

ELEVENTH ANNUAL REPORT

OF THE

STATE DAIRY COMMISSIONER

TO THE

GOVERNOR OF THE STATE OF IOWA.

FOR THE YEAR 1897.

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W. K. BOARDMAN,  
State Dairy Commissioner.

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LETTER OF TRANSMITTAL.

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

SIR—In compliance with law, I have the honor to submit herewith the Eleventh Annual Report of the Department of State Dairy Commissioner for the year ending October 31, 1897.

Very respectfully,

W. K. BOARDMAN,  
*Dairy Commissioner.*

## REPORT.

### OLEOMARGARINE.

The introduction and development in this country, of an artificial substitute for pure butter, manufactured in imitation and in the semblance of butter, now designated by the United States government as oleomargarine, was the most important and direct factor in the establishment of the Department of Dairy Commissioner in Iowa, therefore it would seem that we are under some obligation to the very enemies whom we have fought so hard for the benefits—other than those realized from correcting the evil caused by the traffic in these imitations—that have resulted from the establishment of this department.

The dairy department was originally established to guard and assist in the enforcement of all laws aiming at the regulation and control of the manufacture, sale, and use of substitutes for butter, to the end that our dairy interests might thrive and maintain their rightful positions in the development of the resources of our state, and further to protect the citizen from rank deception that was being perpetrated. The accomplishment of these objects has required a long and difficult warfare, necessitating from time to time the amending of old, or the enactment of new laws, when more radical means were demanded to protect the dairy interests of our state from heavy loss and ultimate ruin. It is not surprising that the founders of the original oleomargarine law of this state, which also contains the provision establishing the dairy department, did not foresee the weakness of the enactment, and with what ease fraud and deception, undiscovered, could be carried on under its provisions. The lawmakers of all other states that undertook, early in the conflict, to regulate and control this traffic,



fell into the same error; namely, by the use of brands and marks to compel the imitation to be sold and used for what it really was, and not for a genuine article; or, in other words, to protect the genuine from competition with fraud, and the consumer from deception. Not until the provisions now upon our statutes, known as the Anti-color law, were enacted, could the advancement of these frauds be checked for any permanent length of time. Suppressed for a time in one locality, it would only seem to stimulate new efforts to establish them elsewhere. The law known as the Anti-color law became operative July 4, 1894. The wisdom of this legislation was apparent the very day the law became effective, and has demonstrated, not only to the citizens of Iowa, but to those of all other sections of our country, the effectiveness of proper laws when rigidly enforced. It is with no little satisfaction that other states have followed the example of Iowa and enact laws containing the very provisions that have been of so much value in the suppression of this illegitimate traffic. The few states now without effective laws should avoid those enactments that, on paper, seem to suit the needs, but have proven, wherever enacted, to be of no value whatever, and should strike right at the root of the whole subject by the provision of the anti-color features. They should not be misled by the terms calling for marking and branding.

As has been before stated, this department was originally created to enforce laws against the oleomargarine traffic, and much attention and space has been devoted to that subject in my previous reports, but now there seems to be but little further information to give upon the subject as far as it directly pertains to violations in our state. There is not at the present time, nor has there been during the United States fiscal year ending June 30, 1897, a single United States special internal revenue tax or license issued for the sale of oleomargarine in Iowa. In fact the last one to be issued bore the date of September 11, 1895. When it is considered that three and one-half years ago, there were 108 such special tax in force in Iowa, and the fraudulent sale of oleomargarine bearing fancy brands of creamery and dairy was being extended to all parts of the state, the beneficial results of this anti-color law is at once most apparent.

The suppression of these fraudulent sales in this state, as well as in many others, during the past three years, has been

influential in developing the dairy industry of our state. This development and increase, resulting in a larger output of fine butter, should cause our people more than ever to take an interest in what has been and may be accomplished in other states to reduce and suppress the frauds that permit the placing before the consumer of an article that is usurping the right of pure butter, of which we now have from eighty to ninety million pounds annually that must seek a market beyond the borders of Iowa. In the marketing of this vast amount of butter we expect and court honest competition, but in addition to this we do not wish or be obliged to meet competition that is based entirely upon fraud and deception. The enactment of effective laws, and the rigid enforcement of them by all states, is so necessary and essential to the advancement of the dairy industry, that Iowa is at the present time more interested in and can be more largely benefited by what can be accomplished outside than within their borders, yet it is still of the utmost importance that present laws be well guarded and strictly enforced.

In my last report, I referred to the two failures of great importance that have occurred since the oleomargarine fight had begun in earnest. One was the defeat in Illinois, and the other a partial success in Michigan. Both of these states have now been redeemed from the enemy and brought into line, with laws having as their foundational feature the anti-color clause. It now remains for our dairy friends to carry the war into Indiana and Kansas, redeeming those two important states and placing them in the same class with their more fortunate neighbors. It is now conceded that in Indiana oleomargarine is meeting with larger consumption in many localities than butter, but in no instance can it be shown that it is sold or used other than through deception as butter. The dairy cause in Michigan is fortunate in having a dairy and food department to enforce the new statutes. Much has already been accomplished in driving the traffic from that state, and notwithstanding the opposition that the commissioner is meeting from some quarters, where it should have been least expected, we look for an early realization of a complete victory for honest dairy products in Michigan. Notwithstanding Nebraska has accomplished much by the enactment of the anti-color law, her lawmakers still seem to be unmindful of the importance of a dairy department with appropriations adequate to carry on the work. The dairymen



and creamerymen of that state should insist on a further recognition of their rights, as the state is now being rapidly developed along the dairy lines. Missouri, with a law modeled after the Iowa law, has been passing through the necessary delay of court proceedings. The enforcement of the anti-color law is in the hands of the state board of agriculture. The secretary of this board and a special agent have been active in bringing offenders before the courts, and early in the season a decision was handed down by the supreme court of the state upholding the constitutionality of the law, thus being in full accord with the United States supreme court and all state courts where the validity of similar enactments have been determined. In addition to the court decisions of Missouri and Michigan, which are in line with all other opinions, the past year has brought forth a decision from the New York courts which will be far reaching in its assistance to detect violators of the law. This decision grants state officials power to investigate and examine railway and express books for the purpose of discovering evidence when suspicion points to the violations of the anti-color law by the shipment into the state of oleomargarine manufactured in imitation of and in the semblance of butter. It is stated that this ruling carries with it the final decision of scores of cases, the aggregate fines of which may equal \$1,000,000. The result and effect of this decision on the manufacturers and shippers from other states will be carefully watched by the dairy people, for it would seem that without the aid of the transportation companies the traffic into states having similar laws to those of New York would be much more difficult and hazardous. It was a day of rejoicing, not only to the honest citizens of Illinois, but throughout the entire country, when repeated defeat had been turned to victory; for the hardest and most important fight that has been waged against fraud for a number of years was conducted last spring in the Illinois legislature and resulted in a complete victory for honest butter. When it is remembered that three-fifths of all the oleomargarine manufactured in this country has been produced in that state, and that one-third of all the licensed retailers doing business were located in that state, it must be seen how valuable was the territory to the oleomargarine people, and that with such large interests they would leave no stone unturned to defeat a measure that would ultimately close up their business in that state. This law became effective July 1, 1897. Since that time the usual

delay caused by court procedures has been indulged in by those violating the provisions of the law. This was to be expected, and in fact that two of the largest manufacturers have discontinued the business, is really more than the friends of the law could have expected; and in addition to this, that one of these manufacturers after discontinuing an immense oleomargarine business has engaged in the legitimate butter business, distributing immense quantities of honest butter into a territory where previously they shipped oleomargarine. It should not be expected that the enemies of honest butter interested in the production of imitation will do less in that state than has been done in all other important sections of our country; therefore the enforcement of the law is only passing through the stages that have been required in all other states to a more or less degree having similar laws. It is well to remember that while many of the eastern and middle states have been fighting against this traffic through all the courts, in Illinois there has been no conflict except that resulting from the attempted enforcement of the United States revenue law. If violations are still carried on, in states like Massachusetts, Pennsylvania and Ohio, to an extent requiring the persistent attention of officials and the courts to bring the offenders to justice, what more could be expected in Illinois, when the whole field, as far as court decisions and proceedings are concerned, is open to contention? With these conditions and the delayed progress of courts is it any wonder that the manufacturers are still defying the law and have been able to induce large numbers of retailers to provide themselves with licenses and handle their yellow goods? That partial success has followed their efforts must be admitted, if we are to judge from the number of licenses issued to November 1, 1897, as compared with the same time the previous year, when two of the largest manufacturers, now out of that line of business, were then still operating their large factories.

There was a reduction in that state of 240 in the number of United States licensed dealers, and a decrease of 2,295,150 pounds of oleomargarine manufactured for the quarter ending September 30, 1897, as compared with the same quarter for 1896. This reduction in the manufactured product was equal to almost 50 per cent. With this showing, the friends of the law were greatly encouraged, but with the month of October, the oleomargarine manufacturers, encouraged by the slow process of law against them and the advanced price of butter, were

able to increase the number of dealers to an extent far beyond even their own expectations, and at the close of the month a record of 174 licenses against 101 for the same month of the previous year was attained. Notwithstanding the large increase in the number of dealers, a decrease of 595,950 pounds of oleomargarine as compared with October, 1896, was realized. When the four months ending October 31, 1897, are considered, we find a net reduction of 167 licensed dealers, and 2,891,800 pounds over the corresponding months of the previous year. This reduction occurred during the first four months of the operation of the new anti-color law, and when the conditions that have previously been referred to are considered, the friends of honest butter should take courage and continue the warfare with renewed energy until the fraudulent traffic is further diminished and finally driven from that state. The National Dairy Union, which has accomplished so much in the past, as ever before, now stands ready to continue its effective work, and should be maintained and encouraged by all those interested in having proper dairy laws enacted and enforced.

The dairymen of Iowa, as far as the enactment and enforcement of the oleomargarine laws in the state are concerned, are practically relieved from any direct contribution or uneasiness, and for this reason they should liberally apply support and influence to other sections where the violations of similar laws affect their interests. If we are to enjoy the security in the future that we now have, it is important that the inroads the enemy is endeavoring to make in other territory should be checked, for if they are successful throughout the field that they are now so actively trying to withhold, will they not later turn their attention to our state? In such an event, to maintain our present proud position, which undoubtedly would be done, would require great effort and liberal assistance. "Forewarned is forearmed," therefore every Iowa dairyman should consider each fight waged against honest butter, his fight, and with the National Dairy Union, as the general prosecutor, it should have liberal support and contribution, and to this end in the name of this department an appeal is hereby made in behalf of the organization.

#### BENEFITS DERIVED FROM THE CREAMERY SYSTEM.

The past year has seen unusual activity and interest manifested on all subjects pertaining to the dairy and creamery. This interest has not been confined to Iowa alone, but has developed in all sections of our country, even to some localities where a few years ago the merits of the dairy cow were unknown or not considered worthy of attention. The financial conditions through which this country has passed during the last four years has, no doubt, had its influence in promoting the present interest and investigations that center around this important branch of agriculture. The uncertainty of remunerative prices for the ordinary crop of the farm, with the risk of a partial or total failure from one cause or another has convinced many that some change in methods of farming throughout our large agricultural districts was necessary if prosperity was to be expected. The fact that some change should be had has been advanced by the agricultural press and leading thinkers, a majority of whom now advocate a more diversified method of farming in a large part of a territory that heretofore has been used exclusively for grain raising. To nearer meet the important requirements for diversified farming, the cow, the dairy and the factory have attracted the attention of many in all parts of our country. It is now recognized that this system of farming conducted on the most economical and profitable basis must place the cow as the center of the system, with the butter or cheese factory as near at hand as possible, that the by-product of the milk may be returned and fed upon the farm. It may be admitted that with some advanced dairy farmers the factory is not essential to success, they being so well skilled in the manufacture and marketing of their product as to be independent of the creamery; but these exceptions are so rare that a factory in any dairy community cannot well be dispensed with.

The cow as the center must be of the kind and breed most adapted to assist in bringing about the desired change from marketing the hay and grain at the shipping station, to a home market, which consists in these products, and other rougher



feeds, being converted principally into butter, beef and pork. To accomplish this, the cow, in addition to furnishing a fair quantity of rich milk for ten months of the year, should raise a number one calf, that will be suitable for the da'ry or the feed lot. The care and management of the calf where diversified farming is to be made most profitable, is of the utmost importance. The future dairy cow depends upon the calf of to-day and her treatment. The future market on the farm for grass, corn fodder, hay, grain and corn, to a large extent, depends upon the male calf of to-day, and his treatment. With live stock to consume the farm products there would be no hard times and where corn cribs at shipping stations are now bursting with their contents, shipments would consist of the finished products, such as choice creamery butter, and fat stock of all kinds. In a change such as is here contemplated, it should not be expected that the ideal cow can at all times be had, but this should not be a sufficient reason to continue in the old rut. The best that can be had should be selected, and from them with proper breeding and handling, a herd of improved stock can soon be grown for the purpose intended, that will be better than can be obtained otherwise. The development of the present creamery system in parts of our state has been slow and uncertain, the main cause being the mistaken idea that when the production of milk for the factory was made a factor, the beef side of the farming would have to be discontinued, as a good feeder could not be expected from a calf raised on separator milk. This line of thought has had an injurious effect in two ways: first, the number of cows that should have contributed to the creamery have not been maintained; and second, the feed lot has suffered, as a cow could not profitably be kept for the chance of a calf alone. Thus the consumptive demand on the farm has not kept pace with production, necessitating a market elsewhere, to relieve the large surplus of the principal crops of the state. To correct this unfortunate condition and have success follow, in those sections of the state where the beef interest must be recognized, requires the keeping of the right kind of a cow and that her calf be not neglected. The return of the separator milk in a good condition to be fed, with a knowledge of how to feed it, is necessary to properly care for the calf. To have the milk in a proper condition depends much upon the treatment at the creamery, but, when heated to a temperature of about 160° F. and delivered from a tank

kept as clean as a churn should be, the creamery has then accomplished its part in this connection, providing none but pure sweet milk is received. The patron has much for which to be responsible, in the care of the separator milk, and if he neglects to properly care for milk that he delivers to the factory, it can be assured that the skimmed milk will also be neglected so as to materially injure its value when fed to the calf. All vessels and utensils used in connection with this class of milk should be clean and free from germs that hasten fermentation. The common swill barrel should not be the reservoir for separator milk, unless it is intended for the hog alone, and even in that case, it is doubtful if as much good can be accomplished as would be should cleanliness be observed. When the milk is properly delivered at factory and returned to the farm the important question then is, how best to feed it? This subject is so well treated in an article from "Wallaces' Farm and Dairy," that it is, in part, reprinted.

The reason why a calf raised on milk skimmed by gravity, or cream raised by setting the milk in cold water, is better than separator milk, is that it has a portion of the butter fat in it. The reason why separator milk makes a poor calf is a similar one, namely, because it has no butter fat in it. If this separator milk is sour, or worse still, sweet one time and sour another, the reason why it grows a poor calf is even more apparent, for nature feeds the calf the sweet, warm milk, and when we deviate from nature we always get a rap over the knuckles. It is impossible to grow a calf by hand with separator milk alone, fed sometimes sweet and sometimes sour. It is impossible to grow a calf by hand fed only on separator milk, even if sweet, warm and often. The reason is, we have destroyed the balanced ration which nature provides. We have taken away the butter fat, and fat in some form or other the young calf must have. The problem, therefore, for the farmer is to consider how he can balance up the ration by substituting cheap fat in place of the high priced butter fat, and the further problem, how he can imitate nature in feeding that calf with its balanced ration, sweet, warm and often, as the system requires.

The Ames Experiment station has conducted three valuable experiments, intended to be lessons to the farmers in Iowa, and a similar work is done in most of the adjoining states.

The third experiment is reported in Bulletin 35, the second in Bulletin 25, and the first in Bulletin 19; these three bulletins should be in the hands of every western farmer who raises even one calf a year. They can be had by all Iowa farmers free on application to Professor Curtis, and if you do not get these bulletins it will be an evidence to us that you don't care one cent's worth as to what the agricultural station, with its expenditure of several thousand dollars each year is doing for you and me. The result of all three experiments show conclusively that corn meal is the cheapest feed with which to balance up the separator milk ration. Many farmers are making the mistake of putting oil meal in with the separator milk, with the idea of

restoring nature's balanced ration. We have protested against this for a good many years and have given our reasons; namely: that oil meal is about as unbalanced a ration as skim milk itself. Both are too highly nitrogenous, that is, they have too much of the flesh forming element, and compel the animal to burn this more expensive and costly element in lieu of the more expensive and valuable element which nature intended they should burn to keep up the animal heat. Oil meal is the residue of flax seed after the fat is taken out. This is an admirable balance for corn, when fed to the growing animal, but is the poorest sort of a balance for skim milk when fed to the calf. Hence, in every case in these three experiments it has cost more to raise a calf on separator milk and oil meal than it does on either oat meal and skim milk, flaxseed, corn meal and skim milk, or corn meal and skim milk alone. For example, the cost of feed per pound of gain when oil meal and milk was used was 2½ cents, on oat meal and milk 2½ cents, on flaxseed, corn meal and milk (10 per cent flaxseed) 2½ cents, and on corn meal and skim milk alone 2 cents. It so happens that corn meal is the cheapest food that can be given to the calf in connection with separator milk. It is not a balanced ration in itself by any means, but the separator milk balances it up so that if a farmer were feeding his calves corn meal, the ration would be greatly improved by adding separator milk; he could not get the full value of it unless he balanced it up with corn meal. Flaxseed, corn meal and milk in the proportion of nine of corn to one of flaxseed is the next best ration, the difficulty being, however, that few farmers grow the flaxseed, and still fewer are near a mill where it can be ground, requiring, as it does, a different mill from that required for ordinary corn, hence, it may as well be dropped out of consideration. Oats is the next best, but there is no need of feeding oats when you have separator milk, and hence it must be put down that the cheapest thing on which to grow calves with separator milk is corn meal.

The separator milk must, however, be sweet and not rendered indigestible by overheating in order to keep it sweet.

Farming is a business, and requires business principles in its conduct. The success of many business enterprises has been acquired from the estoppage of leaks and the utilizing of material that had previously been allowed to go to waste. In the adoption of the system under discussion, nothing on the farm would be wasted. All can be utilized and made to do its part to insure a profit to an enterprise that would otherwise be less profitable or result in absolute loss. With all fodder and grain, including the by-products of the milk, fed on the farm, the loss of soil fertility would be reduced to a minimum, thus extending the time indefinitely when it will be necessary to make use of foreign fertilizers. The unfavorable results brought about by the unfortunate financial condition through which this country has recently passed should have attracted the attention of the grain shipping and fodder wasting farmer to an extent that an important lesson was taught him; for, while he was conducting

his business at a loss, and on credit extending from one harvest to another, and, in case of crop failure, being obliged to ask further extension of credit, he found his more fortunate neighbor receiving and depositing monthly milk checks, unmindful of the hard times, other than what he learned from his neighbor or through the press. The development of the dairy interests in our state during the past year has been large, and has expanded the industry into localities that heretofore had not enjoyed the benefit derived from the dairy branch of our agricultural system. In this extension, sections of the state that heretofore had been devoted entirely to grain and stock raising have recognized the advantage of the dairy, and have combined their interests with the dairy cow, who has never been the cause of a mortgage being placed upon the farm, but who has been instrumental in removing many. The increase in the number of creameries for the past year is larger than for any like period for a number of years. The fact that a large per cent of this increase has been made outside of what has been considered the dairy belt of our state, goes to show that those sections are regarded as a good field for dairy and creamery development.

Many of the leading railway lines of the state, after careful study and investigation of the advantages to be derived from diversified farming, with the cow as the center, have been instrumental in bringing before the farmers and business men located in territory traversed by them, information intended to establish the advisability of such a system, and at many points along their lines, where in the past dairying was unknown, or a poor quality of butter was bartered at the cross-roads store, now can be found modern creameries in full operation, meeting with a success that makes it the boon of the farmer and the pride of the community. In the encouragement extended by railways, or by others, for creamery building, one thing should at all times be kept in mind, and that is that a creamery, no matter how well equipped or managed, without proper support cannot long exist, and usually when a failure results, successful dairying in that community is set back a number of years. The fact that creamery failures are becoming less and less each year is a strong indication that more care is being exercised, and more honest methods employed in their establishment, than was formerly known. The success or failure of a creamery in the newer sections of our state will depend largely upon whether the farmers are going to still further adopt and



continue a system of farming along diversified lines, having a safe and sure future; or, when prices for grain advance, or the beef side looks more promising, neglect the dairy calf and discontinue the production of milk, returning to the system of continuous cropping, necessitating the marketing of their grain otherwise than on their own farm. The lesson of the past should be warning enough, for it demonstrates in our state that those sections which have continued along the advanced lines have been the most fortunate, and their people have a desire to shift from their established course to those features that may seem at different times to promise better results, but which, by changed conditions, may soon be overdone and again be found unprofitable.

It is not surprising that with the increased interest manifested, and the fast extension and development in dairying throughout our own and our sister states, a degree of apprehension is advanced by some, fearing the business will be overdone, and the production of milk and its products increased to a point where their disposition will be made without profit to the farmer. If the conditions in Iowa were not so favorable for this branch of agriculture, the danger referred to might be made ground for a more thorough investigation, but when it is known and acknowledged that in no section in this or any other country can a pound of fine butter be produced cheaper than in our state, the necessity for more careful and thorough investigation is shifted to those engaged in the business and less favorably situated, for in the event of prices reaching a point so low as to require a reduction in the supply of dairy products it will be most felt in those sections, and, consequently, the contraction of the industry must naturally begin there.

The question of supply and demand was treated to a large extent in my last report. The same reasons now exist, only to a larger degree, in determining the advisability of further developing the dairy industry. The danger of over-production was shown to be very slight, provided our markets could be extended by the supplanting of oleomargarine, and the development of an export trade, together with an increased consumption in our home markets resulting from improved quality. These conditions have been furthered to a more or less degree. The past year has seen a decrease of over five millions of pounds in the production of oleomargarine, with prospects of a much larger decrease for each year until the business is reduced to a

point where it will not materially affect the dairy interests. The suggestions offered and advanced in my previous report looking to the future development of the export trade have been more than realized under the able and earnest efforts of Hon. James Wilson, secretary of the U. S. department of agriculture, assisted by Hon. Henry E. Alvord, chief of dairy division connected with that department.

Export trade in butter has been neglected in the past to an extent that in the leading markets of Europe, American butter, with the exception of poor grades, was unknown, but through the agricultural department at Washington and individual efforts, the finest make of American butter has been introduced in Liverpool and London, and information and facts pertaining to the requirements of these markets has been one of the main features connected with the work of the dairy division. From some counties in our state individual shipments of choice creamery butter by the carload have been exported to England, and during the months of greatest production large exportations were made and prices realized that compare favorably with those obtained for butter for storage purposes and home consumption. It was not until the markets of this country improved to a point that made exportation unprofitable that it was discontinued, but it must be admitted that the taking of large quantities for export relieved the stock in this country to an extent that materially assisted in advancing prices earlier in the season than usual and to an extent that otherwise would not have been had. If the market had not been materially reduced on account of the drouth of the autumn months, extending over the dairy districts, it is more than likely that prices would have remained low enough to have made the export market quite desirable, but until fall and winter dairying is developed to a much larger degree, the necessity of an export trade for these months is not so important as during the balance of the year. This fact is one that will interfere in our establishing a regular trade with our foreign cousins, for one of the main features of our meeting competition and developing a demand in any market, is to always have our goods or wares before the people. The fact that Australia and New Zealand are virtually out of the English market during the months that we need it most, will assist to a large extent in making room for our goods. Our government can be of still greater service to this industry by establishing a system of inspection similar

to that connected with the exportation of meats, by which all dairy products will be received at destination bearing a guarantee that they are exactly as represented. A national law should be enacted protecting the brands and trade-marks from being used to the detriment of the individual or state. The government should further assist to an extent that the transportation service to foreign countries will compare favorably with those of our competitors, and that transportation charges will not force large quantities of our shipments to be cleared at foreign ports, as was the case, we are sorry to state, during the past season.

## NEW YORK BUTTER MARKET.

One important use to be made of statistics is that of comparing facts one year or portions of a year with another. From the following table we find the average price of western fancy creamery butter in the New York market, where about 70 per cent of our shipments are consigned, for each month of the past seven years, together with the average yearly price for the same length of time. From this table the price of butter for the year 1897 as compared with that of 1896 is virtually the same, and indicates upon first glance that the market has been of an unchanging nature; but when the corresponding months of the two years are compared, a difference exists that can be accounted for only by an understanding of the conditions prevailing during the respective seasons of the two years.

The first four months of the present year, ending November 1, 1897, when compared with the corresponding months of the previous year, with the exception of one month, show a decided falling off in the averages, which is undoubtedly because of the favorable weather and open winter, and the abundance of cheap feed, both of which aided in an increased production of choice butter. In April, 1896, the average is .023 cents per pound higher than for April of 1897. This, no doubt, was brought about through a decreased make of butter, caused by the condition of the roads and prolonged rain, which made them impassable in many sections and prevented the delivery of milk to many of our creameries. The loss throughout the state of Iowa from this cause alone represents a sum that, if rightly applied, would go far towards putting many of our highways in a condition that would prevent a repetition of the conditions of last spring. There is no interest more directly concerned in the improvement and maintenance of good roads than that of the production of milk or cream as delivered to our 891 creameries.

By again referring to table No. 1 it will be seen there is but



a slight difference in the averages for the months of May, June and July. From August to the end of the year there is a large increase in favor of 1897. This may be explained, first, in that the export demand has taken large blocks of June butter from our market which under other circumstances usually came into direct competition with fresh goods, and also, the stock of fresh creamery was affected, as compared with the previous year, by the partial drouth during the fall months. In a comparison of the averages for different months of the year, October, with an average of .2290 cents, was the highest, and June and July, with .15 cents, were the lowest. The average price for the seven years is .2308, being .0425 cents higher than the average for 1897. We are safe in assuming that the lowest average that will be realized for some time to come has now been reached, and with favorable conditions and improvement in our financial affairs, a gradual improvement in prices can be expected.

TABLE No. 1.

The following table gives the average monthly price of western fancy creamery butter for each month during the past seven years, in the New York market, and average price for each month for the seven 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.	Twelve months ending Nov. 1, 1897.	Av. per month for seven yrs.
November	\$.3740	\$.2560	\$.3100	\$.2790	\$.2510	\$.2930	\$.2112	\$.2306
December	.3812	.2607	.3140	.2840	.2500	.2950	.2200	.2708
January	.3812	.2575	.3387	.2952	.2819	.2368	.1900	.2645
February	.3862	.2975	.3975	.2790	.2394	.2000	.1550	.2550
March	.3750	.2665	.3220	.2570	.2185	.1900	.1475	.2385
April	.3694	.2680	.3112	.2287	.2000	.1650	.1880	.2306
May	.2290	.2125	.2455	.1760	.1785	.1572	.1530	.1920
June	.1825	.1844	.1853	.1728	.1640	.1585	.1800	.1806
July	.1800	.2210	.2160	.1850	.1770	.1405	.1500	.1827
August	.2090	.2220	.2380	.2260	.1950	.1571	.1675	.2022
September	.2475	.2325	.2730	.2500	.2125	.1800	.1900	.2372
October	.3000	.2607	.2941	.2545	.2294	.1850	.2230	.2515
Av. val. per lb. for each yr.	\$.2320	\$.2594	\$.2776	\$.2350	\$.2190	\$.1883	\$.1885	\$.2306

## BUTTER SHIPMENTS EAST FROM CHICAGO.

The following is a table which is of essential interest in connection with this subject. The figures given are obtained from a reliable source and tend to show the pounds of butter forwarded east from Chicago and originating west, north and south of the shipping point. It will be seen that there is a net increase of 9,589,120 pounds of butter over 1896, and in the

months of August and October a decrease over the corresponding months of 1896 of 5,651,200 pounds, while in the comparison of 1895 with 1896 there is no decrease in the shipments by months, and a net increase of 29,088,400 pounds for the year. The largest increase in one month over another in the years 1895 and 1897 is in June, 1897, being 8,042,900 pounds, and April and July, each with over 5,000,000 pounds. A large part of the butter thus consigned east from Chicago is made up from Iowa shipments, and since the amount is increasing from year to year the demand for Iowa butter is likewise affected.

Table showing net pounds of butter forwarded east from Chicago by railways, arranged by months, with total for the three years ending November 1, 1895, 1896, and 1897, and increase of 1896-1897.

MONTHS.	1895.	1896.	1897.	INCREASE 1895-1896.	INCREASE 1896-1897.	DECR'G 1896-1897.
For the year	130,415,280	168,303,680	201,920,000	29,088,400	28,625,320	1,631,390
November	8,082,000	8,900,800	11,988,000	734,200	3,157,600	
December	8,741,000	9,305,120	13,308,000	514,000	4,002,880	
January	11,111,520	12,999,840	15,070,000	1,888,320	2,070,160	
February	8,663,800	10,575,800	13,775,000	1,912,000	3,199,000	
March	8,897,360	10,556,400	14,352,000	1,659,040	4,001,000	
April	7,912,000	10,454,400	15,564,000	2,542,400	5,109,600	
May	12,302,960	17,850,000	21,594,000	4,547,040	3,743,920	
June	27,359,440	36,819,040	27,062,000	9,469,600	8,042,900	
July	19,627,280	25,510,000	3,094,560	5,882,720		
August	15,240,960	19,744,000	17,792,000	4,503,040		1,940,000
September	10,516,800	13,944,000	14,296,000	3,427,200	1,002,000	
October	13,551,680	19,227,200	11,320,000	5,675,520		8,701,680
Total.	130,415,280	168,303,680	201,920,000	29,088,400	28,625,320	1,631,390

## IOWA CREAMERIES.

The information contained in tables numbering 2 to 10, inclusive, have been compiled largely from reports obtained directly from the creameries. The system adopted in collecting this information was to forward to each creamery proprietor, manager or secretary a blank to be filled out and returned to this office. The following is a reprint of the blank used in 1897:

## CREAMERY REPORT.

1. Name of creamery.....
  - a Name or location of skim station or stations.....
  - b State the name of creamery or creameries where each skim station delivers cream.....
2. Creamery located at or near what town?.....
  - a Creamery located in what county?.....
  - b Skim station located at or near what town?.....
  - c Skim station located in what county?.....
  - (If more than one skim station, designate by numbering 1, 2, 3, etc.)
  - d Postoffice where creamery mail is received..... County.....
  - e Shipping station?..... On what railroad?.....
  - f What is a fair valuation of plant? \$.....
  - g Average value of each skim milk plant? \$.....
  - a When was creamery built? 18.....
  - b When was skim plant or plants built? 18.....
  - (If more than one, use number of station, with year built, in making answer.)
3. Is creamery operated by individual or firm?.....
  - a Is creamery operated by farmers' co-operative association?.....
  - b Is creamery operated by a stock company on the co-operative plan?.....
  - c Is creamery operated by a stock company where by-laws provide for annual or semi-annual dividends on stock?.....
  - d Is creamery operated by owner?..... If not, from whom is it leased?.....
4. Name of present proprietor or firm?.....
  - a Postoffice address?.....
  - b Name of president or secretary?.....
  - c Postoffice address?.....
  - d If creamery or skim station has changed ownership within the past year, state name of former owner or owners?.....

- c If creamery was formerly operated as a skim station, or cheese factory, state by whom operated and when change was made?.....
- d If skim station was formerly operated as creamery or cheese factory, state by whom it was operated, and when change was made?.....
5. Has the creamery an official dairy commissioner's test bottle?.....
  - a Number engraved on same?.....
  - b If more than one bottle is used, give the name of creamery or skim station and number of bottle used by each?.....
6. System of operating: As separator?..... As gathered cream?.....
  - a As combined separator and gathered cream?.....
7. State number of separators in use?..... Give name of each, and whether turbine or belt? Name of separator?.....
  - a If a milk tester is used, give name of tester and also name of manufacturer? Name of tester?..... Manufacturer?.....
8. Did you manufacture cheese during any part of the year ending May 1, 1897?.....
9. State by the word "yes," after each question asked below, the plan used in receiving milk and cream:
  - a Is the milk received on the relative value plan (by test)?.....
  - b By the hundred or pool plan?..... c Is cream received by the gauge or inch?..... d By the oil test?..... e By the Babcock test?.....
10. How many of your patrons furnish cream from hand or farm separators?.....
11. Was the creamery operated the entire year ending May 1, 1897?.....
  - a If not operated the entire year, check the month or months the creamery was closed: 1896—May, June, July, August, September, October, November, December. 1897—January, February, March, April.
12. Name of head butter-maker?.....
  - a When one of the firm, give full name?.....
  - b Has butter-maker taken a course in dairying at a dairy school?.....
  - c If so, where?.....
  - d Monthly wages paid head butter-maker for year, or any part of the year, ending May 1, 1897: During winter months? \$..... During summer months? \$.....
  - e If uniform, state amount for the entire year, or any part thereof: \$.....
  - f Monthly wages paid first helper? \$..... Number months employed?.....
  - g Monthly wages paid second helper? \$..... Number months employed?.....
13. State the average number of persons, if any, other than patrons employed in collecting milk?..... Cream?..... Total?.....
  - a State yearly expense of collecting milk? \$..... Cream? \$..... Total? \$.....
14. Give number of pounds of milk received and made into butter from May 1, 1896, to May 1, 1897?.....



(In case creamery was not operated the entire year, answer question for time during the year creamery was operated.)

- a State the average per cent of butter fat and the average pounds of butter made per 100 pounds of milk for each month of the year ending May 1, 1897.

(Answer both questions, if possible; if not, answer the one of which you have a record.)

1896.—May	per cent butter fat; ..	pounds butter made per cwt. milk
June	per cent butter fat; ..	pounds butter made per cwt. milk
July	per cent butter fat; ..	pounds butter made per cwt. milk
August	per cent butter fat; ..	pounds butter made per cwt. milk
September	per cent butter fat; ..	pounds butter made per cwt. milk
October	per cent butter fat; ..	pounds butter made per cwt. milk
November	per cent butter fat; ..	pounds butter made per cwt. milk
December	per cent butter fat; ..	pounds butter made per cwt. milk
1897.—January	per cent butter fat; ..	pounds butter made per cwt. milk
February	per cent butter fat; ..	pounds butter made per cwt. milk
March	per cent butter fat; ..	pounds butter made per cwt. milk
April	per cent butter fat; ..	pounds butter made per cwt. milk
Yearly average	per cent butter fat; ..	pounds butter made per cwt. milk

17. State the average yearly cost per pound of manufacturing separator butter, including the cost of package, but not the cost of delivering milk? .. cents per pound.

- a State yearly average cost of manufacturing gathered cream butter per pound, including the cost of package and the gathering of cream? .. cents per pound

- b Give the number of net pounds and kinds of butter manufactured from May 1, 1896, to May 1, 1897, or part of the year operated, as enumerated below: Number pounds of separator? .. lbs. Gathered cream? .. lbs. Combined separator and gathered cream? .. lbs. Total? .. lbs.

- c Give the estimated cash value of all butter manufactured from May 1, 1896, to May 1, 1897, or part of the year operated, after deducting the expense of shipping and selling? \$ ..

18. What part or per cent of this butter was furnished to patrons?

- a What part or per cent of this butter was marketed for consumption in Iowa? ..

- b What part or per cent of this butter was shipped to points outside of the state? ..

- c State what amount of butter was shipped to the following markets for the year ending May 1, 1897:

New York	.. lbs
Philadelphia	.. lbs
Elgin, Ill	.. lbs
Chicago	.. lbs
New Orleans	.. lbs
Pacific coast	.. lbs
Boston	.. lbs
Cleveland, O.	.. lbs

- d Name other cities, with amounts shipped. ....

19. Give the number of persons patronizing the creamery including the skim stations connected therewith from May 1, 1896, to May 1, 1897, or part of year operated? ..

20. Estimate the number of cows comprising the herd of the average patron of your creamery? ..  
(Please take extra pains to get information so as to answer this question.)

21. If there are any new creameries or skim stations in your county, opened since November 1, 1896, state where they are located and give proprietor or manager:

Name .. P. O. address ..

Name .. P. O. address ..

Name .. P. O. address ..

22. If there are any old creameries or skim stations reopened in the past year in your county, give location and by whom operated:

Name .. P. O. address ..

Name .. P. O. address ..

23. Give the names of any creameries or skim stations in your county having burned since November 1, 1896, giving causes when known? ..

Has the creamery or creameries been rebuilt? ..

24. Give the amount and value of all coal used in your creamery during the year ending May 1, 1897, or part of year operated?

Number tons? .. Value? \$ ..

- a State what per cent or amount of this coal was domestic (mined in Iowa):

Number of tons or per cent? .. Value? \$ ..

- b State what per cent or amount was foreign (mined outside of Iowa)? ..

- c If quality, cost at mine or freight rates cause preference for foreign coal, state which; also other reasons, if any? ..

W. K. Boardman, State Dairy Commissioner:

DEAR SIR—Herewith find a report of the .. creamery for the year ending May 1, 1897. Respectfully,

(Prop., Sec. or M'gr.)

The office record number of this creamery for 1896, is ..

The office record number of this skim station for 1896, is ..

NOTE—Kindly give this your immediate attention. Stamped and addressed envelope enclosed.

The hearty thanks of this department is extended to all those who have answered all questions and promptly returned the report to this office. Also to those who made an effort and thereby made a partial report, but on account of unavoidable

reasons could not entirely fill it out. It is with regret, however, that we are obliged to admit, notwithstanding the repeated and urgent requests made for the report, many did not respond, or if so, did respond in a manner such as to be of little practical use. To these, we have no comment to offer, other than they should be willing to assist in anything reasonable that will promote the interests with which they are connected. Under the provisions of the new code, which became effective October 1, 1897, all creameries, cheese factories and butter packing establishments are obliged to make reports annually to the dairy commissioner, upon blanks furnished by him. This provision should be made applicable to all delinquents to the end that a complete compilation can be had of all creameries and factories of the state, thereby avoiding the necessity of making estimates for those not reporting.

The thanks of the department are extended also to county auditors and United States postmasters who have rendered assistance by furnishing information that we were unable to obtain directly from the managers of the creameries and cheese factories. The promptness and unanimity which these requests were complied with, is worthy of special mention, and in making up a list of all Iowa creameries and cheese factories without their assistance and on account of the negligence of those interested, it would have been far from complete. Railway representatives and manufacturers' agents for creamery supplies have also assisted in perfecting the list.

In order to analyze the past and present conditions of the creamery interests of Iowa, numerous tables have been compiled and arranged by counties. These tables are numbered, and in making a summary, will be referred to according to their respective numbers. Similar tables were printed in the tenth annual report of this department and in some cases reference will be made to them.

#### SYSTEMS OF OPERATION—NEW CREAMERIES.

From the following table (No. 2) the following information is derived: But three counties in the state are without creameries in operation, as reported up to November 1, 1897. These counties are Appanoose, Des Moines and Fremont. Monroe county and Woodbury have joined the list since 1896. Monroe now has one creamery, and Woodbury six, the largest increase of any one county in the state. There were 891 creameries and

skim stations reported in operation November 1, 1897. This is a net increase of eighty-one creameries over those of 1896. Of the 891 creameries and skim stations in operation, 504 are given as individual creameries, which is, that they are operated by proprietary management, either individual, firm or company. Three hundred and forty-nine are owned and operated as co-operative creameries—that is, by the patrons themselves through a board of directors. There are thirty-seven creameries operated by stock companies, part of which are similar to a proprietary management and others upon lines of co-operation. One creamery is not included in these allotments, it being the property of the state of Iowa, and located at Ames. As compared with 1896, we find that there are eighty more individual creameries and skim stations, and forty-five more co-operative in operation, and a decrease of forty-four in the stock company creameries. This indicates that the stock company system of operating creameries is fast disappearing, and that the proprietary and co-operative systems are to prevail. From a comparison of the increase it will be seen that the individual or proprietary system has made as much again the increase of the co-operative creamery system; still these figures may be misleading unless more fully explained. In the net increase of eighty-one creameries and skim stations, forty-eight are creameries and thirty-three skim stations, and a large majority of these skim stations are connected with proprietary creameries, thus swelling the number of individual creameries and skim stations. In many cases a well managed skim station does as much business and is of as much value to a community as a fully operated creamery.

From the same table we find the 891 creameries and skim stations divided as follows: Seven hundred and seventy are separator creameries, sixty-eight gathered cream, and fifty-two combined separator and gathered cream. From Table No. 10 of the tenth annual report, the division was as follows: Six hundred and forty-one separator creameries, ninety-five gathered cream and seventy-four combined. We now find by comparison that there has been a gain in the separator system of 130 creameries, which is made up from the new creameries commencing operation since the last annual report, and change of system of operation in the other two classes, as there has been a decrease in the number of gathered cream class of twenty-seven, and of twenty-two of the combined separator and gath-



ered cream. Those, added to the eighty-one new creameries, make up the 130 increase in the separator system. Taking the sixty-eight gathered cream plants from the total number of creameries and skim stations in operation, we find 820 receiving milk. Of this number 698 use the test system to arrive at the value of butter fat in each patron's milk, and 122 still adhere to the out-of-date, unprogressive plan of paying for the milk according to its weight, regardless of the variation in quantity of butter fat existing in milk delivered at different times and from different herds. The receipt of milk according to weight does not encourage honest or profitable methods. The change taking place is encouraging. There has been an increase of 120 creameries receiving milk over that of 1896, and an increase of 125 using the test plan for settlement, and a decrease of five making settlement according to weight. This shows a gain for the test plan, from its adoption by a number equal to all of the new creameries, together with five that formerly received milk by the hundred weight.

It may not be out of place to mention the fact that creamery failures throughout the state are less and less in number each year and I am of the opinion that the adoption of the test system has had much to do in bringing about the better condition of affairs, by placing the operator in a position in which he can know exactly what he is doing, and at the same time encourage the patrons to improve their stock, as by so doing they reap the benefits to be derived from the production of a better quality of milk. Now that the test plan can practically be declared the general system for receiving milk, the greatest care should be exercised in preventing abuse and deception in its operation. In previous reports reference has been made to this subject, and the desirability of state inspection has been advanced. The necessity of this is each year made more apparent. The reading of the test either too high or too low should be made so dangerous that no person or persons in any way connected with the management of a creamery would subject themselves to exposure and prosecution. The evil does not stop with the creamery itself, but extends to neighboring creameries, where oftentimes the honest and correct operator of the tester is made to suffer through the appearance that his creamery is not giving as large average tests in one case, or is not paying as much per pound for butter fat in another, as the creamery where false manipulation is being practiced.

The importance of correct tests is so great that the state should be divided into districts, and competent persons, after passing a thorough examination, at the experimental station at Ames, should be appointed by the dairy commissioner to give instructions in the science of testing and also to inspect the apparatus used and the manner of testing, together with many of the other duties necessary and of importance to the creamery system.

In Table No. 2, under the head of "number of creameries and skim stations burned, rebuilt, etc., during the year ending May 1, 1897," the following is taken as a summary: There was reported 100 new creameries built in fifty-five counties, and thirty-seven new skim stations in twenty counties. This is by far the largest number newly built in any one year of which there is a record. We have reported eighteen creameries as being burned during the year, three of which were rebuilt. Of the creameries that have been closed for some time, forty-three are reported as reopened, and fifty-five that were in operation last year are now closed. We also have reports of sixteen skim stations being closed, and five others changed from skim stations to creamery plants. There were eight creameries reported to have been changed to skim stations.

TABLE No. 2.

Number creameries and skim stations in each county, how operated, number built, burned, etc.

COUNTIES.	Total number of creameries and skim stations.	Number reported.	Individual.	Co-operative.	Stock company.	NUMBER CREAMERIES AND SKIM STATIONS, SHOWING NUMBER IN- DIVIDUAL, CO-OP- ERATIVE & STOCK COMPANIES.	NUMBER OPER- ATING AS SEP- ARATE & AGATH- ERED CREAM.	NUMBER RECEIV- ING MILK BY TEST OR CWT.	N'M'B CREAMERIES AND SKIM STATIONS BUILT, BURNED AND REBUILT, RE-OPENED OR CLOSED DURING THE YEAR END- ING NOVEMBER 1, 1897.
The state.	891	890	504	349	37	891	771	68	52
Adair	9	9	9	9	9	9	9	9	9
Adams	9	9	9	9	9	9	9	9	9
Allamakee	9	9	9	9	9	9	9	9	9
Appanoose	9	9	9	9	9	9	9	9	9
Audubon	12	12	10	10	10	12	8	1	1
Benton	13	13	6	10	13	6	1	1	1
Black Hawk	19	19	4	15	19	4	1	1	1
Boone	7	7	6	1	7	6	1	1	1
Bremer	24	24	3	21	24	3	1	1	1
Buchanan	15	15	15	15	15	15	15	15	15
Bureau Vista	10	10	7	3	10	7	3	1	1
Butler	21	21	8	11	21	19	1	1	1
Calhoun	12	12	10	10	12	10	1	1	1
Carroll	12	12	10	10	12	10	1	1	1
Cass	11	11	7	4	11	7	1	1	1
Cedar	11	11	9	9	11	9	1	1	1
Cerro Gordo	11	11	7	4	11	7	1	1	1
Cherokee	20	20	5	15	20	5	1	1	1
Chickasaw	4	4	4	4	4	4	4	4	4
Clarke	4	4	4	4	4	4	4	4	4
Cly	2	2	2	2	2	2	2	2	2
Clayton	21	21	10	10	21	19	1	1	1
Clinton	10	10	12	12	10	12	1	1	1
Crawford	4	4	4	4	4	4	4	4	4
Dallas	20	20	3	17	20	3	1	1	1
Davis	3	3	3	3	3	3	3	3	3
Decatur	27	27	10	14	27	10	1	1	1
DeWaver	27	27	10	14	27	10	1	1	1
Des Moines	26	26	9	17	26	9	1	1	1
Dickinson	4	4	4	4	4	4	4	4	4
Dubuque	20	20	3	17	20	3	1	1	1
Emmet	6	6	6	6	6	6	6	6	6
Fayette	11	11	6	5	11	6	1	1	1
Floyd	11	11	6	5	11	6	1	1	1
Franklin	11	11	6	5	11	6	1	1	1
Fremon	12	12	10	10	12	10	1	1	1
Greene	12	12	10	10	12	10	1	1	1
Grundy	12	12	10	10	12	10	1	1	1
Guthrie	11	11	9	9	11	9	1	1	1
Hamilton	10	10	6	3	10	6	1	1	1
Hancock	12	12	6	6	12	6	1	1	1
Hardin	12	12	6	6	12	6	1	1	1
Harrison	7	7	7	7	7	7	7	7	7
Henry	10	10	10	10	10	10	10	10	10
Howard	10	10	10	10	10	10	10	10	10
Humboldt	10	10	10	10	10	10	10	10	10
Ia	10	10	10	10	10	10	10	10	10
Iowa	10	10	10	10	10	10	10	10	10
Jackson	18	18	13	5	18	13	1	1	1
Jasper	11	11	9	1	11	9	1	1	1

TABLE No. 2—CONTINUED.

COUNTIES.	NUMBER CREAMERIES AND SKIM STATIONS, SHOWING NUMBER IN- DIVIDUAL, CO-OP- ERATIVE & STOCK COMPANIES.	NUMBER OPER- ATING AS SEP- ARATE & AGATH- ERED CREAM.	NUMBER RECEIV- ING MILK BY TEST OR CWT.	N'M'H CREAMERIES AND SKIM STATIONS BUILT, BURNED AND REBUILT, RE-OPENED OR CLOSED DURING THE YEAR END- ING NOVEMBER 1, 1897.
Jefferson	10	10	10	10
Johnson	10	10	10	10
Jones	10	10	10	10
Keokuk	10	10	10	10
Kossuth	10	10	10	10
Lee	10	10	10	10
Linn	10	10	10	10
Louis	10	10	10	10
Lucas	10	10	10	10
Madison	10	10	10	10
Malaska	10	10	10	10
Marion	10	10	10	10
Marshall	10	10	10	10
Mill	10	10	10	10
Monroe	10	10	10	10
Montgomery	10	10	10	10
Muscatine	10	10	10	10
O'Brien	10	10	10	10
Oceola	10	10	10	10
Page	10	10	10	10
Palo Alto	10	10	10	10
Plymouth	10	10	10	10
Pocahontas	10	10	10	10
Polk	10	10	10	10
Pottawattamie	10	10	10	10
Poweshiek	10	10	10	10
Ringgold	10	10	10	10
Sac	10	10	10	10
Scott	10	10	10	10
Shelby	10	10	10	10
Sioux	10	10	10	10
Story	10	10	10	10
Tama	10	10	10	10
Taylor	10	10	10	10
Union	10	10	10	10
Van Buren	10	10	10	10
Wapello	10	10	10	10
Warren	10	10	10	10
Washington	10	10	10	10
Wayne	10	10	10	10
Webster	10	10	10	10
Winnebago	10	10	10	10
Winnechick	10	10	10	10
Woodbury	10	10	10	10
Worth	10	10	10	10
Wright	10	10	10	10
Total.	891	890	504	349

Sixteen skim stations closed.

Eight creameries changed to skim stations.

Five skim stations changed to creameries.

\*Creamery at experiment station, Ames, not classified under this heading, it being the property of the state.



## VALUATION OF CREAMERIES—POUNDS MILK RECEIVED.

From Table No. 3 the following facts and extracts are derived: The 891 creameries and skim stations in the state are divided into 778 creameries and 118 skim stations. Of this number, 708 report the value of their plants to be \$2,197,487, an average of \$3,103 each. One hundred and seven skim stations report their value to be \$142,800, or \$1,335 each. Taking these figures as a basis, the 778 creameries and 118 skim stations have a total valuation of \$2,556,149. By comparison of the estimates given in the tenth annual report, it will be seen that there is a shrinkage in the valuation of Iowa creameries of about \$500,000, while at the same time there are eighty-one new creameries and skim stations. These figures show a decrease of about \$900 in the average value of the creameries, and about \$200 in the average value of the skim stations. This, no doubt, can be mainly accounted for by the fact that the cost of building and equipping a first-class creamery has been greatly reduced, by the ignoring of the creamery shark of the past and the adoption of business methods in their construction. The value of a plant must be the amount necessary to reproduce it, and by taking this as a standard many of the creameries that originally and unnecessarily cost \$5,000 or \$6,000, have been valued in the 1897 report to this office at a figure for which they could now be constructed. The experiences of the past in connection with creamery building should teach a lesson to those sections of the country now looking to dairy development. A mistake in this direction oftentimes requires years of labor and patience to regain confidence lost and renew the interest necessary to maintain a successful creamery.

From Table No. 3 we find of the creameries that were in operation during the year ending May 1, 1897, that of the number reporting 542 were in operation the entire year, 74 six months or more, and 27 less than six months, and the average time for the 643 creameries reporting was 10.2 months. It will be seen that about 80 per cent of the number of creameries reporting upon this subject were in operation the entire year. We further find from Table No. 3 that 407 creameries had 46,072 patrons, which is an average of 113 patrons to each creamery. The same number of creameries report 392,425 cows, which is an average of 964 cows to each creamery, and 8.5 cows to each patron. Taking these figures as a basis, there would be 87,349

creamery patrons and 745,178 cows for the 778 creameries. As compared with figures given upon this subject, based upon information in Table No. 10 of the tenth annual report, there is an increase of 9,049 patrons and 78,847 cows. This is but a slight increase in the number of patrons, and but 45 cows, per creamery. The increase in the number of cows can be accounted for by the herds of the increased number of patrons.

The additional number of cows contributing to the production of milk to be manufactured into butter at our creameries is made up from two classes of farmers. One, that has not been engaged in the dairy business heretofore, and the other that has manufactured butter on the farm. Thus the creamery system is fast decreasing the quantity of butter manufactured on the farm, and by modern improvements is increasing the quantity as well as the quality of butter throughout the sections that have been without creameries hitherto. As the number of cows has not materially increased in those sections of the state where the creamery has been established for some time, and as a general increase in production has taken place, this increase must be attributed to one or two things, or both. They are that the patron has been disposing of his unprofitable cow and replacing with a better one, or that he has learned better how to feed for the production of milk. There is no branch of the dairy industry to-day that is as important as the one here referred to, "The cow and how to feed her." The reduction in the cost of production is almost entirely in the hands of the patron. The cost of manufacturing may be slightly reduced in the future, through improved methods and consolidation of creameries and creamery territories, but a reduction in this direction, though representing in the aggregate much, can not in any way be compared with the amount that might be saved annually, through the improvement of dairy herds and feeding along scientific lines.

TABLE No. 2.  
Canneries and skim stations—Number and value of plants—Months operated—Number of patrons and number of cows.

[illegible][illegible]



TABLE NO. 3—CONTINUED,

[illegible]

## MILK AND THE BUTTER PRODUCTION THEREFROM

From Table No. 4 the following information is ascertained: There are 705 creameries receiving milk. Of this number 447 furnish reports that they received during the year ending May 1, 1897, 1,091,897,575 pounds of milk, which produced 49,130,206 pounds of separator butter. This would be an average of 2,442,825 pounds of milk, and 109,911 pounds of separator butter per creamery, or, an amount equal to 1,722,721,125 pounds of milk and 77,487,255 pounds of separator butter for the 705 separator creameries. The receipts of milk by skim stations are credited to the creameries of which they are auxiliaries. These figures indicate that it required an average of 22.2 pounds of milk to produce one pound of butter. This is one-half pound less than a similar estimate given in the last annual report. Five hundred and five creameries report the pounds of butter manufactured. Four hundred and forty-seven of this number are separator or combined separator and gathered cream plants, leaving fifty-eight as distinct gathered cream plants. This number reports manufacturing 7,920,289 pounds of gathered cream butter, which would be 136,557 pounds per creamery, or 4,285,876 pounds for the sixty-eight gathered cream plants. The total number of pounds of all grades of butter manufactured by the 505 creameries was 58,143,363 pounds, an average of 115,135 pounds for each creamery, and equal to 88,999,355 pounds for the 778 creameries. From previous calculations the amount of separator is given as 77,487,255 pounds, and of gathered cream, 9,288,876 pounds. This, taken from the total amount, would leave 2,223,121 pounds for the amount of combined separator and gathered cream butter manufactured. The disposition of this quantity of butter may be of interest. The 505 creameries reporting upon their make of butter also report furnishing their patrons with 2,891,783 pounds; shipping to Iowa markets 2,612,842 pounds, and to points outside of the state 52,638,738 pounds. Taking these figures as a basis, the 778 creameries furnish their patrons 4,426,193 pounds, furnished Iowa markets with 3,999,502 pounds, and shipped to points outside of the state 80,569,017 pounds. It will be seen from these figures that about 90 per cent of the creamery butter manufactured is shipped to points outside of the state, and less than 10 per cent is consumed in Iowa.

TABLE No. 4.  
*Creameries—Pounds of milk received; kinds and amount of butter manufactured, and disposition of same.*

[illegible][illegible]



TABLE No. 4—CONTINUED.

COUNTY.	NUMBER OF CREAMERIES OPERATING FROM MAY 1, 1896, TO MAY 1, 1897.		NUMBER OF CREAMERIES MANUFACTURING BUTTER, WHOLE OR PART, FROM MAY 1, 1896, TO MAY 1, 1897, GIV- ING POUNDS OF SEPARATOR, GATHERED CREAM AND COMBINED SEPARATOR AND GATHERED CREAM.		TOTAL POUNDS OF BUTTER FUR- NISHED TO THE STATE, IOWA AND SHIPPED TO POINTS OUTSIDE OF THE STATE.	
	No. re- ported.	No. milk received.	No. re- ported.	No. milk received.	No. re- ported.	No. milk received.
Adair	1	13,310.574	1	714,285	1	17,499
Adams	1	4,446.678	1	191,364	1	4,421
Adelphi	1	23,013.144	1	951,285	1	51,105
Adair	1	7,574.437	1	322,419	1	35,931
Adair	1	43,088	1	1,621	1	1,000
Adair	1	1,539,000	1	55,000	1	5,000
Adair	1	3,484,450	1	122,311	1	12,386
Adair	1	10,979,265	1	475,091	1	4,000
Adair	1	4,574,440	1	150,000	1	15,700
Adair	1	2,615,511	1	111,642	1	10,559
Adair	1	9,432,077	1	46,100	1	5,000
Adair	1	7,415,562	1	1,386,180	1	32,531
Adair	1	1,091,867,875	1	40,136,596	1	2,401,758
Total	705	447	705	447	705	447

## MARKETS FOR IOWA CREAMERY BUTTER.

It has been shown in Table No. 4 that over 80,000,000 pounds of creamery butter was shipped to markets outside of the state during the year ending May 1, 1897. Table No. 5 is compiled to show the various markets, with quantity shipped to each. The table is compiled by counties, and reports were received from 430, located in eighty-seven counties. They report the amount shipped as 52,216,995 pounds, and billed to the following cities and states:

CITY.	AMOUNT SHIPPED.
New York	37,050,734
Chicago	4,958,211
Boston	4,217,463
Philadelphia	1,794,758
New Orleans	659,841
Cleveland	499,759
Elgin, Ill.	404,255
New Bedford	335,935
Pacific coast	298,789
Washington	222,788
New Haven	219,894
Jacksonville	200,796
Baltimore	166,280
Buffalo, N. Y.	185,484
St. Louis, Mo.	164,987
Newark	120,118
Pittsburg	111,076
Providence	109,368
STATES.	
Illinois	135,421
Rhode Island	89,337
Kentucky	43,544
Colorado	38,898
Montana	21,286
New Hampshire	15,751
Massachusetts	10,822
Ohio	10,800

Total 52,216,995

These figures show that the city of New York received 71 per cent of the shipments; Chicago, 9.5 per cent; Boston, 8.1

per cent; Philadelphia 3.4 per cent, and all other cities in the states combined 8 per cent. When compared with similar estimates made for the year ending May 1, 1896, we find that New York has made a gain of about 2.5 per cent, Chicago a loss of 3 per cent and Boston 4 per cent, Philadelphia remained the same, and other cities made a gain of 4.5 per cent. As these estimates are for shipments prior to May 1, 1897, the export trade for the past season does not appear. The shipments were made to nineteen states, including the District of Columbia.

TABLE NO. 5.

Compiled by counties, showing destination and amounts of butter shipments from 490 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, 1897.

[illegible]



TABLE NO. 5—CONTINUED.

COUNTRY.	No. chemists reporting.	Per cent.											
		New York, 70	Chicago, 95 per cent.	Boston, 8.1 per cent.	Philadelphia, 8.4 per cent.	New Orleans, 1.75 per cent.	Cleveland, 1.35 per cent.	Jacksonville, Fla., .69 per cent.	New Bedford, Mass., .69 per cent.	Edinb., Ill., 1.35 per cent.	Pacific Coast, .77 per cent.	New Haven, 64 per cent.	Washington, .66 per cent.
Kamnet	100	200	100	30,123	600								
Keokuk	100	100	100	100									
Fort	100	7,000	26,400	4,180									
Franklin	100	100,000	337,000	130,553	140,000								
Grand	100	9,300	8,000	27,248	4,793								
Grundy	100	198,137	8,000	130,553	140,000								
Guibire	100	134,319	8,000	27,248	4,793								
Hannock	100	117,868	8,000	27,248	140,000								
Hardin	100	6,821,908	178,553	130,553	11,288								
Harrison	100	9,964	8,000	1,710	32,899								
Howard	100	38,700	8,000	1,710	32,899								
Humboldt	100	120,000	15,000	6,500	38,710								
Iowa	100	68,508	11,700	30,540	100,000								
Jackson	100	22,774	115,000	5,805	7,288								
Jefferson	100	4,502	11,122	1,099,500	2,707								
Johnson	100	8,969	3,969	26,117	26,117								
Jones	100	168,907	1,000	1,099,500	26,117								
Kearney	100	1,170,070	802,896	108,021	108,021								
Kossuth	100	4,609	100,000	108,021	108,021								
Lee	100	600,000	100,000	108,021	108,021								
Lewis	100	30,000	100,000	108,021	108,021								
Lucas	100	87,515	14,125	97,297	70,000								
Madison	100	26,300	14,125	97,297	70,000								
Mahaska	100	36,465	15,140	100,000	54,000								
Marion	100	36,465	15,140	100,000	54,000								
McCall	100	36,465	15,140	100,000	54,000								
Michell	100	922,044	34,000	100,000	54,000								
Monroe	100	922,044	34,000	100,000	54,000								

[illegible]

NOTE.—The states receiving shipments aggregating less than 100,000 pounds are as follows: Rhode Island, 89,337; Kentucky, 43,544; Colorado, 38,895; Montana, 31,286; New Hampshire, 15,731; Massachusetts, 10,927; Ohio, 10,800.

# COMPARATIVE COST OF MANUFACTURING CREAM- ERY BUTTER.

In the creamery report blank sent to all Iowa creameries, reprinted in preceding pages of this report, under No. 17 the following questions were asked: "State the average yearly cost per pound of manufacturing separator butter, including the cost of package, but not the cost of delivering milk." "State the average yearly cost of manufacturing gathered cream butter per pound, including cost of package and the gathering of cream." The interest manifested in this particular part of the creamery system led to the propounding of these questions. Answers were received from 238 separator creameries, located in 56 counties, and 51 gathered cream plants, located in 30 counties. The number reporting is sufficient to make a just comparison between the two methods as regards the cost of manufacturing a pound of butter, but it should be remembered that in the estimates given for gathered cream butter the cost of collecting the cream is included; whereas for separator butter the cost of delivering milk is not so included. As the cost of manufacturing depends to a more or less extent upon the pounds of butter made, the creameries reporting were divided into four classes. In the first class all creameries receiving less than 1,500,000 pounds of milk were placed; those receiving more than 1,500,000 and less than 2,500,000 in class 2; those receiving more than 2,500,000 and less than 3,500,000, class 3, and those receiving more than 3,500,000 pounds of milk are included in class 4. In the classification of the gathered cream, those manufacturing less than 50,000 pounds of butter per year are included in class 1; those manufacturing 50,000 and less than 100,000 pounds in class 2; those manufacturing 100,000 pounds and less than 150,000, class 3, and those manufacturing over 150,000 are included in class 4. Only those creameries reported as covering the entire year were used in this compilation. The following is a recapitulation of the results obtained, in accordance with the classification, together with the average for the 238 separator creameries, and the 51 creameries manufacturing gathered cream butter:

## SEPARATOR BUTTER.

*Cost of manufacturing separator butter per pound, including cost of package, arranged in classes, according to the amount of milk received.*

CLASS.	Number reported.	Total lbs. milk received.	Average cost per creamery.	Average cost per manufacturing.
One .....	66	61,071,512	925,325	.0292
Two .....	45	127,553,272	1,268,556	.0281
Three .....	45	132,908,740	2,353,027	.0280
Four .....	62	318,104,017	5,130,709	.0280
Total .....	218	639,637,541	2,745,097	.0280

## GATHERED CREAM BUTTER.

*Cost of manufacturing gathered cream butter per pound, including the cost of package and the gathering of cream; arranged in classes, according to the number of pounds of butter manufactured.*

CLASS.	Number reported.	Total lbs. butter manufactured.	Average cost per creamery.	Average cost per lb. of gathered cream and manufacturing butter.
One .....	16	497,341	31,077	.0341
Two .....	12	993,949	81,745	.0289
Three .....	7	967,257	133,956	.0331
Four .....	16	4,056,304	253,149	.0290
Total .....	51	6,405,841	124,907	.0330

By a comparison of the separator classes, we find a difference of .80 cents per pound in the cost of manufacturing between Classes No. 1 and 4, and between Classes No. 2 and 3 but a slight difference. This may be accounted for in that when a creamery receives such an amount of milk as to cause the employment of extra help, unless the increase is correspondingly large, the cost of manufacturing a pound of butter will be increased. The gathered cream classes show a difference between Classes No. 2 and 4, of .88 cents and also Class No. 1, with an average of only 31,077 pounds per year, has a lower average cost per pound than Class No. 2, with an average make of 81,745 pounds. This we are unable to account for.

By comparing the cost of the two systems, the separator butter is manufactured at .95 cents per pound less than the gathered cream, the former costing, on an average for the 238 creameries, .0285 cents, and the latter, for 51 creameries, .0331 cents per pound. How far the .95 cents would go toward paying the cost of delivering the milk to the separator cream-



eries is hard to determine, and in fact will depend much upon the conditions and circumstances surrounding each creamery. Where the delivery of milk is done by paid haulers, the average price will be very close to 10 cents per hundred weight, which is about two and one-quarter cents per pound of butter. This would show a difference of about one and one-fourth cents in favor of the gathered cream system, however, since many of the separator creamery patrons deliver their own milk, another complication arises, making comparisons of these two systems all the more difficult.

#### IOWA BUTTER MAKERS.

Table No. 6 contains information pertaining to the butter-makers and other employees concerned in the operation of the creamery. The figures and totals, with the exception of the number of full creameries, are compiled for the year ending May 1, 1897. As it is impossible to know the number of creameries at that date, in making estimates the 773 creameries manufacturing butter and in operation November 1, 1897, are used. Four hundred and eighty-seven creameries, located in 90 counties, reported the average wages paid butter-makers for different seasons of the year, and also for those employed the entire year at a uniform price. Their averages are as follows, arranged by counties: 59 counties report the salaries during the winter season to be \$42.16 per month; the highest average for any one county is \$80 per month, and the lowest \$20. Fifty-nine counties report the averages for summer months to be \$52.95. The highest average for this season is \$35, and the lowest \$30. Eighty-two counties report the average wages paid during the entire year as \$60. The highest average for any county where uniform wages are paid for the entire year is \$30 and the lowest \$28 per month. When the average for the state for different seasons and for the entire year is considered, the results obtained are not surprising; but when the highest and lowest wages for respective periods are compared, the difference is so large that one is at first led to doubt their accuracy, and an explanation may be warranted in this connection. In many cases where the butter-maker receives what may seem high wages, in addition to the ordinary duties of a butter-maker he may have the full or partial management of the creamery, or, in some instances, he is required to furnish extra help at his own expense during the season of the year when the output is

large. On the other hand, many creameries are obliged, on account of light business, to either close their plants during part of the year or reduce expenses to the lowest point, and in these cases the butter-maker, rather than be out of employment, is forced to accept low wages, with the hope that the next season will result in more business and better wages. There are two other factors entering into the wage question to a large extent. The butter-maker who can at all times and under all circumstances produce an article of butter of a uniformly fine quality is sought for and can command a good salary, while others are unprogressive, content with past methods, and satisfied if their goods are taken by the trade, even at a price considerably under the highest quotations. Not to underestimate the importance of the patron doing his part by delivering a fine quality of milk to our creameries, we are of the opinion that with the present and future butter-maker of our state rests to a large degree the maintenance of the reputation that Iowa butter now enjoys. That a higher standard of excellence in the quality of butter will be demanded cannot be questioned, and the future butter-maker, in order to meet these demands, must be a student, as well as worker. He must put brains into his work, and not be content with the fact that the commission merchant receiving his make reports "one-half cent above" realized on his goods. This practice has much to do in influencing the managers and butter-makers to be content with their present condition. In other words, when meeting with these parties at their creameries or elsewhere, and the importance of improving the quality is mentioned, invariably the answer is, "Our butter is all right; we receive one-half cent above." This answer is so uniform that the creameries not receiving this favor may be classed in the minority. Is not this method of doing business entirely too misleading? and does not the extent to which it is used warrant a reform in the present method in market quotations in our trade centers, or the addition to the list of superior quality as is now quoted? The future responsibility of the Iowa butter-maker should be recognized, by both patron and creamery manager, and the wages paid should be commensurate with the responsibility and duties required of him. As a complete separation of the cream from the milk and an exhaustive churning, together with a fine quality of butter, are the essential requirements, the inexperienced and careless butter-maker may be an expensive





TABLE No. 6—CONTINUED.

[illegible]

Legion	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Madison	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Marshall	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Mills	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Monroe	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Monroe	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Muskegon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Muskegon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total
Nashua	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49																																																				

Table No. 7 contains information not hitherto appearing in the annual reports of this department. Five hundred and fourteen creameries and skim stations, out of a total of 823 in operation, report 1,316 separators in use. Of this number, 764 are of the De Laval manufacture, 222 Sharples, 54 Jumbo, and 276 Read. Taking the number reported by 514 creameries as a basis, there would be 2,100 separators used in the total number of creameries and skim stations. Of the 514 reporting on milk testers, 485 use Babcock and 29 the Russian. It will be seen from Table No. 7, that out of 445 reporting on the kinds and amount of fuel used, 80 report using wood, leaving 365 using 38,784 tons of coal. Of this amount 28,444 tons was mined in Iowa, and 10,340 tons was mined outside of the state. Reports were made from all counties in the state having creameries, with the exception of one. Eighty-two per cent of the creameries reported burn coal. At this ratio, 634 of the total number in the state use coal, and 139 use wood. No reliable figures as to the quantity of wood used were obtained. The amount of coal used per creamery would be 106 tons annually, and for the 636 creameries using coal, an estimate upon this basis would require 67,206 tons. The figures also show that about two-thirds of the coal used is Iowa mined, and one-third foreign. From Table No. 7 can be found those counties where Iowa and foreign coal are respectively used. But in this connection it must be considered that the amount given does not represent the amount used, as in but few counties has a report upon this question been received from all the creameries. Those sections of the state where the mining of coal is a leading industry, should be interested in the creamery branch of the dairy industry of our state, as creameries are on the increase and their permanency is undoubtedly established. The quantity of coal used by them annually is worthy of their consideration and their efforts to supply.

TABLE No. 7.

*Creameries and skim stations*—Number operating separators, number and kind of separators and milk testers used, and number tons of Iowa and foreign mined coal used.

[illegible]



TABLE No. 7—CONTINUED.

[illegible][illegible]

## BUTTER FAT AND CHURN YIELD OF MILK.

For the tenth annual report information was obtained and compiled in Table No. 14, pertaining to the per cent of butter fat in milk delivered to our creameries during each month of the year ending May 1, 1896. For the present report, similar information has been gathered and compiled in Table No. 8, so an effort was also made to obtain information relating to the amount of butter produced from 100 pounds of milk, or, in other words, the churn yield of milk. This information will be found in Table No. 9, and is entirely new. Like the table showing butter fat, it is compiled by months for the year ending May 1, 1897. In the compilation of Tables Nos. 8 and 9, only the reports of those creameries operating the entire year and furnishing information for each month were used, this being the only way in which a correct comparison by months can be made. One hundred and thirty creameries, located in 49 counties, made such reports on the per cent of butter fat, and 118 creameries, located in 47 counties, on the per cent of butter, or churn yield. From these tables it will be seen that the average per cent of butter fat for the 130 creameries for the 12 months was 3.80. The table for 1896 shows 3.84. The per cent of butter for the 118 creameries for the same length of time was 4.36. This is a difference of .56 in favor of butter, or an over-run, of 15 per cent. By comparison of the different months, the per cent of over-run can be ascertained for each month, and it will be found that for November it reached 17 per cent and in April 13 per cent. These two tables, for a person interested in this subject, furnish an opportunity for study. The highest per cent of butter fat from any one county was reported from Johnson county, and was 4.03 per cent. The lowest was 3.60 per cent, from 3 counties, namely, Franklin, Henry and Shelby. Thus it will be seen that there was a difference of .43 per cent between the highest and lowest average test of butter fat. From the table of butter yield, the highest per cent was 4.79, from Sioux county, and the lowest 3.98, from Jackson. This is

a difference of .81, or 20 per cent. The two counties here referred to had but one report each, and one might be led to think that the report from Jackson county likely was intended for butter fat, in place of butter, but this is not the case, as the number of pounds of milk received during the year and the average per cent of butter made, equal the total pounds of butter manufactured. The same is true of the creamery in Shelby county. The information contained in the two tables does not especially represent the same creameries, for in many instances a creamery will report on butter fat and not on churn yield, or vice versa. The following is a recapitulation of the monthly averages for butter fat and butter:

MONTH.	Per cent butter fat.	Per cent butter yield.	Overrun.	Per cent overrun.
1896.				
May .....	3.53	4.08	.56	15.3
June .....	3.55	4.04	.51	14.4
July .....	3.62	4.16	.54	15.0
August .....	3.70	4.29	.56	15.0
September .....	3.87	4.45	.58	15.0
October .....	3.94	4.55	.61	16.0
November .....	4.07	4.78	.69	17.0
December .....	4.01	4.62	.61	15.2
1897.				
January .....	3.96	4.51	.55	14.9
February .....	3.86	4.39	.53	13.7
March .....	3.81	4.30	.50	13.0
April .....	3.71	4.20	.49	13.0
Average .....	3.80	4.36	.56	14.7

It is to be regretted that more creameries did not comply with the request to give full information pertaining to this subject, and from excuses received, the keeping of monthly records is greatly neglected. It is advisable, if for no other reason than to compare the results of any creamery one year with another, that complete records of their entire business should be kept. Since the new law requires creamery managers to make reports to the dairy commissioner annually upon blanks furnished, unless records are properly kept this feature cannot be complied with. Following is the compilation by counties.



TABLE No.

*Separator creameries—per cent of butter fat in milk—compiled by counties, showing the average per cent of butter fat in milk for each month and the average for the twelve months ending May 1, 1897, in the different counties, together with the total average per cent for 130 creameries reported, and for each month and for the entire year.*

[illegible]

TABLE No. 9.

*Separator creameries—per cent of butter—compiled by counties, showing the average per cent of butter or churn yield for each month, and the average for the twelve months ending May 1, 1897, in the different counties, together with the total average per cent for 118 creameries reported, and for each month, and for the entire year.*

COUNTIES.	No. examinations held.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	Average.
The state.....	115	1,084	464	1,164	284	464	556	764	624	456	396	316	364	364
Adair.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Allamakee.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Ashtabula.....	14	1,104	474	104	204	1,064	714	764	624	456	396	316	364	364
Black Hawk.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Bremner.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Butler.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Boona Vista.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Butler.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Carroll.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Cedar.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Chickasaw.....	14	1,014	454	634	504	1,064	714	764	624	456	396	316	364	364
Clark.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Clay.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Cummins.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Dallas.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Delaware.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Dodd.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Doyne.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Franklin.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Greene.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Hamilton.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Humboldt.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Jackson.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Johnson.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Jones.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Kearney.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Lincoln.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Luna.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Marathon.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Marquette.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Marshall.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Pocahontas.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto & Marshall & Alto.....	14	1,134	124	184	214	614	444	764	624	456	396	316	364	364
Polk & Pocahontas & Alto & Marshall & Marshall & Alto &														

TABLE No. 10.

Butter shipments—Iowa railway shipments compiled by counties.

COUNTY.	NUMBER OF CREAMERIES FOR YEARS 1896 AND 1897, SHOWING INCREASE OR DECREASE BY COUNTIES.				GROSS POUNDS OF BUTTER SHIPPED OUT OF THE STATE FOR THE YEARS ENDING SEPTEMBER 30, 1896, AND 1897, SHOWING INCREASE OR DECREASE BY COUNTIES.			
	1896.	1897.	Increase.	Decrease.	1896.	1897.	Increase.	Decrease.
The state.....	810	891	81	41	90,367,343	99,547,664	9,180,321	5,113,351
Adair.....	6	9	3	0	496,073	485,808	78,768	0
Adams.....	2	3	1	0	477,317	715,226	237,909	0
Allamakee.....	13	9	0	4	1,281,935	1,810,804	528,870	0
Appanoose.....	11	12	1	0	550,325	717,435	167,110	0
Ashtabula.....	11	12	1	0	2,024,503	2,496,569	472,066	0
Benton.....	23	24	1	0	3,379,179	3,294,239	84,940	0
Black Hawk.....	17	16	0	1	3,884,316	4,742,614	858,298	0
Buena Vista.....	7	12	5	0	1,101,147	1,511,615	410,468	0
Butler.....	14	21	7	0	2,928,120	3,397,313	469,193	0
Calhoun.....	10	12	2	0	1,023,339	1,044,477	21,138	0
Carroll.....	5	7	2	0	980,613	1,085,785	105,172	0
Cass.....	5	7	2	0	234,416	318,507	84,091	0
Cedar.....	4	11	7	0	1,116,959	1,913,450	796,491	0
Cerro Gordo.....	10	10	0	0	1,366,651	1,710,623	343,972	0
Cherokee.....	6	7	1	0	461,534	621,294	159,760	0
Chickasaw.....	19	20	1	0	2,671,115	3,459,397	788,282	0
Clarke.....	4	4	0	0	96,896	298,458	201,562	0
Clay.....	6	9	3	0	1,081,628	593,947	487,681	0
Clayton.....	20	21	1	0	2,266,653	3,451,547	1,184,894	0
Climon.....	10	15	5	0	716,607	698,963	17,644	0
Crawford.....	6	8	2	0	284,829	358,280	73,451	0
Dallas.....	17	16	0	1	1,161,446	968,285	193,161	0
David.....	9	9	0	0	175,193	90,699	84,494	0
Decatur.....	27	27	0	0	14,919	14,170	749	0
Delaware.....	27	27	0	0	3,501,593	3,388,556	113,037	0
Des Moines.....	32	32	0	0	32,098	187,243	155,145	0
Dickinson.....	2	3	1	0	329,735	337,895	8,160	0
Dubuque.....	26	26	0	0	2,313,973	2,828,116	514,143	0
Emmet.....	6	4	0	2	402,336	266,905	135,431	0
Fayette.....	21	21	0	0	2,545,578	3,279,339	733,761	0
Floyd.....	9	9	0	0	915,385	114,112	801,273	0
Franklin.....	9	11	2	0	719,271	731,630	12,359	0
Fremont.....	1	1	0	0	1,976	2,995	1,019	0
Greene.....	16	16	0	0	1,307,284	1,473,100	165,816	0
Grundy.....	6	11	5	0	1,407,590	1,410,995	3,405	0
Guthrie.....	6	11	5	0	878,112	461,236	416,876	0
Hamilton.....	6	10	4	0	2,948,981	2,074,294	874,687	0
Hancock.....	13	8	0	5	325,426	323,606	1,820	0
Hardin.....	9	12	3	0	1,670,994	1,735,701	64,707	0
Harrison.....	3	3	0	0	32,419	179,061	146,642	0
Henry.....	3	3	0	0	73,747	82,445	8,698	0
Howard.....	7	7	0	0	1,741,111	1,700,095	41,016	0
Humboldt.....	10	10	0	0	961,483	944,239	17,244	0
Ia.....	5	5	0	0	231,769	463,378	231,609	0
Iowa.....	1	1	0	0	531,642	35,903	495,739	0
Jackson.....	17	17	0	0	1,651,222	1,846,477	195,255	0
Jasper.....	10	11	1	0	673,190	783,782	110,592	0
Jefferson.....	7	10	3	0	381,592	522,613	141,021	0
Johnson.....	6	6	0	0	245,680	193,610	52,070	0
Keosauqua.....	26	26	0	0	3,102,590	3,771,202	668,612	0
Keokuk.....	3	3	0	0	484,129	315,905	168,224	0
Kossuth.....	10	10	0	0	2,175,399	2,118,619	56,780	0
Lee.....	3	3	0	0	1,056,100	453,790	602,310	0
Linn.....	29	29	0	0	2,473,641	3,298,247	824,606	0
Louis.....	3	3	0	0	61,670	118,275	56,605	0
Lucas.....	2	1	0	1	126,775	73,810	52,965	0
Lyon.....	3	3	0	0	297,220	390,563	93,343	0
Madison.....	2	2	0	0	198,890	298,658	99,768	0
Marshall.....	2	2	0	0	225,000	293,225	68,225	0

## RAILWAY BUTTER SHIPMENTS.

For a number of years the annual reports of this department have contained tables compiled by counties, showing the gross shipments of butter originating in Iowa, and consigned to markets outside of the state. This information is of the most reliable character and is furnished the dairy commissioner upon application, by the proper officials of all the railways operating in the state. From no other source can the condition of the dairy industry be better shown than through a comparison of the shipments from year to year, together with the increase or decrease in the number of creameries in operation during the respective periods. Following is a table showing the shipments of butter from Iowa during the year ending September 30, 1897, together with a comparison of shipments of the previous year, with the increase or decrease by counties, and the number of creameries in operation for the two years and their increase or decrease by counties:



TABLE NO. 10—CONTINUED.

COUNTIES.	NUMBER OF CREAMERIES FOR YEARS 1896 AND 1897, SHOWING INCREASE OR DECREASE BY COUNTIES.			GROSS POUNDS OF BUTTER SHIPPED OUT OF THE STATE FOR THE YEARS ENDING SEPTEMBER 30, 1896 AND 1897, SHOWING INCREASE OR DECREASE BY COUNTIES.			
	1896.	1897.	Increase.	1896.	1897.	Increase.	Decrease.
Marion	4	5	1	296,384	325,689	29,305	70,695
Marshall	2	2	0	920,217	915,479	4,738	54,538
Mills	10	10	0	147,708	14,835	132,873	42,599
Mitchell	1	1	0	1,795,350	2,100,805	305,455	.....
Monona	1	1	0	28,889	53,997	25,107	.....
Monroe	1	1	0	4,175	18,785	14,610	.....
Montgomery	1	1	0	244,133	329,497	85,364	81,795
Muscataine	1	1	0	475,215	303,420	171,795	29,949
O'Brien	1	1	0	672,399	431,060	241,339	.....
Oscola	1	1	0	77,015	104,120	27,105	.....
Page	1	1	0	304,849	397,898	93,049	.....
Palo Alto	1	1	0	2,186,118	1,992,239	193,879	.....
Plymouth	1	1	0	835,475	949,315	113,840	.....
Pocahontas	1	1	0	896,359	859,171	37,188	37,058
Polk	1	1	0	230,515	241,422	20,910	.....
Pottawattamie	1	1	0	673,693	750,522	76,829	.....
Poweshiek	1	1	0	399,568	500,688	101,120	.....
Racine	1	1	0	101,259	103,225	1,966	.....
Ringgold	14	14	0	1,424,833	1,441,747	16,914	.....
Scott	1	1	0	128,273	138,494	10,221	1,969
Shelby	1	1	0	394,838	330,650	64,188	.....
Sioux	1	1	0	914,991	1,021,187	106,196	.....
Story	14	14	0	1,257,115	2,422,437	1,165,322	.....
Tama	1	1	0	699,286	681,450	17,836	.....
Taylor	1	1	0	100,428	255,241	154,813	.....
Union	10	10	0	882,461	1,350,859	468,398	.....
Van Hise	1	1	0	35,785	75,479	39,694	304,938
Vassell	1	1	0	1,404,098	1,009,119	394,979	.....
Warren	1	1	0	55,840	131,309	75,469	.....
Washington	1	1	0	667,180	665,781	1,399	4,415
Wayne	1	1	0	767,494	313,543	453,951	.....
Webster	1	1	0	908,004	912,137	4,133	.....
Winneshiek	14	14	0	1,070,880	1,129,475	58,595	125,406
Winnebago	21	21	0	5,092,798	2,091,505	3,001,293	38,719
Woodbury	1	1	0	1,894,856	1,970,014	75,158	105,165
Worth	1	1	0	1,094,042	1,063,237	30,805	22,385
Wright	4	4	0	851,500	1,397,095	545,595	.....
Total	410	491	81	95,207,243	99,547,684	4,340,441	5,313,251

\*Net increase for year, 4,280,441 pounds.

The above table shows the number of creameries and skim stations to be 891, a net increase over 1896, of 81 creameries. This net increase is made up of an increase of 123 plants in 54 counties, and a decrease of 42 plants in 19 counties. The largest increase made in any one county is that of Woodbury, which in 1896 had none, and now has 8. There is an increase of 5 in each of the following counties: Cedar, Guthrie, Harrison and Wright. Carroll, Page and Pocahontas each have 4 added to their list. Those having the largest decrease are Winneshiek, 9, and Allamakee and Hancock, 4 each. The total gross pounds of butter billed out of the state for the year ending September 30, 1897, was 99,547,684, a net increase over the shipments of 1896, for a corresponding period, of 4,280,441

pounds. Sixty-five counties show an increase of 9,493,692 pounds, and 33 counties a decrease of 5,213,251 pounds. Appanoose county had no shipments during either year. Of the 65 counties having an increase, Story county has the largest, being 1,165,322 pounds. The next largest is Cerro Gordo, with 443,889 pounds. The largest decrease is made in Lee county, which was 582,310 pounds. Clay county shows 485,931 pounds and Wayne county, 453,952 pounds decrease. In the last three counties large quantities of dairy and store butter have been reworked and packed heretofore, and the discontinuing of this to a greater or less extent, may account for the large decrease. Deducting 16 per cent for weight of package, for the gross shipments of 1897, leaves 83,620,081 as the net pounds of butter shipped. The net pounds shipped in 1896 was 71,255,796, and there was a gradual decrease until 1894, when the shipments were but 54,509,417, a decrease of 16,746,379 pounds. This was during the time that the traffic in oleomargarine had practically full sway in most of the leading markets of our country. The increase since 1894 is 29,110,664 net pounds of butter, or 53 per cent.

The largest increase was made during 1896. The favorable conditions for the production of butter, throughout the year, placed the market so high in the quantity shipped, that an increase was not to be expected for a corresponding period, for some time to come. It is now found, however, notwithstanding the partial drouth of the past season and the unfavorable spring months, there has been an increase of 3,587,165 pounds of butter over and above that of 1896. There are now 981 creameries in the state, the largest number that has ever been in operation. This, together with the increase above referred to, warrants the conclusion that our dairy interests are in the best and most prosperous condition yet attained, and a larger number of our citizens are now engaged in this industry, than at any previous time in the history of Iowa. This branch of agriculture is a direct resource to our state, for when we realize that our people receive annually approximately \$15,000,000 for butter shipments to markets outside of the state, and in this transaction the fertility of the soil is in no way affected—unless it may be said that an improvement takes place,—its importance must be apparent to all, and the industry admitted to be second to none. Information similar to that embodied in Table No. 17 was first compiled and published in the tenth annual report of





From this table there will be found a change in the relative positions of many of the counties as regards the total shipments per square mile, when compared with Table No. 17, in the tenth annual report. Those counties shipping 3,000 or more pounds per square mile, are here given according to the rank in shipments per square mile, together with the total number of pounds per square mile shipped, and the total number of pounds per square mile:

Rank.	COUNTY.	Total pounds shipped.	Pounds per sq. mile.
1	Bremer.....	2,768,811	6,386
2	Chickasaw.....	2,914,293	6,790
3	Buchanan.....	3,143,196	5,458
4	Butler.....	3,853,743	4,954
5	Delaware.....	3,853,743	4,791
6	Jones.....	3,663,810	4,624
7	Clayton.....	3,907,809	3,994
8	Dubuque.....	3,382,337	3,967
9	Fayette.....	2,838,644	3,943
10	Mitchell.....	1,794,676	3,730
11	Black Hawk.....	2,088,710	3,626
12	Story.....	3,054,847	3,532
13	Howard.....	1,478,480	3,104
14	Hamilton.....	1,742,382	3,025

In this list, Bremer county still heads the list with 6,386 net pounds shipped per square mile of territory within its borders, which will amount to over \$1,000 annually. Chickasaw county has succeeded Buchanan in second place, still when the total pounds of butter shipped is considered, Buchanan with 3,143,796 net pounds still holds the lead in this respect, and received at a fair estimate \$550,000 for the butter shipments during the past year. Palo Alto county has dropped from the list of those having 3,000 or more pounds per square mile, and Story, with 3,532 pounds per square mile, and Hamilton, 3,025 pounds have advanced to this class.

From Table No. 11, we find that the average net shipments of butter per county was 844,647 pounds, an increase over the previous year of 46,335 pounds, and also that the average pounds per square mile was 1,492, an increase of 64 pounds over that of the previous year.

## IOWA 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 record.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by individual or company.	NAME OF PROPRIETOR, MANAGER, OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, MANAGER, OR MANAGER.	SHIPPING STATION.	BUTTER-MAKER.	Reparation, salted both.	Method of separating cream, or both.	Test.	Dairy commission.
1	Adair County	Adair Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Adair.	.....	Sep'tr.	.....	Test.	.....
2	Adair Hill	Adair Hill Creamery	Ind.	E. M. Lamos	Stuart	Stuart	.....	Sep'tr.	.....	Test.	.....
3	Osoby	Osoby Creamery	Ind.	A. L. Stewart	Fontanella	Fontanella	.....	Sep'tr.	.....	Id.	.....
4	Phik	Phik Creamery	Ind.	A. L. Stewart	Fontanella	Fontanella	.....	Sep'tr.	.....	Id.	.....
5	Fontanella	Blue Grass City Co.	Ind.	A. L. Stewart	Fontanella	Fontanella	.....	Sep'tr.	.....	Id.	.....
6	Greenfield	Greenfield Creamery	Ind.	J. A. Darby	Greenfield	Greenfield	.....	Sep'tr.	.....	Id.	.....
7	Holiday	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Creston	.....	Sep'tr.	.....	Test.	.....
8	North Adair	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Atlantic	.....	Sep'tr.	.....	Test.	.....
9	Orford	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Creston	.....	Sep'tr.	.....	Test.	.....
10	Adams County	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Cornwall	.....	Sep'tr.	.....	Test.	.....
11	Osborne	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Cornwall	.....	Sep'tr.	.....	Test.	.....
12	Carl	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Cornwall	.....	Sep'tr.	.....	Test.	.....
13	Ivoryville	Farmers' Creamery	Co-op.	H. R. Moler, Sec.	Grass	Cornwall	.....	Sep'tr.	.....	Test.	.....
14	Mercer	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Cornwall	.....	Sep'tr.	.....	Test.	.....
15	Nodaway	Elgin Creamery Co.	Ind.	O. Sault, Pres.	Chicago, Ill.	Cornwall	.....	Sep'tr.	.....	Test.	.....

Adair Station.

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Operated by individual or partnership or 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-ering the test or by the hundred.	Dairy commis-sioner's bottle number
16	Adams County Prescott	Continued Prescott R. & C. Assn.	Ind.	F. Brandt, Sec.	Prescott	Prescott	Chas. E. Chawgo	Sep'tr.	Test.	
17	Williamson	Prescott R. & C. Assn.	Ind.	F. Brandt, Sec.	Prescott	Prescott		Sep'tr.	Test.	
18	Dorchester	Dorchester Creamery	Ind.	L. Coppersmith, Sec.	Dorchester	New Albany	H. J. Foss	G. C.		
19	Lansing	Calhoun Creamery	Co-op.	F. Stiro, Pres.	Lansing	Lansing	Geo. Turner	G. C.		
20	Postville	Postville Farmers' Co-operative Creamery	Co-op.	Ellison Orr	Postville	Postville	J. A. Gordon	Sep'tr.	Test.	70
21	Quasdaht	Arctic Spring Creamery	Ind.	J. D. Johnson	Quasdaht	Spring Grove	J. H. Gaare	G. C.		
22	Rossville	Farmers' Co-op. Cr'y Co.	Co-op.	E. W. Stanley, Sec.	Rossville	Rossville	O. N. Hart	Sep'tr.	Test.	
23	Village Creek	Village Creek Cr'y Co.	Co-op.	F. W. Brennan, Pres.	Village Creek	Lansing	K. Munson	Sep'tr.	Test.	
24	Waterville	Farmers' Co-operative and Commercial Cr'y.	Co-op.	A. Asleson, Sec.	Waterville	Waterville	A. Asleson	G. C.		
25	Waukon	Farmers' Waukon Co-operative Creamery	Co-op.	M. Kelly, Pres.	Waukon	Waukon	Jackson Smith	Sep'tr. & G. C.	Test.	1,000
26	Waukon	Ludlow Co-op. Cr'y Co.	Co-op.	A. G. Winter, Sec.	Waukon	Waukon	F. A. Fiet	Sep'tr.	Test.	175
27	Audubon County Audubon	Sharon Creamery	Co-op.	B. Jensen, Sec.	Audubon	Audubon	B. Jensen	Sep'tr.	Test.	
28	Brayton	Oakfield Sep'tr Cr'y Co.	Co-op.	J. Nyman, Sec.	Brayton	Brayton	H. Henriksen	Sep'tr.	Test.	
29	Exira	West Hamlin Separator Creamery Co.	Co-op.	Hans Peterson	Exira	Exira	H. Peterson	Sep'tr.	Test.	
30	Exira	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.	Exira		Sep'tr.	Test.	
31	Hamlin	Blue Grass Sep'tr Cr'y.	Co-op.	R. W. Mullenger	Hamlin	Hamlin	E. Seboonow	Sep'tr.	Test.	1,012
32	Kimballton	Danish Sep'tr Cr'y Co.	Co-op.	P. H. Ingels	Kimballton	Audubon	J. Anderson	Sep'tr.	Test.	
33	Benton County Atkins	Fremont Creamery	Co-op.	George Bromlie Sec.	Atkins	Atkins	O. P. Lake	Sep'tr.	Test.	286
34	Belle Plaine	Springbrook	Ind.	John Newman	Elgin, Ill.	Belle Plaine		Sep'tr.	Test.	
35	Bialstown	Katie's Creamery	Ind.	J. A. Duncalf	Bialstown	Bialstown	Katie A. Duncalf	Sep'tr.	Test.	1,009
36	Mt. Auburn	Mt. Auburn Cr'y Co.	Co-op.	C. Morck, Sec.	Mt. Auburn	Mt. Auburn	O. Morck	Sep'tr.	Test.	
37	Norway	Norway Creamery	Ind.	Wm. Rowse	Norway	Norway	Wm. Rowse	Sep'tr.	Test.	
38	Shellsburg	Shellsburg Creamery	Ind.	W. R. McGregor	Shellsburg	Newhall	W. R. McGregor	S. & G. C.	Hd.	95
39	Shellsburg	Louville	Ind.	W. R. McGregor	Shellsburg	Newhall		S. & G. C.	Hd.	
40	Urbana	Farmers' Co-op. Cr'y Co.	Ind.	A. B. Cramer	Urbana	Center Point	O. M. Fisher	Sep'tr.	Test.	56
41	Van Horne	Van Horne Creamery	Ind.	Geo. Gardiner	Van Horne	Van Horne		S. & G. C.	Test.	908
42	Vinton	Vinton Creamery	Ind.	A. M. Rowe	Vinton	Vinton	Homer Barker	G. C.		
43	Walford	Walford Creamery	Ind.	H. Humphry	Walford	Walford		Sep'tr.	Test.	
44	Watkins	Watkins Creamery	Ind.	E. S. McDonald	Watkins	Watkins	Proprietor	Sep'tr.	Test.	
45	Black Hawk County Benson	Benson Dairy Co.	Co-op.	Wm. Morgan, Sec.	Benson	Benson	Geo. Thayer	Sep'tr.	Test.	650
46	Boise	Mt. Vernon Cr'y Co.	Co-op.	J. E. Randles, Sec.	Boise	Janesville	M. Johnson	Sep'tr.	Test.	
47	Cedar Falls	Black Hawk Creamery	Co-op.	J. C. Filkins, Sec.	Cedar Falls	Cedar Falls	J. E. Smith	Sep'tr.	Test.	151
48	Cedar Falls	Cedar Falls Co-op. G. C.	Co-op.	J. M. Heifer, Sec.	Cedar Falls	Cedar Falls	A. W. Pierce	Sep'tr.	Hd.	80
49	DeWar	Pleasant Val. Dairy As.	Co-op.	W. F. Garrett, Sec.	DeWar	DeWar	W. B. Graham	Sep'tr.	Test.	82
50	Dunkerton	Edwards Creamery	Ind.	Wm. Wroble	Edwards	Dunkerton	S. P. Doty	Sep'tr.	Test.	200
51	Dunkerton	Farmers' Creamery Co.	Co-op.	H. Hoofnagle, Pres.	Dunkerton	Dunkerton	O. G. Alexander	Sep'tr.	Test.	1,002
52	Dunkerton	East Lester Creamery	Co-op.	J. C. Tribon, Sec.	Fairbank	Fairbank	J. F. Dietz	Sep'tr.	Test.	271
53	Eagle Center skinn Stations.	Eagle Center Dairy As.	Co-op.	T. J. Humphrey, Sec.	Eagle Center	Waterloo	Josiah Hill	Sep'tr.	Test.	222



## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual co-operators or by stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-er cream, or both.	Method of recov-ery of the fat or by the test or by the hundred.	Dairy commis-sioner's number.
54	Black Hawk County—Continued.	Union Creamery Co.	Co-op.	A. A. Briggs, Sec.	Finchford	Winslow	A. A. Briggs	Sep'tr.	Test.	1,001
55	Finchford	Gilbertville Dairy A.S.	Co-op.	E. Marion, Sec.	Gilbertville	Washburn	I. L. Chase	Sep'tr.	Test.	658
56	Hudson	Rock Creek Fra. D'y A.S.	Co-op.	James Conry, Pres.	Hudson	Hudson	Thomas Hansen	Sep'tr.	Test.	1,003
57	Hudson	Hudson Co-op. D'y A.S.	Co-op.	D. Bedford, Sec.	Hudson	Hudson	J. W. Burchett	Sep'tr.	Test.	670
58	Jubilee	Co-op Cr'y Co. of Jubilee	Co-op.	H. G. Koob, Sec.	Jubilee	Jubilee	B. Lesires	Sep'tr.	Test.	325
59	La Porte (Grundy Co.)	La Porte Co-op. Cr'y Co.	Co-op.	A. K. Longaker, Pr.	La Porte City (Grundy Co.)	La Porte City (Grundy Co.)	Oscar Harvey	Sep'tr.	Test.	343
60	Reinbeck	Red Bird Cr'y Co.	Co-op.	James Wilson, Pres.	Reinbeck	Reinbeck	S. E. Stevens	Sep'tr.	Test.	680
61	Waterloo	Crain Creek	Ind.	F. A. Riedel	Crain Creek	Waterloo	F. A. Riedel	Sep'tr.	Hd.	131
62	Waterloo	North Star Creamery	Ind.	Fowler Co.	Waterloo	Waterloo	Chas. Wood	Sep'tr.	Test.	
63	Waterloo	Waterloo Creamery	Ind.	Fowler Co.	Waterloo	Waterloo	F. Wightman	Sep'tr.	Test.	
64	Beaver	Beaver Creamery	Ind.	J. Cummings	Beaver	Beaver	F. E. Lewis	S. & G. C.	Test.	
65	Cooper	Renner Bros.	Ind.	Renner Bros.	Grand Junc.			Sep'tr.	Test.	
66	Grand Junc.	Renner Bros.	Ind.	Renner Bros.	Grand Junc.	Grand Junc.	C. S. Renner	Sep'tr.	Test.	
67	Madrid	Madrid	Ind.	M. Laborde	Madrid	Madrid	N. Laborde	Sep'tr.	Test.	111
68	Ogden	Renner's Creamery	Ind.	Renner Bros.	Grand Junc.	Ogden		Sep'tr.	Test.	
69	Renner	Renner's Creamery	Ind.	Renner Bros.	Grand Junc.	Grand Junc.	G. W. Renner	Sep'tr.	Test.	
70	Rosendale, Hamilton Co.	Rosendale Co-op. Cr'y Co.	Co-op.	E. P. Anderson, Pres.	Rosendale, Hamilton Co.	Story City	P. F. Soenke	Sep'tr.	Test.	799
71	Bremer County.	Bremer Creamery Co.	Co-op.	F. C. Kohagen, Sec.	Bremer	Bremer	John Prier	Sep'tr.	Test.	327
72	Bremer	Western Douglas Cr'y	Co-op.	A. Hoppeworth, Sec.	Seigel	Bremer	A. F. Sandler	Sep'tr.	Test.	
73	Denver	Farrington Cr'y Co.	Co-op.	H. Steege, Sec.	Waterloo	Waterloo	P. Haaler	Sep'tr.	Test.	293
74	Denver	First Maxfield Cr'y Co.	Co-op.	Wm. Millies, Sec.	Denver	Waverly	W. McKeen	Sep'tr.	Test.	
75	Frederika	Frederika Cr'y Ass'n	Co-op.	A. Johnston, Pres.	Frederika	Tripoli	F. Finch	Sep'tr.	Test.	
76	Grove Hill	Grove Hill Creamery	Co-op.	C. Shillington, Pres.	Grove Hill	Fairbank	F. D. Daniels	Sep'tr.	Test.	
77	Klinger	Klinger Creamery	Ind.	C. H. Dickman	Klinger	Dunkerton	C. H. Dickman	Sep'tr.	Hd.	
78	Plainfield	Horton Stock Cr'y Co.	Co-op.	A. Cunningham	Plainfield	Plainfield	A. M. Bethke	Sep'tr.	Test.	791
79	Plainfield	Oedar Vale Creamery	Co-op.	T. D. Harrington	Plainfield	Plainfield	C. M. Balsey	Sep'tr.	Hd.	
80	Sumner	Excelsior Creamery Co.	Co-op.	J. J. McConkey	Mentor	Sumner		Sep'tr.		
81	Sumner	Spring Fountain Cr'y Co.	Co-op.	Joe Volker, Sec.	Sumner	Sumner	O. E. Meyerhoff	Sep'tr.	Hd.	
82	Sumner	Sumner Creamery Co.	Co-op.	M. Weacott, Sec.	Sumner	Sumner	B. Winks	Sep'tr.	Hd.	
83	Sumner	Little Valley Creamery	Co-op.	J. Schwake, Sec.	Hack Creek	Sumner	F. M. Zell	Sep'tr.	Hd.	
84	Sumner	Climax Creamery Co.	Co-op.	J. Amoroso, Pres.	Sumner	Sumner	F. Engel	Sep'tr.	Hd.	
85	Tripoli	Seigel Creamery	Co-op.	E. Moeller, Sec.	Tripoli	Tripoli	William True	Sep'tr.	Test.	782
86	Tripoli	Golden Key Creamery	Ind.	William Meyerhoff	Key	Tripoli	H. Meyerhoff	Sep'tr.	Hd.	
87	Tripoli	Fremont Creamery Co.	Co-op.	A. Chopin, Sec.	Tripoli	Tripoli	W. W. Day	Sep'tr.	Test.	768
88	Tripoli	Tripoli Creamery Co.	Co-op.	J. Martin, Sec.	Tripoli	Tripoli	F. Oltrorgre	Sep'tr.	Hd.	
89	Tripoli	Maxfield Creamery Co.	Co-op.	O. Jahnke	Knittel	Tripoli	H. Thies	Sep'tr.	Hd.	
90	Tripoli	Potter's Siding Cr'y	Co-op.	William Bany	Tripoli	Tripoli	W. Stegeman	Sep'tr.	Test.	
91	Tripoli	Wapale Valley Cr'y Co.	Co-op.	B. Tiedt, Sec.	Wapale	Tripoli	Frank Huntley	Sep'tr.	Hd.	150
92	Waverly	Washington Cr'y Co.	Co-op.	E. J. Thies, Sec.	Waverly	Waverly	H. J. Frele	Sep'tr.	Hd.	154
93	Waverly	Artisan Creamery Co.	Co-op.	H. O. Neier, Pres.	Artisan	Waverly	H. A. Grisse	Sep'tr.	Hd.	
94	Waverly	La Fayette Creamery	Ind.	B. Cornforth	Waverly	Waverly	H. Piegors	Sep'tr.	Test.	687

## ELEVENTH ANNUAL REPORT OF THE

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## IOWA CREAMERY LIST--CONTINUED.

Other record	LOCATED AT OR NEAR	NAME OF CREAMERY	Owned by individual, co-op or company	NAME OF PROPRIETOR, SECRETARY OR MANAGER	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER	SHIPPING STATION	NAME OR BUTTER-MAKER	Separation, salted or both	Method of testing milk or by the test or by the number of pounds	Test
95	Braden Co.	Elk & Speed	Ind...	Elliot & Speed	Aurora	Aurora	— Speed	Sept'r	Test	255
96	Braden	Braden Creamery Co.	Co-op	W. W. Bain, Sec	Braden	Braden	H. R. Knapp	Sept'r	Test	140
97	Fairbank	Fairbank Fm's Cr'y Co	Co-op	E. Sanborn, Sec	Fairbank	Fairbank	Martin Higby	Sept'r	Test	110
98	Hannan	Hannan Fm's Cr'y Co	Co-op	J. A. Bruch, Sec	Hannan	Hannan	M. W. Ashby	Sept'r	Test	54
99	Independence	Independence Cr'y	Ind...	Weiss-Shillinglaw	Independence	Independence	James McElride	Sept'r	Test	750
100	Jesup	Jesup Creamery Co.	Co-op	James Dalton, Sec	Jesup	Jesup	C. R. Fuller	Sept'r	Test	174
101	Lamont	Lamont Creamery Co.	Co-op	J. T. Frezona, Sec	Lamont	Lamont	W. Szaro	Sept'r	Test	755
102	Oterville	Oterville Creamery Co.	Co-op	C. L. Bright, Sec	Oterville	Independence	Martin Yundt	Sept'r	Test	187
103	Rowley	Rowley Creamery Co.	Co-op	W. C. Brady, Sec	Rowley	Rowley	John Palmer	Sept'r	Test	167
104	Stanley	Stanley Creamery Co.	Co-op	John Elliott	Lamont	Stanley	F. W. Strong	Sept'r	Test	715
105	Vista	Vista Creamery Co.	Co-op	A. G. Brown, Sec	Vista	Independence	Wm. Frank	Sept'r	Test	173
106	Walker	Homerville Creamery	Ind...	W. W. Wilde	Walker	Walker	E. J. Font	Sept'r	Test	187
107	Winthrop	Winthrop Creamery	Ind...	Henry Plank	Winthrop	Winthrop	H. Plank	Sept'r	Test	173
108	Winthrop	Quasagashon	Ind...	Henry Plank	Winthrop	Winthrop	D. E. Coffin	Sept'r	Test	173
109	Winthrop	Gold Coin Creamery	Ind...	D. E. Coffin	Winthrop	Winthrop	D. E. Coffin	Sept'r	Test	173
110	Rhodes Vista Creamery	Alta Creamery	Ind...	C. P. Corneliusen & Bro	Alta	Alta	R. K. Gurnsey	Sept'r	Test	213
111	Marathon	Farmers' Co-op Cr'y	Co-op	E. R. Stangland, Sec	Marathon	Marathon	P. O. Understrom	Sept'r	Test	1,069
112	Marathon	Fairfield Creamery Co.	Co-op	C. G. England, Sec	Marathon	Marathon	J. A. Smith	Sept'r	Test	30
113	Newell	Coon River Co-op Cr'y	Co-op	Hans Kruse, Sec	Newell	Newell	P. C. Flaetgen & Co	Sept'r	Test	177
114	Newell	Newell Creamery	Ind...	C. Nielson	Newell	Newell	Geo. Ellison	Sept'r	Test	253
115	Newell	Eden	Ind...	G. Nielson	Newell	Newell	—	Sept'r	Test	—
116	Newell	Brown	Ind...	G. Nielson	Newell	Newell	—	Sept'r	Test	—
117	Peterson, Clay county	Crescent	Ind...	Collins & Jordan	Peterson	Peterson	C. H. Jordan	Sept'r	Id.	—
118	Sioux Rapids	Sioux Rapids Creamery	Ind...	E. D. Peck	Sioux Rapids	Sioux Rapids	E. D. Peck	Sept'r	Test	—
119	Storm Lake	Storm Lake Creamery	Ind...	Huck Bros.	Storm Lake	Storm Lake	Chas. Luck	Sept'r	Id.	—
120	Butler Center	Northern West Pt. Cr'y	Co-op	H. Dehn	Greene	Greene	W. Wadeth	Sept'r	Id.	—
121	Albion	Albion	Ind...	Paterson Bros	Aplington	Aplington	H. Paterson	Sept'r	Id.	17
122	Aplington	Hillsville Creamery	Ind...	James P. Johnston	Hillsville	Brison	—	Sept'r	Id.	—
123	Aplington	Monroe Central Cr'y	Co-op	A. Outjes, Sec	Aplington	Aplington	W. Lenius	Sept'r	Id.	—
124	Austinville	White Rose Creamery	Ind...	Paterson, Bode Bros	Austinville	Austinville	Sam'l Paterson	Sept'r	Id.	—
125	Bristow	Claver Lawn	Co-op	J. G. Du Bois, Pres	Bristow	Bristow	E. E. Jones	Sept'r	Test	42
126	Bristow	Ardenale	Co-op	J. G. Du Bois, Pres	Bristow	Bristow	H. O. Goodrich	Sept'r	Test	—
127	Butler Center	Butler Center Cr'y	Ind...	W. J. Daniels	Butler Center	Alison	H. O. Goodrich	Sept'r	Test	20
128	Clarksville	Oak Grove Creamery	Co-op	H. W. Kichen, Mgr	Clarksville	Clarksville	H. W. Kichen	S & O C	Test	1,014
129	Coater	Coater Creamery	Ind...	E. L. Beard	Deonah	Parkerburg	James Santee	Sept'r	Test	506
130	Durmont	Glittersville Creamery	Co-op	James Santee, Sec	Glittersville	Durmont	James Santee	Sept'r	Test	—
131	Greene	Coldwater Co-op D. A.	Stock	M. Wilson	Greene	Greene	L. J. Sargent	S & O C	Test	—
132	New Hartford	Beaver Creamery Co.	Co-op	D. L. Harbut, Sec	New Hartford	New Hartford	J. A. Ransay	Sept'r	Test	192
133	New Hartford	Albion Creamery	Co-op	E. S. Philo	New Hartford	New Hartford	O. L. Courba	Sept'r	Id.	1,210
134	New Hartford	Crescent Creamery	Co-op	L. W. Jansson, Pres	New Hartford	New Hartford	George Palmer	Sept'r	Test	—
135	New Hartford	Walt & Curtis	Ind...	Walt & Curtis	New Hartford	New Hartford	W. G. Curtis	Sept'r	Id.	—



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Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gald- ing cream, or both.	Method of receiving the test or by the hundred.	Dairy commis- sioner's number.
136	Butler County Parkersburg...	Continued. Parkersburg Creamery...	Ind...	Codner & Palmer...	Parkersburg...	Parkersburg...	W. H. Codner...	Sept'r...	Hd...	762
137	Shell Rock...	Shell Rock Creamery...	Stock	H. H. Goodsell, Sec.	Shell Rock...	Shell Rock...	H. A. Miller...	Sept'r...	Test...	89
138	Shell Rock...	Victory Creamery...	Co-op	C. S. Colburn, Pres.	Waverly...	Shell Rock...	H. Woodcock...	Sept'r...	Test...	244
139	Shell Rock...	Star Co-op. Creamery...	Co-op	L. H. Mead...	Shell Rock...	Shell Rock...	F. Beal...	Sept'r...	Hd...	
140	Shell Rock...	Columbia Creamery...	Ind...	Isaac Hall...	Coster...	Shell Rock...	Isaac Hall...	Sept'r...	Hd...	
141	Calhoun County Crandall...	Williams Creamery...	Ind...	P. J. Beswick...	Fonda...	Fonda...	J. L. Allen...	Sept'r...	Test...	311
142	Lake City...	Elm Grove...	Ind...	J. J. Fitzsimons...	Elm Grove...	Lake City...	J. J. Fitzsimons...	Sept'r...	Test...	692
143	Manson...	Manson Creamery...	Ind...	G. B. Moon, Mgr.	Manson...	Manson...	G. B. Moon...	Sept'r...	Test...	
144	Pomeroy...	Twin Lakes Co-op. Cr'y.	Co-op	C. J. Hartling, Sec.	Pomeroy...	Pomeroy...	O. Olsen...	Sept'r...	Hd...	328
145	Pomeroy...	Butler Cr'y Co-op. Cr'y.	Co-op	F. H. Meyer, Pres.	Pomeroy...	Knoke...	E. E. Dodge...	Sept'r...	Test...	
146	Pomeroy...	Pomeroy Co-op. Cr'y.	Co-op	E. C. M. Brienholz...	Pomeroy...	Pomeroy...		Sept'r...	Test...	896
147	Rockwell City...	Rockwell Cr'y Butter Co.	Ind...	Blow Bros...	Rockwell City...	Rockwell City...		Sept'r...	Test...	
148	Carroll County Arcadia...	Golden Star Creamery...	Co-op	W. F. Erp, Sec.	Arcadia...	Arcadia...		Sept'r...	Test...	
149	Breda...	Breda...	Ind...	Ed. Rehker...	Arcadia...	Arcadia...	A. Jackson...	Sept'r...	Hd...	360
150	Dedham...	Dedham...	Ind...	H. L. Fest...	Dedham...	Dedham...	H. L. Fest...	Sept'r...	Test...	1,037
151	Coon Rapids...	Dedham...	Ind...	H. L. Fest...	Dedham...			Sept'r...	Test...	
152	Glidden...	Glidden...	Ind...	W. R. Howard...	Glidden...	Glidden...	W. R. Howard...	Sept'r...	Test...	

153	Halbur...	Excelsior...	Ind...	Hoelker Bros...	Halbur...	Halbur...	F. Hoelker...	Sept'r...	Test...	294
154	Halbur...	Rose Valley...	Ind...	C. Kohorst...	Roselle...	Halbur...	C. Kohorst...	Sept'r...	Hd...	
155	Halbur...	Halbur...	Ind...	Hoelker Bros...	Manning...			Sept'r...	Test...	
156	Manning...	Manning...	Ind...	Hoelker Bros...	Manning...	Manning...	W. F. Miller...	S & G. O.	Hd...	
157	Mt. Carmel...	Mt. Carmel...	Ind...	Ed. Rehker...	Arcadia...	Breda...	W. Hiners...	Sept'r...	Hd...	
158	Templeton...	Templeton Cr'y Co...	Co-op	H. Fangman...	Templeton...	Templeton...	M. J. Wagner...	S & G. O.	Hd...	
159	Willey...	Willey...	Ind...	B. Gresteman...	Willey...	Dedham...	Wm. Witte...	Sept'r...	Test...	889
160	Cass County Atlantic...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...	Atlantic...	Louis Schack...	Sept'r...	Test...	
161	Lewis...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...			Sept'r...	Test...	
162	Lyman...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...			Sept'r...	Test...	
163	Marne...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...			Sept'r...	Test...	
164	Massena...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...			Sept'r...	Test...	
165	Massena...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...			Sept'r...	Test...	
166	Wiota...	Elgin Creamery Co...	Ind...	O. Sands, Pres.	Chicago, Ill...			Sept'r...	Test...	
167	Cedar County Durant...	Durant B & C Assn...	Stock	C. Sorgenfrey, Sec.	Durant...	Durant...	F. Puck...	S & G. O.	Hd...	
168	Bennett...	Golden Star Creamery...	Ind...	A. Hinrichs & Co...	Lowden...	Bennett...	W. H. Kroeger...	S & G. O.	Hd...	117
169	Bennett, No. 1...	Golden Star Creamery...	Ind...	A. Hinrichs & Co...	Lowden...			S & G. O.	Hd...	
170	Bennett, No. 2...	Golden Star Creamery...	Ind...	A. Hinrichs & Co...	Lowden...			S & G. O.	Hd...	
171	Center Dale...	Center Dale...	Ind...	L. B. Pickering...	W. Liberty-Muscatine Co			Sept'r...	Test...	
172	Clarence...	Clarence...	Ind...	C. W. Singlehurst...	Elgin, Ill...	Clarence...	O. L. Woodling...	G. C.		
173	Clarence...	Cedar...	Ind...	H. L. Dean...	Tipton...	Clarence...		G. C.		
174	Lowden...	Union Farmers...	Co-op	Charles Reinking...	Lowden...	Clarence...	Henry Struck...	S & G. O.	Test...	726
175	Springdale...	Hopewell Creamery...	Ind...	C. G. Eves...	West Branch...	West Branch...	C. G. Eves...	Sept'r...	Test...	41

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\*Skim Stations.

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Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by individual co-operative or company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-cream, or both.	Method of receiving the test or by the hundred.	Dairy commission number.	Sample bottle number.
176	Cedar County Springdale.	Continued. Hopewell Creamery.	Ind.	C. G. Eves.	West Branch.			Sep'tr.	Test.		
177	Tipton	Cedar Creamery	Ind.	H. L. Dean	Tipton	Tipton	Wilber Johnson	G. C.			
178	Cerro Gordo County Clear Lake	Clear Lake	Ind.	S. W. Kennedy	Clear Lake	Clear Lake	G. W. Kennedy	Sep'tr.	Test.	113	
179	Mason City	Mason City Creamery	Ind.	H. F. Turner	Mason City	Mason City	L. C. Crogow	Sep'tr.	Test.	200	
180	Portland	Portland	Ind.	W. F. Kehs	Portland	Portland	A. J. Mitchell	Sep'tr.	Test.	66	
181	Rock Falls	Rock Falls	Co-op.	H. F. Gilder	Rock Falls	Rock Falls	Gilbert Oleson	Sep'tr.	Test.		
182	Rock Falls	Mayflower	Co-op.	J. F. Cochoancour	Rock Falls	Rock Falls	J. F. Cochoancour	S. & G. C.	Test.	135	
183	Rock Falls	Owen Center	Ind.	Fish & Colvin	Rockford	Rockford	C. F. Fish	Sep'tr.	Test.		
184	Rockwell	Rockwell	Ind.	Lakins & Gault	Rockwell	Rockwell	J. L. Lakins	Sep'tr.	Test.	291	
185	Rockwell	Rockwell	Co-op.	J. Gerber, Sec.	Rockwell	Rockwell	J. Gerber	Sep'tr.	Test.		
186	Swaedale	Pleasant Valley	Ind.	F. J. Ford	Swaedale	Swaedale	T. J. Ford	S. & G. C.	Test.		
187	Thornton	Thornton	Ind.	George W. Kennedy	Thornton	Thornton	J. H. Clark	Sep'tr.	Test.	776	
188	Ventura	Model Co-op. D. A.	Co-op.	W. Specht, Sec.	Ventura	Ventura	John Ward	Sep'tr.	Test.		
189	Cherokee County Aurelia	Aurelia	Ind.	Kalrtzaw & Matson	Aurelia	Aurelia	P. Matson	Sep'tr.	Test.	356	
190	Cleghorn	Cleghorn Creamery	Ind.	Shenralt Bros.	Rock Valley	Cleghorn		Sep'tr.	Test.		
191	Larrabee	Larrabee	Ind.	Alex. Younger	Larrabee	Larrabee		Sep'tr.	Test.		
192	Marcus	Marcus	Ind.	Skewis & Likens	Marcus	Marcus	S. S. Likens	Sep'tr.	Test.		

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193	Meriden	Meriden	Ind.	O. C. Adams	Meriden	Meriden	O. C. Adam	Sep'tr.	Test.	1,021	
194	Quimby	Shaul & Sanford's	Ind.	Shaul & Sanford	Quimby	Quimby	A. J. Sanford	Sep'tr.	Test.		
195	Washta	Washta Creamery Co.	Co-op.	A. A. Fuller, Sec.	Washta			Sep'tr.	Test.		
196	Chitauque County Alta Vista	Alta Vista Farmers' Creamery Ass'n.	Co-op.	Wm. Vick, Sec.	Alta Vista	Alta Vista	C. Clapper	Sep'tr.	Test.	65	
197	Bassett	Clover Dale	Co-op.	L. J. Young, Sec.	Bassett	Bassett	S. Butler	Sep'tr.	Test.	618	
198	Boyd	Boyd Farmers' Cr'y	Co-op.	Geo. Brown, Sec.	Boyd	Boyd		Sep'tr.	Test.		
199	Deerfield	Deerfield	Co-op.	J. W. Kane, Sec.	Deerfield	Alta Vista	Chas. Meader	Sep'tr.	Test.	475	
200	Devon	Devon F'm's Cr'y Ass'n	Co-op.	E. P. Sheffield, Sec.	New Hampton	Devon	Dan Hieser	Sep'tr.	Test.	301	
201	Fredericksburg	Dresden Creamery	Ind.	J. H. Kolthoff, Mgr.	Williamstown	New Hampton	W. Struble	Sep'tr.	Test.		
202	Fredericksburg	Fredericksburg But. Fy	Co-op.	Wm. Bee, Sec.	Fredericksburg	Fredericksburg	E. F. Beebe	Sep'tr.	Test.	184	
203	Ionia	Ionia Farmers' Cr'y Co.	Co-op.	J. W. Cogley, Sec.	Ionia	Ionia	P. N. Williams	Sep'tr.	Test.	168	
204	Jerico	Jerico Creamery	Co-op.	W. F. Reed, Sec.	Jerico	New Hampton	Jac. F. Whaler	Sep'tr.	Test.	886	
205	Lawler	Jacksonville Creamery	Co-op.	C. E. Pierce, Sec.	Lawler	New Hampton	R. E. White	Sep'tr.	Test.		
206	Lawler	Lawler Creamery Ass'n	Co-op.	H. M. Kout, Sec.	Lawler	Lawler	Jno. A. Sullivan	Sep'tr.	Test.	194	
207	Lawler	Little Turkey Cr'y As.	Co-op.	W. G. Makepeace, Sec.	Little Turkey	Lawler	Jno. A. Sullivan	Sep'tr.	Test.	284	
208	Nashua	Fremont Creamery Co.	Co-op.	E. Lehman, Sec.	Prosper	Nashua	W. J. Simons	Sep'tr.	Test.	645	
209	Nashua	Moody-Sharpley Cr'y	Ind.	S. W. McKee	Nashua	Nashua	G. C.				
210	Nashua	Nashua Butter Co.	Ind.	S. B. Blair, Manager.	Nashua	Nashua		Sep'tr.	Test.	630	
211	Nashua	Republic Co-op Cr'y Co.	Co-op.	J. Caldwell, Sec.	Republic	Nashua	E. Richards	Sep'tr.	Test.		
212	New Hampton	New Hampton	Ind.	J. H. Kolthoff	Williamstown	New Hampton	P. H. Ward	Sep'tr.	Test.	20	
213	Washington	N. Washington F'm's Creamery Ass'n	Co-op.	Geo. Rudolph, Sec.	Washington	Devon	A. W. Thierlicher	Sep'tr.	Test.	997	
214	Williamstown	Williamstown Cr'y	Ind.	J. H. Kolthoff, Prop.	Williamstown	New Hampton	F. G. Kolthoff	Sep'tr.	Test.	15	
215	Williamstown	Williamstown Cr'y As.	Co-op.	H. H. Bailey, Pres.	Williamstown	New Hampton	W. R. Leighton	Sep'tr.	Test.		

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Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual, co-operative or at Co. company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MARKER.	Separator, skimmer, creamer, or both.	Method of weighing milk, or by the hundred, or by the hundred.	Dairy commission number.
216	Clarke County Murray	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.	Murray	James Currie.	Sep'tr.	Test.	
217	Murray	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.	
218	Hopeville	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.	
219	Woodburn	Woodburn Cr'y Co.	Ind.	C. O. Mohler.	Woodburn	Woodburn	C. O. Mohler.	Sep'tr.	Test.	718
220	Clay County. Dickens	Dickens Creamery	Ind.	C. W. Parsons, Mgr.	Dickens	Dickens	C. W. Parsons.	Sep'tr.	Test.	1,058
221	Dickens	Stoux Valley Cr'y.	Ind.	C. W. Parsons, Mgr.	Dickens	Dickens	A. Vavrichek.	Sep'tr.	Test.	1,059
222	Everly	Spring Creek	Co-op.	O. Peterson, Sec.	Everly	Everly	C. Peterson	Sep'tr.	Test.	79
223	Postoria	Postoria Creamery	Stock.	Frank Riley, Sec.	Postoria	Postoria	H. A. Shillenb'g'r	Sep'tr.	Test.	1,134
224	Marathon	Mud Lake Cr'y Co.	Ind.	Wesche Bros.	Marathon	Marathon	Chas. Baker.	Sep'tr.	Test.	375
225	Peterson	Star	Ind.	W. L. Beach.	Willow Creek.	Peterson	Ira Stewart.	Sep'tr.	Test.	787
226	Spencer	Elverton Creamery Co.	Ind.	A. J. Paddock.	Spencer	Spencer	O. B. Ross.	Sep'tr.	Test.	282
227	Spencer	Spencer Creamery	Ind.	Lauck Bros.	Spencer	Spencer	Geo. Mitchell.	Sep'tr.	Test.	1,147
228	Spencer	Summit	Ind.	A. D. Lauck.	Spencer	Spencer	W. A. Lauck	Sep'tr.	Test.	1,148
229	Clayton County Communa	Communa Cr'y Ass'n.	Co-op.	H. Wistrick, Sec.	Communa	Littleport	George Gould.	Sep'tr.	Test.	729
230	Edgewood	Bear Creek	Ind.	H. F. Berger.	Edgewood	Edgewood	Henry Walde.	Sep'tr.	Test.	324
231	Edgewood	Fidelity	Ind.	H. F. Berger.	Edgewood	Edgewood	E. J. Whipple.	Sep'tr.	Test.	338
232	Elkader	Highland Cr'y Ass'n.	Co-op.	H. Olesen, Sec.	Elkader	Elkader	D. Whipple.	Sep'tr.	Test.	188
233	Elkader	Elkader	Ind.	A. O. Elvidge.	Elkader	Elkader	Harvey Clough.	Sep'tr.	Test.	
234	Elkport	Elkport	Ind.	A. O. Elvidge.	Elkader	Elkport	Ole Hauge	Sep'tr.	Test.	
235	Farmersburg	Farmersburg Cr'y Co.	Co-op.	G. F. Meler, Sec.	Farmersburg	Farmersburg	F. Daubenb'g'r	Sep'tr.	Test.	1,005
236	Garnaville	Garnaville Fm'r's Cr'y.	Co-op.	E. W. Kregel, Sec.	Garnaville	Clayton	J. L. Clark.	Sep'tr.	Test.	199
237	Glad	Glad	Ind.	A. O. Elvidge.	Elkader	Freelich	L. Bernatz	Sep'tr.	Test.	
238	Gauder	Clermont Valley	Co-op.	F. F. Ferguson	Clermont, Fayette county			Sep'tr.	Test.	
239	Littleport	Littleport	Ind.	F. T. Pilkington.	Littleport	Littleport	A. B. Jones	Sep'tr.	Test.	
240	Luana	Luana Farmers' Cr'y.	Co-op.	Emil Pufahl, Sec.	Luana	Luana	W. S. Gould	Sep'tr.	Test.	27
241	McGregor	McGregor Creamery	Co-op.	W. I. Knowles, Sec.	McGregor	McGregor	C. C. Corlett	Sep'tr.	Test.	299
242	Mederville	Mederville Creamery	Ind.	Wm. Brinkhaus	Mederville	Mederville	Lew Goodwin.	Sep'tr.	Test.	
243	Osborne	Osborne	Ind.	A. O. Elvidge	Elkader	Osborne	A. H. Peacock	Sep'tr.	Test.	182
244	Osterdock	Osterdock Creamery Co.	Co-op.	E. A. Bush, Sec.	Osterdock	Osterdock	W. C. Wamsley.	Sep'tr.	Test.	367
245	Read	Read Creamery	Stock.	W. W. Wilke, Sec.	Elkader	Elkader	C. G. Smith.	Sep'tr.	Test.	199
246	St. Olaf	St. Olaf	Ind.	A. O. Elvidge	Elkader	St. Olaf	Henry Hanson.	Sep'tr.	Test.	161
247	Strawberry Pt.	Strawberry Pt. F's Ass'n	Ind.	A. R. Currier, Sec.	Strawberry Pt.	Strawberry Pt.	H. E. Swartz.	Sep'tr.	Test.	678
248	Volga City	Volga City F. Op. Co.	Co-op.	G. A. Cummings, Sec.	Volga City	Volga	Joe Jones	Sep'tr.	Test.	325
249	Watson	Blue Grass Creamery	Co-op.	John Geraghty, Sec.	Watson	Monona	E. L. Geno	Sep'tr.	Test.	80
250	Clinton County Andover	Springbrook	Ind.	John Newman & Co.	Elgin, Ill.	Andover		Sep'tr.	Test.	792
251	Brown, No. 1.	Springbrook	Ind.	J. Newman & Co.	Elgin, Ill.			Sep'tr.	Test.	
252	Brown, No. 2.	Springbrook	Ind.	J. Newman & Co.	Elgin, Ill.			Sep'tr.	Test.	
253	Charlotte	Springbrook	Ind.	J. Newman & Co.	Elgin, Ill.	Charlotte		Sep'tr.	Test.	642
254	Delmar	Springbrook	Ind.	J. Newman & Co.	Elgin, Ill.	Delmar		Sep'tr.	Test.	353
255	Elwood	Springbrook	Ind.	J. Newman & Co.	Elgin, Ill.	Elwood		Sep'tr.	Test.	795

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Office number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by Ind. or Co-op.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS FOR RECEIVING TARY OR MANAGER.	SHEDDING STATION.	NAME OF BUTTER-MAKER.	Reputation, rating or both.	Method of treating the milk—by the test or by the hundred.	Dairy count—bottle number.
256	Clinton County, Laet. Nation, No. 2.	Continued. aDiamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.	Monticello.	.....	Sept'r.	Test.	110
257	Delmar Junction, No. 30.	aDiamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.	Monticello.	.....	Sept'r.	Test.	111
258	Grand Mount.	Grand Mount C. C. Co.	Co-op.	C. J. Schuster, Sec.	Grand Mount.	.....	Henry Botter.	Sept'r.	Hd.	112
259	Buena Vista.	Grand Mount C. C. Co.	Co-op.	C. J. Schuster, Sec.	Grand Mount.	.....	.....	Sept'r.	Hd.	113
260	Low Moor.	Springbrook.	Ind.	J. Newman & Co.	Elgin, Ill.	Low Moor.	.....	Sept'r.	Test.	114
261	Quincy.	Springbrook.	Ind.	J. Newman & Co.	Elgin, Ill.	Quincy.	.....	Sept'r.	Test.	115
262	Smithtown, No. 3.	aDiamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.	.....	.....	Sept'r.	Test.	116
263	South Grove, No. 4.	aDiamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.	.....	.....	Sept'r.	Test.	117
264	Wetmore, No. 5.	Springbrook.	Ind.	J. Newman & Co.	Elgin, Ill.	.....	Monroe M. Black.	Sept'r.	Test.	118
265	Charter Oak.	Charter Oak Cr'y Co.	Co-op.	G. Fred Pines.	Charter Oak.	.....	.....	Sept'r.	Test.	119
266	Denison.	Denison Creamery.	Ind.	C. Elmer.	Denison.	.....	C. E. Craft.	Sept'r.	Test.	120
267	Holmes.	Denison Creamery.	Ind.	C. Elmer.	Denison.	.....	.....	Sept'r.	Test.	121
268	Kiron.	Stockholm.	Ind.	K. Mattson.	Kiron.	Osborn.	.....	Sept'r.	Hd.	122
269	Kiron.	oOtto Valley.	Ind.	K. Mattson.	Kiron.	.....	.....	Sept'r.	Hd.	123
270	West Side.	Hayes Township Cr'y.	Ind.	W. H. Prater, Jr.	West Side.	West Side.	Stephen Jans.	Sept'r.	Test.	124

271	A-pluwall.	Hayes Township Cr'y.	Ind.	W. H. Prater, Jr.	West Side.	Manilla.	Stephen Jans.	Sept'r.	Test.	125
272	Manilla.	Hayes Township Cr'y.	Ind.	W. H. Prater, Jr.	West Side.	Manilla.	Stephen Jans.	Sept'r.	Test.	126
273	Dallas Center.	Dallas Center.	Co-op.	A. J. Wis.	Dallas Center.	Dallas Center.	W. H. Hall.	Sept'r.	Test.	127
274	Dexter.	Dexter Creamery.	Ind.	K. C. Pierce.	Dexter.	Dexter.	H. F. Pierce.	Sept'r.	Test.	128
275	Ferry.	Red Star.	Ind.	J. Moody.	Perry.	Perry.	J. M. Moody.	Sept'r.	Test.	129
276	Van Meter.	Zion.	Ind.	Wm. Zeman.	Van Meter.	Van Meter.	R. C. Shook.	Sept'r.	Test.	130
277	Wauke.	Wauke Co-op. Cr'y.	Co-op.	O. E. Hink, Sec.	Wauke.	Wauke.	L. E. Winn.	Sept'r.	Test.	131
278	Woodward.	Woodward Creamery.	Ind.	H. P. Caloney.	Woodward.	Woodward.	H. P. Caloney.	Sept'r.	Test.	132
279	Bloomfield.	Bloomfield.	Ind.	W. H. Davis.	Bloomfield.	Bloomfield.	J. L. Herman.	Sept'r.	Test.	133
280	Floris.	C. B. Caldwell & Son.	Ind.	C. B. Caldwell & Son.	Floris.	Floris.	W. B. Caldwell.	Sept'r.	Test.	134
281	Palsak.	Palsak.	Ind.	J. J. Miller.	Palsak.	Palsak.	W. E. Hoyer.	S. A. G. C. Test.	Test.	135
282	Deodar County.	Grand River R. & C. Pact.	Stock.	P. Griffin, Sec.	Grand River.	Grand River.	Fred Taylor.	Sept'r.	Test.	136
283	Grand River.	aHamilton Creamery.	Ind.	F. G. Hyde, Mgr.	Hamilton, Wyo. Co.	Hamilton, Wyo. Co.	.....	Sept'r.	Test.	137
284	Leroy.	aHamilton Creamery.	Ind.	F. G. Hyde, Mgr.	Hamilton, Wyo. Co.	Hamilton, Wyo. Co.	.....	Sept'r.	Test.	138
285	Adams.	Adams Creamery.	Stock.	F. L. Carpenter, Sec.	Adams.	Adams.	E. M. Newcomb.	Sept'r.	Test.	139
286	Colinsburg.	Colinsburg Creamery.	Co-op.	R. C. Curtis.	Colinsburg.	Colinsburg.	A. Landis, Jr.	Sept'r.	Test.	140
287	Delaware.	Delaware Creamery Co.	Co-op.	C. A. Pierce.	Delaware.	Delaware.	P. F. Madden.	Sept'r.	Test.	141
288	Delaware No. 14.	Delaware Creamery Co.	Co-op.	Simpson, Mcl. & Co.	Boston, Mass.	Monticello.	.....	Sept'r.	Test.	142
289	Delhi.	Silver Spring Creamery.	Co-op.	H. F. Boyer.	Delhi.	Delhi.	Chas. Howard.	Sept'r.	Test.	143
290	Dundee.	Dundee.	Ind.	H. F. Boyer.	Dundee.	Dundee.	Geo. Briggs.	Sept'r.	Test.	144
291	Earville.	Earville Edge.	Ind.	J. M. Dunn & Co.	Earville.	Earville.	J. M. Dunn.	Sept'r.	Test.	145
292	Earville.	Jas. Henderson & Sons.	Ind.	J. Henderson & Sons.	Earville.	Earville.	C. M. Vols.	Sept'r.	Test.	146
293	Earville.	Jas. Henderson & Sons.	Ind.	J. Henderson & Sons.	Earville.	Earville.	C. M. Vols.	Sept'r.	Test.	147
294	Harold Green.	Harold Green.	Ind.	Frank Dickey Co.	Harold Green.	Harold Green.	F. H. Hoston.	Sept'r.	Test.	148



## IOWA CREAMERY LIST—CONTINUED.

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Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by individual or partnership or company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, galth, cream, or both.	Method of receiving milk—by the test or by the separator.	Number of test-bottles.
293	Delaware Co. Hazel Green.	Ind.—Continued. #Broadway.	Ind.	Frank Dickey Co.	Hazel Green.			Sep'tr.	Test.	
294	Hopkinton.	Pleasant Valley.	Ind.	C. A. Riddle.	Hopkinton.	Hopkinton.	C. A. Riddle.	Sep'tr.	Test.	870
295	Hopkinton.	Hopkinton Co-op. Cr'y.	Co-op.	M. L. McGlade, Sec.	Hopkinton.	Hopkinton.	I. H. Griffith.	Sep'tr.	Test.	794
296	Hopkinton.	Keystone.	Ind.	J. W. Merrill.	Cedar Falls.	Hopkinton.	L. B. Burnham.	Sep'tr.	Test.	
297	Manchester.	Spring Branch Cr'y.	Co-op.	W. J. Davis, Sec.	Manchester.	Manchester.	A. A. Palmer.	Sep'tr.	Test.	76
298	Manchester.	Mead's Creamery.	Co-op.	C. W. Mead & Son.	Manchester.	Thorne.	Wm. D. Mead.	Sep'tr.	Test.	90
299	Manchester.	Barryville Company.	Co-op.	Chas. G. Barry, Sec.	Barryville.	Manchester.	E. C. Podney.	Sep'tr.	Test.	740
300	Oneida.	Tuttle Brothers.	Ind.	Tuttle Brothers.	Oneida.	Oneida.	H. Silter.	Sep'tr.	Test.	1,146
301	Petersburg.	Bear Grove.	Co-op.	Jas. Gehhardt, Sec.	Petersburg.	Dyersville.	Jacob Schmidt.	Sep'tr.	Hd.	641
302	Petersburg.	Bear Grove.	Co-op.	Jas. Gehhardt, Sec.	Petersburg.			Sep'tr.	Hd.	
303	Petersburg.	Petersburg Co-op. Cr'y.	Co-op.	F. J. Klostermann, Sec.	Petersburg.	Dyersville.	Frank Rubby.	Sep'tr.	Hd.	
304	Ryan.	Russlan.	Co-op.	Fred Miller.	Ryan.	Ryan.	Fred Miller.	Sep'tr.	Test.	
305	Ryan.	Hazel Green Co-op. Cr'y.	Co-op.	F. B. Dickey, Sec.	Hazel Green.	Ryan.	J. W. Atwood.	Sep'tr.	Test.	115
306	Sand Spring.	Sand Spring Co-op. Cr'y.	Co-op.	F. E. Wood.	Sand Spring.	Sand Spring.	Harry Williams.	Sep'tr.	Test.	96
307	Silver Creek.	Silver Creek.	Ind.	Geo. E. Packer.	Silver Creek.	Ryan.	Geo. E. Packer.	Sep'tr.	Test.	
308	Thorne.	Honey Creek.	Ind.	H. F. Beyer.	Edgewood.	Delaware.	W. K. Pallard.	Sep'tr.	Test.	72
309	Thorne.	Thorne.	Ind.	Harris & Co.	Jesup.	Thorne.	J. Schann.	Sep'tr.	Test.	
310	Worthington, Dubuque Co.	Central Creamery Co.	Co-op.	J. H. White, Sec.	Worthington.	Hopkinton.	H. F. Lehmkuhl.	Sep'tr.	Test.	

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311	Dickinson County.	West Port.	Ind.	Kessey & Winton.	Milford.	Milford.	E. J. Pall.	Sep'tr.	Test.	214
312	Milford.	Milford F'mrs B & C As.	Ind.	Geo. Chase, Pres.	Milford.	Milford.	Geo. E. Hunt.	Sep'tr.	Test.	
313	Spirit Lake.	Spirit Lake B & C Fact.	Ind.	— Dickinson.	Spirit Lake.	Spirit Lake.	C. A. Painter.	Sep'tr.	Test.	875
314	Dubuque County.	Balltown Creamery Co.	Co-op.	C. D. Harrington, Sec.	Balltown.	Waupeton.	Henry Koehler.	Sep'tr.	Test.	
315	Bereard.	Austin Co-op. Cr'y.	Co-op.	John Gurrin, Sec.	Garry Owen.	Cascade.	S. M. Adamson.	Sep'tr.	Hd.	705
316	Cascade.	Cascade Co-op. Cr'y.	Co-op.	F. A. Hamil, Sec.	Cascade.	Cascade.	L. L. Moss.	Sep'tr.	Test.	886
317	Cascade.	Hazel.	Ind.	Minhart & Wardel.	Cascade.	Cascade.	— Wardel.	Sep'tr.	Test.	
318	Cascade.	Crystal Falls.	Ind.	H. L. Dehner.	Cascade.	Cascade.	W. J. Atchison.	Sep'tr.	Test.	
319	Cascade.	Butterfield Cr'y Co.	Co-op.	Stuart Martin, Pres.	Cascade.	Cascade.	Henry Boyer.	Sep'tr.	Test.	1,122
320	Dyersville.	Farmers Golden Star.	Co-op.	J. H. Prier, Sec.	Dyersville.	Dyersville.	Jay Smith.	Sep'tr.	Test.	1,139
321	Dyersville.	Pin Oak.	Co-op.	M. P. Leibold, Sec.	Pin Oak.	Pin Oak.	A. H. Ford.	Sep'tr.	Test.	149
322	Epworth.	Epworth Creamery Co.	Co-op.	D. Burrell, Sec.	Epworth.	Epworth.	P. H. Stockwell.	Sep'tr.	Hd.	674
323	Farley.	Farley Creamery Co.	Co-op.	J. F. Schoonover, Pres.	Farley.	Farley.	C. E. Minehart.	Sep'tr.	Test.	659
324	Farley.	Johns Creek.	Ind.	Vibber & Heald.	Farley.	Farley.	C. Bartholomew.	Sep'tr.	Hd.	
325	Farley.	Pleasant View.	Ind.	Vibber & Heald.	Farley.	Farley.	John Higgs.	Sep'tr.	Hd.	
326	Fillmore.	Fillmore Creamery Co.	Co-op.	W. Craft, Sec.	Fillmore.	Fillmore.	N. B. Francois.	Sep'tr.	Hd.	
327	Lattners.	Lattners Spring Co.	Co-op.	E. Hauser, Sec.	Lattners.	Graf.	Samuel Strief.	Sep'tr.	Hd.	398
328	Lore.	Lore.	Co-op.	C. Kemp, Sec.	Lore.	Lore.	F. Koehler.	Sep'tr.	Test.	
329	Luxemburg.	Globe.	Co-op.	Globe.	Luxemburg.	Dyersville.	Jacob Friedman.	Sep'tr.	Test.	245
330	New Vienna.	New Vienna Central Creamery Co.	Co-op.	Joseph Schemmel.	New Vienna.	Dyersville.	M. Kant.	Sep'tr.	Hd.	719
331	Peosta.	Highland.	Ind.	George Franke.	Peosta.	Peosta.	George Franke.	Sep'tr.	Hd.	226
332	Richardsville.	Farni Creamery.	Ind.	Farni Creamery Co.	Richardsville.	Durango.	Joseph Farni.	Sep'tr.	Hd.	
333	Richardsville.	Oak Grove.	Co-op.	M. Regan.	O'Neill.	Waupeton.	August Bang.	Sep'tr.	Hd.	

Skim Stations.

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## IOWA CREAMERY LIST—CONTINUED.

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ELEVENTH ANNUAL REPORT OF THE

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Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual co-operative or otherwise.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, rubber cream, or both.	Method of receiving milk—by separator or by other method.	Dairy commissioner's test-bottle number.
334	Dubuque County.	Continued.	Ind.	Lande Bros.	Rockdale	Dubuque	J. Wiles.	Sep'tr.	Test.	361
335	Sherrill	Sherrill	Co-op.	J. C. Boleyn, Sec.	Dubuque	Specht's Ferry	Fred Koeller	Sep'tr.	Test.	
336	Tivoli	Hickory Valley Cr'y.	Co-op.	L. F. Pegeler, Sec.	Dyersville	Dyersville	C. H. Arnold	Sep'tr.	Hd.	
337	Worthington	Spring Valley Cr'y Co.	Co-op.	R. E. Knapp, Sec.	Worthington	Worthington	H. P. Hancock	Sep'tr.	Test.	75
338	Worthington	Worthington	Ind.	W. Lattner	Worthington	Worthington	C. Bohler	Sep'tr.	Hd.	
339	Zwingle	Zwingle	Ind.	Nemmers & Butler.	LaMotte	Zwingle	Joe Blunt.	S. & G. C.	Test.	
340	Emmet County.	Farmers Creamery.	Ind.	G. Stewart	Armstrong	Armstrong	Fred Wilcox	Sep'tr.	Test.	626
341	Armstrong	Forsythe	Co-op.	H. W. Gaarde, Sec.	Armstrong	Armstrong	T. B. Garden	Sep'tr.	Test.	635
342	Estherville	Estherville	Co-op.	M. C. Peterson	Estherville	Estherville		Sep'tr.	Test.	611
343	Wallingford	Wallingford Cr'y Co.	Co-op.	P. J. Miller	Wallingford	Wallingford	R. Lansing	Sep'tr.	Test.	310
344	Fayette County.	Alpha Farmers' Cr'y.	Co-op.	A. L. Davis, Sec.	Alpha	Waucoma	C. N. Beach	Sep'tr.	Test.	63
345	Arlington	Brush Cr'y F'm's C. A.	Co-op.	C. H. Day, Sec.	Arlington	Arlington	G. H. Day	Sep'tr.	Test.	
346	Aurora	Gundlach Creamery	Ind.	A. O. Kingsley	Strawberry Pt.	Aurora	A. A. Astell	Sep'tr.	Test.	675
347	Clermont	Clermont Valley Cr'y.	Co-op.	F. F. Ferguson	Clermont	Clermont	A. Crickson	Sep'tr.	Test.	
348	Clermont	Burr Oak	Co-op.	Henry Smith, Sec.	Clermont	Clermont	L. Iverson	Sep'tr.	Test.	734
349	Eldorado	Eldorado	Ind.	Schledemantel Bros	Ossian, Winnebago county			Sep'tr.	Test.	

350	Elgin	Elgin Farmers' Dairy Co.	Co-op.	A. S. Roug, Sec.	Elgin	Elgin	Ed. Hanson	Sep'tr.	Test.	
351	Fayette	Fayette Cr'y Ass'n.	Co-op.	J. M. Edmunds	Fayette	Fayette	C. H. Wilson	Sep'tr.	Test.	387
352	Hawkeye	Hawkeye	Ind.	Bortner & Wilkening	Hawkeye	Hawkeye	A. P. Bortner	Sep'tr.	Test.	156
353	Maynard	Harlan Creamery Co.	Co-op.	A. F. Crawford, Sec.	Maynard	Maynard	A. D. Farnham	Sep'tr.	Test.	362
354	Minkler	Oran Creamery Co.	Co-op.	J. D. Watters, Sec.	Minkler	Fairbank	J. L. Bunt	Sep'tr.	Hd.	
355	Oelwein	Jefferson	Co-op.	J. H. Meyer, Sec.	Oelwein	Oelwein	C. H. McQueen	Sep'tr.	Test.	140
356	Oelwein	Oelwein Farmers' Cr'y.	Co-op.	E. E. Day, Sec.	Oelwein	Oelwein	H. H. Opperman	Sep'tr.	Test.	102
357	Randalla	Fairview	Co-op.	A. M. Holmes, Sec.	Randalla	Randalla	Johnson	Sep'tr.	Test.	15
358	Randalla	Randalla Creamery	Co-op.	G. D. Terrey, Sec.	Randalla	Randalla	F. O. Billings	Sep'tr.	Test.	390
359	Richfield	Richfield	Co-op.					Sep'tr.	Test.	
360	St. Lucas	Farmers' Co-op. Cr'y.	Co-op.	J. J. Mihm, Sec.	St. Lucas	Waucoma	Mark Blong	Sep'tr.	Test.	1,438
361	Sumner	Center Valley Cr'y Co.	Co-op.	A. E. Fridly, Sec.	Sumner	Sumner	C. R. Bracey	Sep'tr.	Hd.	
362	Stanley	Stanley	Co-op.	Frank Strong, Sec.	Stanley	Stanley		Sep'tr.	Test.	
363	Westgate	Westgate Creamery Co.	Co-op.	W. J. McWeeny	Westgate	Westgate	Robert Maillie	Sep'tr.	Test.	373
364	West Union	W. Union F'm's D. Co.	Co-op.	Chas. Dwyer, Sec.	West Union	West Union	William Tilson	Sep'tr.	Test.	40
365	West Union	Union Creamery	Stock	J. T. Riley, Mgr.	West Union	West Union	S. Peterson	S. & G. C.	Test.	363
366	West Union	Union Creamery	Stock	J. T. Riley, Mgr.	West Union			S. & G. C.	Test.	
367	Floyd County.	Charles City Creamery	Ind.	J. C. Dalby, Prop.	Charles City	Charles City	Fred Janes	S. & G. C.	Test.	164
368	Charles City	Flood Creek Cr'y Ass'n.	Co-op.	L. Melcher, Pres.	Charles City	Charles City	John Halfner	Sep'tr.	Test.	
369	Floyd	Floyd	Ind.	Winks & Day	Floyd	Charles City	C. H. Day	Sep'tr.	Test.	688
370	Niles	Niles	Ind.	Madatt & Clark	Algona	Charles City	Fred Madatt	Sep'tr.	Test.	712
371	Nora Springs	Nora Springs	Ind.	E. C. Kennedy	Nora Springs	Nora Springs	R. C. Kennedy	S. & G. C.	Test.	10
372	Rockford	Rockford Co-op. D. As.	Co-op.	O. L. Crowell, Sec.	Rockford	Rockford	W. J. Grunes	G. C.	Test.	

\*Skin Stations.

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## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR	NAME OF CREAMERY.	Organized by individual co-op. or by W.C.C. company	NAME OF PROPRIETOR, SECRETARY, OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gail, cream, or both.	Method of receiving the milk or by the hundred	Dairy commission number, bottle number.
373	Franklin County	Edna	Ind.	J. Martin & Son	Ackley	Ackley	C. Straassburg	Sep'tr	Hd	701
374	Chaplin	Chaplin	Ind.	A. E. Hoffman	Chaplin	Chaplin	A. E. Hoffman	Sep'tr	Test	77
375	Dows	Farmers' Co-op. Cr'y Co.	Co-op	S. H. Mendell, Sec.	Dows	Dows	J. N. Bossuot	Sep'tr	Test	31
376	Franklin County	Edna	Ind.	J. Martin & Son				Sep'tr	Test	
377	Geneva	Geneva	Ind.	I. W. Meyers	Hampton	Geneva	B. E. Peterson	S. & O.C.	Test	
378	Hampton	Hampton	Ind.	Johl & Kennedy	Hampton	Hampton	J. Kennedy	G. C.		
379	Hampton	Pleasant Ridge	Ind.	McKellar & Cochran	Hampton	Hampton	L. C. Cochran	Sep'tr	Hd	113
380	Latimer	Hamilton Creamery	Co-op	F. Rodemeyer, Sec.	Hampton	Latimer	Geo. Jorgensen	Sep'tr	Test	
381	Latimer	Latimer	Co-op	Chas. Johnson, Sec.	Latimer	Latimer	J. Madsen	Sep'tr	Test	
382	Popejoy	Popejoy Creamery Co.	Co-op	J. A. Iverson, Sec.	Popejoy	Popejoy	W. H. Baker	Sep'tr	Test	
383	Sheffield	Sheffield Cr'y Ass'n	Co-op	L. B. Carhart, Sec.	Sheffield	Sheffield	C. Triplett	Sep'tr	Test	183
384	Greene County	Adasa Co-op. Cr'y Co.	Co-op	M. M. Reading, Sec.	Adasa	Adasa	W. S. Fey	Sep'tr	Test	703
385	Farlin	Farlin Creamery	Ind.	W. S. Irving	Farlin	Farlin	W. S. Irving	Sep'tr	Test	344
386	Grand Junc.	Hardin Township	Ind.	J. C. Harker	Grand Junc.	Grand Junc.	W. Elling	Sep'tr	Hd	
387	Grand Junc.	Renner's	Ind.	Renner Bros.	Grand Junc.	Grand Junc.		Sep'tr	Test	118
388	Cooper	Cooper	Ind.	Renner Bros.	Grand Junc.	Grand Junc.		Sep'tr	Test	
389	Jefferson	Renner's Creamery	Ind.	Renner Bros.	Grand Junc.	Jefferson		Sep'tr	Test	

390	Paton	Paton Creamery	Ind.	George E. White	Paton	Paton	Geo. E. White	Sep'tr	Test	877
391	Rippey	Rippey	Ind.	Richardson & Remington	[Alto Co. Ruthven, Palo	Rippey	E. Tuttle	Sep'tr	Test	234
392	Scranton	Scranton Creamery	Co-op	A. H. Fey, Pres.	Scranton	Scranton	A. Adams	Sep'tr	Test	133
393	Grundy County	Johnson	Ind.	J. W. Johnson	Ackley	Ackley	Theo. Newman	S. & O.C.	Hd	798
394	Beaman	Beaman Creamery	Ind.	P. McNelly	Beaman	Beaman	P. McNelly	Sep'tr	Test	267
395	Conrad	Conrad Creamery	Ind.	N. H. Blour	Conrad	Conrad		Sep'tr	Test	
396	Cedar Falls	Fredsville Co-op. Co.	Co-op	C. Olson, Sec.	Fredsville	Cedar Falls	A. K. Smith	Sep'tr	Test	263
397	Dairyville		Ind.	George Graham	Dairyville	New Hartford	Geo. Graham	Sep'tr	Test	136
398	Grundy Center	J. H. Sperry	Ind.	J. H. Sperry	Grundy Center	Grundy Center	Louis Cedar	Sep'tr	Test	336
399	Grundy Center	J. H. Sperry	Ind.	J. H. Sperry	Grundy Center	Grundy Center	George Norton	Sep'tr	Test	
400	Grundy Center	J. H. Sperry	Ind.	J. H. Sperry	Grundy Center			Sep'tr	Test	
401	Holland	Holland	Ind.	J. H. Sperry	Grundy Center	Holland	Peter Larson	Sep'tr	Test	967
402	Grundy County	Colfax	Ind.	S. Nelson	Holland	Holland	S. Nelson	Sep'tr	Test	
403	Ivester	Ivester Creamery Co.	Co-op	Geo. Schwarck, Sec.	Ivester	Eldora	E. E. Starr	Sep'tr	Test	273
404	Morrison	Lincoln Spring	Ind.	Patrick & Campbell	Lincoln	Lincoln	G. H. Patrick	Sep'tr	Test	632
405	Morrison	Morrison	Ind.	H. F. Jackson & Bros.	Morrison	Morrison	H. F. Jackson	Sep'tr	Test	1,143
406	New Hartford	Fairfield Co-op. Cr'y	Co-op	C. Strong, Sec.	New Hartford	New Hartford	N. M. Johnston	Sep'tr	Test	
407	Parkersburg	Beaver Center Cr'y	Co-op	John H. Stowe, Sec.	Parkersburg	Parkersburg	J. Christensen	Sep'tr	Test	
408	Reinbeck	The Fowler Cr'y Co.	Ind.	C. F. Fowler, Pres.	Waterloo	Reinbeck	S. E. Stevens	Sep'tr	Test	
409	Reinbeck	Grant Township Cr'y	Ind.	W. H. Schelber, Pres.	Reinbeck	Reinbeck	W. H. Schelber	Sep'tr	Test	
410	Wellsburg		Ind.	W. F. Graham	Wellsburg	Wellsburg	W. F. Graham	Sep'tr	Test	
411	Guthrie County	Bagley Creamery	Ind.	H. H. Cummings	Bagley	Bagley	H. B. McGhee	G. C.	Test	

\*Skim Stations.

\*Manufactures both butter and cheese.

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual, co-op or sick company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of receiv-ing milk—by the separator or otherwise.	Dairy commis-sioner's test-bottle number.
412	Guthrie County Bayard.	y-Continued. sBagley Creamery	Ind...	H. H. Cummings	Bagley			G. C.	Test.	
413	Guthrie Center	Guthrie Center	Ind...	Andrew Wood	Guthrie Center	Guthrie Center	H. I. Keater	Sep'tr.	Test.	1,003
414	Dale City	sGuthrie Center	Ind...	Andrew Wood	Guthrie Center			Sep'tr.	Test.	
415	Wichita	sGuthrie Center	Ind...	Andrew Wood	Guthrie Center			Sep'tr.	Test.	
416	Casey	sElgin Creamery Co.	Co-op	Elgin Creamery Co.	Chicago, Ill.			Sep'tr.	Test.	
417	Menlo	Menlo Creamery Co.	Co-op	A. C. Curtis, Sec.	Menlo	Menlo	A. Kelsey	Sep'tr.	Test.	
418	Stuart	Stuart Creamery	Ind...	E. M. Lamos	Stuart	Stuart	A. Cochran	Sep'tr.	Test.	
419	Arbor Hill	sStuart Creamery	Ind...	E. M. Lamos	Stuart			Sep'tr.	Test.	
420	Earlham	sStuart Creamery	Ind...	E. M. Lamos	Stuart			Sep'tr.	Test.	
421	Yale	Yale	Ind...	Park & Son	Yale	Yale	D. C. Bartholme	Sep'tr.	Test.	1,003
422	Hamilton County Ellsworth	Ellsworth Co-op Cr'y A	Co-op	M. H. Brinton, Sec.	Ellsworth	Ellsworth	K. T. Naa	Sep'tr.	Test.	32
423	Rose Grove	sEllsworth Co-op Cr'y A	Co-op	M. H. Brinton, Sec.	Ellsworth			Sep'tr.	Test.	
424	Jewell	Jewell	Ind...	H. K. Gronbeck	Jewell	Jewell	H. K. Gronbeck	Sep'tr.	Test.	
425	Kamrar	Gold Nugget	Ind...	A. O. Blow	Kamrar	Kamrar	A. O. Blow	Sep'tr.	Test.	35
426	Randall	Randall Farmers' Cr'y	Co-op	J. Clausen, Sec.	Randall	Randall	H. N. Miller	Sep'tr.	Test.	9
427	Stanhope	Stanhope Creamery	Ind...	N. O. Blow			N. O. Blow	Sep'tr.	Test.	247
428	Stratford	Star and Stratford	Ind...	J. M. Daniels	Dayton	Stratford	T. H. Daniels	Sep'tr.	Test.	

429	Webster City	Poplar Grove Creamery	Ind...	D. C. Miller, Mgr.	Poplar Grove	Webster City	D. C. Miller	Sep'tr.	Test.	1,048
430	Williams	Payne's Model	Ind...	F. R. Payne	Williams		F. R. Payne	Sep'tr.	Test.	
431	Woodstock	Prairie Queen Cr'y Co.	Stock	H. D. Welch		Woodstock		Sep'tr.	Test.	
432	Hancock County Britt	Crystall Creamery Co.	Co-op	Ed. Peterson, Sec.	Britt	Britt	J. K. Johnston	Sep'tr.	Test.	90
433	Britt	Britt Co-op Cr'y Co.	Co-op	Jno. Fisk, Sec.	Britt	Britt	Thos. H. Kenyon	Sep'tr.	Test.	
434	Duncan	Duncan Creamery	Co-op	John Spiller, Sec.	Duncan	Duncan	Ed. Christensen	Sep'tr.	Test.	1,047
435	Garner	Concord Creamery Co.	Co-op	H. O. Shultz, Sec.	Garner	Ventura	C. R. Conway	Sep'tr.	Test.	
436	Goodell	Goodell	Ind...	C. S. Farman & Son	Goodell	Goodell	Thomas Elder	G. C.		
437	Klemme	Klemme Creamery Co.	Co-op	Louis Sampson, Sec.	Klemme	Klemme	N. L. Palmer	G. C.		
438	Madison	Madison Creamery Co.	Co-op	C. B. Hanver	Forest City	Forest City		Sep'tr.	Test.	749
439	West Lake	West Lake Cr'y Co.	Co-op	F. E. McCorkle	West Lake	Goodell	A. B. Bailey	Sep'tr.	Test.	
440	Alden	Alden Co-op Cr'y Co.	Co-op	E. L. Rolitho, Sec.	Alden	Alden	R. M. Hishworth	Sep'tr.	Test.	1,052
441	Cleves	Cleves	Ind...	J. M. Martin & Son	Ackley	Cleves	W. F. Gimes	Sep'tr.	Hd.	216
442	Eldora	Hughes	Ind...	M. E. Hanson, Sec.	Hughes	Hughes	M. E. Hanson	Sep'tr.	Test.	
443	Hubbard	Hubbard Co-op Cr'y Co.	Co-op	J. V. White, Sec.	Hubbard	Hubbard	D. E. Whitney	Sep'tr.	Test.	
444	Iowa Falls	Iowa Falls Cr'y Co.	Ind...	G. L. Whinnery	Iowa Falls		A. P. Buchanan	Sep'tr.	Test.	31
445	Lawn Hill	Lawn Hill	Ind...	George B. Strayer	Eldora	Lawn Hill	Geo. B. Strayer	G. C.		
446	Radcliffe	Lincoln Creamery Co.	Co-op	M. Christian, Pres.	Radcliffe	Radcliffe	P. Larson	Sep'tr.	Test.	
447	Radcliffe	Concord & Scott Co-op Creamery	Co-op	T. L. Tompson, Sec.	Radcliffe	Radcliffe	M. J. Mansager	Sep'tr.	Test.	880
448	Radcliffe	Buckeye	Ind...	Carl Clausen	Radcliffe	Radcliffe	Carl Clausen	Sep'tr.	Test.	107
449	Robertson	Robertson	Ind...	J. Windecker & Son	Robertson	Robertson	S. O. Windecker	Sep'tr.	Hd.	
450	Union	Union Creamery	Co-op	F. E. Culp, Sec.	Union	Union	Thos. E. Culp	Sep'tr.	Test.	280
451	Whitten	Whitten Cr'y Ass'n	Co-op	G. N. Carr, Sec.	Whitten	Whitten	G. N. Carr	G. C.		

skim Stations.



## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual co-operators or by a 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, and by the test or by the hundred.	Dairy commis-sioner's number.
432	Harrison County, California Jct.	California Junction	Ind.	M. H. Teilmann & Co.	California	Cal. Junction	M. H. Teilmann	Sep'tr.	Test.	
433	Dunlap	Dunlap Creamery	Co-op.	A. C. Glickrist	Dunlap	Dunlap	F. W. Shellman	Sep'tr.	Test.	
434	Little Sioux	Little Sioux	Co-op.	B. L. Jones, Pres.	Little Sioux	River Sioux	O. Kucker	Sep'tr.	Test.	
435	Allea	Little Sioux	Co-op.	B. L. Jones, Pres.	Little Sioux	Little Sioux		Sep'tr.	Test.	
436	Mo. Valley	Mo. Valley B. & C. Co.	Ind.	W. A. Jones, Pres.	Mo. Valley	Mo. Valley	W. H. Clarkson	Sep'tr.	Test.	
437	Magnolia	Magnolia Creamery Co.	Ind.	F. H. Cadwell, Sec.	Logan	Logan	E. A. McHale	Sep'tr.	Test.	
438	Modale	Modale	Co-op.	F. W. Schwertley	Modale	Modale	O. Schroeder	Sep'tr.	Test.	
439	Henry County, Trenton	Trenton Creamery	Ind.	W. G. Clark	Trenton	Mt. Pleasant	W. G. Clark	Sep'tr.	Test.	
440	Wayland	Hickory Grove F. D. A.	Co-op.	N. Rich, Pres.	Wayland	Wayland	Fred Hellemann	Sep'tr.	Test.	52
441	Winfield	Winfield Creamery	Ind.	Eicher Bros.	Winfield	Winfield	J. A. Eicher	Sep'tr.	Test.	891
442	Boward County, Bonair	Bonair	Ind.	A. O. Elridge	Elkader	Bonair	J. J. McManera	S & G. C.	Test.	
443	Chester	Chester Co-op Cr'y Ass'n	Co-op.	E. O. Greene	Chester	Chester	E. D. Capper	G. C.		
444	Cresco	Cresco Creamery	Ind.	W. R. Owen	Cresco	Cresco	J. A. Barker	Sep'tr.	Test.	663
445	Elma	Elma Creamery	Co-op.	A. A. Carter, Sec.	Elma	Elma	A. Gullrouson	Sep'tr.	Test.	772
446	Louther	Acme Co-op. Cr'y Co.	Co-op.	A. J. Dilly, Sec.	Acme	Louther	Kingsbury	Sep'tr.	Test.	
447	Protivin	Protivin Cr'y Ass'n	Co-op.	J. J. Lukes, Sec.	Protivin		W. J. Kodine	Sep'tr.	Test.	739
448	Saratoga	Saratoga Cr'y Ass'n	Co-op.	Wm. H. Taubman	Saratoga	Riceville	G. W. Hootman	Sep'tr.	Test.	
449	Humboldt County, Arnold	Grove Co. Co-op. Cr'y	Co-op.	G. Combs, Manager	Grove	Arnold	F. S. Wherry	Sep'tr.	Test.	
450	Bode	Bode Creamery Ass'n	Co-op.	T. C. Hanson, Sec.	Bode	Bode	H. Dixon	Sep'tr.	Test.	264
451	Bradgate	Bradgate Co-op. Cr'y Ass'n	Co-op.	L. Van Horn, Sec.	Bradgate	Bradgate	E. M. Varguara	Sep'tr.	Test.	491
452	Hardy	McMurry Bros.	Ind.	McMurry Bros.	Goldfield, Wright Co.	Hardy	Kelling	Sep'tr.	Test.	
453	Humboldt	Humboldt	Co-op.	G. L. Crutshank, Sec.	Humboldt	Humboldt	J. C. Hall	Sep'tr.	Test.	50
454	Ottosen	Wacoona Cr'y Ass'n	Co-op.	L. J. Clave, Sec.	Ottosen	Ottosen	L. J. Hoppersted	Sep'tr.	Test.	878
455	Owl Lake	Fountain B. and C. Co.	Ind.	B. T. Scott & Co.	Goldfield, Wright Co.			Sep'tr.	Test.	
456	Renwick	Renwick Separator Cr'y	Ind.	W. T. Drennen & Son	Renwick	Renwick	S. P. Drennen	Sep'tr.	Test.	265
457	Rutland	Rutland Cr'y Ass'n	Co-op.	W. J. Brown, Sec.	Rutland	Rutland		Sep'tr.	Test.	
458	Thor	Clover Creamery	Co-op.	L. Olson, Sec.	Thor	Thor	L. J. Takhim	Sep'tr.	Test.	132
459	Ida County, Arthur	Arthur	Ind.	Critchon Bros.	Arthur	Arthur	Geo. Critchon	Sep'tr.	Test.	
460	Battle Creek	Maple Valley	Ind.	Nielsen & Jorgensen	Battle Creek	Battle Creek	Peter Nielsen	Sep'tr.	Hd.	
461	Galva	Galva	Ind.	Robt. Jorgensen	Galva	Galva	Robt. Jorgensen	Sep'tr.	Hd.	
462	Holstein	Holstein	Ind.	Perpritz & Bichel	Holstein	Holstein		Sep'tr.	Hd.	
463	Ida Grove	Ida Grove	Ind.	Hallam & Hubbard	Ida Grove	Ida Grove	I. G. Arthur	Sep'tr.	Hd.	
464	Ida County, Genoa Bluff	Genoa Bluff	Ind.	G. R. Howard	Genoa Bluff	Marengo	C. Kroff	S & G. C.	Test.	181
465	Marengo	Ida Valley Creamery	Ind.	H. B. Brown	Marengo	Marengo	John Howard	S & G. C.	Test.	
466	Millersburg	Millersburg	Ind.	M. Bear	Millersburg	North English	G. C.			
467	North English	North English	Ind.	Magoon & O'Brien	North English	North English	Dick O'Brien	G. C.		
468	Victor	Victor	Ind.	J. M. Mathew	Williamsburg		S. D. Beets	G. C.		
469	Williamsburg	Williamsburg	Ind.				J. M. Mathews	G. C.		

\*Skin Stations.

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual, co-op or other company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS, TOL. SCORE, MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Behavior, health, or both.	Method of receiving milk.	Test.	Dairy cows, number.
400	Jackson County, Ia.	Andrew Lilly Creamery.	Ind.	C. E. Bell.	Andrew.	Maquoketa.	A. B. Ayers.	Sept'r.	Test.	Test.	726
401	Baldwin, No. 27	Diamond Creamery Co.	Ind.	Simpson, Mel. & Co.	Boston, Mass.	Bellevue.	George Whitley.	G. C.	Test.	Test.	305
402	Bellevue.	Esse Valley Creamery.	Ind.	C. M. Kogler.	Bellevue.	Bellevue.	Frank Fairing.	G. C.	Test.	Test.	71
403	Bellevue.	Esse Valley Creamery.	Ind.	H. N. Schuler, Sec.	Bellevue.	Bellevue.	Frank Fairing.	G. C.	Test.	Test.	96
404	Bernard, Ia.	Austin Creamery.	Co-op.	J. Ournas, Sec.	Cascade, Du-	Maquoketa.	S. M. Adamson.	Sept'r.	Test.	Test.	124
405	Fulton	Fulton Creamery Co.	Co-op.	S. D. Heide, Sec.	hogue Co.	Maquoketa.	Charles Vath.	Sept'r.	Test.	Test.	731
406	La Motte.	La Motte Creamery.	Ind.	Nemmers & Butler.	Fulton.	La Motte.	Peter Butler.	S. & G. C.	Test.	Test.	305
407	St. Donata.	La Motte Creamery.	Ind.	Nemmers & Butler.	La Motte.	La Motte.	Peter Butler.	S. & G. C.	Test.	Test.	71
408	La Motte.	La Motte Creamery.	Ind.	Nemmers & Butler.	La Motte.	La Motte.	Peter Butler.	S. & G. C.	Test.	Test.	96
409	La Motte.	Sterling Separator.	Ind.	S. A. Hoffman.	La Motte.	La Motte.	M. J. Hoffman.	S. & G. C.	Test.	Test.	124
410	Cottonville.	Sterling Separator.	Ind.	S. A. Hoffman.	La Motte.	La Motte.	M. J. Hoffman.	S. & G. C.	Test.	Test.	731
411	Monmouth.	Pioneer Creamery.	Co-op.	O. W. Heyren, Sec.	Miles.	Miles.	Charles E. Allen.	S. & G. C.	Test.	Test.	96
412	Monmouth.	Emellie.	Co-op.	W. Brady & Son.	Emellie.	Monmouth.	H. Brady.	Sept'r.	Test.	Test.	124
413	Monmouth.	Monmouth Creamery Co.	Co-op.	John Cass, Pres.	Monmouth.	Monmouth.	Samuel Conley.	Sept'r.	Test.	Test.	731
414	Otter Creek.	Otter Creek.	Ind.	Labbe Bros.	Otter Creek.	Zenigle.	William Hunt.	Sept'r.	Test.	Test.	96
415	Springbrook.	Springbrook.	Ind.	John Newman.	Eig. J. H.	Preston.	William Hunt.	Sept'r.	Test.	Test.	124

500	Union Center.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	745
501	Spragueville.	Spragueville.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
502	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
503	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
504	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
505	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
506	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
507	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
508	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
509	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
510	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
511	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
512	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
513	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
514	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
515	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
516	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
517	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
518	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
519	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
520	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
521	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
522	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
523	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
524	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
525	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
526	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
527	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146
528	Springbrook.	Springbrook.	Ind.	John Newman.	Elgin, Ill.	Spragueville.	Ralph Balth.	Sept'r.	Test.	Test.	146

Elkton Station.



## IOWA CREAMERY LIST—CONTINUED.

Office number	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by in- dividual or co- operative or other company.	NAME OF PROPRI- ETOR, SECRETARY OR MANAGER.	P. O. ADDRESS TOWN, STATE, COUNTY.	SHIPPING STATION.	NAME OF BUTTER MAKER.	Reputation, quali- ty of cream or butter.	Kind of treat- ment milks are given before being bottled.	Daily coun- sidered as one hundred pounds.	Bottle number of stronger treat- ment.
829	Johnson County, Amiah.....	Beers Creek Mills Dry A	Co-op.....	J. B. Miller, Pres.....	Amiah.....	Wellman.....	L. J. Gungertsch.....	Sep'tr.....	Test.....	Test.....	22
830	Leone Tree.....	Hildebrand Creamery.....	Ind.....	E. Hildebrand.....	Leone Tree.....	Leone Tree.....	E. Hildebrand.....	G. C.....	Test.....	Test.....	23
831	North Liberty.....	North Liberty.....	Ind.....	J. W. Andele.....	North Liberty.....	Iowa City.....	J. W. Andele.....	Sep'tr.....	Test.....	Test.....	24
832	North Liberty.....	Green Castle.....	Ind.....	J. W. Andele.....	North Liberty.....	.....	.....	Sep'tr.....	Test.....	Test.....	25
833	Oak Hills.....	Oaks Creamery Co.....	Ind.....	V. D. Bungardner.....	Oaks.....	.....	H. Gaymon.....	Sep'tr.....	Test.....	Test.....	26
834	Iowa City.....	Oaks Creamery Co.....	Ind.....	V. D. Bungardner.....	Oaks.....	.....	J. H. Bell.....	Sep'tr.....	Test.....	Test.....	27
835	Oxford.....	Oxford Creamery Co.....	Ind.....	J. H. Bell.....	Oxford.....	Oxford.....	.....	G. C.....	Test.....	Test.....	28
836	200 Solds.....	Oxford Creamery Co.....	Ind.....	Wood & House.....	C. Rapids, Minn Co.....	Solon.....	Feed Reader.....	Sep'tr G. C.....	Test.....	Test.....	29
837	Solon.....	Solon.....	Ind.....	Fisher & Beck.....	Solon.....	Solon.....	.....	Sep'tr G. C.....	Test.....	Test.....	30
838	Johnson County, Amiah.....	Amber.....	Ind.....	W. H. Sanford.....	Amber.....	Amber.....	Jas. Cleveland.....	Sep'tr.....	Test.....	Test.....	31
839	Amber.....	Hazel Green Co-op.....	Co-op.....	T. I. Platon, Sec.....	Amber.....	Amber.....	A. E. Porter.....	Sep'tr.....	Test.....	Test.....	32
840	Amber.....	Jackson.....	Ind.....	W. H. Sanford.....	Amber.....	Amber.....	J. W. Evans.....	Sep'tr.....	Test.....	Test.....	33
841	Amiah.....	Fawn Creek.....	Ind.....	J. S. Condit.....	Amiah.....	Amiah.....	Port Wilkison.....	Sep'tr.....	Test.....	Test.....	34
842	Amiah.....	Franklin Creamery.....	Ind.....	Vinton Smith.....	Amiah.....	Amiah.....	Vinton Smith.....	Sep'tr.....	Test.....	Test.....	35
843	Cass Center.....	Center Creamery.....	Ind.....	Thomas & Minney.....	Amiah.....	Amiah.....	S. M. Mazy.....	Sep'tr.....	Test.....	Test.....	36
844	Cascade.....	Temple Hill Creamery.....	Co-op.....	Jos. Gavin, Pres.....	Cascade.....	Cascade.....	G. Adamson.....	Sep'tr.....	Ind.....	Ind.....	37
845	Duquoin Co Center Jct.....	Rose Creamery.....	Ind.....	C. Hanna.....	Center Jct.....	Center Jct.....	F. Beckman.....	Sep'tr.....	Test.....	Test.....	38

146	Hale	Hale Creamery Co.	Ind.	C. E. Waldron, Mgr.	Hale.	Hale.	W. H. Brownell.	Sept'r.	Test.
147	Langworthy	Clover Leaf Creamery.	Co-op.	H. Harris, Sec.	Langworthy.	Amber.	S. N. Glass.	Sept'r.	Test.
148	Martelle	Martelle.	Ind.	James Sinclair.	Martelle.	Martelle.	J. Sinclair.	Sept'r.	Test.
149	Brookside	Martelle.	Ind.	James Sinclair.	Martelle.			Sept'r.	Test.
150	Monticello	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.	Monticello.	G. L. Prestopians.	Sept'r.	Test.
151	Monticello, No. 1	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
152	Langworthy	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
153	Langworthy, No. 1	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
154	Peirceburg.	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
155	No. 1, also No. 2.	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
156	Monticello, No. 1	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
157	Monticello, No. 2	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
158	Langworthy, No. 2	Diamond Creamery Co.	Ind.	Simpson, Mcl. & Co.	Boston, Mass.			Sept'r.	Test.
159	Monticello.	Downville Creamery	Co-op.	J. F. Laude, Sec.	Monticello.	Monticello.	P. J. Grunenberg.	Sept'r.	Test.
160	Monticello.	Star Co-operative Cr'y.	Co-op.	Geo. Ambuehl, Sec.	Monticello.	Monticello.	O. W. Brazellon.	Sept'r.	Test.
161	Onslow	Coral Creamery	Ind.	J. G. Bader.	Clayford.	Onslow.	J. G. Bader.	Sept'r.	Test.
162	Scotch Grove.	Rose Creamery	Ind.	C. M. Hanna.	Scotch Grove.			Sept'r.	Test.
163	Wyoming	Wyoming Association.	Co-op.	J. W. Rhodes.	Wyoming.	Wyoming.	Isaac H. Smith.	Sept'r.	Test.
164	Caluk County, Del.	The Delta Creamery.	Ind.	James Dickson.	Delia.		H. S. Wood.	Sept'r.	Id.
165	Bedford	Springbrook.	Ind.	Jno. Newman & Co.	Elgin, Ill.			Sept'r.	Test.
166	Kewa	Kewa Creamery	Stock	S. E. Bolman, Sec.	Kewa.	Kewa.	W. W. Carpenter.	Sept'r.	Test.
167	What Cheer.	What Cheer Creamery.	Ind.	Emery & Frank.	What Cheer.	What Cheer.	F. L. Emery.	Sept'r.	Test.
168	Barnes City.	What Cheer Creamery.	Ind.	Emery & Frank.	What Cheer.	What Cheer.		Sept'r.	Test.

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by In- dividual, Co-op or company.	NAME OF PROPRIETOR OR MANAGER.	P. O. ADDRESS OF PROPRIETOR TAYLOR OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Reputation, Rath. of cream, or both.	Method of receiving the milk or by the test or by the hundred.	Dairy Committee bottle number.
599	Kossuth County Algona.....	Algona Co-op. Cr'y Co.	Co-op.	J. B. Hofas	Algona	Algona	A. W. Sternbach	Sept'r	Test.	260
600	Bancroft.....	Bancroft Creamery Co.	Co-op.	F. Thola, Sec.	Bancroft	Bancroft	A. Johnson	Sept'r	Test.	261
601	Bancroft.....	Sauces Co-op. Cr'y Co.	Co-op.	M. Jensen, Sec.	Sauces	Bancroft	John Tibbitts	Sept'r	Test.	602
602	Buffalo Fork.....	Buffalo Fork Cr'y Co.	Co-op.	J. Englehardt	Buffalo Fork	Bart	R. Lane	Sept'r	Test.	603
603	Bart.....	Bart Co-op. Cr'y Co.	Co-op.	W. A. Chapman, Sec.	Bart	Bart	D. L. Driver	Sept'r	Test.	604
604	Fenton.....	Fenton Co-op. Cr'y Co.	Co-op.	G. W. Newell, Sec.	Fenton	Bart	H. W. Pettibone	Sept'r	Test.	345
605	German Valley Germania.....	German Valley Co-op. Co-op.	Co-op.	P. E. Johnston Co-op. J. A. Morck, Sec.	German Valley Germania	Bancroft	E. A. Bacon J. A. Morck	Sept'r	Test.	346
606	Hobart.....	Hobart.....	Co-op.	A. Gilmore, Sec.	Hobart	Hobart	A. Marrell	Sept'r	Test.	347
607	Irrigation.....	Irrigation Co-op. Cr'y Co.	Co-op.	S. E. Roney, Sec.	Irrigation	Irrigation	H. A. Varney	Sept'r	Test.	289
608	Ledyard.....	Ledyard Co-op. Cr'y Co.	Co-op.	E. K. Skinner	Ledyard	Ledyard	E. K. Jenkins	Sept'r	Test.	1,651
609	Lone Rock.....	Lone Rock Cr'y Co.	Co-op.	John Bernhard, Sec.	Lone Rock	Bart	L. C. Adams	Sept'r	Test.	128
610	Lavene.....	Lavene Cr'y Assn.	Co-op.	Geo. L. Minkler	Lavene	Lavene	Geo. L. Minkler	Sept'r	Test.	129
611	Lott's Creek.....	Lott's Creek Co-op. Cr'y Co-op.	Co-op.	A. Krause	Lott's Creek	Whitemore	M. Dwyer	Sept'r	Test.	130
612	Sexton.....	Sexton Co-op. Cr'y Co.	Co-op.	E. E. Laage, Sec.	Sexton	Sexton	F. O. Bacon	Sept'r	Test.	131
613	St. Joseph.....	St. Joseph Dairy Assn.	Co-op.	F. Payson, Sec.	St. Joseph	Livemore	Fred Bacon	Sept'r	Test.	132
614	Swa City.....	Swa City Creamery Co.	Co-op.		Swa City	Swa City	J. A. Conholin	Sept'r	Test.	133

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615	Wesley.....	Wesley Co-op. Cr'y Co.	Co-op.	P. E. Shaw, Sec.	Wesley	Wesley	N. E. Hanna	Sept'r	Test.	616
616	West Bend.....	Garfield Creamery Co.	Co-op.	B. Birmingham, Sec.	West Bend	West Bend	J. L. Reid	Sept'r	Test.	268
617	Whitemore.....	Whitemore Cr'y Co.	Co-op.	Thos. Carmody, Sec.	Whitemore	Whitemore	G. A. Hanna	Sept'r	Test.	1,090
618	Argyle.....	Argyle Creamery	Ind.	E. E. Quisenberry	Argyle	Argyle	E. G. Quisenberry	Sept'r	Test.	619
619	West Point.....	West Point Creamery	Ind.	H. Borge & Co.	West Point	West Point	H. Borge	G. O.	Test.	620
620	Albion.....	Albion	Stock	J. M. Robins, Sec.	Robins	Albion	Obas. Royden	Sept'r	Test.	621
621	Center Point.....	Center Point	Ind.	Geo. L. Weeks	Center Point	Center Point	John Derlinger	Sept'r	Test.	622
622	Central City.....	Central City	Ind.	Henderson & Nisbet	Central City	Central City	John Nisbet	Sept'r	Test.	623
623	Valley Farm.....	Valley Farm	Ind.	F. G. Henderson	Central City	Central City	H. Weber	Sept'r	Test.	4
624	Coggon.....	North Side Creamery	Co-op.	F. Lehman, Sec.	Coggon	Coggon	F. Lehman	Sept'r	Ind.	624
625	Coggon.....	Coggon	Stock	M. Leas, Sec.	Coggon	Coggon	Howard Bliss	Sept'r	Ind.	625
626	Deep Spring.....	Deep Spring	Ind.	Henderson & Borsner	Coggon	Coggon	John Borsner	Sept'r	Ind.	626
627	Elmont.....	Elmont	Ind.	S. B. Mills	Elmont	Central City	Seth B. Mills	Sept'r	Ind.	627
628	Ely.....	Ely and Western Cr'y	Stock	J. C. Dvorak, Sec.	Ely	Ely	L. J. Ford	Sept'r	Test.	628
629	Ely and Western Cr'y	Ely and Western Cr'y	Stock	J. C. Dvorak, Sec.	Ely	Ely		Sept'r	Test.	629
630	Scotch Grove.....	Scotch Grove	Ind.	Henderson & Back	Fairfax	Oedar Rapids	A. J. Babcock	Sept'r	Ind.	630
631	Lafayette.....	Lafayette Creamery Co.	Co-op.	D. W. Neighbors	Lafayette	Albion	A. J. Babcock	Sept'r	Test.	1,640
632	Lafayette.....	Lafayette	Ind.	Krueger & Thompson	Lafayette	Lafayette		G. O.	Test.	1,641
633	Libon.....	W. S. Furnas Co.	Ind.	Marion	Marion	Marion	C. A. Cline	Sept'r	Test.	705
634	Marion.....	Marion	Ind.	W. W. Grey	Marion	Ogdon	W. C. Lutz	Sept'r	Test.	1,129
635	Prairieburg.....	Nickel Plate	Ind.	E. LeClair	Prairieburg	Prairieburg		Sept'r	Test.	706
636	Prairieburg.....	Diamond Creamery Co.	Ind.	Shannon, Mel & Co.	Boston, Mass	Monticello		Sept'r	Test.	707
637	Prairieburg.....	Minshart & Cook	Ind.	Minshart & Cook	Prairieburg	Coggon	H. F. Cook	Sept'r	Test.	708
638	Robins.....	Eureka Creamery Co.	Stock	J. B. Holinger, Sec.	Robins	Robins	B. Gould	Sept'r	Test.	709

\* Skin Stations.



## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by individual co-op. or otherwise.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-er, cream, or both.	Method of receiving milk for the test or by the hundred.	Dairy commis-sioner's bottle number.
609	Linn County	—Continued.								
610	Alburnett	Eureka Creamery Co.	Stock.	J. B. Holsinger, Sec.	Robins			Sep'tr	Test.	
611	Springfield	Phoenix	Ind.	Irwin Paul	Springville	Springville	Irwin Paul	Sep'tr	Test.	381
612	Linn Grove	Phoenix	Ind.	Irwin Paul	Springville			Sep'tr	Test.	
613	Toddsville	Monroe	Stock.	J. B. Miller	Toddsville	Toddsville	C. Lefaner	Sep'tr	Test.	210
614	Troy Mills	Troy Mills Creamery	Ind.	E. G. Gard.	Troy Mills	Walker	J. W. Ondler	Sep'tr	Hd.	
615	Walker	Highland Creamery Co.	Co-op.	W. Horak	Walker	Walker	F. H. Nietert	Sep'tr	Hd.	18
616	Walker	Walker	Ind.	H. J. Nietert	Walker	Walker	S. W. Laird	Sep'tr	Test.	
617	Waubek	Crown	Ind.	J. G. Fox	Waubek	Central City	H. C. Hemenway	Sep'tr	Hd.	
618	Waubek	Waubek	Ind.	A. L. Corry	Waubek	Viola	A. L. Corry	Sep'tr	Hd.	
619	Waubek	Birmingham	Ind.	W. J. Ross	Waubek	Central City	W. J. Ross	Sep'tr	Test.	
620	Linn County	Fredonia Creamery	Ind.	Thos. Carey	Fredonia	Fredonia	E. W. Kelly	G. C.		
621	Letts	Letts	Ind.	H. Hildebrand	Letts	Letts	J. M. Hildebrand	Sep'tr	Test.	
622	Wapello	Wapello	Ind.	F. P. Bretbach	Wapello	Wapello	F. P. Breitbach	G. C.		
623	Lucas County	Russell Creamery	Co-op.	W. J. Marshall	Russell	Russell	W. J. Marshall	Sep'tr	Test.	84
624	Lyon County	Inwood Creamery Co.	Stock.	N. Nordenack, Mgr.	Inwood	Inwood	N. Nordenack	Sep'tr	Test.	636
625	Larchwood	Larchwood Creamery	Ind.	E. Wright	Larchwood	Larchwood	E. Wright	Sep'tr	Hd.	

626	Lester	Lester Creamery Co.	Co-op.	L. W. Billings, Sec.	Lester	Lester	L. W. Billings	Sep'tr	Hd.	
627	Madison County	Stuart Creamery	Ind.	E. M. Lamos	Stuart			Sep'tr	Test.	
628	Macksburg	Cook Creamery Co.	Ind.	J. W. Way	Lorimer	Lorimer	J. W. Way	Sep'tr	Test.	
629	Pitza	Jackson Center	Ind.	E. M. Lamos	Stuart	Winterset	E. E. Gates	Sep'tr	Test.	
630	Winterset	Cloverdale	Co-op.	E. E. Gates	Winterset	Winterset		Sep'tr	Test.	
631	Marion County	N. Sharon Produce Co.	Stock.	N. Sharon Prod. Co.	New Sharon	New Sharon	H. Martin	G. C.		
632	Bussey	Bussey Creamery	Ind.	W. E. Caldwell & Co.	Bussey	Bussey	E. D. Caldwell	Sep'tr	Test.	1,034
633	Durham	Farmers' R. & C. Mfg. Co.	Co-op.	C. H. Dunham, Sec.	Durham	Durham	F. Larwood	Sep'tr	Test.	
634	Knoxville	Knoxville	Ind.	J. J. Bousquet	Pella	Knoxville	W. H. Litter	G. C.		
635	Newbern	Newbern Creamery	Ind.	Luther Biggs	Newbern	Chariton	A. D. Riggs	Sep'tr	Test.	
636	Pella	Garden City Creamery	Ind.	J. J. Bousquet	Pella	Pella	T. Smorenburg	Sep'tr	Test.	
637	Marshall County	Minerva Valley Cr'y Co.	Co-op.	J. Van Meter, Sec.	Clemons	Clemons Grove	H. Nolta	G. C.		
638	Green Mount'n	Green Mountain Cr'y	Co-op.	M. C. Bower, Pres.	Green Mount'n		C. S. Woods	Sep'tr	Test.	1,055
639	Haverhill	Columbia Creamery Co.	Co-op.	M. Kunkle, Sec.	Haverhill	Haverhill	C. S. Mithiser	Sep'tr	Test.	1,039
640	Liscomb	Liscomb But. & Ch. Co.	Ind.	C. F. Biersborn, Mgr.	Liscomb	Liscomb	C. F. Biersborn	Sep'tr	Test.	306
641	Melbourne	Farmers' Co-op. Cr'y Ass'n.	Co-op.	R. Robinson, Pres.	Melbourne	Melbourne	F. J. Mable	Sep'tr	Test.	741
642	Rhodes	Eden Creamery	Ind.	J. H. Perry	Rhodes	Rhodes	C. A. Weeks	S. & G. C. Test.		1,131
643	State Center	State Center Farmers' Creamery Ass'n.	Co-op.	E. G. Swift, Mgr.	State Center	State Center	Guy Thomas	G. C.	Test.	16
644	Emerson	Blue Grass	Ind.	W. M. Tolander	Emerson	Emerson	W. M. Tolander	G. C.		
645	Glenwood	Golden Hill Dairy	Ind.	W. W. Mockelwait	Glenwood	Glenwood	D. T. Phelps	Sep'tr	Test.	
646	Malvern	Malvern Creamery	Ind.	J. P. Morton	Malvern	Malvern		G. C.		

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## IOWA CREAMERY LIST—CONTINUED.

Office record number	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by 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—by the hundred or by the hundred.	Dairy commis-sioner's number
646	Mitchell County Bailey.....	Lawn Spring.....	Co-op.	T. J. Wheeler.....	Bailey.....	Bailey.....	M. M. Blandin	S. & G. O.	Test.	1,035
647	Little Cedar.....	Little Cedar Cr'y Co.	Co-op.	G. H. Hammond.....	Little Cedar.....	Little Cedar.....	C. B. French.....	G. C.		
648	New Haven.....	Farmers' Co-op. Cr'y.....	Co-op.	John Griffin, Sec.....	New Haven.....	Osage.....	C. Thomas.....	G. C.		
649	Orchard.....	Farmers' Co-op. Cr'y Ass.	Co-op.		Orchard.....	Orchard.....	M. V. Patch.....	G. C.		
650	Osage.....	Rock Creek Co-op. Cr'y Ass.	Co-op.	S. J. Fosholdt, Sec.....	Merola.....	Osage.....	L. McLaren.....	G. C.		736
651	Osage.....	Osage Co-op. Creamery.	Co-op.	A. Bartle, Sec.....	Osage.....	Osage.....	D. McDugall.....	S. & G. O.	Test	
652	Riceville.....	Riceville Co-op. Cr'y.....	Co-op.	S. L. Crum, Mgr.....	Riceville.....	Riceville.....	G. A. Miller.....	S. & G. O.	Test	
653	St. Asagar.....	Farmers' Co-op. Cr'y.....	Co-op.	M. E. Benson.....	St. Asagar.....	St. Asagar.....	A. Anderson.....	G. C.		
654	Monona County Blencoe.....	Walnut Grove Cr'y.....	Ind.	Geo. Bruner.....	Blencoe.....	Blencoe.....	Peter Beck.....	Sep'tr.	Hd.	
655	Whiting.....	Whiting Creamery Co.	Co-op.	Charles Cassidy, Sec.	Whiting.....	Whiting.....	Niles Danielson	Sep'tr.	Test.	
656	Monroe County Albia.....	Albia.....	Ind.	Tompson & Wallace	Albia.....	Albia.....	B. E. Wallace.....	Sep'tr.	Test.	
657	Montgomery County Elkton.....	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.	Elkton.....	J. H. Baldwin	Sep'tr.	Test.	119
658	Stanton.....	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.	
659	Muscatine County Atalissa.....	Atalissa.....	Ind.	C. A. Minshell, Sec.	Atalissa.....	Atalissa.....	James Blair.....	S. & G. O.	Hd.	687
660	West Liberty.....	Cedar Valley Creamery	Ind.	S. B. Pickering.....	West Liberty..	West Liberty..	Wm. Mathew.....	S. & G. O.	Hd.	
661	Center Dale.....	Cedar Valley Creamery	Ind.	S. B. Pickering.....	West Liberty..			S. & G. O.	Hd.	

662	West Liberty..	H. H. Hildebrand.....	Ind.	H. H. Hildebrand.....	West Liberty..	West Liberty..	E. R. Hildebrand	G. C.		
663	Wilton Junction	Nickle Plate Creamery	Ind.	George W. Kelley.....	Wilton Junction	Wilton.....	C. E. Kelley.....	S. & G. O.	Hd.	969
664	Moscow.....	Nickle Plate Creamery	Ind.	George W. Kelley.....	Wilton Junction			S. & G. O.	Hd.	
665	O'Brien County Paulina.....	Paulina Creamery Co.	Stock.	W. Strampe, Mgr.....	Paulina.....	Paulina.....	Wm. Strampe.....	Sep'tr.	Hd.	89
666	Paulina.....	Caledonia Creamery Co.	Ind.	William Gehris.....	Germantown..	Paulina.....	William Gehris	Sep'tr.	Hd.	
667	Pringhar.....	Pleasant Park Cr'y.....	Ind.	Morrow & Younger.	Pringhar.....	Pringhar.....	Geo. G. Stoddard	Sep'tr.	Hd.	
668	Sutherland.....	Sutherland.....	Ind.	A. Younger.....	Larabee.....	Sutherland..	M. Adams.....	Sep'tr.	Hd.	67
669	Waukegan County Allendorf.....	Allendorf.....	Co-op.	G. M. Alwood, Sec.	Allendorf.....	Allendorf.....	A. P. Mott.....	Sep'tr.	Test.	
670	Malvin.....	Sanborn.....	Ind.	George Wells.....	Sanborn.....	Sanborn.....		Sep'tr.	Test.	82
671	Ocheyedan.....	Fm's Co-op. B. & C. Co.	Co-op.	F. J. Fozack.....	Ocheyedan.....	Ocheyedan.....	H. Richardson.	Sep'tr.	Test.	
672	Sibley.....	Sibley.....	Ind.	W. Emmett.....	Sibley.....	Sibley.....	W. Emmett.....	Sep'tr.	Test.	
673	Page County Blanchard.....	Blanchard.....	Ind.	J. J. Thompson.....	Blanchard.....	Blanchard.....	J. J. Thompson.	S. & G. O.	Test.	
674	Clarinda.....	Wall Street.....	Ind.	Clark & Gray.....	Clarinda.....	Clarinda.....	A. H. Gray.....	Sep'tr.	Test.	
675	Coin.....	Coin.....	Ind.	W. H. Wheeler.....	Coin.....	Coin.....		Sep'tr.	Test.	
676	Essex.....	Essex.....	Ind.	T. K. Elliott, Sec.	Essex.....	Essex.....	W. H. Keyes.....	Sep'tr.	Test.	1,067
677	Yorktown.....	Yorktown B. & C. Ass.	Co-op.	F. C. Morley.....	Yorktown.....	Yorktown.....	Wm. C. Kimball	Sep'tr.	Test.	
678	Shambaugh.....	Shambaugh.....	Co-op.	L. W. Shambaugh, Sec.	Shambaugh.....	Shambaugh.....	J. C. Murphy.....	Sep'tr.	Test.	777
679	Shenandoah.....	Shenandoah B. & C. Co.	Stock.	H. C. Hedison, Sec.	Shenandoah..	Shenandoah..	C. G. Voigt.....	Sep'tr.	Hd.	
680	Palo Alto County Ayrshire.....	Silver Creek.....	Co-op.	P. N. Bond, Sec.	Ayrshire.....	Ayrshire.....	A. J. Blakeman.	Sep'tr.	Test.	1,067
681	Curlew.....	Curlew.....	Co-op.	E. Ford, Pres.	Curlew.....	Curlew.....	C. S. Christensen	Sep'tr.	Test.	178
682	Cylinder.....	Cylinder B. & C. Ass.	Co-op.		Cylinder.....	Cylinder.....	F. M. Cleveland	Sep'tr.	Test.	552
683	Depew.....	Maple Leaf Company..	Co-op.	A. Letchman, Sec.	Depew.....	Cylinder.....	Ed. Krasin.....	Sep'tr.	Test.	51

\* Skim Stations.



## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual, co-operative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of receiving milk—by the separator or by the hundred	Dairy commis-sioner's test—bottles
684	Palo Alto County—Continued. Emmetsburg...	Emmetsburg Cr'y Co...	Stock.	L. Stuehmer, Sec.	Emmetsburg...	Emmetsburg...	N. Kimston...	Sep'tr.	Test...	994
685	Emmetsburg...	Nevada...	Co-op.			Emmetsburg...	A. B. Conway...	Sep'tr.	Test...	
686	Fairville...	Fairville...	Co-op.	A. Stahl...	Fairville...	Whittemore...	A. C. Kressin...	Sep'tr.	Test...	369
687	Graettinger...	Lost Is'and Cr'y Co...	Co-op.	L. C. Christenson...	Fallow...	Graettinger...	C. Remington...	Sep'tr.	Test...	
688	Graettinger...	Farmers' Co-op. Cr'y Co	Co-op.	A. O. Bergeson, Sec.	Graettinger...	Graettinger...	W. G. Stersbeck	Sep'tr.	Test...	
689	Mallard...	Mallard B. & C. Assn.	Co-op.	Theo. Rinders...	Mallard...	Mallard...	J. W. Finnell...	Sep'tr.	Test...	340
690	Osgood...	Osgood...	Co-op.	L. P. Stillman...	Emmetsburg...	Osgood...	E. W. Reid...	Sep'tr.	Test...	37
691	Rodman...	Rodman Creamery Co.	Co-op.	C. J. Frye...	Rodman...	Rodman...	J. A. Reid...	Sep'tr.	Test...	746
692	Ruthven...	Highland Butter Assn.	Co-op.	F. J. Breman...	Ruthven...	Ruthven...	W. H. Haller...	Sep'tr.	Test...	23
693	Ruthven...	Ruthven...	Ind.	H. D. Remington...	Ruthven...	Ruthven...	A. L. Remington	Sep'tr.	Test...	742
694	Ruthven...	Trumbull Lake...	Ind.	H. D. Remington...	Ruthven...	Ruthven...	E. J. Remington	Sep'tr.	Test...	
695	West Bend...	West Bend Co-op Cr'y Co	Co-op.	L. E. Temple, Sec.	West Bend	West Bend...	Thos. Clark...	Sep'tr.	Test...	365
696	Plymouth County. Akron...	Akron & Sioux Valley.	Co-op.	G. O. Putnam, Pres.	Akron...		G. Chenoweth...	Sep'tr.	Test...	789
697	Dalton...	Grant Township...	Co-op.	H. F. Maust...	Struble...	Dalton...	E. W. Geyer...	Sep'tr.	Test...	
698	Ellendale...	Ellendale...	Co-op.	J. F. Gorman...	Ellendale...	Merrill...	Wm. Anderson...	Sep'tr.	Test...	
699	Le Mars...	Le Mars Co-op. Cr'y.	Co-op.	Theo. Langle...	Le Mars...	Le Mars...		Sep'tr.	Test...	753
700	Merrill...	Merrill Creamery Co.	Co-op.	R. M. Crouch, Sec.	Merrill...	Merrill...	C. B. Horrocks...	Sep'tr.	Test...	655
701	Neptune...	Neptune Co-op. Cr'y Co.	Co-op.	F. J. Dobbert, Sec.	Neptune...	Le Mars...		Sep'tr.	Test...	
702	O'Leary...	O'Leary Creamery Co.	Co-op.			Le Mars...	A. Freese...	Sep'tr.	Test...	
703	Oyens...	Oyens Co-op Cr'y Assn.	Co-op.	A. Kloster, Pres.	Oyens...	Oyens...	C. Mortison...	Sep'tr.	Test...	
704	Remsen...	Remsen Co-op. Cr'y Co.	Co-op.	F. Bohlke, Sec.	Remsen...	Remsen...	D. W. Mohler...	Sep'tr.	Hd.	
705	Struble...	Struble Creamery...	Co-op.	F. Stoll...	Struble...	Struble...	C. Vanderham...	Sep'tr.	Test...	
706	Pocahontas County. Fonda...	Lilly...	Co-op.	J. D. Fitzgerald, Sec.	Fonda...	Fonda...	C. D. Vonham...	Sep'tr.	Test...	311
707	Fonda...	Rosebud...	Ind.	A. T. Heswick...	Fonda...	Fonda...	E. A. Haven...	Sep'tr.	Test...	7
708	Havelock...	Havelock...	Ind.	C. C. Clifton...	Havelock...	Havelock...	C. C. Clifton...	Sep'tr.	Test...	
709	Laurens...	Laurens Creamery...	Ind.	W. & J. G. Hias...	Laurens...	Laurens...	F. W. Johnson...	Sep'tr.	Test...	
710	Plover...	Plover Creamery...	Ind.	John Carroll, Pres.	Howard, Ill.	Plover...	F. Wilson...	Sep'tr.	Test...	789
711	Pomeroy...	Bretholz Creamery...	Ind.	E. C. M. Bretholz...	Pomeroy...	Pomeroy...	Wm. Bretholz...	Sep'tr.	Test...	
712	Pomeroy...	Belville...	Ind.	B. Fisher...	Pomeroy...	Pomeroy...	R. Fisher...	Sep'tr.	Hd.	
713	Rolfe...	Gilt Edge...	Ind.	W. R. Rogers...	Rolfe...	Rolfe...	E. D. Rogers...	Sep'tr.	Test...	329
714	Rusk...	Grant Creamery Co.	Ind.	L. E. Hanson, Sec.	Rusk...	Pomeroy...	N. G. Nelson...	Sep'tr.	Hd.	
715	Polk County. Ankeny...	Crocker Center...	Ind.	McKae Bros.	Des Moines	Ankeny...	W. R. Stewart...	Sep'tr.	Test...	
716	Bondurant...	Farmers' Co-op. Cr'y As.	Co-op.	B. F. Rathrock...	Bondurant...	Bondurant...	A. Gabrielson...	Sep'tr.	Test...	
717	Grimes...	Grimes B. and C. Co.	Stock.	W. J. Stewart, Sec.	Grimes...	Grimes...	G. A. Stewart...	Sep'tr.	Test...	279
718	Maxwell...	Keystone...	Ind.	F. W. Hill...	Maxwell...	Maxwell...	A. K. Mendenhall	Sep'tr.	Test...	535
719	Mitchellville...	Mitchellville Cr'y Ass'n	Co-op.	Wm. Prichards...	Mitchellville...	Mitchellville...	Geo. E. Roller...	Sep'tr.	Hd.	186
720	Runnells...	Runnells B. and C. Co.	Co-op.	W. L. Pence, Pres.	Runnells...	Runnells...	W. C. Hurst...	Sep'tr.	Test...	377
721	Pottawattamie County. Avoca...	Avoca...	Ind.	R. Frost...	Avoca...	Avoca...	M. A. Lorensen	G. C.		
722	Hancock...	Silver Valley...	Ind.	H. C. Brandes...	Hancock...	Hancock...	J. Doehla...	Sep'tr.	Hd.	261
723	Macedonia...	Macedonia Cr'y Ass'n.	Stock.	J. M. Coas, Pres.	Macedonia...	Macedonia...	S. M. Geyer...	Sep'tr.	Test...	

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-ered cream, or both.	Method of receiv- ing milk—by the test or by the separator.	Dairy commis- sioner's test- stoner's test- bottle number.
724	Pottawattamie County—Continued.	Minden	Co-op.		Minden	Minden		Sep'tr.	Test.	686
725	Treynor	Treynor Creamery Co.	Co-op.	Geo. Hurch	Treynor	Council Bluffs	F. O. Winchell	Sep'tr.	Test.	
726	Pocahontas County.	Barnes Creamery	Ind.	F. L. Emery, Sec.	What Cheer	Barnes City	F. L. Emery	Sep'tr.	Test.	
727	Barnes City	What Cheer Creamery	Ind.	Emery & Fank	What Cheer			Sep'tr.	Test.	
728	Brooklyn	Brooklyn	Ind.		Brooklyn	Brooklyn		Sep'tr.	Test.	
729	Deep River	Deep River	Ind.	W. A. Negley	Deep River	Deep River	G. C.			
730	Grinnell	Fowler	Ind.	J. W. Fowler	Grinnell	Grinnell	J. W. Fowler	Sep'tr.	Test.	197
731	Guernsey	Guernsey B. and C.	Ind.	S. Whitney, Sec.	Toledo	Guernsey	A. L. Minehart	Sep'tr.	Test.	
732	Ringgold County.	Benton	Ind.	Farwell & Bowlby	Benton	Benton	F. B. Farwell	Sep'tr.	Hd.	
733	Knowlton	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.	
734	Redding	Redding Creamery	Ind.	D. M. Rich	Redding	Redding	D. M. Rich	G. C.		
735	Shannon City.	Union Creamery Co.	Co-op.	J. W. Hunter, Pres.	Shannon City	Shannon City	E. G. Undermore	Sep'tr.	Test.	121
736	Sac County.	Auburn Creamery	Ind.	Dunahue & Ahrens	Lake View	Auburn	S. C. McCay	Sep'tr.	Test.	121
737	Carnarvon	Carnarvon Creamery	Ind.	Seaman & Hoon	Carnarvon	Carnarvon	D. J. Hoon	Sep'tr.	Hd.	122
738	Early	Delaware Center	Co-op.	A. M. Morse, Sec.	Early	Early	A. J. Grotland	Sep'tr.	Test.	1,128
739	Early	Early	Ind.	G. W. Pattee	Early	Early	H. C. Best	Sep'tr.		337
740	Early	Gold Medal	Ind.	J. W. Wright	Early	Lake View	J. W. Wright	Sep'tr.	Test.	191
741	Lake View	Lake View	Ind.	Donahue & Ahren	Lake View	Lake View	J. Ericson	Sep'tr.	Test.	249
742	Odebolt	Odebolt	Co-op.	W. B. Umbarger, Mgr.	Odebolt	Odebolt	E. McFarland	Sep'tr.	Hd.	683
743	Odebolt	Farmers' Creamery Co.	Stock	J. A. Cranston, Sec.	Odebolt	Odebolt	F. W. Sargent	Sep'tr.	Test.	265
744	Odebolt	Stockholm	Ind.	K. Mattson	Kiron	Odebolt	K. Mattson	Sep'tr.	Hd.	
745	*Sac City	Blue Grass B. & C. Fac.	Ind.	I. Hillman	Sac City	Sac City	F. Hillman	Sep'tr.	Test.	
746	Sac City	Corn Valley	Ind.	W. H. Pittis	Sac City	Sac City	W. H. Pittis	Sep'tr.	Test.	
747	Sac City	Pearl	Ind.	H. H. Underhill	Sac City	Sac City	M. R. Wright	Sep'tr.	Test.	327
748	Schaller	Eureka	Ind.	O. F. Schrader	Schaller	Schaller	Geo. Bristol	Sep'tr.	Hd.	331
749	Wall Lake	Wall Lake	Ind.	Donahue & Ahren	Wall Lake	Wall Lake	T. Deacon	Sep'tr.	Test.	711
750	Scott County.	Amity	Ind.	W. Koberg	Amity	Davenport	W. Koberg	Sep'tr.	Test.	
751	Donahue	Donahue Fm's B. Co.	Ind.	Frank Keppy	Donahue	Donahue	P. H. Kower	Sep'tr.	Test.	1,030
752	Eldridge	Eldridge B. and C. Co.	Ind.	W. J. Bryson	Eldridge	Eldridge	W. J. Bryson	Sep'tr.	Test.	276
753	Long Grove	Star	Ind.	Geo. Curtis	Long Grove	Long Grove	J. H. Marriott	G. C.		
754	Shelby County.	Earling Creamery Co.	Ind.	F. Thelle, Sec.	Earling	Earling	C. J. Pick	Sep'tr.	Hd.	
755	Westphalia	*Earling Creamery Co.	Ind.	F. Thelle, Sec.	Earling			Sep'tr.	Hd.	
756	Elk Horn	Danish Centrifugal	Ind.	Geo. James, Sec.	Elk Horn	Brayton	P. K. Peterson	Sep'tr.	Test.	
757	Harlan	Harlan	Ind.	C. Jorgenson	Harlan	Harlan	C. Jorgenson	Sep'tr.	Test.	
758	Harlan	Buck Valley Creamery	Co-op.	B. Rasmussen, Sec.	Harlan	Kirkman	M. P. Henriksen	Sep'tr.	Test.	751
759	Walnut, Pottawattamie Co.	Prairie Rose	Co-op.	J. D. Lorentzen	Harlan	Walnut	N. C. Madren	Sep'tr.	Test.	
760	Stone County.	Alton	Ind.	M. E. Mueller	Alton	Alton	M. E. Mueller	Sep'tr.	Test.	1,042
761	Granville	Northwestern Cry Co.	Stock	C. Wagner	Granville	Granville	F. Koppe	Sep'tr.	Hd.	

\*Skim Stations.

\*Manufactures both butter and cheese.



# IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR	NAME OF CREAMERY.	Operated by individual, co-operative or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-er, cream, or both.	Method of receiving milk, the test or by the hundred.	Milk commis-sioner's test-bottle.
762	Sioux County Hawarden	Continued. Hawarden Cr'y Ass'n.	Co-op.	G. J. Shoemaker.	Hawarden	Hawarden	G. A. Crowther.	Sep'tr.	Test.	129
763	Hospers	Hospers Creamery	Co-op.	P. Jungers, Sec.	Hospers	Hospers	F. U. Johnson	Sep'tr.	Test.	
764	Hull	Hull	Ind.	L. E. Bourquin	Hull	Hull	L. E. Bourquin	Sep'tr.	Hd.	304
765	Rock Valley	The Rock Valley Cr'y.	Ind.	Stenscad Bros.	Rock Valley	Rock Valley	J. Stenscad	Sep'tr.	Hd.	357
766	Sioux Center	Welcome Creamery Co.	Ind.	D. Hogeboom	Sioux Center	Sioux Center		Sep'tr.	Hd.	749
767	Sioux Center	Sioux Center Creamery	Ind.	G. H. Schoep	Sioux Center	Sioux Center	P. Westra	Sep'tr.	Hd.	987
768	Sioux Center	Sioux Center Creamery	Ind.	G. H. Schoep	Sioux Center	Sioux Center		Sep'tr.	Hd.	
769	Story County Ames	Iowa Agri. College Cr'y		State of Iowa	Ames	Ames	Geo. L. McKay	Sep'tr.	Test.	304
770	Ames	Milford Farmers' Cr'y.	Co-op.	W. J. Gilmore, Sec.	Ames	Ames	Wm. Young	Sep'tr.	Test.	306
771	Cambridge	Cambridge Far. Cr'y Co.	Co-op.	Oliver Hill, Sec.	Cambridge	Cambridge	J. R. Moody	Sep'tr.	Test.	1,019
772	Collins	Farmers' Co-op. Cr'y	Co-op.	A. G. Armstrong, Sec.	Collins	Collins	A. G. Armstrong	Sep'tr.	Test.	620
773	Colo	Fairview	Ind.	L. M. Kelley	Colo	Colo	L. M. Kelley	Sep'tr.	Test.	614
774	Elwell	Highland Creamery Co.	Co-op.	B. J. Talbot, Sec.	Elwell	Elwell	B. J. Talbot	Sep'tr.	Test.	1,000
775	Gilbert Station	Gilbert Station Cr'y	Ind.	T. H. Jones	Gilbert Station	Gilbert	P. Jensen	Sep'tr.	Test.	
776	Huxley	Huxley Farmers' Cr'y.	Co-op.	J. Stenberg, Sec.	Huxley	Huxley	J. F. Burrets	Sep'tr.	Test.	
777	Iowa Center	Iowa Center	Ind.	J. Q. Moore	Iowa Center	Maxwell	M. Mortenson	Sep'tr.	Test.	212
778	Maxwell	Maxwell	Ind.	F. W. Hill	Maxwell	Maxwell	W. Peterson	Sep'tr.	Test.	233
779	McCallsburg	McCallsburg Far. Cr'y.	Co-op.	F. Schawper, Pres.	McCallsburg	McCallsburg	E. S. Hoyt	Sep'tr.	Test.	340
780	Nevada	Nevada	Ind.	Boardman Bros.	Nevada	Nevada	T. Russell	Sep'tr.	Test.	
781	Roland	Indian Hill Creamery	Stock	R. Kimble, Pres.	Roland	Roland	John Baitinger	Sep'tr.	Test.	661
782	Roland	Roland Far. Cr'y Co.	Co-op.	E. J. Evenson, Sec.	Roland	Roland	R. Nelson	Sep'tr.	Test.	43
783	Slaters	The Slaters Far. Cr'y Co.	Co-op.	Ole Langland, Sec.	Slaters	Slaters	John Freeland	Sep'tr.	Test.	
784	Story City	Story City Far. Cr'y Co.	Co-op.	Carl Rasmussen	Story City	Story City	W. H. Scheiber	Sep'tr.	Test.	730
785	Tama County Berlin	Berlin Creamery	Ind.	H. P. Jacobsen & Bro.	Morrison	Berlin	C. P. Jacobson	Sep'tr.	Test.	
786	Chelsea	Chelsea	Ind.	Siegel & Son	Chicago, Ill.	Chelsea	Robert Allee	G. C.	Test.	
787	Dysart	Dysart	Ind.	C. O. Harrington	Vinton	Dysart	E. O. Howe	G. C.	Test.	
788	Dinsdale	Dinsdale	Co-op.	E. Mitchell, Sec.	Dinsdale	Dinsdale	O. E. Gaffin	Sep'tr.	Test.	1,007
789	Gladbrook	Gladbrook	Ind.	P. McNelly	Beaman	Gladbrook	Burton Owens	S. & G. C.	Test.	
790	Montour	Montour	Ind.	L. L. Johnson	Montour	Montour	J. M. Lawyer	G. C.	Test.	
791	Toledo	Toledo	Stock	S. S. Whitney, Sec.	Toledo	Toledo	Frank Skillins	G. C.	Test.	
792	Traer	Traer	Ind.	J. R. O'Connor	Traer	Traer	J. R. O'Connor	S. & G. C.	Test.	
793	Taylor County Bedford	Bedford	Ind.	W. A. Geithman	Bedford	Bedford	W. A. Geithman	Sep'tr.	Test.	
794	Blockton	Blockton	Ind.	H. H. Longwell	Blockton	Blockton	Fred Longwell	Sep'tr.	Test.	
795	Clearfield	Clearfield	Ind.	J. Dubet	Clearfield	Clearfield	G. U. McNair	Sep'tr.	Test.	609
796	Conway	Blue Grass Creamery	Stock	M. C. Hall, Sec.	Conway	Conway	Frank Ketch	Sep'tr.	Test.	
797	Conway	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.	Conway		Sep'tr.	Test.	
798	Guss	Cold Spring Creamery	Co-op.	H. R. Moats, Sec.	Guss	Corning	W. A. Liebhardt	Sep'tr.	Test.	
799	Guss	Maple Grove	Ind.	E. Schoonover	Guss	Nodaway	E. Schoonover	G. C.		1,135
800	Lenox	Elgin Creamery Co.	Ind.	O. Sands, Pres.	Chicago, Ill.			Sep'tr.	Test.	

\* Skim Stations.

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Owned by individual, partnership or company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, galvanized cream, or both.	Method of receiving milk by the milk can or by the hundred.	Dairy commission number, or bottle number.
801	Union County, Afton	Elgin Creamery Co.	Ind...	O. Sands	Chicago, Ill.	Afton	J. W. Kelley	Sep'tr	Test.	771
802	Dodge	sElgin Creamery Co.	Ind...	O. Sands	Chicago, Ill.	Afton	J. W. Kelley	Sep'tr	Test.	
803	Lincoln	sElgin Creamery Co.	Ind...	O. Sands	Chicago, Ill.	Afton	J. W. Kelley	Sep'tr	Test.	
804	Pleasant	sElgin Creamery Co.	Ind...	O. Sands	Chicago, Ill.	Afton	J. W. Kelley	Sep'tr	Test.	
805	Thayer	sElgin Creamery Co.	Ind...	O. Sands	Chicago, Ill.	Afton	J. W. Kelley	Sep'tr	Test.	
806	Arlapsee	Farmers' Co-op Cry Assn	Co op.	S. Clough, Jr., Sec.	Arlapsee	Arlapsee	H. L. Case	Sep'tr	Test.	906
807	Creston	Elgin Creamery	Ind...	O. Sands	Chicago, Ill.	Creston	R. H. Fairfield	Sep'tr	Test.	722
808	Crowwell	sElgin Creamery	Ind...	O. Sands	Chicago, Ill.	Crowwell	R. H. Fairfield	Sep'tr	Test.	
809	Kent	sElgin Creamery	Ind...	O. Sands	Chicago, Ill.	Kent	R. H. Fairfield	Sep'tr	Test.	
810	Lorimer	Elgin Creamery	Ind...	O. Sands	Chicago, Ill.	Lorimer	Geo. Beckman	Sep'tr	Test.	637
811	Talmage	Talmage Creamery Co.	Stock	J. W. Bebee, Sec.	Talmage	Talmage	J. W. Alexander	Sep'tr	Test.	303
812	Pleasant	sTalmage Creamery Co.	Stock	J. W. Bebee, Sec.	Talmage	Talmage	J. W. Alexander	Sep'tr	Test.	
813	Dodge	sTalmage Creamery Co.	Stock	J. W. Bebee, Sec.	Talmage	Talmage	J. W. Alexander	Sep'tr	Test.	
814	Van Buren County, Cantril	Cantril B. and C. Co.	Stock	A. P. DeFord, Sec.	Cantril	Cantril	Gus Schwanke	Sep'tr	Test.	
815	Milton	Milton	Ind...	Woodward & Cooley	Milton	Milton	V. T. Cooley	Sep'tr	Test.	
816	Stockport	sFairfield	Ind...	John McLane	Fairfield, Jefferson county	Stockport	V. T. Cooley	Sep'tr	Test.	
817	Wapello County, Agency	Agency B. and C. Co.	Ind...	John Engert	Agency	Agency	C. E. Perkins	Sep'tr	Test.	
818	Blakesburg	Blakesburg Creamery	Ind...	A. E. Nelson	Blakesburg	Blakesburg	A. E. Nelson	Sep'tr	Test.	
819	Eldon	Eldon	Ind...	C. E. Mortenson	Eldon	Eldon	C. E. Mortenson	Sep'tr	Test.	
820	Kirkville	Kirkville	Ind...	Z. S. Hahn	Oskaloosa	Kirkville	H. E. Ross	Sep'tr	Test.	
821	So. Ottumwa	South Ottumwa Cr'y	Ind...	E. C. McKimney	So. Ottumwa	Ottumwa	J. G. Meyers	Sep'tr	Test.	633
822	Warren County, Lacona	Lacona	Ind...	F. W. Shupe	Lacona	Lacona	F. W. Shupe	Sep'tr	Test.	
823	Milo	Warren County	Ind...	E. Haldman	Humeston	Humeston	E. Haldman	Sep'tr	Test.	
824	Norwalk	Norwalk Creamery	Ind...	G. Morrow, Sec.	Des Moines	Norwalk	James Wright	Sep'tr	Test.	
825	Prole	Prole	Ind...	E. H. Perkins	Prole	Prole	J. Wiley	Sep'tr	Test.	
826	Washington County, Kalona	Kalona	Ind...	Wm. Brooks & Son	Kalona	Kalona	Wm. Brooke	Sep'tr	Test.	
827	Noble	Oak Ridge	Ind...	E. Jenkin, Mgr.	Noble	Noble	E. Jenkin	Sep'tr	Test.	993
828	Riverside	Riverside	Ind...	E. Nichols	Riverside	Riverside	Wm. Miles	G. C.	Test.	
829	Washington	Washington	Ind...	Hise Bros	Washington	Washington	A. Viking	Sep'tr	Test.	876
830	Wellman	Daytonville	Ind...	C. O. Nicholas	Wellman	Wellman	Wellman	Sep'tr	Test.	883
831	Wayne County, Allerton	Allerton	Ind...	I. A. Halderman	Allerton	Allerton	M. Rasmussen	Sep'tr	Test.	622
832	Humeston	Wayne County Cr'y	Ind...	T. G. Hyde, Mgr.	Humeston	Humeston	T. G. Hyde	Sep'tr	Test.	664
833	Humeston	sWayne County Cr'y	Ind...	T. G. Hyde, Mgr.	Humeston	Humeston	T. G. Hyde	Sep'tr	Test.	
834	Lewisburg	sWayne County Cr'y	Ind...	T. G. Hyde, Mgr.	Humeston	Humeston	T. G. Hyde	Sep'tr	Test.	
835	Cambria	sWayne County Cr'y	Ind...	T. G. Hyde, Mgr.	Humeston	Humeston	T. G. Hyde	Sep'tr	Test.	
836	Seymour	Seymour Creamery	Ind...	R. S. Parker	Seymour	Seymour	H. Brohaw	Sep'tr	Test.	787
837	Webster County, Badger	Badger Creamery	Ind...	G. W. Gillman	Badger	Badger	G. W. Gillman	Sep'tr	Test.	229
838	Dayton	Willow Brook	Ind...	J. M. Daniels	Dayton	Dayton	M. Larson	G. C.	Test.	218
839	Duncombe	Duncombe	Ind...	Clelland Bros	Duncombe	Duncombe	Wm. Clelland	Sep'tr	Test.	



## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	Organized by individual co-op. or company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, gath-er and cream, or both.	Method of receiving milk, the test or by the hundred.	Dairy commis-sioner's bottle number.
	Water Court Gowrie.....	<i>y-Continued.</i>								
840	Moorland.....	Moorland.....	Ind.	F. S. Davis.....	Gowrie.....	Gowrie.....	Geo. Holtsclaw.....	G. C.		
841	Vincent.....	Vincent.....	Co-op.	S. J. Skinner.....	Moorland.....	Moorland.....	S. J. Skinner.....	Sep'tr..	Test..	132
842	Winneshiek County, Amund.....	Eden Co-operative Cr'y	Co-op.	D. Skuttle, Sec.....	Vincent.....	Vincent.....	I. J. Erdal.....	Sep'tr..	Test..	
843	Forest City.....	Forest City Creamery.....	Co-op.	I. J. Kessey.....	Forest City.....	Forest City.....	Lewis Richard.....	S. & G.O.	Test.	
844	Forest City.....	Forest City Creamery.....	Co-op.	I. J. Kessey.....	Forest City.....	Forest City.....	S. & G.O.	Test.		
845	Lake Mills.....	Winneshiek & North Creamery.....	Co-op.	Ole T. Grove.....	Lake Mills.....	Lake Mills.....	Ben Nelson.....	Sep'tr..	Test..	869
846	Lake Mills.....	Winneshiek & North Creamery.....	Co-op.	Ole T. Grove.....	Lake Mills.....	Lake Mills.....	J. M. Tapager.....	Sep'tr..	Test..	
847	Lake Mills.....	Logan Butter Factory.....	Co-op.	John J. Lande.....	Lake Mills.....	Lake Mills.....	J. M. Tapager.....	Sep'tr..	Test..	
848	Lake Mills.....	Logan Butter Factory.....	Co-op.	John J. Lande.....	Lake Mills.....	Lake Mills.....	J. M. Tapager.....	Sep'tr..	Test..	
849	Mt. Valley.....	Mt. Valley Creamery.....	Co-op.	J. T. Tallekson.....	Fertile.....	Fertile.....	N. N. Engbretson.....	Sep'tr..	Test..	1,132
850	Norman.....	Norman Cr'y Ass'n.....	Co-op.	S. G. Honsy.....	Norman.....	Norman.....	N. N. Engbretson.....	Sep'tr..	Test..	
851	Norman.....	Norman Cr'y Ass'n.....	Co-op.	S. G. Honsy.....	Norman.....	Norman.....	Erik Clement.....	Sep'tr..	Test..	
852	Thompson.....	Thompson Co-op.....	Co-op.	S. Higenbotham.....	Thompson.....	Thompson.....	M. M. Tapager.....	Sep'tr..	Test..	
853	Thompson.....	Thompson Co-op.....	Co-op.	S. Higenbotham.....	Thompson.....	Thompson.....	M. M. Tapager.....	Sep'tr..	Test..	
854	Winneshiek County, Burr Oak.....	Silver Creek.....	Co-op.	C. E. Reed.....	Burr Oak.....	Decorah.....	C. E. Reed.....	G. C.		

855	Canover.....	Crystal Springs.....	Ind.	C. E. Wood, Mgr.....	Canover.....	Canover.....	L. Lyman.....	Sep'tr..	Test..	824
856	Castalia.....	Castalia Farmers' Cr'y	Co-op.	H. L. Mayne, Sec.....	Castalia.....	Castalia.....	Wm. Albright.....	Sep'tr..	Test..	
857	Hesper.....	Anchor.....	Ind.	J. H. Miller.....	Hesper.....	Mable.....	E. Halsey.....	G. C.	Test.	
858	Highlandville.....	Kjomer Spring.....	Ind.	N. N. Larson.....	Highlandville.....	Mable.....	N. N. Larson.....	G. C.		
859	Nordness.....	Nordness Creamery Co.	Stock.	J. J. Running.....	Nordness.....	Nordness.....	Geo. H. Thune.....	G. C.		
860	Nordness.....	Red Oak.....	Co-op.	O. G. Hauger, Sec.....	Nordness.....	Nordness.....	Erik Clement.....	G. C.		
861	Nordness.....	Washington Prairie.....	Ind.	E. G. Opdahl.....	Decorah.....	Ossian.....	P. O. Nasse.....	G. C.		159
862	Ossian.....	Winneshiek County, Scheidmantle Cr'y.....	Ind.	Scheidmantle Bros.....	Ossian.....	Ossian.....	Will Spelcher.....	S. & G.O.	Test.	
863	Ossian.....	Scheidmantle Cr'y.....	Ind.	Scheidmantle Bros.....	Ossian.....	Ossian.....	Will Spelcher.....	S. & G.O.	Test.	
864	Ridgeway.....	Lincoln Farmers' Co-op.	Co-op.	J. Paley, Sec.....	Ridgeway.....	Ridgeway.....	G. A. Baker.....	G. C.	Test.	
865	Ridgeway.....	Ridgeway Creamery.....	Ind.	C. A. Fosse, Sec.....	Ridgeway.....	Ridgeway.....	L. F. Fasse.....	S. & G.O.	Test.	
866	Spillville.....	Spillville Cr'y Co.....	Ind.	J. A. Dostal.....	Spillville.....	Canover.....	J. A. Dostal.....	G. C.	Test..	315
867	Woodbury County, Anthon.....	Anthon Cr'y Co.....	Ind.	G. A. Brown.....	Anthon.....	Anthon.....	G. H. Fuller.....	Sep'tr..	Test..	
868	Climbing Hill.....	Climbing Hill.....	Ind.	De Witt Goodrich.....	Climbing Hill.....	Luton.....	D'Witt Goodrich.....	Sep'tr..	Test..	
869	Cushing.....	Cushing.....	Ind.	John Wilson Co.....	Cushing.....	Cushing.....	J. Wilson.....	Sep'tr..	Hd.	
870	Oto.....	Oto Creamery.....	Ind.	Welch & Smith.....	Oto.....	Oto.....	J. H. Schrum.....	Sep'tr..	Test..	
871	Smithland.....	Smithland.....	Ind.	T. H. Smith.....	Smithland.....	Smithland.....	J. H. Schrum.....	Sep'tr..	Hd.	
872	Sioux City.....	Sioux City Cr'y Co.....	Ind.	F. J. Glenn.....	Sioux City.....	Sioux City.....	E. C. Gure.....	Sep'tr..	Hd.	
873	North County, Bristol.....	Norman Creamery.....	Co-op.	S. E. Honsey.....	Norman.....	Norman.....	.....	Sep'tr..	Test..	
874	Fertile.....	Fertile Co-op. Dairy.....	Co-op.	R. G. Richardson.....	Fertile.....	Manly.....	J. A. Johnson.....	Sep'tr..	Test..	723
875	Grafton.....	Grafton Cr'y Ass'n.....	Ind.	M. Buehrer.....	Grafton.....	Grafton.....	T. H. Eckstein.....	S. & G.O.	Test..	196
876	Kensett.....	Kensett Creamery.....	Ind.	Chas. Watson.....	Kensett.....	Kensett.....	C. Watson.....	G. C.	Test..	733
877	Lake Mills.....	Nordland.....	Co-op.	F. L. Lee, Pres.....	Nordland.....	Kensett.....	H. Gulbranson.....	Sep'tr..	Test..	244
878	Manly.....	F'm's Co-op. Cr'y Ass'n	Co-op.	A. E. Mellen, Sec.....	Manly.....	Manly Junction.....	H. Knowles.....	G. C.	Test..	

\*Skim Stations.

## IOWA CREAMERY LIST—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CREAMERY.	(Organized by individual, co-op or other company.)	NAME OF PROPRIETOR, SECRETARY, OR MANAGER.	P. O. ADDRESS FOR SECURING MANAGER.	SHIPPING STATION.	NAME OF BUTTER-MAKER.	Separator, pasteurizer, or both.	Method of receiving milk—by the can or by the bucket.	Dairy commissioner's test number.
879	Worth County.	Continued.								708
880	Northwood	Brookfield Cr'y Ass'n.	Co-op.	J. B. Thompson.	Northwood	Northwood	N. C. Stirling	Sep'tr.	Test.	304
881	Northwood	Hartland Creamery	Co-op.	Ole N. Grefelst.	Silver Lake	Northwood	Sils Dahlen	Sep'tr.	Test.	
882	Northwood	Farmers' B. and C. Ass'n.	Co-op.	L. G. Mollen, Sec.	Northwood	Northwood	J. Stirling	Sep'tr.	Test.	
883	Northwood	Tenold Cr'y Ass'n.	Co-op.	O. G. Anderson, Sec.	Tenold	Northwood	Wm. Thygesen	Sep'tr.	Test.	
884	Belmond	Norway Cr'y Co-op.	Co-op.	G. Alexander, Pres.	Belmond	Belmond	Channer	Sep'tr.	Test.	
885	Belmond	Belmond Creamery Co.	Stock.	H. J. Klemm, Sec.	Belmond	Belmond	G. Wendworth	Sep'tr.	Test.	
886	Clarion	Clarion Creamery	Ind.	J. D. Denison	Clarion	Clarion	J. Denison	S. & O.C.	Test.	
887	Eagle Grove	Eagle Grove Creamery	Ind.	S. Middleton	Eagle Grove	Eagle Grove	S. Middleton	S. & O.C.	Test.	
888	Florence	Florence Co-op.	Ind.	W. E. Henley, Pres.	Clarion	Florence	H. Graesseth	Sep'tr.	Test.	
889	Goldfield	Fountain B. & C.	Ind.	B. P. Scott	Goldfield	Goldfield	B. P. Scott	Sep'tr.	Test.	
890	Goldfield	McMurry Bros.	Ind.	McMurry Bros.	Goldfield	Goldfield	J. Campbell	Sep'tr.	Test.	
891	Rowan	Rowan Creamery Co.	Co-op.	E. Ballar, Pres.	Rowan	Rowan	E. V. Campbell	Sep'tr.	Test.	

a Skin stations.

## THE CHEESE INDUSTRY IN IOWA.

Little advancement can be noted in the development of the cheese branch of the dairy industry of our state, as far as shown by the manufacture of the product—in fact, this feature may be considered at a stand-still, with indications of a backward movement. While creameries are on the increase, to an extent far beyond previous records, we find but four additional cheese factories reported over the previous year, and the output less than that for the same period of the previous year. The consumption of cheese throughout our state is on the increase, and should be an incentive for the production of this article in Iowa on a much larger scale. That the consumption of cheese has been largely increased through the efforts of state and national legislation, is recognized by the wholesale and retail dealers. The national filled-cheese law, placing artificial cheese under similar regulations to those of oleomargarine, has materially assisted in freeing our state from filled cheese, which in turn has been replaced by an honest article, that is both palatable and wholesome, to the end that the consumption of cheese in Iowa has more than doubled since the law became effective, July 1, 1896. The failure to develop the production of cheese, therefore, must be from some cause other than lack of demand. Both cheese and butter are the products of milk. Contrast the difference in the development of these industries: Butter, in addition to supplying our 2,225,000 people, is exported to an amount nearly equal to 100,000,000 pounds annually; while with cheese, the total annual make by factories in Iowa is less than 4,000,000 pounds, and where an export should be made large importations are necessary to supply the demand at home, thereby exhausting, rather than adding to, the resources of Iowa in this respect. The conditions that make the production of butter in Iowa surpassed by no other section in quality and reduced cost, should also apply to the production of cheese, providing the industry is developed to an extent corresponding with that of the leading cheese producing



sections of our country. The cheapness and abundance of feed, together with the local demand for a good article, would enable the production and sale at prices that would afford a profit more than that obtained by those who are now engaged in supplying the greater portion of the cheese now marketed in our state. Investigation has developed the fact that much grain and other feed is being constantly shipped from Iowa to the eastern states, and there converted into cheese through the medium of the cow, pastured and maintained upon high-priced land. It is further developed that much of this cheese is marketed in Iowa. Thus the fertility of the soil—and that is practically the only value there is in farm land—is shipped by piecemeal and made to keep up the productiveness of the eastern farm, and by these transactions our people pay the freight both ways when we buy our cheese from them. How long and to what extent this can be continued is a question for our farmers to decide.

Statistics pertaining to the cheese industry of our state have been sought for in the same manner as those of the creamery, but with much less satisfaction. The comments pertaining to the reports from creameries, as previously made in this report, are equally as true as to those who are conducting cheese factories. The following is the reprint of the blank used for the year 1897 by cheese factories in making a report to this department, and the cheese factory list and Tables Nos. 12 and 13 were compiled from answers received.

## CHEESE FACTORY REPORT.

1. Name of cheese factory.....
2. Cheese factory located at or near what town?.....  
Cheese factory located in what county?.....  
a Postoffice where factory mail is received?.....County?.....  
b Shipping station?.....On what railroad?.....
3. What is a fair valuation of plant? \$.....When was factory built? 18.....
4. Is cheese factory operated by individual or firm?.....  
a Is factory operated by farmers' co-operative association?.....  
b Is factory operated by a stock company on the co-operative plan?.....  
c Is factory operated by a stock company where by-laws provide for annual or semi-annual dividends on stock?.....  
d Is factory operated by owner?...If not, from whom is it leased?.....
5. Name of present proprietor or firm?.....  
Postoffice address?.....  
a Name of president or secretary?.....  
Postoffice address?.....

- b If cheese factory has changed ownership within the past year, state name of former owner or owners?.....
- c If cheese factory was formerly operated as a creamery or skim station, state by whom operated and when change was made?.....  
When changed?.....
6. Has the factory an official dairy commissioner's test bottle?.....  
Number engraved on same?.....
7. State number of separators in use?.....Give name of each, and whether turbine or belt? Name of separator?.....
8. If a milk tester is used, give name of tester and also name of manufacturer? Name of tester?.....Manufacturer?.....
9. Did you manufacture butter during any part of the year ending May 1, 1897?.....  
a Do you contemplate manufacturing butter during any part of the year ending May 1, 1898?.....
10. State by the word "yes" after each question asked below, the plan used in receiving milk and cream:  
a Is the milk received on the relative value plan (by test).....  
b By the hundred or pool plan?.....
11. Was the cheese factory operated the entire year ending May 1, 1897?..  
If not operated the entire year, check the month or months the factory was closed:  
1896—May June July August September October  
November December  
1897—January February March April
12. Name of head cheese-maker?  
a When one of the firm, give full name?.....  
b Has cheese-maker taken a course in dairying at a dairy school?.....  
If so, where?.....  
c Monthly wages, price per pound paid head cheese-maker for year, or any part of the year, ending May 1, 1897:  
During winter months?.....During summer months?.....  
d If uniform, state amount for the entire year, or any part thereof: \$.....  
e Monthly wages paid first helper?.....Number months employed?.....
13. State the average number of persons other than patrons employed in collecting milk?.....  
a State yearly expense of collecting milk? \$.....
14. Give number of pounds of milk received and made into cheese from May 1, 1896, to May 1, 1897.....  
(In case cheese factory was not operated the entire year, answer question for time during the year cheese factory was operated.)  
a State the average per cent of butter fat and the average pounds of cheese made per 100 pounds of milk for each month of the year ending May 1, 1897.  
(Answer both questions if possible; if not, answer the one of which you have a record.)  
1896.—May .....per cent butter fat; .....pounds cheese made  
June .....per cent butter fat; .....pounds cheese made  
July .....per cent butter fat; .....pounds cheese made  
August .....per cent butter fat; .....pounds cheese made

- 1896.—September.....per cent butter fat;.....pounds cheese made  
 October.....per cent butter fat;.....pounds cheese made  
 November.....per cent butter fat;.....pounds cheese made  
 December.....per cent butter fat;.....pounds cheese made  
 1897.—January.....per cent butter fat;.....pounds cheese made  
 February.....per cent butter fat;.....pounds cheese made  
 March.....per cent butter fat;.....pounds cheese made  
 April.....per cent butter fat;.....pounds cheese made  
 Yearly average.....per cent butter fat;.....pounds cheese made
15. State the average yearly cost per pound of manufacturing cheese, including the cost of package but not the cost of delivering milk?  
 .....cents per pound?
- a Give the number of net pounds and kinds of cheese manufactured from May 1, 1896, to May 1, 1897, or part of the year operated, as enumerated below: Number pounds of cheddar?.....lbs.  
 Limburger?.....lbs. Swiss?.....lbs. Number pounds brick?.....lbs. Pounds and kinds of other cheese?.....lbs. Total?.....lbs.
- b Give the estimated cash value of all cheese manufactured from May 1, 1896, to May 1, 1897, or part of the year operated, after deducting the expense of shipping and selling? \$.....
16. What part or per cent of this cheese was furnished to patrons?  
 a What part or per cent of this cheese was marketed for consumption in Iowa?.....  
 b What part or per cent of this cheese was shipped to points outside of the state?.....
17. Give the number of persons patronizing the cheese factory from May 1, 1896, to May 1, 1897, or part of year operated?.....
18. Estimate the number of cows comprising the herd of the average patron of your factory?.....
- (Please take extra pains to get information so as to answer this question.)
19. If there are any new cheese factories, creameries, or skim stations in your county, opened since November 1, 1896, state where they are located and give proprietor or manager:  
 Name.....P. O. address.....  
 Name.....P. O. address.....  
 Name.....P. O. address.....  
 Name.....P. O. address.....
20. If there are any old cheese factories, creameries, or skim stations reopened in the past year in your county, give location and by whom operated:  
 Name.....P. O. address.....  
 Name.....P. O. address.....
21. Give the names of any cheese factories, creameries, or skim stations in your county having burned since November 1, 1896, giving causes when known?  
 Has the cheese factory or creamery been rebuilt?.....
22. Give the amount and value of all coal used in your factory during the year ending May 1, 1897, or part of year operated:  
 Number tons?.....Value? \$.....

- a State what per cent or amount of this coal was domestic (mined in Iowa):  
 Number of tons or per cent?.....Value? \$.....
- b State what per cent or amount was foreign (mined outside of Iowa)?.....
- c If quality, cost at mine or freight rates cause preference for foreign coal, state which; also other reasons, if any?.....

W. K. Boardman, State Dairy Commissioner:

DEAR SIR—Herewith find a report of the.....cheese factory for the year ending May 1, 1897. Respectfully,

(Prop., Sec., or M'gr.)

The office record number of this factory for 1896, is.....

NOTE.—Kindly give this your immediate attention. Stamped and addressed envelope enclosed.

In table No. 12 we gather the following summary and conclusions: There were in operation November 1, 1897, 75 cheese factories, operated in 41 counties. This is an increase of four factories over the previous year. Nine of the factories manufacture butter at some season of the year. Of the total number of factories, 57 have individual or proprietary management, 7 have co-operative management and 11 are stock companies. Seventeen factories receive milk on the test plan, and 58 by weight. From the best of authorities it is claimed that in the manufacture of cheese the quality of milk as regards butter fat affects not only the richness but also the quantity of cheese that a given amount of milk will produce, for the reason that an increase in the fat contents of milk is accompanied by an increase in the other cheese-producing solids. If this be admitted, the importance of adopting the test plan in receiving milk should be apparent. While our creameries are almost universally adopting this system, we find that the cheese factories are still largely adhering to the plan of receiving by weight only. The benefit and equality derived from the test system may not be so marked when cheese is the object as in the manufacture of butter, but the question of justice still exists, and the encouragement of a better quality of milk would best be promoted in the adoption of the test plan. Forty-two factories report on the number of months operated during the year. Fifteen were in operation 12 months, 20 less than 12 months but more than 6, and 7 less than 6 months. The average time



of operating for the 42 factories reporting was 8 months. The fact that cheese factories as a class do not operate the entire year is one reason, no doubt, that has retarded the establishment of more factories. But this feature might be overcome by having more of our creameries constructed so as to manufacture cheese during the summer and fall months, when the quantity of milk is large and the price usually low. Thirty-six factories report the number of patrons to be 1,198, which is about 31 to each factory, or 2,325 for the 75 factories. This is an increase of 270 patrons. Thirty-three cheese factories report 9,467 cows, or 287 cows per factory. This is an average of 9.2 cows per patron, and a total for the 75 factories of 21,475. A slight decrease in the number of cows, and a decrease of over 1 each in the number of cows per patron.

TABLE No. 12.

*Iowa Cheese Factories—Showing total number of cheese factories, how, and number of months operated during year ending May 1, 1897; also number of persons employed, number patrons and number cows, together with average for each county.*

COUNTIES.		TOTAL NUMBER OF CHEESE FACTORIES, SHOWING NUMBER REPORTED, INDIVIDUAL, CO-OPERATIVE, STOCK COMPANY, BY THE HUNDRED, AND BY THE THOUSAND.										TOTAL NUMBER PERSONS EMPLOYED IN FACTORIES.										NUMBER COWS REPORTED, AND AVERAGE NUMBER COWS PER FACTORY.									
		No. factories reported.	Individual.	Co-operative.	Stock company.	No. factories reported.	By the hundred.	No. factories reported.	Twelve months.	Six months or more.	Less than six months.	Average number months.	No. factories reported.	Cheese-makers.	Assistants.	Total number employed.	No. factories reported.	Number patrons.	Number factories.	Number cows.	Average number cows per factory.	No. factories reported.	Number patrons.	Number factories.	Number cows.	Average number cows per factory.	No. factories reported.	Number patrons.	Number factories.	Number cows.	Average number cows per factory.
The state.		75	57	11	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Adams		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Albany		1	1	1	1	1	1	1	1	1	1	1	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	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	1	1	1	1	1	1	1	1	1	1	1
Cedar Rapids		1	1	1	1	1	1	1	1	1	1	1	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	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	1	1	1	1	1	1	1	1	1	1	1
Dea		1	1	1	1	1	1	1	1	1	1	1	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	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	1	1	1	1	1	1	1	1	1	1	1
Hamilton		1	1	1	1	1	1	1	1	1	1	1	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	1	1	1	1	1	1	1	1	1	1	1
Jackson		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Jefferson		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Johnson		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Kane		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Kendall		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lincoln		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Logan		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lyon		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Macon		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Madison		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mahoning		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Marion		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mason		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
McDonald		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mercer		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Miami		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Manassas		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Marshall		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Martin		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maryland		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Massachusetts		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						

TABLE NO. 12.—CONTINUED.

COUNTIES.	TOTAL NUMBER OF CHEESE FACTORIES SHOWING NUMBER OF COWS, HEAVY AND STOCK COMPANIES.			TOTAL NO. OF COWS MILKED BY THE TEST ON CWT.			NUMBER OPERATED FOR LESS THAN A YEAR: AVERAGE NUMBER OF MONTHS.			TOTAL NUMBER PERSONS EMPLOYED IN FACTORIES.			NUMBER OF THOSE FURNISHING MILK TO OTHER FACTORIES.			NUMBER OF COWS PRODUCING MILK TO OTHER FACTORIES.		
	No. factories.	Individual.	Co-operative.	No. factories.	By team.	By the hundred.	No. factories.	Twelve months or more.	Six months or less than six months.	Average number months.	No. factories.	Cheese-makers.	Assistants.	Collecting milk.	Total number employed.	No. factories.	Number paid.	Number received.
Lee.....	70	28	67	1	1	1	43	15	20	1	8.9	40	13	1	53	36	1,128	33
Lincoln.....	11	11	10	1	1	1	10	1	1	1	12.0	1	1	1	1	1	1	1
Marshall.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Monroe.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Muscatine.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Poweshiek.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Ringgold.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Story.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Taylor.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Washington.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Wapello.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Warren.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Wayne.....	1	1	1	1	1	1	1	1	1	1	12.0	1	1	1	1	1	1	1
Total.....	397	151	327	11	11	11	175	43	15	20	8.9	40	13	1	53	36	1,128	33

\*This factory is the property of the state of Iowa, located at Ames, and operated in connection with the creamery at Ames.

From Table No. 13, 44 cheese factories report their value as \$77,050, which is an average of \$1,760 per factory, or a value of \$132,000 for the 75 factories. Thirty-nine factories report the number of pounds of milk received for the year ending May 1, 1897, to be 22,708,529 pounds, which is an average of 582,270 pounds per factory, or 43,670,250 pounds for the 75 factories. Thirty-seven report the amount of cheese manufactured for the same length of time 2,202,223 pounds, or 59,519 pounds per factory, and taking this as a basis would figure 4,463,946 pounds for the 75 factories. This shows that it required 9.5 pounds of milk for each pound of cheese manufactured. As to the disposition of the above, about three-fourths was disposed of in Iowa, and one-fourth was shipped to points outside the state. Twenty-one factories report the number of tons of coal used to be 450. This would make the total used by 75 factories, 1,575 tons.



Iowa Cheese Factories—Showing value of plants, pounds of milk received, kinds and number of pounds of cheese manufactured and disposition of same for the year ending May 1, 1897.

TABLE No. 13.

COUNTY.	TOTAL NUMBER AND VALUE OF ALL PLANTS.			TOTAL POUNDS OF MILK RECEIVED FROM MAY 1, 1896, TO MAY 1, 1897.			TOTAL POUNDS OF CHEESE AND YOUNG AMERICA CHEESE, KINDS OF SWISS, LIMBURGER AND OTHER KINDS NOT NAMED, AND TOTAL POUNDS OF ALL CHEESE MANUFACTURED DURING THE YEAR ENDING MAY 1, 1897.					TOTAL POUNDS OF CHEESE SOLD OR CONSUMED IN IOWA AND POUNDS SHIPPED OUT OF STATE.			TOTAL TONS COAL USED DURING YEAR.	
	Number cheese factories.	Number re-ported.	Value.	Number re-ceiving milk.	Number re-ported.	Total pounds of milk re-ceived.	Number re-ported.	Total pounds cheese and young Amer-ica.	Total pounds Swiss.	Total pounds Limburger.	Total pounds cheese man-ufactured.	Number re-ported.	Pounds sold in Iowa.	Pounds shipped out of state.	Number re-ported.	Number tons.
The state.....	76	44	\$77,650	76	39	22,708,529	37	1,583,918	20,100	6,000	436,076	36	1,585,131	417,292	21	450
Appanoose.....	1	1	1,500	1	1	1,500	1	1,500	1,500	1,500	1,500	1	1,500	1,500	1	1
Black Hawk.....	1	1	8,500	1	1	8,500	1	8,500	8,500	8,500	8,500	1	8,500	8,500	1	1
Humboldt.....	1	1	7,800	1	1	7,800	1	7,800	7,800	7,800	7,800	1	7,800	7,800	1	1
Johnson.....	1	1	1,400	1	1	1,400	1	1,400	1,400	1,400	1,400	1	1,400	1,400	1	1
Lee.....	1	1	5,500	1	1	5,500	1	5,500	5,500	5,500	5,500	1	5,500	5,500	1	1
Linn.....	1	1	2,000	1	1	2,000	1	2,000	2,000	2,000	2,000	1	2,000	2,000	1	1
Monroe.....	1	1	6,350	1	1	6,350	1	6,350	6,350	6,350	6,350	1	6,350	6,350	1	1
Poweshiek.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Wayne.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Bremser.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Cerro Gordo.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Clarke.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Dallas.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Floyd.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Franklin.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Guthrie.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Grundy.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Hardin.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Howard.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Keokuk.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Page.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Ringgold.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Sec.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Taylor.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Washington.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Warren.....	1	1	5,900	1	1	5,900	1	5,900	5,900	5,900	5,900	1	5,900	5,900	1	1
Total.....	76	44	\$77,650	76	39	22,708,529	37	1,583,918	20,100	6,000	436,076	36	1,585,131	417,292	21	450

LIST OF IOWA CHEESE FACTORIES, NOVEMBER 1, 1897.

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 individual, co-operative, or stock company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of receiving the milk, or by the test or by the hundred.	Dairy company, or other name, or number, or bottle number.
1	Appanoose County.	Iconium.....	Stk Co	H. L. Vosburg, Pres	Iconium.....	Moravia and	N. Wyckoff.....	Hd.	
2	Moravia.....	Star Cheese Co.....	Stk Co	Sam Johnson, Sec.	Moravia.....	Moravia.....	N. Y. Wyckoff.....	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. Brothar.....	Hd.	
5	Benton County.	Model.....	Ind.	R. C. Sprague, Mgr.	[Linn Co. Cedar Rapids.	Atkins.....	A. C. Stewart.....	Hd.	
6	Atkins.....	Model.....	Ind.	R. C. Sprague, Mgr.	Cedar Rapids, Linn Co.	Newhall.....	J. H. Hayck.....	Hd.	
7	Rogersville.....	Excelsior.....	Ind.	R. E. Fairbanks.	Rogersville.....	Garrison.....	Proprietor.....	Hd.	884
8	Black Hawk County.	Waterloo—North Star.....	Ind.	The Fowler Co	Waterloo.....	Waterloo.....	Charles Wood.....	Test.	
9	Waterloo.....	Waterloo.....	Ind.	The Fowler Co.....	Waterloo.....	Waterloo.....	F. E. Wightman.....	Test.	
10	Bremser County.	Janessville.....	Ind.	The Fowler Co.....	[Hawk Co. Waterloo, Bick.	Janessville.....	A. M. Royer.....	Test.	
11	Cathoon County.	Rockwell City R. & C. Factory.....	Stk Co	T. C. Gregg, Sec.	Rockwell City.	Rockwell City.	T. E. Garrity.....	Test.	
12	West Branch.	West Branch—"Quaker".....	Ind.	—Eaves.....	West Branch..	West Branch..	D. Van Patton.....	Test.	

\*Manufacture both butter and cheese.

LIST OF IOWA CHEESE FACTORIES—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CHEESE FACTORY.	Operated by individual, corporation or company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of packing the cheese, by the test or by the hundred.	Dairy commissioner's certificate number.
13	Cerro Gordo County. Burchinal .....	Burchinal .....	Ind.	Coats & Hoffman .....	Burchinal .....	Burchinal .....	Lewis Hoffman .....	Hd.	
14	Clarke County. Weldon, Decatur county.	Weldon Cheese Factory .....	Ind.	Tallman & Parr .....	Weldon .....	Weldon .....	L. M. Parr .....	Test.	677
15	Crawford County. Buck Grove .....	Thew's Cheese Factory .....	Ind.	S. M. Thew .....	Buck Grove .....	Buck Grove .....	Proprietor .....	Hd.	
16	Dallas County. Woodward .....	Woodward Factory .....	Ind.	H. P. Cosenky, Mgr. ....	Woodward .....	Woodward .....	Fred Cosenky .....	Test.	394
17	Dare County. Drakeville .....	Drakeville Dairy Association ..	Stk Co	A. Fonta, Sec. ....	Drakeville .....	Drakeville .....			
18	Deaatur County. Bracewell .....	A. A. Snow's Factory .....	Ind.	A. A. Snow .....	Brownell .....	Brownell .....	Proprietor .....	Hd.	
19	Floyd County. Charles City .....	Elm Spring Cheese Factory .....	Ind.	H. D. White & Co. ....	Charles City .....	Charles City .....	H. D. White .....	Hd.	
20	Charles City .....	St. Charles Cheese Co. ....	Stk Co	A. O. Rusta .....	Charles City .....	Charles City .....	Burt Somer .....	Hd.	
21	Franklin County. Dows .....	Dows Factory .....	Ind.	A. A. Bangs .....	Dows .....	Dows .....	John 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. ....	[Haw]k Co. Waterloo, W'ck .....	Reinbeck .....	G. A. Peace .....		

25	Hardin County. Hubbard .....	Cottage Factory .....	Ind.	S. C. Christopher .....	Cottage .....	Hubbard .....	W. Plunklight .....	Hd.	364
26	Iowa Falls .....	Ellis Cheese Manufacturing Co. ....	Stk Co	W. I. Clark, Mgr. ....	Iowa Falls .....	Iowa Falls .....	W. I. Clark .....	Hd.	
27	Howard County. Cresco .....	Cresco Cheese Co. ....	Ind.	Kellow & House .....	Cresco .....	Cresco .....	J. J. House .....	Hd.	
28	Humboldt County. Luverne, Kosuth county.	D. Martyn's .....	Ind.	D. Martin .....	[south Co.] Luverne, Kos .....	Luverne .....		Hd.	
29	Renwick, Humboldt county.	Elmer Factory .....	Ind.	Conrad Elmer .....	Renwick .....	Renwick .....	Fred Fahrney .....	Hd.	
30	Renwick .....	Fred Klasse Factory .....	Ind.	Fred Klasse .....	Renwick .....	Renwick .....	John Rotenberger .....	Hd.	
31	Renwick .....	Pioneer Factory .....	Stk Co	F. Legier, Pres .....	Luverne, Kosuth county. Renwick .....	Renwick .....	Proprietor .....	Hd.	
32	Renwick .....	Speich Factory .....	Ind.	Fred Speich .....	Renwick .....	Renwick .....	B. Bosley .....	Hd.	
33	Jefferson County. Pleasant Plain .....	Pleasant Plain .....	Ind.	W. J. Alter .....	Pleasant Plain .....	Pleasant Plain .....	W. J. Alter .....	Hd.	
34	Johnson County. Iowa City .....	Sharon Cheese Factory .....	Co-op.	F. M. Webber, Sec. ....	Iowa City .....	Iowa City .....	J. Gunno .....	Hd.	
35	Morse .....	Shamrock Cheese Factory .....	Ind.	L. H. Shaver Ch. Co. ....	Cedar Rapids, Linn Co. ....	Morse .....	F. S. Snyder .....	Hd.	390
36	Jones County. Onalwa .....	Mineral Valley Cheese Factory ..	Ind.	John Fagan .....	Onalwa .....	Onalwa .....	H. E. Willard .....	Hd.	373
37	Onalwa .....	Onalwa Cheese Factory .....	Ind.	S. L. Gilbert .....	Onalwa .....	Onalwa .....	Floyd Johnson .....	Test.	42
38	Kiokuk County. Talleyrand .....	Talleyrand .....	Stk Co	L. M. Tucker, Sec. ....	Talleyrand .....	Keota .....	C. Tucker .....	Hd.	66
39	Webster .....	Webster Cheese Factory .....	Ind.	M. M. Wheeler, Sec. ....	Webster .....	Webster .....	H. C. Wheeler .....	Hd.	
40	Lee County. Pt. Madison .....	Denmark Factory .....	Ind.	T. G. Currie .....	Pt. Madison .....	Pt. Madison .....	Albert C. Lindsay .....	Hd.	
41	*West Point .....	West Point Cheese Factory .....	Ind.	Jno. Walljasper, Mgr. ....	West Point .....	West Point .....	Henry Fogge .....	Hd.	
42	Linn County. Marion .....	Gray Factory .....	Ind.	Edward C. Clark .....	Cedar Rapids .....	Cedar Rapids .....	W. R. Carol .....	Hd.	
43	Springville .....	Springville Factory .....	Ind.	Edward C. Clark .....	Cedar Rapids .....	Cedar Rapids .....	F. H. Huyck .....	Hd.	123

\*Manufacture both butter and cheese.



## LIST OF IOWA CHEESE FACTORIES—CONTINUED.

Office record number.	LOCATED AT OR NEAR.	NAME OF CHEESE FACTORY.	Organized by individual, co-op. or partnership company.	NAME OF PROPRIETOR, SECRETARY OR MANAGER.	P. O. ADDRESS OF PROPRIETOR, SECRETARY OR MANAGER.	SHIPPING STATION.	NAME OF CHEESE-MAKER.	Method of receiving milk or cream.	Butter's test.
41	Marshall County.	Liscomb Butter and Cheese Co.	Co-op.	C. E. Bierstorm.	Liscomb.	Liscomb.	C. E. Bierstorm.	Test.	
42	Montgomery County.	Grant Cheese Co.	Ind.	John Hinton.	Grant.	Elliot.	Proprietor.	Hd.	
43	Grant.	Lincoln.	Ind.	K. T. Evans.	Red Oak.	Red Oak.	Proprietor.	Hd.	
44	Marion County.	Bluff Creek Factory.	Co-op.	G. W. Marfles, Sec.	Albia.	Albia.	George Marfles.	Hd.	74
45	Albia.	Bene Factory.	Ind.	S. G. Rose.	Albia.	Albia.	Proprietor.	Hd.	
46	Albia.	Diamond Cheese Co.	Six Co.	Leroy Miller, Mgr.	Albia.	Albia.	Nelson Miller.	Hd.	
47	Albia.	Exile & Smith.	Ind.	Exile & Smith.	Albia.	Albia.	Proprietors.	Hd.	
48	Albia.	Gholson Cheese Factory.	Ind.	Dan Gholson.	Selection.	Albia.	May Gholson.	Hd.	
49	Albia.	Hinton Factory.	Ind.	Samuel Hinton.	Albia.	Albia.	Proprietor.	Hd.	
50	Albia.	Hollingshead.	Ind.	J. Hollingshead.	Albia.	Albia.	Proprietor.	Hd.	
51	Albia.	Griffin Cheese Factory.	Ind.	H. Griffin.	Albia.	Albia.	Proprietor.	Hd.	
52	Albia.	Pharis Cheese Factory.	Ind.	Harry Pharis.	Albia.	Albia.	Henry Pharis.	Hd.	
53	Hilton.	Hilton Factory.	Ind.	Rowles Bros.	Albia.	Albia.	Barian Rowles.	Hd.	
54	Tyrone.	Mt. Carmel.	Ind.	P. W. Crouch.	Tyrone.	Tyrone.	R. E. Stoops.	Hd.	
55	Muscatine County.	Muscatine.	Ind.	Shultz & Prins.	Muscatine.	Muscatine.	Proprietor.	Hd.	
56	Page County.	Northboro Cheese Factory.	Ind.	W. H. Hasfield.	Northboro.	Northboro.	Proprietor.	Hd.	

57	Fussell County.	Neely's.	Ind.	J. E. Neely & Son.	Grinnell.	Grinnell.	W. J. Neely.	Test.	
58	Grinnell.	Jacob Factory.	Ind.	A. C. Payne.	Jacob.	Jacob.	W. E. Payne.	Test.	
59	Cherokee County.	Cherokee Center Cheese Co.	Ind.	W. W. Sherman.	Cherokee Center.	Cherokee Center.	Proprietor.	Test.	
60	Ringold County.	Liberty Cheese Co.	Co-op.	J. E. Main, Sec.	Mt. Ayr.	Mt. Ayr.	L. C. Main.	Hd.	
61	Sac County.	Wheeler Factory.	Ind.	H. O. Wheeler.	Odebolt.	Odebolt.	Phillip W. Parr.	Test.	76
62	*Sac City.	Blue Grass Butter and Oil Factory.	Ind.	L. Hillman.	Sac City.	Sac City.	Fred Hillman.	Test.	76
63	*Story County.	Iowa Agr. College Creamery.	Ind.	State of Iowa.	Ames.	Ames.	G. L. McKay.	Test.	76
64	Taylor County.	Eastlack.	Ind.	F. M. Eastlack.	Sharpburg.	Conway.	Proprietor.	Hd.	
65	Van Buren County.	Farmington Cheese Co.	Ind.	Miller Bros.	Farmington.	Farmington.		Hd.	
66	Winnebago County.	Manua Cheese Co.	Ind.	John Kollar.	Albia, Monroe.	Albia.	Reil Parrott.	Hd.	
67	Forrest County.	Belmont Cheese Co.	Ind.	O. Macdham, Sec.	Mt. Ayr.	Mt. Ayr.	Proprietor.	Hd.	
68	Washington County.	Clay Cheese Co.	Co-op.	H. Dickinson, Sec.	Clay.	Clay.	M. L. Doaner.	Test.	
69	Dublin.	Dublin Cheese Factory.	Co-op.	W. E. Leek, Mgr.	Dublin.	West Chester.	West Chester.	Hd.	
70	West Chester.	West Chester Co-op. Dry Co.	Co-op.	Gross & White.	West Chester.	West Chester.	Clark White.	Hd.	
71	Frederick County.	Corydon Cheese Factory.	Ind.	Mathew Dollans.	Corydon.	Corydon.	Proprietor.	Hd.	
72	Linsville.	Linsville Cheese Factory.	Ind.	Mathew Dollans.	Linsville.	Linsville.	Proprietor.	Hd.	
73	Forest City.	Forest City.	Six Co.	S. O. Holland, Sec.	Forest City.	Forest City.	Fred Behler.	Hd.	

\* Manufacture both butter and cheese.

## FINANCIAL EXHIBIT.

The following is a statement of the expenditures and receipts of the department for the year ending November 1, 1897:

## EXPENDITURES.

Commissioner's salary account .....	\$ 1,500.00
Commissioner's contingent expense account .....	467.77
Clerk's salary account .....	900.00
Milk agents' fees .....	1,488.00
Stationery and printing .....	424.53
Office supplies .....	1.60
Envelopes and postage .....	344.20
Laboratory supplies .....	55.89
Telegraph and telephone .....	14.62
Express and freight .....	37.58
Analyses and examination .....	20.00
Milk agents, special work .....	33.00
Extra office help .....	136.00
Total .....	\$ 5,432.53

## RECEIPTS.

Collected and remitted to treasurer of state for 620 permits for the sale of milk .....	\$ 620.00
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## TEST BOTTLES AND PIPETTES.

In conformity with section 2515 of chapter 13, title 12, of the annotated code of 1897, relating to the duties of the dairy commissioner and the director of the Iowa Agricultural Experiment station, proper arrangements have been made for the issuing and filing of certificates in this office, of which the following is a copy. The name of the machine, manufacturers and other special descriptions are to be inserted in the blank spaces left for these purposes:

Original No .....

STATE OF IOWA.

AGRICULTURAL EXPERIMENT STATION,  
AMES

## To Whom It May Concern:

THIS IS TO CERTIFY, That the ..... steam motor hand milk tester, manufactured by ..... located at ..... state of ..... and sold by ..... located at ..... state of ..... has been examined and tested at the Iowa Agricultural Experiment station, and when properly and correctly operated will produce accurate measurements of butter fat, on condition that the test bottle or bottles, milk pipette, cream pipette, acid and acid measure shall conform to the following description and standard:

The head, wheel or cylinder of this milk tester has a diameter of ..... inches and requires not less than ..... revolutions per minute. This certificate is issued in compliance with section 2515 of the annotated code of Iowa enacted at the extra session of the Twenty-sixth General Assembly, 1897.

Signed, .....

Director Experiment Station, Iowa Agricultural College.

Dated this ..... day of ..... 189 .....

Under the section above referred to (2515) the dairy commissioner is obliged to keep on hand and furnish, upon proper application, a certified D. C. test bottle and pipette to those creameries and cheese factories that operate a chemical milk tester which, corresponding with a milk tester of the same



manufacture, has been examined at the experiment station, and when the certificate for such examination has been placed on file in this office. It is necessary for managers of creameries and cheese factories, when making application for the test bottle or pipette, to include the name and kind of tester used, together with the name of the manufacturer or dealer from whom it was obtained. A blank form of application will be furnished by this office upon request. In compliance with the new law, those creameries and cheese factories that have on hand a D. C. test bottle will not be obliged to obtain another certified bottle, but must procure a certified D. C. pipette of the kind adapted for use of the milk tester they have. All others operating a milk tester should procure both the D. C. test bottle and pipette.

#### SKIM MILK TEST BOTTLES.

This department is not required to furnish a test bottle particularly adapted for the testing of skim milk, but on account of some controversy as to the correct readings of the divisions on the neck of certain skim milk test bottles, the department has considered it of sufficient importance to have a number of the two principal styles of double-necked bottles calibrated and examined in order to determine the value of the divisions of the scale on the bottles known as the Wagner and Ohlsson or Nausbaumer. The following are the results of the testing of five of each of these bottles. The test was made by Prof. J. B. Weems, chemist for the Iowa Agricultural college. The tests and comments given below comprise his report upon this subject:

OHLSSON OR NAUSBAUMER.		WAGNER.	
No. 1 .....	.05085 per cent	No. 1 .....	.0562 per cent
No. 2 .....	.04965 per cent	No. 2 .....	.0478 per cent
No. 3 .....	.05160 per cent	No. 3 .....	.0501 per cent
No. 4 .....	.04880 per cent	No. 4 .....	.049105 per cent
No. 5 .....	.05205 per cent	No. 5 .....	.04949 per cent

The figures given represent each division of the scale.

The above results are for 18 grams. For practical results they are close enough to represent what they were designed for, that is, each division to represent .05 per cent for a charge of 18 grams.

It would seem from the result of this examination that there should be no occasion for further controversy as to what is the proper reading of the divisions of the scale on the double-necked skim milk test bottle when manufactured to correspond with those now in general use.

#### SYNOPSIS AND COMMENT ON THE NEW DAIRY LAW.

The dairy laws of Iowa were somewhat changed through the repeal of the old and the adoption of the new code by the extra session of the Twenty-sixth General Assembly in 1897. This department recognizes the importance of the changes and addition to the laws, and considers it unfortunate that those sections of the code relating to this department and affecting the dairy interests throughout the state cannot be printed in pamphlet form or reproduced in this report. Until an act authorizing or allowing such publication is passed by the general assembly, the annotated code will be the only source from which to ascertain the provisions of the dairy laws. The importance of giving these laws current circulation, so that the patrons of our creameries and cheese factories, the creamery and cheese factory managers and the city milk dealers, as well as those concerned in the manufacture and sale of oleomargarine, may know the exact position which they occupy in the conduct of their business, should cause the legislature, at an early date, to grant this department the privilege of publishing the dairy laws in all annual reports, and also in pamphlet form, that they may receive a larger distribution. Our people cannot become too familiar with such laws, and the efficiency of this department can better be maintained through this agency. The dairy industry, as well as the people of Iowa, are to be congratulated that in no way have the laws relating to the manufacture, sale and use of imitation butter and cheese been impaired, but, on the other hand, have been made more effective by an additional provision prohibiting the soliciting or taking of orders for delivery of yellow colored oleomargarine or filled cheese in our state.

Thus has another one of the numerous methods employed in getting fraudulent goods into consumption been made illegal. The necessity of branding or marking all cheese made from skimmed or partially skimmed milk on both package and cheese

in a plain and durable manner, "Skimmed Milk Cheese," is another step in the right direction. The violation of this provision, in case of conviction, imposes a fine of not less than \$25 and not more than \$100. The maintenance of all premises and utensils in a clean and hygienic condition by city milk dealers and proprietors of creameries, cheese factories or reworkers or packers of butter is now made obligatory upon such person or persons, and further, they are obliged to make annual reports to the dairy commissioner, on blanks furnished by him, in a manner prescribed by the commissioner and embodying such facts as will assist in the compilation of statistics regarding the production, manufacture and sale of dairy products, and other matters that he may regard of importance connected therewith.

The importance of having a reliable and accurate milk test is recognized, and the dairy commissioner is required to furnish creameries and cheese factories, when properly applied for, a standard milk pipette, as well as a test bottle, either of which must be certified to be accurate, reliable and standard. But the law requires only such test bottles and pipettes to be furnished that are adapted for such milk-testing machines, the manufacturers or dealers of which have filed with the commissioner a certificate from the experiment station at Ames, to the effect that such milk tester, when properly and correctly operated, will produce correct measurements of butter fat.

The law now, in addition to other regulations pertaining to the production and sale of milk, provides that cows kept for that purpose shall not be stabled in an unhealthy place, or in a crowded manner, and shall not be fed food which produces impure or unwholesome milk, or fed upon distilled glucose or brewery waste in any state of fermentation, or any substance in a state of putrefaction or rotteness.

The addition of water or any other substance or thing to whole milk or skimmed milk is declared an adulteration, and milk obtained from animals fed upon any substance of an unhealthy nature or upon waste as described above, is declared to be impure and unwholesome and the sale of all such milk is prohibited.

#### MILK AND CREAM STANDARD.

Milk which is proved by any reliable method of test or analysis to contain less than 12½ per cent of milk solids or three pounds of butter fat to 100 pounds of milk shall be regarded as

skimmed or partially skimmed milk, and an article not containing 15 per cent or more of butter fat shall not be regarded as cream.

#### MILK INSPECTOR.

Any city milk dealer, employee or any other person resisting or interfering with the dairy commissioner or his agent in the performance of his duties in the collection of milk samples, etc., is guilty of misdemeanor and subject to severe penalty. The penalty for the violation of any of the provisions under title 22, chapter 18, of the code of laws here referred to, is a fine not exceeding \$500, or imprisonment in the county jail not to exceed six months, or both such fine and imprisonment, at the discretion of the court.



## CITY MILK TESTS.

About 500 city milk dealers, 40,000 families and 770 hotels, restaurants, etc., in thirteen cities of Iowa, each having a population of 10,000 or more people, are directly concerned in the work of this department in the system of city milk tests and inspection. In this number, the interest is mutual—the dealer in tests of his milk supply, and the family or consumer, in the quality of milk they buy. The importance of the work may be well understood in a consideration of this statement. It is the testing of samples of milk taken from the current supply of the dealer, while he is in the act of delivering to a customer, and the inspection of all wagons, cans and utensils, used in the sale and delivery of milk, that gives to the test and inspection system, its importance. The foremost feature of the work is to arrive at the quality and condition of milk sold. With the regular Babcock test, the quantity of butter fat in 100 pounds of milk, is ascertained, and if any tests less than 3 per cent of butter fat, the same is regarded by law as skimmed or partially skimmed milk, the sale of which is prohibited unless sold as such. The inspection of all cans, utensils, etc., is another feature of the work, equal in importance to the tests, if the quality as regards purity and cleanliness is to be taken into consideration.

Any infectious odor arising from the surroundings of the milk house, the wagon, or wherever the milk is exposed to the atmosphere, materially affects milk, and that to an extent which may be adjudged unhealthy and impure—unfit for use. In both the testing of milk, and the inspection of all apparatus used in its sale, it may be said with satisfaction that the authority of this department has been met with an apparent good feeling by the dealers and others interested, inasmuch as to bring the system to a point which signifies that Iowa with her laws upon these subjects, maintains a control over the product, such as has improved the trade and benefited the dealers accordingly.

The city milk agents appointed and maintained by this department have sought to faithfully fulfill their duties, and in protecting the rights of the consumer have, in most instances, been encouraged and assisted by the milk dealers of their respective cities. In addition to the police regulation of this work, the test system as now conducted with publications of results in annual reports and monthly publications in the daily press, the educational feature is advanced, as the test of each dealer's milk indicates the quality his herd produces. It is beneficial in that he may dispose of the inferior cows and replace them with a better grade. The consumer may rest assured that the quality of milk, as a part of his daily subsistence, is better and purer than it was before the establishment of the present system, and that it will not deteriorate, but improve, will depend much upon the advancement and continuation of the test in our Iowa cities.

There are now thirteen cities having the regular milk tests. These cities, together with the city milk agents working therein, are as follows:

Burlington	W. B. McChesney
Cedar Rapids	F. M. Brown
Clinton	A. E. Rumble
Council Bluffs	Rupert Fleming
Davenport	H. J. High
Des Moines	C. C. Chase
Dubuque	Dr. B. Michel
Keokuk	F. Harshman
Muscatine	Dr. John Tillie
Ottumwa	E. B. Hill
Sioux City	O. P. McCray
Marshalltown	E. M. Singleton
Fort Madison	Camp Thomas

## PERMITS AND APPLICATIONS THEREFOR.

Since the laws relating to the city milk inspection system have become operative, the dealers in each city have been required to secure from this department a permit for the sale of milk from each and every wagon, depot or store in operation. Since the year ending July 4, 1894, the following is the number of permits issued annually in the cities of the state having inspection:

1894	359
1895	489
1896	566
1897	620

The increase during this period is 226. The largest increases were—1894, 130, and 1895, 77. The work of securing the names and addresses of dealers so as to notify them of the law with relation to the permit, has been not only complicated and continuous, but consisting of much care and attention. Dealers cannot be reached readily by mail, and since these permits must be applied for and issued direct from this office, without the assistance of the agent—save in locating and reporting those not having the permits—it has been one of the difficult features of the work.

No .....

STATE OF IOWA,  
OFFICE OF STATE DAIRY COMMISSIONER,  
DES MOINES.

## CITY MILK DEALER'S PERMIT.

By virtue of the laws of the state of Iowa, and the power in me vested, together with the fee (\$1) in hand paid I, W. K. Boardman, state dairy commissioner, do hereby grant permission to.....  
to sell or deliver milk and cream in the city of.....  
from one depot or store, located at No.....street,  
one wagon starting from.....street in said city for the  
term ending July 4, 1898.

Dated this.....day of.....189.....

Signed,.....  
State Dairy Commissioner.

By.....  
Clerk.

Not transferable. Expires July 4, 1898.

In order to obtain the permit, a form of application was adopted by this office by which information was obtained and used in the compilation of statistics showing the number of cows, value of milk product, etc., as reported by each dealer for each city having the system of tests and inspection. The application blank was mailed to all dealers prior to July 4th, the date all permits expire in each year, so that when sending for their permits they would have a form enabling them to make application for permits without difficulty. In all cases the application was required, together with the fee of \$1 for each permit, before the permit was issued. I would like to state in this connection, that a greater majority of the dealers making application for their permits answered the questions asked intelligently and to full satisfaction, thus showing interest in the work in their particular case. Following is the form of application.

STATE OF IOWA,  
OFFICE OF  
DAIRY COMMISSIONER,  
Des Moines.

Form 5-1897.

W. K. BOARDMAN,  
State Dairy Commissioner.

To City Milk Dealers.—Below will be found a list of questions pertaining to the production and sale of milk, for city consumption, as sold and delivered by you. Similar information has been obtained by this department in the three preceding years. The annual reports furnished city milk dealers upon examination will readily show the use made of such information. An important feature in this connection will be the comparisons from year to year. You are therefore earnestly requested to answer each and all of the questions to the best of your ability.

Important Notice.—Since all permits expire July 4th of each year, all milk dealers in cities having over 10,000 population are obliged to obtain from this office, on or before July 4th of each year, an annual permit for each milk wagon, store or depot from which milk is sold. Permits are not transferable, and all persons entering the business at any time of the year must make application for a written permit before doing business, and under all circumstances pay (\$1) the full amount of the fee therefor.

Permit.—All persons selling or delivering milk as above are required to fill out the application blank below, sign and forward to this office to be placed on file, the application to be accompanied by Chicago exchange, express or postal money order, at the rate of \$1 for each permit required.

This department will not assume or recognize any loss arising from remittances by cash or postage stamps.

## CITY MILK DEALER'S REPORT.

1. Name of dealer, firm or company.....  
City.....Street and number,  
or P. O. box number.....  
(Important: Write full name and address plainly)
2. No of wagons you sell milk or cream from.....No. of stores  
you sell milk or cream from.....No. of depots you sell milk  
or cream from.....
3. State whether or not you sell whole milk?.....  
cream?.....skimmed milk?.....  
State, when making delivery, whether milk is poured from small delivery  
can, dipped from large can, drawn from faucet, or distributed in  
individual glass bottles or jars.  
Poured from small delivery can?.....dipped from large  
can?.....drawn from faucet?.....distributed  
in glass bottles or jars?
4. How many months in the year do you conduct your business?.....
5. How many families, hotels, restaurants and lunch counters, boarding  
houses, soda fountains and ice cream parlors do you supply with milk  
and cream—Private families?.....hotels?.....restaurants  
and lunch counters?.....boarding houses?.....ice cream  
parlors and soda fountains?.....



6. State average value of milk sold per month, \$.....  
 State average value of cream sold per month, \$.....  
 State average value of milk and cream sold per month, \$.....  
 7. Is all the milk or cream sold from your own herd? ..... If not,  
 what per cent or part do you buy? ..... From whom  
 do you buy (name of party)? .....  
 Name .....  
 Location .....  
 Name .....  
 Location .....  
 Name .....  
 Location .....  
 Is the milk and cream delivered to you? ..... Does the party  
 you buy of retail milk and cream? ..... If not, what per cent  
 or part of his supply do you buy? .....  
 State average number of milch cows in herd of party from whom you  
 obtain your supply? .....  
 8. State average number milch cows in your herd ..... State  
 number of Jerseys in your herd ..... State number of grade  
 Jerseys in your herd ..... State number of Holsteins in your  
 herd ..... State number of grade Holsteins in your herd  
 State number of Shorthorns in your herd .....  
 State number of grade Shorthorns (frequently called Durham) in your  
 herd ..... State number of Red Polled in your herd  
 State number and other kinds of breeds .....  
 9. State different kinds of grain, fodder, etc., you feed your herd .....  
 10. State average number of persons employed in your dairy business .....  
 11. What part or per cent of your milk and cream do you wholesale to other  
 dealers? ..... State plainly the names and addresses of  
 other dealers to whom you wholesale milk (name of party):  
 Name .....  
 Location or address .....  
 Name .....  
 Location or address .....  
 Name .....  
 Location or address .....

## APPLICATION FOR PERMIT.

(NOTE.—When more than one wagon, depot or store is operated, each  
 should be numbered from one up to the number used.)

W. K. Boardman, State Dairy Commissioner, Des Moines, Iowa: ..... 189..  
 hereby make application for ..... permit ..... to sell milk  
 in the city of ....., Iowa, for the year ending July 4, 1898.

The following is a memoranda of each depot, store or wagon under the  
 management of the undersigned:

Milk depot, located at No. .... street  
 Store or shop, located at No. .... street  
 Wagon No. 1, starts from No. .... street  
 Wagon No. 2, starts from No. .... street  
 Wagon No. 3, starts from No. .... street  
 Wagon No. 4, starts from No. .... street

Herewith find enclosed a draft, postal money order or express money  
 order, to the amount of ..... dollars, for which please forward the  
 number of permits enumerated above.

(Signature) .....

(NOTE.—In all cases \$1 must accompany application.)

Permit issued for year ending July 4, 1897, was No. ....

All permits expire July 4th of each year.

With the individual reports of each dealer, and after a care-  
 ful compilation of the information from each city, the following  
 facts pertaining to the thirteen cities are gleaned: The census  
 of 1895 relegates the population of the cities heretofore named  
 to be 808,087. In these cities there are 535 wagons, depots and  
 stores from which milk and cream are sold, and these dealers  
 supply 88,017 families and 767 hotels, restaurants and boarding  
 houses, with milk and cream reported to be valued at \$782,536.  
 The reports show 8,630 cows supplying milk to this trade, which  
 would net as the average value of each cow's production, \$89  
 annually. A very slight difference is found in the comparison  
 of this with the last annual report. It has been noticed from  
 reports received that a larger number of dealers buy their milk  
 from farmers or wholesale dealers than last year.

In the manner of delivering milk, outside of that of the wagon,  
 depot or store, it is found that the number selling bottled milk,  
 or milk put up in glass jars, remains about the same; however,  
 from personal observation, it has been found that the volume  
 of the business has increased to a large and noticeable degree.  
 In some cases, dealers who put up their milk in glass bottles or  
 jars, have established depots along the line of their routes,  
 where there may be a transient call for it, and in case on the  
 following day there is some left unsold, it is taken back to the  
 dairy and churned into cottage cheese, for which there is some  
 demand. It is acknowledged, that unless the best of care is  
 taken to thoroughly cleanse the bottles or jars, and likewise  
 keep from them, while filling, all obnoxious odors or dust, etc.,  
 the milk is spoiled easily. The glass bottle is considered by

some a safeguard against unhealthy substances sometimes found in milk delivered in cans. Still, if corked air tight and the animal heat and odor is not assisted in evaporation while the milk is being cooled, the effect will be detrimental, resulting in bad flavor and early fermentation to a much greater extent than when milk is delivered in open cans.

### 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:

CITIES.	Population census of 1880.	PERMITS ISSUED UNDER THE ACT JULY 4, 1880.		MAKERS OF MILK DELIVERING MILK.		KINDS OF MILK SOLD.			No. persons employed.	NO. OF FAMILIES, RESTAURANTS, HOTELS, ETC.		GRAINLY VALUE OF MILK FROM WHICH MILK SUPPLY IS OBTAINED.										YEARLY AVERAGE VALUE OF MILK PER COW.	
		Deposits.	Total.	Dipped or poured from cans.	Drawn from frames in cans.	Whole milk.	Cream.	Skimmed milk.		Private families.	Hotels, restaurants, etc.	Foreign.	Grande Jorveys.	Islandine.	Grande Mol.	Shortbore.	Grass Short.	Common stock.	Total of all breeds.	Yield per cow.	Yield per cow.		
Burlington	22,200	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Cedar Rapids	15,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Decorah	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Davenport	20,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Des Moines	15,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Fort Madison	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Grasshopper	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Harmon	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Shanksville	10,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000											



In order to give a comparison of the results, and the average of the tests obtained, the following table, showing the number and average test for each city, together with the total number and average test for all cities in the state, is given. The compilation is for the years 1893, 1894, 1895, 1896 and 1897:

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 five years ending October 31, 1897.

CITIES.	1893.		1894.		1895.		1896.		1897.		Average for five years.
	No. tests made.	Average test.	No. tests made.	Average test.	No. tests made.	Average test.	No. tests made.	Average test.	No. tests made.	Average test.	
Burlington.....	327	3.73	444	3.75	456	3.75	462	3.84	514	4.19	3.86
Cedar Rapids.....	490	3.78	381	4.00	366	3.88	300	4.16	313	4.55	3.79
Clinton.....	586	3.71	391	3.88	356	3.71	421	3.77	358	3.80	3.72
Council Bluffs.....	492	3.51	353	3.62	306	3.44	333	3.83	320	3.80	3.62
Davenport.....	545	3.65	337	3.69	394	3.58	582	3.77	663	3.80	3.72
Des Moines.....	537	3.81	401	3.82	409	3.86	545	3.96	591	3.97	3.86
Dubuque.....	425	3.85	358	3.81	409	3.86	545	3.96	591	3.97	3.86
Keokuk.....	344	3.86	287	4.02	316	4.11	289	4.40	323	3.93	3.88
Muscatine.....	361	3.97	360	4.05	371	4.11	315	3.98	256	4.07	3.94
Ottumwa.....	79	3.87	193	3.67	327	3.85	174	4.26	177	4.12	3.87
Sioux City.....	323	3.71	352	3.67	492	3.67	556	3.88	556	4.02	3.80
Marshalltown.....	.....	.....	.....	.....	.....	.....	456	3.95	456	4.15	3.95
Fort Madison.....	.....	.....	.....	.....	.....	.....	187	4.15	380	4.07	4.11
Total and av. test for each year.....	3,905	3.80	3,884	3.79	4,840	3.82	5,871	4.00	6,679	3.90	3.94
Average test for entire period.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.94
Total tests made in thirteen cities during entire period.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35,318

In order to compare the number of tests and the tests by months, for each of the cities during the past five years, the following table has been prepared:

## BURLINGTON.

MONTHS.	1893.		1894.		1895.		1896.		1897.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	10	4.04	51	3.81	44	3.62	56	3.63	41	4.30
December.....	48	3.51	61	3.95	35	3.65	71	3.64	66	4.25
January.....	37	3.27	35	3.79	38	3.79	29	3.79	41	3.60
February.....	69	3.39	48	3.74	31	3.75	46	3.68	44	3.79
March.....	61	3.81	48	4.05	47	3.74	34	3.74	49	4.10
April.....	31	3.79	33	3.53	37	3.65	42	3.74	48	3.90
May.....	43	4.07	33	3.76	32	3.84	31	3.84	38	4.00
June.....	37	3.95	39	3.61	58	3.74	24	3.64	27	4.30
July.....	39	3.97	35	3.74	.....	.....	34	4.08	35	4.03
August.....	46	3.81	33	3.74	.....	.....	31	3.81	32	4.03
September.....	47	3.53	34	3.52	38	4.30	27	4.30	32	4.28
October.....	41	3.53	34	3.52	38	4.30	27	4.30	32	4.28
Total and average.....	527	3.73	444	3.75	456	3.75	462	3.84	514	4.19

## CEDAR RAPIDS.

MONTHS.	1893.		1894.		1895.		1896.		1897.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	66	3.73	17	4.04	50	3.94	31	4.09	43	4.20
December.....	71	3.91	43	4.12	30	4.12	32	4.00	43	4.02
January.....	71	3.94	14	3.94	30	3.77	40	4.00	40	3.98
February.....	20	3.78	70	3.91	19	4.06	34	3.98	18	3.98
March.....	20	3.78	16	4.18	30	3.80	19	4.12	50	3.95
April.....	19	3.58	30	4.01	.....	.....	43	4.07	.....	.....
May.....	65	3.90	37	3.84	30	3.61	43	4.03	.....	.....
June.....	35	3.73	86	3.90	103	3.83	30	4.25	.....	.....
July.....	18	3.79	35	3.95	.....	.....	40	4.14	54	4.14
August.....	48	3.92	40	4.64	43	4.18	66	4.34	.....	.....
September.....	31	4.08	40	4.64	43	4.18	66	4.34	.....	.....
October.....	31	4.08	40	4.64	43	4.18	66	4.34	.....	.....
Total and average.....	486	3.73	381	4.00	366	3.86	350	4.16	313	4.08

## CLINTON.

MONTHS.	1893.		1894.		1895.		1896.		1897.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	14	4.14	42	4.04	32	4.01	28	4.12	.....	.....
December.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
January.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
February.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
March.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
April.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
May.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
June.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
July.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
August.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
September.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
October.....	22	3.54	29	4.17	32	4.01	28	4.12	.....	.....
Total and average.....	235	3.71	271	3.86	309	3.71	321	3.77	263	3.80

## COUNCIL BLUFFS.

MONTHS.	1893.		1894.		1895.		1896.		1897.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	14	3.92	38	3.82	18	3.69	39	3.92	39	4.05
December.....	22	3.54	40	3.99	46	3.61	34	3.99	40	4.00
January.....	40	3.44	38	3.87	30	3.54	35	3.83	40	3.99
February.....	40	3.44	38	3.87	30	3.54	35	3.83	40	3.99
March.....	58	3.69	53	3.68	64	3.53	72	3.67	76	3.85
April.....	25	3.52	14	3.67	67	3.50	81	3.74	80	4.00
May.....	40	3.44	38	3.87	30	3.54	35	3.83	40	3.99
June.....	50	3.39	.....	.....	32	3.54	63	3.74	58	3.80
July.....	40	3.44	38	3.87	30	3.54	35	3.83	40	3.99
August.....	40	3.44	38	3.87	30	3.54	35	3.83	40	3.99
September.....	51	3.61	15	3.73	31	3.77	31	3.91	44	3.95
October.....	37	3.65	47	3.80	32	3.59	62	3.83	36	4.10
Total and average.....	492	3.53	320	3.82	500	3.64	563	3.83	585	3.80

## DAVENPORT.

MONTHS.	1893.		1894.		1895.		1896.		1897.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November.....	41	4.04	40	3.64	15	3.81	35	3.70	98	3.58
December.....	50	3.82	58	3.64	14	3.20	40	3.98	47	3.65
January.....	27	3.91	25	3.28	14	3.66	45	3.93	48	3.80
February.....	27	3.91	25	3.28	14	3.66	45	3.93	48	3.80
March.....	27	3.91	25	3.28	14	3.66	45	3.93	48	3.80
April.....	14	3.61	43	4.40	36	3.62	35	3.81	49	3.79
May.....	20	3.61	14	3.78	39	3.62	60	3.70	69	3.84
June.....	37	3.95	48	3.66	48	3.75	43	3.89	.....	.....
July.....	45	3.90	18	3.82	107	3.80	24	3.70	50	3.80
August.....	37	3.95	48	3.66	48	3.75	43	3.89	.....	.....
September.....	48	3.92	49	3.90	39	3.82	60	3.70	69	3.84
October.....	30	3.97	30	3.85	34	3.73	72	3.71	49	3.65
Total and average.....	501	3.65	337	3.66	394	3.58	502	3.77	663	3.80

## DES MOINES.

MONTHS.	1903.		1904.		1905.		1906.		1907.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November	14	4.03	24	3.43	53	3.69	70	4.00	126	4.20
December	10	3.10	18	3.51	72	3.55	80	4.04	122	4.50
January	37	3.85	35	3.87	69	3.90	78	4.00	122	3.96
February	36	3.50	41	3.72	76	3.67	84	3.90	127	3.80
March	27	3.44	21	3.73	90	3.55	90	3.70	136	3.78
April	156	3.50	75	3.61	89	3.90	116	3.70	130	3.80
May	180	3.25	48	4.12	118	3.78	39	3.80	160	3.55
June	61	3.69	68	3.90	91	3.66	90	3.80	108	3.70
July	64	3.66	68	4.21	118	3.70	103	3.82	138	3.66
August	31	3.61	69	4.21	80	3.84	115	3.45	137	3.75
September	73	3.55	72	3.40	81	3.49	91	3.71	131	3.72
October	61	3.49	92	3.73	131	4.04	133	3.76		
Total and average	545	3.37	555	3.81	1,029	3.70	1,004	3.96	1,591	3.38

## DUBUQUE.

November	18	3.35	31	3.45	15	3.69	44	4.18	47	4.05
December	20	3.38	35	3.40	28	3.83	37	4.18	47	4.04
January	30	3.38	45	3.45	20	4.14	46	3.95	47	4.14
February	12	3.43	10	2.94	22	3.30	45	4.10	48	3.87
March	56	3.42	42	3.33	47	3.71	47	4.03	48	3.67
April	24	3.53	30	3.28	48	4.02	47	4.08	47	3.65
May	31	3.35	37	3.34	46	4.25	46	3.93	39	4.03
June	15	3.09	22	3.35	47	3.95	47	3.90	47	4.04
July	39	3.35	21	3.96	33	4.09	45	4.13	47	4.00
August	41	3.50	19	3.73	39	3.96	46	4.29	48	3.97
September	56	3.35	22	3.71	48	3.94	47	4.03	45	3.93
October	74	3.37	27	3.67	94	3.95	34	4.07	36	3.96
Total and average	425	3.35	358	3.51	400	3.90	542	4.08	549	3.97

## KEOKUK.

November	14	4.14	20	4.31	12	4.32	39	4.42	33	4.02
December	22	4.00	32	4.33	33	4.57	11	4.93	34	4.27
January	21	4.30	37	4.38	25	4.35	16	4.60	22	4.25
February	35	4.14	32	4.19	24	4.53	29	4.61	34	4.27
March	10	3.46	22	4.43	21	4.73	30	4.64	32	4.69
April	10	3.46	12	4.17	53	4.66	32	4.62	32	4.65
May	32	3.56	20	4.17	33	4.70	29	4.43	32	4.65
June	28	3.90	24	3.64	23	4.00	34	4.13	37	4.23
July	28	3.93	24	4.19	27	4.00	20	4.58	33	4.12
August	66	3.44	35	4.19	34	4.08	21	4.11	34	4.05
September	13	3.41	24	4.24	23	4.15	33	4.22	34	4.31
October	20	3.35	35	4.34	16	4.45	23	4.72	34	4.48
Total and average	246	3.56	287	4.32	316	4.41	290	4.40	282	4.44

## MUSCATINE.

November	9	4.42	23	3.73	34	3.92	14	3.70	21	4.01
December	28	3.81	28	3.81	33	4.04	46	3.99	35	3.92
January	44	3.72	12	4.02	45	3.97	24	3.93		
February	16	3.49	33	3.93	37	4.00	11	3.57		
March	15	3.70	67	3.79	51	3.90	32	3.96	12	3.78
April	15	3.70	18	3.70	28	3.62	23	3.87		
May	35	3.75	38	3.75	38	3.80	32	4.11	21	4.15
June	9	3.70	31	3.75	64	3.87	35	4.05	29	4.40
July	9	3.56	35	3.94	38	4.13	21	4.11	18	3.95
August	35	3.55	16	3.77	37	3.91	43	3.96	41	4.31
September	35	3.50	34	3.99	38	3.89	22	3.83	41	4.31
October	33	3.69	386	3.80	435	3.91	315	3.98	356	4.07
Total and average	383	3.69	386	3.80	435	3.91	315	3.98	356	4.07

## OTTUMWA.

MONTHS.	1903.		1904.		1905.		1906.		1907.	
	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.	Number tests made.	Average test.
November	16	3.81	31	3.45	21	4.52	14	4.57	15	4.51
December	28	3.81	31	3.45	21	4.52	14	4.57	15	4.51
January	28	3.94	32	3.46	11	3.95	11	4.46	16	4.58
February	15	3.32	17	3.35	14	4.03	14	4.30	14	4.40
March	10	3.70	31	3.41	17	4.02	13	4.35	15	4.29
April	20	3.07	8	3.55	14	3.66	13	4.20	14	4.27
May	9	3.76	8	3.37	23	3.77	15	4.10	14	4.07
June	35	4.40	35	4.10	54	4.08	17	4.11	15	4.20
July	15	4.46	13	3.91	16	4.00	13	4.07	15	4.27
August	9	3.69	9	3.97	14	3.91	16	4.00	15	4.27
September	78	3.87	190	3.67	237	3.95	174	4.26	177	4.42
October										
Total and average	78	3.87	190	3.67	237	3.95	174	4.26	177	4.42

## SIOUX CITY.

November	37	3.97	38	3.82	27	3.81	51	3.61	47	3.58
December	25	3.69	34	3.67	27	3.70	52	3.80	40	3.70
January	23	3.33	34	3.54	37	3.75	45	3.92	37	3.60
February	23	3.33	25	3.61	35	3.73	44	3.99	45	3.53
March	37	3.77	33	3.77	40	3.77	41	3.91	47	3.54
April	39	3.37	39	3.67	43	3.63	40	3.89	56	3.50
May	32	3.43	24	3.53	39	3.65	40	3.76	56	3.64
June	32	3.43	29	3.69	111	3.89	39	3.64	44	3.77
July	13	3.88	29	3.78	43	3.78	33	3.69	44	3.74
August	32	3.64	29	3.73	39	3.80	31	3.88	45	3.42
September	25	3.49	38	3.88	20	3.61	49	3.49	41	3.88
October	229	3.71	302	3.67	490	3.67	505	3.88	556	3.78
Total and average	229	3.71	302	3.67	490	3.67	505	3.88	556	3.78

## MARSHALLTOWN.

MONTHS.	1905.		1907.	
	Number tests made.	Average test.	Number tests made.	Average test.
November	19	4.30	15	4.08
December	37	4.31	38	3.73
January	44	4.06	49	3.81
February	40	4.00	37	3.53
March	35	3.70	51	3.94
April	35	3.70	51	3.94
May	35	3.70	51	3.94
June	35	3.70	51	3.94
July	35	3.70	51	3.94
August	35	3.70	51	3.94
September	35	3.70	51	3.94
October	35	3.70	51	3.94
Total and average	426	3.95	458	3.88

## FORT MADISON.

June	3	2.66		
July	20	3.98	34	3.97
August	21	4.58	31	4.33
September	27	4.36	34	4.63
October	27	4.36	34	4.63
Total and average	137	4.15	360	4.67



## TESTS OF CREAM.

In the last annual report of this department, for the first time, a report of the number and average of cream tests in the state for the year ending November 1, 1896, was published. Cream tests were not at that time compulsory on the part of the department, but these tests were made with a view to finding out the average quality of cream sold to the city trade. During 1896 there were fifty-nine tests and an average of 18.84 reported for all the cities in the state where the tests were made. During the year ending October 31, 1897, 111 tests were made, and the average was 18.86. This shows an increase in the number of tests of fifty-five and a difference of 1.02 per cent in favor of 1897. The law upon this subject places the standard of cream at 15 per cent. In the 111 tests made, but two are below the standard, both being from Des Moines dealers. The lowest test below standard was 12.90, and the other 13.50 per cent, while the highest test made was 33 per cent, made in Council Bluffs. The highest test made during 1896 was 27 per cent, being in the city of Cedar Rapids, and the lowest test, 9 per cent, made in the same city. That there is now a much larger cream sale carried on by the Iowa milk dealers, has been ascertained by the reports from each of the dealers when making applications for their permits. The tests of the past year show decisively that a good quality of cream is sold the trade. Since the tests of cream will be conducted regularly from now on, it is expected the quality will improve still more. The following is a table showing the date and average test of cream in each of the cities.

## CREAM TEST.

NAME OF DEALER.	Date of test.	Test.
Durlington.		
F. M. Parsons	March 4	19.80
F. W. Bulmar	July 12	13.20
H. O. Keister	July 11	16.20
J. T. Witten	March 31	15.60
N. H. Davis Milk Co.	March 31	15.80
M. H. Davis Milk Co.	March 31	15.80
O. G. Van Winkle	May 29	15.90
E. T. Swords		
Cedar Rapids.		
L. W. Allen	April 27	16.40
F. Kilmeyer	April 27	21.00
Miller Bros.	April 27	21.00
Clinton.		
W. C. Anderson	July 21	26.40
W. C. Anderson	June 20	24.10
W. C. Anderson	June 20	24.10
Clinton Cream Depot	June 20	24.10
Clinton Cream Depot	Aug. 19	28.20
Clinton Cream Depot	Sept. 18	28.20
Clinton Cream Depot	Sept. 18	28.20
J. Reter	July 22	27.00
J. Reter	Sept. 20	25.20
J. Reter		
Council Bluffs.		
E. Badale	July 12	19.80
J. Ellsworth	May 3	18.00
J. Ellsworth	June 2	18.00
A. C. Ellsworth	May 12	19.80
A. C. Ellsworth	June 2	19.80
A. C. Ellsworth	Sept. 17	21.00
W. H. Kissel	Sept. 17	21.00
H. H. Martin	Sept. 17	21.00
H. H. Martin	Oct. 24	29.10
N. P. Nelson	May 18	17.70
Otto Schoenbach	July 22	21.00
Otto Schoenbach		
Des Moines.		
H. T. Abraham	June 17	30.20
J. F. Laible	June 17	26.40
Des Moines.		
R. C. Arthur	Feb. 6	21.00
Robert S. Bennett	Dec. 12	19.50
W. P. Bennett	Aug. 5	22.00
W. P. Bennett	Sept. 20	21.10
W. P. Bennett	Oct. 20	21.00
W. P. Bennett	Jan. 20	19.40
Bragdon Bros. 1	March 20	15.50
Bragdon Bros. 2	May 7	15.40
Bragdon Bros. 3	Aug. 7	15.40
Bragdon Bros. 4	Oct. 4	15.40
Bragdon Bros. 5	June 11	15.40
J. Grutskanek	July 10	15.00
Ed. Campbell	March 11	15.00
W. F. Carter	June 11	15.00
Des Moines Dairy Co.	Nov. 14	12.90
Ehle & Ehle	June 12	19.40
I. Pilsch	Feb. 17	15.00
G. W. Felt	May 19	19.50
C. W. Felt	Dec. 11	24.00
F. C. Harless	March 13	15.00
Iowa Dairy Co. 1	June 11	17.10
Iowa Dairy Co. 2	Dec. 19	14.70
Iowa Dairy Co. 3	Jan. 16	18.00
Iowa Dairy Co. 4	July 7	20.10
Iowa Dairy Co. 5	July 7	20.10
Iowa Dairy Co. 6	Aug. 2	18.00
Iowa Dairy Co. 7	Aug. 10	20.10
Iowa Dairy Co. 8	Aug. 10	20.10
Iowa Dairy Co. 9	Aug. 10	20.10
Iowa Dairy Co. 10	Aug. 10	20.10
Iowa Dairy Co. 11	Aug. 10	20.10
Iowa Dairy Co. 12	Aug. 10	20.10
Iowa Dairy Co. 13	Aug. 10	20.10
Iowa Dairy Co. 14	Aug. 10	20.10
Iowa Dairy Co. 15	Aug. 10	20.10
Iowa Dairy Co. 16	Aug. 10	20.10
Iowa Dairy Co. 17	Aug. 10	20.10
Iowa Dairy Co. 18	Aug. 10	20.10
Iowa Dairy Co. 19	Aug. 10	20.10
Iowa Dairy Co. 20	Aug. 10	20.10
Iowa Dairy Co. 21	Aug. 10	20.10
Iowa Dairy Co. 22	Aug. 10	20.10
Iowa Dairy Co. 23	Aug. 10	20.10
Iowa Dairy Co. 24	Aug. 10	20.10
Iowa Dairy Co. 25	Aug. 10	20.10
Iowa Dairy Co. 26	Aug. 10	20.10
Iowa Dairy Co. 27	Aug. 10	20.10
Iowa Dairy Co. 28	Aug. 10	20.10
Iowa Dairy Co. 29	Aug. 10	20.10
Iowa Dairy Co. 30	Aug. 10	20.10
Iowa Dairy Co. 31	Aug. 10	20.10
Iowa Dairy Co. 32	Aug. 10	20.10
Iowa Dairy Co. 33	Aug. 10	20.10
Iowa Dairy Co. 34	Aug. 10	20.10
Iowa Dairy Co. 35	Aug. 10	20.10
Iowa Dairy Co. 36	Aug. 10	20.10
Iowa Dairy Co. 37	Aug. 10	20.10
Iowa Dairy Co. 38	Aug. 10	20.10
Iowa Dairy Co. 39	Aug. 10	20.10
Iowa Dairy Co. 40	Aug. 10	20.10
Iowa Dairy Co. 41	Aug. 10	20.10
Iowa Dairy Co. 42	Aug. 10	20.10
Iowa Dairy Co. 43	Aug. 10	20.10
Iowa Dairy Co. 44	Aug. 10	20.10
Iowa Dairy Co. 45	Aug. 10	20.10
Iowa Dairy Co. 46	Aug. 10	20.10
Iowa Dairy Co. 47	Aug. 10	20.10
Iowa Dairy Co. 48	Aug. 10	20.10
Iowa Dairy Co. 49	Aug. 10	20.10
Iowa Dairy Co. 50	Aug. 10	20.10
Iowa Dairy Co. 51	Aug. 10	20.10
Iowa Dairy Co. 52	Aug. 10	20.10
Iowa Dairy Co. 53	Aug. 10	20.10
Iowa Dairy Co. 54	Aug. 10	20.10
Iowa Dairy Co. 55	Aug. 10	20.10
Iowa Dairy Co. 56	Aug. 10	20.10
Iowa Dairy Co. 57	Aug. 10	20.10
Iowa Dairy Co. 58	Aug. 10	20.10
Iowa Dairy Co. 59	Aug. 10	20.10
Iowa Dairy Co. 60	Aug. 10	20.10
Iowa Dairy Co. 61	Aug. 10	20.10
Iowa Dairy Co. 62	Aug. 10	20.10
Iowa Dairy Co. 63	Aug. 10	20.10
Iowa Dairy Co. 64	Aug. 10	20.10
Iowa Dairy Co. 65	Aug. 10	20.10
Iowa Dairy Co. 66	Aug. 10	20.10
Iowa Dairy Co. 67	Aug. 10	20.10
Iowa Dairy Co. 68	Aug. 10	20.10
Iowa Dairy Co. 69	Aug. 10	20.10
Iowa Dairy Co. 70	Aug. 10	20.10
Iowa Dairy Co. 71	Aug. 10	20.10
Iowa Dairy Co. 72	Aug. 10	20.10
Iowa Dairy Co. 73	Aug. 10	20.10
Iowa Dairy Co. 74	Aug. 10	20.10
Iowa Dairy Co. 75	Aug. 10	20.10
Iowa Dairy Co. 76	Aug. 10	20.10
Iowa Dairy Co. 77	Aug. 10	20.10
Iowa Dairy Co. 78	Aug. 10	20.10
Iowa Dairy Co. 79	Aug. 10	20.10
Iowa Dairy Co. 80	Aug. 10	20.10
Iowa Dairy Co. 81	Aug. 10	20.10
Iowa Dairy Co. 82	Aug. 10	20.10
Iowa Dairy Co. 83	Aug. 10	20.10
Iowa Dairy Co. 84	Aug. 10	20.10
Iowa Dairy Co. 85	Aug. 10	20.10
Iowa Dairy Co. 86	Aug. 10	20.10
Iowa Dairy Co. 87	Aug. 10	20.10
Iowa Dairy Co. 88	Aug. 10	20.10
Iowa Dairy Co. 89	Aug. 10	20.10
Iowa Dairy Co. 90	Aug. 10	20.10
Iowa Dairy Co. 91	Aug. 10	20.10
Iowa Dairy Co. 92	Aug. 10	20.10
Iowa Dairy Co. 93	Aug. 10	20.10
Iowa Dairy Co. 94	Aug. 10	20.10
Iowa Dairy Co. 95	Aug. 10	20.10
Iowa Dairy Co. 96	Aug. 10	20.10
Iowa Dairy Co. 97	Aug. 10	20.10
Iowa Dairy Co. 98	Aug. 10	20.10
Iowa Dairy Co. 99	Aug. 10	20.10
Iowa Dairy Co. 100	Aug. 10	20.10
Iowa Dairy Co. 101	Aug. 10	20.10
Iowa Dairy Co. 102	Aug. 10	20.10
Iowa Dairy Co. 103	Aug. 10	20.10
Iowa Dairy Co. 104	Aug. 10	20.10
Iowa Dairy Co. 105	Aug. 10	20.10
Iowa Dairy Co. 106	Aug. 10	20.10
Iowa Dairy Co. 107	Aug. 10	20.10
Iowa Dairy Co. 108	Aug. 10	20.10
Iowa Dairy Co. 109	Aug. 10	20.10
Iowa Dairy Co. 110	Aug. 10	20.10
Iowa Dairy Co. 111	Aug. 10	20.10

## CREAM TEST—CONTINUED.

NAME OF DEALER.	Date of test.	Test.
<i>Des Moines—continued.</i>		
Iowa Dairy Co. 2	Sept. 11	24.00
Iowa Dairy Co. 2	Sept. 11	18.50
Hawkeye Milk Co. 1	March 11	18.00
Hawkeye Milk Co. 1	April 3	18.50
Hawkeye Milk Co. 1	July 10	18.50
Hawkeye Milk Co. 1	Aug. 5	19.30
Hawkeye Milk Co. 1	Aug. 2	18.90
C. N. Johnson	April 3	18.50
L. Jones	May 6	18.90
J. Kampinsky	June 11	20.10
McConnell Bros.	Jan. 28	18.50
McConnell Bros.	June 12	15.30
J. M. Mueller	July 10	18.50
J. M. Mueller	Aug. 2	18.50
E. E. Moore	Aug. 2	18.50
E. E. Moore	March 4	18.50
H. Pickering	Sept. 2	18.90
O. R. Pickering	Nov. 11	20.50
O. R. Pickering	April 30	22.00
Mrs. H. A. Pugh	Sept. 25	15.30
J. S. Smith	Nov. 7	24.00
William Stubbs 1	Nov. 7	17.10
William Stubbs 1	Feb. 12	18.30
William Stubbs 1	May 22	18.50
William Stubbs 1	June 12	18.50
William Stubbs 1	July 13	18.50
William Stubbs 1	July 13	20.70
William Stubbs 1	Feb. 12	17.70
A. Terry	Aug. 7	18.90
H. A. Zimmerman	Aug. 7	15.50
W. H. Thomsen	May 26	18.50
Valley Dairy	Feb. 20	21.30
J. P. Van Steuben	Aug. 2	19.50
J. West	Feb. 8	19.30
F. West	March 20	24.00
F. Woelke	Aug. 7	15.50
D. F. Wilson & Bro.	July 10	15.30
D. F. Wilson & Bro.	Aug. 7	15.50
Young Bros.	Nov. 11	15.50
Young Bros.	Sept. 11	18.90
J. H. Windsor	June 8	16.20
Wiscasset		
Will Bros.	Aug. 6	37.40
G. W. Le Fort	Sept. 26	12.50
Osborne		
J. H. McIlharg	May 8	22.00
Fort Madison		
T. G. Lurrier	Dec. 18	37.40
Total and average	111	19.98

## NEEDS OF THE CITY MILK TRADE.

*Inspection of Herds.*—In previous reports of this department it has been stated there was an apparent need and call for inspection of herds and of premises where milk for the city supply is produced—the stables where all dairy cows are kept, and the milk houses, etc., wherever milk is handled, and where it passes from the cow to the cans and is made ready for delivery. The milk agents in cities now having inspection have so far looked to the cleanliness of all wagons, cans and utensils, but have not, owing to the limited appropriation, examined the

stables and premises where milk is produced, only to a limited degree. It cannot be expected that the agents can visit the dairy farms, which are in most cases many miles in the country, away from easy approach, and requiring a day or a half a day for each place, all to be paid from the fund appropriated for a limited number of tests of the city milk supply. However, the dairy commissioner in person and several of the agents have visited certain dairies and found the condition of things sufficiently in need of attention to warrant the inspection, and to convince any one of the need of additional appropriation to enable the department to have thorough inspection of all dairies supplying the city trade.

The state veterinary surgeon has visited and tested some of the herds in one of the cities of Iowa named in this report, with the result that several of the cows from which the milk supply was being taken were found to be affected with tuberculosis, and were killed. The fact that the milk of these cows was consumed day by day by a number of families, and that tuberculosis in milk may be, without a shadow of doubt, transmitted to man, should not be looked upon with indifference, but, on the other hand, laws and regulations should be enacted with a view to the proper protection of our people against such a danger to life and health. As a surety against the spread of tuberculosis, the tuberculin test, when correctly used, will determine whether or not the disease exists in the cow, and this should be one of the avenues to insure the delivery of pure and wholesome milk to the milk consuming public.

There is a clause in the dairy laws of Iowa, found in the annotated code of 1897, page 1,952, section 4988, which was enacted with a view to establish protection against any diseased milk. This clause provides that milk taken from a cow having any disease of a character to produce unhealthy or impure milk, or having ulcers, running sores, or from cows when stabled in an unhealthy or crowded condition or fed upon distilled, gluecose or brewery waste in any state of putrefaction or rottenness, shall be prohibited from sale, and any person violating any of these provisions shall be subject to the penalty of the law.

The milk dealers in our cities should make it a point to advise themselves as regards the laws which relate to their business, to the condition of the milk sold, and to cows connected therewith. The annotated code of Iowa may be found



in the office of any county officer, or in the office of any justice of the peace. It is unfortunate that the legislature has not provided for the publication in pamphlet form or otherwise of the dairy laws of Iowa, and it is to be hoped that the Twenty-seventh General Assembly will so amend the publication clause as to permit of the publication and distribution of the dairy laws in the annual reports of this department, or in pamphlet form when needed, as the state in no way can expect to have the laws more readily complied with than by familiarizing every person affected by their provisions with them.

As to cleanliness in stables and on the premises where each dealer produces milk for his supply, the strictest of sanitation should rule. This is a matter of business requiring business conduct, for the stable, milk house, cans and utensils, milk cows and all stock concerned in the business should receive as much, if not more care than would a store or other place open to the public view to be used in this class of trade. Care in the conduct of a stable will not only add value to the property, but will insure the health and thrift and fruitfulness of the herd. In the case of the wagon and utensils, value and long usage are also added. The continuous value of an article should be an incentive to cleanliness and careful handling. The cleanliness of all premises should be observed, if for no other reason than to protect the milk from germs, dirt, or odors of any kind, considering that if the milk is exposed it will receive such germs or odors, and when consumed will be received into the human organism, which should be protected rather than endangered against such afflictions. Sickness of a contagious character in the family of the dairyman should be reason for either an absolute discontinuation of the sale of milk from such premises or the removal of the patient, and thorough disinfection of all articles coming in contact in any way with the milk supply, thus conforming to the regulations of the state board of health.

*Milk Delivery Wagons.*—One of the best advertisements the bakery, laundry, grocery and oil business have, is the wagon in which their goods are delivered to the custom. People are inclined to regard these traveling representatives of the business as an insight into their class and manner of conduct. Our people do not buy bread from a crippled, worn out and unclean bread delivery wagon, for the reason that the bread itself comes into close contact with either the wagon or the conditions

surrounding it. This is true also of the milk business. I have observed a large number of the milk dealers in the cities of Iowa having the test system, operate wagons which, taken as the true representative of their business, are unfit for use and have long since outlived their usefulness. The chance of the milk delivered in such wagons being affected by the surroundings, and in cases where dealers are in the habit of hauling swill and other odorous substances in their wagons, should be reason enough to condemn the practice and for prohibiting the use of such wagons for the delivery of milk. The wagon in each instance is the business house itself. The public notice and interest themselves in these traveling stores. Under these circumstances, it should be the aim of every milk dealer to have his wagon appear as respectable and well equipped as possible, bearing in mind the fact that it will not only establish his business upon a better basis, but will add value and long usage, if properly cared for. It will in a measure retain custom, and, in consideration of the product sold and the times, will increase his trade. "There is no man too poor to care for his property, and no man too rich to justify neglect.





## CLINTON-CONTINUED

NAME.	MANNER OF SELLING MILK.		Perch. number for lot.	Permit number for lot.	Number of tests		Average test.	Sum of values standard.
					Highest test.	Lowest test.		
Pitch, H.	Water	294	120		4.60	3.90	4.25	
Gertsen, D.	Water	294	120		4.40	3.80	4.10	
Oldenham, John.	Water	294	120		4.40	3.80	4.10	
Free strap, Paul.	Water	294	120		4.40	3.80	4.10	
Hild & Stockwell.	Water	294	120		4.40	3.80	4.10	
Howe, F. H.	Water	294	120		4.40	3.80	4.10	
South, Clinton.	Water	294	120		4.40	3.80	4.10	
Johnson, Nels.	Water	294	120		4.40	3.80	4.10	
Johnson, Geo.	Water	294	120		4.40	3.80	4.10	
Krogman, Frank.	Water	294	120		4.40	3.80	4.10	
Kennedy, John J.	Water	294	120		4.40	3.80	4.10	
Miller, A.	Water	294	120		4.40	3.80	4.10	
Morrisey, Owen.	Water	294	120		4.40	3.80	4.10	
Nelson, C.	Water	294	120		4.40	3.80	4.10	
Stiller, J.	Water	294	120		4.40	3.80	4.10	
O'Brien, S.	Water	294	120		4.40	3.80	4.10	
Olson, S.	Water	294	120		4.40	3.80	4.10	
Paulsen, Carl.	Water	294	120		4.40	3.80	4.10	
Permon, Nels.	Water	294	120		4.40	3.80	4.10	
Reinert, O.	Water	294	120		4.40	3.80	4.10	
Rasmussen, F.	Water	294	120		4.40	3.80	4.10	
Ritter, J.	Water	294	120		4.40	3.80	4.10	
Snyder, P.	Water	294	120		4.40	3.80	4.10	
Storvick, Charles.	Water	294	120		4.40	3.80	4.10	
Thompson, S.	Water	294	120		4.40	3.80	4.10	
Thompson, F. S.	Water	294	120		4.40	3.80	4.10	
Thompson, P. S.	Water	294	120		4.40	3.80	4.10	
Total.		294	120		4.40	3.80	4.10	

## COUNCIL BLUFFS

COUNCIL BLUFFS.									
Arnold, P. J.	Wagon	218	241	27	4.80	2.80	3.91		
Applegate, O. N.	Wagon	255	277	22	4.80	2.80	3.91		
Baker, W. W.	Wagon	256	267	11	4.10	2.50	3.75		
Basdale, E.	Wagon	255	267	12	4.10	2.50	3.75		
Bassett, J. L.	Wagon No. 1.	255	267	12	4.10	2.50	3.75		
Elsworth, J. C.	Wagon No. 2.	219	240	21	4.80	2.80	3.77		
Elsworth, J. L.	Wagon	216	238	22	4.80	2.80	3.77		
Greenie, W. A.	Wagon	215	236	21	4.80	2.80	3.77		
Greene, Chas.	Wagon	219	240	21	4.80	2.80	3.77		
Johnson Bros.	Wagon	260	27	21	4.80	2.80	3.75		
Kline, W. F.	Wagon	223	243	20	4.80	2.80	3.75		
Kline, W. F.	Wagon	223	243	20	4.80	2.80	3.75		
Leather, C. E.	Wagon	227	269	42	4.80	2.80	3.75		
Martin, H. H.	Wagon	217	24	27	4.80	2.80	3.75		
Martin, H. H.	Wagon	201	9	40	4.80	2.80	3.75		
Marshall, Mrs. V.	Wagon No. 2.	201	10	40	4.80	2.80	3.75		
Neelson, F.	Wagon	207	62	14	4.80	2.80	3.75		
Neelson, S. P.	Wagon	214	5	20	4.80	2.80	3.75		
Neelson, S. P.	Wagon	207	29	20	4.80	2.80	3.75		
Ray, James.	Wagon	218	267	49	4.80	2.80	3.75		
Reed, A. J.	Wagon	212	61	19	4.80	2.80	3.75		
Johnson, Mrs. Mary M.	Wagon	212	21	21	4.10	2.40	3.78		
Scherer, Chas.	Wagon	213	21	21	4.10	2.40	3.78		
Skodsholm, Otto.	Wagon	215	186	39	4.80	2.80	3.75		
	Wagon	274	8	34	4.30	2.30	3.83		
Total.					865	4.80	2.80	3.83	

## DAVENPORT

DAY REPORT.									
Abrams, H. T.	Wagon	120	265	11	4.00	2.50	3.75	...	...
Amiel, J.	Wagon	391	111	7	4.10	3.00	3.80	...	...
Arp, Hans	Wagon	100	137	6	4.10	3.00	3.70	...	...
Barnes, George S.	Wagon	202	177	6	4.10	3.00	3.70	...	...
Bartley, H.	Wagon	100	130	6	4.10	3.00	3.70	...	...
Beier, B.	Wagon	100	102	6	4.10	3.00	3.70	...	...
Bumer Bros.	Wagon	100	67	75	3.70	3.00	3.75	...	...
Bond, C. H.	Wagon	100	100	6	4.00	3.00	3.75	...	...
Bruhn, H.	Wagon	100	100	6	4.00	3.00	3.75	...	...

## DAVENPORT—CONTINUED.

[illegible]

## DES MOINES.

NAME.	MANNER OF SELLING MILK.	Permit number for 1907.	Permit number for 1908.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
Arthur, E. O.	Wagon	180	21	25	5.00	3.70	3.78	0
Anderson, A.	Wagon	30	10	30	4.60	3.70	4.07	1
Adams, Jane	Wagon	158	5	30	5.00	3.90	4.50	1
Bennett, W. P.	Wagon	427	18	30	5.00	4.00	4.50	1
Bennett, H. S.	Wagon	59	274	17	4.20	3.30	3.75	1
Blackman, F. M.	Wagon	83	20	30	5.00	3.30	3.83	1
Bradon Bros.	Wagon No. 1	84	14	4.20	3.20	3.60		
Burke, U. J.	Store	543	11	4.50	3.20	3.60		
Berger, H.	Wagon	308	145	3	4.50	3.40	3.95	1
Bergenson, Andy	Wagon	550	19	4.00	3.70	3.45		
Bickley, H. T.	Store	200	281	5	3.70	3.20	3.78	1
Badley, J. W.	Wagon	153	280	15	4.00	3.10	3.67	1
Campbell, Ed	Wagon	179	6	4.70	3.50	3.74		
Churchman, W. W.	Wagon	179	6	4.70	3.50	3.74		
Clark, H. E.	Depot	338	26	3.70	3.60	3.66		
Cruikshank, J.	Wagon	328	77	19	4.50	3.00	3.80	1
Carter, W. F.	Wagon	533	10	5.00	2.50	3.25		
Chapman, A. A.	Depot	533	10	5.00	2.50	3.25		
Calkins, O. H.	Depot	15	317	4	4.50	3.50	3.90	1
Dunne, E. B.	Wagon	14	145	6	4.00	3.60	3.80	1
Dunne, E. B.	Store	154	79	10	4.00	3.40	3.83	1
Dippell, Louis	Wagon	151	101	4	4.20	3.00	3.70	1
Ehle & Ehle	Wagon	151	17	13	3.20	2.60	3.38	1
Ehle & Ehle	Depot	182	18	19	3.20	2.60	3.71	1
Engle & Bahl	Wagon	35	8	4.30	3.70	4.04		
Fair Lawn Dairy	Wagon	468	3	4.70	3.80	3.81		
Fitzgerald, Kate	Wagon	611	24	3.20	2.80	3.75		
Felt, G. W.	Wagon	351	15	4.00	2.90	4.01		
Flynn, Thomas	Wagon	376	29	4.10	3.20	3.70		
Gel, F. M.	Wagon	383	302	15	4.00	3.20	3.70	1
Gordon, William	Wagon	327	217	10	4.50	3.10	3.81	2
Gordon, A. H.	Wagon	547	205	7	3.00	2.40	3.20	1
Gordon, J. R.	Wagon	345	50	3.00	2.70	3.73		
Gay, C. C.	Store	610	4	4.10	3.00	3.80		
Graham, M. J.	Store	319	10	4.00	3.60	3.80		
Carlson, S. B.	Wagon	469	213	18	4.50	3.30	3.91	1
Harless, W. C.	Depot	389	271	11	4.40	3.20	3.83	1
Harding Creamery Company	Wagon	517	217	13	4.20	3.40	3.84	1
Hawth Bros.	Store	149	156	10	4.30	3.10	3.81	1
Hockersmith, J. S.	Wagon No. 1	55	19	12	4.00	2.60	3.58	1
Howell, W. O.	Wagon No. 2	616	39	3	4.00	3.00	3.83	1
Howell, W. O.	Wagon	329	27	5	4.30	3.30	3.48	1
Herman, O. M.	Store	613	3	3.50	2.50	3.20		
Hollingsworth, Mrs.	Store	613	165	3	3.50	2.50	3.20	1
Hawkeye Milk Company	Wagon No. 1	11	32	5.00	1.80	2.71		
Hawkeye Milk Company	Wagon No. 2	11	12	4.10	3.20	3.70		
Hawkeye Milk Company	Wagon No. 3	11	12	4.20	3.00	3.60		
Hawkeye Milk Company	Depot	181	4	4.00	3.50	3.80		
Iowa Dairy Company	Wagon No. 1	152	23	4.50	2.40	3.65		
Iowa Dairy Company	Wagon No. 2	153	17	6.50	7.00	3.83		
Iowa Dairy Company	Wagon No. 3	153	5	4.30	2.40	3.40		
Iowa Dairy Company	Wagon No. 4	154	3	4.50	2.10	3.83		
Iowa Dairy Company	Depot	155	18	4.80	2.10	3.72		
Izard, H. W.	Wagon	434	162	4	4.00	3.40	3.85	1
Johnson, C. E.	Wagon	127	20	3.20	3.10	3.60		
Jonas, L.	Store	598	6	3.60	3.70	3.13		
Kanpapp, M.	Store	168	272	4	4.00	3.00	3.75	1
Kanpapp, J. J.	Wagon	606	26	7	4.00	3.50	3.40	1
Lea, A. M.	Wagon	154	15	4.50	3.00	3.83		
Lane, A. C.	Wagon	155	4	4.00	3.00	3.35		
Lane, M. M.	Wagon	155	4	4.50	3.80	3.85		
McConnell's Dairy	Wagon	155	4	4.50	3.80	3.85		

## DES MOINES—CONTINUED.

NAME.	MANNER OF SELLING MILK.	Permit number for 1907.	Permit number for 1908.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
Marie, E. B.	Depot	1	1	1	4.30	3.90	4.10	1
Malone, J.	Wagon	435	276	4	4.50	3.20	3.90	1
Miller, M. J.	Wagon	417	276	4	4.00	3.60	3.80	1
Miller, M. H.	Wagon	417	276	4	4.00	3.60	3.80	1
Monroe, Sam	Wagon	204	7	10	4.70	3.20	3.84	1
Mueller, J. M.	Wagon	548	143	11	4.40	3.60	3.75	1
McKowan, G. W.	Wagon	353	14	4.40	3.60	3.80		
Moore, E. E.	Wagon	353	14	4.40	3.60	3.80		
McDill, O. W.	Wagon	353	14	4.40	3.60	3.80		
McLewellyn, J.	Wagon	353	14	4.40	3.60	3.80		
Nichols, G. A. B.	Wagon	532	278	1	3.60	3.00	3.60	1
Nelson	Wagon	51	25	25	4.40	3.50	3.97	1
Olesen, J.	Wagon	172	10	4.70	3.60	3.57		
Payton, W. W.	Wagon	348	10	4.10	3.50	3.93		
Pickering, O. B.	Wagon	348	10	4.10	3.50	3.93		
Proctor, George	Depot	353	10	4.50	3.40	3.49		
Pugh, Mrs. H. A.	Wagon	353	10	4.50	3.40	3.49		
Page, G. D.	Wagon	353	10	4.50	3.40	3.49		
Painter, John	Wagon	353	10	4.50	3.40	3.49		
Quist, Frank	Wagon	353	10	4.50	3.40	3.49		
Quist, Andrew	Wagon	353	10	4.50	3.40	3.49		
Randolph, W. E. F.	Wagon	450	150	20	4.00	3.20	3.81	1
Ring, F. M.	Store	369	28	10	4.00	3.10	3.74	1
Rodman, C.	Wagon	153	163	18	4.10	3.30	3.60	1
Ricketts, W. E. F.	Wagon	561	12	4.50	3.70	3.65		
Reynolds, Mrs. L. F.	Wagon	561	12	4.50	3.70	3.65		
Robb, George F.	Wagon	561	12	4.50	3.70	3.65		
Robertson, Robert	Store	361	80	9	4.50	3.80	4.00	1
Sanders, H.	Wagon	31	28	5	4.00	3.20	3.90	1
Schlenker, George F.	Wagon	443	274	5	4.50	3.70	4.38	1
Schlenker, William	Wagon	443	274	5	4.50	3.70	4.38	1
Schnefeldt, O.	Store	322	147	7	4.10	3.60	3.91	1
Scott, A. W. & Co.	Depot	147	39	15	4.00	3.00	3.90	1
Sellers, H. A.	Wagon	421	41	13	4.00	3.00	4.14	1
Smith, J. S.	Store	135	148	13	4.00	3.00	3.84	1
Sanders & Johnson	Wagon	284	208	17	5.00	3.60	4.37	1
Stokey, D. M.	Wagon	174	23	14	4.00	3.00	3.84	1
Strickland, L. M.	Wagon No. 1	174	23	14	4.00	3.00	3.84	1
Stubbs, William	Wagon No. 2	151	204	22	4.00	3.00	3.80	1
Stubbs, William	Wagon	454	145	17	4.00	3.00	3.80	1
Starks, J. H.	Wagon	454	145	17	4.00	3.00	3.80	1
Shoenaker, H. S.	Wagon	454	145	17	4.00	3.00	3.80	1
Shoenaker, H. S.	Depot	454	145	17	4.00	3.00	3.80	1
Terry, A.	Wagon	264	211	4	3.60	3.40	3.43	1
Terry & West	Wagon	463	270	17	5.10	3.30	4.00	1
Thomas, W. H.	Wagon	164	270	17	5.10	3.30	4.00	1
Tyler, J.	Wagon	430	270	17	5.10	3.30	4.00	1
Tyler, Mrs. C. A.	Store	430	270	17	5.10	3.30	4.00	1
Val's Dairy	Wagon	430	270	17	5.10	3.30	4.00	1
Val's Dairy	Depot	430	270	17	5.10	3.30	4.00	1
Vander Linden, L. J.	Store	125	161	12	4.10	3.00	3.85	1
Von Stueben, J. F.	Wagon No. 1	434	121	21	4.80	3.00	3.86	1
Von Stueben, J. F.	Wagon No. 2	434	121	21	4.80	3.00	3.86	1
Von Stueben, J. P.	Wagon	434	121	21	4.80	3.00	3.86	1
Von Stueben, W. V.	Wagon	434	121	21	4.80	3.00	3.86	1
West, F.	Wagon	172	308	19	4.80	3.00	3.77	1
West, C. P.	Wagon	172	308	19	4.80	3.00	3.77	1
Wessinger & Co.	Wagon	466	270	10	4.00	3.40	3.77	1
Williamson, James	Wagon	347	16	4.40	3.00	3.71		
Woolbridge, F.	Wagon	449	275	8	4.10	3.10	3.71	1
Wood, W. T.	Store	400	167	5	3.90	3.10	3.70	1
Wormstedt, T. H.	Store	400	167	5	3.90	3.10	3.70	1
Wilson, D. F. & Bro.	Wagon	232	19	4.30	3.10	3.75		
Windsor, J. B.	Wagon	86	167	9	4.00	3.00	3.43	1
Weller & Co.	Wagon	349	166	9	4.00	3.10	3.82	2
Young, E. B.	Wagon	349	166	9	4.00	3.10	3.82	2
Young Bros.	Wagon	349	166	9	4.00	3.10	3.82	2
Zinn, Mrs. D.	Store	349	166	9	4.00	3.10	3.82	2
Total.				1,291	4.90	3.60	3.72	44



## DUBUQUE.

NAME.	MANNER OF SELLING MILK.	Permit number for 1897.	Permit number for 1898.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
Adam, Mike	Store	438	305	9	4.40	3.30	3.80	.....
Albrecht, G.	Wagon	.....	.....	13	4.30	3.90	3.97	.....
Avery, Henry L.	Wagon	464	.....	.....	.....	.....	.....	.....
Barrett, John	Wagon	324	267	8	3.40	3.00	3.20	.....
Bollen & Hulwer	Wagon	293	267	12	4.40	3.00	4.00	.....
Bronke, C.	Wagon	311	271	11	4.00	3.30	3.65	.....
Buckingham, T.	Wagon	335	378	11	5.00	3.30	3.90	.....
Buckingham, T.	Wagon	335	378	11	4.20	3.00	3.80	.....
Headie, Chas.	Wagon	335	378	4	4.40	3.00	3.80	.....
Heiply, I.	Wagon	293	258	.....	.....	.....	.....	.....
Conzett, A.	Wagon	293	258	.....	.....	.....	.....	.....
Cushing, Mel.	Wagon	.....	.....	9	3.20	3.40	3.75	.....
Cushing, Mel.	Wagon No. 1.	519	.....	12	4.30	3.00	3.80	.....
Cushing, Mel.	Depot	511	.....	11	4.00	3.20	3.75	.....
Daly, F.	Depot	724	.....	11	4.40	3.40	3.90	.....
Dugan, James T.	Wagon	556	362	9	4.40	3.40	3.85	.....
Dugan, Mrs. M.	Wagon	556	362	10	4.40	3.40	3.85	.....
Elgin, M.	Wagon	120	98	12	4.40	3.50	3.95	.....
Fluetsch, J. & Sons	Wagon No. 1.	121	99	12	4.20	3.20	3.85	.....
Fluetsch, J. & Sons	Wagon No. 2.	121	99	8	4.20	3.30	3.74	.....
Fluetsch, J. & Sons	Depot No. 1.	121	99	.....	.....	.....	.....	.....
Fluetsch, J. & Sons	Depot No. 2.	121	99	.....	.....	.....	.....	.....
Freder, O.	Wagon	.....	.....	8	4.00	3.40	3.80	.....
Gonier, A.	Wagon	.....	.....	2	4.00	3.20	3.60	.....
Gonier, B.	Wagon	.....	.....	2	3.80	3.20	3.50	.....
Gadient, John	Wagon	50	86	11	4.50	3.00	3.79	.....
Gartner, A.	Wagon	456	361	12	4.20	3.00	3.65	.....
Hick, M.	Wagon	.....	.....	10	4.30	3.00	3.60	.....
Hickman, A.	Wagon	.....	.....	10	4.00	3.20	3.58	.....
Holmes, E.	Wagon	548	368	11	4.00	3.20	3.65	.....
Holmes, E.	Wagon No. 2.	548	368	11	4.00	3.20	3.65	.....
Herron, H. L.	Wagon	247	.....	11	5.20	3.30	4.13	.....
Hoffert, J.	Wagon	408	.....	9	4.00	3.40	4.11	.....
Howard & Pringle	Wagon	.....	.....	1	4.40	3.40	4.00	.....
Kutsch Bros	Wagon	.....	.....	6	4.00	3.00	3.50	.....
Lecklin, J. H.	Wagon	45	275	10	4.00	3.00	3.50	.....
Lecklin, J. H.	Wagon No. 2.	46	.....	11	4.00	3.00	3.50	.....
Knockie, A.	Wagon	259	330	11	5.00	3.00	3.88	.....
Meyer, H.	Wagon	85	30	8	5.00	3.20	4.00	.....
Meyer, H.	Wagon No. 1.	85	30	8	4.60	3.40	3.74	.....
Mueller, Emil C.	Wagon	212	82	11	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 1.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 2.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 3.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 4.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 5.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 6.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 7.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 8.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 9.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 10.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 11.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 12.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 13.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 14.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 15.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 16.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 17.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 18.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 19.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 20.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 21.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 22.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 23.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 24.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 25.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 26.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 27.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 28.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 29.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 30.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 31.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 32.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 33.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 34.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 35.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 36.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 37.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 38.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 39.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 40.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 41.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 42.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 43.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 44.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 45.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 46.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 47.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 48.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 49.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 50.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 51.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 52.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 53.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 54.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 55.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 56.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 57.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 58.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 59.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 60.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 61.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 62.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 63.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 64.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 65.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 66.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 67.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 68.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 69.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 70.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 71.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 72.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 73.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 74.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 75.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 76.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 77.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 78.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 79.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 80.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 81.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 82.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 83.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 84.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 85.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 86.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 87.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 88.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 89.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 90.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 91.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 92.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 93.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 94.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 95.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 96.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 97.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 98.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 99.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 100.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 101.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 102.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 103.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 104.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 105.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 106.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 107.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.	Wagon No. 108.	212	82	12	4.80	3.00	4.02	.....
Mueller, Emil C.								

## SIOUX CITY.

NAME.	MANNER OF SELLING MILK.	Permit number for 1897.	Permit number for 1898.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
Baby Milk Dairy.....	Wagon.....	394	397	11	4.70	3.60	3.90	
Bradstreet, C. O.....	Wagon.....	443	288	13	4.20	3.20	3.95	
Read-Treet, T. E.....	Wagon.....	365	313	12	4.00	3.00	3.50	
Bowman, H.....	Wagon.....	365	313	1	4.00	4.00	4.00	
Clark, H. D.....	Wagon.....	386	367	13	5.40	4.00	4.04	
Campbell, C. W.....	Wagon.....	392	392	4	4.50	3.00	3.50	
Francis, W.....	Wagon.....	412	286	15	4.20	3.00	3.58	
Franklin & Olson.....	Wagon.....	413	391	12	4.00	3.00	3.63	
Fettersen, A.....	Wagon.....	141	384	7	4.00	3.40	3.63	
Gloman, W. H.....	Wagon.....	394	394	1	3.40	3.40	3.40	
Hazen & Mix.....	Wagon.....	394	394	1	3.40	3.40	3.40	
Hermann, W. M.....	Wagon No. 1.....	329	339	17	4.00	3.00	3.97	
Hermann, W. M.....	Wagon No. 2.....	339	339	17	4.00	3.00	3.97	
Heath, D. B.....	Wagon.....	92	131	13	4.40	3.00	4.02	
Hansen, Anna.....	Wagon.....	367	388	5	4.00	3.00	3.58	
Hansen, Louis.....	Wagon.....	478	478	4	4.40	3.40	3.70	
Jensen & Freese.....	Wagon No. 1.....	477	477	13	4.20	3.00	3.59	
Jensen & Freese.....	Wagon No. 2.....	477	477	11	4.00	3.00	3.75	
Johnson, C.....	Wagon.....	63	7	7	4.00	3.20	3.60	
Johnson, A. H.....	Wagon.....	475	287	21	4.20	3.00	3.57	
Kroman, L.....	Wagon.....	725	725	10	5.00	3.00	3.50	
Lynn Bros.....	Wagon.....	67	260	13	4.20	3.00	3.69	
Lamb, W.....	Wagon.....	524	263	10	5.00	4.00	4.17	
Mahoney, William.....	Wagon.....	328	369	11	4.40	3.20	3.91	
McNamara, S. E.....	Wagon.....	372	388	12	4.20	3.00	3.51	
Morgan, C. H.....	Depot.....	309	292	11	4.20	3.20	3.73	
Monlin, W. H.....	Wagon.....	278	123	12	4.00	3.20	3.58	
Newgard, A.....	Wagon.....	351	390	8	4.20	3.00	3.47	
Olson, F. & Son.....	Wagon.....	338	390	13	4.80	3.00	3.48	
Olson, Eric.....	Wagon.....	232	247	5	4.00	3.00	3.20	
Olson, Andrew.....	Wagon.....	396	2	2	3.60	2.50	3.00	
Oven, F. M.....	Wagon.....	396	396	10	4.00	3.20	3.60	
Perrasso & Gambirino Bros.....	Store.....	351	390	13	4.40	3.20	3.82	
Pott, L.....	Wagon.....	260	13	4.20	3.20	3.76		
Perrin, E. E.....	Wagon.....	130	130	4	3.40	2.80	3.10	
Ray, W. D.....	Wagon.....	498	498	12	4.60	3.50	4.13	
Reise, G. E.....	Wagon.....	142	142	8	4.00	3.00	3.45	
Robinson, C. M.....	Wagon.....	66	9	5.00	4.00	4.27		
Rowe, N. J.....	Wagon.....	535	363	12	4.40	3.00	3.50	
Reynolds, C. O.....	Wagon.....	91	362	3	3.80	3.20	3.50	
Solseth, A. H.....	Wagon.....	606	362	4	4.10	3.00	3.82	
Sheppard, M. J.....	Wagon.....	330	301	12	3.80	3.00	3.57	
Sherman, E.....	Depot.....	240	240	10	3.40	4.00	3.70	
Syrreman, C.....	Wagon.....	384	343	16	4.50	3.00	3.44	
Storrier, A. W.....	Wagon No. 1.....	60	26	12	3.90	3.20	3.06	
Storrier, A. W.....	Wagon No. 2.....	61	27	10	4.00	3.20	3.53	
Swanson, S. A.....	Wagon.....	570	229	12	4.80	3.00	3.54	
Stellern, J. J.....	Store.....	367	340	11	5.00	3.00	4.15	
Steinbeck, Mary.....	Wagon.....	336	340	1	4.00	4.00	4.00	
Treadwell, T. F.....	Wagon.....	390	284	13	4.00	3.00	3.58	
Tully, T. B.....	Wagon.....	336	336	12	4.00	3.00	3.77	
Washington, A. L.....	Depot.....	231	300	10	4.70	3.00	3.58	
Wilcox, D. O.....	Wagon.....	65	129	17	4.40	3.00	3.56	
Woodcock, A. C.....	Wagon.....	132	132	12	4.00	3.00	3.74	
Woodcock, A. C.....	Wagon No. 2.....	581	133	4	4.80	3.40	4.00	
Weiss, Christian.....	Wagon.....	533	533	6	4.80	3.00	3.06	
Wendler, R. O.....	Wagon.....	429	429	4	4.20	4.20	4.20	
Young, E. D.....	Wagon.....	507	291	11	4.40	3.00	3.79	
Total.....				556	4.40	3.20	3.75	

## MARSHALLTOWN.

NAME.	MANNER OF SELLING MILK.	Permit number for 1897.	Permit number for 1898.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
Bellus, S. E.....	Wagon.....	145	136	43	5.80	3.00	4.07	
Brown, C. W.....	Wagon.....	552	345	35	4.80	3.20	4.03	
Cole, Alvin.....	Wagon.....	85	135	43	4.70	3.00	3.71	
Dowser, G. C.....	Wagon.....	579	579	27	6.10	3.20	3.98	
Griffiths, H. O.....	Wagon No. 1.....	353	134	11	5.00	4.40	4.49	
McCord, Dell.....	Wagon No. 2.....	354	354	29	4.20	3.00	3.75	
McCord, Dell.....	Depot.....	44	44	18	4.40	3.00	3.60	
Plumb, J. M.....	Wagon.....	211	211	41	5.00	3.20	3.86	
Roundy Bros.....	Wagon.....	344	344	60	4.80	3.00	3.74	
Treedy, G.....	Wagon No. 1.....	72	72	49	4.80	3.00	3.67	
Varnum, C. B.....	Wagon No. 2.....	459	459	51	4.40	3.40	3.93	
Varnum, C. B.....	Wagon.....	35	37	12	4.80	3.60	4.22	
Wilson, W. R.....	Wagon.....	344	344	458	5.20	3.60	3.93	
Winchell, E.....								
Total.....				458	5.20	3.60	3.93	

## FORT MADISON.

NAME.	MANNER OF SELLING MILK.	Permit number for 1897.	Permit number for 1898.	Number of tests.	Highest test.	Lowest test.	Average test.	Number below standard.
Beelman, J. W.....	Wagon.....	50	141	33	5.60	3.20	3.97	
Barton, James.....	Wagon.....	42	140	31	5.40	3.60	4.54	
Conrad, George.....	Wagon.....	41	328	9	3.20	3.20	4.20	
Currier, T. C.....	Depot.....	350	349	4	5.40	4.40	4.45	
Drollinger, Frank.....	Wagon.....	540	540	24	4.40	3.20	3.62	
Jones, J. G.....	Wagon.....	361	361	25	4.60	3.00	3.91	
Knapp & Holland.....	Wagon.....	117	347	33	4.60	3.40	4.29	
Manshelm, John.....	Wagon.....	145	346	32	5.80	3.00	4.22	
Manshelme, Mrs. B.....	Wagon.....	139	139	50	4.40	3.00	3.65	
Skurk, F. E.....	Wagon.....	570	570	8	5.80	3.00	4.75	
Stellern, J. J.....	Wagon.....	146	146	6	5.00	4.00	4.20	
Smith, W. R.....	Wagon.....	136	136	200	5.20	3.60	4.07	
Stewart, William.....								
Total.....				200	5.20	3.60	4.07	



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