96

DUBUQUE.

November.....	18	3.35	31	3.65	15	3.69	44	4.18
December.....	20	3.34	50	3.72	23	3.83	47	4.15
January.....	30	3.38	45	3.40	20	4.14	46	3.95
February.....	12	3.43	10	3.94	23	3.30	45	4.10
March.....	56	3.42	43	3.33	47	3.71	47	4.03
April.....	24	3.53	20	3.28	48	4.02	48	4.08
May.....	31	3.26	37	3.34	46	4.25	46	3.93
June.....	15	3.09	22	3.35	47	3.93	47	3.90
July.....	39	3.35	21	3.05	23	4.09	45	4.13

DUBUQUE—CONTINUED.

MONTHS.	1893.		1894.		1895.		1896.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
August.....	41	3.50	19	3.73	26	3.96	46	4.29
September.....	56	3.55	22	3.71	48	3.94	47	4.03
October.....	74	3.87	27	3.87	24	3.95	31	4.07
Total and average.....	422	3.53	358	3.51	409	3.90	542	4.06

KEOKUK.

November.....	14	4.11	29	4.31	12	4.32	30	4.47
December.....	.....	.....	32	4.79	33	4.57	11	4.32
January.....	.....	.....	21	4.00	27	4.35	16	4.00
February.....	.....	.....	31	4.19	24	5.3	28	4.81
March.....	.....	.....	32	4.41	21	4.73	30	4.64
April.....	10	3.46	13	4.17	33	4.86	32	4.62
May.....	52	3.63	30	4.17	33	4.70	22	4.43
June.....	38	3.60	.....	.....	23	4.59	34	4.10
July.....	33	3.63	24	3.84	27	4.00	20	4.38
August.....	66	3.44	35	4.10	31	4.08	22	4.14
September.....	13	3.41	24	4.24	23	4.15	33	4.23
October.....	29	3.85	35	4.34	16	4.45	23	4.72
Total and average.....	245	3.53	297	4.32	316	4.41	299	4.40

MUSCATINE.

November.....	9	4.43	23	3.73	24	3.92	14	3.10
December.....	.....	.....	26	3.81	31	4.04	46	3.99
January.....	.....	.....	44	3.72	12	4.02	45	3.97
February.....	16	3.49	49	3.65	37	4.06	11	3.27
March.....	67	3.79	51	3.90	32	3.86	.....	.....
April.....	15	3.76	18	3.79	26	3.52	21	3.97
May.....	.....	.....	39	3.75	38	3.97	23	4.11
June.....	9	3.70	.....	.....	30	3.74	.....	.....
July.....	9	3.56	31	3.76	64	3.87	35	4.05
August.....	.....	.....	38	4.04	28	4.13	21	4.11
September.....	.....	.....	10	3.77	37	3.91	43	3.98
October.....	25	3.20	34	3.99	39	3.89	22	3.83
Total and average.....	381	3.69	360	3.80	435	3.91	315	3.96

OTTUMWA.

MONTH	1893.		1894.		1895.		1896.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	16	3.81	51	3.45	21	4.52	14	4.57
December.....					22	3.46	15	4.46
January.....			28	3.34	11	3.96	11	4.34
February.....			15	3.32	17	4.32	14	4.08
March.....	16	3.70	34	3.41	17	4.02	13	5.25
April.....	20	3.97	8	3.55	14	3.56	13	4.20
May.....	8	3.40			16	3.68	15	4.20
June.....	9	3.76	8	3.37	23	3.77	15	4.10
July.....			25	4.16	54	4.08	17	4.11
August.....					15	4.14	15	4.10
September.....			15	4.46	13	3.91	16	4.60
October.....	9	3.69	9	3.97	14	3.91	16	4.50
Total and average.....	78	3.87	193	3.67	237	3.95	174	4.28

SIOUX CITY.

November.....	37	3.97	38	3.52	27	3.81	51	3.61
December.....	28	3.50	23	3.67	28	3.70	52	3.80
January.....	37	3.65	34	3.54	27	3.76	45	3.98
February.....	23	3.53	35	3.61	35	3.73	44	3.90
March.....	37	3.75	33	3.77	40	3.64	41	4.19
April.....	23	3.72	24	3.62	41	3.44	39	3.70
May.....	39	3.37	30	3.67	43	3.63	40	3.76
June.....	35	3.83	24	3.53	38	3.65	40	3.70
July.....	22	3.64	19	3.59	111	3.86	39	3.64
August.....	12	3.88	19	3.76	43	3.73	35	3.60
September.....	25	3.53	29	3.73	39	3.50	31	3.58
October.....	15	3.49	28	3.88	20	3.61	40	3.49
Total and average.....	353	3.71	332	3.67	497	3.67	506	3.83

MARSHALLTOWN.

MONTH.	1896.	
	Number tests made.	Average test.
November.....	19	4.30
December.....	37	4.31
January.....	33	4.07
February.....	44	4.36
March.....	40	4.00
April.....	45	3.87
May.....	35	3.70
June.....	55	3.81
July.....	36	3.73
August.....	47	3.91
September.....	32	3.48
October.....	33	3.53
Total and average.....	456	3.95

FORT MADISON.

June.....	9	3.66
July.....	35	3.98
August.....	21	4.38
September.....	35	3.38
October.....	37	4.38
Total and average.....	137	4.13

For the whole report on the city milk test department we have gleaned the following results: For the city of Burlington 462 tests were made, with an average of 3.84. There were two tests below standard. For Cedar Rapids 350 tests were made, the average being 4.16. Clinton, 421 tests; average, 3.77. Council Bluffs, 593 tests; average, 3.83, with ten tests below standard. Davenport, 526 tests; average, 3.77. Des Moines, 1,064 tests; average, 3.96, with six tests below standard. Dubuque, 542 tests; average, 4.08. Keokuk, 289 tests; average, 4.40. Muscatine, 315 tests; average, 3.98. Ottumwa, 174 tests; average, 4.26. Sioux City, 506 tests; average, 3.88. Marshalltown, 456 tests; average, 3.95. Fort Madison, 187 tests; average 4.19, with two below standard. Total number of tests made, 5,871; average of all tests, 4.00; total number below standard, 20.

LIST OF IOWA CHEESE FACTORIES, NOVEMBER 1, 1896.

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

Office record number.	LOCATED AT OR NEAR.	NAME OF CHEESE FACTORY.	Operated by an individual, or partnership, 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 ton or by the day.	Dairy commissioner's test-locus number.
1	Appanoose County. Iconium.....	Iconium.....	Stk Co	H. A. Thompson, Sec.	Iconium.....	[Tyrone. Moravia and	N. Wycoff.....	Hd.	
2	Moravia.....	Star Cheese Co.....	Stk Co	Sam. Johnson, Sec.	Moravia.....	Moravia.....	Frank Selby.....	Hd.	
3	Moulton.....	Moulton.....	Ind.	A. Dickson.....	Moulton.....	Moulton.....	Proprietor.....	Hd.	
4	Ray.....	Ray Cheese Co.....	Stk Co	R. F. Main, Sec.	Ray.....	Main Station.	H. G. Broshar.....	Hd.	
5	Denton County. Newhall.....	Model.....	Ind.	G. M. Olmsted.....	[Linn Co. Cedar Rapids.	Newhall.....	J. H. Huyck.....	Hd.	
6	Rogerville.....	Excelsior.....	Ind.	R. E. Fairbanks.....	Rogerville.....	Garrison.....	Proprietor.....	Hd.	884
7	Black Hawk County. *Waterloo.....	Waterloo-North Star.....	Ind.	The Fowler Co.....	Waterloo.....	Waterloo.....	Charles Wood.....	Test.	
8	*Waterloo.....	Waterloo.....	Ind.	The Fowler Co.....	Waterloo.....	Waterloo.....	F. E. Wightman.....	Test.	
9	Bremer County. *Janessville.....	Janessville.....	Ind.	The Fowler Co.....	[Hawk Co. Waterloo, B'ck	Janessville.....	A. M. Hoyer.....	Test.	
10	Calhoun County. *Rockwell City.....	Rockwell City B. & C. Factory.....	Stk Co	T. C. Gregg, Sec.	Rockwell City.	Rockwell City.	T. E. Garity.....	Test.	
11	Cedar County. West Branch.....	West Branch-"Quaker".....	Ind.	L. H. Shaver Ch. Co.	[Linn Co. Cedar Rapids.	West Branch.	D. Van Patten.....	Test.	
12	Cerro Gordo County. Sheffield.....	Sandridge.....	Stk Co	D. O'Donnell, Sec.	Rockwell.....	Rockwell.....	Charles Gerber.....	Test.	
13	Burchinal.....	Burchinal.....	Ind.	Coates & Hoffman.	Burchinal.....	Burchinal.....	Lewis Hoffman.....	Hd.	
14	Clarke County. Weldon, Decatur Co. Woodburn.....	Weldon Cheese Factory..... Farmers' B. & C. Ass'n.....	Ind. Stk Co	Tallman & Parr..... H. P. Halling, Sec.	Weldon..... Woodburn.....	Weldon..... Woodburn.....	L. M. Parr..... H. W. Hasslinger.....	Test. Test.	677 716
16	Crawford County. Buck Grove.....	Thew's Cheese Factory.....	Ind.	S. M. Thew.....	Buck Grove.....	Buck Grove.....	Proprietor.....	Hd.	
17	Dallas County. Woodward.....	Woodward Creamery.....	Ind.	H. P. Colenky, Mgr.	Woodward.....	Woodward.....	Fred Colenky.....	Test.	304
18	Duple County. Drakeville.....	Drakeville Dairy Association.....	Stk Co	A. Foutz, Sec.	Drakeville.....	Drakeville.....			
19	Dickinson County. Spirit Lake.....	Spirit Lake B. & C. Factory.....	Ind.	Painter & Painter.	Spirit Lake.....	Spirit Lake.....	C. A. Painter.....	Test.	
20	Floyd County. Charles City.....	Elm Spring Cheese Factory.....	Ind.	H. D. White & Co.	Charles City.....	Charles City.....	H. D. White.....	Hd.	
21	Franklin County. Dows.....	Dows Factory.....	Ind.	A. A. Bangs.....	Dows.....	Dows.....	Josie Bangs.....	Hd.	
22	Greene County. Grand Junction.....	Grand Junction.....	Ind.	J. C. Harker.....	Grand Junction.....	Grand Junction.....		Test.	
23	Guthrie County. Jamaica.....	Jamaica Cheese Factory.....	Ind.	A. H. Chadsey.....	Jamaica.....	Jamaica.....	Proprietor.....	Hd.	
24	Grundy County. *Reinbeck.....	The Fowler Co.....	Ind.	The Fowler Co.....	[Hawk Co. Waterloo, B'ck	Reinbeck.....	G. A. Peace.....		
25	Hardin County. Hubbard.....	Cottage Factory.....	Ind.	S. C. Christopher.....	Cottage.....	Hubbard.....	W. Plumisight.....	Hd.	364
26	Iowa Falls.....	Ellis Cheese Manufacturing Co.....	Stk Co	W. I. Clark, Mgr.	Iowa Falls.....	Iowa Falls.....	W. I. Clark.....	Hd.	
27	Henry County. Mt. Pleasant.....	Pleasant Valley.....	Ind.	Neel Campbell.....	Mt. Pleasant.....	Mt. Pleasant.....	Proprietor.....	Hd.	
28	Howard County. Cresco.....	Cresco Cheese Co.....	Ind.	Kellow & House.....	Cresco.....	Cresco.....	J. J. House.....	Hd.	
29	Hubbald County. L. verne.....	D. Martyn's.....	Ind.	D. Martyn.....	Luverne.....	Luverne.....		Hd.	
30	Keokuk.....	Elmer Factory.....	Ind.	Conrad Elmer.....	Keokuk.....	Keokuk.....	Fred Fahrney.....	Hd.	

*Manufacture both butter and cheese.

LIST OF IOWA CHEESE FACTORIES—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CHEESE FACTORY.	Owned by an individual or operated as a stock company.	NAME OF PROPRIETOR OR MANAGER.	F. O. ADDRESS TO PROPRIETOR OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of receipt by the hundred.	Label design number.
21	Howard County	Fred Klause Factory	Ind.	Fred Klause	Bonwick, Ia. Co.	Bonwick	John Eschbater	Hd.	116
22	Bonwick	Pioneer Factory	Ind.	Sts. Gerber	Laverne, Kos.	Bonwick	Proprietor	Hd.	117
23	Bonwick	Spitch Factory	Ind.	Fred Spitch	Bonwick	Bonwick	B. Hoesley	Hd.	118
24	Ia. County	Arthur Factory	Ind.	M. J. Bissler	Arthur	Arthur	Proprietor	Hd.	119
25	Ladora County	Ladora Factory	Ind.	D. D. Case	Ladora	Ladora	Proprietor	Hd.	120
26	Johnson County	Frank Pierce B. & C. Co.	Ind.	Henry C. Kasinath	Frank Pierce	Kalona	Proprietor	Hd.	121
27	Iowa City	Sharon Cheese Factory	Co-op	F. M. Webster, Sec.	Iowa City	Iowa City	J. Grayo	Hd.	122
28	Mores	Sharrock Cheese Factory	Ind.	L. H. Shaver Ch. Co.	Cedar Rapids	Mores	F. S. Snyder	Hd.	123
29	Jones County	Mineral Valley Cheese Factory	Ind.	John Fagan	Onalwa	Onalwa	H. E. Willard	Hd.	124
30	Onalwa	Onalwa Cheese Factory	Ind.	S. L. Gilbert	Onalwa	Onalwa	Floyd Johnson	Test.	125
31	Keosauqua	Talleyrand	Stk. Co.	L. M. Tucker, Sec.	Talleyrand	Keosauqua	C. Tucker	Hd.	126
32	Webster	Webster Cheese Factory	Ind.	M. M. Wheeler, Sec.	Webster	Webster	H. C. Wheeler	Hd.	127
33	Laurens County	Denmark Factory	Ind.	T. G. Currie	F. Madison	F. Madison	Albert L. Lundy	Hd.	128
34	West Point	West Point Cheese Factory	Ind.	Page & Stolar	West Point	West Point	Henry Fogg	Hd.	129
35	Zion County	Gray Factory	Ind.	Edward C. Clark	Cedar Rapids	Cedar Rapids	W. H. Ouel	Hd.	130
36	Springville	Springville Factory	Ind.	Edward C. Clark	Cedar Rapids	Cedar Rapids	F. H. Hayek	Hd.	131
37	Liscomb County	Liscomb Butter and Cheese Co.	Co-op	G. E. Birstrom	Liscomb	Liscomb	G. E. Bier torn	Test.	132
38	Madison County	Lincoln	Ind.	E. T. Evans	Red Oak	Red Oak	Proprietor	Hd.	133
39	Monroe County	Bluff Creek Factory	Co-op	John Korstian, Sec.	Albia	Albia	George Marlin	Hd.	134
40	Albia	Bone Factory	Ind.	S. G. Bone	Albia	Albia	Proprietor	Hd.	135
41	Albia	Diamond Cheese Co.	Stk. Co.	Leroy Miller, Mgr.	Albia	Albia	Proprietors	Hd.	136
42	Albia	Enix & Smith	Ind.	Enix & Smith	Albia	Albia	May Chobson	Hd.	137
43	Albia	Goshen Cheese Factory	Ind.	Dan Goshen	Selection	Albia	Proprietor	Hd.	138
44	Albia	Hilton Factory	Ind.	Samuel Hinton	Albia	Albia	Proprietor	Hd.	139
45	Albia	Hollingshead	Ind.	J. Hollingshead	Albia	Albia	Proprietor	Hd.	140
46	Albia	Griffin Cheese Factory	Ind.	M. A. Griffin	Albia	Albia	Henry Pharis	Hd.	141
47	Albia	Pharis Cheese Factory	Ind.	Rovlen Bros.	Albia	Albia	Harlan Bowles	Hd.	142
48	Hilton	Hilton Factory	Ind.	Bowles Bros.	Albia	Albia	Proprietor	Hd.	143
49	Selection	Selection	Ind.	F. W. Oroush	Tyross	Tyross	E. E. Hoop	Hd.	144
50	Tyross	Mt. Carmel	Ind.		Tyross	Tyross	Proprietor	Hd.	145
51	Perry County	Northboro Cheese Factory	Ind.	W. H. Hatfield	Northboro	Northboro	Proprietor	Test.	146
52	Northboro	Northboro	Ind.	J. E. Stealy & Son	Grinnell	Grinnell	W. J. Stealy	Hd.	147
53	Grinnell County	Neely's	Co-op	J. E. Main, Sec.	Neely	Neely	L. C. Main	Hd.	148
54	Mt. Airy	Liberty Cheese Co.	Ind.	H. O. Wheeler	Odebolt	Odebolt	Philip W. Fair	Test.	149
55	Osborn	Wheeler Factory	Ind.	H. O. Wheeler	Osborn	Osborn	Fred Hillman	Test.	150
56	Osborn	Elms Grass Butter and Ch. Factory	Ind.	I. Hillman	Osborn	Osborn		Test.	151

LIST OF IOWA CHEESE FACTORIES—CONTINUED.

Office record number.	LOCATED AT OR NEAR	NAME OF CHEESE FACTORY.	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 CHEESE-MARKER.	Method of receiving milk by the milkman or the farmer.	Dairy commission bottle number.
66	Story County Ames	Iowa Agr. College Creamery		State of Iowa	Ames	Ames	G. L. McKay	Test	304
67	Taylor County Guss	Maple Grove	Ind.	I. Schoonover	Guss	Guss	Proprietor	Hd.	
68	Sharpsburg	Eastlack	Ind.	F. M. Eastlack	Sharpsburg	Conway	Proprietor	Hd.	
69	Washington County Dublin	Dublin Cheese Factory	Co-op.	C. E. Lemley, Sec.	Dublin	West Chester	M. L. Donner	Hd.	
70	Wayne County Olio	Olio Co-operative	Stk Co	D. M. Brunner	Olio	Olio	R. E. Spencer	Test	
71	Corydon	Corydon Cheese Factory	Ind.	Cress & White	Corydon	Corydon	Clark White	Hd.	81
72	Lineville	Lineville Cheese Factory	Ind.	Mathew De Haan	Lineville	Lineville	Proprietor	Hd.	
73	Winnesho County Forest City	Holland Factory	Stk Co	S. O. Holland, Sec.	Forest City	Forest City	Fred Schuler	Hd.	

TABLE No. XVIII
CHEESE FACTORY LIST BY COUNTIES.

Showing total number of cheese factories, how, and number of months operated, during year ending May 1, 1896. Also number persons employed, number of patrons, and number of cows, together with average for each county.

COUNTY.	TOTAL NUMBER OF CHEESE FACTORIES, SHOWING NUMBER INDIVIDUAL, CO-OPERATIVE, AND STOCK COMPANIES.				TOTAL NUMBER RECEIVING MILK BY THE TRUCK OR BUS.		NUMBER OPERATED ENTER YEAR; NUMBER LESS THAN A YEAR; AVERAGE NUMBER OF MONTHS.		TOTAL NUMBER PERSONS EMPLOYED IN FACTORIES.				NUMBER OF PATRONS FOR MILK.		NUMBER OF COWS PRODUCING MILK DELIVERED TO FACTORIES, WITH AVERAGE NUMBER OF COWS FOR EACH FACTORY.		NUMBER OF FACTORIES BUILT AND REMODELED IN 1896.		
	Total number.	Number factories reported.	Individual.	Co-operative.	Stock company.	Number factories reported.	By truck.	By bus.	Number factories reported.	Number factories reported.	Average No. of months.	Number factories reported.	Number factories reported.	Number factories reported.	Number of cows.	Average number per factory.	Number factories.	Number factories.	
The state	71	59	46	4	9	55	15	40	11	10	6	2	6	2	6	2	6	2	6
Appanoose	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Benton	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Black Hawk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bremer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Calhoun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cedar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cerro Gordo	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Clarke	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Crawford	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dallas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dickinson	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Floyd	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Franklin	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Green	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Grundy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Guthrie	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hardin	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Haris	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Henry	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Howard	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

FINANCIAL STATEMENT.

FROM NOVEMBER 1, 1896, TO NOVEMBER 1, 1896.

Funds available November 1, 1896.....		\$ 2,992 39	
Amount appropriated by the Twenty-sixth General Assembly.....			11,000 00
Commissioner's salary account.....	\$ 1,500.00		
Commissioner's contingent expense account.....	367.98		
Clerk's salary account.....	900.00		
Stationery and printing.....	171.39		
Office supplies.....	13.25		
Envelopes and postage.....	270.35		
Laboratory supplies.....	111.87		
Telegraph and telephone.....	12.22		
Express and freight account.....	27.99		
Special analyses and examination.....	132.10		
Milk agents' fees.....	1,446.00		
Milk agents' special work.....	76.85		
Extra office help.....	69.12		
Legal counsel and transcript.....	15.50		
Balance unexpended November 1, 1896.....	8,888.97		
Total.....	\$ 13,992.39	\$ 13,992.39	
RECAPITULATION.			
Total funds available.....		\$ 13,992 39	
Total expenditures from November 1, 1896, to November 1, 1896.....	\$ 5,185.42		
Balance appropriations unexpended November 1, 1896.....	8,888.97		
Total.....	\$ 13,992 39	\$ 13,992 39	
Collected for 566 permits issued to city milk dealers for year ending July 4, 1896.....	\$ 566.00		
Remitted to state treasurer for 551 permits.....		\$ 566 00	
Total.....	\$ 566 00	\$ 566 00	

IOWA STATE DAIRY LAWS.

MILK LAW.

CHAPTER 50, LAWS TWENTY-FOURTH GENERAL ASSEMBLY.

AN ACT to repeal section 4042 of the code of 1873 and provide a substitute therefor, and to enlarge the duties and powers of the state dairy commissioner, and to provide an appropriation therefor.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. IMPURE MILK—PENALTY FOR VIOLATION.—That section 4042 of the code of 1873 is hereby repealed and the following is enacted in lieu thereof: If any person or corporation shall sell or exchange, or expose for sale or exchange, deliver or bring to another for domestic use, or to be converted into any product of human food whatsoever, any unclean, impure, unhealthy, adulterated, unwholesome, or skimmed milk, or milk from which has been held back what is commonly known as strappings, or milk taken from an animal having disease, sickness, ulcers, abscesses or running sore, or was taken from an animal fifteen days before or less than five days after parturition, shall upon conviction thereof be fined not less than twenty-five dollars (\$25) nor more than one hundred dollars (\$100), and be liable in double the amount of damages to the person or persons upon whom such fraud shall be committed. *Provided*, that the provisions of this act shall not apply to skimmed milk when sold as such.

SEC. 2. SKIMMED MILK DEPINED.—For the purposes of this act milk which is proved by any reliable method of test or analysis, to contain less than three pounds of butter fat to the one hundred pounds of milk, shall be regarded as skimmed or partially skimmed milk.

SEC. 3. ENFORCEMENT.—It is hereby made the duty of the dairy commissioner to enforce the provisions of the foregoing sections.

SEC. 4. MILK AGENTS' COMPENSATION.—The state dairy commissioner is hereby authorized to appoint agents in every city having over ten thousand inhabitants, in the state of Iowa, who are to collect the samples of milk as sold in such cities, and it shall be their duty to forward such samples to the office of the commissioner in Des Moines in such manner as he shall direct. The compensation of such agents at any one time shall not be more than three dollars (\$3) for collecting and delivering the same to the express companies.

SEC. 5. NUMBER OF COLLECTIONS.—The number of times samples are collected in each city of more than ten thousand inhabitants shall not exceed an average of thirty times during any one year.

SEC. 6. **CLERKS' HIRE INCREASED.**—The state dairy commissioner, if it shall be found necessary, may increase the clerk hire of his office twenty-five dollars (\$25) per month.

SEC. 7. **MILK DEALERS' PERMIT—PENALTY FOR VIOLATION.**—Every milk dealer who runs a milk wagon, milk depot, or sells milk from a store, in the cities that have over ten thousand inhabitants, in the state of Iowa, shall obtain a permit from the state dairy commissioner's office, for which he shall pay the sum of one dollar (\$1) annually. The commissioner shall keep a book in which shall be registered the name, location and number of each dealer in milk, and a record of each analysis. Whoever violates the provisions of this section, upon conviction thereof, shall be fined not less than ten dollars (\$10) nor more than twenty-five dollars (\$25).

SEC. 8. **POWER TO TAKE AND INSPECT.**—The dairy commissioner or his agents shall have power and authority to open any can or vessel containing milk which is offered for sale, and may inspect the contents thereof and may take therefrom samples of milk for analysis.

SEC. 9. **APPROPRIATION.**—That there is hereby appropriated out of any money in the state treasury, not otherwise appropriated, the sum of twenty-five hundred dollars, or so much as may be necessary for the purpose of carrying out the provisions of this act.

Approved April 8, 1892.

CHAPTER 46, LAWS TWENTY-FIFTH GENERAL ASSEMBLY.

A LAW prohibiting the manufacture, sale and use of any imitation butter and cheese, and regulating the manufacture, sale and use of substitutes for butter and cheese not having a yellow color.

AN ACT to repeal sections 1, 2, 3, 4, 5, 8, 10 and 15 of chapter 52 of the acts of the Twenty-first General Assembly, and to repeal section 6 of chapter 52 of the acts of the Twenty-first General Assembly as amended by senate file No. 51 of the Twenty-fifth General Assembly, and approved February 12, 1894, and to enact substitutes therefor; to prohibit the manufacture, sale, keeping for sale and fraudulent use of substances designed as imitation butter and cheese, and to regulate the manufacture, sale and keeping for sale of any substance designed to be used as a substitute for butter and cheese.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. **LAWS REPEALED.**—That sections 1, 2, 3, 4, 5, 8, 10 and 15 of chapter 52 of the acts of the Twenty-first General Assembly, and section 6 of chapter 52 of the acts of the Twenty-first General Assembly as amended by senate file No. 51 of the Twenty-fifth General Assembly, and approved February 12, 1894, are hereby repealed and the following enacted in lieu thereof.

SEC. 2. **DEFINING IMITATION BUTTER AND CHEESE.**—That for the purpose of this act every article, substitute or compound, other than that produced from pure milk or cream from the same, made in the semblance of butter and designed to be used as a substitute for butter made from pure milk or cream from the same, is hereby declared to be imitation butter; and that for the purpose of this act every article, substance or compound other than that produced from pure milk or cream from the same, made in

the semblance of cheese and designated to be used as a substitute for cheese made from pure milk or cream from the same, is hereby declared to be imitation cheese; provided, that the use of salt, rennet and harmless coloring matter for coloring the product of pure milk or cream shall not be construed to render such product an imitation.

SEC. 3. **PROHIBITING THE COLORING YELLOW OF SUBSTITUTES FOR BUTTER OR CHEESE.**—No person shall coat, powder or color with annatto or any coloring matter whatever, any substance designed as a substitute for butter or cheese, whereby such substitute or product so colored or compounded shall be made to resemble butter or cheese, the product of the dairy.

No person shall combine any animal fat or vegetable oil or other substance with butter or cheese, or combine therewith or with animal fat or vegetable oil or combination of the two or with either one or with any substance or substances whatever, any annatto or compound of the same, or any other substance or substances, for the purpose or with the effect of imparting thereto a yellow color or any shade of yellow, so that such substitute shall resemble yellow or any shade of genuine yellow butter or cheese, nor introduce any such coloring matter or such substance or substances into any of the articles of which the same is composed. *Provided*, nothing in this act shall be construed to prohibit the use of salt, rennet and harmless coloring matter for coloring the products of pure milk or cream from the same.

No person shall by himself, his agent or employe, produce or manufacture any substance in imitation or semblance of natural butter or cheese, nor sell, nor keep for sale, nor offer for sale, any imitation butter or cheese made or manufactured, compounded or produced in violation of this section, whether such imitation butter or cheese shall be made or produced in this state or elsewhere.

This section shall not be construed to prohibit the manufacture and sale, under the regulations hereinafter provided of substances designed to be used as a substitute for butter or cheese and not manufactured or colored as herein prohibited.

SEC. 4. **LAWFUL SUBSTITUTES—HOW MARKED.**—Every person who lawfully manufactures any substance designed to be used as a substitute for butter or cheese shall mark by branding, stamping or stenciling upon the top and side of each tub, firkin, box, or other package in which such article shall be kept and in which it shall be removed from the place where it is produced, in a clean and durable manner in the English language, the words, "substitute for butter" or "substitute for cheese," as the case may be, in printed letters, in plain Roman type, each of which shall not be less than one inch in length by one-half inch in width.

SEC. 5. **SHIPPING.**—No person, by himself or another, shall ship, consign or forward by any common carrier, whether public or private, any substance designed to be used as a substitute for butter or cheese, and no carrier shall knowingly receive the same for the purpose of forwarding or transporting unless it shall be manufactured and marked as provided in the preceding sections of this act, and unless it be consigned by the carrier and receipted for by its true name; *provided*, that this act shall not apply to any goods in transit between foreign states across the state of Iowa.

SEC. 6. HAVING IN POSSESSION.—No person shall have in his possession or under his control, any substance designed to be used as a substitute for butter and cheese unless the tub, firkin, box, or other package containing the same be clearly and durably marked as provided by section 4 of this act; *provided*, that this section shall not be deemed to apply to persons who have the same in their possession for the actual consumption of themselves or family.

Every person having in possession or control of any substance designed to be used as a substitute for butter or cheese which is not marked as required by the provisions of this act, shall be presumed to have known during the time of such possession or control the true character and name, as fixed by this act, of such product.

SEC. 7. SELLING.—No person by himself, or another, shall sell, or offer for sale, any substance designed to be used for a substitute for butter or cheese under the name of, or under the pretense that the same is butter or cheese; and no person, by himself or another, shall sell any substance designed to be used as a substitute for butter or cheese, unless he shall inform the purchaser distinctly at the time of the sale that the same is a substitute for butter or cheese, as the case may be, and shall deliver to the purchaser at the time of the sale a statement clearly printed in the English language, which shall refer to the article sold, and which shall contain in prominent and plain Roman type a statement that the substance so sold is a substitute for butter or cheese, as the case may be, and such statement shall also give the name and place of business of the maker.

SEC. 8. HOTELS; EATING HOUSES; PLACARD—PENALTY FOR VIOLATION.—No keeper or proprietor of any bakery, hotel, boarding house, restaurant, saloon, lunch counter, or place of public entertainment, or any person having charge thereof or employed thereat, or any person furnishing board for others than members of his own family, or for any employes where such board is furnished for a compensation or as a part of the compensation of any such employe, shall keep, use, or serve therein either as food for his guests, boarders, patrons, customers or employes, or for cooking purposes, any imitation butter or cheese as defined in section 2 of this act, and in using or serving any substance designed as a substitute for butter or cheese as herein defined, he or they shall display and keep posted a card opposite each table in a conspicuous place where the same may be easily seen and read in the dining room, lunch room, restaurant, bakery, hotel, boarding house, saloon, or place of public entertainment, and place where such substance designed as a substitute is sold, used, or disposed of, which card shall be white and in size not less than ten by fourteen inches; upon which shall be printed in plain black Roman letters not less in size than one inch in length and one-half inch in width the words, "substitute for butter used here," or "substitute for cheese used here," as the case may be, and said cards shall not contain any other words than the ones above prescribed. Any person or persons violating the provisions of this section shall, upon conviction thereof, be punished by a fine of not less than twenty-five dollars, nor over one hundred dollars, or by imprisonment in the county jail for not over thirty days.

SEC. 9. PENALTY FOR VIOLATION.—Whoever shall violate any of the provisions of sections 3, 4, 5, 6 or 7 of this act shall, for the first offense, be punished by a fine not less than fifty dollars, nor more than one hundred

dollars, or by imprisonment not exceeding thirty days; and for each subsequent offense, by a fine of not less than two hundred and fifty dollars nor more than five hundred dollars, or by imprisonment in the county jail not less than thirty days nor more than six months, or by both fine and imprisonment, in the discretion of the court.

SEC. 10. POSSESSION CONSTRUED; SEIZURES.—Whoever shall have possession or control of any imitation butter or imitation cheese, or any substance designed to be used as a substitute for butter or cheese contrary to the provisions of this act, shall be construed to have possession of property with intent to use it as a means of committing a public offense within the meaning of chapter 50, of title 25, of the code; *provided*, that it shall be the duty of the officer who serves a search warrant issued for imitation butter or imitation cheese, or any substance designed to be used as a substitute for butter or cheese, to deliver to the state dairy commissioner, or to any person by such commissioner 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 to return to the person from whom it was taken, the remainder of each article seized as aforesaid. If any sample be found to be imitation butter or imitation cheese, or substance designed to be used as a substitute for butter or cheese, it shall be returned to and retained by the magistrate as and for the purpose contemplated by section 4648 of the code, but if any sample be found not to be imitation butter or imitation cheese, or a substance designed to be used as a substitute for butter or cheese, it shall be returned forthwith to the person from whom it was taken.

Approved April 24, 1894.

UNREPEALED SECTIONS OF CHAPTER 52, LAWS TWENTY-FIRST GENERAL ASSEMBLY.

SECTION 7. NO ACTION ON CONTRACT.—No action can be maintained on account of any sale or other contract made in violation of or with intent to violate this act by or through any person who was knowingly a party to such wrongful sale or other contract.

SEC. 9. DEFAACING OR REMOVING MARKS.—Whoever shall deface, erase, cancel or remove any mark provided for by this act with intent to mislead, deceive, or to violate any of the provisions of this act shall be deemed guilty of a misdemeanor.

SEC. 11. APPOINTMENT OF DAIRY COMMISSIONER.—The governor shall on or before the first day of April of each even-numbered year appoint an officer who shall be known as the Iowa state dairy commissioner, who shall have practical experience in the manufacture of dairy products, and who shall hold his office for the term of two years from the first day of May following his appointment, or until his successor is appointed and qualified. Said commissioner shall give an official bond conditioned for the faithful performance of the duties of his office in the sum of ten thousand dollars, with sureties to be approved by the governor. He may be removed from office by the governor, with the approval of the executive council, for neglect or violation of duty. Any vacancy shall be filled by the appointment of the governor by and with the advice and consent of the executive council.

SEC. 12. SALARY; OFFICE; CLERK.—The state dairy commissioner shall receive a salary of fifteen hundred dollars per annum, payable monthly, and the expenses necessarily incurred in the proper discharge of the duties of his office; *provided*, that a complete itemized statement of all expenses shall be kept by the commissioner, and by him filed with the auditor of state after having been duly verified by him before receiving the same. He shall be furnished a room in the agricultural department of the capitol at Des Moines, in which he shall keep his office and all correspondence, documents, records and property of the state pertaining thereto, all of which shall be turned over to his successor in office. He may, if it is found to be necessary, employ a clerk, whose salary shall not exceed the sum of fifty dollars per month. Said salaries and expenses to be paid from the appropriation provided for in section 17 of this act. The commissioner provided for by this act shall hold no other official position under the laws of Iowa or a professorship in any of the state institutions.

SEC. 13. DUTIES; REPORTS.—It shall be the duty of the state dairy commissioner to secure, so far as possible, the enforcement of this act. He shall collect, arrange and present in annual reports to the governor, on or before the first day of November of each year, a detailed statement of all matters relating to the purposes of this act which he shall deem of public importance, including the receipts and disbursements of this office. Such report shall be published with the report of the state agricultural society.

SEC. 14. SECURING EVIDENCE.—The state dairy commissioner shall have power in all cases where he shall deem it important for the discharge of the duties of his office, to administer oaths, to issue subpoenas for witnesses and to examine them under oath, and to enforce their attendance to the same extent and in the same manner as a justice of the peace may now do, and such witnesses shall be paid by the commissioner the same fees now allowed witnesses in justices' courts.

SEC. 15. PROSECUTION; COST.—It shall be the duty of the court in each action for the violation of this act to tax as cost in the cause the actual and necessary expense of analyzing the alleged imitation butter or imitation cheese which shall be in controversy in such proceedings, provided that the amounts so taxed shall not exceed the sum of twenty-five dollars. It shall be the duty of the district or county attorney, upon the application of the dairy commissioner, to attend to the prosecution in the name of the state of any suit brought for violation of any of the provisions of this act within his district, and in case of conviction he shall receive twenty-five per cent of the fines collected, which shall be in addition to any salary he may receive, to be taxed as costs in the case.

SEC. 17. APPROPRIATION.—That the unexpended portion of the appropriation provided for by section 17 of the 52d chapter of the acts of the Twenty-first General Assembly, is hereby appropriated for the next biennial period, or so much thereof as may be necessary for the proper carrying out of the purpose of the act; but not more than one-half of said unexpended balance shall be drawn from the state treasury prior to the first day of May, 1889. The amount hereby appropriated shall be expended only under the direction and with the approval of the executive council. And all salaries, fees, costs and expenses of every kind incurred in the carrying out of this law shall be drawn from the sum so appropriated.

SEC. 18. Chapter 39 of the acts of the Eighteenth General Assembly of Iowa, and all acts and parts of acts in conflict with this act, are hereby repealed.

SEC. 19. This act being deemed of immediate importance shall take effect and be in force from and after its publication in the Iowa State Register and Iowa Homestead, newspapers published in Des Moines, Iowa.

Approved March 27, 1888.

Amendments approved March 28, 1888.

MILK TESTING LAW.

CHAPTER 47, LAWS TWENTY-FIFTH GENERAL ASSEMBLY.

AN ACT regulating the testing of milk.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. ACCURATE TESTS; PROCURE TEST BOTTLES; BURDEN OF PROOF; PENALTY FOR VIOLATION.—Any person by himself or agents, servants or employes, or any corporation, its agents, servants or employes who shall operate a creamery, cheese factory, or condensed milk factory in this state, and who shall use a chemical milk test for the purpose of determining the quantity of butter fat in milk purchased or received from the patrons of such creamery, cheese factory or condensed milk factory, is hereby required to use reliable and accurate tests, and no such tests shall be considered reliable and accurate, unless the same shall be clear oil and free from any foreign substance, and produce such measurements of butter fat as would result from the use of a standard Babcock milk tester. And every such person or corporation so engaged, and who shall use a chemical milk test, as aforesaid, is hereby required to procure from the state dairy commissioner's office one standard tube or bottle for testing milk, which shall be certified and marked, as provided in section 2 hereof, and which said test tube or bottle, so certified and marked as aforesaid, shall be kept for the inspection of such patrons and for the purpose of verifying the tests so used by such person or corporation.

And in any case of action in any court, arising between such person, corporation or factory and a patron thereof, the burden of proving such milk test to be reliable and accurate shall be upon such person, corporation or factory, and he shall show or establish that the test by him made, and the results therefrom, correspond with or are equivalent to the measurement of the butter fat which would result from the use of the standard Babcock milk tester.

Any person operating such creamery or factory, as aforesaid, or any agent, servant or employe of such person, or of any such corporation so engaged who shall violate the provisions of this section, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than \$50, nor more than \$100, or by imprisonment in the county jail not more than thirty days.

SEC. 2. DUTIES OF DAIRY COMMISSIONER—It is hereby made the duty of the state dairy commissioner to keep on hand a supply of standard Babcock test tubes or bottles for testing milk, and he shall furnish to any person or corporation desiring the same, one such tube or bottle, and upon request shall certify the same to be accurate, reliable and standard, and shall place thereon the letters "D. C." as a permanent mark thereon, such tube or bottle so furnished to be at the actual cost thereof.

SEC. 3. This act being deemed of immediate importance shall take effect and be in force from and after its publication in the *Iowa State Register* and *Des Moines Leader*, newspapers published in Des Moines, Iowa.

Approved April 24, 1894.

REGULATIONS OF THE IOWA STATE BOARD OF HEALTH.

RELATIVE TO DISEASES IN FAMILIES—OR HOMES OF, OR DEALERS IN MILK, CREAM, BUTTER, OR CHEESE.

From revised edition for 1896:

When Asiatic cholera, small-pox, diphtheria (membranous croup), scarlet fever (scarlatina, scarlet rash), leprosy, yellow fever, typhus fever, measles, or any other contagious disease exists in any house or dwelling place of a dealer in or seller of milk, he shall discontinue and cease to give, or sell, or distribute milk to any person, or to creameries or butter factories, or in anywise handle such milk, until a permit is granted therefor by the mayor (or clerk), countersigned by the health officer. And no person who attends cows, and the milking, or who has the care of milk vessels or the sale or distribution of milk, shall be permitted to enter any premises or place wherein exists any of the diseases named herein, nor have any communication, direct or indirect, with any person who resides in, or is an occupant of such infected place; nor shall any milk or butter be given away, sold or distributed from such infected place.

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