Annual report of the Dairy and Food Commissioner of Wisconsin. For the period ending June 30, 1918. 1918

State Dairy and Food Commissioner
Madison, Wisconsin: Democrat Printing Company, 1918

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THE WISCONSIN DAIRY AND FOOD COMMISSION, 1918

ANNUAL REPORT

OF THE

Dairy and Food Commissioner

OF WISCONSIN

For the Period Ending June 30, 1918

GEORGE J. WEIGLE
Dairy and Food Commissioner
Ex Officio
State Superintendent of Weights and Measures

MADISON, WISCONSIN
Democrat Printing Company
1918

DAIRY AND FOOD COMMISSIONERS OF WISCONSIN

H. C. THOM.....May 29, 1889, to May 28, 1891

D. L. HARKNESS.....May 28, 1891, to June 11, 1894

THOMAS LUCHSINGER.....June 27, 1894, to Feb. 7, 1895

H. C. ADAMS.....Feb. 7, 1895, to May 1, 1892

J. Q. EMERY.....Dec. 24, 1902, to Feb. 10, 1915

GEO. J. WEIGLE.....Feb. 10, 1915, to .....

ORGANIZATION OF THE COMMISSION

GEORGE J. WEIGLE, Dairy and Food Commissioner, *ex officio* State Superintendent of Weights and Measures.

RICHARD FISCHER, Ph. D., Consulting Director of Chemical Laboratory.

E. L. ADERHOLD, Assistant Commissioner.

C. E. LEE, M. S., Assistant Commissioner and Dairy Specialist.

HARRY KLUETER, Ph. G., Chemist.

RALPH W. SMITH, Chief Inspector of Weights and Measures (from September 27, 1917).

FRED P. DOWNING, A. B., Chief Inspector of Weights and Measures (to September 17, 1917).

M. LORAINE WALTER, Secretary to Commissioner.

MARY JANES, Stenographer (from September 10, 1917).

RUTH NERDRUM, Stenographer.

BERTHA E. HAHM, Stenographer (to August 25, 1917).

LOUENA FINDORFF, Stenographer and Bookkeeper.

AGNES NEUBAUER, Stenographer.

VERA HODGIN, Stenographer (from September 4, 1917).

SYLVIA SACHTJEN, Clerk (March 27–April 23, 1918).

WM. A. BRANNON, M. A., Assistant Chemist.

IRVING R. HOWLETT, B. S., Assistant Chemist

WALTER NEBEL, Ph. D., Assistant Chemist (to September 22, 1917).

C. A. KROHN, Assistant Chemist (from December 6, 1917).

FRANCIS C. KRAUSKOPF, Ph. D., Assistant Chemist (from June 17, 1918).

GEORGE H. EIGENBERGER.

C. J. KREMER.

W. A. VOIGT.

Food Inspectors

JAMES VAN DUSER.

R. B. SOUTHARD.

FRED MARTY.
JACOB LEHNHERR.
J. D. CANNON (to March 31, 1918).
S. B. COOK.
S. J. DUFNER.
FRED S. HANSON.
OSCAR KNUDSON (from April 22, 1918).
*Dairy and Food Inspectors.

GEORGE WARNER.
B. A. HASS.
WM. P. STERNS.
H. L. BORNHEIMER.
W. J. KRAMER (to September 22, 1917).
JOHN E. BOETTCHER.
CHAUNCEY BECKWITH.
J. M. KELLIHER (from October 11, 1917).
GEO. D. GILMAN (from April 22, 1918).
**Sealers of Weights and Measures.

LEO BRENNAN, Junior Sealer of Weights and Measures.

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* Sealers of Weights and Measures for creameries and cheese factories.
** Inspectors of food and sanitary conditions at places where weights and measures work is done.

LETTER OF TRANSMITTAL

His Excellency, EMANUEL L. PHILIPP,

Governor of Wisconsin.

Sir:—I have the honor to submit herewith, in compliance with law, the report of the dairy and food commissioner for the annual period ending June 30, 1918.

GEO. J. WEIGLE,

Dairy and Food Commissioner,

Ex Officio State Superintendent of Weights and Measures.

REPORT OF COMMISSIONER

With its work increased to almost double the former amount, the dairy and food department has, during the past year, accomplished results that are most gratifying; results which emphasize the importance of the department, one of the most useful and beneficial to the people of the state.

In addition to the new laws which have come under the jurisdiction of this department within the past year, the commissioner and his staff were deputized by the food administration to cooperate with that body in carrying out its program of conservation, and to do inspectional work in connection with their regular duties as members of the department.

Much work was done by the food inspectors inspecting bakers, endeavoring in every way to secure compliance with the rules and regulations of the food administration, and assisting the bakers by instructions and suggestions how to obtain the best results with available materials. In many cases there were unsatisfactory conditions due to a misunderstanding of the rules. These misunderstandings were cleared up, and when there were found to be flagrant violations the food administration was notified.

Improvement in the egg situation was another very important work of the food inspectors, and considerable time has been devoted during the past year to egg inspection and publicity work.

The cold storage act, the law licensing bottlers, and that licensing bakeries and confectioners brought their share of extra work upon the inspectors, and also upon the office staff in keeping records of all reports and applications.

Because of the many unusual problems raised by the war, the work in the laboratory has been increased to perhaps double its former amount, and the chemists have been working at maximum speed and under the handicap of insufficient help. Scores of samples of foods of all kinds, suspected of containing ground glass or poison, were received with requests for analysis. The laboratory has been and is still flooded with such samples which are being taken care of as rapidly as possible.

The dairy inspectors have likewise been kept very busy inspecting cheese factories, creameries, dairies and milk plants. New problems are confronting the operators and makers in these plants and the aid of this department and its inspectors is constantly being sought.

Work in the weights and measures department also shows fine progress, and a graphic comparison given in the report of R. W. Smith, chief inspector, shows at a glance the improvement in conditions. The work of the department is approved throughout the state and is often highly commended by dealers; they realize that business can thrive only on honest and equitable methods of purchase and sale, and the antagonistic attitude of dealers so frequently encountered in the early days of the department is now almost unknown. The inspectors are welcomed because the people understand that their work is promotive of fair dealing.

The legislature of 1917 enacted a law known as the Trading Stamp Law, effective January 1, 1918, which prohibits the issuance of any trading stamp, token, ticket, bond, or similar device except that the token, of whatever kind, comply with the following four provisions: that it bear upon its face a stated cash value, that it be redeemable in cash only, in amounts aggregating 25c or over of redemption value, and that it be redeemable only by the person, firm or corporation issuing same. This law was placed in the charge of the chief inspector of weights and measures, and the weights and measures inspectors were directed to make try-outs to acquaint the people with the law and secure compliance with its provisions. Since the beginning of the year, when the law became operative, the dairy and food commissioner has twice been enjoined from enforcing the law pending the decisions of the Supreme Court, but a decision has recently been rendered and the department is now free to carry on its work to stop the unrestricted use of trading stamps and tokens having tendencies of a pernicious character. The object of the law is to do away with the practice of giving away coupons and trading stamps, etc., which would seem to enhance the value of the article and cause the purchaser to rely upon something else than the article sold, and thus by an appeal to cupidity lure to improvidence.

The campaign waged by this department for cleaner, better, more wholesome foods, with the least waste; for service to the industries involved, and for education rather than prosecution is bearing fruit abundantly and the dairy and food department is being recognized as a most faithful and efficient worker for the interests of the people of the state.

The subjects touched upon in the foregoing paragraphs are discussed in greater detail in the following pages.

Food Work

Bakeries and Confectioneries. The licensing and inspection of bakeries and confectioneries by this department took effect on March 1, 1918, and since that time more than ninety per cent of the bakeries and confectioneries in the state have been inspected once, sometimes twice, and licensed. The inspectors have made it a point to give

every bakery and confectionery a critical inspection. In many of them very material sanitary improvements were recommended; some prosecutions were brought, but generally poor conditions were corrected through suggestions and re-inspection. In addition to looking after sanitary conditions, the materials entering into the manufacture of bakery goods were also given close attention. With the new regulations of the United States Food Administration, existing standards in shops were upset. Under the name of "substitutes" milling products of low grade were sold to bakers who often found it difficult to handle them. Manufacturers and vendors of compounds consisting of combinations of products not heretofore on the market took advantage of the uncertainty of bakers, and foisted upon them products of unknown character at prices far above their actual worth. A number of such articles were sent to the state laboratory for analysis, and bakers were advised of the character and value of such compounds. In candy and ice cream establishments the efforts of the inspectors have been turned toward greater cleanliness and greater care in the handling and storing of raw materials as well as of finished products. Attention was also directed to the ingredients.

Meat Markets and Grocery Stores. The inspection of meat markets and groceries has occupied some of the time of the food inspectors during the past year. The improvements in these establishments has been very marked. After a consistent campaign against exposing food to flies, dust and other contamination, against dirty floors, rat-contaminated food bins and flour storage rooms and dirty and cobwebby ceilings, the inspectors found such conditions existing in bad form only in few places. They report that unclean sausage-making machinery, unclean refrigerator floors, hooks and bars, spoiled meats and markets filled with flies are now seldom found. The laws relating to cereal and water in sausage, to tallow in lard, and to the use of preservatives in foods are uniformly observed. General cleaning up of back yards, cellars and alleys has improved the rat condition.

An unsanitary and fraudulent practice in many meat markets was eliminated by the prosecution of one firm and by the warning of others. Chickens were fed to excess just before slaughter, their bulging crops weighed in with the chicken and later cut out, although the price was based on the first weighing. If the crops were not speedily cut out after slaughter, the mass contained in them was apt to sour and decay, causing the meat to become discolored and bad.

Cold Storage. Since the cold storage act became effective on September 1, 1917, practically every cold storage plant in the state has been inspected and licensed. Inspection showed them to be in fair condition with the exception of "fish houses". The inspections consisted of noting the sanitary conditions, the condtion of the goods in storage, and the proper marking of all goods going into and coming out of storage. Instances were found where dealers failed to sell cold storage goods as such, but conditions are improving and the law is now being more

generally complied with. The fish houses are a problem in themselves. Most of the buildings are crude affairs which are difficult to keep clean. Wooden floors, wooden walls, and utensils saturated and coated with grease and slime abound, according to the reports of the inspectors. Facilities for proper drainage and cleaning are almost wholly lacking; many practices are objectionable. The fact that the fish often do not reach the storage plant until some time after having been caught is another objectionable practice. Frequently barrels of fish were found quite unfit for food. Dealers were found who believed that fish unfit to be sold as fresh or frozen fish were still satisfactory for smoking. There is an immense amount of work still to be done in connection with the storing and marketing of fish, although much has been accomplished in the last year. The law requires that all articles of food when placed in storage shall be marked with the date of entry; and when goods are withdrawn they shall be marked with the date of such withdrawal. The rules and regulations laid down by the department require that the goods be marked as follows: "Received" followed by the month, day and year, and "Delivered", followed by the month, day and year. In this way the public is informed when they purchase cold storage goods, and the dissatisfaction formerly arising from the suspicion that cold storage goods were being sold as fresh goods is now dispelled. A table showing the amount of goods in storage for each month is given on page 11.

Bottlers. Another new law relating to bottlers of soda, mineral and spring waters went into effect during the year, and much time and thought on those plants has been expended by the food inspectors. The rules and regulations formulated in connection with the law established a high standard of cleanliness and sanitation, but conditions found in many factories were exceedingly discouraging. It is an all too common practice for persons with very little capital to begin manufacturing soda water, with poor equipment, dirty bottles, questionable water supply and other objectionable features. The law and rules and regulations were simple, few in number and easily understood, but the greatest difficulty was that the means of the bottlers were generally limited, the prospects for a successful season rather poor because of the scarcity of sugar, because appliances for economical efficient and sanitary work were expensive and labor and materials high. In nearly all cases the inspectors were welcomed and were of much assistance to the operators in giving suggestions and advice, and in some cases in helping to make homemade soaking devices that would thorougly cleanse the bottles, when soakers could not be purchased. Deplorable conditions were found in scores of bottling plants, but in spite of great handicaps the operators of many plants have responded in splendid manner. The improvement has been rapid, but there is still much educational, constructive work to be done. Sixty per cent of the bottlers in the state are licensed at the present time.

REPORT BY MONTHS OF FOODS IN COLD STORAGE FROM SEPTEMBER, 1917, TO JULY, 1918.

(The amounts given represent pounds except in the case of eggs in shell, it represents dozens.)

Articles	September	October	November	December	January	February	March	April	May	June
Meats:										
Beef (all kinds)	819,306	1,659,530	2,757,720	3,415,893	3,232,677	2,709,691	2,509,945	2,165,399	1,790,420	1,359,846
Veal	156,463	169,178	181,689	164,206	76,097	94,692	79,064	98,020	153,627	123,463
Mutton and lamb	32,433	75,713	171,241	196,177	185,611	130,389	85,599	96,433	47,489	40,265
Pork (all kinds)	883,886	566,995	775,645	1,565,271	2,512,327	2,697,071	2,361,926	2,249,454	2,690,883	3,222,294
Lard	138,136	91,831	26,354	20,064	143,200	258,606	687,830	785,340	507,840	572,054
Fish	591,433	654,743	3,326,948	2,778,485	1,711,000	988,443	473,496	328,689	513,098	489,463
Poultry	174,483	293,021	464,585	547,321	540,039	417,581	227,826	135,458	77,267	64,249
Game	242	242	.....	.....	.....	1,919	2,041	2,225	2,225	2,225
Eggs, in shell	2,203,020	2,599,685	1,664,810	812,700	180,701	5,250	37,035	1,210,710	2,659,320	2,964,900
Eggs, out of shell	12,191	7,360	35,629	11,342	2,666	2,321	8	5,481	8,561	114,788
Butter	612,850	484,525	308,565	242,337	171,812	112,208	20,912	14,994	102,325	557,911
Oleomargarine	19,447	28,314	22,903	18,900	7,545	4,754	7,494	3,322	4,269	3,728

Egg Work. This is the second year that intensive egg work has been done by the food inspectors. The campaign started last year has been productive of much good. The inspectors report that everywhere the merchants comment on the improvement in the egg situation; eggs are of much better quality than two or three years ago, and it is a modest estimate to say than one million dollars has been saved in the state during the last year. The work of the dairy and food department along this line has been a very great factor in bringing about this improvement. The new ruling of the food administration regarding the candling of eggs by the first buyer will do much to further this improvement Merchants ask that the good work be kept up and increased, if possible, and with the federal ruling together with the state law, more effective work than ever before can be done.

Drugs, Linseed Oils, Turpentine and Lead. The inspection of drugs has not been given as much attention during the past year as formerly, and few samples were secured. The inspection of linseed oils, turpentine and white leads has been followed as vigorously as ever. Few instances of the sale of adulterated linseed oil were found, although some stores sell compounds or substitutes. Booklets containing information on linseed oils, turpentines and pigments have been distributed, and, after a number of prosecutions brought several years ago, dealers are on the alert. More drug work will be done during the coming year. For a further discussion of the food work, see Mr. Klueter's report.

Dairy Work

The work of inspecting cheese factories, creameries, milk plants and dairy farms has been carried on efficiently by the eight dairy inspectors and the assistant commissioners. The licensing law and rules and regulations connected therewith are more clearly understood by the operators and makers, and as a result the general condition of factories is improved.

Several of the inspectors report considerable improvement on the dairy farms. One report says: "This year I found the barns generally clean, cobwebs swept out and the walls and ceiling whitewashed, and a pride and willingness on the part of the dairy farmer to have the place inspected. The high price of dairy products has been an incentive to the dairy farmer. Many new, up-to-date barns, well-lighted and ventilated, have been built in the past year, and many are now under construction." Another of the inspectors reports: "There is steady and general improvement in dairy barns and in cow cleanliness."

Some work has been done in the testing of cheese for moisture, and the majority of the time of one of the assistant commissioners has been devoted to that work. (See report of Assistant Commissioner Aderhold).

For a more detailed report of the dairy work, I refer you to the report of Assistant Commissioner Lee.

Following are statistics for the calendar year 1917, showing the enormous output and value of dairy products in the state of Wisconsin:

WISCONSIN DAIRY STATISTICS FOR THE YEAR 1917

	Pounds	Received for or valued at
Cheese produced in factories	277,267,444	$63,470,882.69
Other cheese factory products sold		271,112.08
Cheese produced on farms	1,433,702	90,118.00
Butter produced in factories	101,325,285	39,583,037.06
Other butter factory products sold		3,564,550.14
Farm-made butter	7,952,480	2,385,744.00
Milk delivered to condenseries	747,540,078	22,358,085.95
Milk produced other than that furnished cheese and butter factories or condenseries		22,815,693.75
Estimated value of milk and cream shipped to Chicago, St. Paul, Minneapolis, Dubuque and other points outside of Wisconsin not including milk plants		3,062,100.00
Skim milk		16,220,045.60
Whey		11,045,843.76
Value of milk and cream, not otherwise reported, used in the manufacture of ice cream		1,395,065.20
Whey cream		1,294,572.15
Milk delivered to milk plants and shipped to Chicago	99,792,538	2,678,963.44
Total		$190,235,814.72

The data for cheese, butter, milk delivered to condenseries, whey cream, milk delivered to milk plants and shipped to Chicago, and other dairy products produced at the factories, was obtained from blanks filled out by the operators of these plants.

The figures used for cheese and butter produced on farms were taken from the report of 1915.

The value of milk produced other than that furnished cheese and butter factories and condenseries was estimated as the amount used for family consumption by the total population of the state, which population is taken as 2,500,350 (figures reported by the U. S. Census Bureau, July 1, 1916). In estimating this amount, one pint per capita per day was used and the milk valued at 2½c per pint.

In obtaining the estimate for the value of milk and cream shipped to Chicago, St. Paul, Minneapolis, Dubuque and other points, the figures given in the 1915 report were used.

Skim milk was valued at one-half as much per hundred pounds as shelled corn is per bushel; and the value of whey at one-half of skim milk. The value of shelled corn was placed at $1.63 per bushel (page 12, Bulletin No. 14, Agricultural Statistics for 1917 by W. F. Callender.)

During the past year it has been brought forcibly to our attention, in terms of dollars and cents and number of inspections, that the only economical and efficient means of transportation for the inspectors of

this department is the state automobile. In many localities of the state the maintenance of livery for hire is become a thing of the past, and when obtainable the charges have soared skyward. Automobile hire may be had, but the prices are exorbitant and the service unsatisfactory. The inspectors are often required to return to the starting point at the end of the day, when with a state car they might push on to another portion of the territory. A thorough investigation of delays, expenses and number of inspections, points conclusively to the purchase of state automobiles as the only solution in the interests of economy and efficiency, and for a discussion of this investigation I would refer you to the report of C. E. Lee.

During August of 1917 the weights and measures department sustained the loss of Mr. F. P. Downing, chief inspector of weights and measures, who resigned his position to become associated with the United States Department of Agriculture in the capacity of Investigator of Marketing. Mr. Downing had served as chief inspector in the department since its inception in 1910. At that time nothing was known of weights and measures regulation in the state with the possible exception of one or two of the larger cities. The field was new, the obstacles were many, Mr. Downing had had no previous acquaintance with weights and measures, but due to his untiring efforts in its behalf the department has grown until it is now known as one of the foremost in the country. Mr. Downing carries with him into his new field of endeavor the best wishes of this department that he may continue his efforts with the same signal success.

Mr. R. W. Smith of Minnesota was appointed to replace Mr. Downing as chief inspector. The position required a man of technical as well as practical knowledge of scale construction and of experience in weights and measures work, and in casting about for the proper man we were unable to find within our ken in the state of Wisconsin a man with the qualifications of Mr. Smith; he fulfilled all the requirements of the position and in September, 1917, was placed in charge of the department. The state has been very fortunate in securing the services of Mr. Smith; he has continued the good work already begun and has enlarged and perfected it and has conducted the department in an efficient and highly satisfactory manner.

Owing to the war conditions many new problems in food regulation have arisen, and many new laws have been placed on the statute books for enforcement by this department. As a result the work in the office and laboratory, as well as in the field, has been tripled,—indeed I do not believe I should be far afield if I should say that the work has been quadrupled. In spite of this increase in work, we have made no material increase in our clerical, chemical or inspectional force. The records show that the department has been run in an economical and business-like manner under the handicap of insufficient help. For this credit should be given to all employes of the department for their loyalty and enthusiasm in making the department work so success-

ful. I therefore take this opportunity to extend to my employes my heartfelt thanks and appreciation for their splendid cooperation and efficiencey.

Recommendations

At this time I would like to call attention to some needed additions and amendments to the dairy and food laws:

1. It seems necessary that we have some legislation authorizing the seizure of food products offered for sale when such food products are unfit for human food. Foods which were in a state of partial decay have at times been found by our inspectors. Even though the inspector may be informed that this product would be destroyed, we have had good reason to believe that in some cases the product was not entirely destroyed, but that parts of it have been used. If the inspector had had the power to confiscate the product and denaturize same, we might have prevented its use as an article of food. Also some provision should be made for adding harmless coloring matter to unsanitary milk so as to prevent it being offered for sale at other places.

2. I also feel that the licensing of cream buying stations should come under the jurisdiction of this department. The licensing of creameries and cheese factories now comes under this department and the cream buying stations being so closely related to the creameries, it seems no more than justice that they come under similar legislation. Also, in that way all cream buying stations in the state would be governed by the same law, rules and regulations, and not according to the varied rules and regulations made by the various town, city and village boards of health. There are a number of boards of health which have not as yet issued any rules or regulations governing cream buying stations.

3. All of the milk and cream sold to creameries and considerable milk sold to cheese factories is paid for on the basis of the butter fat content. With the high prices paid for milk and cream, it is quite necessary that the correct test of such milk and cream be made and also that only persons experienced in such testing be employed for such work. If all testers of milk and cream were required to take out a license for that purpose, a closer supervision could be held over their work.

4. Under the present cold storage law, the fee required for a license to operate such warehouse depends entirely on the location of such warehouse; that is, whether it be in a first, second, third or fourth class city. No fee is required of warehouses located outside of cities or in villages. It seems only justice that this law be amended so that all warehouses be required to pay some fee. I therefore recommend that such amendment be made to this cold storage law.

5. The Supreme Court of the state has held that that part of the law relating to the payment of fees for licenses issued to bakers and

confectioners was unconstitutional, due to the fact that discrimination was shown to some bakers. Therefore no fees can be charged for licensing bakers and confectioners. I would suggest that there be an amendment to this law fixing certain fees for the above mentioned licenses.

6. Section 4607b—9 of the Wisconsin Statutes provides a penalty for violation of sections 4607b—4 to 4607b—9 relating to unsanitary milk and cream, maintaining premises and utensils in an unsanitary condition, etc. This section states that any person, or as the officer, servant or agent of any firm or corporation, who violates any of the provisions of the above mentioned sections, upon conviction should be punished by fine or imprisonment. Nowhere is provision made for the firm or corporation receiving a fine, only the officer. I feel that this law should be so changed that the firm or corporation might receive similar punishment.

7. Section 4607c of the Statutes permits the manufacture of skim milk cheese, provided it is ten inches in diameter and nine inches high. While this law permits the manufacture of skim milk cheese, it does so only if it is of certain dimensions and would exclude all soft cheese, such as Cottage, Edam, Camenbert and numerous others. It seems quite likely that when this law was passed, it was the intention of the legislature to prohibit the manufacture of skim milk cheese made in imitation of American cheese. It seems advisable that our law should be amended making it lawful to manufacture such cheeses as Cottage, Edam, Camenbert and numerous others of similar type. Care should be taken, however, in amending this law, not to permit cheese to be manufactured in imitation of American, Brick, Swiss or Limburger cheese and also that all skim milk cheese be properly labeled.

8. During the 1917 session of the legislature, an amendment was passed limiting the moisture in American or Cheddar cheese to 40 per cent. It now seems advisable that the moisture in Brick cheese be limited and I would therefore recommend that this addition be made to the laws.

9. Under the present law the dairy and food commissioner's term is for a period of two years. The laws to be enforced by the dairy and food commissioner are so numerous and of such varied nature and his responsibilities are so many that to me it seems more efficient work could be accomplished if the term were extended to a period of about five years. As a matter-of-fact a man unfamiliar with the work of this department finds that considerable time is necessary to familiarize himself thoroughly with the laws and their application. This extension would be in harmony with the term of office of many of the other commissioners in the capitol.

10. There are certain other recommendations made in the reports of Mr. Lee, Mr. Smith and Mr. Klueter to which I refer you. They are, briefly stated, as follows:

Mr. Lee suggests: "that an amendment be made to the whey butter law so as to include the labeling of whey cream."

Mr. Smith calls attention to the following changes and additions to the weights and measures laws:

a. "The necessity of requiring that packages put up in a retail store be marked with the net weight or measure, or be accompanied by a sales slip.

b. "Requiring that liquids be sold by either standard liquid measure or by weight.

c. "Provision be made for the inspection of railroad track scales.

d. "Fixing a standard for a cord of wood.

e. "Giving authority to the State Superintendent of Weights and Measures to employ in the service of the state, city sealers in work outside of their own city."

Mr. Klueter points out the following changes and additions:

a. "Legislation relating to the handling of eggs.

b. "Standardization of a loaf of bread.

c. "A change in the percentage of cereal permissible in sausage.

d. "A law prohibiting the sale of any oil as and for a paint oil which contains mineral oil.

e. "Special legislation covering the canning industry."

CONVICTIONS.

Date	Defendant	Cause of Action	Trial Judge	Fine or Forfeiture
1917				
July 6	Albert Wosejpka, Haugen	Selling adulterated tincture of iodine	Chas. A. Taylor, Barron	$25 and costs.
July 10	H. Marcus & Sons, Muscoda	Selling adulterated butter	Chas. Burrows, Lancaster	$25.
July 11	Albert T. Graber, Mineral Point	Selling rat contaminated lard	J. J. Kuelling, Mineral Point	$25 and costs.
July 11	Jos. Jetzer, Sheboygan	Maintaining meat market in an unsanitary condition.	O. A. Bassuener, Sheboygan	$35 and costs.
July 19	Chas. Brandt, Wausau	Manufacturing and preparing for sale food not securely protected from filth.	Louis Marchetti, Wausau	$25 and costs.
July 19	Geo. W. Zern, Foxboro	Storing and exposing for sale food not securely protected from dust, dirt and other filth.	F. S. Parker, Superior	$25 and costs.
July 21	Geo. S. Swarthout, Fall River	Delivering unsanitary milk to a cheese factory.	C. L. Dering, Portage	$25 and costs.
July 24	Ed. J. Swagel, Krak	Selling adulterated eggs	J. H. DeWane, Kewaunee	$25 and costs.
July 31	Chas. Geisler, Wausau	Manufacturing and preparing for sale food not securely protected from filth.	R. N. Larner, Wausau	$25 and costs.
Aug. 2	Mrs. H. Rhadeus, New Richmond	Offering for sale unsanitary milk	A. R. Kibby, New Richmond	$25 and costs.
Aug. 2	Anton Chermak, Manitowoc	Maintaining meat market in an unsanitary condition.	Albert Schmidt, Manitowoc	$25 and costs.
Aug. 6	Otto Hammermeister, Manitowoc.	Maintaining meat market in an unsanitary condition.	Albert Schmidt, Manitowoc	$25 and costs.
Aug. 9	A. F. Jahnke, McFarland	Selling adulterated butter	A. C. Hoppman, Madison	Fine suspended on payment of costs.
Aug. 14	Melvin S. Walker, Plainfield	Selling short weight sugar	C. F. Youngman, Wautoma	$5 and costs.
Aug. 14	James Peterick, Plainfield	Selling short weight sugar	C. F. Youngman, Wautoma	$5 and costs.
Aug. 17	Frank Nepil, Kewaunee	Selling less than the quantity represented.	J. H. DeWane, Kewaunee	$25 and costs.
Aug. 23	R. E. Bartlett, New Glarus	Selling adulterated tincture of iodine	H. N. B. Caradine, Monroe	$25.
Aug. 24	Joe Holly, Stangelville	Maintaining an unsanitary meat market.	J. H. DeWane, Kewaunee	$25 and costs.
Aug. 30	Shawano Creamery Co., Shawano	Selling less than the quantity represented.	H. O. Buth, Shawano	$5.
Sept. 12	Sam J. Kearns, Benton	Selling and storing foods not protected from contamination.	J. C. Oates, Darlington	$25 and costs.
Sept. 20	F. W. Thyme, Portage	Selling adulterated ice cream	J. Barrows, Mauston	$25 and costs.
Sept. 24	Conrad Gerland, Rice Lake	Selling less than the quantity represented.	Chas. A. Taylor, Barron	$25 and costs.
Sept. 25	F. Biehn, Union Grove	Exposing for sale unsanitary meat	Wm. Smieding, Racine	$25 and costs.
Sept. 26	Ole P. Munson, Ferryville	Delivering adulterated milk to a cheese factory.	E. Tichenor, Prairie du Chien	$25 and costs.
Sept. 26	Theo. Kochicas, Beloit	Maintaining fountain in an unsanitary condition.	J. B. Clark, Beloit	$25 and costs.
Oct. 1	Sam Grotsky, Kenosha	Selling and delivering adulterated bread	C. C. Randall, Kenosha	$25 and costs.

Oct. 1	J. E. Minton, Mellen	Selling less than the quantity represented.	J. A. Garvin, Ashland	$25 and costs.
Oct. 2	F. F. Kull, Black Creek	Using chemical preservative in sausage...	A. M. Spencer, Appleton	$25 and costs.
Oct. 3	C. Danielson, Verona	Selling adulterated milk	A. C. Hoppmann, Madison	$25 and costs.
Oct. 4	Grover Wilson, Bellevi.le	Selling adulterated milk	A. C. Hoppmann, Madison	$25 and costs.
Oct. 5	Paul C. Weber, Milwaukee	Preparing, handling and caring for foods in an unclean manner.	Geo. Page, Milwaukee	$20 and costs.
Oct. 9	Byron Mulder, New Amsterdam...	Selling adulterated eggs	John Brindley, La Crosse	$25 and costs.
Oct. 11	A. O. Jostad Co., Holmen	Selling adulterated eggs	John Brindley, La Crosse	$25 and costs.
Oct. 13	Vollenweider & Co., Wausau	Storing and selling foods not securely protected from filth, flies, dust and other contamination.	Louis Marchetti, Wausau	$25 and costs.
Oct. 17	Steve Kapzukiewicz, Gilman	Exposing and selling foods under unsanitary conditions.	M. W. Ryan, Medford	$25 and costs.
Oct. 17	G. W. Rhandaul, Kenosha	Storing and selling foods not securely protected from filth, flies, dust and other contamination.	C. E. Randall, Kenosha	$25 and costs.
Oct. 18	Fred Putz, Tomah	Selling less than the quantity represented.	H. J. Masters, Sparta	$25.
Oct. 18	John Markie, Tomah	Selling less than the quantity represented.	H. J. Masters, Sparta	$25.
Oct. 18	Sletteland & Mikklison, Holmen..	Selling adulterated eggs	John Brindley, La Crosse	$25 and costs.
Oct. 19	John Kolinski, Stevens Point	Maintaining a meat market in an unsanitary condition.	G. L. Park, Stevens Point	$25 and costs.
Oct. 22	Fred Fach, Marshfield	Delivering adulterated milk to a cheese factory.	F. W. Calkins, Grand Rapids	$25 and costs.
Oct. 23	Frank J. Pleet, Stevens Point	Maintaining grocery in an unsanitary condition.	John Murat, Stevens Point	$30 and costs.
Oct. 23	Frank Barrows, Stevens Point...	Maintaining confectionery in an unsanitary condition.	John Murat, Stevens Point	$30 and costs.
Oct. 25	W. N. Wiley, Stevens Point	Maintaining confectionery in an unsanitary condition.	John Murat, Stevens Point	$25 and costs.
Oct. 25	Joe M. Dix	Selling adulterated eggs	John Murat, Stevens Point	$25 and costs.
Nov. 2	Stolle Lbr. & Veneer Co., Tripoli.	Storing food for sale and not securely protecting such food from filth, flies and other contamination.	A. J. Le Claire, Tripoli	$30.
Nov. 3	John Terpestra, Sparta	Selling adulterated milk	H. J. Masters, Sparta	$25 and costs.
Nov. 12	G. B. England, Mt. Horeb	Selling adulterated milk	A. C. Hoppmann, Madison	$25 and costs.
Nov. 21	Art Zimbal, Sheboygan	Selling adulterated milk	Otto Bassnener, Sheboygan	$25 and costs.
Nov. 21	D. Depagter, Sheboygan	Selling adulterated milk	Otto Bassnener, Sheboygan	$25 and costs.
Dec. 3	John Payne, Sheboygan	Selling adulterated milk	Otto Bassnener, Sheboygan	$25 and costs.
Dec. 11	A. T. Huibregtse, Hingham	Selling adulterated cheese	L. Steinert, Plymouth	$25 and costs.
Dec. 21	Claude E. Wilcox, New Holstein..	Selling adulterated cheese	L. Steinert, Plymouth	$25 and costs.
Dec. 17	B. H. Terbeest, Madison	Selling a misbranded article of food	A. C. Hoppmann, Madison	$25 and costs.
Dec. 20	Hans Schultze, Stanley	Delivering adulterated milk to a cheese factory.	Wm. A. Campman, Neillsville	$25 and costs.
Dec. 21	Chas. Schweitzer, Racine	Selling and exposing for sale adulterated food.	Wm. Smieding, Racine	$25 and costs.

CONVICTIONS—Continued.

Date	Defendant	Cause of Action	Trial Judge	Fine or Forfeiture
1917				
Dec. 27	Chris. Buscuglia, Milwaukee.....	Selling cold storage eggs for "best eggs" and not displaying placard.	Geo. Page, Milwaukee.....	$25 and costs.
Dec. 28	Barney Shimon, Milwaukee.....	Selling adulterated eggs.....	Geo. Page, Milwaukee.....	$25 and costs.
Dec. 28	Nick Kirch, Mazomanie.....	Selling buckwheat flour in misbranded sacks.	A. C. Hoppmann, Madison.....	$25 and costs.
Dec. 31	G. H. Kothlow, Edgerton.....	Selling adulterated butter.....	H. Maxfield, Janesvile.....	$25 and costs.
1918				
Jan. 3	Richard Cody, Milwaukee.....	Selling adulterated eggs and selling in violation of cold storage act.	Geo. Page, Milwaukee.....	$25 and costs.
Jan. 3	Raymond Leach, Hortonville.....	Selling adulterated milk.....	A. M. Spencer, Appleton.....	$25 and costs.
Jan. 4	C. L. Dunlap, Milwaukee.....	Selling eggs in violation of cold storage law.	Geo. Page, Milwaukee.....	$25 and costs.
Jan. 5	Madison Dairy Prod. Co.,Madison	Selling misbranded butter, misbranded in that it contained less than the quantity represented.	A. C. Hoppmann, Madison.....	$25 and costs.
Jan. 9	Chris. E. Nielsen, Kenosha.....	Selling cold storage eggs without displaying notice.	J. E. Tully, Kenosha.....	$25 and costs.
Jan. 9	H. R. Miller, Kenosha.....	Selling cold storage eggs without displaying notice.	J. E. Tully, Kenosha.....	$25 and costs.
Jan. 9	E. W. Berry, Kenosha.....	Selling cold storage eggs without displaying notice.	J. E. Tully, Kenosha.....	$25 and costs.
Jan. 9	J. Nielsen, Kenosha.....	Selling cold storage eggs without displaying notice.	J. E. Tully, Kenosha.....	$25 and costs.
Jan. 10	Edgerton Cry. Co., Edgerton....	Selling adulterated butter.....	H. Maxfield, Janesville.....	$25 and costs.
Jan. 11	R. C. Nevin, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racine.....	$25 and costs.
Jan. 11	Sam Culotta, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racine.....	$25 and costs.
Jan. 11	F. Haumerson, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racine.....	$25 and costs.
Jan. 11	James Mares, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racine.....	$25 and costs.
Jan. 11	Chris. Slot, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racine.....	$25 and costs.
Jan. 12	J. Philip, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racine.....	$25 and costs.

Jan. 12	Mike Brusha, Racine.....	Selling cold storage eggs without displaying notice.	Wm. Smieding, Racne..	$25 and costs.
Jan. 12	Chippewa Model Dairy Co., Chippewa Falls.	Selling misbranded butter in prints.....	F. W. Jenkins, Chippewa Falls.....	$25 and costs.
Jan. 14	Pat. Brick, Chippewa Falls.....	Selling adulterated eggs.....	F. W. Jenkins, Chippewa Falls.....	$50 and costs.
Jan. 14	O. A. Falstad, Eau Claire.....	Selling unwholesome, stale, tainted and putrid meat.	Henry McBain, Eau Claire.....	$10 and costs.
Jan. 16	O. Bogda, Milwaukee.....	Selling as and for eggs, cold storage eggs and without giving notice.	Geo. Page, Milwaukee.....	$25 and costs.
Jan. 18	Sam Zimmermann, Belleville.....	Selling adulterated milk.	A. C. Hoppmann, Madison.....	$25 and costs.
Jan. 19	Grover Wilson, Belleville.....	Selling adulterated milk.	A. C. Hoppmann, Madison.....	$25 and costs.
Jan. 21	Eau Claire Elevator Co., Eau Claire.	Selling corn meal and other meal in misbranded sacks.	James Wickham, Eau Claire.....	$25 and costs.
Jan. 21	C. W. Chevey, Co., Eau Claire....	Selling corn meal and other meal in misbranded sacks.	James Wickham, Eau Claire.....	$25 and costs.
Jan. 23	Eugene Ellenson, Chippewa Falls.	Selling adulterated milk.....	F. W. Jenkins, Chippewa Falls.....	Fine remitted on payment of costs.
Jan. 23	P. Cherrier, Chippewa Falls.....	Selling unsanitary milk.....	F. W. Jenkins, Chippewa Falls.....	$25 and costs.
Jan. 24	C. H. Bergmann, Eau Claire.....	Selling corn meal and other meals in misbranded sacks	J. McBain, Eau Claire.....	$25 and costs.
Jan. 25	P. J. Flannagan, Milwaukee.....	Selling cold storage eggs without displaying placard.	Geo. Page, Milwaukee.....	Sentence suspended.
Jan. 26	A. Banock, Milwaukee.....	Selling cold storage eggs without displaying placard.	Geo. Page, Milwaukee.....	Sentence suspended on payment of costs.
Jan. 26	Fred W. Mazo, Fennimore.....	Selling short weight butter.....	C. W. Burrows, Lancaster.....	$25.
Jan. 28	Geo. Salandisch, Milwaukee.....	Selling cold storage eggs without giving proper notice.	Geo. Page, Milwaukee.....	$25 and costs.
Jan. 30	Louis Schuket, Menomonie.....	Selling diseased, contaminated and putrid meat.	P. B. Clark, Menomonie.....	$25 and costs.
Feb. 1	James Holstein, Menomonie.....	Selling rat contaminated lard.....	P. B. Clark, Menomonie.....	$25 and costs.
Feb. 4	A. Eichenberger, Monroe.....	Selling adulterated milk.....	W. T. Saucerman, Monroe.....	$25 and costs.
Feb. 6	Floyd Rice, Ellsworth.....	Selling soda water containing flies, dirt and other foreign matter.	C. Fenton, Ellsworth.....	$25 and costs.
Feb. 6	Peter Weiskircher, Dodgeville.....	Selling adulterated cream.....	T. Arthur, Dodgeville.....	$25 and costs.
Feb. 6	Irving Melbaurn, Dodgeville.....	Selling adulterated milk.....	T. Arthur, Dodgeville.....	Fine suspended on payment of costs.
Feb. 8	Geo. Burmeister, Waukesha.....	Selling adulterated milk.....	Judge Thomas, Waukesha.....	$25 and costs.
Feb. 9	B. H. TerBeest, Mad'son.....	Selling adulterated butter.....	A. C. Hoppmann, Madison.....	$100 and costs.
Feb. 12	J. J. Hettwer, Fond du Lac.....	Selling adulterated cheese.....	R. C. Fairbank, Fond du Lac.....	$25 and costs.
Feb. 15	G. A. Wegner, Van Dyne.....	Selling adulterated cheese.....	J. E. Carew, Fond du Lac.....	$25 and costs.
Feb. 15	Frank R. Schmidt, Portage.....	Storing, preparing and manufacturing meats which were not protected from filth and contamination.	F. Kiefer, Portage.....	$25 and costs.

CONVICTIONS—Continued.

Date	Defendant	Cause of Action	Trial Judge	Fine or Forfeiture
Feb. 15	Peter Bereolas, Appleton	Preparing, handling and caring for food in an unclean manner.	A. M. Spencer, Appleton	$20 and costs.
Feb. 25	John Damm, Waukesha	Selling adulterated milk	J. E. Thomas, Waukesha	$25.
Feb. 25	G. W. Rhadaus, Kenosha	Selling adulterated milk and cream	J. E. Tully, Kenosha	$25 and costs.
Feb. 26	Jos. Lanka, Prairie du Chien	Selling adulterated milk	A. Nelson, Prairie du Chien	$25 and costs.
Feb. 27	H. E. Eide, La Crosse	Preparing, handling and caring for bakery goods in an unclean manner.	J. Brindley, La Crosse	$20 and costs.
Mar. 4	Paul Segesser, Juda	Maintaining cheese factory and premises in an unclean and filthy condition.	W. T. Saucerman, Monroe	Costs.
Mar. 5	Peter Klofenstern, Jr., Ladysmith	Selling unsanitary cream	C. C. Kile, Ladysmith	$25 and costs.
Mar. 12	J. Vanderleest, Racine	Selling adulterated milk	Wm. Smieding, Racine	Fine remitted on payment of costs.
Mar. 13	Fred Horn, Racine	Selling adulterated milk	Wm. Smieding, Racine	$25 and costs.
Mar. 13	Geo. F. Pleges, Racine	Selling adulterated cream	Wm. Smieding, Racine	$25 and costs.
Mar. 13	Fred Leuzke, Racine	Selling adulterated milk	Wm. Smieding, Racine	$25 and costs.
Mar. 15	M. Scellack, Racine	Having in possession with intent to sell pop containing saccharin.	Wm. Smieding, Racine	$25 and costs.
Mar. 15	J. C. Clink, Waukesha	Selling chopped meats containing sulphites	J. E. Thomas, Waukesha	Sentence suspended on payment of costs.
Mar. 19	K. F. Strobel, Eden	Selling American cheese which contained more than 40% moisture.	R. C. Fairbanks, Fond du Lac	$25 and costs.
Mar. 20	H. C. Russell, Superior	Maintaining factory utensils in an unsanitary condition.	F. S. Parker, Superior	$25 and costs.
Mar. 20	Geo. Taft, Superior	Maintaining utensils in milk plant in an unsanitary condition.	F. S. Parker, Superior	$25 and costs.
Mar. 21	Harry Dryer, Superior	Making butter without a permit or license	F. S. Parker, Superior	$25 and costs.
Mar. 26	F. L. Morton, Milwaukee	Handling, preparing and caring for food in an unclean manner.	Geo. Page, Milwaukee	$20 and costs.
Mar. 27	E. Walsh, Racine	Selling adulterated milk	Wm. Smieding, Racine	$25 and costs.
Mar. 27	Hubert Voss, Mayville	Selling adulterated milk	Chas. Lenz, Mayville	$25 and costs.
Mar. 27	M. G. Hallada, Seymour	Using chemical preservative in sausage	A. M. Spencer, Appleton	$25 and costs.
Mar. 28	Frank Schultz, Pleasant Prairie	Selling adulterated milk	J. E. Tully, Kenosha	Sentence suspended on payment of costs.
Mar. 28	G. Topel, Kenosha	Selling adulterated milk	J. E. Tully, Kenosha	Fine suspended on payment of costs.

Mar. 28	Chas. Schultz, Pleasant Prairie...	Selling adulterated milk.....	J. E. Tully, Kenosha.....	Fine suspended on payment of costs.
Mar. 28	M. Bieber, Pleasant Prairie.....	Selling adulterated milk.....	J. E. Tully, Kenosha.....	Fine suspended on payment of costs.
April 1	John Wuethrich, Greenwood.....	Selling cheese containing more than 40% of moisture.	R. F. Kountz, Neillsville.....	$25 and costs.
April 1	M. L. Treichel, Neillsville.....	Selling cheese containing more than 40% of moisture.	R. E. Andrews, Marshfield.....	$25 and costs.
April 1	Emery Taylor, Oshkosh.....	Selling adulterated cream.....	A. H. Goss, Oshkosh.....	$25 and costs.
April 10	L. Karsky, Superior.....	Selling adulterated milk.....	F. S. Parker, Superior.....	$25 and costs.
April 12	Joe Haidacker, Foxboro.....	Selling adulterated milk.....	F. S. Parker, Superior.....	$25 and costs.
April 12	Mike Lonegro, Foxboro.....	Selling adulterated milk.....	F. S. Parker, Superior.....	$25 and costs.
April 16	Theo. Rigas, Milwaukee.....	Selling cold storage eggs without proper notice.	Geo. Page, Milwaukee.....	$25 and costs.
April 29	Robert P. Peschel, Beloit.....	Maintaining bakery in an unsanitary condition.	J. B. Clark, Beloit.....	$20 and costs.
May 1	Mathew McDonald, Randolph.....	Selling adulterated milk.....	F. W. Kiefer, Baraboo.....	$25 and costs.
May 6	Saukville Dairy Co., Saukville....	Selling adulterated cheese.....	A. H. Kuhl, Port Washington.....	$25 and costs.
May 10	Henry Kelkenberg, Elk Mound....	Maintaining creamery and utensils in an unsanitary condition.	P. B. Clark, Menomonie.....	$25 and costs.
May 11	Harry Radtke, Bear Creek.....	Selling adulterated cheese.....	A. M. Spencer, Appleton.....	$25 and costs.
May 14	Robert Scheibe, Appleton.....	Selling adulterated cheese.....	A. M. Spencer, Appleton.....	$25 and costs.
May 14	Fred Eucke, Ashland.....	Selling adulterated milk.....	John A. Garvin, Ashland.....	Fine remitted on payment of costs.
May 22	Frank Gallenberg, Antigo.....	Delivering adulterated milk to a cheese factory.	J. W. Parsons, Antigo.....	$25 and costs.
May 27	A. R. Nitz, Milwaukee.....	Operating a soda water factory without a license.	Geo. Page, Milwaukee.....	$25 and costs.
May 27	*Theo. Rigas, Milwaukee.....	Selling cold storage eggs without giving proper notice.	A. Backus, Milwaukee.....	$25 and costs.
June 6	J. Sherbon, Cumberland.....	Selling unsanitary cream.....	Chas. Taylor, Barron.....	$25 and costs.
June 8	Cornelius Janesse, Oostburg.....	Maintaining cheese factory and utensils in an unsanitary condition.	D. Mahlsted, Plymouth.....	$25 and costs.
June 10	Richard Birkett, Oostburg.....	Maintaining cheese factory and utensils in an unsatisfactory condition.	D. Mahlsted, Plymouth.....	$25 and costs.
June 13	Wm. Flath, Plymouth.....	Maintaining cheese factory and utensils in an unsanitary condition.	D. Mahlsted, Plymouth.....	$25 and costs.
June 14	Fred Chapman, Cascade.....	Maintaining cheese factory and utensils in an unsanitary condition.	D. Mahlsted, Plymouth.....	$25 and costs.
June 15	Arthur Rohr, Plymouth	Maintaining cheese factory and utensils in an unsanitary condition.	D. Mahlsted, Plymouth.....	$25 and costs.
June 17	R. Hein, Hilbert.....	Maintaining factory utensils in an unsanitary condition.	.....	$25 and costs.
June 17	Alex. E. Korth, Menasha.....	Operating a cheese factory in an unsanitary condition.	.....	$25 and costs.

* Appealed from judgment in district court.

CONVICTIONS—Concluded.

Date	Defendant	Cause of Action	Trial Judge	Fine or Forfeiture
June 18	C. J. Widder, Oostburg.....	Operating a cheese factory without permit or license.	D. Mahlsted, Plymouth.....	$25 and costs.
June 18	Peter Lammers, Oostburg.....	Making cheese without a permit or license.	D. Mahlsted, Plymouth.....	$25 and costs.
June 18	A. Debbart, Waterloo.....	Having in possession with intent to sell unsanitary milk.	C. A. Buss, Jefferson.....	$25 and costs.
June 18	Arthur Rahder, Waterloo.....	Having in possession with intent to sell unsanitary milk.	C. A. Buss, Jefferson.....	$25 and costs.
June 21	Frebert Klitz, Marion.....	Maintaining cheese factory and utensils in an unsanitary condition.	E. Dooley, Marion.....	$25 and costs.
June 22	J. L. Breher, Sheboygan Falls....	Selling adulterated cheese.....	D. Mahlsted, Plymouth.....	$25 and costs.
June 29	Peter H. Riesch, West Bend.....	Operating an unclean and unsanitary cheese factory.	C. S. Hayden, West Bend.....	$50 and costs.

DISBURSEMENTS

For Year Ending June 30, 1918

Weigle, Geo. J., commissioner, sal. and exp.	$3,310.63
Aderhold, E. L., asst. commissioner, sal. and exp.	2,684.56
Beckwith, Chauncey, inspector, sal. and exp.	2,587.90
Boettcher, J. E., inspector, sal. and exp.	2,702.16
Bornheimer, H. L., inspector, sal. and exp.	2,364.13
Brannon, W. A., asst. chemist, sal. and exp.	1,889.73
Brennan, Leo, junior sealer of weights and measures	480.00
Cannon, J. D., inspector, sal. and exp.	1,832.62
Cook, S. B., inspector, sal. and exp.	2,677.77
Downing, F. P., chief insp. of weights and measures, sal. and exp.	517.46
Dufner, S. J., inspector, sal. and exp.	2,543.86
Eigenberger, Geo., inspector, sal. and exp.	2,196.73
Findorff, Louena, stenographer and bookkeeper	772.50
Fischer, Richard, consulting director chemical laboratory	600.00
Gilman, Geo. D., inspector, sal. and exp.	389.01
Hahm, B. E., stenographer	136.69
Hanson, F. S., inspector, sal. and exp.	2,290.78
Hass, B. A., inspector, sal. and exp.	2,433.13
Hodgin, Vera, stenographer	515.00
Howlett, Irving R., asst. chemist	1,600.00
Janes, Mary, stenographer	729.00
Kelliher, J. M., inspector, sal. and exp.	1,506.30
Klueter, Harry, chemist, sal. and exp.	2,252.78
Knudson, Oscar, inspector, sal. and exp.	382.96
Kramer, W. J., inspector, sal. and exp.	652.24
Krauskopf, F. C., asst. chemist	46.67
Kremer, C. J., inspector, sal. and exp.	1,946.80
Krohn, C. A., asst. chemist	341.94
Lee, C. E., asst. commissioner, sal. and exp.	2,878.35
Lehnherr, Jacob, inspector, sal. and exp.	2,691.07
Marty, Fred, inspector, sal. and exp.	2,143.09
Nebel, Walter, asst. chemist	273.33
Nerdrum, Ruth, stenographer	880.23
Neubauer, Agnes, stenographer	672.50
Sachtjen, S. M., clerk	60.33

Smith, R. W., chief insp. of weights and measures, sal. and exp.	1,459.66
Southard, R. B., inspector, sal. and exp.	2,509.06
Sterns, W. P., inspector, sal. and exp.	2,461.45
Van Duser, James, inspector, sal. and exp.	2,141.49
Voigt, W. A., inspector, sal. and exp.	2,440.01
Walter, M. L., secretary to commissioner, sal. and exp.	1,257.53
Warner, Geo., inspector, sal. and exp.	2,394.76
Insurance fund	26.65
Printing Board	1,327.99
Refunds	208.00
Secretary of State, photostat	1.60
Superintendent of Public Property, postage, supplies, etc.	3,476.02
Superintendent of Public Property, Fords	720.00
Total	$72,406.47

REPORT OF HARRY KLUETER, CHEMIST

HONORABLE GEORGE J. WEIGLE,
Dairy and Food Commissioner.

Dear Sir:

I herewith submit a report of the food work done in the laboratory and in the field for the year ending June 30, 1918.

As you know, the food work in the field has expanded so that our inspectors are called upon to take care of cold storage plants, bakeries, confectioneries and bottling plants. At its last session, the legislature passed the Cold Storage Act. This became effective September 1, 1917, and provides for the licensing of all cold storage warehouses on the basis of the sanitary conditions of the plant and the proper labeling of all foods stored therein. In accordance with authority to make rules and regulations a comprehensive set of rules and regulations were promulgated on October 1, 1917. The subject of cold storage was new and it was necessary that considerable time be given to the study of the subject. Meetings were held at which the operators of cold storage plants were present and took an active part in the discussion of the tentative set of rules and regulations which had been prepared. After some slight changes these rules and regulations were adopted and became effective December 1, 1917.

The legislature transferred the laws relating to bakeries and confectioneries to this department by the enactment of sections 1410d—1 to 1410d—8 of the Statutes. Provision was also made for licensing bakeries and confectioneries. In order that a person, firm or corporation may be licensed to operate a bakery or confectionery it is necessary that the building or room to be used conforms to the provisions of law. These provisions have to do with the construction of the building and the sanitary conditions therein.

By the enactment of section 1410b—11 of the Statutes the legislature provided for the licensing of persons, firms or corporations engaged in the business of manufacturing or bottling soda water beverages. In this section the dairy and food commissioner is authorized to make reasonable rules and regulations pertaining to the proper handling and storing of such beverages and the construction and sanitary conditions of buildings and the proper cleaning and sterilizing of all machinery, bottles or other containers in which the product is sold and he therefore may prescribe such standards of purity for all ingredients used in the manufacture of such beverages as will insure a pure and

unadulterated product. Under this authority of law a tentative set of rules and regulations was drawn up and a meeting of the soda water bottlers of the state called for the purpose of discussing these rules and regulations. About fifty bottlers responded and a day was given over to a discussion of the rules and regulations. With some slight changes, these rules and regulations were adopted and became effective January 1, 1918.

I am calling attention to this new work added by the legislature to show the additional work placed upon the department. Provision has been made for licensing persons, firms or corporations to engage and carry on business in three different lines. In order to find out whether places applying for a license can be licensed it is necessary that inspections be made. The bakeries and confectioneries were already under a licensing system under the Industrial Commission. Under that arrangement one inspector was called upon to make all of the inspections and consequently many places could not be visited during the year. We have in the neighborhood of 800 bakeries and 400 confectioneries in the state so that with but one inspector it was absolutely impossible to carry on any systematic inspection of these places.

Perhaps the greatest amount of inspectional work necessary was in connection with the soda water bottling establishments. When we began the inspection of these places we found an industry which had grown up with little or no control as to sanitary conditions and construction of buildings to be used as soda water bottling plants. We found that in almost all of the factories a number of inspections was necessary. After the first inspection, a copy of the inspection report having been left by the inspector, the matter was further taken up by correspondence with the operator of the factory, stating specifically what changes and additions were called for in the plant before a license could be granted. I am pleased to say that a large number of the factories complied with the law and could be licensed at the time of the second inspection. Still, at many places it was necessary that we make more than two inspections; in fact, we have made as high as five and six inspections, trying to assist the operator in putting his plant in condition to be licensed or, if that were impossible, to show him the necessity of discontinuing business. I feel that a great deal of good has resulted from the law licensing soda water bottling establishments. It has put the business on a higher plane. It has served to interest the owners and operators of these plants in their own business and I feel there has been an awakening of the proprietors and I hope that Wisconsin will be able to say, in the near future, that she is proud of the factories engaged in the manufacture of soda water beverages. A good deal of difficulty was experienced in getting materials and much delay was caused by the shortage of help. Nevertheless, the people of this industry have responded in a noble manner.

I do not believe that there has been a period in the history of this country equal to the last year for impressing upon the minds of the people the importance of food and food control. We have been called upon as a nation to supply vast quantities of food not only for our own army and navy but also for our allies. This has always been a land of plenty and no attempt was ever made to control the production and handling of foods with respect to quantity and quality. While the new conditions have not been regulated through the dairy and food department but through food administrators, we have, however, been called upon to cooperate and assist in the enforcement of these regulations.

It has become necessary for the housewife to learn more about foods. She has been called upon to use substitutes for this or that food. She has become interested in food values, striving to learn in what food the greatest food value was to be found for the least money. A large percentage of the nutritive parts of wheat which were formerly used in cattle feeds are now being used in war flours.

New Legislation

It seems very clear from our experiences during the past year that effort is necessary to pass certain new legislation. There were introduced at the last session of the legislature several bills relating to the handling of eggs, the standardization of a loaf of bread, the change in the percentage of cereal permissible in sausage and the seizure and confiscation of adulterated articles of food. For some reason or other the legislature did not see fit to pass these bills. I feel that these matters should again be presented to the legislature and in addition that we should present a bill prohibiting the sale of any oil as and for a paint oil which contains mineral oil. We have succeeded in driving adulterators of linseed oil out of the state as far as linseed oil is concerned but they have returned with a new product, a linseed oil compound or a paint oil bearing some fancy trade name. Many of the people who use linseed oil for painting purposes are not expert painters and it is an easy matter for a merchant to convince these people that a compound paint oil is equally as good as linseed oil. This is not true. No oil has been found which can entirely take the place of linseed oil in painting and I feel that our best efforts should be put forth in passing a law which will make it impossible to sell for painting purposes any oil containing a mineral oil. Thousands of dollars worth of damage has been done to buildings in this state by the use of these mixtures.

The canning industry of this state should be taken care of by means of a special law. This industry has been growing rapidly in the state and it is now estimated that we can at least forty per cent of the peas packed in the United States. Large quantities of corn, beans, sauerkraut and other vegetables are canned and I believe a closer supervi-

sion of the conditions of these factories is necessary. It seems clear to me that a great deal of our work with these factories must be done previous to the actual canning period. We can hardly expect to be permitted to go to a factory and close it down during the rush of the season. We should be in a position to give information concerning the construction and equipment of factories tending to make their operation more sanitary. Of course, inspection will have to go on during the actual canning season but we cannot require a canning factory to close down to make certain repairs, additions and changes. During the canning season our inspection would be limited to those features which pertain to sanitation only. Canned foods are becoming of more importance each year and the state can no longer delay a close supervision over this important industry. We should be in a position to offer assistance to any of the factories which experience difficulty and it seems to me that these things can only be brought about through a special law. While our general food law applies, still if we were to have special laws I feel that better progress could be made in handling this industry.

Beverages

Thirty-five samples of beverages were analysed in the laboratory, twenty-three of which were so-called near beers and the percentage of alcohol was determined. All of the work done on these samples was not for the purpose of enforcing the excise laws but I feel that we should know something of the alcoholic strength of these beverages because we are continually receiving inquiries about this or that brand of near beer. This department has nothing to do with the enforcement of the excise laws but the question of the proper branding of these products might be raised and it seemed that some data should be available.

Twelve samples were tested for chemical preservatives and saccharin. Three samples of Catawba grape juice were adulterated in that they contained sulphur dioxide. Sulphur dioxide serves two purposes in a Catawba grape juice; it not only preserves the product but it seems to clarify and brighten it. This clarification, however, could be brought about if the grape juice were properly stored and sedimentation allowed to take place. While the percentage of sulphur in the products seemed small, still there was enough there so that the flavor of the grape juice was affected.

One sample of soda water was found to be adulterated in that it contained saccharin. Three samples of soda water were found to contain benzoic acid or a salt thereof and were therefore adulterated. A bottle of soda water collected at the Sister Bay Bottling Works contained a large amount of precipitate and this factory was experiencing trouble with its product. The precipitate was analysed and we found that it contained iron.

Dairy Products

During the year 863 samples of dairy products were analysed. A large percentage of the work of the laboratory has always been on dairy products. I believe that we are giving the dairy industry closer supervision than any other food producing industry in the state. This is perhaps true because of the importance of the industry but I believe that we should increase our activities in other lines as well. I do not mean that we should decrease our activities along dairy lines but other food producing industries demand more time and attention and should receive it.

Sixty-six samples of butter were analysed. Ten of these samples were found to be up to the standard and properly labeled. Twenty-two samples were not standard in that they contained less than the required percentage of butter fat. A sample manufactured by the Edgerton Creamery Company of Edgerton was found to contain only 74.15 per cent of butter fat with 18.61 per cent of moisture. Another sample manufactured by the Mellen Creamery Company of Mellen was found to contain 75.08 per cent of fat and 19.8 per cent of moisture. A sample collected from the Sheboygan Dairy Products Company of Madison was found to contain 76.77 per cent of butter fat and 15.98 per cent of moisture. This sample was found to contain over five per cent of salt. Another sample, collected from the Sheboygan Dairy Products Company of Green Bay, was found to contain 76.64 per cent of fat and 19.33 per cent of moisture. Prosecutions were brought in connection with samples of the Mellen Creamery Company, the Sheboygan Dairy Products Company of Madison and the Edgerton Creamery Company. In two cases convictions resulted. The manager of the Mellen Creamery Company was found not guilty by a jury. I believe the jury was largely influenced in this case because of the fact that the Mellen Creamery Company was at the time being prosecuted in the Federal Courts for the sale of adulterated butter. Thirty-four samples of butter were submitted for tests. Most of the samples were suspected of containing foreign fat such as oleomargarine. In no case did we find foreign fat present.

One sample of butter produced at the Borden Condensed Milk Company's plant at New London was found to contain a large number of small green spots. An analysis of this butter showed that the green spots were due to the presence of copper. An investigation was made at the condensery where the product was manufactured and we found that an old holding vat which was in poor repair was being used for ripening the cream. A large part of the tinning on the inside of the vat had corroded off, exposing copper surfaces and a sufficient amount of copper was taken up to produce this condition in the butter. A sample submitted by John Wisth of Greenwood was found to contain green spots of the same character and the trouble was located in the

creamery from which this product came and was of the same nature as the sample from the Borden plant.

One hundred and ten samples of cheese were analysed. Most of the work consisted of tests for moisture. Sixty-two samples tested for moisture were found to be in compliance with law; that is to say, they contained forty per cent or less of moisture. Forty-eight of the samples were found to be adulterated in that they contained over forty per cent of moisture. This work was done in connection with the new moisture standard set for Cheddar cheese by the last legislature. Many of the cheese dealers of this state felt that the cheese factories were putting too large a percentage of moisture in cheese and thereby lowering the quality of Wisconsin cheese. I do not think that the number of samples shown to contain over forty per cent of moisture as here reported in any way represents the average run of the cheese of this state with respect to moisture. In collecting these samples the inspectors simply collected samples of such cheese as they had reason to believe contained an excessive amount of moisture. The inspectors do not go out and collect samples of cheese promiscuously. If this were done I feel that the percentage of samples found to be in compliance with the standard would be very much larger than is represented by the work done during this year. No doubt a rigid enforcement of the moisture standard law will tend to raise the quality of Wisconsin Cheddar cheese. For the purpose of collecting data on moisture in cheese I would recommend that samples of cheese be obtained from the various exhibits, at the Cheese Makers' convention, the exhibit at the State Fair, and if possible, the exhibit at the National Dairy Show.

Fourteen samples of cream delivered to cities were tested and found to be below the standard. One of the samples contained only 9.4 per cent of butter fat, thus being practically one-half standard. Two of the samples were down to 12 per cent or two-thirds standard.

One hundred and ninety-five samples of milk were analysed. Twenty-five of these samples were delivered to a cheese factory or creamery and were found to be in compliance with the legal standard for milk. However, fifty-five samples delivered to a cheese factory or creamery were found to be adulterated. The usual method of adulteration was practiced as the samples were either watered or skimmed. This work, I think, shows a slight increase in the number of samples of adulterated milk delivered to cheese factories and creameries over the previous year. This may be due to the high price offered for milk. The temptation to make money was increased by these high prices. Fifty-one samples of milk were collected from herds and analysed in connection with the fifty-five samples of adulterated milk delivered to creameries and cheese factories. I feel that during the period of increased demand for milk and the high price paid it is necessary to give more time and attention to this feature of the dairy work. Forty-seven samples of city milk were analysed and forty-three were

found to be below the legal standard while four were found to be in compliance with the standard. During the past year we have found an increased percentage of samples of city milk which were adulterated with the addition of water. Here again I feel that the high prices increased the temptation for adulteration.

Seventeen samples of ice cream were analysed. Six of the samples were found to be up to the legal standard for this product while eleven were found to be below the standard. A large percentage of the samples found to be below the legal standard were collected at Camp Douglas during the time of the mobilization of the National Guard. This was during the month of August and large quantities of the ice cream were being sold at the Camp. We found one sample of ice cream containing as low as 7.66 per cent of butter fat, another sample containing only 9.71 per cent of fat, while four samples contained ten per cent, three samples contained eleven per cent and one sample contained thirteen per cent of butter fat. Prosecutions resulted for the sale of the samples containing less than ten per cent of butter fat.

During the year 455 samples of milk and cream were submitted and tested with the Babcock test. The purpose in having most of these samples tested was to determine whether or not the correct tests were being given the patrons at the creameries and cheese factories or to determine whether any overreading or underreading of the Babcock tests was being practiced at cream buying stations.

DRUGS

Thirty-five samples of drugs were analysed. Fifteen of these were spirits of camphor, eight of which were standard and seven not standard. Ten samples of tincture of iodine were analysed and six of these were standard and four not standard. Four samples of sweet oil were analysed, two of which were found to be standard and two not standard. The two latter samples were found to be cottonseed oil and not olive oil. Where sweet oil is called for by the purchaser olive oil must be dispensed since sweet oil is mentioned as a synonym for olive oil in the United States Dispensatory. One sample of aspirin was analysed This sample gave a slight positive test for salicylic acid. However, only a trace of salicylic acid was present and the sample was practically pure aspirin. One sample of sweet spirits of nitre, submitted by H. H. Hackbarth of Mosinee, was analysed and found to be badly below the legal standard. Sweet spirits of nitre deteriorates very rapidly and undoubtedly this sample was an old preparation. A sample of bichloride of mercury tablets submitted by R. R. Crosby of Sharon and claimed to be five grain tablets, upon analysis was found to contain only 3½ grains of bichloride of mercury to the tablet and the sample was therefore misbranded. The sample of benzoate of soda submitted by H. C. Schranck of Milwaukee was found to be standard. The sample of paregoric submitted by Edward Williams of Madison

was tested for the percentage of camphor and was found to comply with the standard in that respect. This sample was not analysed for the other ingredients of paregoric since Mr. Williams only requested the percentage of camphor.

We have not done as much drug work during the past year as during the previous year. During the year previous to this period a large number of samples of drugs was analyzed. After our activity of that year, which resulted in many prosecutions, I felt that if drug work was to be done samples other than those which have usually been collected should be obtained and analyzed. This was not possible because of the fact that we were short of help in the laboratory and because our inspectors were so busy with the sanitary inspections of bakeries, confectioneries, cold storage warehouses and soda water factories. I feel that we should plan new drug work and I would very much like to see the day when this department could have at least two graduate pharmacists on its inspection force. I feel that much good work could be done by two capable pharmacists acting as inspectors in going over the stock of drugs in many drug stores. We know from experience that certain tinctures, fluid extracts, and other pharmaceutical preparations deteriorate with age and many of these preparations could be separated out and disposed of on the spot without any analysis in the laboratory. By an arrangement of this kind I feel that the department would be brought closer to the druggists of the state and we could work together which, I think, would result in improved conditions in the sale of drugs. I do not mean to insinuate that the drugs offered for sale in the state of Wisconsin are inferior to the drugs offered for sale in any other state. I believe they are as good or better but I do not believe that they are so good that no improvement can be made.

Flavors and Flavoring Extracts

Thirty-nine samples of flavors and flavoring extracts were analysed, twenty-one of which were lemon extract. Eight of these twenty-one were found to be standard and thirteen were found to be not standard or were misbranded. Eighteen of the thirty-nine samples were vanilla extracts and vanilla extract compounds, six of which were standard and twelve of which were not standard. Eight of the samples were misbranded. Some of them contained no statement of the net contents while on others false and misleading statements were found. In other words, these samples were short measures. Practically all of these preparations were shipped into the state and it seems that it might be advisable to try to get official samples of the extracts which were in violation of law for the Federal goverment so that prosecutions can be brought against the manufacturer or dealer outside of the state. Under the Federal law, an article of food is misbranded if it contains any false or misleading statement or if the contents are below the stated quantity.

We have collected official samples in two cases and we expect prosecutions to result in these instances.

Twelve samples of vanilla extract and compounds were found to be either adulterated or misbranded. Vanilla extract is one of the higher priced articles of food and there is a big call for less expensive vanilla extracts. Purchasers of this product are inclined to grumble somewhat about the high price and many times substitutes, imitations or compounds are offered in place of the genuine extract. The customer, being more interested in the price than the quality, takes a bottle of the compound or imitation at a less price and believes that he is getting a genuine vanilla extract. By the use of coumarin or the extract of tonka bean a very strong flavoring extract can be prepared which is in imitation of vanilla. If the product is clearly labeled to show that it is a compound and the ingredients are stated on the label there is, perhaps, no serious violation of law. If the use of artificial color in these products is forbidden then the possibility of dispensing compounds or imitations as and for genuine extracts is lessened. As time goes on people will become accustomed to reading labels and studying foods so that the time may come when the consumer will reject the artificially colored food product. By the use of artificial color many cases of fraud are made possible and few people are well enough informed on compound foods to know that the addition of artificial color is to make the article appear better or of greater value than it really is.

Flour and Meals

Sixty-nine samples of flour and meals were analysed. Many of the samples were analysed at the request of the State Food Administrator. Owing to the shortage of wheat flour and the food regulations requiring the purchase of substitutes it was necessary that samples be submitted from time to time to see whether the regulations were being followed out. Several samples of barley flour were submitted because they were suspected of containing wheat. An analysis of these flours in the laboratory showed that they were genuine barley flour. Two samples of wheat flour were submitted by Saint Mary's Hospital at Racine because they were suspected of being chemically bleached. No evidence of chemical bleaching was found. One sample of corn meal was found to be mixed with quite a quantity of oat hulls and other seed coats, showing gross carelessness in the process of manufacture. A sample of graham flour was found to be adulterated with cracked corn and oat hulls. Pancake flour, submitted by the State Food Administrator was suspected of containing wheat flour. The product was found to be free from wheat flour.

Fifteen samples of rye flour, barley flour, corn flour and corn meal were collected and analysed for the food administrator in connection with the gathering of wheat substitutes to be shipped to neutral countries, especially Holland, Denmark, and Sweden. During the months of

June and July, when we were in a position to judge to some extent what the following year's grain crops might be, it was found that we had large quantities of wheat flour substitutes which could be furnished these countries which were badly in need of food. Before this food could be shipped, however, it was necessary that an inspection of the flour, conditions of storage and condition of the containers be made and that the samples be analysed for moisture and fat or for adulteration. During this investigation Inspector C. J. Kremer and myself, who made the inspections at the storage warehouses, found large quantities of barley flour infested with vermin due to the poor condition of storage. It is needless to say that all such flour was rejected and pronounced unfitt for food.

Food Preservatives

Nineteen samples of food preservatives were analysed. Twelve of the nineteen samples were the product of the Price Compound Company of Minneapolis, Minnesota, and were found to be composed of practically ninety-five per cent of boric acid and five per cent of salt. Four samples were found to be mixtures of salt and saltpeter, sold under fancy names whereby it was possible for the manufacturer to get a higher price for salt and saltpeter. Some of the preparations of this kind, composed largely of salt, sell at the rate of twenty-five cents per pound. The inspectors find a quite general use of mixtures of this kind. For several years we have been analysing various brands of meat preservatives and published the results, showing that they were composed of salt and saltpeter. However, this information does not seem to have reached the butchers and they are still paying an abnormally high price for a simple mixture of salt and saltpeter.

Foods Suspected of Containing Ground Glass

Fifty-one samples of various foods, suspected of containing ground glass, were submitted, a great number of them through the State Food Administration. In three cases particles of glass were found present. Two of these samples were submitted by A. C. Wolfe, United States Attorney for the Western District of Wisconsin and upon reporting that glass was found an investigation was made at the city from which the samples were sent and it was found in both of these cases that the glass had found its way into the food as a result of an accident. The sample of corn meal submitted by Clinton G. Price, District Attorney for Juneau County, Mauston, Wisconsin, was found to contain considerable powdered glass. This case was further investigated and it was found that the glass had been added to the corn meal because of a quarrel between neighbors. The idea of adding powdered glass was undoubtedly brought to the mind of this person through the publicity given the subject of ground glass in foods during the months of January, February and March. There seemed to be much hysteria with respect to the

presence of ground glass in foods as a result of which we received almost every kind of food imaginable to be tested for the presence of ground glass. This work revealed, in many cases, the presence of sand For instance, we found samples of raisins containing considerable sand. Samples of corn meal were found to contain an unusually high percentage of sand. Peanut butter examined showed the presence of too much sand. One sample of cheap peanut candy was found to contain much sand, small stones, wood, coal, and peanut shucks. The results of this analysis were taken up with the factory manufacturing this candy and the manufacturer promised to correct these conditions at once. I do not believe that the articles of food suspected of containing glass and found to contain small quantities of sand did in fact contain more sand than under normal conditions but this simply shows how thoroughly suspicious the consuming public has become on the subject of ground glass in food.

Foods Tested For Poisons

Six samples of food were submitted, suspected of containing poison. A sample of cheese submitted by E. A. Krug of Kewaunee was found to contain a small amount of arsenic and zinc. A sample of cheese submitted by the H. B. Stanz Company of Milwaukee was suspected of containing ptomaines. However, the cheese was found to be of an inferior quality and from its appearance it might well have contained ptomaines. This case was followed up at the factory and very dirty conditions were found to exist there and prosecution resulted. A sample of maple syrup was tested for arsenic and heavy metals with negative results. A sample of food color was tested for arsenic also with negative results. A sample of jam was tested for copper and arsenic. A small amount of copper was found but no arsenic. A sample of cream suspected of containing poison because of a very disagreeable odor was examined and the strong odor was found to be due to onions.

Gelatine

A thorough investigation of the gelatine used in the manufacture of ice cream and in many bakeries was thought advisable and as a result fifty-one samples of gelatine were analysed, thirty-nine of which were found to be adulterated. All but one of these samples were adulterated because they contained excessive amounts of zinc and copper. Many of these samples had been shipped in interstate commerce and were therefore subject to the provisions of the Federal Food Law. Official samples were collected and prosecutions resulted against the parties selling the same in interstate commerce. The goods were also seized. Twelve samples of gelatine were found to be free from adulteration and passed as standard. Large quantities of gelatine have been imported from foreign countries, a large percentage coming from Belgium, France and Austria. Because of the war no gelatine could be obtained from

these sources and unscrupulous dealers took advantage of this situation by substituting good grades of glue for gelatine or by mixing glue with gelatine, and selling the product as gelatine. I feel that the gelatine situation has been completely cleared up in this state and that dealers now are on the lookout for adulterated gelatine and are buying only from reliable concerns.

Lard, Lard Substitutes and Oleomargarine

One sample of oleomargarine was sent in by an inspector which was held to be in imitation of yellow butter. This shipment of oleomargarine was returned by the dealer to the manufacturer. Two samples of lard were submitted, both of which were tested for foreign fat and found to be free from adulteration. One sample of lard, submitted by inspector Kremer was found to be a mixture of commercial glucose, corn oil, starch and salt.

Linseed Oil

Twenty-six samples of linseed oil were analysed, sixteen of which were found to be badly adulterated. The usual form of adulteration was found, that is, a half mineral oil. The adulteration in two cases ran up to fifty per cent, in several cases over forty per cent and in most of the other samples the adulteration was as high as thirty per cent. Sixteen of the twenty-six samples were submitted. Our inspectors report that they are not finding the usual amount of adulterated linseed oil. In the places where adulterated linseed oils were formerly offered for sale they are finding compounds on sale. Many of these are labeled "Linseed Oil Compounds." An analysis of several of these compounds has shown that they contain as high as fifty per cent and even sixty per cent of mineral oil or machine oil. We find that these adulterated oils are being offered for sale and sold as paint oils. Undoubtedly the shrewd salesman selling these adulterated oils or compounds persuade the merchants to believe that these products are almost as good, if not just as good, for painting purposes. This is not true. The oil which will completely take the place of linseed oil has not yet been found. There is no oil of equal value for painting purposes.

Mineral oil does not dry and when mixed with linseed oils even to the extent of only five or ten per cent, prevents the drying of the linseed oil. If these mixtures are used on new wood work it is more than likely that the wood work will be ruined and placed in such condition that no first-class job of painting will be possible in the future. I believe that legislation along these lines is absolutely necessary to protect our citizens. We find that these adulterated oils are sold in large quantities to the farmers in the country away from the railroads.

Meat Products

Twenty-three samples of meat products were analysed, sixteen of which were tested for chemical preservatives. Ten were found to be free from chemical preservatives, while six contained sulphites or a salt of sulphurous acid. There seems to be a slight tendency on the part of some butchers to return to the old practices of eight or ten years ago. The use of sulphites in hamburgers ten or twelve years ago was very common but a rigid enforcement of our chemical preservative law by means of samples and prosecutions checked these practices. This is a case where I do not believe that warnings are necessary. The preservative is added by the man who grinds the hamburger or prepares the sausage and the violation of law is a wilful one. I believe our method of handling these cases, that is, by prosecution on the first evidence, is just. It seems that we can well devote more time to this line of work during the coming year.

Seven samples of sausage were analysed. All of these samples were found to contain cereal yet all of them were sold for sausage and not sausage with cereal. Four of the samples contained more than four per cent of cereal so that these samples were not even legally salable as and for sausage with cereal. Our inspectors have been doing good work with the enforcement of this law. They take up with the butchers at the time of inspection the question of the use of cereal, inquiring as to the amount of cereal used. Where they found that an excessive amount was being used, according to the man's own admission, they requested that he cut down the amount of cereal and keep within the law and sell the product as and for sausage with cereal. Many of the shops that I have visited during the past years have conspicuously displayed a notice to the purchaser that the sausage sold contained cereal. As I mentioned in the beginning of this report I hope the legislature will see fit to reduce the percentage of cereal permissible in sausage so that only two per cent can be used.

Miscellaneous Foods

Twenty-two samples of miscellaneous foods were analysed. Four of the samples were found to be misbranded in that the contents of the package was not stated or not correctly stated. One sample of figs was found to contain sulphur dioxide and the sale of this product was therefore in contravention of law. Four samples of codfish were analysed, two of which were labeled "Prepared with Four Tenths of One Per Cent of Boric Acid Which is Removed in Two or Three Washings As you Freshen the Fish." However, we found in the laboratory that several washings and the use of considerable water was necessary to remove the boric acid. Undoubtedly when times again become normal the manufacturers of this product will return voluntarily to the use of sodium benzoate. This is more easily removed than boric acid. Two samples

of evaporated milk were analyzed and found to be in compliance with the legal standard for that product. Two samples of Jiffy Jell were analysed for the State Food Administrator and the analysis showed the products to be mainly sugar. The composition of Jiffy Jell is approximately ninety per cent of sugar, 8.7 per cent of gelatine and 1.5 per cent of citric acid to which there is added a small amount of coloring matter and flavor. Two samples of bread were analysed for the Commissary Department of the University. This was in connection with the use of substitutes and the results of analysis, as found in the table, are of interest. One was a sample of oatmeal bread and the other a sample of potato bread.

Saccharine Products

Thirty-three samples of saccharine products were analysed, fifteen of which were maple syrups. Ten of the samples were standard and five were not standard because they had not been sufficiently concentrated or boiled down. Eighteen miscellaneous saccharine products were analysed, most of which were honeys. Four samples of syrups used as sugar substitutes in the manufacture of soda water were submitted. Owing to the shortage of sugar it was necessary that the supply of sugar to soda water factories be decreased from the normal supplies. They were given by the first ruling, eighty per cent of their last year's supply. However, a new ruling followed very soon, reducing their allotment to fifty per cent of their last year's supply. New products were, of course, offered for sale one of which was Sugarlene. This was found to be a syrup containing about seventy-five per cent of sugar, 36.5 per cent of which was sucrose, the balance being invert sugar. This product was made by treating cane sugar in solution with a small amount of an organic acid, the acid usually used is citric. It will be seen, however, that the use of such a product is in no way the conservation of sugar and I have been informed that sugar was to be denied factories manufacturing this class of product. The sample of Non-Crystal Economy sugar was found to be a solution of sugar and of the same general composition found in Sugarlene. Two samples of syrup were submitted and the analysis showed that one was a sample of high grade refiners syrup and the other a lower grade of refiners syrup. The use of such a product would be genuine conservation of sugar.

Turpentine

Fourteen samples of turpentine were analysed, eight of which were standard and six were found to be badly adulterated. The usual form of adulteration was found, that is admixture with mineral oil of the character of kerosene. In one sample, handled by the Paragon Oil and Supply Company of Oshkosh, sixty-two per cent of adulteration was found. Two of the samples were found to contain over thirty per cent of adulteration. What has been said concerning the need of legislation

in regard to linseed oil is perhaps true with respect to turpentine. In speaking of turpentines, I have in mind that used for technical purposes and not the product used for medicinal purposes. I do not believe that the pharmacists of the state are handling a product of this kind. I am inclined to believe that the pharmacists are exercising more care in the purchase of turpentine, realizing the importance of it as a drug.

Vinegar

Twenty-six samples of vinegar were analysed. All of these were submitted. Eleven of the samples were found to be up to the required standard for acetic acid in vinegar and fifteen were found to be below the standard.

During the past year considerable correspondence has been received regarding the sale of distilled vinegar colored with caramel or some other artificial color whereby it would be in imitation of the color of genuine cider vinegar. This, I believe, should be prohibited. Vinegar at the present time is selling for approximately three times its normal price. This is due to the fact that the government requires large quantities of acetic acid for the prosecution of the war. By not permitting the use of artificial color therefor, two purposes could be served. We could prevent violation of the food law for it seems clear to me that the purpose of coloring distilled vinegar with caramel for instance can only be so that it can be easily pawned off for cider vinegar. Then, too, if we do not permit distilled vinegar to be colored there will be available a larger supply of acetic acid from these sources for the government. I think that this point is well worth considering and we should restrict our use of vinegar as much as possible to cider vinegar or the fruit vinegars, making possible the use of larger quantities of acetic acid in war work.

SUMMARY ANALYSIS

1289 SAMPLES

	No. of Samples		
BEVERAGES			35
Tested for chemical preservatives, either soluble and saccharin	12		
Submitted samples tested for percentage of alcohol	23		
DAIRY PRODUCTS			836
BUTTER		66	
Standard and properly branded	10		
Not standard	22		
Submitted samples	34		
CHEESE		110	
Tested for moisture and found to contain 40% or less of moisture	62		
Tested for moisture and found to contain over 40% of moisture	48		
CREAM, city supply, not standard		15	
MILK		195	
Delivered to cheese factories or creameries, standard	25		
Delivered to cheese factories or creameries, not standard	55		
Herd samples	51		
City milk, standard	4		
City milk, not standard	43		
Ice cream, standard	6		
Ice cream, not standard	11		
Submitted Samples		455	
DRUGS			35
SPIRIT OF CAMPHOR		15	
Standard	8		
Not standard	7		
TINCTURE OF IODINE		10	
Standard	6		
Not standard	4		
MISCELLANEOUS		5	
SUBMITTED SAMPLES		5	
FLAVORS AND FLAVORING EXTRACTS			39
LEMON EXTRACT		21	
Standard	8		
Not standard or misbranded	13		
VANILLA EXTRACTS AND COMPOUNDS		18	
Standard	6		
Not standard or misbranded	12		
FLOUR AND MEALS			69
FOOD PRESERVATIVES			19
FOODS SUSPECTED OF CONTAINING GROUND GLASS			5
FOODS SUSPECTED OF CONTAINING POISON			6
GELATINE			51
LARD, LARD SUBSTITUTES AND OLEOMARGARINE			4
LINSEED OILS			26
Standard	2		
Not standard	8		
Submitted samples	16		

	No. of Samples		
MEAT PRODUCTS			23
Tested for chemical preservatives, none found	10		
Found to contain sulphites	6		
SAUSAGE		7	
Not standard, found to be sausage with cereal	3		
Not standard, found to contain more than 4% of cereal	4		
MISCELLANEOUS FOODS			22
SACCHARINE PRODUCTS			33
MAPLE SUGAR AND MAPLE SYRUPS		15	
Standard	10		
Not standard, below in total solids	5		
MISCELLANEOUS		18	
TURPENTINE			14
Standard	8		
Not standard	6		
VINEGAR			26
Up to required standard for acetic acid	11		
Below required standard for acetic acid	15		

BEVERAGES.

Beverages—Tested for Chemical Preservatives, Ether Soluble and Saccharin.

Date	Sample of	Purchased of or Submitted by	Manufacturer or Jobber	Remarks
1917				
July 26	Grape juice	F. A. Shimmel, Sturgeon Bay	Duroy & Haines Co., Sandusky, O.	Adulterated in that it contains sulphur dioxide.
July 31	Grape juice	Two Rivers Merc. Co., Two Rivers.	John C. Meier Grape Juice Co., Silverton, Ohio.	Adulterated in that it contains sulphur dioxide.
Aug. 29	Grape juice	A. F. Ackerman, Plymouth	Man-Blanc & Co., Chicago	Adulterated in that it contains sulphur dioxide.
Oct. 9	Pop	Medford Bottling Works, Medford	Medford Bottling Works, Medford	Tested for saccharin, none found.
Oct. 9	Pop	Medford Bottling Works, Medford	Medford Bottling Works, Medford	Tested for saccharin, none found.
Oct. 11	Pop	Thorp Bottling Works, Thorp	Thorp Bottling Works, Thorp	Tested for saccharin, none found.
1918				
Mar. 5	Pop	M. Sedlas & Co., Milwaukee	M. Sedlac & Co., Milwaukee	Not standard. Contains saccharin.
May 21	Pop	Superior Bottling Works, Superior.	Superior Bottling Works, Superior.	Not standard. Contains benzoic acid or salt thereof.
May 21	Pop	Superior Bottling Works, Superior.	Superior Bottling Works, Superior.	Not standard. Contains benzoic acid or salt thereof.
May 23	Pop (cherry)	T. F. Mackmiller, Iron River	T. F. Mackmiller, Iron River	Color used identified as Amaranth S & J 107.
May 23	Pop (strawberry)	T. F. Mackmiller, Iron River	T. F. Mackmiller, Iron River	Not standard. Contains benzoic acid or salt thereof.
June 4	Pop	*Sister Bay Bottl. Works, Sister Bay		Precipitate found in bottle gave slight test for iron, due to use of water high in iron.

* Submitted by.

Beverages—Submitted Samples Tested for Percentage of Alcohol.

Date	Brand	Submitted by	Per cent of alcohol by volume
1917			
July 6	Tiptop near beer	G. Taylor, Madison	none
Aug. 13	Blackberry cider	Harvey Martin, Soldiers Grove	10.48
Aug. 13		J. E. Hoffa, Soldiers Grove	10.48
Aug. 13		J. E. Hoffa, Soldiers Grove	10.48
Aug. 27	Edelweiss	C. P. Norgord, Commissioiner of Agriculture, Madison	0.20
Sept. 20	Beer	Emerson Ela, Madison	4.85
Sept. 20	Beer	Emerson Ela, Madison	4.85
Oct. 16		John Hoffa, Soldiers Grove	3.59
Oct. 31	Beer	G. F. Moore, Madison	3.6
Nov. 30	Holsum	E. E. McMillin, Soldiers Grove	3.1
Dec. 3	Hard cider	John Schulkamp, Madison	9.32
Dec. 11	Holsum	Charles Mullickin, Soldiers Grove	2.96
1918			
April 11	Puritan	*Ross Bankes, Readstown	0.21
May 7	Whiskey	T. S. Ryan, Mineral Point	38.24
May 21	Near beer (Clearo)	T. F. Clancy, Soldiers Grove	0.04
May 21	Near beer (Budd)	T. F. Clancy, Soldiers Grove	0.25
May 21	Near Beer	T. F. Clancy, Soldiers Grove	0.25
May 21	Near Beer (Tip Top)	T. F. Clancy, Soldiers Grove	0.16
May 21	Near Beer	T. F. Clancy, Soldiers Grove	0.43
May 21	Near Beer (Famo)	T. F. Clancy, Soldiers Grove	0.16
May 21	Near Beer	T. F. Clancy, Soldiers Grove	0.16
May 21	Near Beer	T. F. Clancy, Soldiers Grove	0.25
June 18	Beerine	Graham & Brown, Beloit	0.21

* Purchased of.

DAIRY PRODUCTS.

Butter—Standard and Properly Branded.

Date	Purchased of	Manufacturer or Jobber
1917		
Sept. 8	S. L. Stoffer, Richland Center	J. T. Scott, Richland Center.
Sept. 14	Lykens Cooperative Creamery Co., Centuria	Lykens Cooperative Creamery Co.
Sept. 14	Lykens Cooperative Creamery Co., Centuria	Lykens Cooperative Creamery Co.
Sept. 14	Amery Creamery Co., Amery	Amery Creamery Co.
Nov. 22	Mellen Creamery Co., Mellen	Mellen Creamery Co.
1918		
Jan. 18	Piper Bros., Madison	A. L. Parman, Mazomanie.
Jan. 18	Shipke & Dorn, Madison	
Feb. 12	Spring Hill Creamery Co., Chetek	Spring Hill Creamery Co.
Feb. 15	Carroll Bros., Monroe	Krog Creameries, Platteville.
Feb. 18	Wm. Schwartz, Jr., Mayville	Fred Baertschy, Mayville.

Butter—Not Standard.

Date	Purchased of	Manufacturer or Jobber	Per cent milk fat	Per cent moisture
1917				
July 28	L. Shapiro, Richland Center	Wisconsin River Creamery Co., Muscoda	80.88	15.24
Aug. 4	L. Connor, Oregon	Jenning & Jahnke, McFarland	79.14	16.04
Sept. 17	J. T. Scott, Richland Center	J. T. Scott, Richland Center	81.93	15.39
Sept. 17	J. T. Scott, Richland Center	J. T. Scott, Richland Center	80.87	14.45
Oct. 2	Kee & Chapell, Janesville	Jennings & Jahnke, McFarland	79.22	15.58
Oct. 19	Pyre & Wanamaker, Edgerton	Edgerton Creamery Co., Edgerton	74.15	18.61
Oct. 19	Pyre & Wanamaker, Edgerton	G. H. Kothlow, Edgerton	78.90	17.25

Oct. 24	Bernard Block, Mellen	Mellen Creamery Co., Mellen	75.08	19.80
Nov. 23	Pyre & Wanamaker, Edgerton	G. H. Kothlow, Edgerton	81.81	15.10
Dec. 7	Pyre & Wanamaker, Edgerton	Edgerton Creamery Co., Edgerton	78.49	15.28
Dec. 14	E. R. Winslow, Janesville	Lodi Creamery Co., Lodi	80.25	14.63
1918				
Jan. 4	F. N. Kern & Co., Fennimore	Farmers Mutual Cooperative Creamery Co., Fennimore	82.07	14.73
Jan. 4	F. N. Kern & Co., Fennimore	Farmers Mutual Cooperative Creamery Co., Fennimore	82.06	14.74
Jan. 19	Nic. P. Behrend, Madison	Madison Dairy Product Co., Madison	81.13	15.08
Jan. 19	Oppel's Grocery, Madison		80.36	15.06
Jan. 19	Madison Pure Food Store, Madison		80.79	14.58
Jan. 19	Herman Mack, Madison	H. C. Christians, Johnson Creek	81.17	14.41
Jan. 19	Piper Bros., Madison		81.83	12.87
Jan. 19	M. L. Nelson, Madison	Sheboygan Dairy Products Co., Madison	76.77	15.98
Jan. 19	Jas. E. Trainor, Madison	Mansfield-Caughey Co., Madison	80.22	15.10
Jan. 19	Jas. E. Trainor, Madison	University of Wisconsin, Dairy Department	79.80	14.53
May 27	Sheboygan Dairy Products Co., Green Bay	Sheboygan Dairy Products Co., Green Bay	76.64	19.33

Butter—Submitted Samples.

Tested for Foreign Fat or for Per Cent of Butter Fat.

Date	Submitted by	Remarks
1917		
Aug. 29	H. Lekachman, Clyman	No foreign fat found.
Oct. 5	Bessemer Creamery Co., Bessemer, Mich	Fat 82.99%, moisture 13.72%.
Oct. 23	Gertrude Brinkman, Madison	No foreign fat found.
Oct. 29	W. D. Rose, Health Officer, Granton	No foreign fat found.
Oct. 29	F. C. Babbitt, Colburn	No foreign fat found.
Nov. 9	H. S. Parker, Galesville	No foreign fat found.
Nov. 27	Mrs. A. C. Withington, Baraboo	No foreign fat found.
Dec. 6	Farmers Store Co., Eau Claire	No foreign fat found.
Dec. 7	Nick Emrick, Waukesha	No foreign fat found.
Dec. 11	Borden's Condensed Milk Co., New London	Green spots in butter found to be copper, probably from storing cream in copper vat or kettle.

DAIRY PRODUCTS—Continued.

Tested for Foreign Fat or for Per Cent of Butter Fat.

Date	Submitted by	Remarks
1918		
Jan. 2	E. I. Steensland, Blanchardville	No foreign fat found.
Jan. 8	Dr. L. G. Gillick, Pulaski	Found to contain copper.
Jan. 24	L. D. Bailey, Richland Center	Fat 83.60%, moisture 13.08%.
Jan. 24	A. H. Mordt, Crandon	No foreign fat found.
Jan. 24	American Hotel, Tomah	No foreign fat found.
Jan. 29	H. Klueter, Madison	Fat 82.36%, moisture 13.47%.
Jan. 31	G. W. Krueger, Chelsea	No foreign fat found.
Feb. 4	H. W. Silvernale, Mukwonago	No foreign fat found.
Feb. 5	Carl Panten, La Crosse	No foreign fat found.
Feb. 11	Sheboygan Dairy Products Co., Madison	Fat 77.37%, moisture 17.37%.
Feb. 12	C. F. Smith, Appleton	No foreign fat found.
Feb. 12	A. Ruth & Sons, Sun Prairie	No foreign fat found.
Feb. 12	Edw. A. Babcock, Madison	No foreign fat found.
Feb. 14	Mrs. James Carolan, River Falls	No foreign fat found.
Feb. 18	John Wisth, Greenwood	Contained several green spots.
Mar. 2	P. M. L. Nelson, Hillsdale	No foreign fat found.
Mar. 12	J. H. Vint, Franksville	No foreign fat found.
Mar. 25	Mrs. M. C. White, Wabeno	No foreign fat found.
April 4	Wm. Ebersold, Wausau	No foreign fat found.
April 8	Hugo Richter, Wausau	No foreign fat found.
April 19	Wm. P. Hyland, Ashland	No foreign fat found.
April 29	Borge Halvorson, Northland	No foreign fat found.
June 4	Aug. Lutze, Sheboygan	Moisture 13.29%.
June 28	H. P. Fremstad, Pigeon Falls	No foreign fat found.

Cheese—Tested for Moisture and Found to Contain 40% or less of Moisture.

Date	Collected of or Submitted by	Manufacturer	Per cent moisture
1917			
July 9	M. B. Emmerich, Stratford	M. B. Emmerich, Stratford	35 3
July 9	Davis Dairy Co., Rewey	Davis Dairy Co., Rewey	36.75

July 10	Barreltown Cheese Factory, Mineral Point	Barreltown Cheese Factory, Mineral Point	37.8
July 13	*Joseph Spaeni, Monticello		27.86
July 17	Sugar Grove Cheese Factory, Plain	Sugar Grove Cheese Factory, Plain	39.2
July 17	Cold Spring Cheese Factory, Plain	Cold Spring Cheese Factory, Plain	35.0
July 17	Pleasant Valley Cheese Factory, Plain	Pleasant Valley Cheese Factory, Plain	36.0
July 17	Seigle Cheese Co., Grand Rapids	Seigle Cheese Co., Grand Rapids	37.8
July 17	Speich Bros., Pittsville	Speich Bros., Pittsville	36.9
July 18	Wilson Creek Cheese Factory, Spring Green	Wilson Creek Cheese Factory, Spring Green	36.4
July 18	Gruber Cheese Factory, Plain	Gruber Cheese Factory, ...Plain	35.0
July 21	Geo. Meyer, Stratford	Geo. Meyer, Stratford	35.9
July 23	*R. J. Ellsworth, Mineral Point		37.9
Aug. 16	Erwin Koepsel, Greenwood	Aug. Koepsel, Greenwood	38.6
Aug. 21	H. L. Klemme, Stratford	H. L. Klemme, Stratford	39.9
Aug. 24	Williams Creamery Co., Osseo	Williams Creamery Co., Osseo	38.8
Aug. 24	H. H. Solie, Osseo	H. H. Solie, Osseo	40.1
Aug. 24	H. H. Solie, Osseo	H. H. Solie, Osseo	38.6
Aug. 24	H. H. Solie, Osseo	H. H. Solie, Osseo	39.5
Sept. 18	Mrs. David Mandel, Owen	Mrs. David Mandel, Owen	39.45
Sept. 21	Auburndale Cooperative Cheese Co., Auburndale	Auburndale Cooperative Cheese Co., Auburndale	39.15
Sept. 22	Herman Guetschow, Marshfield	Herman Guetschow	38.95
Sept. 26	Erick Schwoek, Merrill	Erick Schwoek, Merrill	36.5
Sept. 27	Chas. Buelow, Merrill	Chas. Buelow, Merrill	37.1
Oct. 8	*Arthur Zwney, Ringle		39.9
Oct. 9	John Masang, Edgar	John Masang, Edgar	39.14
Oct. 23	Emil Ehlert, Thorp	Emil Ehlert, Thorp	37.11
Oct. 30	Gayhardt Olson, Abbotsford	Gayhardt Olson, Abbotsford	37.67
Nov. 21	*John Kirkpatrick, Richland Center		40.28
Nov. 22	Wisconsin Cheese Producers Federation, Plymouth	H. M. Scott, Waldo	34.00
Dec. 4	Frank L. Shumate, Bagley	Frank L. Shumate, Bagley	37.9
Dec. 12	H. Blanke Co., Plymouth	H. M. Scott (Bates Factory)	40.21
Dec. 12	H. Blanke Co., Plymouth	H. M. Scott	39.11
Dec. 12	Kiel Cheese & Butter Co., Kiel	Scott & Son (Meggers factory)	37.77
Dec. 18	*J. D. Cannon, New London	L. Kortbein, Clintonville	39.5
1918			
Jan. 19	A. F. Westphal, Fond du Lac	J. H. Wagner, Fond du Lac	39.21
Jan. 19	A. F. Westphal, Fond du Lac	F. A. Brueser, Oakfield, R. 28	40.31
Mar. 8	Blodgett Cheese Co., Greenwood	Albert Leibzeit, Greenwood	39.80
Mar. 8	Blodgett Cheese Co., Greenwood	Williams Creamery Co., Augusta	36.80
Mar. 18	Blodgett Cheese Co., Marshfield	H. E. Wordell, Granton	39.91
Mar. 18	Blodgett Cheese Co., Marshfield	Alma Center Cooperative Cheese Co., Alma Center	38.68
April 1	Fred Speich, Pittsville	Fred Speich, Pittsville	30.40
April 8	Paul Krueger, Ringle, R. 1	Paul Krueger, Ringle	39.32
April 8	Ludwig A. Kuhn, Ringle	Ludwig A. Kuhn, Ringle	39.11

DAIRY PRODUCTS—Continued.

Cheese—Tested for Moisture and Found to Contain 40% or less of Moisture—Continued.

Date	Collected of or Submitted by	Manufacturer	Per cent moisture
April 10	Fred Joss, Antigo	Fred Joss, Antigo	35.94
April 10	James W. Mattek, Deerbrook	James W. Mattek, Deerbrook	39.61
April 27	Dick Tiepkema, Vesper	Dick Tiepkema, Vesper	39.37
May 6	*Saukville Dairy Co., Saukville		38.44
May 10	C. E. Blodgett C. B. & Egg Co., Grand Rapids	Leo Kraut, Melrose	38.94
May 16	John Kirkpatrick Co., Lone Rock	Evergreen Cheese Factory, Lone Rock	37.23
May 16	John Kirkpatrick Co., Lone Rock	Evergreen Cheese Factory, Lone Rock	38.50
May 16	John Kirkpatrick Co., Lone Rock	Andrew Peterson, Dixon Union Factory, Lone Rock	37.80
May 16	John Kirkpatrick Co., Lone Rock	Fountain Hill Cheese Factory, Lone Rock	38.09
June 6	John Tesmer, Colby	John Tesmer, Colby	37.23
June 7	P. J. Schaefer Co., Marshfield	F. G. Speich, Pittsville	40.10
June 7	C. E. Blodgett C. B. & Egg Co., Marshfield	F. W. Zastrow, Greenwood	39.50
June 8	P. J. Schaefer Co., Marshfield	A. M. Johnson, Rozellville	39.19
June 8	P. J. Schaefer Co., Marshfield	A. C. F. Witt, Granton	39.97
June 14	Sheboygan Dairy Products Co., Madison	Otto Gruenke, Granton	39.09
June 25	*J. L. Jacquot, Appleton	Peter W. Hess, Trenton	39.24
June 25	*J. L. Jacquot, Appleton		33.80
			38.44
1917			
Aug. 24	Williams Creamery Co., Osseo	Williams Creamery Co., Osseo	42.1
Aug. 24	H. H. Solie, Osseo	H. H. Solie, Osseo	42.1
Nov. 12	G. H. Fuller & Son, Spring Lake	Geo. Blumenstein, Spring Lake	40 45
Nov. 12	Geo. Blumenstein, Spring Lake	Geo. Blumenstein, Spring Lake	50.43
Nov. 21	Ed. Walther, Cuba City	Ed Walther, Cuba City	41.62
Nov. 21	R. C. Walther, Platteville	R. C. Walther, Platteville	41.30
Nov. 22	Davis Bros. Cheese Co., Plymouth	C. E. Wilcox, New Holstein	43.49
Nov. 22	Davis Bros. Cheese Co., Plymouth	C. E. Wilcox, New Holstein	41.46
Nov. 23	Dow Cheese Co., Plymouth	A. T. Huibregtse, Hingham	43.40
Dec. 18	*J. D. Cannon, New London	Wm. Stanton, New London	44.2
Dec. 18	*J. D. Cannon, New London	Wm. Thurk, Sugar Bush	40.6
Dec. 18	*J. D. Cannon, New London	Gust Wagge, Clintonville	40.8
Dec. 18	*J. D. Cannon, New London	Orin Gettlinger, Bear Creek	43.9
Dec. 27	*John Graves, Sun Prairie		41.5

1918			
Jan. 19	A. F. Westphal, Fond du Lac	J. J. Hettwer, Fond du Lac	42.44
Jan. 19	A. F. Westphal, Fond du Lac	J. J. Hettwer, Fond du Lac	42.38
Feb. 1	Winnebago Cheese Co., Fond du Lac	G. A. Wegner, Van Dyne	42.87
Feb. 1	Winnebago Cheese Co., Fond du Lac	G. A. Wegner, Van Dyne	43.46
Feb. 9	Hanson Co., Neenah	Oswald Schneider, Jr., Allenville	43.5
Feb. 9	Fred Stank, Rozelleville	Fred Stank, Rozelleville	41.56
Feb. 9	Fred Stank, Rozelleville	Fred Stank, Rozelleville	42.10
Feb. 22	John Wuethrich, Greenwood	John Wuethrich, Greenwood	42.67
Feb. 28	James Mallman, Sheboygan	C. E. Darnieder, St. Cloud	43.30
Feb. 28	James Mallman, Sheboygan	C. E. Darnieder, St. Cloud	43.75
Mar. 8	Pauly & Pauly, Green Bay	Saukville Dairy Co., Saukville	42.38
Mar. 8	Blodgett Cheese Co., Greenwood	John Wuethrich, Greenwood	40.95
Mar. 8	Blodgett Cheese Co., Greenwood	John Wuethrich, Greenwood	42.33
Mar. 8	Blodgett Cheese Co., Greenwood	Williard Cooperative Dairy Co., Willard	40.50
Mar. 18	Blodgett Cheese Co., Marshfield	M. L. Treichel, Neillsville	43.47
Mar. 18	North Hewitt Cheese Co., Marshfield	North Hewitt Cheese Co., Marshfield	40.69
Mar. 26	P. J. Schaefer Co., Marshfield	Paul Ott, Wausau	40.57
Mar. 28	Sheboygan County Cheese Co., Sheboygan	W. O. Stanton, New London	41.32
Mar. 29	Pauly & Pauly Cheese Co., Green Bay	Saukville Dairy Co., Saukville	43.21
Mar. 29	C. A. Straubel, Green Bay	W. C. Falck, DePere	43.07
Mar. 29	C. A. Straubel, Green Bay	W. C. Falck, DePere	41.86
Mar. 29	C. A. Straubel, Green Bay	Jule Suidzinski, Denmark, R. 2	41.35
April 13	Harry Radtke, Bear Creek	Harry Radtke, Bear Creek	43.53
April 27	F. W. Zastrow, Greenwood	F. M. Zastrow, Greenwood	42.00
May 6	*William Winder, Richland Center	.....	48.40
May 6	*William Winder, Richland Center	.....	48.2
May 16	John Kirkpatrich Co., Lone Rock	Evergreen Cheese Factory, Lone Rock	40.03
May 16	John Kirkpatrich Co., Lone Rock	Evergreen Cheese Factory, Lone Rock	40.34
May 16	John Kirkpatrich Co., Lone Rock	Evergreen Cheese Factory, Lone Rock	41.14
May 31	F. W. Nussbaumer, Waldo	F. W. Nussbaumer, Waldo	43.46
June 13	J. L. Breher, Sheboygan Falls	J. L. Breher, Sheboygan Falls	44.95
June 14	J. L. Breher, Sheboygan Falls	J. L. Breher, Sheboygan Falls	42.30
June 25	*J. L. Jacquot, Appleton	Anona Cheese Co., Appleton	42.35
June 25	*J. L. Jacquot, Appleton	Anona Cheese Co., Appleton	42.34

* Submitted by.

DAIRY PRODUCTS—Continued.

Cream from City Supply—Not Standard.

Date	Bought of or Submitted by	Per cent milk fat
1917		
Oct. 1	*State Cooperative Laboratory, Superior	
1918		
Jan. 17	Irving Melbourn, Dodgeville	14.4
Jan. 25	Peter Weiskircher, Dodgeville	12.00
Jan. 29	Peter Klofensten, Ladysmith	13.5
Feb. 20	K. E. Carmen, Hudson	16.91
Feb. 20	Virtue Sisters, Hudson	15.55
Feb. 20	Chafin Hall Hotel, Hudson	17.3
Feb. 27	Pfleger Bros., Racine	9.4
Mar. 19	G. C. Taylor & Son, Oshkosh	15.25
Mar. 19	A. Wendtland, Oshkosh	12.25
April 3	J. Sherbon, Cumberland	14.27
April 10	†E. H. Holzer, Oshkosh	13.2
April 15	H. R. Roethlieberger, Oshkosh	14.15
April 29	Marshfield Dairy Co., Marshfield	15.5
May 2	F. Champean & Son, Green Bay	13.5

* Submitted sample, tested for preservatives; none found.
† Submitted samples.

DAIRY PRODUCTS—Continued.

Milk Delivered at Cheese Factories or Creameries—Standard.

Date	Sold or Delivered by	Delivered to
1917		
Aug. 13	F. J. Hosenjager, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 13	Chas. Gressel, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 14	F. H. Hosenjager, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 14	Chas. Gressel, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 15	F. H. Hosenjager, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 15	Chas. Gressel, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 16	F. H. Hosenjager, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 16	Chas. Gressel, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 17	F. H. Hosenjager, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 17	Chas. Gressel, Maplewood	Van Camp Packing Co.'s Condensery.
Aug. 24	"Composite sample"	H. H. Solie, Osseo.
Sept. 18	Edwin Jones, Mineral Point	Rosendale Cheese Factory.
Sept. 18	Orville Hughes, Mineral Point	Rosendale Cheese Factory.
Sept. 18	John E. Davis, Mineral Point	Rosendale Cheese Factory.
Sept. 18	Will Elliman, Mineral Point	Rosendale Cheese Factory.
Sept. 18	Chas. Czirr, Mineral Point	Rosendale Cheese Factory.
Sept. 19	Albert Zweifel, Belleville	Zweifel-Zimmermann Factory.
1918		
Jan. 21	Vincent Thom, Monroe	Thom's Place.
Jan. 21	Vincent Thom, Monroe	Thom's Place.
Jan. 21	Vincent Thom, Monroe	Thom's Place.
Jan. 25	Andrew Olsen, Dodgeville	Melbourn Dairy.
Feb. 11	"Composite sample"	Eau Claire Creamery, Cameron.
Feb. 12	"Composite sample"	Eau Claire Creamery, Chetek.
Mar. 21	Lewis Larsen, Superior	Russell Creamery.
April 16	John Fetzer, Hartford	South Star Cheese Factory.

DAIRY PRODUCTS—Continued.

Milk—Not Standard. Delivered to Cheese Factories or Creameries.

Date	Sold or Delivered by	Sold or delivered to	Sp. G. 15.5°	Per cent milk fat	Per cent total solids	Per cent solids not fat	I. R. of whey 20° C.	Remarks
1917								
July 17	F. G. Hemling, Fall River	Hardstone Cheese Factory	1.0320	2.5	11.24	8.74	40.1	Skimmed.
July 18	William Thurke, Kewaskum	Wayne Cheese Factory	.....	.....	.....	.....	37.0	Watered.
July 24	A. W. Huebner, Reeseville	Cold Spring Cheese Factory	1.0291	2.95	10.99	8.04	36.8	Badly watered.
July 24	Chas. Riege, Reeseville	Cold Spring Cheese Factory	1.0289	3.10	10.98	7.88	39.35	
July 24	Ben Kohn, Reeseville	Cold Spring Cheese Factory	1.0297	2.95	11.01	8.06	37.6	Badly watered.
Aug. 12	Barner Kritziger, Reeseville	Cold Spring Cheese Factory	1.0300	3.65	11.83	8.18	38.7	
Aug. 14	Wm. Vandenberg, New London	Bordens Condensery	1.0327	2.25	10.93	8.68	.....	Skimmed.
Aug. 22	Orris McFarlane, Tigerton	Spring Brook Cheese Factory	1.0346	2.55	11.60	9.35	.....	Badly skimmed.
Sept. 20	Ole Munson, Ferryville	Indian Head Trail Cheese Factory	1.0232	1.65	7.90	6.25	32.8	Badly watered.
Sept 21	Grover Wilson, Belleville	Zweifel-Zimmermann Factory	1.0231	2.77	9.19	6.42	33.1	Badly watered.
Sept. 29	O. Danielson, Verona	Badger State Cheese Factory	1.0196	3.07	8.84	5.77	31.75	Badly watered.
Oct. 4	Fred Fach, Marshfield	Rock Cheese Factory	1.0191	2.40	7.43	5.03	29.25	Badly watered.
Oct. 5	T. Lundeberg, Cottage Grove	Ridge Cheese Factory	1.0268	3.50	10.76	7.26	37.45	Badly watered.
Oct. 5	Art. Zimbal, Sheboygan	Sheboygan Dairy Products Company	1.0270	3.35	10.45	7.10	36.6	Watered.
Oct. 5	D. Depagter, Sheboygan	Sheboygan Dairy Products Company	1.0260	3.3	10.39	7.09	35.5	Watered.
Oct. 5	John Payne, Sheboygan	Sheboygan Dairy Products Company	1.0240	3.3	9.94	6.64	34.15	Watered.
Nov. 7	G. B. England, Mt. Horeb	Rock Hill Cheese Factory	1.0266	3.20	10.58	7.38	37.1	Badly watered.
Dec. 3	Ray Leack, Hortonville	Hortonville Cheese Factory	1.0258	3.65	10.49	6.84	35.45	Badly watered.
Dec. 19	Sam Zimmermann, Belleville	Zweifel-Zimmermann Factory	1.0291	2.93	10.62	7.69	40.0	
Dec. 19	Grover Wilson, Belleville	Zweifel-Zimmermann Factory	1.0288	3.60	11.61	8.01	40.6	
Dec. 19	Fred Zwicky, Belleville	Zweifel-Zimmermann Factory	1.0293	3.55	11.57	8.02	41.7	
Dec. 19	B. Becker, Belleville	Zweifel-Zimmermann Factory	1.0296	3.57	11.77	8.22	.....	
1918								
Jan. 12	Joe Dragula, Stevens Point	Albert Higgins	1.0234	3.93	10.46	6.53	33.3	Badly watered.
Feb. 7	Thos. Paulus, Prairie du Chien	Viola Creamery	1.0199	2.35	7.86	5.46	32.9	Badly watered.
Feb. 26	M. Ciesielczyk, Leeman	Briarton Cheese Factory	1.0315	2.65	10.95	8.30	40.3	

Feb. 26	M. Siemanhouski, Leeman	Briarton Cheese Factory	1.0328	2.50	11.31	8.81	41.65	
Feb. 26	M. Jaskolski, Rose Lawn	Briarton Cheese Factory	1.0286	2.00	9.60	7.60	38.9	Watered.
Mar. 5	Peter Woeyer, Hartford	Maple Hill Cheese Factory	1.0298	3.30	11.29	7.99	41.75	
Mar. 13	Hubert Voss, Mayville	Perfection Creamery	1.0247	2.67	9.25	6.65	34.55	Badly watered.
Mar. 13	Frank Berndt, Mayville	Perfection Creamery	1.0209	2.83	8.49	5.66	32.25	Badly watered.
Mar. 20	L. Karsky, Superior	Russell Creamery	1.0325	2.70	11.48	8.78	.....	Skimmed.
Mar. 21	Mike Lenigro, Foxboro	Russell Creamery	1.0257	3.30	10.57	7.27	38.55	Watered.
Mar. 21	Joe Haidacker, Foxboro	Russell Creamery	1.0275	3.77	11.71	7.94	39.85	Watered.
Mar. 22	John Kloph, Plymouth	Otter Creek Factory	1.0313	2.50	10.67	8.17	.....	
Mar. 25	Frank Skaya, Marshfield	McMillan Cheese Factory	1.0319	2.90	11.51	8.61	.....	Skimmed.
Mar. 26	Mathew McDonald, Randolph	Shady Lane Cheese Factory	1.0258	3.00	10.06	7.06	26.60	Watered.
Mar. 28	Ed. O'Connor, Mosinee	Moon Cheese Factory	1.0314	2.83	11.20	8.37	.....	
April 3	J. E. Watson, Oconomowoc	Mapleton Cheese Factory	1.0277	3.20	10.57	7.35	.....	Watered.
April 9	Frank Gallenberg, Antigo	F. J. Buss Cheese Factory	1.0255	2.65	9.52	6.87	36.8	Badly watered.
April 9	Joe Cejka, Antigo	F. J. Buss Cheese Factory	1.0289	2.50	10.26	7.76	.....	
April 9	Ed Hruska, Antigo	F. J. Buss Cheese Factory	1.0296	3.00	10.96	7.96	.....	
April 9	H. Schroeder, Hartford	Northwest Cheese Factory	1.0298	3.00	10.77	7.77	.....	
April 10	O. Mountain, Hartford	Thompson's Cheese Factory	1.0307	3.05	11.44	8.39	.....	
April 10	D. Courtney, Hartford	Thompson's Cheese Factory	1.0290	2.65	10.54	7.89	.....	
April 10	H. A. Malloye, Hartford	Thompson's Cheese Factory	1.0295	2.83	11.12	7.95	.....	
April 10	R. C. Daly, Hartford	Thompson's Cheese Factory	1.0299	2.55	10.54	7.99	.....	
April 10	D. E. Buckley, Hartford	Thompson's Cheese Factory	1.0301	2.90	10.93	8.03	.....	
April 10	Geo. Kennally, Hartford	Thompson's Cheese Factory	1.0301	2.73	10.80	8.07	.....	
April 16	J. O'Connors, Hartford	South Star Cheese Factory	1.0287	3.00	10.58	7.58	.....	
April 16	Dennis Grady, Hartford	South Star Cheese Factory	1.0186	2.20	7.40	5.20	32.0	Watered.
April 16	Nic Pfragner, Hartford	South Star Cheese Factory	1.0271	3.20	10.48	7.28	38.25	Watered.
April 16	Peter Mayer, Hartford	South Star Cheese Factory	1.0295	2.78	10.59	7.81	40.0	
April 29	Mr. Feller, Verona	Montrose Cheese Factory	1.0284	2.80	10.28	7.48	.....	
May 4	Geo. Pindlewski, Junction City	Junction Cheese Factory	1.0299	2.85	10.53	7.75	38.85	
May 14	A. H. Metzger, Beaver Dam	F. Jung's Cheese Factory	1.0279	2.45	9.70	7.25	38.8	Watered.

DAIRY PRODUCTS—Continued.

Samples Taken at Cheese Factories, Creameries, and City Herd Samples Collected by Inspectors in Connection with Milk Supplies, Sent to Laboratory for Analysis.

Date	From Herd of	Sp. G. 15.5°	Per cent milk fat	Per cent total solids	Per cent solids not fat	I. R. of whey at 20° C.
1917						
July 17	A. Bickenstock, Fall River	1.0306	3.2	11.77	8.57	39.65
July 18	William Thurke, Kewaskum	.....	.....	.....	.....	39.65
July 19	William Thurke, Kewaskum	.....	.....	.....	.....	38.65
July 25	A. W. Huebner, Reeseville	.....	.....	.....	.....	38.0
July 25	Barney Kritiziger, Reeseville	1.0298	3.3	11.42	8.12	39.65
July 26	Chas. Riege, Reeseville	1.0303	3.7	12.33	8.63	41.0
July 26	Ben Kohn, Reeseville	1.0288	3.25	11.18	7.93	38.8
July 30	John Ferpestra, Sparta	1.0336	3.90	12.96	9.06	42.6
Aug. 13	Wm. Vandenberg, New London	1.0313	3.30	11.63	8.33	.....
Aug. 14	Orris McFarlane, Tigerton	1.0308	5.45	13.97	8.52	.....
Aug. 22	Ole Munson, Ferryville	1.0319	4.25	13.39	9.14	43.85
Sept. 24	Grover Wilson, Belleville	1.0304	4.10	12.77	8.67	40.9
Sept. 25	C. Danielson, Verona	1.0300	3.60	12.10	8.5	39.1
Oct. 5	Art. Zimbal, Sheboygan	1.0310	4.4	13.41	9.01	40.15
Oct. 8	John Fayne, Sheboygan	1.0290	4.4	12.40	8.00	38.55
Oct. 9	Jacob Depagter, Sheboygan	1.0311	4.4	13.25	8.85	40.0
Nov. 9	G. B. England, Mt. Horeb	1.0291	4.45	12.76	8.14	41.1
Nov. 10	G. B. England, Mt. Horeb	1.0297	4.30	13.01	8.29	42.2
Dec. 3	Ray Leach, Hortonville	1.0307	4.40	12.90	8.50	40.25
Dec. 20	Grover Wilson, Belleville	1.0306	4.10	12.62	8.52	42.0
Dec. 21	Grover Wilson, Belleville	1.0312	4.35	13.16	8.81	42.6
Dec. 21	Fred Zwicky, Belleville	1.0284	5.55	14.05	8.5	41.25
Dec. 22	Sam Zimmermann, Belleville	1.0310	3.60	12.13	8.53	41.75
Dec. 26	Borden & Glynn, Milton	.....	4.6	.....	.....	.....
1918						
Jan. 30	John Drehmel, Eden	1.0358	5.1	14.53	9.43	41.85
Jan. 31	J. J. Hickey, Rhinelander	.....	4.55	13.83	9.28	.....
Feb. 7	Jos. Lanka, Prairie du Chien	1.0255	3.45	10.52	7.07	38.9

Feb. 20	Geo. Eggett, Loyal	1.0312	3.1	11.32	8.22	40.35
Feb. 21	Geo. Eggett, Loyal	1.0310	3.1	11.18	8.08	42.0
Feb. 26	M. Siemanhouski, Leeman	1.0287	4.10	12.28	8.18	41.0
Feb. 28	M. Zaskolski, Rose Lawn	1.0299	3.50	12.02	8.52	42.4
Mar. 14	Hubert Voss, Mayville	1.0330	3.73	12.23	8.5	40.6
Mar. 14	Frank Berndt, Mayville	1.0301	4.15	12.23	8.08	41.15
Mar. 22	John Kloph, Plymouth	1.0296	3.13	11.10	7.97	.....
Mar. 25	Frank Skaya, Marshfield	1.0317	3.50	12.06	8.56	42.35
Mar. 26	Mathew McDonald, Randolph	1.0310	3.87	12.40	8.53	41.0
Mar. 28	Ed O'Connor, Mosinee	1.0310	2.88	10.98	8.10	.....
Mar. 28	C. L. Brown, Blue River	1.0287	2.53	10.22	7.69	39.0
April 4	J. E. Watson, Oconomowoc	1.0315	3.70	12.28	8.58	.....
April 9	L. Karsky, Superior	1.0311	3.95	12.42	8.57	.....
April 9	Mike Linegro, Foxboro	1.0302	3.90	12.40	8.50	45.65
April 9	Joe Hardacher, Foxboro	1.0314	3.80	12.41	8.93	45.6
April 9	Frank Gallenberg, Antigo	1.0287	3.00	10.71	7.71	41.0
April 10	Joe Cejka, Antigo	1.0288	2.83	10.28	7.45	.....
April 10	Ed Hruska, Antigo	1.0290	3.10	10.83	7.73	.....
April 16	Jeremiah O'Connor, Hartford	1.0285	3.15	10.99	7.84	.....
April 16	Dennis Grady, Hartford	1.0316	3.15	11.81	8.66	41.55
April 17	John Fetzer, Hartford	1.0317	3.35	11.54	8.19	.....
April 17	Peter Meyer, Hartford	1.0305	3.25	11.28	8.03	40.8
April 17	Nick Pfragner, Hartford	1.0310	3.85	12.35	8.5	41.2
May 6	Geo. Pinollewski, Junction City	1.0314	3.85	12.55	8.70	41.0

City Milk—Standard.

Date	Purchased of	Date	Purchased of
1918		1918	
Mar. 16	Kleinheinz Dairy Co., Wausau.	Mar. 18	Kleinheinz Dairy Co., Wausau.
Mar. 17	Kleinheinz Dairy Co., Wausau.	April 16	Chas. Garfott, Cross Plains.

DAIRY PRODUCTS—Continued.

City Milk—Not Standard.

Date	Delivered by	City	Sp. G. 15.5°	Per cent milk fat	Per cent total solids	Per cent solids not fat	I. R. of whey 20° C.	Remarks
1917								
Sept. 19	F. Shunk, Sharon	Sharon	1.0252	3.20	10.13	6.93	36.7	Watered.
Sept. 26	Geo. Burmeister, Waukesha	Waukesha	1.0304	2.50	10.56	8.06	39.5	Below standard in fat and solids not fat.
Oct. 23	John Gilbert, Kennan	Kennan		0.3				Skim milk served at a hotel for milk.
Dec. 27	Albert Garville, Belleville	Belleville	1.0300	3.15	11.23	8.08		Below standard in solids not fat.
1918								
Jan. 2	A. Eichenberger, Monroe	Monroe	1.0275	3.5	11.13	7.63		Watered.
Jan. 10	Otto Olson, Mt. Horeb	Mt. Horeb	1.0331	2.85	11.69	8.84		Skimmed.
Jan. 12	E. R. DeWitt, Sparta	Sparta	1.0371	2.91	12.29	9.39		Skimmed.
Jan. 17	Irving Melbourn, Dodgeville	Dodgeville	1.0282	3.00	10.70	7.70	38.0	Below standard in solids not fat.
Feb. 27	Fred Leuzke, Racine	Waukesha	1.0323	2.33	10.95	8.62	39.9	Skimmed.
Feb. 27	Fred Horn, Racine	Waukesha	1.0287	3.43	11.17	7.74	38.8	Below standard in solids not fat.
Jan. 17	Geo. Burmeister, Waukesha	Monroe	1.0304	3.57	11.67	8.10	45.5	Below standard in solids not fat.
Jan. 17	D. H. Carstens, Waukesha	Monroe	1.0302	3.70	11.98	8.28	41.67	Below standard in solids not fat.
Jan. 21	A. Eichenberger, Monroe	Rhinelander	1.0274	2.5	9.96	7.46		Watered.
Jan. 22	Joseph Steiner, Monroe	Eden	1.0269	3.6	10.42	6.82	35.8	Watered.
Jan. 29	J. J. Hickey, Rhinelander	Rhinelander		2.27	10.24	7.97		Watered.
Jan. 30	John Drehmel, Eden	Waukesha	1.0269	3.45	10.69	7.24	36.0	Watered.
Jan. 31	J. J. Hickey, Rhinelander	Waukesha	1.0259	3.5	10.81	7.31	36.55	Watered.
Feb. 5	John Damm, Waukesha	Loyal	1.0320	2.5	10.90	8.4	42.0	Skimmed.
Feb. 5	John Damm, Waukesha	Kenosha	1.0278	2.87	10.50	7.63		Below standard in fat and solids not fat.
Feb. 19	Geo. Eggett, Loyal	Kenosha	1.0257	3.27	10.49	7.22		Below standard in fat and solids not fat.
Feb. 26	M. Bieber, Pleasant Prairie	Kenosha	1.0304	2.75	11.19	8.44		Below standard in fat.
Feb. 26	Schultz Bros., Pleasant Prairie	Kenosha	1.0210	2.33	8.31	5.98		Watered.
Feb. 26	Frank Schultz, Pleasant Prairie	Racine	1.0227	3.25	9.99	6.74	33.65	Watered.
Feb. 27	G. Topel, Kenosha	Racine	1.0289	3.05	11.16	8.11	39.0	Below standard in solids not fat.
Feb. 27	Kreuzke Bros., Racine	Racine	1.0303	2.90	11.20	8.30	40.4	Below standard in fat and solids not fat.
Feb. 27	J. Vanderhest, Racine	Racine	1.0248	3.30	10.54	7.24	37.0	Watered.
Feb. 27	Peiffer Bros., Racine	Racine	1.0330	2.80	11.76	8.96	41.8	Skimmed.
Feb. 28	C. A. Brainard & Co., Boscobel	Boscobel	1.0288	2.35	10.11	7.86	38.85	Watered.
Mar. 1	A. Brown, Boscobel	Boscobel	1.0286	3.90	12.08	8.18	39.65	Below standard in solids not fat.

Mar. 1	A. Brown, Boscobel	Boscobel	1.0283	3.23	11.08	7.88	39.0	Below standard in solids not fat.
Mar. 7	Paul Held, Prairie du Sac	Prairie du Sac	1.0285	2.98	10.74	7.76	39.75	Below standard in fat and solids not fat.
Mar. 12	Fred Luezke, Racine	Racine	1.0263	3.00	10.08	7.08	36.75	Watered.
Mar. 12	Fred Luezke, Racine	Racine	1.0263	2.70	9.46	6.76	36.25	Watered.
Mar. 12	Fred Luezke, Racine	Racine	1.0263	3.55	10.88	7.33	36.7	Watered.
Mar. 12	Jake Heuschel, Kiel	Kiel	1.0297	2.48	10.41	7.93	39.0	Below standard in fat and solids not fat.
Mar. 13	Fred Jeuzke, Racine	Racine	1.0282	3.30	10.72	7.42	38.5	Below standard in solids not fat.
Mar. 13	Aug. Broshat, Racine	Racine	1.0309	2.80	11.06	8.26	40.5	Below standard in fat and solids not fat.
Mar. 13	Henry Vanswol, Racine	Racine	1.0321	2.53	11.25	8.75	40.6	Skimmed.
Mar. 18	Russell Creamery, Superior	Superior	.....	.....	.....	.....	36.4	I. R. reading shows watering.
Mar. 20	C. L. Porter, Lone Rock	Lone Rock	1.0298	3.15	11.20	8.05	43.85	Below standard in solids not fat.
Mar. 22	R. Hempton, Blue River	Blue River	1.0274	3.00	10.40	7.40	40.00	Below standard in solids not fat.
Mar. 28	C. L. Brown, Blue River	Blue River	1.0281	3.47	11.15	7.68	39.0	Below standard in solids not fat.
April 16	M. Mahoney, Ashland	Ashland	1.0323	2.40	10.99	8.59	.....	Skimmed.

Ice Cream—Standard.

Date	Bought of or Submitted by	Manufacturer
1917		
July 31	Ernest Berbes, Rice Lake	Rice Lake Creamery Co., Rice Lake.
Aug. 5	*Board of Health, Superior	Palace of Sweets.
Aug. 6	*Board of Health, Superior	Russell.
Aug. 6	*Board of Health, Superior	Graham.
Aug. 6	*Board of Health, Superior	Hunt & Sullivan.
Aug. 26	J. H. McCrillis, Marshfield	J. H. McCrillis, Marshfield.

* Submitted samples.

DAIRY PRODUCTS—Continued.

Ice Cream—Not Standard.

Date	Bought of	Manufacturer	Per cent fat
1917			
July 31	G. O. Gustafson, Rice Lake	G. O. Gustafson, Rice Lake	11.94
Aug. 13	T. H. Delbeck, Camp Douglas	Luick, Milwaukee	13.01
Aug. 13	Frank Hammond, Camp Douglas	Central Wisconsin Creamery Co., Reedsburg	10.13
Aug. 13	Young & Bartlette, Camp Douglas	American Ice Cream Co., Madison	11.38
Aug. 13	G. R. Getts, Camp Douglas	Eau Claire Creamery Co., Eau Claire	9.71
Aug. 13	Mrs. H. Roddy, Camp Douglas	Mansfield-Caughey Co., Madison	10.58
Aug. 13	F. S. Dougherty, Camp Douglas	F. A. Rhyme, Portage	7.66
Aug. 13	Frank Althans, Camp Douglas	Rothe Ice Cream Co., New Lisbon	11.00
Aug. 14	2nd Wis. Regimental Canteen, Camp Douglas	Eau Claire Creamery Co., Eau Claire	10.01
Aug. 14	T. H. Delbeck, Camp Douglas	Ruebensaal Bros., Reedsburg	10.115
1918			
April 5	E. H. Holzer, Oshkosh	E. H. Holzer, Oshkosh	8.04

Submitted Samples.

Forty samples of cream and 415 samples of milk were submitted either for the purpose of checking up Babcock determinations which had been made by factory men on these samples, or to detect adulteration.

DRUGS.

Spiritus Camphorae (Spirit of Camphor).

The latest edition of the U. S. Pharmacopoeia requires that spirit of camphor be made by dissolving camphor in alcohol and further requires that 100 ccs. of camphor contain not less than 9.5 grams nor more than 10.5 grams of camphor.

Spirit of Camphor—Standard.

Date	Purchased of	Date	Purchased of
1917			
July 13	Wm. Haarlow, Spring Valley.	Oct. 4	Hager's Pharmacy, Cassville.
Aug. 23	Evan J. Hughes, Reeseville.	Nov. 6	Dieter Bros., Richland Center.
Aug. 24	Ihde's Drug Store, Gresham.	1918	
Sept. 14	Vogt's Pharmacy, Linden.	Mar. 21	Roy A. Fortun, Whitehall.
Sept. 19	H. A. Robinson, Platteville.		

Spirit of Camphor—Not Standard.

Date	Purchased of	Grams of camphor per 100 ccs.	Date	Purchased of	Grams of camphor per 100 ccs.
1917					
June 19	Sweet's Pharmacy, Roberts	6.62	Nov. 6	Clark's Drug Store, Richland Center	11.11
July 23	F. W. Hannon, Luxemburg	4.01	Nov. 14	R. J. Slosson, Bruce	5.98
Aug. 28	Fischer Pharmacy, Plymouth	8.76			
Oct. 3	Vogt Bros., Glen Haven	8.33	1918		
			Mar. 25	D. L. Potter, Muscoda	9.10

DRUGS.

Tincture of Iodi (Tincture of Iodine).

Tincture of iodine, according to the latest edition of the U. S. Pharmacopoeia, is a solution of 7 grams of iodine and 5 grams of potassium iodide in sufficient alcohol to make 100 ccs. of the finished product, and when titrated with tenth normal sodium thio-sulphate, shall contain not less than 6.5 grams nor more than 7.5 grams of iodine per 100 ccs. and not less than 4.5 grams nor more than 5.5 grams of potassium iodide per 100 ccs.

Tincture of Iodine—Standard.

Date	Purchased of	Date	Purchased of
1917			
June 21	Casper Klunke, Kewaskum.	Aug. 28	Fischer Pharmacy, Plymouth.
July 13	Wm. Haarlow, Spring Valley.	Sept. 14	Vogt's Pharmacy, Linden.
Aug. 23	Evan J. Hughes, Reeseville.	Nov. 2	Ralph Lowell, Little Chute.

Tincture of Iodine—Not Standard.

Date	Purchased of	Grams of iodine per 100 ccs	Grams of potassium iodide per 100 ccs.	Date	Purchased of	Grams of iodine per 100 ccs.	Grams of potassium iodide per 100 ccs.
1916				1917			
Nov. 11	Pioneer Drug Store, Hayward.....	5.65	8.04	July 23	F. W. Hannon, Luxemburg.....	5.79	3.428
				July 31	G. R. Evans, Kendall.....	4.23	4.81
				Aug. 24	Ihde's Drug Store, Gresham.....	5.01	5.154

Miscellaneous Drugs.

Date	Bought for	Bought of	Remarks
1917			
Mar. 1	Acid Acetylo Salic	Look's Drug Store, New London	Gives a slightly positive test for salycylic acid.
July 20	Sweet Oil	Philipp Fischer, Newburg	Cotton seed oil sold for sweet oil.
Aug. 1	Sweet Oil	A. Schickert, Hubertus	Standard.
Aug. 24	Sweet Oil	Farmers Mercantile Co., No. 2, Allenton	Standard.
Sept. 18	Sweet Oil	C. S. Heimstreet, Lake Mills	Standard.

Miscellaneous Drugs—Submitted Samples.

Date	Bought for	Submitted by	Remarks
1917			
July 1	Tincture of iodine	Chas. G. Ford, Genoa Junction	Standard.
July 17	Sweet spirits of nitre	H. H. Hackbarth, Mosinee	Below standard.
Sept. 11	Mercury bichloride tablets	R. R. Crosby, Sharon	Claimed to be 5 grains tablets; found to be 3½ grains.
1918			
Jan. 3	Sodium benzoate	H. C. Schrank Co., Milwaukee	Standard.
Jan. 18	Paregoric	Edward Williams, Madison	Tested for percentage of camphor; found to be standard.

FLAVORS AND FLAVORING EXTRACTS.

Lemon Extract—Standard.

Date	Purchased of or Submitted by	Date	Purchased of or Submitted by
1917		Oct. 4	Grimm Bros., Cassville.
May 9	A. V. Buth, Sullivan.	1918	
June 14	J. A. Kircher, Barton.	June 28	*State Board of Control, Madison.
July 3	T. O. Thompson, Wilson.	June 28	*State Board of Control, Madison.
Aug. 2	J. Yogerst & Co., Richfield.		
Sept. 6	A. J. Edminster Co., Cornell.		

* Submitted by.

Lemon Extract—Not Standard or Misbranded.

Date	Labeled	Purchased of	Manufacturer or Jobber	Remarks
1916				
Oct. 26	Extract Lemon	Chicago Burlington Tea Co., Burlington.	Louise Weinberg, Burlington.....	Misbranded in that contents was not stated.
1917				
May 2	Terpeneless Half Strength Lemon Extract.	New Department Store, Star Prairie.	Minnesota Mercantile Co., Stillwater, Minn.	Below standard. Misbranded in that contents was not stated.
May 9	Terpeneless Lemon Flavor. One-Quarter Standard Strength.	B. A. Pieser, Turtle Lake.....	Green-DeLaittre Co., Minneapolis..	Below standard.
July 2	Extract of Lemon. Contents 132.165 ccs.	W. T. Turner, Woodville.....	Henrich Chemical Co., Minneapolis	Misbranded. Found to be short measure.
July 31	Extract of Lemon. Contents 117.48 ccs.	C. J. Strand, Eau Claire.....	Dr. Ward Medical Co., Winona....	Misbranded. Found to be short measure. Below standard in oil of lemon.
Aug. 7	Dr. Codman's Pure Extract of Lemon.	A. Lindflott, Blanchardville.....	The Codman Extract and Medicine Co., Janesville.	Misbranded in that contents was not stated. Below standard.

Aug. 13	Lemon Flavoring	Farmers Produce Co., Chippewa Falls.	Foster Bros. Co., Eau Claire.....	Not standard. Contains no oil of lemon.
Aug. 13	Lemon Flavoring	Wm. Jones, Jim Falls.....	Foster Bros. Co., Eau Claire.....	Not standard. Contains no oil of lemon.
Aug. 13	.....	Otto Nelson, Marinette.....	Aretic Mfg. Co., Grand Rapids, Mich.	Found to be short measures.
Sept. 14	Pure Honest Quality Lemon.	Aug. H. Albrecht, Lake Mills....	Arbuckle Bros., Chicago.....	Below standard in oil of lemon. Misbranded in that contents was not correctly stated.
Oct. 10	Pure Extract of Lemon...	Jos. E. Graf, La Crosse.....	Frommes Chemical Co., La Cross	Below standard in lemon oil.
Nov. 28	Lemon Extract Terpeneless.	Farmers Produce Co., Chippewa Falls.	Utility Specialty Mfg. Co., Chippewa Falls.	Below standard.
1918				
April 11	Lemon Extract	O. W. Olson & Sons, Hixton....	H. T. Lange Co., Eau Claire.....	Misbranded in that net contents was not stated. Below standard in lemon oil.

Vanilla Extracts and Compounds—Standard.

Date	Bought for	Bought of
1917		
May 22	Extract of Vanilla.....	The Department Co., Stoughton.
Aug. 13	Vantella	Wm. Jones, Jim Falls.
Sept. 13	Vanilla Extract	Thorp Mercantile Co., Thorp.
Sept. 14	Vanilla Extract	H. C. Protter, Manawa.
Sept. 19	Vantella	The Golden Rule, Bloomer.
Nov. 17	Extract of Vanilla.....	P. Engeldinger & Son, Durand.

FLAVORS AND FLAVORING EXTRACTS—Concluded.

Vanilla Extracts and Compounds—Not Standard or Misbranded.

Date	Bought for	Labeled	Bought of	Remarks
1917				
May 29	Vanilla	Bengal Compound Flavoring of Vanilla with Coumarin and Vanillin.	James Birmingham, Wolf Creek...	Not a vanilla extract.
Aug. 13	Vanilla extract	Vanilla Flavor	Farmers Produce Co., Chippewa Falls.	Contains little or no vanilla.
Aug. 13	Vanilla extract	Foster's Vantella	Farmers Produce Co., Chippewa Falls.	Adulterated. Contains no vanilla.
Aug. 22	Vanilla compound	Extract Vanilla Compound	B. L. Watson, Petersburg	Misbranded in that contents were not stated.
Sept. 17	Vanilla extract		H. J. Setz, Lake Mills	Misbranded in that contents were not stated.
Oct. 26	Extract of vanilla	Extract Vanilla	Chicago-Burlington Tea Co., Burlington.	Misbranded in that contents were not stated.
Oct. 10	Vanilla extract	Artificial Extract of Vanilla	John E. Graf, La Crosse	Contains no vanilla.
Nov. 17	Compound vanilla extract	Compound Flavoring of Vanilla, Vanillin and Coumarin.	P. Engeldinger & Son, Durand....	Contains little or no vanilla.
Nov. 28	Vanilla flavor	Synthetic Vanilla Flavor	Farmers Produce Co., Chippewa Falls.	Contains little or no vanilla.
Dec. 13	Vanilla	Pure Concentrated Extract Vanilla—Compound.	Wm. Powers, Hayward	Contains no vanilla.
1918				
June 28	Extract of vanilla		*State Board of Control	Contains considerable coumarin.
June 28	Vanilla		*State Board of Control	Contains coumarin. A compound—not a straight vanilla.

* Submitted by.

FLOUR AND MEALS.

Date	Bought for or Submitted as	Bought of or Submitted by.	Remarks
1917			
Oct. 10	Flour (Pillsbury)	*St. Mary's Hospital, Racine	Standard.
Oct. 10	Flour (Gold Medal)	*St. Mary's Hospital, Racine	Standard.
Dec. 28	Buckwheat	*Mrs. John Mortensen, Shell Lake	Contained about 5 to 7% of wheat starch.
1918			
Jan. 19	Oatmeal (cooked)	*E. H. Gervois, Rosholt	Copper present in small amount.
Jan. 19	Oatmeal (uncooked)	*E. H. Gervois, Rosholt	No copper found.
Feb. 5	Buckwheat flour	P. H. Isaacson, Ellsworth	Commercially pure.
Feb. 18	Buckwheat flour	*Waldo Sweet, Fond du Lac	No foreign starch present. Moldy and stale flour. Undoubtedly last year's flour.
Mar. 19	Buckwheat flour	*Pringle Bros., Edgerton	No foreign starch present. Highly refined. May be last year's flour.
Mar. 19	Barley flour	*Bert Bird, Wheeler	Starch is barley starch. Contains considerable seed coats. Not refined very much.
Mar. 19	Corn meal	*State Council of Defense, Madison	Contains oat hulls and other seed coats. If they were removed and it was produced under clean conditions, it is fit for food. Unmixed or with seed coats in and clean, it can be used as a substitute.
Mar. 20	Barley flour	*C. A. Hoppe, West Bend	No foreign starch. Contains much seed coat.
Mar. 23	Wheat flour	Listman Milling Co., La Crosse	Moisture determination made in connection with short weight.
Mar. 23	Barley flour	Listman Milling Co., La Crosse	Moisture determination made in connection with short weight.
April 19	Graham flour	*D. S. Bullock, Madison	Contained cracked corn, oat hulls—not graham flour.
April 18	Wheat flour	*Miss A. L. Daniels, Madison	Below standard in nitrogen.
May 22	Oat meal	*Chief of Police, La Crosse	Tested for Paris green, none found.
May 27	Pancake flour	*U. S. Food Administration, Madison.	Suspected of containing wheat flour, none found.
May 29	Wheat flour	*C. Frinks, Waukesha	No foreign starch present unless it be a small percentage of barley.
June 5	Rye flour	*H. P. Christ, Wausaukee	Tested for wheat flour, none found.
June 8	Corn flour	*Food Administration, Madison	Contains 10.90% moisture and 0.59% fat.
June 8	Barley flour	*Food Administration, Madison	Contains 10.39% moisture and 1.24% fat.
June 8	Rye flour	*Food Administration, Madison	Contains 11.41% moisture and 1.43% fat.
June 8	Rye flour	*Food Administration, Madison	Contains 11.67% moisture and 1.49% fat.
June 8	Rye flour	*Food Administration, Madison	Contains 11.65% moisture and 1.38% fat.
June 9	Rye flour	*Food Administration, Madison	Contains 11.46% moisture and 2.84% fat.
June 9	Rye flour	*Food Administration, Madison	Contains 10.97% moisture and 1.51% fat.
June 9	Rye flour	*Food Administration, Madison	Contains 11.49% moisture and 1.63% fat.
June 9	Rye flour	*Food Administration, Madison	Contains 10.92% moisture and 1.56% fat.
June 9	Rye flour	*Food Administration, Madison	Contains 11.39% moisture and 1.51% fat.

FLOUR AND MEALS—Continued.

Date	Bought for or Submitted as	Bought of or Submitted by.	Remarks
June 9	Rye flour	*Food Administration, Madison	Contains 12.80% moisture and 1.08% fat.
June 9	Rye flour	*Food Administration, Madison	Contains 11.09% moisture and 1.73% fat.
June 11	Yellow granulated cornmeal.	*E. R. Godfrey & Sons Co., Milwaukee.	Contains 14.42% moisture and 0.27% fat.
June 11	Yellow granulated cornmeal.	*E. R. Godfrey & Sons Co., Milwaukee.	Contains 14.33% moisture and 0.32% fat.
June 12	White cornmeal	*National Biscuit Co., Milwaukee	Contains 10.81% moisture and 4.14% fat.
June 12	White cornmeal	*National Biscuit Co., Milwaukee	Contained 11.51% moisture and 3.32% fat.
June 22	Corn flour	*Mr. McIntosh, Madison	Found only corn starch granules.
June 22	Potato flour	*Mr. McIntosh, Madison	Found to be almost wholly corn starch.
June 24	Wheat graham	C. W. Chevey Co., Eau Claire	Misbranded, short weight.
June 24	Buckwheat flour	C. W. Chevey Co., Eau Claire	Misbranded, short weight.
June 28	Potato flour	R. Gallagher, Madison	Adulterated. Found to be potato starch, not potato flour.
June 28	Potato flour	*E. A. Babcock, Madison	Adulterated. Found to be potato starch, not potato flour.
June 28	Potato flour	H. O. Biglow, Madison	Adulterated. Found to be potato starch, not potato flour.
June 28	Potato flour	Berken & Leslie, Madison	Adulterated. Found to be potato starch, not potato flour.
June 28	Potato flour	Peniaha, Railroad St., Madison	Adulterated. Found to be potato starch, not potato flour.
June 28	Potato flour	Geo. H. Marks, Madison	Adulterated. Found to be corn starch with 5 to 10% of potato starch.
June 28	Potato flour	Wm. Beglinger, Madison	Adulterated. Found to be corn starch with 5 to 10% of potato starch.
June 29	Potato flour	H. Mack, Madison	Adulterated. Found to be corn starch with not to exceed 7% of potato starch.
June 29	Potato flour	Simon Bros., Madison	Adulterated. Found to be potato starch, not potato flour.
June 29	Potato flour	Frank Bros., Madison	Adulterated. Found to be corn starch with not to exceed 7% of potato starch.
June 29	Potato flour	Olwell Bros., Madison	Adulterated. Found to be potato starch, not potato flour.
June 29	Potato flour	H. A. Dierfeld, Whitewater	Adulterated. Found to be corn starch with about 5% potato starch.
June 29	Potato starch	J. J. Mason Co., Sparta	Standard.
June 29	Potato flour	Cut Rate Grocery, Green Bay	Adulterated. Found to be potato starch, not potato flour.
June 29	Potato flour	Harry DeTennis, Green Bay	Adulterated. Found to be potato starch, not potato flour.
June 29	Potato flour	Wm. F. Bubolz, Green Bay	Adulterated. Found to be potato starch, not potato flour.
June 29	Potato flour	S. W. Hines Merc Co., Cumberland	Standard.
June 29	Potato flour	Company Store, Cumberland	Standard.
June 29	Potato flour	J. O. Kuehl, Neenah	Standard.
June 29	Potato flour	Earl Benedict, Sparta	Standard.
June 29	Potato flour	Henry Faas, Neenah	Adulterated. Found to be 75% potato starch and 25% corn starch.
June 29	Potato flour	G. Kalfahs, Neenah	Standard.
June 29	Potato flour blended with corn starch.	Tiffault Kamps Mercantile Co., Marshfield.	Adulterated mainly with corn starch with 10 to 15% of potato starch.

June 29	Potato flour	E. Krawiski, Milwaukee	Not standard. Not potato flour but a mixture of potato starch and corn starch.
June 29	Potato flour	A. P. Fleischman, Fond du Lac	Not standard. Not potato flour but potato starch.
June 29	Potato flour	E. Krawicki, Milwaukee	Not standard. Not potato flour but potato starch.
June 29	Potato flour	F. Hildebrand, Marshfield	Not standard. Not potato flour but potato starch.
June 29	Potato flour	A. W. Schroeder, Milwaukee	Not standard. Not potato flour but potato starch.
June 29	Potato flour	Fingers Fancy Grocery, Fond du Lac.	Not standard. Not potato flour but nearly pure corn starch.
June 29	Potato flour	M. Washbush, Fond du Lac	Not standard. Not potato flour but potato starch.

* Submitted by.

FOOD PRESERVATIVES.

Date	Labeled	Purchased of	Manufacturer or Jobber	Remarks
1916				
Nov. 10	Mrs. Price's Compound	Hocking Bros., Waupaca	The Price Compound Co., Minneapolis.	Composed essentially of boric acid.
Dec. 12	Mrs. Price's Special Prepared Boric Acid.	O. H. Herrmann, Bear Creek	Mrs. W. T. Price, Minneapolis	Composed essentially of boric acid
1917				
April 27	Mrs. Price's Canning Compound.	Webster Drug Co., Webster	Mrs. W. T. Price, Minneapolis	Composed essentially of boric acid
Aug. 2	Mrs. Price's Compound	J. Yoyerst & Co., Richfield	The Price Compound Co., Minneapolis.	Composed essentially of boric acid
Aug. 22		Arthur E. Breitenfelt,* Hartford	The Price Compound Co., Minneapolis.	Composed essentially of boric acid
Aug. 23	Mrs. Price's Compound	H. D. Stoppenback, Schleisingerville	The Price Compound Co., Minneapolis.	Composed essentially of boric acid.
Aug. 24	Mrs. Price's Compound	M. Stoffel & Co., Allenton	The Price Compound Co,. Minneapolis.	Composed essentially of boric acid
Aug. 24	Mrs. Price's Compound	Farmers Mercantile Co. No. 2, Allenton.	The Price Compound Co., Minneapolis.	Composed essentially of boric acid.
Aug. 29	Mrs. Price's Compound	F. E. Wicke, Fort Atkinson	The Price Compound Co., Minneapolis.	Composed essentially of boric acid
Aug. 31		J. W. Gates, Fort Atkinson		Composed essentially of boric acid.
Sept. 12	Mrs. Price's Compound	J. J. Mears, Marathon	Mrs. W. T. Price, Minneapolis	Composed essentially of boric acid

FOOD PRESERVATIVES—Continued.

Date	Labeled	Purchased of	Manufacturer or Jobber	Remarks
Sept. 18	Mrs. Price's Canning Compound.	W. H. Borst, Leon.....	.....	Composed essentially of boric acid.
Oct. 12	Mrs. Price's Compound.....	Geo. L. Reed, Darien.....	The Price Compound Co., Minneapolis.	Composed essentially of boric acid.
1918				
May 16	Preservative powder.....	*C. J. Kremers, Milwaukee.....	.....	Found to be a mixture of common salt and saltpeter.
May 27	Meat preservative.....	*C. J. Kremers, Milwaukee.....	.....	Found to be a mixture of common salt and saltpeter.
May 31	Butter preserver.....	*Victor Packing Co., Rockford, Ill..	.....	Found to be a mixture of common salt and saltpeter.
June 5	Mrs. Price's Compound.....	J. L. McCarthy, Madison.....	The Price Compound Co., Minneapolis.	Composed essentially of boric acid.
June 11	Canning Compound.....	Yahr & Lange Drug Co., Milwaukee.	Yahr & Lange Drug Co., Milwaukee.	Composed essentially of boric acid.

* Submitted by.

FOODS SUSPECTED OF CONTAINING GROUND GLASS.

Date	Sample of	Submitted by	Remarks
1917			
Dec. 1	Hominy grits.....	Mrs. Proudfit, Madison.....	Tested for glass, none found. Some sand present.
1918			
Jan. 8	Sandwich buns.....	Mrs. Hans Anderson, Boyceville.....	Tested for glass, none found.
Jan. 8	Cinnamon rolls.....	Mrs. Hans Anderson, Boyceville.....	Tested for glass, none found.
Jan. 8	Big Joe cake.....	Mrs. Hans Anderson, Boyceville.....	Tested for glass, none found.

Jan. 8	Bread	Mrs. Hans Anderson, Boyceville	Tested for glass, none found.
Jan. 8	Bread	Mrs. Hans Anderson, Boyceville	Tested for glass, none found.
Jan. 8	Bread	Mrs. Hans Anderson, Boyceville	Tested for glass, none found.
Jan. 9	Flour	Eau Claire Baking Co., Eau Claire	Tested for glass, none found.
Jan. 9	Salt	Eau Claire Baking Co., Eau Claire	Tested for glass, none found.
Jan. 9	Sugar	Eau Claire Baking Co., Eau Claire	Tested for glass, none found.
Jan. 9	Cinnamon	Eau Claire Baking Co., Eau Claire	Tested for glass, none found.
Jan. 23	Tomatoes	L. G. Bennis & Son, Birchwood	Tested for glass, none found.
Feb. 4	Peanut butter	Lakewood Mercantile Co., Lakewood	Tested for glass, none found. Much sand present.
Feb. 4	Peanut butter	Mrs. W. H. Delano, Neenah	Tested for glass, none found. Much sand present.
Feb. 11	Peanut butter	R. J. Sarasy, Footville	Examined for glass, none found. Some sand present.
Feb. 11	Cornmeal	M. P. Schultz, Monroe	Sand present.
Feb. 14	Cocoa	Ratzlaff Bros., Edgerton	Glass suspected, found to be sand.
Feb. 14	Peanut butter	State Council of Defense, Madison	Examined for glass, none found. Some sand present.
Feb. 14	Cornmeal	Miss Carol Preplow, Elkhorn	Glass suspected, found to be sand.
Feb. 18	Codfish	Council of Defense, Fond du Lac	Glass suspected, found to contain considerable sand.
Feb. 19	Mince meat	Dr. R. D. Boynton, Grand Marsh	Glass suspected, found to be sand.
Feb. 19	Topnet Fig Bars	Dr. R. D. Boynton, Grand Marsh	Examined for glass, none found. Some sand present.
Mar. 4	Stewed tomatoes	G. F. Sanborn, Eagle River	Glass suspected, none found. Found to contain sand.
Mar. 4	Cornmeal	City Drug Store, Iola	Glass suspected, none found. Considerable coarse sand present.
Mar. 5	Canned salmon	State Council of Defense, Madison	Glass suspected, none found. Some sand present.
Mar. 11	Mincemeat	W. H. Marvin Co., Urbana, Ohio	Found to contain 0.23% sand.
Mar. 11	Seeded raisins	W. H. Marvin Co., Urbana, Ohio	Found to contain 0.036% sand.
Mar. 11	Mincemeat	W. H. Marvin Co., Urbana, Ohio	Found to contain 0.012% sand.
Mar. 13	Peanut candy	Clinton G. Price, Mauston	Suspected of containing glass. Contained much sand. Found also large quartz crystals, small stones. wood, coal and peanut shucks.
Mar. 18	Tomatoes (2)	O. P. Babbit, Wausau	Sample in tin can free from glass, some sand. Sample in Mason jar, glass top broken hence slivers of glass were naturally found in the tomatoes in the jar. Sand was also found.
Mar. 18	Barley flour	Mrs. Herman Miller, Melrose	Tested for glass, none found. Contains some shiny crystals identified as sugar. A very few crystals of sand present.
Mar. 19	Cornmeal and corn bread.	Dr. F. W. Starr, Stanley	Tested for glass, none found in either cornmeal or cornbread. Much sand present.
April	*Glass	A. C. Wolfe, U. S. District Attorney, Madison.	*Submitted for the purpose of determining whether or not sample was glass. Sample said to be taken from rye bread. Examination proved it to be glass.
April 2	Peanut butter	Mrs. Wm. Cripps, Marshall	Tested for glass, none found. Very small amount of sand present.
April 2	Flour	State Council of Defense, Madison	Tested for glass, none found. Very small amount of sand present.
April 4	Bread	Food Administrator, Kenosha	Tested for glass, none found. A small amount of sand present. Sample accompanied by an envelope containing a piece of glass said to have been found in this bread.
April 8	Wheat flour	D. F. Recker, Food Administrator, Rhinelander.	Tested for glass, none found. A small amount of sand present.

FOODS SUSPECTED OF CONTAINING GROUND GLASS—Continued.

Date	Sample of	Submitted by	Remarks
1918			
April 8	Buckwheat flour.....	Cora B. Hawes, Augusta.....	Tested for glass, none found. Some sand present.
April 8	Whole wheat flour....	D. F. Recker, Food Administrator, Rhinelander.	Tested for glass, none found. A small amount of sand present.
April 9	Canned salmon.....	T. B. Abel, Sparta.....	Tested for glass, none found. A few particles of sand present. Sample accompanied by several pieces of brittle transparent material that aroused suspicion—identified as calcium phosphate. More such crystals found in unopened can.
April 9	Peppermint candy.....	M. L. Ellis, Evansville.....	Tested for glass, none found. Accompanied by several pieces of glass said to have been found in this candy. These were identified with polarizing microscope as glass.
April 17	Bread.....	Dr. S. F. Verbeck, Lodi.....	Tested for glass, none found. Small amount of sand present.
April 20	Peanut butter.....	J. N. Doyle, Princeton.....	Tested for glass, none found. Sand present in considerable amount.
April 29	Bread.....	A. C. Wolfe, U. S. Attorney, Madison....	Tested for glass, none found.
April 29	Bread crumbs.....	A. C. Wolfe, U. S. Attorney, Madison.....	Tested for glass—nine small pieces of glass found.
April 29	Corn meal.....	Klisner Bros., Augusta.....	Tested for glass, none found. Some sand present.
April 29	Corn meal....	Clinton G. Price, Mauston.....	Tested for glass, none found. Some sand present.
April 29	Corn meal.....	Clinton G. Price, Mauston.....	Contains considerable powdered glass.
May 28	Cookies.....	P. H. Ryan, Postmaster, Wausau.....	Suspected of containing glass. Two pieces of glass submitted with cookies were identified as glass. One piece of glass separated from cookies. All were rather large pieces and could not be considered powdered glass.
June 3	Cake.....	Dr. W. L. Holt, Health Officer, Beloit....	No glass found. Considerable quartz sand, some quite large crystals Most glassy looking particles scratch glass.
June 19	Fig jam.....	Will Sisson, Argyle.....	Tested for glass, none found. Much sand present.

GOODS SUSPECTED OF CONTAINING POISON.

Date	Sample of	Submitted by	Remarks
1917			
Nov. 19	Cheese.....	E. A. Krug, Kewaunee.....	Found to contain a small amount of zinc and arsenic.

1918 Jan. 17	Cheese	H. B. Stanz Co., Milwaukee	Tested for ptomaines, none found. Cheese found to be of very inferior quality.
May 8	Maple syrup	Mrs. John Zingler, Embarras	Tested for arsenic and heavy metals, none found.
May 25	Red color	J. C. Redmond, Augusta	Identified as amaranth. Tested for arsenic, none found.
May 27	Jam	Dr. Charles E. Getchell, Baraboo	Found to contain a small amount of copper, no arsenic.
June 18	Cream	Arnott Creamery Co., Arnott	No poison found. Very strong onion odor.

GELATINE.

Date	Collected from or Submitted by	Manufacturer or Dealer	Remarks
1917 Aug. 9	*Boyd & Fichten, Madison		Not standard. Contains an excessive amount of zinc and copper.
Aug. 10	*Kennedy Dairy Co., Madison	U. S. Glue Co., Carrollville	Passed.
Aug. 15	H. V. Schwalbach, So. Germantown	The Northern Jobbing Co., Chicago	Passed.
Aug. 18	Barkdoll Bros., Milwaukee	E. Lowe Co., New York	Not standard. Contains an excessive amount of zinc.
Aug. 18	Badger Candy Co., Milwaukee	Hughes Gelatine Co., Detroit, Mich	Not standard. Contains an excessive amount of zinc.
Aug. 18	Puritan Candy Co., Milwaukee	T. M. Duche & Son, Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 18	Blatz Candy Co., Milwaukee	O. R. Pieper	Not standard. Contains an excessive amount of zinc.
Aug. 18	Schranck-Schwarting Co., Milwaukee	T. M. Duche & Son, Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 18	J. E. Truss Co., Milwaukee	W. K. Jahn Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 18	Quality Biscuit Co., Milwaukee	Stein-Hirsch Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 18	R. A. Johnston Co., Milwaukee	Stein-Hirsch Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 18	National Biscuit Co., Milwaukee		Not standard. Contains an excessive amount of zinc.
Aug. 18	Webers, Milwaukee	Kohnstaum Co., Chicago	Passed.
Aug. 20	Victor Pappas, Kenosha	Brown, Young & Co., New York	Not standard. Contains an excessive amount of zinc.

GELATINE—Continued.

Date	Collected from or Submitted by	Manufacturer or Dealer	Remarks
Aug. 20	Geo. Mansfield Co., Milwaukee	U. S. Glue Co., Carrollville	Passed.
Aug. 20	Wm. Halberstade, Racine	Sethness Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	R. Bullock, Racine	Hilker & Bletsch Co., Chicago	Passed.
Aug. 20	Bloomer Ice Cream Co		Passed.
Aug. 20	A. Baumann, Watertown	Downey & Turnquist, Chicago	Passed.
Aug. 20	Zilisch Pure Milk Co., Madison	W. K. Jahn Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	J. Condon, Kenosha	Habecht & Braun, Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	Standard Ice Cream Co., Milwaukee	Sethness Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	American Candy Kitchen, Kenosha	Habecht & Braun, Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	George Mazurine, Racine	J. G. Cherry Co., Cedar Rapids, Ia	Not standard. Contains an excessive amount of zinc.
Aug. 20	Racine Ice Cream Co., Racine	Creamery Package Mfg. Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	Racine Pure Milk Co., Racine	W. K. Jahn, Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	Beck Candy Co., Racine	Downey & Turnquist Co., Chicago	Not standard. Contains an excessive amount of zinc.
Aug. 20	Princess Confectionery Co., Milwaukee	Armour & Co	Not standard. Contains an excessive amount of zinc.
Aug. 20	Jersey Ice Cream Co., Milwaukee	Schrank & Schwarting Co., Milwaukee	Not standard. Contains an excessive amount of zinc.
Aug. 20	American Candy Co., Milwaukee	T. M. Duche & Son, New York	Not standard. Contains an excessive amount of zinc.
Aug. 20	H. Zaage, Milwaukee	Schrank & Schwarting Co., Milwaukee	Not standard. Contains an excessive amount of zinc.
Aug. 20	Jos. Bloomer Co., Milwaukee	Armour & Company	Not standard. Contains an excessive amount of zinc.
Aug. 20	Kenosha Ice Cream Co., Kenosha	Habecht & Braun, Chicago	Not standard. Contains an excessive amount of zinc and copper.
Aug. 20	Watertown Creamery Co., Watertown	Sethness Co., Chicago	Not standard.

Sept. 4	*Liquid Carbonic Co., Chicago	Michigan Carbon Works, Detroit, Mich	Not standard. Contains an excessive amount of zinc.
Sept. 4	*Wm. Hass, American Ice Cream Co., Madison.		Not standard. Contains an excessive amount of zinc.
Sept. 7	O. A. Town, Manawa	Plymouth Rock Gelatine Co., Boston	Passed.
Sept. 11	*Shurtleff Co., Janesville		Not standard. Contains an excessive amount of zinc.
Sept. 17	*Charles Hayman, Boscobel		Passed.
Sept. 17	*Charles Hayman, Boscobel		Not standard.
Sept. 17	*Charles Hayman, Boscobel		Not standard.
Sept. 21	*E. A. Babcock, Madison	Michigan Carbon Works, Detroit, Mich	Not standard. Contains an excessive amount of zinc.
Sept. 21	Keeley's Palace of Sweets, Madison		Not standard. Contains an excessive amount of zinc and capper.
Oct. 4	*Demos Bros., Kenosha		Adulterated with sodium chloride.
Oct. 4	*Sturtevant, Wright & Wagner, Beloit		Passed.
Oct. 4	*Johnson Candy Co., Milwaukee		Standard.
Nov. 6	Consumers Milk Co., Beloit		Not standard. Contains an excessive amount of zinc and copper.
Nov. 6	Vale Baking Co., Beloit		Not standard. Contains an excessive amount of zinc and copper.
Nov. 6	Vale Baking Co., Beloit		Not standard. Contains an excessive amount of zinc and copper.
Dec. 18	*Boyd & Fichten, Madison		Not standard. Contains an excessive amount of zinc.
1918 May 31	G. R. & W. R. Montague Co., La Crosse	American Glue Co., Chicago	Passed.

* Submitted by.

LARD, LARD SUBSTITUTES AND OLEOMARGARINE.

Date	Bought or Submitted for	Bought of or Submitted by	Remarks
1917 Nov. 22	Lard	*Griff, Hughes, Joel	Tested for foreign animal fat, none found.
1918 Jan. 7	Oleomargarine	Johnson-Eclie Co., Cumberland	Held to be in imitation of yellow butter.
Mar. 8	Lard	*Edward A. Babcock, Madison	Standard.
May 28	Lard Substitute	*C. J. Kremers, Milwaukee	Found to be a mixture of commercial glucose, corn oil, starch and salt.

* Submitted by.

LINSEED OILS.

Linseed Oils—Standard.

Date	Purchased of	Manufacturer
1917		
Oct. 10	Thorp Hardware Co., Thorp	Hirst & Begley Linseed Co., Chicago.
1918		
Feb. 27	Mrs. M. A. Guenther, Knowlton	

Linseed Oils—Not Standard.

Date	Bought for	Purchased of	Manufacturer or Jobber	Per cent unsaponifiable material
1917				
July 23	Boiled linseed oil	A. Grassel & Co., Luxemburg	Ohio State Oil Co., Cleveland, O	51.15
July 23	Raw linseed oil	A. Grassel & Co., Luxemburg	Ohio State Oil Co., Cleveland, O	38.78
Oct. 11	Boiled linseed oil	Woytasik & Co., Hatley	Ohio State Linseed Co., Cleveland, O	41.77
Oct. 11	Boiled linseed oil	Joseph Chesek, Hatley		37.52
Nov. 13	Raw linseed oil	Hackley-Phelps-Bonnell Co., Phelps	Ohio State Linseed Co., Cleveland, O	44.86
Nov. 13	Boiled linseed oil	Hackley-Phelps-Bonnell Co., Phelps	Ohio State Linseed Co., Cleveland, O	50.82
Dec. 6	Boiled linseed oil	Gust Anderson, Benoit	American Turpentine Co., Cleveland, O	38.28
1918				
Mar. 23	Boiled linseed oil	Piercity & Schrap, Juneau	Standard Linseed Co., Cleveland, O	32.43

Linseed Oils—Submitted Samples.

Date	Submitted by	Remarks
1917		
July 24	Hammond-Chandler Lumber Co., Rice Lake	Not standard. Contains 30.21% of unsaponifiable material.
Aug. 3	R. A. Myers, Viola	Not standard. Contains 43.50% of unsaponifiable material.
Aug. 3	R. A. Myers, Viola	Not standard. Contains 36.79% of unsaponifiable material.
Aug. 5	W. F. Goldspohn, Arlington	Standard.
Sept. 10	H. F. Miller, Kenosha	Contains volatile oil of the nature of kerosene.
Sept. 13	State Board of Control, Madison	Not standard. Contains 28.46% of unsaponifiable material.
Dec. 8	E. Freidl, Phillips	Not standard. Contains 8.82% of unsaponifiable material; also contains rosin oil.
Dec. 8	James A. Thompson, Lodi	Standard.
1918		
Jan. 28	Lintner & Harrison, Pardeeville	Standard.
Feb. 21	U. W. Painter, Madison	Standard.
Mar. 11	Fred J. Junck, Milwaukee	Standard.
April 25	Wm. L. Gjestrang, Whitehall	Standard.
May 6	Peter Martin, Edmund	Standard.
May 6	Peter Martin, Edmund	Standard.
May 6	Peter Martin, Edmund	Not standard. Contains 39.60% of unsaponifiable material.
May 24	South Madison Sanitarium, Madison	Contains volatile oil of the nature of kerosene.

MEAT PRODUCTS.

Meat and Meat Products—Tested for Chemical Preservatives—None Found.

Date	Bought for	Bought of or Submitted by
1917		
July 5	Hamburger	J. Gorgen & Sons, Mineral Point.
July 16	Hamburger	J. H. Johnson, Rice Lake.
July 16	Hamburger	E. J. Eiter, Rice Lake.
July 20	Hamburger	Chas. Trudeau, Oconto.
Oct. 9	Hamburger	*Frank's Restaurant, Madison.
Oct. 29	Bacon	*Math. Koenigs, Jr., Fond du Lac.
Nov. 6	Hamburger	Ed. Babcock, Madison.
1918		
Mar. 6	Hamburger (4 samples)	*Board of Health, Superior.
May 13	Chopped meat	E. B. Fischer Market, North Milwaukee.
May 13	Corned beef	E. B. Fischer Market, North Milwaukee.

* Submitted by.

Meat and Meat Products—Found to Contain Sulphites.

Date	Bought for	Bought of
1917		
Aug. 21	Hamburger	Maas & Poltl, Hartford.
Sept. 21	Hamburger	F. F. Krull, Black Creek.
Oct. 23	Chopped beef	Central Market, Cedarburg.
Oct. 24	Chopped beef	Chas. Tillman, Grafton.
1918		
Feb. 23	Hamburger	New York Market, Waukesha.
Mar. 1	Hamburger	M. G. Hallada, Seymour.

Sausage—Not Standard. Found to be Sausage with Cereal.

Date	Bought of
1917	
July 16	Kelnhoter & Wilda, Rice Lake.
July 16	Wilz & Koehler, Rice Lake.
Aug. 23	A. Aucam & Son, Racine.

Sausage—Not Standard. Found to Contain more than 4% of Cereal.

Date	Bought of	Per cent cereal	Date	Bought of	Per cent cereal
1917			1917		
July 5	Tetzner & Son, Washburn	5.01	July 10	Frank Hoffman, Sheboygan	4.25
July 5	Breeken & MacDonald, Washburn	4.83	Sept 21	F. J. Wilford, Baldwin	4.31

MISCELLANEOUS FOODS.

Date	Bought or Submitted for	Labeled.	Bought of or Submitted by	Remarks
1917				
April 13	Golden Slice Cake.....	Golden Slice Luncheon Cake 6 oz. net weight.	R. M. Lough, Lodi.....	Misbranded in that it contained a false and misleading statement as to weight.
June	Corn meal	.....	*Burkhardt Milling & Electric Powe Co., Burkhardt.	Standard.
June 22	Ground cinnamon	.....	*City Sealer, Rhinelander.....	Misbranded in that contents were not correctly stated. Short weight.
June 22	Pepper	.....	*City Sealer, Rhinelander.....	Found to be properly branded.
July 6	Elbo Macaroni	Elbo Macaroni, net weight 14 oz. 10 oz. net.	James Brewer Co., Mineral Point..	Misbranded. Net contents not plainly stated.
Oct 16	Figs	.....	Metcalf Dept. Store, Shullsburg....	Sulphur dioxide present.
Nov 2	Crystalline substance	.....	*L. F. Vick, Viola.....	Found to be rock salt.
Dec. 31	Peanut butter	.....	*Sherman T. Wrightman, Traverse City, Mich.	No adulteration found.
1918				
Jan 17	Bread	.....	*Dr. R. J. Goggins, Oconto Falls...	Submitted because of blue color. Tested for blue color—found a number of blue wool fibers.
Jan 24	Yeast Cakes	Yeast Cakes, seven cakes 3¾ oz. or over.	Much & Mallery, Berlin.....	Found to be six cakes, weight 3 oz. Misbranded as to numerical count and weight.
Feb. 12	Evaporated Milk	Armour's Evaporated Milk.....	Farmers Store Co., Bloomer.....	Standard.
Feb. 26	Codfish	Pure Codfish	W. J. Rowland, Union Grove.....	Tested for boric acid, none found.
Feb. 26	Codfish	Pure Codfish 4/10 of 1% Boracic Acid. Remove by soaking fish in water until fresh enough to suit the taste.	A. M. Wilson, Union Grove.....	Preserved with an external application of boric acid.
Feb. 27	Codfish	Pure Codfish	Jas. Cullen, Caledonia.....	Tested for boric acid, none found.
Mar 1	Codfish	Absolutely Boneless Cod Bits. Prepared with 4/10 of 1% Boracic Acid which is removed in two or three washings as you freshen the fish.	Louis Noll Co., Waterford.....	Preserved with an external application of boric acid.
Mar. 13	Oatmeal bread	.....	*Miss E. P. Leonard, Madison.....	Water 28.89%, ash 1.73%, fat 1.07%, protein 11.09%, carbohydrates 57.22% (by difference including crude fibre).

Mar. 13	Potato bread		*Miss E. P. Leonard, Madison	Water 28.49%, ash 2.30%, protein 9.83%, fat 0.88%, carbohydrates 58.50% (by difference).
April 7	Evaporated milk		*Sturtevant, Wright & Wagner Co., Beloit.	Fat 7.90%; total solids 26.37%.
May 26	Olive oil		*Paul Corona, Madison	Standard.
May 31	Orange color		*H. Klueter, Madison	Found to be a mixture of Ponceau 3R, S & J 56 and Orange II S & J 86.
June 17	Jiffy-Jell (Strawberry)		*Food Administration, Madison	Found to be a mixture of 90.24% of sugar, 8.70% gelatine and 1.5% citric acid.
June 17	Jiffy-Jell (Raspberry)		*Food Administration, Madison	Found to be a mixture of 89.68% sugar, 8.64% gelatine and 1.44% citric acid.

SACCHARINE PRODUCTS.

Maple Sugar and Maple Syrups—Standard.

Date	Sample of	Bought of or Submitted by
1917		
Aug. 2	Maple syrup	J. Yogerst & Co., Richfield.
Sept. 19	Maple syrup	The Golden Rule, Bloomer.
1918		
Jan. 29	Maple syrup	Waterman-Ehrhard Co., Menomonie.
April 1	Maple sugar	Korb & Nelson, Boyd.
April 16	Maple syrup	*J. H. Donahue, Lewis.
May 8	Maple syrup (2 samples)	*A. M. Steinwand, Colby.
May 20	Maple syrup	*Harvey Cornelius, West DePere.
May 22	Maple syrup	*Mrs. George Burgess, Unity.
May 22	Maple syrup	*R. E. Schultz, Jefferson.

* Submitted by.

SACCHARINE PRODUCTS—Continued.

Maple Syrups—Not Standard. Below in Total Solids.

Date	Submitted by	Date	Submitted by
1918			
April 5	Harry R. Barrett, Lehigh.	April 16	P. A. Badour, Oconto.
April 5	Mrs. A. W. Shaw, Lehigh.	May 22	G. W. Davies, North Freedom.
April 15	E. E. Prucha, Manawa.		

Miscellaneous Saccharine Products.

Date	Sample of	Bought of or Submitted by	Remarks
1917			
July 30	Honey	Bostwick Grocery, Eau Claire	Gives a slight test for commercial invert sugar syrup.
Aug. 4	Honey	S. C. Sayner, Eau Claire	Gives a slight positive test for commercial invert sugar syrup.
Aug. 4	Honey	O. H. Johnson, Eau Claire	Standard.
Aug. 4	Honey	O. P. Jaeger, Eau Claire	Gives a slight positive test for commercial invert sugar syrup.
Sept. 25	Sugar	*Charles Sage, Delavan	Found to be free from adulteration.
Oct. 4	Honey	*H. C. Dornbush, Plymouth	Standard.
Oct. 25	Honey	S. C. Hamilton, River Falls	Misbranded in that contents were not stated.
Nov. 18	Honey (2 samples)	*Mrs. Vaugh, Madison	No adulteration found.
Dec. 21	Honey	*John J. O'Neill, Elroy	No adulteration found.
1918			
Jan. 2	Honey	*R. D. Culver, Almond	No adulteration found.
Jan. 4	Honey	*Geo. L. Bemis & Son, Birchwood	No adulteration found.
Jan. 2	Sugar	*Dr. H. V. Bancroft, Blue Mounds.	Contained blue color which was found to be ultramarine.
Mar. 11	Raw sugar	*W. H. Marvin Co., Urbana, Ohio	A partially refined sugar. Contained a very small amount of sand.
Mar. 25	Sugarlene	*H. C. Schrank Co., Milwaukee	No adulteration found.
May 29	Non-crystal—Economy Sugar	Sorge-Ennison Co., La Crosse	A sugar solution partially inverted.
June 17	Syrup	*New Glarus Bottling Co., New Glar	A high grade of refiner's syrup
June 17	Syrup	*New Glarus Bottling Co., New Glar	Medium grade of refiner's syrup.

* Submitted by.

TURPENTINE.

Turpentine—Standard.

Date	Purchased of	Manufacturer or Jobber
1917		
Sept. 19	Martin & Steichen, Bloomer	Wolf Glicksman, Chippewa Falls.
1918		
Feb. 9	Hoehn's Pharmacy, Fall Creek	Interstate Oil Co., La Crosse.
Feb. 9	Hoehn's Pharmacy, Fall Creek	Winona Oil Co., Winona, Minn.
Feb. 26	J. McGonigal & Son, Loyal	Vilas Bros., Milwaukee.
Feb. 28	Griebenow & Weirich Co., Owen	Londen-Savanah Naval Stores Co., Hammond, Ind.
Mar. 28	Ed. Johnson, Rib Lake	Northwestern Oil Co., Superior.
April 12	J. A. Johnson, Wanderoos	
April 17	Nerison & Flugstad, Westby	V. Fauche Hardware Co., La Crosse.

Turpentine—Not Standard.

Date	Purchased of or Submitted by	Manufacturer or Jobber	Per cent of adulteration shown on polymerization
1917			
Aug. 10	H. Lulloff & Sons, St. Nazianz	Paragon Oil & Supply Co., Oshkosh	62.0
Sept. 13	*State Board of Control, Madison		29.0
Dec. 7	*E. Friedl, Phillips		30.4
Dec. 7	Berg-Waters Mercantile Co., Kendalls	Spencer McCord Drug Co., La Crosse	3.0
1918			
Jan. 31	Geo. W. Jungck, Menomonie	Southern States Turpentine Co., Cleveland	31.2
May 15	Vogt Bros., Glen Haven	Ohio State Linseed Co., Cleveland	20.0

* Submitted by.

VINEGAR.

Vinegars—Up to Required Standard for Acetic Acid.

Date	Submitted by	Date	Submitted by
1917		1918	
July 30	Bemis-Hooper-Hays Co., Oshkosh.	Feb. 9	Ewards & Atherbon, Rochester.
Sept. 17	E. H. Mallory, Elkhorn.	Mar. 4	Reuben Nye, Verona (4 samples).
Oct. 9	Reuben Nye, Verona (2 samples).	April 15	S. A. Thomas Co., Potosi.
Nov. 5	Wm. Parsons, Ft. Atkinson.		

Vinegars—Below Required Acetic Acid Standard.

Date	Submitted by	Grams acetic acid per 100 ccs.	Date	Submitted by	Grams acetic acid per 100 ccs.
1917			Oct. 10	T. L. Specht, Madison R. 4	2.54
July 30	Bemis-Hooper-Hays Co., Oshkosh	3.00	Dec. 11	H. Kemp, Avalon	1.8
July 30	W. H. Moore, Endeavor	2.4			
July 30	W. H. Moore, Endeavor	1.5	1918		
Sept. 13	G. L. Chambers, Monroe	2.24	Mar. 1	M. D. Beebe, Orfordville	3.45
Sept. 17	Wm. Bergin, Glenbeulah	3.61	Mar. 1	M. D. Beebe, Orfordville	0.52
Sept. 21	K. Wickstrom, Clinton	3.17	Mar. 1	M. D. Beebe, Orfordville	1.98
Sept. 26	T. O'Brien, Tiffany	3.7	Mar. 1	M. D. Beebe, Orfordville	0.35
Oct. 9	Reuben Nye, Verona	3.65	June 28	John Tomlin, Evansville	3.4

Respectfully submitted,

HARRY KLUETER,

Chemist.

REPORT OF C. E. LEE, ASSISTANT DAIRY AND FOOD COMMISSIONER AND DAIRY SPECIALIST

Honorable GEORGE J. WEIGLE,
Dairy and Food Commissioner.

Sir:

This report is a statement of the duties performed during the year ending June 30, 1918.

I have had supervision of the work of the inspection of butter and cheese factories, condenseries, skimming stations, cream buying stations, market milk supply and dairy inspections.

The report of each inspection made by the men in the field has been closely studied. In a number of cases it was found necessary to write letters to operators of plants and to dairy men in order that the work of the inspector might be followed up and the department learn if the inspector's instructions had been carried out. This has necessitated the reinspection of certain factories and dairies by the men in the field or by me personally. In connection with this work it has been found necessary to hold conferences with the men in their respective territories or at the office.

During the past year I devoted a great deal of time to the inspection of the milk supply of several of the large cities. This work was carried on in cooperation with the regular inspector of this department for the territory in which the cities were located. In three of the cities visited it was found necessary to prosecute the operators of milk plants because the dairy utensils and premises were in an unsanitary condition. In each case a conviction was secured. In a few of these cities it was found that adulterated milk was being sold. In each case the offender was brought into court and a conviction was secured in all cases but one. Inspection was also made of a large number of dairies where the milk was produced in order that the department might have definite information regarding the handling of the product until it was delivered to a milk plant or to the consumers direct.

Several samples of butter were collected and submitted to the chemist. A few were found to be adulterated and as a result of this work three convictions were secured in the Dane County Municipal Court. In one case the fine imposed by the judge was $100.00 and costs, with the understanding that for the next offense a portion of the penalty would be a jail sentence.

An investigation was made of the method employed by one condensery in sampling and testing milk. An inspection was also made by me of nearly one fourth of all the condenseries in the state to determine if these plants were being operated in compliance with sanitary regulations.

Several meetings consisting of state or local butter and cheese makers' associations, farmers' clubs or gatherings and other associations of various kinds have been attended. At many of these meetings addresses have been delivered besides assisting in the discussion of various subjects that came up for consideration. In a few cases talks have been given before high school boys and girls on the subject of milk and methods of control. In one city this work together with a conference of the city officials and representatives of various organizations was the means, in part at least, of adopting a milk ordinance by the city council. This kind of work is very important. It is a means of informing the producers that they must furnish good wholesome food products and educating the consumers.

In June I attended two hearings called by the Joint Committee on Definitions and Standards, Washington, D. C. One of these hearings was held at St. Paul, Minnesota, and the second one at Washington, D. C. At the St. Paul hearing I was called upon to act with the committee in bringing out a full discussion of methods employed in the manufacture of butter and the possibility of the control of composition and high quality. At the Washington meeting I spoke on the need of a definition for butter that would represent that product when made with a view of maintaining quality and for the full protection of the producer and the consumer.

The increased value of milk, butter and cheese, in fact of all dairy products, due to abnormal or war conditions, has naturally made the producers more watchful of his product. He has laid more stress on the weight of the milk and cream sold and whether or not the Babcock test was correctly operated. Not only has the dairyman placed these questions before the factory operators, but he has also requested that the department investigate the accuracy of the testing done by the factory operator buying their product. This work has been referred to the men in the field and by them given full consideration.

The total number of factory inspections made by the men doing this kind of work was 3962 of which 2938 were made at cheese factories and 1024 at butter factories. Reports have also been received regarding the work of 2930 cheese makers and 1012 butter makers. The records show that 3397 dairy farms have been visited, 1241 milk fat tests, 597 lactometer readings and 4035 sediment tests have been made at cheese factories; 118 milk fat tests, 30 lactometer readings and 1318 sediment tests have been made of milk delivered to butter factories and condenseries. This does not include several hundred tests of milk and cream sold in the cities by the dealers or by the producers direct.

This department has cooperated with the Live Stock Sanitary Board

in promulgating the rules and regulations governing the pasteurization of factory by-products. The men in the field have also given instructions to the butter and cheese factory operators as to how this work may best be accomplished. In many plants it has been necessary to outline the needed additional factory equipment.

Mr. James Van Duser of the Milwaukee territory has devoted a great deal of time in the vicinity of that city in cooperation with the Health Department, inspecting the dairies producing milk and cream for that city.

The large exhibit of dairy products entered at the 1917 Wisconsin State Fair was mainly due to the efforts of this department. Mr. Fred Marty was the superintendent in charge of the dairy exhibit. He was assisted during the State Fair week by two of our other men. Four men from this department acted as judges of butter and cheese. Requests upon this department for men to assist in the judging of butter and cheese at the dairy department of the University, county and community fairs, etc. have been granted.

Market Milk

The market milk situation has had the usual amount of attention. In many sections the method of handling of milk and cream has materially improved over a year ago. Representatives of this department have made an inspection of the milk and cream supply of nearly all of the large cities and villages. In many places a reinspection was made for the purpose of checking up results of the first inspection. New problems have come up in connection with the milk supply because of the increased value of manufactured dairy products. For years certain dairy men have sold the milk and cream produced on their own farms direct to the city consumers. Thus the city was always assured of a supply of milk. With the advance in value of all dairy products the price for fluid milk and cream for family use should also increase in like proportion. In certain cities the consumers objected to the advanced price and as a result the milk supply was cut short. Many dairymen discontinued selling milk to the city trade and placed their product at a nearby butter or cheese factory. In some villages and smaller cities it was still possible to buy milk at from 7 to 9 cents a quart or even 13 quarts for one dollar. In the larger cities milk prices advanced to 11 cents per quart when sold by dealers or operators of large city milk plants. This advance was necessary to meet the demands of the producers and the increased cost of operation and distribution.

Another factor influencing the production and distribution of market milk was the impossibility in many cases of obtaining suitable help. Many dairymen delivering milk from their own herds depended upon their boys to distribute the same but the call for these boys by the government upset this system. The owner of the farm in many cases continued the distribution but at a great sacrifice. In a number of

cities the system of milk distribution as already stated has been changed from a house to house delivery to that of leaving the product at a grocery store or meat market. In other places the butter factory has become a place where milk and cream may be obtained when called for. The shortage of fresh fluid milk has increased the demand for evaporated milk.

In considering market milk problems, as a whole conditions have improved but in many localities, especially the larger cities, there is still a great deal of work to be done. Sanitary conditions of many milk plants were found below standard; in some cases milk was found below standard both in milk fat and in solids not fat. This department must exercise greater supervision over the milk supply of the larger cities than heretofore, whenever possible cooperating with the local board of health or the health officer rather than working independently.

Every city of 3,000 or over should be required to have an ordinance regulating the production and distribution of market milk. The work of our men would be greatly simplified and more efficiently done if they could obtain either from the health officer or city clerk the name and location of dairies producing milk for the city. The city council of Chippewa Falls passed a milk ordinance requiring among other things that each dairy man regardless of the size of his dairy apply for a license. The enforcement of the ordinance was placed in charge of the city board of health. That body through the city clerk requested this department to make an inspection. Every dairy was located and the distance traveled greatly reduced; the chairman of the board furnished transportation. It was also found that the mere fact of calling for a license had created in the minds of the dairymen a new interest in the work that they were doing.

Several of the larger cities are at present making some attempt to regulate the milk supply. Some find it very difficult if not impossible to get the city council to lend its support. In one large city the passing of an ordinance has been deferred for several months because the ordinance, among other things, held that all milk sold should be produced by cows found to be free from tuberculosis.

In certain cities when an attempt had been made to control the milk supply it was found that the milk and cream was above the average. The city of Eau Claire and also the city of Madison may be cited as fair examples, while in other cities not only impure milk but an adulterated product was found. The time has arrived in the development of the dairy industry of the state when steps should be taken to further safeguard the health of the consumers of fluid milk. This is true with reference to children who are in many cases dependent upon cows' milk from birth for a large per cent of their food. For all children milk is a necessity. It should therefore be required that all of the milk and cream sold as market milk and cream within the state should be produced by dairies where all cows are known to be free from tuberculosis, and in such state of health as may be prescribed by the State Live Stock Sanitary Board.

The department should also devote more time to the inspection of market milk although that is an impossibility considering the amount of work that is now required of the men in the field. The only solution to this problem would come from the addition of several men to the present force of eight inspectors and two assistant commissioners.

Factory Inspection

The inspection of butter and cheese factories was pushed very vigorously from the beginning of the year (July 1, 1917) until December when market milk and dairy inspection was taken up and continued until May when factory work was again resumed. While this work is being done, the men in the field also take care of the requests for special investigations of problems of one kind or another over which this department has jurisdiction. These requests may come from dairymen who feel that they are not being fairly dealt with as to weights and tests of milk or cream sold. Factory operators call for assistance when they suspect or have facts to show that certain milk producers are delivering an adulterated product. Occasionally the consumers call the attention of the department to the quality of the milk, cream, butter or cheese delivered to their homes, but this is not done as frequently as it might.

The second year of the butter and cheese factory operators licensing law ended December 31, 1917. The good work accomplished during the first year was again noticeable in the second year. The full intent of the law is still not known to some men who engage in the operation of a butter or cheese factory. This together with the rather large number of cheese factories that change hands during the year, increased the work of the inspectors. It necessitated the reinspection of individual plants even to two or three times.

Many new factories have taken the place of what were considered useful buildings, but which were not adequate to the needs of present day requirements. Permanent repairs have been secured on many factories, and they are operated now in compliance with the requirements of the licensing law and the rules and regulations. Activities along these lines would have been more marked had it not been for the restriction placed on the erection of new buildings and the difficulty found in many sections in obtaining skilled labor for construction. When conditions again become normal many other improvements will naturally come about as a result of extensions of time.

The thirty months of the licensing law (January 1916 to July 1918) has resulted in more modern factory buildings with improved light and ventilation. Improved factories have had a good effect on the makers. In many cases they have been given the necessary material with which to clean both utensils and factory. Operators are cooperating with the makers in order that the license law rules and regulations are complied with. During the coming year it will be impos-

sible to secure improvements, but there should be no let-up in the enforcement of those laws and regulations dealing with sanitation. The excuse so often made that shortage of help makes it impossible to keep the factory and utensils clean should not be given much consideration when handling valuable food. The time required to clean the factory and utensils is small compared with the work of actually making the product.

In many places the manner of handling the factory sewage has been improved but there are still factories where the men in the field must insist on greater care being taken in handling the factory waste in such a manner that no offensive odors are created. It is to be regretted that I find it necessary to state that more time must be devoted to the inspection of the condenseries and milk plants. From an investigation made the managers of these plants have grossly violated the state laws relating to cleanliness of utensils and premises. These conditions must be improved even if it is found necessary to delegate one man to inspect all of these plants. Some of these condenseries were found in a most sanitary condition, but others were found poorly managed. No one was held responsible for the quality of the raw material received nor the cleanliness of the plant, cans and utensils used.

Butter and Cheese Makers

Since the introduction of the licensing law, the men in charge of the actual making of the butter and the cheese have been reported on a separate inspection sheet. This system has made it possible for the department to know from actual records the efficiency of the men held directly responsible for the making of approximately a yearly output of 100,000,000 pounds of butter in 850 factories and 277,000,000 pounds of cheese in 2600 cheese factories. Many of these men have had years of service and they have played a very important part in the development of the factory system. They have seen the dairy industry grow from an income of $20,000,000 a year to the 1917 mark of $190,000,000. Naturally the older men are being replaced by those of less experience.

The dairy industry must do its share to aid the government in its important work. This has taken many of the trained makers and others who were acting as helpers, with a view of learning the trade. Others, because of greater remuneration in other lines of work have left the factories. These conditions must be met and unless it is properly directed the dairy industry may receive a set-back due to improper handling of the product from the farm to the consumer by untrained men. The immediate step that must be taken as a safeguard is to advise the operators to increase the wages of trained men still employed as makers. So far the increase has not equaled the income of men engaged in less important work. This in part is

due to many factories being operated in a cooperative manner, and no one is held directly responsible for that phase of the work. The state association could do a great deal in improving this condition. Naturally the inspectors and others connected with this department met these men from one to five or more times a year, thus getting in touch with new ideas, but the inspector's time is limited because of the territory he must cover.

The efficiency of the makers in charge of the butter and cheese factories will depend upon their training. They are exceedingly busy but they must be guided in an intelligent way either in small or large groups.

It should be possible for the representatives of the dairy and food department to assist the makers in locating the causes of defects in flavor and general make-up of the finished product of any factory. A little of this work is now being done, it being limited to the size of the territory or the number of inspections that must be made during the season in order that the territory may be covered at least once. During the past four years the number of factories in operation and the pounds of butter and cheese produced have increased but the number of inspectors employed has not been increased.

Cream Buying Stations

In several counties there has been an increase in the number of stations in operation, not alone because of an increase in the available supply of cream but rather due to the number of creamery companies that are bidding for this product. Wisconsin factorymen come in for their share of the spoil together with Illinois, Iowa and Minnesota Operators. The usual policy adopted is to send a field man or advance agent to look over the territory. If the outlook is good, some one is secured to operate the station. The room selected may be in a vacant building, a grocery store or meat market, and the equipment required besides a scale and a tester is a number of ten gallon cans. In many of these establishments no provision whatever is made for the proper cooling and storing of the cream until it is hauled to the depot. The man in charge may or may not have any knowledge of sampling, testing or grading the cream. Hence there is no standard as to quality of product that shall be received. The field man may act as an instructor for seven to ten days.

In certain localities there may be a need of someone to act as a cream buyer in order to avoid the shipping by each individual of a small lot of cream in a large can. The station agent overcomes this and the product is handled as one shipment. In many communities the cream station is a hindrance to the progress of the industry. Many of these stations are located in a well-established creamery community and depend largely upon the product of poorly managed

dairies. The creamery has certain standards as to quality of the cream that shall be used in the manufacture of butter. The patron who fails to comply and is told how his cream may be improved, often resents the offer with the remark: "The station will take my cream regardless of quality." In one village of southern Wisconsin the agent failed to locate a station but before giving up his task he asked the creamery operator to ship to the company that he represented all the low grade cream received at a premium of 2 cents per pound of butter fat, above cost. In another city where a creamery has been in operation for nearly twenty years the station operator received in one month 511 ten-gallon cans of cream. The express charges amounted to $173.00, cartage at shipping point $25.00 and the price paid the producers was less than that paid by the local creamery.

Many station men are not complying with the law in so far as obtaining a license from the chairman of the local board of health is concerned. If they are licensed it is not on a uniform basis. The administration of the law by a local board does not have the same effect as if handled by a state body. Every effort should be made to change section 1636—70 of the statutes so as to place all milk or cream depots or stations under the control of the dairy and food commissioner. The present law should also be so amended as to give this office authority to formulate rules and regulations governing these stations. The quality of Wisconsin butter as well as that made from the product of cream buying stations or depots will improve when they are operated in compliance with reasonable regulations.

Whey Cream Production

A by-product of cheese factories is very often considered of little importance by the cheese makers and hence is often neglected. The department must encourage this industry but at the same time must protect the consumer.

There has been a marked increase in the production of whey cream during the past year, largely due to the increased value of butter fat and a better understanding by the cheese factory operators of the need of conserving butter fat. A large portion of this cream is churned by butter factory operators whose plants are located in cheese territories and who depend largely upon whey cream for their receipts. Some of it is shipped out of the state and the balance is churned at the factory where it is produced and the butter is sold to the patrons of the factory as whey butter. The average quality of whey cream has been improved largely due to the operators following out the suggestions made by this department as to the care the cream should receive, and the creamery operators being more exacting as to the kind of cream they accept. The improve-

ment will be still more marked when all of the cheese makers do their part in keeping the cream free from foreign taints and do not allow it to become high in acid before it is delivered. Another hindrance to quality is that some butter factory operators have no fixed standard as to the quality of the cream churned.

The law requiring that butter made from whey cream shall bear the label "whey butter" has had its good effect. A few of the butter factory operators handling this product have willingly complied, while others have been very indifferent. As stated, in many localities the whey cream is churned at the cheese factory where it is produced and the butter is sold to the patrons. This is the most logical method of disposing of this by-product of the cheese factories. It makes it possible for the milk producers to obtain butter churned from a portion of the fat in the milk of their own production at a lower price than if the same butter was bought at a grocery store.

The law dealing with the branding of whey butter should be amended to include the labeling of whey cream. Such a law would protect the buyer who may claim that he is not in a position to know the kind of cream he is receiving and also make it difficult to enforce the law dealing with the labeling of butter from whey cream. The whey butter industry will continue to increase and it rests with the cheese makers and factory operators as to the quality of this product and whether or not they will establish a demand for whey butter that is brought about by high standard of quality.

Quality of Wisconsin Butter

So far as we are able to learn the quality of the butter compares favorably with that of previous years. In certain localities the improvement has been very marked, while in other sections no change has taken place. Competition for cream by the butter factories and cream buying stations has increased, thus making it more difficult to maintain high quality. The number of factories making butter of very high quality has increased because there is a demand for that grade by butter firms having an outlet for such goods. Several of the creameries where this kind of butter is made were referred to the parties having charge of filling the government contract of Navy butter, with the result that Wisconsin did its share in filling the order.

The butter factory operators of Polk county and others who were able to produce this high grade butter deserve special mention. There are many other plants making this grade of goods throughout the entire year selling on a special contract and hence were not in a position to aid in the filling of the government order. This high grade butter is not sold on the open market but finds an outlet through the channels that recognize quality or to firms that sell butter bearing an established brand.

At the 1917 Wisconsin State Fair, 11 per cent of the creameries of

the state entered tubs of butter. The average score placed upon this butter was 93.12 with twelve tubs that received scores of 95 to 96. Another lot of 26 tubs received scores from 93 to 94.88 with only five entries scoring below 90. When butter of this high quality is entered from various sections of the state, it reflects credit upon an industry that should be encouraged and given every assistance possible.

Each representative of the department in performing his duty naturally points out to the operators and makers with whom he comes in contact the changes, if any, that should be made to bring about an improvement in the quality of the finished product. Very often our representatives are told that the suggestions made if followed out will improve the quality of the butter, but the extra expense in doing the work outlined will not be offset by an additional price that the butter may bring on the open market. Such a remark is based on facts because the Bureau of Markets in its Daily Butter Market Bulletin very often gives the quotation for 90 point score centralized butter equal or even higher than the quotation for 92 or even 93 scoring butter received from local factories.

As the dairy industry of the state has progressed in volume and total value, conditions of factories and training and experience of the makers have also improved, but the marketing condition which bears a direct relation to the full development of the industry has made practically no change. The butter industry is very largely controlled by the dairymen who produce the milk, the creameries in many localities being owned by the farmers and operated on a cooperative basis. Other plants are owned by individuals who have a direct interest in the community. The so-called centralized system of operating butter factories has taken control of certain territories but not to the extent that it has monopolized all of the cream in a given territory.

It would seem advisable that certain changes be made in the general system of operating the factories and in the marketing of the butter in order that the state may place upon the market butter of uniformly high quality. The system now in vogue may have been adequate in the past but it will not bring desired results in the future when one considers the efficiency of the larger organizations in getting a firmer hold upon the desirable markets of the world.

Suggestions as to Future Aid of Butter Factory Operators

1. That dairy inspections be increased with a view of bringing about a more uniform method of handling the product until it is delivered to the factories.

2. That the factory operators and producers be aided in securing cream for the purpose of being made into butter which contains at least 30 per cent of milk fat. At present the average fat content of the cream received at a large number of the factories is too low to make

it possible to operate the plants economically and to secure desirable results. The loss to the creamery industry from this cause alone exceeds $1,000,000 annually.

3. That the creameries be organized into groups or units to be supervised in such a manner as to obtain uniformity in the general method of operation or management and method to be followed in the manufacture of butter. This would make it possible to place upon the market butter of one grade in car lots. Butter in car lots always nets the shippers greater returns than if small lots are sold to same or different buyers. It would also do away with the duplication of territory covered by many plants which is not only a detriment to quality but increases the cost of factory operation.

4. That a system of marketing under state control be established in order that the product may be properly graded and sold on quality basis.

5. That state aid be furnished to each organization of local creameries banded together for the purpose of improving factory conditions and having agreed to employ a special dairy and food inspector to act as a field agent.

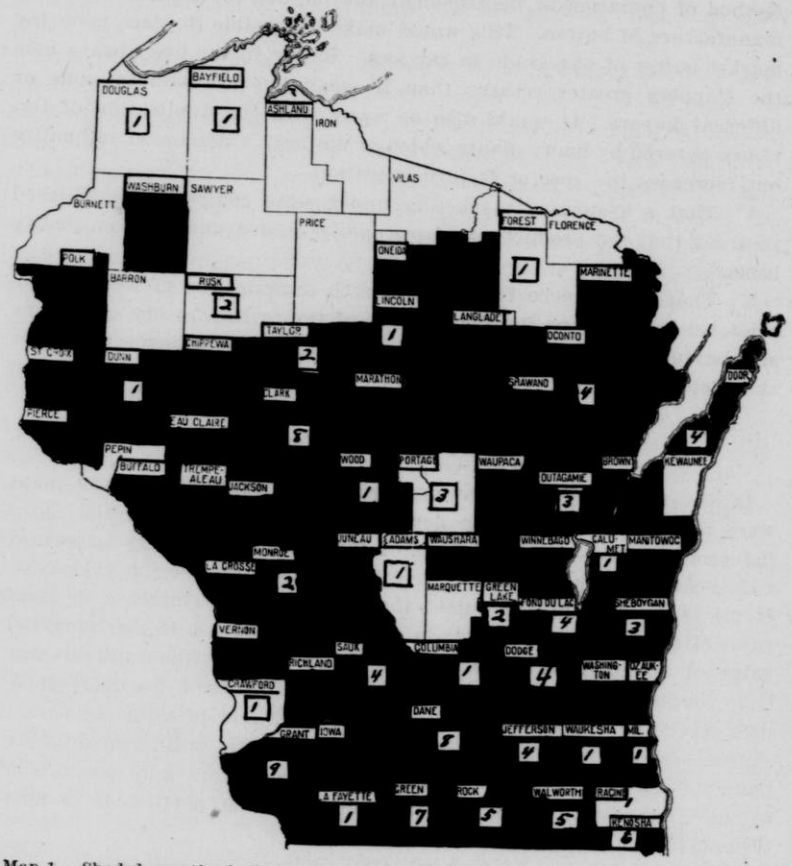
The Dairy Industry Has Made Progress

In the report for the year ending July 1, 1917, figures and maps were presented to show the development and changes in the dairy industry for the period 1909–1915. I therefore deem it very important that a similar comparison be made for the two year period 1915–1917. It might be said at the outset that the enormous increase in total value of all dairy products was in a large measure due to the increased value of all commodities brought about by rather abnormal or war time conditions. There has been an increased demand for dairy products especially condensed and evaporated milk and to a certain extent cheese and butter. The decrease in local market milk consumption has not been sufficient to influence to any large extent milk production in the southeastern section of the state and that portion of eastern Wisconsin supplying Milwaukee with milk.

The price paid for the raw material delivered to milk plants, condenseries, butter and cheese factories, did not advance the same. Cheese factory prices made the greatest advance and butter factory prices the least.

In 1915 and 1917 prices received by nine butter factories located in the various butter producing sections placed in 1915 upon the market 4,843,588 pounds of butter valued at $1,359,129.88. This is an average of 28 cents per pound for butter sold. These same plants manufactured 4,534,340 pounds of butter in 1917, valued at $1,855,134.42, or an average of 40.9 cents per pound of butter. The price received increased 46 per cent. The same situation prevailed as to wholesale

prices received for all the cheese manufactured in the two years. In 1915 the wholesale price received by the factory operators was 13.9 cents and in 1917 the average price being 22.9 cents, an increase of 64.7 per cent. The price paid to patrons of market milk plants in 1915 was approximately $1.50 per 100 pounds and $2.27 in 1917, or an



Map 1 — Shaded counties indicate decrease in pounds of butter manufactured, 1915 and 1917 compared.

increase of 77 cents for 100 pounds which amounts to 51 per cent. (The above prices were paid by one milk plant for the two years.)

Certain definite changes have taken place that have altered the ratio of butter production as compared with cheese, or both butter and cheese, in comparison with market milk and the condensing industry. In 1915 the total output of factory butter amounted to 124,636,071 pounds, valued at $34,744,774.51, and in 1917 the output of butter was 101,325,285 pounds valued at $39,583,037.96, a decrease in production of 18.9 per cent and an increase in the value of 13.8 per cent.

There was a decrease in pounds of butter manufactured in all the shaded counties, 1915 and 1917 compared. The number placed in the white area in the county shows the decrease in the number of factories in operation. To illustrate: There was less butter manufactured in Grant county in 1917 as compared with 1915 and nine plants ceased operation.

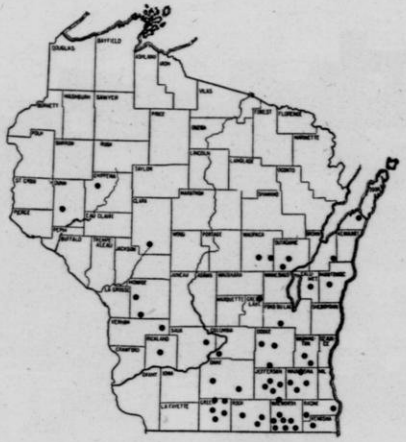
Map 2 — Shaded counties indicate increase in cheese produced, 1915 and 1917 compared.

The cheese produced in the factories in 1915 was 234,929,037 pounds and 277,267,444 pounds in 1917, an increase of 18 per cent. The 1915 value of cheese was $32,835,922.53 and 1917 the value was $63,470,882.69, an increase of 93.3 per cent.

Shaded counties indicate increase in pounds of cheese produced, 1915 and 1917 compared. The number within the white area gives the increase in the number of factories in operation per county. It

is noticeable that nearly the entire state shows an increase. The five counties of the north will eventually have their cheese factories.

In 1915 the condenseries used 396,607,532 pounds of milk valued at $9,138,520.79 while the 1917 data gave 747,540,078 pounds valued at $22,815,693.75, an increase of 88.5 per cent in the amount of milk used and 149.6 per cent in the total amount paid for this product. Map 3 gives the approximate locations of the 53 condenseries in the state, July 1, 1918. Not all of these were in operation in 1917, some only a portion of that year. It is apparent from this map that these plants are no longer confined to the so-called milk territory of southeastern Wisconsin but have invaded the well-established butter and cheese districts.



Map 3.—Location of Condenseries—July 1, 1918.

It is of interest to note another change that has taken place in the two years on the basis of the pounds of milk used in the manufacture of butter, cheese and condensed milk. Assuming that each pound of butter represents 25 pounds of milk and each pound of cheese 10 pounds, and for condensed and evaporated milk the actual number of pounds are given in the following table:

Pounds of milk for	1915	1915 % of total	1917	1917 % of total
Butter	3,115,901,775	53	2,533,132,125	41.8
Cheese	2,349,290,370	40	2,772,674,440	45.8
Condensed and evaporated milk	396,607,532	7	747,540,078	12.4
Totals	5,861,799,677	.....	6,053,346,643	.....

Per cent of increase in milk used 3.2

TABLE A

Comparison of Butter Production

Counties by Groups	Pounds 1915	Pounds 1917
Ashland, Bayfield, Burnett, Douglas, Forest, Florence, Iron, Langlade, Lincoln, Marinette, Oconto, Oneida, Price, Rusk, Sawyer, Taylor, Vilas, Washburn	6,875,538	7,546,689
Barron, Dunn, Pierce, Polk, St. Croix	18,254,769	18,364,296
Chippewa, Clark, Eau Claire, Marathon, Outagamie, Portage, Shawano, Waupaca, Wood	17,878,863	11,991,910
Buffalo, Crawford, Juneau, Jackson, La Crosse, Monroe, Richland, Sauk, Trempealeau, Pepin, Vernon	32,717,210	27,934,638
Brown, Calumet, Door, Fond du Lac, Kewaunee, Manitowoc, Sheboygan, Winnebago	10,566,029	7,876,421
Adams, Columbia, Dodge, Green Lake, Marquette, Waushara	8,667,058	5,851,635
Dane, Grant, Green, Iowa, Lafayette	12,265,885	8,299,751
Jefferson, Kenosha, Milwaukee, Ozaukee, Racine, Rock, Walworth, Washington, Waukesha	17,400,719	13,459,945
Totals	124,626,071	101,325,285

TABLE B

Comparison of Cheese Production

Counties by Groups	Pounds 1915	Pounds 1917
Ashland, Bayfield, Burnett, Douglas, Forest, Florence, Iron, Langlade, Lincoln, Marinette, Oconto, Oneida, Price, Rusk, Sawyer, Taylor, Vilas, Washburn	7,003,168	12,651,948
Barron, Dunn, Pierce, Polk, St. Croix	4,682,630	8,575,831
Chippewa, Clark, Eau Claire, Marathon, Outagamie, Portage, Shawano, Waupaca, Wood	50,257,771	63,772,563
Buffalo, Crawford, Jackson, Juneau, La Crosse, Monroe, Richland, Sauk, Trempealeau, Pepin, Vernon	13,864,468	20,556,972
Brown, Calumet, Door, Fond du Lac, Kewaunee, Manitowoc, Sheboygan, Winnebago	77,903,406	78,730,245
Adams, Columbia, Dodge, Green Lake, Marquette, Waushara	26,347,492	32,911,836
Dane, Grant, Green, Iowa, Lafayette	40,362,869	40,293,067
Jefferson, Kenosha, Milwaukee, Ozaukee, Racine, Rock, Walworth, Washington, Waukesha	14,507,233	19,774,982
Totals	234,929,037	277,267,444

In order to further illustrate the changes that have taken place and also to show the output of butter and cheese in the various dairy sections, the state is divided into eight districts as shown on Map 4, and Tables A, and B give the counties and pounds of butter and cheese produced in 1915 and 1917, for each group. As already stated butter

Map 4. Eight districts referred to in tables a and b.

production in the state decreased, yet districts No. 1 and No. 2 increased in butter production because of the development of dairy farming and the creamery industry having the advantage when dairying is yet in its infancy. As the cheese factory industry moves northward it will show even a greater increase than for 1915 to 1917. The five counties of Taylor, Lincoln, Langlade, Oconto and Marinette made the bulk of the cheese, namely, in 1915, 6,682,376, out of a total of 7,003,168 for the 18 northern counties and 11,645,071 in 1917, out of a total of 12,651,948 pounds or 95 and 92 per cent respectively.

The counties in groups No. 2 and 4 produced over 45 per cent of the entire amount of butter, and only a little over 10 per cent of the cheese. Groups No. 3, No. 5 and No. 7 in 1917 produced 63 per cent of the cheese with Dodge the banner county in total pounds of cheese produced—largely brick cheese, Sheboygan the largest output of American cheese, and Green of Swiss cheese.

Method of Transportation

Until the past three years the inspectors of this department in performing their duties depended upon railroads for means of transportation between cities and livery in making inland points. Since that time several of the men have used their own cars at an allowance of 10 cents per mile. In October, 1917, the department purchased two Ford automobiles and in May, 1918, another automobile.

It is impossible to give definite data as to the actual cost of the operation of these automobiles because of changing conditions and the nature of the work performed and also because of the difference in the territory covered in the short time in which these cars have been used. Prior to two years ago it was possible to hire livery at a cost of $3.00 to $5.00 per day, while at the present time in many localities of the state horses are not maintained for the purposes of livery and auto hire can only be had at a cost of $2.00 for the first hour and $1.00 for each succeeding hour. If the drive is a long one a charge of 15 cents to 25 cents per mile is made. The use of individually owned cars at a cost of 10 cents per mile was a great saving to the state, together with an increase in the amount of work accomplished. Not all of the men, however, owned cars of the type that might be operated within the allowance made.

From all indications it is economy for the state to furnish the men with automobiles. Two of the automobiles purchased were used in November and December of last year and from April to July of this year with very good advantage. One inspector reported the following for two consecutive weeks when state car was used: The distance traveled was 245 and 175 miles and the expense including hotel bill was $26.68 and $19.48 respectively. For two weeks when automobile hire was used in place of state cars the expense amounted to $46.94 and $47.20. One of the inspectors used his own car for a month at 10 cents per mile and his entire expenses for the month amounted to $182.80. He was later furnished with a state car with the result that his expense was reduced to $124.14.

The advantages to the state in furnishing the inspectors of the dairy and food department with automobiles may be summarized as follows:

1. Decrease in cost of making inspections.
2. Increase in the number of inspections made per week, which means that a larger territory can be covered by each man.

3. Delays due to train accommodations on many of the branch lines avoided.
4. Makes it possible for the men to start out on Monday morning and follow a continuous route until the end of the week, while if livery is used, they very often are obliged to return to the starting point before the trip is finished.
5. It means the saving of liverymen for other lines of work. Livery hire invariably means a driver.
6. It means the saving to the state of the wages of the driver and his hotel bill.

Respectfully submitted,

C. E. LEE,

Assistant Commissioner

REPORT OF E. L. ADERHOLD, ASSISTANT DAIRY AND FOOD COMMISSIONER

Honorable GEORGE J. WEIGLE,
Dairy and Food Commissioner,
Madison, Wisconsin.

Dear Sir:

I have the honor to submit herewith my annual report as assistant commissioner for the year ending June 30, 1918.

CHEESE MOISTURE TESTING

The legislature created a maximum legal moisture standard of forty per cent for American cheese which became effective in 1917. About June 1, of that year, I was directed to take up cheese moisture testing with the view of enforcing that standard. Most of my time for the balance of that year, with an occasional day or two since, was spent at that work.

Part of the testing was done at my residence but the bulk of it was done at Plymouth and Fond du Lac because dealers there had provided testing facilities.

Most of the cheese samples were obtained at warehouses of cheese dealers at Sheboygan, Plymouth, Fond du Lac and Neenah, where over twenty dealers received the output of about six hundred factories. Some testing also was done at Manitowoc, Green Bay and Appleton.

At the beginning of this work very few cheese makers knew the moisture content of their cheese, much of which was found to contain excessive moisture. Frequently samples were tested that contained over forty-two per cent.

During the first few months this work was pretty much on the educational order, the producers of high moisture cheese being notified of its character and warned to keep within the law. In most cases compliance with the law was thus secured although repeated warnings were needed in a number of instances. Not all warnings were heeded and it became necessary to make some prosecutions and it appears as though scattering factory men still are courting prosecution under the law.

Because of the moisture law and of the work mentioned above, in which I had the cooperation of manufacturers and dealers in general,

the quality of American cheese, in the territory affected by the said work, has taken a decided turn for the better, which improvement is fully appreciated by dealers who were familiar with conditions "before and after." In affirmation of such appreciation I am herewith quoting from letters received from dealers:

A Sheboygan dealer writes:

"The 40% moisture law we are more than pleased to acknowledge has proven of the greatest benefit to us dealers not alone, but indirectly to the dairy farmers of Wisconsin. The cheese received by us since the moisture law has been strictly enforced shows a decided improvement in quality."

"Improved quality creates a greater demand for cheese whereas poor cheese will operate to the contrary."

A Plymouth dealer writes:

"Your work here this past winter and spring improved the quality to a wonderful degree from the fact that the factory men knowing that tests were being made here were more careful of their make to keep it under 40%, where former years it had run up to 46.48 and in some cases 50, in fact water was the principal ingredient, making cheese that wouldn't keep."

A Neenah dealer writes:

"In regard to the moisture test we find a big improvement with a number of factories who were making soft cheese, some of them now making a fine quality. We trust you will be able to continue the good work."

A Fond du Lac dealer writes:

"We consider that the quality of cheese in our vicinity has improved fully 25%. We find that since the law is enforced the cheesemakers have ceased loading their cheese with excess moisture. This improves the texture and flavor very much. We also have less trouble with cheese becoming swissy and gassy."

"We hardly believe we could remain in the business if the cheese makers were yet permitted to load their cheese with excessive moisture."

The cheese of the American type that "made Wisconsin famous" had from thirty-five to thirty-eight per cent of moisture. Prior to the time the moisture law became effective I heard a cheese maker boast that he was able to incorporate forty-seven per cent of water in his cheese and I heard others grumble because they were unable to get in more than forty-three per cent. I found one lot of cheese which contained fifty-one per cent of moisture.

Because of the unfair competition created by that mushy, wet stuff, a number of makers who for years have been producing cheese of highest quality declared, "we can no longer afford to make cheese of good quality."

The above very brief outline of what the situation was a year ago indicates plainly that the enviable reputation of our American cheese

was on the road to ruin and traveling at a rapid gait. Its progress along that road has been halted and disaster will be averted if cheese producers in general are made to comply with the moisture law.

I believe that never in the history of Wisconsin has there been so great an improvement in a dairy product in one year's time as was secured by the creation and enforcement of this moisture law, and that never before has the dairy and food department achieved such beneficial results with an equal outlay of effort. I therefore suggest that whatever supervision is needed in the various cheese producing sections to secure compliance with the moisture law should be given.

I regret to be obliged to report that in the manufacture of brick cheese the tendency to incorporate water also prevails. Unfortunately we have no moisture standard for that type of cheese and I fear the quality of that article has greatly deteriorated. Limburger is also losing out in quality from the same cause. It appears to me imperative that maximum moisture standards be created for these types of cheese as soon as it possibly can be done.

The Wisconsin Cheese Makers Association is on record in favor of a moisture standard for Brick cheese and dealers in that article strongly favor it.

There is considerable Brick cheese made with a moisture content ranging from forty-five to fifty-four per cent, whereas, according to my best information, Brick cheese of good texture never has to exceed forty-two per cent. In my opinion a maximum moisture standard of forty-four per cent for Brick cheese would be sufficiently high to be reasonable.

False Economy

The price of cheese is governed by the law of supply and the demand is influenced by the quality of the goods. If all cheese contained five per cent more whey than is compatible with high quality, the supply would be increased five per cent and the price correspondingly decreased.

Besides that there would be the extra expense of handling, boxing, storing and transporting that additional five per cent. The high moisture product leaves a bad taste in the mouths of the consumers wherefore consumption and demand are decreased by it.

The manufacture of high moisture cheese is demoralizing from every point of view and the logic of the situation demands that the excess whey be fed to hogs in the first place and converted into pork.

Under the circumstances it appears to me that whatever the dairy and food department can do in the way of securing needed moisture standards for cheese and in preventing the loading of any type of cheese with water will result in untold benefit to the dairy industry.

Market Milk

Most of my time during the winter months was employed in market milk inspection. In the big towns in my territory this work had been

done thoroughly a year ago but inspection at many small towns was passed up for want of time.

This year the work on market milk at the large cities was limited to milk plant and utensil inspection, testing the capacity of milk bottles, sediment testing milk and testing milk and cream for adulteration. In some instances reinspection was made of dairy barns where bad conditions prevailed last year.

At some twenty-five villages I inspected the dairies and utensils and tested the capacity of containers in which milk was measured for sale. The utensils used were in good condition generally and appeared clean although in several cases they were not being properly cleansed. Most of the barns were in fair to good condition while here and there very bad barn conditions were found.

There is a steady and general improvement in dairy barns and in cow cleanliness. Aside from that the market milk situation is in a rut, where it probably will remain for a while.

Milk of the highly desirable kind that one can relish and feel perfectly safe in drinking is by no means common and, at some cities, difficult to obtain. I refer to milk from dairies where cows are tuberculin tested; where barn conditions are good; where cows are clean; where milking is done by approved methods; where milk is promptly and thoroughly cooled and where all utensils are sterilized.

There are two reasons why the market milk situation is in a rut. Firstly, consumers don't know the conditions and methods employed at the sources of supply and are prone to patronize those whose prices are lowest even if their milk is inferior. Secondly, municipalities fail to regulate the milk supply.

Dairymen in general are not really opposed to regulation. In the production and handling of milk they do not employ approved methods chiefly because they would not get paid for doing it. Milk dealers rather favor regulation, many of them being strong for it. City fathers constitute the greatest obstacle to effective regulation for they have not the backbone to provide the machinery for it and, when brought to provide it, they have not the backbone to use it.

It is true that some milk dealers use pasteurizing apparatus and sell their product as pasteurized milk, but in some cases pasteurizing is done in a very haphazard manner and in other cases that milk is put up in unsterilized bottles.

Wisconsin has no law or legal standard covering the sale of pasteurized milk that can be used for enforcing efficient pasteurization.

Factory Waste

The satisfactory disposal of liquid waste at factories has been a big problem where a stream of water is not available, and where the soil is so impervious to water that a blind well will not operate. Such was the situation at a certain cheese factory in Sheboygan county last year when the operator of that factory appealed to me for aid in his sewage problem.

At my suggestion the liquid waste at that factory is now conducted to an underground receptacle very near the building. That receptacle is covered and has a capacity sufficient to hold one day's waste. Daily the fresh waste is pumped out of this receptacle by means of a steam jet pump through a three-fourths inch hose seventy feet long. During the pumping the end of the hose is manipulated to spread the waste thinly on the soil. Each day the waste is deposited in a different place. This method of handling liquid waste at that factory has been entirely satisfactory and can be successfully used at many factories.

Factory waste consists of water which contains a very small percentage of milk solids and usually a little cleanser. Foul odors are created by such waste when deposited frequently in the same place so that decay of milk solids is rapid.

The underlying principle of the above described method of handling sewage is to keep fermentation and decomposition down to a degree where odors are not noticeable. So the waste is distributed in a fresh, "sweet" condition, very thinly, and at intervals of at least a week in a given spot.

At the average factory a hose seventy feet long seems ample for distributing waste, and the public highway is an excellent place for waste so disposed of, or, in a dry time, perhaps the garden is the best place for it.

Dairy by-products should not be disposed of in this manner as they carry so high a percentage of milk solids that odors would be created. They should be hauled away from the factory and fed to live stock.

The above described method of sewage disposal is not practical in winter but the disposal of factory sewage during that period of the year never has been a problem.

Cheese and Butter Factories

In my territory there are factories which are badly in need of a ventilating system for the removal of dampness from the buildings, and there are milk intake rooms that have no fly protection. Also at some factories odors are created by spilling by-products on the soil or by faulty methods of sewage disposal. There are just a few slackers among factory employes who are not cleanly in their work.

Otherwise conditions in general are good to excellent and the best spirit and cooperation exists among factory operators and employes toward our department.

Cheese Scoring

I have acted as judge in scoring cheese at the State Fair, county fairs and in October 1917, I judged cheese at the National Dairy Show.

Respectfully submitted,

E. L. Aderhold,
Assistant Commissioner.

REPORT OF R. W. SMITH, CHIEF INSPECTOR OF WEIGHTS AND MEASURES

Honorable GEORGE J. WEIGLE,
Dairy and Food Commissioner,
Ex Officio State Superintendent of Weights and Measures.

Sir:

I hereby submit a report of the work done by the state and city departments of weights and measures for the year ending June 30, 1918.

Weights and measures work may be broadly divided into two general classifications; mechanical work and supervisional work. The mechanical embraces the actual testing, adjusting and sealing of various kinds of weighing and measuring appliances. This branch of the work is the one first taken up when a department is organized and upon it is concentrated most of the effort of the department until such time as the weighing and measuring machines themselves are in good condition when the territory covered is considered as a whole. The importance of the mechanical side of the work must not be overlooked, because, without correct weighing and measuring instrumentalities, it is impossible to secure the desired results along weights and measures lines. The mechanical work done by a department of weights and measures can readily be shown by means of tables, and an illuminating comparison may easily be made between the work of one year and of any other year. In this report certain tables have been prepared showing the total number of the various kinds of scales, weights and measures which have been inspected and tested by the state department of weights and measures and by the various cities throughout the state in which city sealers are located. The table showing the work of the state department includes not only the work done by the inspectors of weights and measures but also such weights and measures work as is performed by the creamery and cheese factory inspectors.

Graphic comparisons are shown between the work of the past year and the work of former years, and improvements in conditions may be seen at a glance. The state department has throughout the years grown both in size and in efficiency as is evidence by the greater number of weighing and measuring appliances which have been tested during the past year over what was done in former years. An exam-

ination of the tables also reveals the fact that up to a certain point a smaller number of scales, weights and measures are in need of adjustment or must be condemned for repairs or condemned outright with each succeeding year. A point, however, is reached beyond which this improvement cannot go because, after all, scales are nothing but machines and as such deteriorate with use; and measures and weights wear out the same as any other article which is in constant use. A certain number then of these appliances reach a condition each year which makes them unfit for further use or makes repairs necessary, and this figure remains fairly constant. Alarm should not be felt, therefore, that during the past year many pieces of equipment have been adjusted or have been condemned for repairs or even condemned, because almost without exception this equipment represents only that part of the total weighing and measuring instruments of the state which has worn out since the time of the previous inspection.

But, to point out the need of constant work along mechanical lines, a few examples of things which were found by state inspectors may well be cited and the following partial list has been compiled from the weights and measures reports:

Two yard measures each ½ inch short.
Meat peddler's spring scale 8 ounces fast on 12 pounds.
Public weighing scale 150 pounds short on 1000 pounds, due to mud freezing under the levers.
Hopper scale 12 pounds slow on 1000 pounds, due to an accumulation of grain and a mouse nest under the levers.
Yard measure ¾ inch short.
Yard measure ¾ inch long.
One quart measure 12 fluid drams too large.
Baggage scale in depot 12½ pounds slow on 100 pounds.
Oil pump with shortage of 8 per cent.
Error of 3 grains in arm length on a cream test scale.
A difference of 3 ounces in the balance between "scoop on" and "scoop off" positions of scoop balance on counter scale.
Counter scale 12 ounces slow on 5 pounds on account of deranged levers.
Five ounce variation on shift on five pound load on counter scale.
Wagon scale poise filled with dirt—result 10 pounds slow on 1000 pounds.
Many cases of screws missing from the beam poises and beam rods wrong end up in portable scales.
Hopper scale 17 pounds fast on 500 pounds.
Computing scale 12 ounces fast on 20 pounds.
Ten ounce variation on shift on 5 pound load on computing scale.
Portable scale 10 pounds fast on 100 pounds on beam.
Wagon scale 40 pounds slow on 1000 pounds, due to ice.

So-called grain beams designed to read in bushels instead of pounds were found to be graduated on the basis of 50 pounds for a bushel of barley instead of 48 pounds as provided by the statute. A number of these beams were found in the state and they were condemned for repairs as a faulty weighing device.

An effort, attended by more or less success, has been made to have the grain buyers throughout the state buy not only barley but other grains as well on the basis of 100 pounds instead of on a bushel basis. It is felt that this plan would eliminate most of the troubles attending the present odd bushel weights as a basis for computation, and the grain buyers have been willing to make the change provided that the practice was universally followed throughout the state. This matter has been given considerable publicity through the medium of a trade journal and through the efforts of the state and city sealers, and it is thought that before long the hundred pound unit will be in general use throughout the state.

TABULATION OF MECHANICAL WORK
STATE DEPARTMENT WEIGHTS AND MEASURES
July 1, 1917 to June 30, 1918

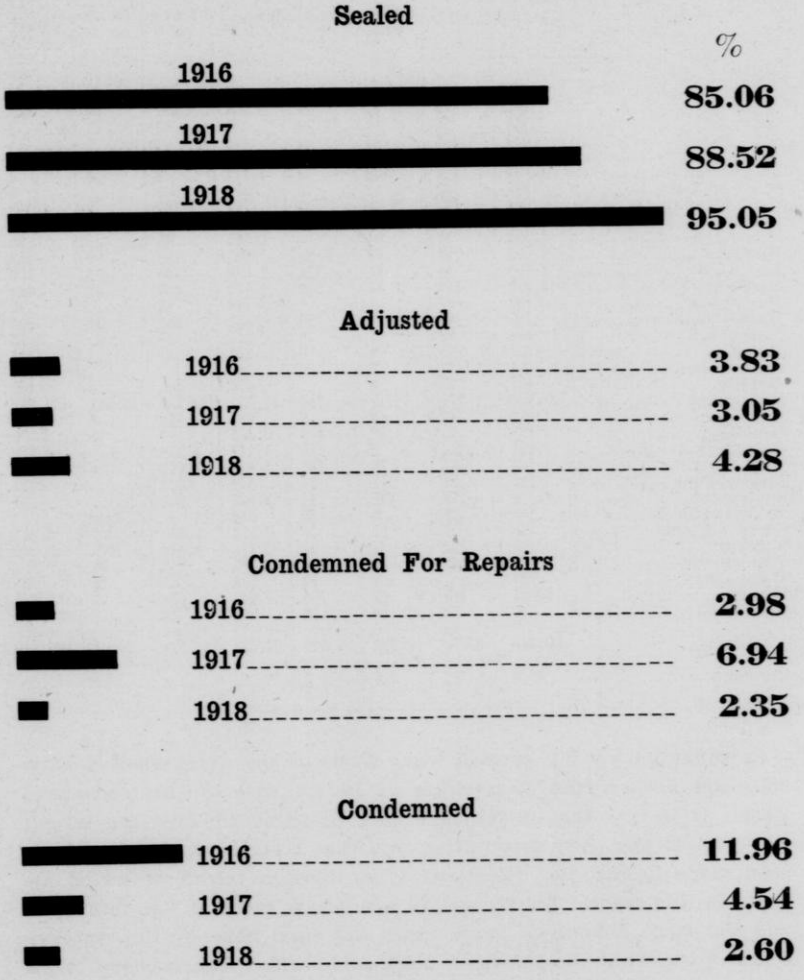
Total Number of Establishments Inspected..... 13,506
Total Number of Appliances Tested.....127,150

Appliances	*Sealed	Adj.	Cond. Repairs	Cond.	Total
SCALES					
Counter	5,368	370	252	61	5,681
Hopper	295	56	14	.....	309
Suspension	150	22	8	.....	158
Computing	3,827	1,137	234	11	4,072
Wagon	1,569	170	345	17	1,931
Port. Platform	6,379	768	468	86	6,933
Dormant	880	92	76	2	958
Spring	1,144	87	115	300	1,559
Torsion	473	8	48	4	525
Beam	239	6	12	7	258
Slot Machine	8	1	1	.....	9
Prescription	296	11	9	1	306
Jewelers	22	.....	.....	2	24
Cream	165	4	13	9	187
Dry Measures	275	.....	.....	29	304
Liquid Measures	22,198	32	207	1,338	23,743
Presc. Grad	2,204	.....	.....	140	2,344
Aut. Pumps	3,484	594	375	14	3,873
Linear Meas	7,017	171	37	94	7,148
Weights	64,859	1,911	777	1,192	66,828
Totals	120,852	5,440	2,991	3,307	127,150

*The appliances adjusted have been sealed and in figuring the totals are included in the "sealed" column.

NOTE—The above tabulation includes only the field work of the state department.

COMPARISON OF PERCENTAGES OF MECHANICAL WORK FOR FISCAL YEARS 1916, 1917, 1918. FIELD WORK—STATE DEPT.



TABULATION OF MECHANICAL WORK

CITY DEPARTMENTS OF WEIGHTS AND MEASURES

July 1, 1917, to June 30, 1918

	Weights and Measures Appliances					Containers		
City	Sealed	Adj.	Cd. Rep.	Cond.	Total	Correct	Incorrect	Total
Antigo	432	83	4	1	437	57	.....	57
Appleton	2,346	78	42	62	2,450	487	56	543
Ashland	231	15	1	8	240	.....	.....	.....
Baraboo	811	156	11	48	870	.....	.....	.....
Beloit	1,665	127	23	109	1,797	458	30	488
Eau Claire	1,029	102	38	44	1,111	2	2	4
Fond du Lac	935	102	12	13	960	9	.....	9
Grand Rapids	698	123	2	37	737	1,167	2	1,169
Green Bay	4,422	573	197	73	4,692	157	3	160
Janesville	1,552	21	4	4	1,560	55	.....	55
Kenosha	1,773	48	44	88	1,905	198	4	202
La Crosse	1,898	88	12	126	2,036	106	.....	106
Madison	4,016	113	34	121	4,171	402	42	444
Manitowoc	783	97	1	.....	784	25	.....	25
Marinette	787	36	4	40	831	168	57	225
Marshfield	894	82	7	9	910	15	.....	15
Menasha	337	48	1	6	344	41	.....	41
Menomonie	751	37	3	36	790	.....	.....	.....
Merrill	467	12	3	.....	470	400	.....	400
Milwaukee	31,428	271	1,217	106	32,751	115,750	25,512	141,262
Neenah	672	11	4	8	684	779	3	782
Oshkosh	1,868	79	89	477	2,434	97	2	99
Portage	1,091	.....	5	15	1,111	4,278	.....	4,272
Racine	3,133	305	76	186	3,395	1,099	14	1,113
Rhinelander	810	81	11	21	842	322	.....	322
Sheboygan	3,350	74	187	44	3,581	358	.....	358
So. Milwaukee	203	28	6	25	234	.....	.....	.....
Stevens Point	790	47	17	27	834	2,860	1	2,861
Superior	5,095	282	35	94	5,224	4,946	270	5,216
Watertown	2,089	308	76	100	2,265	282	30	312
Waukesha	722	.....	3	19	744	55	12	67
Wausau	2,845	105	39	58	2,942	172	3	175
West Allis	526	22	18	16	560	28	.....	28
Totals	80,449	3,554	2,226	2,021	84,696	134,767	26,043	160,810
Per cent	95.0	4.2	2.6	2.4	.....	.....	.....	.....

In summing up the supervisional work of the department the results are not so readily apparent as in the case of the mechanical work. It is true that tables have been prepared showing the try-out work which has been done; it is true that certain prosecutions have been made in cases of violation of our laws, a record of which appears in this report; but the actual results are more or less intangible and the large amount of good which has been done by this supervisional work cannot be shown in black and white. Supervisional work consists of try-outs and check-weighings performed in the various places of business throughout the state, in educational work, in instruction in the law and the proper methods of compliance therewith, in talks before various organizations of business men and housewives, in examination into questionable methods of sale, in examining the condition and use (not testing) of weighing and measuring devices,

etc. This sort of work has been carried on consistently both by state inspectors and by the city sealers and without question has had fully as much to do with bettering weights and measures conditions throughout the state as the mechanical inspection of the equipment.

TABULATION OF SUPERVISIONAL WORK

STATE DEPARTMENT OF WEIGHTS AND MEASURES

July 1, 1917 to June 30, 1918

Establishments tried out	2,301
Packages weighed	17,524
Packages underweight	2,241
Sanitary and food inspections	3,746
Prosecutions	17

TABULATION OF SUPERVISIONAL WORK

CITY DEPARTMENTS OF WEIGHTS AND MEASURES

July 1.1917 to June 30, 1918

City	Try-Outs				Prosecutions	
	No. of visits	No. of tests	No. found short	Mis-branded	Cases brought	Convic-tions
Antigo	195	502			1	1
Appleton		1,392	89			
Ashland	122	233	2			
Baraboo						
Beloit	415	1,142	196			
Eau Claire	130	1,095	174	10		
Fond du Lac	79	363				
Grand Rapids	1,323	909	89			
Green Bay	113	547	67	7	1	1
Janesville						
Kenosha	108	495	8			
La Crosse	134	603	20		6	5
Madison	586	1,625	263	186	4	4
Manitowoc	29	29		25		
Marinette	59	319	98	55		
Marshfield	39	118	33			
Menasha	91	238	11			
Menomonie						
Merrill	47	195	2			
Milwaukee	1,119	7,309	676	1,029	34	32
Neenah	878	7,051	39			
Oshkosh	64	174	11		1	1
Portage		136	29			
Racine	1,046	1,782	395	245	3	3
Rhinelander	224	1,572	305		2	2
Sheboygan	424	1,182	449	6	1	1
So. Milwaukee	2	3				
Stevens Point	1,878	5,161	50	87	2	2
Superior	918	3,786	83	298		
Watertown	985	2,390	72	61	3	3
Waukesha	225	400	7			
Wausau	429	895	98			
West Allis	39	173	20			
Totals	11,701	41,859	3,286	2,009	59	56

There have been several changes in the personnel of the state and city departments of weights and measures and also a number of changes have been made in the amount of work other than weights and measures work done by the state inspectors. Mr. W. J. Kramer has been replaced on the state force by Mr. J. M. Kelliher, formerly city sealer of Green Bay. Mr. W. A. Voigt, transferred to the food department of the Dairy and Food Commission, has been replaced by Mr. George D. Gilman, formerly city sealer of Appleton. Mr. F. P. Downing, chief inspector of weights and measures, was succeeded on September 28, 1917 by the present chief inspector.

Among the city sealers the following changes in personnel have been made: Mr. J. A. Flannigan has been appointed city sealer of Green Bay to replace Mr. J. M. Kelliher, who was appointed to the state service. Mr. J. A. Hodgins has been appointed city sealer of Appleton to succeed Mr. George D. Gilman, appointed to state service; Mr. George McEntee has been appointed city sealer of Fond du Lac to succeed Mr. J. L. Weber; Mr. Wm. P. Hyland has been appointed city sealer of Ashland to replace Mr. A. J. Kull; Mr. F. J. Briesemeister has been appointed city sealer of South Milwaukee to replace Mr. J. H. Neary; Mr. B. M. Mulvaney, city sealer of Oconto, has resigned and has not yet been replaced.

The state weights and measures men have been relieved of the sanitary inspection of stores in all towns except those which are not located on a railroad. In these they do the work as formerly. The weights and measures inspectors now inspect the weighing and measuring equipment of all creameries and cheese factories which are located in a town or at a place where there is some other weights and measures work to be done besides that to be done in the cheese factory or creamery in question. Weights and measures inspectors are now charged with the enforcement of the so-called Anti-Trading Stamp law, section 1747m of the Statutes. They are also charged with assisting in the enforcement of the Automobile License Law.

By the introduction of a new system relating to equipment which is condemned for repairs, weights and measures inspectors have been relieved of practically all of the reinspection work which formerly took so much time and resulted in so much expense to the state. When equipment which has been condemned for repairs has been put in proper shape, a comparative test is made by the owner of the equipment to determine the accuracy of his scale or measure, and when a satisfactory return has been made on this test to the office at Madison, on a blank left by the inspector, a permit is issued legalizing the use of the equipment pending a retest by the state. This system has been in use since March 1, and while it is too early to say definitely how much time and expense will be saved, still it is confidently expected that this change, together with the others mentioned above, will enable the weights and measures inspectors to cover the territory as-

signed them within one year, a condition which has not been realized in the past.

The only changes which have been made in the tolerances and specifications for weighing and measuring appliances have been the addition of two new specifications, one on spring cream buying scales and one on moisture test scales. The specification on cream buying scales covers that class of spring scale which is used by cream haulers on their wagons in traveling from farm to farm buying cream for the creameries. The specification on moisture test scales fixes the requirements for scales used for the determination of moisture in butter and cheese when these scales are sealed by the department.

A regulation has been issued whereby those manufacturers who furnished bonds under the provisions of section 1666a of the Statutes must renew these bonds at least every three years or must notify the department by means of a renewal receipt or other approved means that the bond is being kept in force. This action was taken so that the state might be protected at all times against the manufacture of serially sealed bottles which did not comply with specifications.

In the tables is shown a comparison between the expenses of the state inspectors of weights and measures for the fiscal year ending June 30, 1917 and the fiscal year ending June 30, 1918. This summary has been itemized under various headings for the better comparison of the expenses of two succeeding years, and two outstanding facts are apparent. First, that the expense for meals and lodging is materially greater now than it was a year ago. Second, that the same condition exists in regard to the expense for livery and drayage. It is safe to assume that about the same amount of time has been spent by the inspectors in the field each year, and the difference in hotel expense represents the additional tariff charged for the same service. This difference of almost $450.00 for board and lodging in 1918 represents an increase of over 15 per cent over the charge in 1917. The figure for livery and drayage shown for 1918 represents an increase of over 12½ per cent over the figure for 1917. The other items shown in this tabulation remain fairly constant.

SUMMARY OF INSPECTORS' EXPENSES FOR THE FISCAL YEAR ENDING JUNE 30, 1917

STATE DEPARTMENT OF WEIGHTS AND MEASURES

Month	Meals and lodging	R. R. & St. car fares	Livery, bus and drayage	Freight and express	Excess baggage	Miscellaneous	Total
July	$220.55	$110.93	$342.50	$24.36	$18.65	$8.91	$725.90
August	289.90	111.09	336.75	30.29	14.70	11.47	794.20
September	199.25	772.07	264.60	24.34	11.80	10.16	582.22
October	274.70	123.17	375.20	44.16	46.20	18.11	881.54
November	228.95	101.10	262.85	32.97	14.55	11.25	651.67
December	211.60	104.58	205.30	32.36	9.35	6.00	569.19
January	249.65	110.55	219.10	26.08	20.00	5.13	630.51
February	171.00	71.13	123.25	15.92	30.85	6.65	418.80
March	256.65	110.25	187.62	35.60	20.70	4.70	615.52
April	255.40	113.70	248.25	37.39	35.20	7.00	696.94
May	296.15	115.57	349.55	36.87	29.95	6.60	834.69
June	264.78	118.80	278.40	29.46	37.85	5.30	734.59
Totals	$2,918.58	$1,262.94	$3,193.37	$369.80	$289.80	$101.28	$8,135.77

SUMMARY OF INSPECTORS' EXPENSES FOR THE FISCAL YEAR ENDING JUNE 30, 1918

STATE DEPARTMENT OF WEIGHTS AND MEASURES

Month	Meals & Lodging	R. R. & St. Car Fares	Livery, Bus and Drayage	Freight and Express	Exc. Bag.	Miscel.	Total
July	$241.70	$89.04	$269.40	$12.91	$17.80	$4.25	$635.10
August	293.40	111.01	397.05	23.12	30.25	6.65	861.48
September	199.05	97.79	250.45	23.63	19.87	5.35	596.12
October	302.85	140.85	269.68	29.56	45.85	3.90	792.69
November	301.40	104.47	312.65	35.02	57.57	5.24	816.35
December	272.30	91.86	261.50	34.02	8.30	2.90	670.88
January	296.95	97.63	177.90	22.35	14.84	6.65	616.32
February	326.70	111.53	159.95	10.17	25.05	4.20	637.60
March	338.60	123.36	230.50	27.24	19.85	3.85	743.40
April	294.90	115.26	336.10	28.83	20.12	2.85	798.06
May	266.75	73.37	371.05	27.94	16.50	3.37	758.98
June	327.30	95.10	529.60	23.05	24.10	5.95	1,005.19
Totals	$3,461.90	$1,251.27	$3,565.83	$297.84	$300.08	$55.16	$8,932.08

The total number of tests made at the office of weights and measures in Madison the past year is very much less than that of other years. Two reasons may be given for this difference. First, the fact that creamery glassware is now being sealed by the manufacturer the same as milk bottles which means that it is unnecessary for this office to test large numbers of milk and cream test bottles; second, because most of the creameries of the state are now supplied with reliable cream test and moisture test scales, resulting in a decreased demand upon the distributors and consequently there is a smaller number of this type of scale passing through our office for test.

Most of the moisture test scales which were tested during the past year were for the determination of moisture in cheese. The department has done considerable work on scales of this kind to meet the demand of the cheese factories for a machine which will enable them to comply with the recent law passed by the legislature fixing a maximum moisture content for cheddar cheese. The department has had difficulty in maintaining a sufficiently high standard for these moisture test scales in the matter of sensibility. It was necessary to reject many of those first submitted because they were not sufficiently sensitive, and many of these scales were repaired in our office so as to avoid the delay of returning them to the factory with the resulting inconvenience and delay to the cheese maker. At the present time, however, moisture scales are being sent out by the manufacturers in compliance with the specifications of the department and if these scales are intelligently used by the cheese makers they will give most excellent results.

The table shows that 32 per cent of the state standards tested were found in need of adjustment. This percentage is large but it must be remembered that any state standard on which the slightest adjustment is made is entered on the record as being adjusted, and that the amount of adjustment is so small that in many cases it could not be determined except upon the delicate balances in the office. The table does not include the tests and adjustments made on the 50 pound weights used by the inspectors in the field, many of which have been tested and adjusted from time to time throughout the year. The table also does not include the tests made in the field upon the equipment of the city sealers at the time of the inspection of their equipment and work.

TABULATION OF MECHANICAL WORK PERFORMED IN THE OFFICE

Appliances	Sealed	Per cent sealed	Adjusted	Per cent adjusted	Condemned report	Per ct. condemned report	Condemned	Per ct. condemned	Total
Cream test scales	47	82.5	1	1.75	10	17.5	.....	.....	57
Moisture test scales	63	74.1	14	16.5	22	25.9	.....	.....	85
Cream buying scales	292	99.3	.....	.....	2	0.7	.....	.....	294
Cream test bottles	2	100.	.....	.....	.....	.....	.....	.....	2
Milk test bottles	109	87.9	.....	.....	.....	.....	15	12.1	124
Milk pipettes	1	100.	.....	.....	.....	.....	.....	.....	1
Liquid measures	8	72.7	.....	.....	.....	.....	3	27.3	11
Weights (commercial)	238	98.8	44	18.25	.....	.....	3	1.2	241
City standards	40	100.	13	32.5	.....	.....	.....	.....	40
State standards	62	100.	20	32.3	.....	.....	.....	.....	62
Miscellaneous	4	80.	.....	.....	1	20.	.....	.....	5
Totals	866	.....	92	.....	35	.....	21	.....	922

During the year careful tests have been made upon the various balances in use in the office of weights and measures to determine their sensibility reciprocals and arm length errors. These tests are of assistance where the work performed does not require a relatively high degree of accuracy. Of course in all precision work but one arm of the balance is used in the determination and the sensibility reciprocal is established for each operation. Tests were also made upon the secondary or office standards of the department using for that purpose the primary state standards. Adjustments were not made upon the secondary weights, it being only necessary to correct the tables showing the individual errors on the various sets. At this time a set of avoirdupois weights was very carefully adjusted to be known as the office working standards, which weights are used for all ordinary work in the office, thereby protecting the secondary set. Tests were also made upon some of the portable ten pound balances used by the inspectors in the field and errors in sufficient number were found to justify the construction of a special jig or device for testing and sealing the beams of these balances. Such a jig was accordingly procured and the sealers' balances carefully adjusted and sealed.

Throughout the year various talks have been given both by the chief inspector and the inspectors in the field, explaining the work of the department. In many instances these talks were illustrated by exhibits of interest along weights and measures lines.

An investigation has been started but not yet completed on the conditions prevailing in the cheese industry which effect the question of weight. As far as this investigation has gone it strongly points to the need for further investigation and for a correction of many of the practices which are in present vogue. Sufficient data are not at hand as yet to justify definite recommendations.

During the year a permanent exhibit of the weights and measures department has been completed in the dome of the Capitol building. This exhibit consists of a large wall case in which are displayed various things explaining the work of the department. A very fine model has been constructed showing a comparison between a careless, faulty installation of a wagon scale and a careful, up to date installation. Two good installations are illustrated in which the features of proper ventilation, drainage, foundation, clearance, approaches, protection from the weather, etc., are brought out. It is expected that this model, which is made portable so that it can be taken to different parts of the state, will do much to create a proper appreciation of the need for careful installation of all heavy scales. The exhibit further contrasts examples of worn pivots and bearings with new pivots and bearings.

Three balances which were received by the state of Wisconsin about 1865 from the federal government also form a part of the exhibit, the 25 pound and 50 pound balances being outside of the wall case and the 2 pound within it. These balances have a great historical value to

citizens of Wisconsin in addition to their beautiful workmanship, and they are now, for the first time, displayed where the public may view them. These balances are not used by the state department at the present time and thus form a permanent part of this exhibit. A set of Troy weights also received from the federal government is included in the exhibit. Certain of the present day primary standards, liquid and dry, are also shown. A few examples of faulty weighing and measuring equipment are exhibited as concrete reasons for the existence of a department of weights and measures. The exhibit is completed by various placards explaining the exhibits and the work of the department.

An effort has been made throughout the year to bring about a greater uniformity in the work of the various state and city inspectors of weights and measures. It was found that in many of the details of the work, men were working along different lines, and while their work was satisfactory considered by itself, there was a lack of that uniformity which is so desirable in an organization of men engaged in the same kind of work. A number of the cities of the state have been visited for the purpose of making the inspection and test of equipment which is provided for by the statutes, and it is planned to complete this work in all the cities where there are city sealers at as early a date as possible.

On April 23, 24 and 25, a conference on weights and measures was held at the Capitol Building in Madison which was attended by all state inspectors and by most of the city sealers of the state. There were present 20 state inspectors, 31 city sealers and 36 visitors, speakers and representatives of the various manufacturers. This three-day conference was devoted to a study of various weights and measures problems and the meetings were addressed by authorities from outside of the state. Exhibits were furnished by six scale companies, one manufacturer of oil pumps and one manufacturer of graduated glassware. One of the facts which was brought out very prominently at this conference was the need for closer coordination between the various units of the weights and measures organization of the state. The need for this coordination was felt by the men themselves and steps were taken to form a state society of weights and measures men. Details for this organization have not yet been completed but will be before a great while. Everything which will tend to draw the city sealers into closer touch with the state office of weights and measures and the state inspectors should be done. It appears that this result might be hastened by more frequent reports from the city sealers to the state; by a closer cooperation between the city sealer and the state inspector; by a greater authority of the State Superintendent of Weights and Measures over the city sealer; by making the office of weights and measures a clearing house for all ideas and plans pertaining to weights and measures work; by a provision for better salaries for the city sealers, many of

whom are at present receiving a mere pittance for their services. In other words, all of the men in the state who are engaged in this work should be tied together into one large family and made to feel that each has an interest in the work of the other, and that the state is vitally interested in the work of all.

Owing to the changes that have been made from time to time in the statutes under which the department operates, a very satisfactory set of laws has been placed upon the books for the protection of the citizens of the state. However, some additional changes are desirable and should be incorporated in our Statutes at the earliest opportunity. The statute requiring sales to be made by net weight, as passed by the last legislature, has been of very great assistance in protecting the purchaser from paying for the wrapper or container of his commodity at commodity prices. Two important items of food, however, should be specifically mentioned in this legislation because at the present they are without the provisions of the statute. These articles are meat and cheese. The abuse in the case of wrapped meats and cheese is very great and the losses to the merchant amount to many thousands of dollars annually. There is no moral reason why a packer of meat or cheese should be allowed to sell the manifold wrappings of his commodity at the price of the commodity itself.

The burden of this loss rests upon the retailer because he is obliged under the statute to sell net when he retails goods which he buys gross from the manufacturer or packer. The long established custom of wrapping meats and cheese and charging for the wrapper has been recognized by the courts and in the absence of a special requirement our general net weight law does not cover this situation.

A number of cities within the state have enacted ordinances requiring that all packages put up in a retail store shall be marked with their net weight or measure or be accompanied by a sales slip upon which sufficient information is given so that the housewife can intelligently check her purchases. This regulation should be enacted into a state law so that all of the people of the state might benefit by its provisions.

In order to protect the consumer against certain unscrupulous practices a provision should be enacted into our statutes requiring that all liquids shall be sold either by standard liquid measure or by weight. The practice particularly referred to is the use of an automatic oil or gasoline vending device in which the purchaser drops a coin and receives a certain amount of oil or gasoline. He does not know beforehand how much he is going to get and after he has received it he has no redress in case he thinks he has not received a sufficient amount, because the device does not have any attendant and all the purchaser can do is accept what he gets and say nothing. A law such as suggested above would require that the sale be made by a definite quantity and in that way the purchaser would secure the protection which he does not have at the present time.

The need for railroad track scale inspection by the state is as imperative as it has been in the past and this legislation should be given attention at the very earliest suitable opportunity. This matter was discussed at length in last year's report and no further mention will be made of it here.

There should be a regulation on our statute books fixing the standard for a cord of wood. At present nothing but custom establishes the figure of 128 cubic feet.

It would expedite the work of the state and city inspectors of weights and measures if the state superintendent were given the authority to employ in the service of the state in work outside of their own city but within its immediate vicinity such city sealers as he deemed advisable. This work could be performed by a city sealer at less expense to the state in many instances than it can be done under the present system. It would permit of more frequent inspections and closer supervision with the same expenditure of money as is now being made. As pointed out in the early part of this report it is thought that under the present arrangements state inspectors can cover the state at least once each year as provided by law. However, this means that they must devote their efforts almost exclusively to the mechanical side of the work and that the supervisional side suffers as a consequence. The supervisional part of the work is just as important as the mechanical side and should receive an equal amount of attention in order to secure ideal results. The arrangement as suggested, whereby the city sealer might work in territory contiguous to his city, would allow more time to be given to the supervisional work by the state inspectors with beneficial results to all concerned.

In order to enable the state inspectors of weights and measures to perform their duties more efficiently and expeditiously, your attention is respectfully directed to the desirability of the use of automobile trucks by these men. There is no question but that the work could be done in much better fashion if the state owned a sufficient number of automobiles so that each of the inspectors might be working with one during the summer months. It would not, perhaps, be necessary to have a separate machine for each inspector, at least for a time. Two inspectors might work to very good advantage together, on many classes of work. For the use of an inspector of weights and measures, I would suggest the purchase of three-quarter or one-ton truck chasses, these to be equipped with specially designed bodies to carry the inspectors' equipment. You will appreciate that from the nature of the load carried, an ordinary truck body would be entirely out of the question. A truck with two compartments should be provided one of the correct size to hold twenty 50 pound weights and the other of a suitable size to contain the grips and other miscellaneous equipment which the inspector carries. With such a machine an inspector could also carry a more complete outfit than is possible where he must carry

everything by hand, and the efficiency of his work would be accordingly increased.

The reports of the several state inspectors of weights and measures indicate that in general conditions about the state show a steady improvement, and particularly that the attitude of the merchants and the public toward the work of the department is very good. This is in contrast to the condition in the early days of the department when there was more or less friction caused largely by a lack of understanding of what the department stood for and of what its work was designed to accomplish. Another thing which is brought out by these reports is the better manner in which large scales are being installed, as a result of the campaign of education directed to this end which is being carried on at all times by the men in the field. The need for continued effort is emphasized also and instances of violation of our laws and regulations, caused in most cases by carelessness or ignorance, are cited. However, the general tone of these reports is optimistic.

The reports of the various city sealers of weights and measures reveal a variety of conditions. In some cases a large amount of effort is directed towards supervisional work and in others almost none at all. In some cities the conditions approach the ideal and in others the work is more or less perfunctory. This latter condition may be accounted for in many instances because of the very small salaries paid to the city sealers, which means that only a small amount of time can be devoted to this important work and that the interest taken in his work by the city sealer is less than it should be. The amount of remuneration received has a great deal to do with inspiring a man with a proper regard for his work and his efficiency is consequently very largely dependent upon the salary which he receives. One encouraging feature is that in most cases the sealers have the hearty cooperation of their city officials. This is indispensable in securing the best results. Cities in which the sealer has not this cooperation and in which he is hampered in his work by the city officials are fortunately very rare.

In conclusion I wish to say that I feel the work of the department of weights and measures is of greater importance now than it has ever been in the past owing to the abnormal conditions in which we are living at the present time; and I feel that every effort should be made to maintain it at its present high state of efficiency and to increase this efficiency by every means which lies within our power, thereby making the department of even greater value and service to the people of the state.

Respectfully submitted,

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