Proceedings of the Wisconsin Cheese Makers' Association thirty-seventh annual convention November 21, 22, 1928 assembled in the Columbus Community Club Building Green Bay, Wisconsin. 1929

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PROCEEDINGS

OF THE

WISCONSIN CHEESE MAKERS' ASSOCIATION

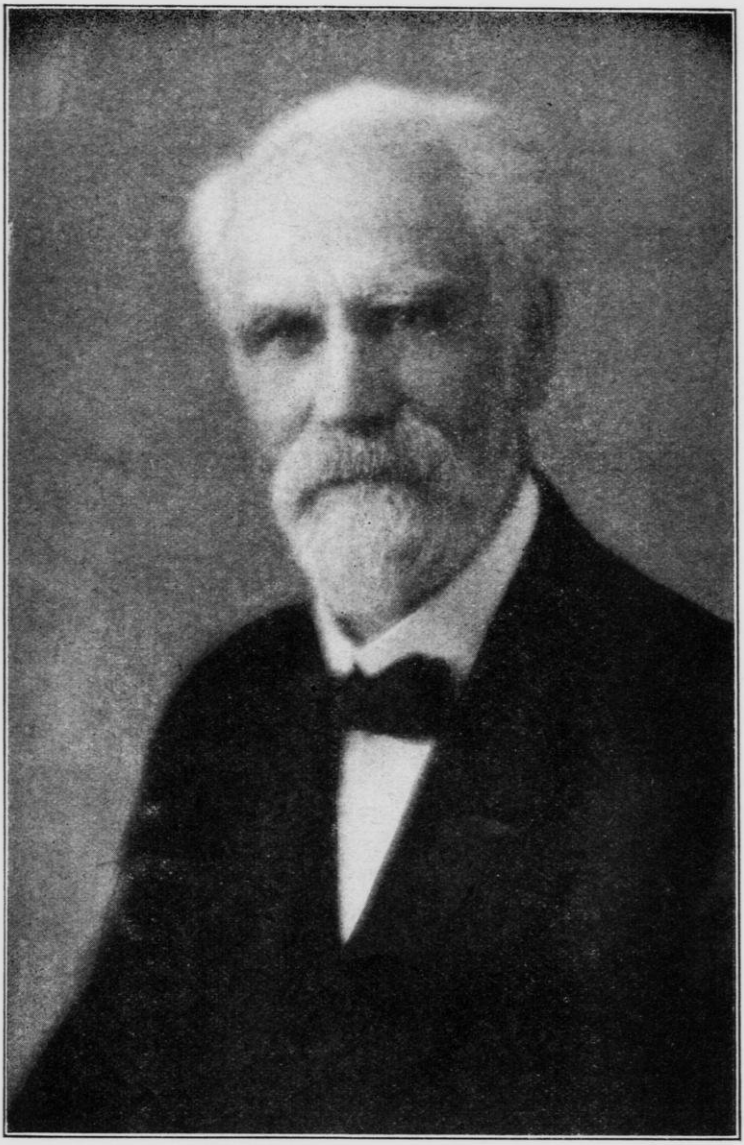
THIRTY-SEVENTH ANNUAL CONVENTION

November 21, 22, 1928

Assembled in the Columbus Community Club Building
Green Bay, Wisconsin

Compiled by
J. L. SAMMIS, Secretary

Madison, Wisconsin
1929



HON. JOHN QUINCY EMERY

Sept. 15, 1843. Aug. 5, 1928.

Wisconsin Dairy and Food Commissioner, 1902–1915, 1921–1926
Consulting Assistant to Dairy and Food Commissioner
July, 1927 to Aug. 1928

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LETTER OF TRANSMITTAL

Office of the Secretary,
Wisconsin Cheese Makers' Association,
Madison, Wis., 1929.

To His Excellency, Walter J. Kohler,
Governor of the State of Wisconsin.

I have the honor to submit report of the thirty-seventh annual meeting of the Wisconsin Cheese Makers' Association, showing the receipts and disbursements reported the past year, also containing papers, addresses and discussions had at the annual convention held at Green Bay, in November, 1928.

Respectfully submitted,

J. L. Sammis,
Secretary.

WISCONSIN CHEESE MAKERS' ASSOCIATION
THIRTY-SEVENTH ANNUAL MEETING
Community Club Building, Green Bay, November, 1928

Officers and Directors

EDW. F. WINTER, President ---------- Gillett
J. H. PETERS, Vice President ---------- Plymouth
J. L. SAMMIS, Secretary ---------- Madison
OTTO WEYER, Treasurer ---------- Manitowoc
A. T. BRUHN, Director, 37, 38, 39 ---------- Spring Green
M. M. SCHAETZL, Director, 37, 38, 39 ---------- Edgar
EARL B. WHITING, Director, 36, 37, 38 ---------- Gillett
J. GEMPELER, JR., Director, 36, 37, 38 ---------- Monroe
ARNO SCHMIDT, Director, 36, 37 ---------- Sheboygan Falls

Judges of Cheese

W. F. HUBERT ---------- Sheboygan
JOHN CANNON ---------- New London
FRED MARTY ---------- Monroe

Superintendent of Cheese Exhibit

J. W. CROSS ---------- Milwaukee

Life Members

E. L. ADERHOLD, Neenah
P. H. KASPER, Bear Creek
J. D. CANNON, New London
J. W. CROSS, Milwaukee
JOHN KIRKPATRICK, Richland Center
JACOB KARLEN, JR., Monroe
AL. WINCKLER, Cumberland
FRED MARTY, Monroe
W. F. HUBERT, Sheboygan
MATH. MICHELS, Fond du Lac
C. E. REED, Plymouth
J. L. SAMMIS, Madison
OSCAR DAMROW, Sheboygan Falls

NOVEMBER, 1928 HONORARY MEMBERS

W. F. HUBERT, Sheboygan
R. C. JORGENSEN, Denmark
EDW. F. WINTER, Gillett
E. B. WHITING, Gillett
S. D. CANNON, Neenah
C. J. FOKETT, Reedsville
HENRY NOLTE, Cleveland
J. GEMPELER, JR., Monroe
J. N. KAVANAUGH, Green Bay
P. H. MICKLE, Sextonville
W. J. KRAMER, Madison
M. CHRISTOPHERSON, New Franken
M. M. SCHAETZL, Edgar
C. A. ZILISCH, Colby
RAY LARSEN, Shawano
JOHN F. LENSMIRE, Marathon
G. M. MATZNICK, Kiel
HENRY J. LOEHR, Calvary
OSWALD REITZ, Calvary
O. R. SCHWANTES, Clintonville
BEN WIEDENHAFT, Lena
JOHN BABLER, Campbellsport
H. F. ZARLING, Clintonville
EARL F. ALBRECHT, Forestville
F. M. BROEREN, Thorp

OFFICIAL REPORTER

ALEX KAEMPFER, 438 Caswell Block, Milwaukee

OFFICIAL ORGANS

The Dairy Market Reporter, Sheboygan Falls, Wis. The Butter, Cheese and Egg Journal, Milwaukee
Official Cold Storage—Mid-West Cold Storage Co., Green Bay, Wis.

THIRTY-SEVENTH ANNUAL CONVENTION

OF THE

Wisconsin Cheese Makers' Association

Held at Green Bay, Wisconsin,

Nov. 21, 22, 1928,

In the Columbus Community Club Building

The opening session was called to order by President Edwin F. Winter at 10:30 A. M.

ADDRESS OF WELCOME

By MAYOR J. H. MCGILLAN

LADIES AND GENTLEMEN: I am very glad indeed to welcome you here this morning. I think that some distinction is due to Green Bay in that this Association selected our home city as the place of holding the convention. As I understand, it is somewhat a departure from the procedure you have customarily followed in the past, and we are very glad and we hope that the accommodations that are furnished you here are going to be commensurate with your needs, and that you will leave the city of Green Bay with good and kind recollections of our accommodations and the treatment of our city.

We are very proud of Green Bay. We are proud of her situation at the mouth of the lakes, on that great artery of navigation that stretches half way across the continent. We are in a strategic position, and the citizens of this city have dreams of what this city will be eventually. We see in our mind's eye the wonderful metropolis that some day is going to be in this location. We, who are charged with the administration of city affairs, are building with a purpose and plan to have some day the largest city in the Northwest, at the mouth of the lakes here.

I wish you could come here earlier in the season that you could see the other things that nature has done for us. I wish you could see her green trees and grass, see our giant elm trees for miles forming a perfect canopy over eighty feet of streets. It is a sight worth com-

ing to see. I wish you could see our city parks and go to the places of amusement outdoors.

I congratulate you on the spirit of progress that the Association has had for years in getting together for the purpose of exchanging views and ideas. The business that you represent has made Wisconsin famous. It was surprising to me on one of my trips to New York when I met some men from the East at a dinner, calling for Wisconsin cheese. I can remember back when men and women referred to New York cream cheese, and New York was famous through its cheese. That sentiment has changed and throughout the United States today Wisconsin is famous because of its cheese.

They tell us in the East that we do not suffer from certain ailments that agriculture suffers in the rest of the Nation.

They have said to me that you in Wisconsin don't have any crop failures; your cows milk the year around, you can make cheese and butter and get cream all the time. You are not dependent on rain or snow, or droughts. You must have continual prosperity in Wisconsin.

It is up to us then to see that our industry is encouraged. It is your duty. You know what the obstacles to success in your line are. It is up to you to sit down and discuss them. Have your committees investigate such laws as you believe are required for the continued prosperity of your industry, and see that your Legislature is informed of the result of your deliberations. I know that the Legislature is in a receptive mind. I know that they will listen attentively.

You are about to spend a few days with us. Just remember that our citizens are always ready to extend the hand of friendship to you.

As Mayor of Green Bay, I welcome you here. If there is anything we can do, we hope you will feel at liberty to call upon us, and when you leave here you will wish in your hearts you could be citizens of Green Bay always.

RESPONSE TO ADDRESS OF WELCOME

By VICE PRESIDENT, J. H. PETERS, Plymouth

Mr. President, Fellow Cheese Makers and Members of the Wisconsin Cheese Makers' Association, I wish to thank Mayor McGillan, the Chamber of Commerce, and the City of Green Bay for the splendid welcome they are giving us. Last winter when the Directors met here at Green Bay, the Secretary of the Chamber of Commerce assured us that the City of Green Bay would treat us right, and I feel the Secretary was very conservative in his remark. He further remarked that the key of the city would be turned over to us, and he assured us that we would not see the police station. That is mighty fine!

One of the members of the Chamber of Commerce at that meeting last winter said that they were going to do everything they possibly could to show us a good time, and that they would give us the free use of the town pump. I don't know where the pump is, but no doubt

it is still wet. I am sure this meeting is going to be a success as the hospitality shown us here at Green Bay makes me feel that we made no mistake in coming here. The City of Green Bay is keenly interested in the cheese industry as a whole, and it is a pleasure to me to see so many fellow cheese makers laying down their daily task to come here to attend our Convention. We have big problems confronting us in the future, and the only way we can solve them is by having organizations and associations of this kind. Urge your fellow cheese makers to be a member of our State Association, and to attend the yearly conventions. This is, and should be, a cheese makers' convention where we should discuss our mutual problems.

The competition we have had in the past was not anywhere as keen as we have at the present time. Several large milk plants have started up within the last year or so, taking fluid milk that formerly was made into cheese. Our Southern States who were consuming most of our cheese, are now going into the manufacture of cheese themselves, and now, as never before, we need quality cheese in order to put on the market something better than theirs.

It is a necessity for us to build up our state organization, not only to maintain our prestige but to increase it, for we cannot afford to be satisfied because we are leaders. We must attain pre-eminence as the most prosperous and prolific dairy State in the Union. In closing I want to say, Mr. McGillan, that we appreciate the effort there has been put forth by your Secretary of the Chamber of Commerce and we thank you for your words of welcome.

PRESIDENT'S ANNUAL ADDRESS

By EDWARD F. WINTER, Gillett

To the Officers and Members of the Wisconsin Cheese Makers' Association, Ladies and Gentlemen: As President of the Wisconsin Cheese Makers' Association, I bid you welcome to our 37th Annual Convention. All the plans indicate that this year's session shall be the greatest in our history in the matter of attendance and we feel sure that the program and speakers prepared for us will be better than ever before.

It is worth while mentioning that this is our 37th Convention, and that we are holding it in Green Bay. All of us remember that in Milwaukee last year there was a great argument as to whether this session would be held in Milwaukee or Green Bay to attract us cheese makers who had never attended the Milwaukee convention. After the convention voted to come to Green Bay, our directors and executive committee met and looked over what Green Bay had to offer and all three groups of our association voted to meet in Green Bay this year.

We are meeting in Green Bay now and in the effort to make this convention successful we are in debt to R. F. Malia, Secretary of the Association of Commerce, and to the men who worked with him in ar-

ranging the plans. All of us who live near here were sure that a great convention could be held here and since last night I have been talking with exhibitors and delegates who are glad that we decided to come here.

The Columbus Club is a wonderful place for our convention, and I hope that our convention this year will vote that from now on we will hold one convention in Milwaukee to attract the cheese makers of the South and the next year to come to Green Bay to take care of the cheese makers of the North. I believe that from now on we should have two convention cities; one Green Bay and the other Milwaukee. We can't pass up the importance of Green Bay in the cheese world. I hope before this convention is over, that you delegates will go on record favoring this plan which is for the best interests of our Association. The past year has been a good one for us. Great progress has been made. I feel that our work is just starting and with all the cheese men of the state joining with us we can do more and better work than ever before.

I want to thank the other officials and members who have worked with me. I have been your President for two years and it has been a great pleasure to work for you. We have a great Association and this year's convention proves that we are better than ever. In closing I want to thank all who in any way have helped during the past year. In particular, I want to repeat my thanks to Mr. Malia of the Association of Commerce and to the people of Green Bay for their hard work in making this convention so good.

REPORT OF THE AUDITING COMMITTEE

MR. PETERS: The Auditing Committee of the Board of Directors examined the Secretary's and Treasurer's books, and found them all to be correct. This report is signed by Schaetzel, Peters and Whiting.

REPORT OF THE TREASURER

MR. SAMMIS: Mr. Chairman, the report of the treasurer, Otto Weyer, consists of taking in the membership fees downstairs at the door, and at the close of the convention all the money he receives will be deposited in the State Treasury, in accordance with the law, within three days.

REPORT OF THE SECRETARY

By J. L. SAMMIS, Dairy School, Madison

MR. SAMMIS: Mr. Chairman, the report of the secretary, as usual, is too long to read, but it will be printed as heretofore in the annual report, and every member will receive a copy. If anybody finds any mistakes in the annual report, the secretary will be very thankful, if you will call attention to such mistakes in order that they may be corrected immediately. There are a few items which have come up during the past year which I would like to call your attention to.

This convention, like everything worth while, ought to grow, and it takes continual effort to keep it on the increase.

State Convention Growth

What do we mean by growth of a convention? We watch a boy grow up and when he gets about six feet high or so, we say he has come to be a man, but in reality a six foot boy is not always a man. The real distinction between a boy and a man is not how big he is, but rather what he can do. When he begins to think as a man and talk as a man and act as a man then presumably he is a man, although he may not be six feet high either. It is rather in what a convention does than the mere numbers who may be in attendance. A State cheese convention pays attention to the cheese affairs of the state. We hope to have people come from all parts of the State, and discuss the State aspects of the cheese industry and the interests of the State's cheese makers. The mere presence of five hundred or six hundred people who might come in locally from the neighboring cities might give us a large sized convention, but still it would be a local meeting. Thus I think from year to year we may attempt to judge something of the growth of our convention by the number of our people who come from all over this State, and not merely from the total number in attendance.

Purpose and Method of State Convention

Looking over the printed program this year, we find about thirty important subjects for discussion by the cheese makers and program speakers. Now, it is a man-sized job for anybody to stay here for two days, and listen, and take away with him everything that is presented by all the speakers. On that account we don't attempt to have any entertainments on the program, no plays, no high school bands, but simply stay here and saw wood for two days, attending to the discussion of subjects on the program. We recognize the difference here between a local jollification or community gathering where we come together for social purposes to have a good time, and a State Convention where we are here from all parts of the state for business, only.

Aside from the program, I believe it is fair to say that the rest of the convention is of secondary importance. Some people think we don't need to have a cheese exhibit at a State Convention. Perhaps not. The main purpose of the cheese exhibit is to interest the makers to attend, take part in the program and learn. Some people say we don't need to have booth exhibits by the people who have things to sell as we have downstairs. Perhaps not. The main object of this exhibit, from our standpoint, is educational, in order that the makers may come here and see everything new in supplies and equipment for cheese factories. We believe they learn a great deal, besides having a convenient method for examining things and getting prices, and so we think the cheese exhibits and the commercial exhibits really do contribute a good deal to our conventions.

More Local Associations Needed

The State Association has done and is doing all it can to promote local organizations over the State. We would like to have a local cheese makers' association in every county. We would like to have each of them give a picnic every month in the summer, and a dance every month in the winter and have a good time. That is a good thing for a local organization. Organize these meetings and get together and it will do you a lot of good.

We are very glad to see a new organization founded here in northeastern Wisconsin. We hope there will be more of them. It is an astonishing fact that up in Canada, they have organized twenty-seven new local cheese makers' associations. I am going to tell you more about those in a little while. This is the first year for a long time we haven't had a group of dairy school students here. I expected them in last night, about midnight, but they didn't come. I suppose they thought it was too far to come from Madison.

Employment Table

The employment table is over here in charge of Mr. Peters, the vice-president, and any cheese maker who wants to find a new job, or anybody who wants to hire a new cheese maker, come up and see Mr. Peters. Probably he can help you along that line.

Convention Dance

There is a dance for all the members and their ladies at the Northland Hotel at nine o'clock tonight. I hope there will be a big attendance.

Official Dinner

At six P. M. in the Northland Hotel we have what we call the official dinner. Now, that isn't merely a place to get something to eat. It is a place for work. After dinner, we sit around for an hour or

more and talk about the affairs of this convention, and try to devise better plans for next year. If you are a real booster for this Convention, if you are really interested, if you are a worker, if you want to begin, if you are willing to help, if you have an idea about something that ought to be different or better, then you are invited to join with us at the Northland Hotel at six o'clock. We want your advice, and if you can help we ask you very cordially to come in. All the honorary members, the past officers and the present officers should be there. You will get through in plenty of time to attend the dance at nine o'clock.

In addition to the facilities which are afforded the members here in the Columbus Club building, I have a letter from the Y. M. C. A. of this city inviting all of you to attend the Y. M. C. A. where they have a cafeteria, dormitory rooms, showers, swimming pool, bowling alleys, gymnasium and other facilities, to which you are welcome. It is in the same block with the Northland Hotel, just across the street. They say they will be happy to render any service whatever to you during the meeting.

Prizes for High School Contests

This year the Association has offered three prizes, valued at about ten dollars altogether, for a State wide high school student cheese judging contest, which was held at the College of Agriculture, Madison, in which some forty or fifty high schools competed. The contest was won by the students from the Colby High School consisting of Bernie Neville, Byron Olson and Alois Gabriel, who as a team, judged cheese better than anybody else in the contest.

A letter from the Milwaukee Association of Commerce, inviting the Convention to return to Milwaukee in 1929, says, "we know that manufacturers are much more willing to exhibit their goods at conventions held in Milwaukee than anywhere else in the State." I have had communications also from several of the exhibitors downstairs on the subject.

List of 1928 Honorary Members

We are very proud to do honor to these members listed on the wall; their names will be printed on the letterheads. These men have done good work in their local towns for the convention. They have gone around and solicited prizes; they have talked to the cheese makers and induced them to send cheese here and attend. Our aim is to have every cheese maker here to learn more, each year. This organization was formed thirty-seven years ago to teach cheese makers to do better work. That is still its object.

These honorary members we are very proud of, and we hope they will all serve next year. Read this list over and if your town is not represented, by all means make up your mind that you will do this work next year, at your town. Send your name to the secretary.

You will get a page of suggestions telling you what to do, and instead of about twenty-four or thirty, let's have fifty or a hundred honorary members next year, from all over the state.

WHAT WE LEARN FROM EUROPEAN CHEESE MAKERS

By P. H. KASPER, Bear Creek

Mr. Chairman, Members of the Wisconsin Cheese Makers' Association: Everybody knows that I was appointed to cross the pond to represent the cheese industry of Wisconsin. I was not in a hurry in accepting this call, because I thought there were other men more entitled to it than I was, and I am not a bit sorry even though I had only a common school education, being raised on a farm and working over a cheese vat for over forty years, still I think I had a chance to to see a lot, and brought back a lot of information not only for the boys in the cheese industry but also our farmers.

The World's Dairy Congress was held in London, England, and Glasgow, Scotland. There were about forty nations represented. About forty thousand people attended every day, and it was a very difficult matter to arrange a program to suit everybody.

We visited the dairy farms in England. The farmers all over in England are very much interested in the Ayrshire and shorthorn cows even though they have some very good breed Holstein cows. It surprised me how well the barns were kept. The barns are built somewhat different than ours. They have no basement barns like we have. The barns are about one story high, nine feet high in the studdings and very well lighted, and some of the barns are six feet from the rafters. They have glass so when the cows are in the barn they have about as much light as out in the pasture. I think we have just as good land here as over in England. The cows come in the barn, and one of the men goes ahead with a sponge washing them off, and another follows with a towel and another follows with the milking machine.

I have a great prejudice against the milking machines, but I watched them over there, and talked to them about it. I took milking machines apart, and found that milking machines can be kept clean. One farmer, we were advised, had 160 acres and he kept 100 cows, and those 100 cows were given 60 acres of pasture the first of March. At the time we were there, July 7th, the pasture was giving the cows plenty of food. Every Monday morning a man goes in with a large drag; that is only for fertilization, but they claim the grass needs cultivation as well as anything else.

We also visited some of the dairy schools in England and in Scotland. If we want to improve the quality of our cheese we must use some of the English methods. Some of our boys tell us it takes too much work but it doesn't. You have more work in the start, but you

have less work in finishing up. The cheese they had there has a wonderful texture. I will assure you if we go to work and keep our factories like they have over there and work for quality like the people over in England, there are certainly great opportunities for the cheese industry here. Even in our country where competition is getting keener all the time, the only way to fight that is to make a better cheese and get a better price.

In Germany people are very much interested in dairying. Over there the barns and houses are all built together. A lot of people think it is very unsanitary, but if you go there you don't know there is a barn next door. There was a little cheese and butter in the place I was in, and it seems they were the only two businesses in the town. This man took in about three thousand pounds of milk a day, and he had a couple of milkmaids to peddle milk in the town. They went around with a little express wagon, and they had a couple of cans on there. When they had one can empty, they poured out the customer's milk, they poured it out to be sure that every one gets the right quantity of cream, by mixing it up and pouring it into the empty can. They had some hand cheese, and I assure you if a man started making that kind of cheese, instead of casein, there would be an awful demand for cheese.

In my trip I found that our country over here compared well with England. We have thousands and thousands of acres of land up North, as good land as they have over in Holland. We have thousands of acres of pastures, that have been lying idle for the past thirty years. It is the same in my neighborhood. If they would be cultivated in the spring of the year, the production would be almost double. This way as soon as the first of July comes the pasture is dried up. No matter how much rain we get the soil is too thick so the water can't penetrate it.

I won't take any more time. I want to thank you.

ONTARIO, CANADA, CHEESE MAKERS' ASSOCIATIONS

MR. SAMMIS: Mr. Chairman, with your permission, I would like to present a report from the Ontario, Canada, Cheese Makers' Associations, at this time.

I have here a number of letters and programs and other papers from the Ontario, Canada, people, a letter from Mr. George H. Barr, Director of Dairies, Ontario Department of Agriculture, and other officers up there, together with printed matter, including the program of the next annual convention December 5th and 6th, 1928, at Belleville, Ontario. In Ontario, Canada, they have forty-six government instructors travelling around among the factories. Each instructor supervises about twenty-four factories so that he is able to spend one day each month in each factory. He gives each factory very close supervision. Since the spring of 1927, twenty-seven cheese makers'

associations have been organized in this territory. Each association consists of about twenty-four members under one instructor. Each association meets once or twice a month at the different members' cheese factories. They don't go to town and have a dance or picnic, but they meet at a cheese factory, and then two weeks later they meet at the next man's factory. They move around the circle and go to everybody's place in the course of a year or two. They look over their cheese and discuss their troubles and their remedies. The reports are that these meetings do more good than anything they ever tried before. The members learn more from such meetings than from any other kind. This is a thing that could be done in Wisconsin. In every township, in every county, a group of twenty cheese makers might meet and organize and agree that they will go to a certain factory two weeks from today and another factory two weeks later, meet there for half a day and talk things over. It often does a man a lot of good to visit; it induces him to clean up at home before the others get there, which is a very good thing, and maybe he will learn something after they arrive that will be to his advantage.

The cheese instructors of Ontario, forty-six of them, are engaged by the government on a classified basis, and with graded salaries. For a cheese instructor to qualify for a first class maximum salary he must have ninety-five per cent of all the cheese made in his twenty-four factories, during the past year, to be first grade cheese under the government inspection. If he has less than ninety-five per cent of first grade cheese he gets a lower grade as instructor and gets a lower salary. The cheese makers in Ontario are also licensed. They receive either licenses or permits from the Ontario Department of Agriculture, but a cheese maker who gets a first class license this year must have a record of making at least ninety-three per cent of first quality cheese last year. He must make at least eighty-eight per cent of first quality cheese in order to get a second class license, and if he gets less than eighty-eight per cent first quality cheese he may be given a permit which is good for one year only. Under the law, no cheese maker can hold a permit in Canada for more than two years. If he can not earn a license by high quality cheese, then he is automatically put out of the cheese business. A helper or an apprentice must have two years' experience with an experienced cheese maker and he must pass the dairy school examinations. Then he is given a permit for one year. At the end of the year he may get a license or he may get another permit but if he can't earn a license in two years, then he is automatically out of the business.

I would like to report briefly as to conditions now existing in New Zealand in the cheese industry. The Federation of Co-operative Dairy Factories in Taranaki, New Zealand, report that ninety-three per cent, I believe it is, of all the cheese made down there is being made from pasteurized milk. The cows are on the pasture all the year around. That they have a great many cows, so that they have large factories close together. They have no small factories down there at all. There are one or two factories with fourteen or fifteen

ten thousand pound vats. There is a large number of factories with seven or eight ten thousand pound vats, but there are no one or two vat factories as we have in this country. The milk down there is mostly obtained from high testing breeds of cows. They are preparing reports on the results of selling high fat cheese and low fat cheese in the London markets. They also plan to give us reports soon on the relative yields and composition of cheese of the high and low testing milk.

We are indebted to Mr. P. O. Veale, the chemist in charge of the scientific department of the Co-operative Dairy Factories, Hawera, New Zealand, for this report.

SOUTHERN WISCONSIN ASSOCIATION

By FRED MARTY, Monroe, President

Mr. Chairman and Fellow Members: Our organization, namely the Southern Wisconsin Cheese Makers' and Dairymen's Association, is one of the two oldest organizations in the State of Wisconsin. We had our 28th annual convention last week in Monroe, so you see that organization is only ten years junior of this organization. We had a very wonderful convention. We are working for the betterment and the advancement of the cheese industry, particularly in the manufacture of foreign types of cheese in Wisconsin. At the last National Dairy Show held in Memphis, Tennessee, we were in competition with every part of the Union that was making Swiss, Block, Brick and Limburger cheese, and I am pleased to state that Wisconsin won the gold, silver, and bronze medal on Swiss cheese. Wisconsin won the gold, silver and bronze medal on Brick Cheese. Wisconsin won the gold, silver and bronze medal on Limburger, and with the exception of one man who took the bronze medal on Brick cheese, all the rest were members of our organization, and we felt proud.

Gentlemen, it was only a year ago that I asked you one and all not to look upon the National honors in a light way. I don't think there is any other publicity that reaches from coast to coast and into other countries. That means more than we realize. Wisconsin, the greatest cheese State of the Union, had twenty-nine entries at the 1928 Dairy Show, at Memphis, Tennessee. We captured the silver medal. Minnesota, to the west of us with one entry, captured the gold medal. They went down there with one entry and came home with the gold medal. Can you believe it? I think it is worth while going after. When I was there in 1928, I had the pleasure to meet all the southern college professors and men that were active in furthering the dairy industry of the south, and from the prevailing activities shown by those present, I can assure you that there is going to be cheese made in the south in the future. Where there were no cheese factories there at all two years ago there are now cheese factories down there in operation with a larger amount of milk than any individual cheese factory in this State today. And taking the National Dairy

Exhibition in the heart of the independent dairy development of the south, namely St. Louis, Missouri, with a contract by the City of St. Louis guaranteeing the National Dairy Exhibition $75,000 a year for the next five years to come with a pro rata increase depending upon the increase of the demands of the Exhibition, I can assure you that they are positively going to do something for dairying in the south.

AMERICAN CHEESE MAKERS' ASSOCIATION

By R. H. SAMPE, Osceola

Mr. President, Ladies and Gentlemen: About five years ago we organized at New Richmond what is known today as the American Cheese Makers' Association.

Then three years ago it was decided to hold a Convention. This organization was formed with several objects and aims in view. What we had in mind was an organization controlled by cheese makers only. The object is to improve and protect the position of the cheese maker and manager and to promote the welfare of the dairy industry. Therefore, a constitution and a set of by-laws was drafted, namely these:

1st. The Association shall employ lawful means to obtain its object, and especially the following:

A. To establish and maintain districts.

B. By regulating and supervising the training in cheese making and factory management.

C. By increasing and maintaining the efficiency of our members.

D. By eliminating from membership in this Association as far as lies in our power the inefficient maker or manager.

E. Our organization differs from this one wherein we partake mainly to the manufacture of American Cheddar cheese, and only a licensed maker can become a member.

The dues are $5.00, and $2.50 for junior members.

By gathering once a month and discussing our troubles, and explaining new developments in the dairy industry, a feeling of good fellowship and cooperation is established.

The members pledge their support to this and other associations.

Owing to the expense of attending here, delegates will be sent here every year; also all members are urged to send in their cheese exhibits.

We are always anxious to have the industry run smoothly, to meet success, and to help inspire the less trained man to make a better product.

Cheese making is a progressive calling, and we must constantly seek new knowledge and improved methods as year by year we are called upon to do better work. Our aim will be to keep the members in our neck of the woods wide awake to all that is going on in the

dairy industry, always ready to welcome new ideas, and to help put this grand old State in the foremost ranks for quality cheese. I thank you.

NORTHEASTERN WISCONSIN ASSOCIATION

By A. WILHELM, Oconto Falls

Mr. Chairman, Students and Fellow Cheese Men: Mr. Sammis wrote me three letters, and asked me to give a report in behalf of the Northeastern Wisconsin Cheese and Butter Makers' Association. He wrote me three times. It happened I wasn't home, but when I did get home I told him I would. It appeared in Mr. Sammis' letter that he was a diplomat, and I was pretty well convinced that all the diplomats don't meet in Parliament.

I heard a little story over the radio the other night. The boy, said to his father, "What makes the world go around, and he said: "Son, how many times must I tell you to keep out of the cellar?" I realize you are all here to help make the dairy industry better and greater. I am going to tell you just why the Northeastern Wisconsin Association was formed.

First of all, to create better fellowship, for educational purposes, and to work in harmony with the Dairy and Food Commissioner. We know lots of the boys that look at the Dairy and Food Inspectors as men with horns and so on. A lot of boys from the country are afraid of them. But we want to meet them on our own ground; we want to mix with the Dairy and Food Inspectors so we may have a better understanding. We were organized in March. We didn't have any particular plan to go by, but after the constitution and by-laws were adopted we got started. We had one picnic and two dances, which were successful, and we managed to raise enough money to carry on our first Convention which was held in Shawano two weeks ago.

From the reports I have received from outsiders, letters and also a few telegrams, it must be a success. I have not talked with the secretary and treasurer, but I am surely convinced that the financial standing is O. K. One of the things that the boys who started the organization really had in mind is that Northeastern Wisconsin Cheese territory is best for the purpose of making cheese. Up to now everybody knows that an outside firm can come in and all they have to do is to get a permit and ship milk, regardless of whether conditions warrant it or not. I don't know whether Mr. Kramer is here or not, but I don't believe that permits should be issued unless the outside party can show that for improvement in the dairy industry there is actual need for an outside firm to come in and ship milk.

You know as well as I do that they actually do not pay more. They only gyp the farmers. If they don't get him the first time they keep on going there until they get him. The average cheese maker doesn't have time to bother the farmer, and as Mr. Glover says, the factory

ought to get larger instead of smaller. But he ought to go in Northeastern Wisconsin, and he will find they are getting smaller, due to the fact that trucks are tearing up the road. I am talking in behalf of my fellow cheese makers that have felt this particular thing. Another thing is this building of cheese factories without any particular cause or reason, across the road or half a mile down the road, whether there is enough milk there to run it or not. Is that justice? Why grant these men a license? They have just a personal grudge against the other fellow. No matter who they damage, the farmer must pay for it. Nobody else but the farmer is going to pay for it. Why grant all these licenses? Is it proper that anybody can get a license these days to operate a factory? That thing should be eliminated and that thing is what we have in mind in Northeastern Wisconsin, to ask our new Dairy and Food Commissioner, or I mean the present Dairy and Food Commissioner, to stop that particular thing, to draw a line on that; and to look into it, whether conditions warrant it. And also there is another thing, if our Governor-elect should desire to appoint a new man, we should all stand behind the proper candidate. Mr. Young, down at Beloit, recommended Mr. Boettcher. Mr. Boettcher may be all right mechanically, but I believe we need a man that is actually engaged in the manufacturing of cheese and butter or both, because he has to know the conditions and what is needed.

MANITOWOC COUNTY ASSOCIATION

By C. J. FOKETT, Reedsville

LADIES AND GENTLEMEN: I am here to represent Manitowoc County, but I am not a speaker. We have a speaker here who will surprise you. That is Senator Cashman of Kewaunee.

Address by Senator JOHN E. CASHMAN, Kewaunee

Mr. Chairman, Ladies and Gentlemen: An introduction like that almost handicaps a speaker. I am glad as a farmer to meet the cheese makers. On the cheese makers, their ability, their skill, their honesty, we farmers depend a good deal, and yet the foundation of the dairy industry is the dairy farmer. Without the dairy farmer and his family, their farm, their herd and their toil, there would be no dairy industry, and no cheese makers' convention. The farmer who is engaged in dairying is in that type of agriculture because there is a market and a fair price for milk. The milk check which comes regularly once or twice a month is a Godsend to the dairy farmer. It pays the running expenses, it pays the taxes, and it helps to pay the mortgage on the farm. Without these milk checks the farmers of Wisconsin would soon be off their farms, so that anything that seriously affects the dairy industry or interferes with the price of milk is of vital concern to the dairy farmer, and practically all the farmers in Wisconsin are dairy farmers. A fair price for milk ex-

ists for the simple and sole reason that there is as yet no overproduction, no surplus. Just as soon as there is a surplus down will tumble the price of dairy products, just as sure as night follows day; just as sure as it has happened in the case of wheat and of cotton and other products of the farm.

I am going to mention some of the things which, in my judgment, the dairy industry has to contend with. The greatest enemy of this industry is the movement to extend dairying to every State in the Union, to induce people in other lines of agriculture, cotton growers and wheat growers, to quit that type of agriculture, purchase dairy cattle and go into the business of dairying. This movement is thoroughly organized. Pardon me if I say things as a farmer. Even if the farmers are dull and dumb, yet they have some spirit of independence and it will be a sad day for the Nation when it hasn't got its rural farm citizenship. The greatest enemy to the dairy industry is that movement backed by Agricultural Colleges, and men on the public pay roll, to extend dairying. It is thoroughly organized. It cooperates with Breeders' Associations, with Associations of Commerce, and it can have but one object and one result if permitted to continue, and that is the building up of competition, the production of a surplus and the consequent and inevitable fall in the prices of milk, cheese and butter. That is one of the things to contend with. The farmer who is led into this scheme on that advice of a market for surplus dairy cattle becomes a partner in the accomplishment of his own ruin and his own financial bankruptcy. The farmer does not need to look for such help. The farmer can sell all the surplus of the cattle that he has right at home to the local dealers for all that they are worth. No other industry would fall for this sort of thing.

Another serious matter which the dairy industry has to contend with is imitations and substitutes. There isn't anything that can take the place of milk as a food for the young. No individual of the human species can grow and develop as he should without milk. It is nature's first, only and most important food, and yet hundreds of millions of pounds of substitutes are on the market each year. Hundreds of millions of pounds of cocoanut oil are imported to be made into sweets. Let me give you the figures for 1926. In the year 1926, 245,000,000 pounds of cocoanut oil were imported in the United States to be made into a substitute. In that same year there were imported 450,000,000 pounds of copra, which is the dried meat or center of the cocoanut, from which cocoanut oil is extracted in this country after importation. Cocoanut oil is made into oleomargarine and placed upon the market to be consumed by the American people. Years ago the agricultural colleges experimented upon the relative food value of oleomargarine. Rats were used for the experiment. The young rat that was fed oleomargarine didn't grow. He remained weak and developed eye disease, and weighted but two ounces. The other rat of the same family was fed butter. He grew strong and healthy and weighed seven ounces. You wouldn't think of feeding your horse imitation oats, and yet fathers and mothers, American fathers and

mothers, will buy this cocoanut oil stuff and feed it to their children, and that isn't all. Those hundreds of millions of pounds of cocoanut oil imported from the South Pacific Islands by the oleomargarine manufacturers are brought in absolutely free of any tariff duty. Not only that, but oleomargarine manufactured from that cocoanut oil, free of duty, is placed on the market here to undersell the American farmer, and to undermine the dairy industry absolutely free of any internal revenue tax.

There was under the Statutes of 1886 and 1902, there was a tax of one quarter of a cent a pound on uncolored and ten cents a pound on colored oleomargarine, but a Federal Judge for the District of Rhode Island has rendered an opinion that those statutes contemplated oleomargarine in which animal fats were used, but not oleomargarine made from vegetable oils. The Federal Judge has decided, therefore, that it cannot be taxed and it isn't taxed. If I am correctly informed not one pound of oleomargarine is allowed to be manufacured or sold in the Dominion of Canada. If that is so, then Canada protects her farmers and protects her dairy industry and Canada protects the lives and health of her people.

There was another law passed in 1885, forty-five years ago, prohibiting the skimming of milk prior to the manufacture of cheese. That law did more than any other one thing to establish the splendid reputation of Wisconsin cheese, if I recollect.

Two years ago, 1926, a subsidiary of a big Chicago Company, now familiar to everybody, went into court at Antigo contesting that statute with the result that the law which for thirty-one years stood guard over this splendid name of Wisconsin cheese is now practically a dead letter.

There is another law prohibiting the use of dairy terms in describing substitutes and imitations. The Friedman Oleo Company of Chicago, in spite of that law, uses the word "cream" as part of the label on their oleomargarine. The Wisconsin Dairy and Food Commissioner went into court, as is his duty under the law, to prevent that violation, and what happened? Why, the Friedman Oleo Company rushed right into Judge Hoppmann's Court at Madison, a Circuit Court, and got an injunction right away, and that was last April. It was a temporary injunction and that injunction hasn't come to a hearing or trial yet, and yet it holds up the Dairy and Food Commissioner. It holds up the State of Wisconsin, and it defies the whole State of Wisconsin Legislature to protect the great industry.

I have tried to tell you three things which the dairy industry has to contend with, and I am very thankful for getting this much time.

SECOND SESSION, WEDNESDAY AFTERNOON, NOVEMBER 21, 1928

The meeting was called to order by Vice-President Peters at 2:15 P. M.

Resolutions Committee

THE CHAIRMAN: On that committee I will appoint Mr. Whiting, and Mr. Jacob Gempeler of Monroe, and H. J. Howe of Nye, Wisconsin.

Nominating Committee

THE CHAIRMAN: On that committee I will appoint Mr. W. F. Hubert, Mr. John Bartlett, Mr. Louis P. Rach, Mr. Charles Laack, Mr. John Fischer and Mr. Ed. Malczweski.

MR. HUBERT: Mr. Chairman, the Nominating Committee will meet at 4:30 in the room at the rear. We will also meet again tomorrow morning.

Any nominations for officers that you want to make, make them to the Nominating Committee. We will be in there ready to receive any suggestions you want to make.

GENERAL DISCUSSION HOUR

Prizes to Patrons for Better Milk

MR. SAMMIS: Mr. Chairman, some of the speakers on the program are not here yet. First number on the program is a discussion of Prizes to Patrons for Better Milk, by Frank Skabroud, Jr., Jump River. Mr. Skabroud wrote me a letter and told me what he was doing; he says, it pays. He says he gets better milk at his factory as a result of his efforts in this particular line. He set out early in the season to take samples of every patron's milk at odd periods, on Monday one week, maybe Wednesday next week; the patrons never knew when he was going to sample the milk. Mr. Skabroud then offered some prizes to the man who would bring him the best milk every month throughout the whole season, and in order to determine who brought the best milk he says that he takes a sediment test of the milk of all the patrons on one day, in each two weeks. He has a big card, and he sticks those sediment tests up on the card, and he writes the patron's number right alongside of the test, so the patrons when they come to the intake can see who brought the dirty milk and who brought the clean milk. When Mr. Skabroud offered a little prize for the man who had the best and cleanest test, they all began to take notice. He says that he actually gets better cheese and it pays him to offer these little prizes. He sent in a number of his sediment test cards to Madison, and asked me to look them over and pick out which ones were the best, and score these cards for him. I did that and I have several of the reports here, and I notice that in his early reports there are a lot of them scored pretty low, and in the later reports the general average is considerably higher up, indicating here that his milk is improving, and he says that he is getting better milk and better cheese at his factory, and the costs of the prizes amounts

to very little. That is Mr. Skaboud's experience. I wonder if anybody else in the house has at this time or last year offered prizes for better and cleaner milk.

MR. F. A. FLYNN, of Briarton: I have done that also in my factory, this year.

MR. SAMMIS: What do you think of it? Did it do you any good?

MR. FLYNN: Well, I can't say as it has done much good. Some farmers didn't like it. When I took the sediment test, I put the number under the test, and then I let the farmer pick out the cleanest one.

MR. SAMMIS: Did you offer any kind of prizes

MR. FLYNN: I did, and I was surprised at the fellow that got the prize, a little boy eleven years old took care of the milk, and the milk from that place was perfectly clean. They didn't have any cement floors in their barn, or any facilities, you might say, to house their cows, but the milk was perfectly clean.

MR. SAMMIS: There is an idea for us. The younger generation is beginning to learn things that we can't teach the old timers.

MR. FLYNN: But I think it was the little prize I offered. His father was running a threshing outfit at the time, and he was home with his mother and he took care of the milk. He said he did, maybe his mother did.

MR. SAMMIS: Did anybody else have any experience in offering prizes for better milk, for cleaner milk? Has anybody here been running a sediment test on the milk at the factory every few days or every week or so? Hold up your hands, I want to see how many members—about forty. Now I wish that those who have their hands up would get up and let's hear from you.

MR. FLYNN: Mr. Speaker, about making those sediment tests, some time we have lots of difficulty. Some of the farmers' milk isn't clean, and you say here, you have to take care of your milk, we want better milk. Competition is quite keen in our neighborhood, and they say if you don't take it, they will take it another place. They seem to get away with it.

Methylene Blue Test

MR. SAMMIS: That is one of the things we are here to talk about, to see what can be done about it. But we are going to talk about rules and regulations and laws tomorrow. But today we are just trying to find out what you have already done in the past, what conclusion you have reached from your past work. I am going to ask how many of you have been using the methylene blue test at your factories. Well, there are not so many, but there must be about fifteen here that have been using the methylene blue test. Has anybody got any questions about the methylene blue test? Is there anybody here who doesn't like it? Nobody.

I hope that the law making authorities are present and see and hear your opinion that you ought to have better milk, and see if there is anything can be done along that line to help you out. But isn't it true that no law can take the place of our own activities? You don't need to make enough fuss about it to get everybody mad, but keep boosting about clean milk all the time, a little bit. You know you can tell a man his milk is dirty in such a way that he wants to knock you right down. I saw that happen. That was the cheese maker's fault, because he didn't do it right; you can tell the farmer that his milk isn't as clean as it ought to be, in such a way that he will get interested. In order to get results we have got to do what we can do, not try to do what is impossible. Mr. Skabroud found a way to get results.

I believe that every cheese maker can improve the quality of his milk a little if he will really try to do what can be done at his factory, without starting a row or a quarrel or a fight. And it is this united effort all together, this steady pressure that is going to bring about results much more quickly and much more effectively than any law that can be passed. You know that we are the people, every one of us, all of us, and if the law is going to be obeyed we have got to do it, we have all got to help. We can't lay the responsibility on anybody else but ourselves.

Cooling Milk at the Farm

The next question here is "Best Methods of Cooling Milk on Farm." Now, we have to move along briskly on this. Has anybody found a new way of cooling milk on the farm? How many of you use tin metal coolers with cold water inside? There are a few with hands up. Well, how do you like it?

A MEMBER: Well, we seem to like it all right. It seems to cool the milk quicker than any other way.

MR. SAMMIS: But when he cools it, does he keep it at the farm over night?

A MEMBER: Yes, in the cooling tank.

MR. SAMMIS: So that even if he does cool it on a tin cooler, he has got to have a tank of water. Do you think you get better milk by that method of cooling?

A MEMBER: Yes, I do.

MR. SAMMIS: The quick cooling of milk is an important thing. The quicker it is cooled the better. Could you trust all your patrons to use these coolers?

A MEMBER: I don't think I could.

MR. SAMMIS: Just why not, would they keep them clean?

A MEMBER: Yes, sir, some of them would.

MR. SAMMIS: That is the main difficulty, if you put a tin cooler on the farm somebody won't use it right. They say we used it this morning, and it is still clean tonight. Did you ever see a farmer put a barrel between the windmill and the milk cooling tank so that he could always have fresh water out of this barrel for the house without having to pump? When you go home tell them maybe that is a good idea, to stick a barrel in there, and it will always be full of the freshest, coldest water, for household use.

Care of Milking Machines

Now, we come to a question that is very important, the care of milking machines. How many people think they are having trouble with milking machines on the farm, hold up your hands. Nobody has any trouble. Well, that is fine. Now, if you go downstairs you can find out maybe the best way in the world to keep milking machines clean. They have lots of information on how to wash a milking machine. One thing is sure about it, the machines won't wash themselves. You have got to keep them clean.

About the care of the milking machine, how many of you ever used steam? Did you ever have a farmer bring a milking machine to you, and put a can over it and steam it at the factory? How many of you tried that? Not a soul. Well, that is a good thing to do. If you have trouble with your milking machines and you don't think they clean them, get one man to bring his machine in on Monday and another man or two on Tuesday and so on throughout the week, have them bring in their machines at least once a week and have those

machines steamed. That will help a lot. If you go downstairs and go around among the exhibitors you can learn a number of ways and materials, and a number of plans to help keep your machines clean.

Use of Old Starters

Here is a question on the effect of using old starters. I heard a man tell that he kept his starter for fourteen years and is getting very good results. He changed it several times during that period; in fact, he transferred it every day. How many of you can use a starter that is two days old and get good results with it? A starter that was two days old, you made it Monday morning and you used it Wednesday morning. How many of you think you get poor results with a two days' old starter? Never tried it, eh! Well, that is pretty good. You know in the early days of this Association we had to put in half the time talking about starters to get men to use them. How many of you here have been able to keep these starters going for as long a time as a year without changing day after day? Quite a large number. How many of you have ever kept a starter two years? Yes, there are half a dozen. Has anybody any questions to ask about starter making?

Best Methods of Intake Milk Inspection

Who is the best man to inspect the milk at the factory? A good many of the makers put the helper to work at the intake. How many of you let the helper inspect the milk? Nobody. If anybody has any questions at any time, stand right up and let's hear them, and somebody will give you an answer.

Standardization of Milk for Cheese Making

How many of you have had any experience with that? Well, there are two with hands up. We ought to be able to learn something, there are a lot of us who don't know much about it. Suppose we hear from some of these men who have had some experience.

MR. FLYNN, of Briarton: Well, it is a sad experience. To be honest with you there is no money in it. I found out by taking the same amount of milk and standardizing, I can't just remember how many pounds I had, but practically the same amount for two days, and maybe I don't figure it right, but I figured on a basis of 2.7 yield. And I took the money that I got from the cream, that is the butter fat, and I figured it out on a 2.7 yield, and then on the following day I didn't standardize, and I used nearly the same amount of milk and I weighed my cheese and everything, and I found that my yield was a little bit better without standardizing than it was before I standardized. After I added all this extra butter fat so the result was it took 9.3 pounds of milk to make a pound of cheese without standardizing, and it took 9.7 where I standardized it, and added the cheese, that is in figuring a 2.7 yield for a pound of butter bat. And in that way, I found there was no money in it, and I would like to have it explained to me why there shouldn't be money in it in standardizing. I can't figure it out. I have been studying on that a year. If we have some surplus skimmed milk to put in without taking any of this butter fat out, in that way there would be some profit, but otherwise I don't advise any one to standardize.

MR. SAMMIS: You didn't have any skimmed milk to add?

MR. FLYNN: I did not, just put the skimmed milk back in and I took the fat out. I just did it for experience.

MR. SAMMIS: Now, there is another man back here that has had some experience.

MR. OLIG: I found out by standardizing I could get pretty near the same results as I did before, and I could gain a little bit on competition that we have with the condensories up there, and get a little money myself besides, and I have been having my cheese tested at the creamery, and always run from fat tests from 51 to 53, and I was getting about ten pounds out of every 100.

MR. FLYNN: I would like to ask a question about the testing of the fat now. There is such a variation in the tests, say for instance, we have 100 pounds of cheese that has 38 per cent moisture, that leaves 62 per cent solids. Now, what per cent of that should be fat?

MR. SAMMIS: The law requires that at least half of it shall be fat.

MR. FLYNN: At least half of it? Well, I have had tests made by two different concerns.

MR. OLIG: A most substantial way to figure that, multiply the number of pounds of butter fat you take out by your average tests, and that much butter fat you take out of your milk that way, to have 51 or 53 all the time.

MR. SAMMIS: So that after you have standardized, you have 51 to 53 per cent?

MR. OLIG: Yes.

MR. SAMMIS: And what did you have before you standardized?

MR. OLIG: Well, I don't know, I never had it tested in fact.

MR. SAMMIS: Your conclusion is that standardizing pays you?

MR. OLIG: As far as I found it, yes.

MR. SAMMIS: Can you estimate how many cents on the dollar you made by standardizing?

MR. OLIG: I figured it on a lump sum, and it amounted to about what I had this summer, about 7,000 pounds of milk, and I made all the way from seven to eight dollars a day.

MR. SAMMIS: By standardizing?

MR. OLIG: Yes, sir.

A VOICE: Have this gentleman tell us in figures how he is making any money in standardizing. I can't figure it out myself. I couldn't figure it out in any way or manner that there was anything in it. I would like to know your figures and find out.

MR. SAMMIS: Now, gentlemen, we can hardly go into detail as to just how he figures. If you two men could get together for a few minutes you could explain it to each other. But we have this conclusion, that the speaker says he thinks he has made seven or eight dollars, on how much milk?

MR. OLIG: About 7,000 pounds.

MR. SAMMIS: That is your profit, I suppose, or did the farmer get it?

MR. OLIG: Part of it.

MR. SAMMIS: All right. The man who does accurate work in standardizing is certainly entitled to extra pay for doing it if he can get it.

A VOICE: I would like to know the average test of your factory.

MR. OLIG: About a three nine test.

MR. SAMMIS: And if you standardize, what was the test after you standardized?

MR. OLIG: That would bring it down to about three point four of the whole milk.

MR. PETERSON, of Seymour: Mr. Chairman, when you asked the question, how many cheese makers had experience with the standardization of milk, and there were only two that raised up their hands, I think there were a whole lot of hands that were lame or something wrong, but I have had a little experience in standardizing

of milk for cheese making—American cheese. I am not saying anything about Swiss cheese. They claim that in Swiss cheese you are not supposed to have as much fat because you can't get the holes just right. We are not looking for any holes in American cheese. It is the Swiss cheese that brought about this standardization. About a week ago I made an experiment at a factory where I took in the milk, in one vat first, and we took a sample of that milk and tested it, and it tested three seven. Then we divided the milk up into vats, and I used more starter in one vat than I did the others. One vat I set at 18 and worked very slowly, only cooked it to 100, didn't cut it up very fine, and it took about two hours and a quarter before the whey was ready to go off. The other vats I used more starter. I set it between 21 and 22, and cut it up finer, cooked it faster and worked it more and the result was that when I tested that cheese for moisture, they both had 37 per cent moisure. So working different ways, the whey cream from the milk that was worked first was considerable more than the whey cream from the milk that was worked slowly, and when I tested that cheese for fat I found that the one that I worked fast had 51.4 per cent fat, and the one I worked slowly had 54.2 per cent. Somebody is buying cheese, and comes out to the factory and tries to tell the cheese maker that if he has some milk testing 37 or 39 or 4, whatever it might be, that he is able to take off so many pounds of fat and still make a lawful cheese. Now, if I would follow a man's advice like that, how would I come out with the milk that I worked fast, that only had 1.4% more than the law requires. That is why I think it is impossible for the factories to determine the amount of fat they will have in the cheese until after it is made. And the methods of standardizing, if such must be done, must have a change from one season to the other. When you have a slow working milk, high testing milk, it might be advisable although it doesn't pay anyway, and I am sure that the food value of the cheese after it is standardized is not up to what it should be. When people buy cheese, they don't buy it because it is round and weighs 21 pounds; they buy it for the food value that is in that cheese and this little experiment that I made here might be useful to some when they come around and tell us they can take out so much fat from a tested milk, and I don't think it can be done. If some other cheese makers would make the same experiment, I would like to hear from them.

MR. ADERHOLD: Mr. Chairman, I think it is quite remarkable, Mr. Olig, you have had such good success in standardizing. Of course, I don't know what kind of cheese he has been making, whether any of it has been over-moist, or whether there have been any complaints as to quality. There may have been, I don't know. I don't know know whether he has a cheese in this contest, but I want to throw out a word of caution to the cheese makers, that if you are going to try standardizing, don't forget about the other necessary qualities of cheese. When they get to standardizing, they may forget about quality, about moisture contents and a few other things. It is a rather risky thing to do. I heard of a cheese maker last week who is one of the best cheese makers anywhere. He has had at least fifteen years' experience, and he got so he wanted to get something out of nothing, and he got to standardizing. When he was before the judge in court last week he was within the law as to fat, but he had forty-four per cent of moisture. That is one of the things you musn't lose sight of, the quality of your cheese and the legal phase of it so far as moisture is concerned.

MR. FLYNN: About making the tests for fat. I had a test made by a certain firm in Green Bay, and when I got the test I found out that with all the solids and moistures, and everything, I didn't have 100 pounds. I will tell you how I made my test. I don't want to

take up any more of your time than I have to. I made that test like this. I tested it in my vat, and then separated a certain amount, and then I tested the whey, the whey cream, and got the number of pounds of fat in the whey cream and I tested the cream that I took from the whole milk, and I deducted that and in that way I could tell pretty accurately how much fat was in the cheese. You figure all the fat that is taken out, the rest must be in.

MR. SAMMIS: Has anybody else had any experience?

MR. WILHELM: I had a case of standardizing, and I found there is no gain whatsoever. The only gain there would be if the price of cream was very, very high, and the price of cheese is very, very small, and that man who is trying to advocate standardizing is trying to kid the cheese maker.

A VOICE: Mr. Chairman, I would like to ask you how high the fat test of the milk, according to your experiments, would have to be in order that the cheese maker's cheese contains 57 per cent fat in a dry substance

MR. SAMMIS: That would be very rich milk, maybe five per cent, maybe four and a half anyhow. I think we can draw from this little discussion we have had so far this idea at least, that when a man does standardize why he has added one more complication, one more source of trouble to this work. He has got to look out for the standardizing and do that the way he planned it; and then he has still to make the cheese with all the care he can to regulate the moisture, also avoid getting a sour cheese, and get the right amount of acid. He has all the troubles he had before in addition to the standardizing. You musn't imagine just because we standardize that is going to take care of the whole works, and everything is going to be easy. It is just like trying to drive a couple of pigs along the road. You know that if you have got three pigs instead of two to drive, much more effort and care has to be used. Some people can hardly drive two pigs, and some people can hardly drive one. Any more discussion about this matter? The next question is "Why Use Both Fat and Casein Tests on Milk, Before Skimming?" Anybody want to talk about the Casein Tests?

The Use of the Casein Test

A VOICE: I would like to ask you, how to make a casein test. I have asked about six or eight men around my home town, and nobody seems to know how it is made.

MR. SAMMIS: Well, now, who will answer this question? Has anybody been making them?

A VOICE: Yes, in the spring time of the year. I don't use it for any other purpose.

MR. SAMMIS: How many of you have one of these acidimeters in your factory? You have to have an acidimeter to make a casein test with. And if you don't know how to run an acidimeter you can't make casein tests. If you have a good acidimeter, in good shape and good condition, and know how to run it, then, with that acidmeter and one more bottle of material, one more re-agent that you put in you can make a casein test. Now, I think that is about all we can explain here to you today about making a casein test. If you buy the equipment, you will get the directions with it. It is not so hard to do, but you have got to be accurate in making the casein test with the acidimeter, or you won't get anywhere with it. The casein test is not so accurate as the fat test. You have got to have experience to do the thing really right. When you start a casein test, you must make two or three tests on a lot of milk and see if you get the same results. If you don't the result is not reliable. You can't stand-

ardize milk accurately with a fat test alone. There may be plenty of milk testing three and a half per cent fat, which might possibly be standardized down a little and still give a lawful cheese, but there is other milk testing three and a half per cent which contains so much casein along with the fat that you can't standardize it down, and still get a lawful cheese as to fat contents, and the only way to find out about how much casein your milk has got is to test it very carefully. Standardizing based on a fat test alone is a very dangerous sort of proposition. It is something like running a car with only one hand on the wheel. Some of the boys do that sometimes, and you know that is dangerous. And if you are going to try to standardize with only one hand on the wheel, just making a fat test alone, you are doing a mighty dangerous thing, which you can't do successfully even with a lot of practice.

The next question we have had a number of answers to, *"Is It Profitable?"* Now, let's summarize this thing a little. Let's find out how many people here will hold up their hands and say that standardization has given them some profit in their factory. Hold up your hands and let's find out. The only way to learn here from each other is for you all to talk and express your views. How many of you here think when you have standardized you have made no profit whatever? Hold up your hands. There is one. I don't believe that any of these officials are going back there to see who has been standardizing. I don't see why you should hesitate to vote on such a matter. While we are talking about it, let's ask how many of you are opposed to standardizing? Well, there is half the house up. All right, let's try that again. There must be half of the house voting in favor of not standardizing. Here is a question here we can talk about, whether we standardize or not. *"How Should the Maker be Paid for Standardizing?"* He has got this extra work of running a separator, and this test, and he has got this danger of getting illegal cheese. Now, what part of the profits, if any, should the maker get? Supposing the maker made seven dollars a day. Mr. Olig, will you tell us about what fraction of that you think the maker ought to have.

MR. OLIG: I will take out whatever is left for myself. I had as high as seventy, eighty and ninety dollars this summer a month.

MR. SAMMIS: As a matter of fact, did the farmers get pretty nearly all of it, or what did you have left? How much profit were you able to make a month for yourself?

MR. OLIG: I tell you I had thirty dollars last month, I had a little better than nine thousand pounds of milk.

MR. SAMMIS: That is about one dollar a day? That is a pretty good profit. We are mighty glad to hear from your experience, Mr. Olig, and we are very much obliged for your telling us about it.

Here is another question, *"Is Standardizing Likely to Injure the Cheese Business?"* I thing we ought to hear from a lot of people about that, the men who sell cheese, the men who buy cheese or who make it. Is standardizing likely to injure the cheese business, and why do you think so? Who wants to talk about that?

Cheese From Southern States

MR. W. F. HUBERT, Sheboygan: Mr. Chairman, during the past year or two, we have made a good many tests. During the past year we have tested pretty nearly every cheese that came in our plant, and early in the season we found a good many lots that we figured were standardized, but at the present time it is only occasionally that we find a lot of cheese which we think there has been any tampering done with it. Also during the past year we have gotten competition from the Southern States. I am told that there has been

nearly fifteen million pounds of cheese made in the South. I am also told that they standardize. I know that that cheese is made in the South, but the largest proportion of it the people do not want. Wisconsin has got to give the people every bit that is in the cheese, make good cheese and ship it to them, and we don't have to fear for the competition. That is one thing we have got to look out for. Today cheese is being shipped from the South into Wisconsin, because it can not be sold in the South and your Wisconsin cheese is going down there because the people demand it. Make all the good cheese you can, and as I stated before, you don't need to be afraid of Southern competition.

MR. WILLIAM WINDER: Mr. Chairman and Ladies and Gentlemen, I just want to give you my own opinions on this question, not that I value them so highly, but the question is something that every one of us is interested in. Not only as cheese makers, cheese dealers, but every farmer, every man that is milking a cow and selling milk in the State of Wisconsin should be interested in quesions of this kind. Now, just recently there has come to my mind many instances of skimming milk in an attempt to adjust the fats to the casein. In other words, you work down to as close a minimum standard of fat in the cheese. The firm that I am working for received cheese last week from a very good factory, and one of the State Inspectors took samples from two days. The first in question was just a little bit tougher, you might say, in texture than the rest of the lot, and for that reason the inspector was suspicious, and how nearly correct he was in his suspicions was borne out by the analysis. In one day's make, the fat was just exactly fifty per cent of the moisture-free substance and in the other a small fraction of one per cent under the standard. The one low in fat content, had more moisture than permitted by law. This man admitted that he had been skimming a small amount of milk for a little time. He had secured the information necessary to do what he thought was proper by sending some milk to some place in Madison on one or two occasions, and then was going at it blindly day after day, depending upon the test of the milk, and, as has been pointed out, it is simply guess work unless the casein test is run in conjunction with the fat. That is neither here nor there. I think the big question for us is the one mentioned by Mr. Hubert. We have to consider the value of Wisconsin cheese.

I had some little experience in calling upon some of the trade in some of the States, and I was approached with this question: What are you fellows trying to do over in Wisconsin? Are you going to make skimmed milk cheese again?" One man said, "Why, you fellows are crazy to allow that thing to get started. We have depended upon Wisconsin for our full cream or whole milk cheese as you call it. If we wanted the cheese skimmed, we knew we could buy it. We didn't want it, we wanted whole milk cheese. Is it a fact you are skimming milk over there again to make cheese?" That thing was quite alarming to these large cattle buyers and distributors of cheese at some points in other States. That is just one little instance that points out the danger in this thing, and we musn't forget what happened to us, well about forty years ago. And let's give consideration to the reputation of our cheese rather than to the immediate dollar we may make out of it. Now, this is a day and age when we want to get just as much out of today and tomorrow, and get it while it is worth getting, and then, (as I heard the remark the other day) after another year or two, "to hell with the cheese business." I think that is a rather narrow way of looking at it, and I don't believe there is a member of this Association that, if he looks this question squarely and fairly in the face, and faces the facts, if he considers what may happen to the reputation of the cheese, may be in favor of opening up

this question of so-called standardizing or skimmed milk, he will give it serious thought—at least I hope so.

THE CHAIRMAN: Is there anything more about standardizing milk?

MR. FLYNN: One more question, are there any cheese manufacturers today in Wisconsin where they are using a filler and labelling it full cream cheese

MR. SAMMIS: Does anybody know if there are any?

MR. FLYNN: Mr. Kremer ought to know, the Dairy and Food Commissioner.

MR. KREMER: Ladies and gentlemen, I think you overestimate my ability altogether. How am I to know what you are doing in the hundreds of factories throughout the State? I say, if I know or learn of any place, in any factory where a filler is being used, it won't be long now, because I am determined to fight such propositions to the best of my ability, and if it is going on, the sooner the fight starts the better I like it.

MR. KIRKPATRICK: I would like to ask the question whether any Southern cheese so far as moisture and butter fat content is concerned is standardized cheese?

MR. KREMER: We have not received at the laboratory any Southern cheese to speak of. As a matter of fact, I don't recollect any just now. We had some from Canada, but we have not received any from the South.

MR. HUBERT: Mr. Chairman, there are fourteen exhibits in the room that are not from the State of Wisconsin. There are three or four from Southern States, and it might be a good thing for the Commissioner to buy those. We know where they are made, and probably it would be educational.

MR. KREMER: Why should we buy cream cheese coming from the South when there is so much good cheese coming from Wisconsin? I will say this much, however, gentlemen, we are willing to purchase samples of the three cheeses, four or six, the Southern cheese that you have mentioned here, and test the samples, but please don't wish three or four Southern cheese on the poor Dairy and Food Department.

MR. KIRKPATRICK: As I understand it, the Commissioner is getting quite active in regard to moisture and butter fat in Wisconsin cheese, and so I would like to know whether you are looking after the importations of Southern cheese into this State, whether those fourteen or twenty-five carloads of Southern cheese which have come into Wisconsin in the last few weeks have been analyzed or inspected by the Commission, such as they are doing today with Wisconsin cheese in the hands of grinders.

MR. KREMER: You know my friend, Mr. Kirkpatrick, says he is going to have some fun with me. He can have some fun if he can make me bite on that Southern cheese, but if he has got some of the Southern cheese let him try it out. I understand he has got the moisture test and the Babcock test and all the implements in his own factory. The same thing with Mr. Hubert. Ordinarily speaking we have no control over merchandise that comes in interstate packages in the hands of the importers. We couldn't do a thing about it. If any Southern cheese is offered anywhere at retail in Wisconsin, we will make it our business to pick some up, and pick it up quickly. We will, as a matter of cooperation, test the Southern cheese if the importers call our attention to it, but we have no control over that cheese.

MR. HUBERT: Do I understand you to say about cheese shipped from Minnesota into the State of Wisconsin with a high moisture, that you have no control over it?

MR. KREMER: Not while it is in the hands of the importer, while in the original package. It does come under our control when it is cut up and offered for sale in retail stores.

MR. HUBERT: Then the only way we can get at that cheese would be through the Federal Government?

MR. KREMER: Yes, sir.

MR. WEBSTER: I would like to ask this question. I have had occasion to test quite a number of samples of process cheese. Whether it is a coincidence or not, I don't know, but I find every time I have tested, the cheese has come exactly to the legal limit and no more or no less. I don't think it is a coincidence, and it is only natural perhaps that a man who is interested in processing shouldn't want the cheese maker to do the standardizing. As far as standardizing is concerned, from my experience I am not a cheese maker, but I have been in touch with some cheese makers that are standardizing. I think some cheese makers here are standardizing, but they don't want to let anybody know about it because if the cheese dealer finds out about it, it might cause him some more trouble, so they keep still. I found in every case where a cheese maker knows the test of his milk, keeps an accurate check on the weight of his milk and knows what he is doing, he can standardize. I haven't had one that has got into difficulty over it yet, but I have known some fellows that got into difficulty when they got careless and didn't watch what they were doing, and from my experience in standardizing I would say don't standardize unless you understand the subject thoroughly, and are able to check up not only on the test of your milk, but also on the test of your cheese both for moisture and for fat. Unless you can do that, don't try to standardize. That is the experience I have had.

MR. HUBERT: Mr. Chairman, I would like to ask the gentleman how the processer is going to standardize. How is he going to do that?

MR. WEBSTER: I just said, is it a coincidence, that the cheese I have tested,—and I have tested quite a bit,—all the cheese that gets into his plant is exactly on the limit both as to moisture and the fat. I have tested a large number of samples, and I find that they come to exactly the limit. And I am not a processer, and I don't know how they work things.

MR. HUBERT: I extend an invitation to you to come down to our plant, and I will show you what we do. I will be glad to take you through from one end to the other.

MR. WEBSTER: Perhaps it is just a coincidence, but I say this of the process cheese, I have tested quite a number of samples to convince myself that it was standardized. I tested a large number of samples, and I found every one of them was just to the line, no more and no less. Whether they standardize or not, I am not here to say.

MR. ADERHOLD: Mr. Chairman, since he says he is not a cheese dealer, I would like to know what business he is in.

MR. WEBSTER: I am in the creamery business.

MR. MOLIG: I read an article in the Butter and Cheese Journal where the Dairy Department at Madison is carrying on some experiments in standardizing, and I expected at this time we would have some figures along that line from Mr. Sammis himself. I believe he is in a position to give us the inside dope on this standardizing question, and I would like to hear from him in respect to those experiments that the State has carried out.

MR. SAMMIS: Well, Mr. Chairman, we have been making some standardized cheese at the Dairy School off and on during the last year to see what we could learn about it; never having made any before this year, we didn't know anything about it. We found out first of all that it is pretty hard to standardize cheese with certainty,

down close to the limit. It is a dangerous thing. We can make experiments with 200 pounds of milk, and there isn't much loss if we get an illegal cheese, but plenty of vats of milk would have cost a lot of loss if they had five or ten thousand pounds of milk in them. There is a good deal of danger in it. In the next place, the quality of cheese if it is standardized very much is distinctly different. Now, in order to get the real details of such a thing you would have to study the reports. I can't give them to you in a few minutes, and you couldn't hear them and understand them, if I did. I have been in hopes that we might get out some published report in the course of time, but it is very hard to get anything printed. Possibly we may have something printed in the course of time from the Dairy and Food Commission at the capitol. I think they made some standardized milk cheese. The expression of opinion and experience that has been brought out by the majority today agrees pretty largely with my own views. It is certainly a dangerous and difficult thing. As one speaker said, if you don't thoroughly understand a thing you better let it alone. Nobody likes to experiment with a shotgun and find out which end the bullets come out of. Go slow, or else let the thing alone. That is about the best conclusion I can give you in a few words, and until such matters are published in print that is about all I can say about it. We hope to have it published some of these days.

FEED VALUE OF WHEY

By E. C. DAMROW, Fond du Lac

MR. CHAIRMAN: The object of this circular is to show in dollars and cents the feed value in by-products of milk. Most of this is taken from feeding experiments at various experiment stations at a number of universities. Also two experiments made under my own observation.

The feeding experiments made at the universities are all based on skim milk and butter milk. I have always felt that this was unfair because whey was not considered or rather a large section of our good old Wisconsin was left out especially the cheese section where whey was used as feed.

But considering further why these experiments were only based on skim milk and butter milk, I feel that it was not done to completely ignore whey but to base the experiment on the by-products mostly used in all the states. Wisconsin is practically the only state where whey is of much consideration.

We have the feed value in skim milk and butter milk as reported in Henry's "Feeds and Feeding" book page 203. Let us see what the feed value of whey is compared to skim milk:

Solids in	Skim Milk	Whey
Sugar	5. lb.	5. lb.
Albumen	.75	.75
Casein	2.7	
Ash	.7	.4
	9.15	6.15

"Total solids skim milk 9.15 lbs., whey 6.15 lbs. or whey contains a little better than 2/3 as much solids as skim milk and naturally is worth 2/3 of the feed value of skim milk."

"The following are not made in prejudice to whey but for national information."—Taken from L. C. Thompson's "Value of Skim Milk and Butter Milk for Livestock Feeding."

(1) "Their composition is such that skim milk and butter milk are exceptionally well adapted for building muscles and the bony framework of young animals, according to Henry and Morrison."

(2) "Feeding trials have shown, that in general skim milk is superior to whole milk for calf feeding, after the calves have once become adjusted to the change."

There is but very little difference in the composition between skim milk and whey.

(3) "For hogs, feeding trials have demonstrated that, where skim milk or butter milk have been fed as a supplement to corn or other cereals, the gains are larger than with any other substitute."

(4) "Experiments prove that when fed in combination with grains, 500 lbs. of skim milk are equal to at least 100 lbs. of grain."

500 lbs. skim milk=100 lbs. grain
At $1.00 per bushel; 100 lbs.=$1.785
Therefore 500 lbs. skim milk=$1.785 or 35.7c per hundred
100 lbs. whey=2/3 of skim milk or 23.8c.

(5) "Pigs fed skim milk or butter milk in addition to corn gained 59.61% (almost 60%) faster than did those receiving corn alone and 4.18 lbs. of skim milk and butter milk had the same value as 1 lb. of corn, according to composite results of experiments at seven different stations.

If 4.18 lbs. of skim milk= 1 lb. of corn
100 lbs. skim milk= 23.9 lb. of corn—almost
100 lbs. of skim milk= 24 lb. of corn or 42.8c
almost 43% per hundred lbs. of skim milk
100 lbs. of whey= 28.5c

Average Daily Ration	Total No. of pigs	Av. Initial weight per pig	Av. Final weight per pig	Av. Daily gain per pig	Feed to produce 100 lbs. gain
5.09 corn	53	106.42	184.61	1.05	492.88 lbs.
5.09 corn 12.58 skim milk and butter milk	53	108.38	226.46	1.66	302.07 lbs. corn 799.40 lbs. butter milk and skim milk

Feed to produce 100 lbs. gain in weight of hogs.
492.88 lbs. corn= 302.07 lbs. corn plus 799.4 lbs. skim milk.
500 lbs. corn= 300 lbs. corn plus 800 lbs. skim milk.
200 lbs. corn= 800 lbs. skim milk.
Corn @ $1.00 per bushel.
200 lbs. corn= $3.57 or 800 lbs. skim milk= $3.57
100 lbs. skim milk= 44.6c
100 lbs. whey= 29.7c

The above is from experimental feeding stations on feeding skim milk and butter milk. I place the feed value of whey at a very conservative figure.

The following is from an experimental feeding of whey by a man who is considered by myself and all who know him as an honest, conservative and reliable man. There is no man for whom I have a higher regard—Mr. F. P. Baker, St. Cloud, Wisconsin.

Bought eight 7-weeks old Poland China Pigs June 16, 1928 at $3.00		$24.00
Seed for ¼ acre pasture, oats, and rape		1.25
Ground Barley	$10.25	
Flour Middling	12.40	
Hominy Feed	19.80	42.45
		$67.70

The hogs were fed mostly whey and very little grain. Starting with 80 pounds of whey which was increased to 240 pounds daily in the last two months or an average of 180 pounds of whey for 117 (3 Mo. 26 da.) days making a total of 21,060 pounds of whey.

The hogs were sold in less than four months of feeding, weighing an average of 198 pounds or a total weight of:

1,584 lbs. at 10½c	$166.32
Cost of pigs and feed	67.70
Net gain for pasture and whey	$98.62

$98.62÷210=47c per hundred lbs. of whey.

If the hogs would have been sold for 8c per pound the value of the whey would have been 28c per hundred.

The hogs know good whey as well as the little pigs know sweet milk. The whey tank was thoroughly cleaned every other day except for one week and the hogs soon voiced quite emphatically a protest against such slop and insisted on good wholesome whey.

Experiment made by Mr. Milton Pingle, Stockbridge, Wisconsin.

Bought eight 3-months old pigs from a farmer who was selling whole milk and was short of feed, and, of course, had no milk by-products to feed to the young stock. These pigs were pastured for 3 months and fed on all the whey they wanted; they received but little ground corn.

Eight pigs cost	$38.00
Corn	10.00
Total	$48.00

Mr. Pingle had about 450 pounds of milk and got about 400 pounds of whey daily, which was considerably more than the hogs could consume. At this rate if the pigs consumed all the whey, 36,000 lbs. were used at the end of 4 months, when they were sold for $138.85
Cost of pigs and feed 48.00

$90.85

$90.85 ÷ 36,000 equals 25c per 100 lbs. of whey.

If 300 lbs. of whey was the daily consumption of the hogs then the whey will net 31c per hundred.

$90.85÷27,000 equals 31c per hundred.

I do not know what kind of hogs these experiment stations fed, but I do not think it was the "Razor Type" variety that are fast on foot, long in snout, but very little indication of bacon and ham.

I hope that the time will soon come when all cans are thoroughly washed and sterilized at the factories or plants and no whey or skim milk allowed to be returned in them but other containers used for this purpose, so that the milk delivered to the plant is not contaminated by the cans that can not be so thoroughly washed and sterilized on the farms.

This will mean a little extra work and inconvenience to both the farmer and the operator and I see the time coming very soon when such will be the law of the state. I hope that everybody now building or remodeling their plant will consider this.

The farmer, on the other hand, usually has plenty of old cans that are not fit to haul or ship milk. He must provide a little more room on his truck or wagon so he can haul his empties.

If this will become the practice I feel confident the losses now sustained by the farmers and operators on off grade cheese and butter would be more than repaid every year.

This, however, is an entirely different subject than I started out to cover, but it is well worth considering at this time.

I hope that you cheese makers and butter makers as well as you farmers would also make these tests on feeding. Our agricultural departments at Madison will be only too glad to help and work with you.

I shall appreciate it very much if you will make such experimental feedings, keeping an absolutely accurate record of same, and send me your results. I shall then compile them and give you a summary of the complete report at your next convention which, I hope will be bigger, better, and of far more educational value to us all.

1928 RESULTS OF PASTEURIZING MILK FOR CHEESE MAKING

By ERNST ZERMAHLEN, Two Rivers

THE CHAIRMAN: If Mr. Zermahlen isn't in the room, has anyone anything to offer on this particular subject? Is there anybody can tell us anything on that subject? Can you tell us anything, Mr. Sammis?

MR. SAMMIS: Well, Mr. Chairman, we discovered this morning that in New Zealand about 92 per cent of their cheese is made from pasteurized milk. That is a piece of news. I gave it to you for just what it is worth. I think it is true that they all have very large factories, and it is convenient for them to pasteurize theirs. What one factory can do, another one can not always do. Maybe some day we may have all large factories in Wisconsin, the way they do in New Zealand, with five or ten vats of milk. If that comes about we can pasteurize with economy and uniformity in cheese quality. That is something for the future. If you think it is a good thing to have larger factories and not so many, why not use your influence in that direction? Think it over. We may never have large factories in

Wisconsin, and I am not attempting to predict what will happen, but we may be able to learn something from New Zealand. Are there any questions about the pasteurizing of milk for cheese making?

PASTEURIZATION OF CHEESE CURD DURING MANUFACTURE

By J. L. SAMMIS and LEO GERMAIN, Wisconsin Dairy School

Pasteurization has been applied to milk for cheese making, and also to finish cheese under patented processes. Intermediate between these, there is the possibility of pasteurizing cheese curd in the vat during the process of manufacture at the country cheese factory.

Possible Uses for Such a Process

The cost of purchasing and operating milk pasteurizing machinery is not prohibitive in a large plant handling 20,000 to 100,000 lbs. of milk daily, but the small country cheese factory handling 2,500 to 8,000 lbs. of milk usually can not afford either the initial cost, or the expense of operation, and frequently the floor space for pasteurizing machinery is not available. The pasteurization of curd during manufacture may find regular or occasional use in many of the present factories.

For this process, no additional machinery need be purchased, as the curd will be heated in the cheese vat where it is made. The process can be used any day when required, without previous preparation, and can be discarded when not needed, without the accumulation of overhead charges on equipment not in use. Nothing is needed but a tank of hot water, and a supply of cold water which every factory has.

The Temperature of Pasteurization and Other Variables

Pasteurization of milk at 165 degrees in a flash machine, or at 145 degrees for 30 minutes has been regarded as sufficient to kill tuberculosis bacteria and other disease germs. Price (Cornell 1926) recommends holder pasteurization of milk at 145 degrees for 30 minutes as giving better quality American cheese than a shorter time at this temperature, but no factory can afford a holder pasteurizer. Kraft in pasteurizing cured cheese found that this substance being relatively low in moisture content required less heating to obtain good keeping quality than is commonly applied to vegetables and fruits with their higher moisture content. The pasteurization temperature selected by the bacteriologist for the purpose of destroying certain disease producing organisms is not necessarily the same as that which the manufacturer may choose, for the purpose of suppressing those bacteria producing objectionable flavors, undue acidity, gas, etc., while also keeping fuel costs at a minimum.

The variables in this process which were studied were temperature, and time of pasteurization, acidity, and moisture content of the product. Each day a vat of curd or of milk well mixed was divided and part was handled normally, while other parts were heated as described.

In all cases, the results attained were measured by testing the cheese for fat and moisture, using the Babcock rapid method for fat in cheese devised in this laboratory in 1909. The quality of cheese in each case was determined by the scores placed on the cheese at three periods during curing, about 1 month apart, by expert cheese judges, A. T. Bruhn, of the Wisconsin Dairy and Food Department, State Capitol, Madison, Wis., and J. W. Moore of the Wisconsin Department of Markets, State Capitol, Madison.

Scope of Experiments

A few experiments in ripening milk at different temperatures showed what temperatures could be depended on stop ripening.

In a number of experiments both with sweet milk and with overripe milk heat was applied to the vat of material at various stages during the early part of the process, (a) while the curd was in the whey, (b) immediately after drawing the whey, (c) after matting and milling at low acidity, and (d) after milling the curd at high acidity. Various temperatures and time periods for heating were employed. Finally, careful observations were made as to losses in yield, as a result of the methods used.

The heating of water in an open tank higher than 175 degrees is difficult on account of escaping steam and noise. 10 lbs. of curd at 90 degrees mixed with 20 lbs. of water at 172 degrees will heat the curd and cool the water to about 145 degrees.

EXPERIMENTAL PART

Temperatures Limiting Acid Formation in Milk

The following results show what temperatures were necessary to stop acid formation by lactic and bulgaric bacteria, separately or mixed, in pasteurized milk, and in ordinary raw milk.

A can of fresh milk was heated in a steam jacket at 210 degrees for 1½ hours to stop bacterial growth, and was then cooled and divided. At 110 degrees, one half was inoculated with 5% of bulgaric starter, and the other half at 100 degrees with 5% of lactic starter. Parts of each lot were held at different temperatures, and acidimeter tests were made hourly. The acidity was .20% at the start.

Acid Development by Bulgaric Starter

Temperature / Hours	Acidity at the end of each hour						
	1	2	3	4	5	6	7
100 F.	.22	.27	curdled				
110 F.	.23	.31	curdled				
115 F.	.24	.37	curdled				
120 F.	.23	.34	curdled				
130 F.	.20	.20	.20	.20	.20	.20	.22

Acid Development by Lactic Starter

Temperature / Hours	Acidity at the end of each hour						
	1	2	3	4	5	6	7
100 F.	.22	.27	.38	curdled			
110 F.	.21	.23	.25	.26	.26		
115 F.	.20	.21	.22	.22	.22		
120 F.	.20	.20	.20	.20	.20	.20	

The bulgaric bacteria grew better at about 115, and were stopped at 130 degrees. The lactic bacterial grew well at about 100 degrees, but are stopped at about 110–115 degrees.

Acid Development in Unpasteurized Milk

To a can of raw milk, 1½% of lactic starter was added. It was then divided and held at different temperatures.

Temperature / Hours	Acidity at the end of each hour								
	1	2	3	4	5	6	7	8	9
100 F.	.17	.19	.24	.26	.29	.34	.37	.40	.40
110 F.	.17	.18	.19	.20	.20	.31	.43	.50	curdled
120 F.	.17	.17	.17	.17	.17	.17	.20	.24	.24
130 F.	.17	.17	.17	.17	.17	.17	.17	.17	.17

Ordinary milk supplies are likely to contain both lactic and bulgaric bacteria. 130 degrees is the lowest temperature likely to stop acid formation in ordinary milk supplies. Contrary to the view of many cheese makers, 110 degrees is not likely to check acid development in the cheese vat, because of the widespread presence of bulgaric bacteria.

Pasteurization of Curd While in the Whey

A few trials showed that the heating of curds from overripe milk to 130 degrees in the whey frequently melted the curd into a doughy mass, but lower temperatures could be applied gradually with safety. This process is not recommended.

On seven days in March 1925, milk ripened to .23–.24% acidity was divided into three vats, set with rennet, and after cutting the curds were heated slowly to 100, 110, and 120 degrees respectively.

The whey was at about .20% acidity in the 100 degree vat, and at .18 or .19% acidity in the others when the whey was drawn, about 1 to 1¼ hours after cutting.

The 100 degree curds after pressing stuck to the press cloths, as high acid curds generally do, and after curing they were short and sour. The 110 degree curds were better in quality, higher in score, and lower in moisture content. The 120 degree curds were the best in quality and not at all acid. The cheese were scored when two months old.

Scores on Cheese Pasteurized in the Whey From Overripe Milk

Date made 1925	Heated in the Whey to		
	100 F.	110 F.	120 F.
March 2	83 sour	88 trifle short	91 waxy
5	82 sour	84 short	90½ not acid
9	83½ sour	88 trifle acid	89½ tough, not acid
10	86½ sour	92 trifle short	93½ waxy, not acid
12	82 sour	84 short, acid	-- Not closed well
16	85 sour	93½ trifle acid	94 waxy, not acid
17	84	91½ waxy, not acid	91 waxy, not acid

These scores showed great improvement in cheese quality, and indicated the desirability of further study. The moisture content of the cheese was determined, to show the effect of the process on the yield. A loss of 3% moisture results in a loss of about 5% in yield, or equals a loss of 1 cent in price on cheese at 20 cents a pound.

Moisture Content of Cheese, Sampled After Pressing

Date made 1925	Moisture Content		
	100 F.	110 F.	120 F.
March 2	39.8	38.8	38.4
5	39.2	39.0	35.2
9	37.2	35.8	33.2
10	38.1	37.0	34.4
12	38.8	37.4	34.8
16	37.8	34.8	34.8
17	37.4	33.8	36.3
Average	38.3	36.7	35.3

To avoid such losses in moisture and yield, portions of the 120 degree curds were salted with a mixture of 2 parts water and 1 of salt, in comparison with dry salt.

Effect of Using Wet Salt on 120 Degree Curds

Date made 1925	Moisture Content			Scores		
	100 F.	120, dry	120, wet	100 F.	120, dry	120, wet
March 17	37.4	33.8	36.3	84	91½	91
19	36.0	32.0	34.0	84	88	92½
Average	36.7	32.9	35.1	84	89.75	91.75

The addition of water with salt increased the moisture test, overcoming 2/3 of the loss in yield and did not injure the quality.

While some improvement has been attained in the quality of cheese obtained from overripe milk, it is not intended to suggest that a factory pasteurizing curds in the whey should accept overripe milk on that account. Pasteurizing acid in the whey is not recommended.

Pasteurization of Sweet Milk Curds After Drawing Whey

In these experiments, a vat of curd made with 1½% starter was handled normally, and the whey drawn at .17% acidity. Before the curd was matted, it was diveded into several parts. One part was allowed to mat normally. The other parts were dropped into hot water and held at 120 or 130 degrees for 10 minutes or longer. These curds were then cooled, matted, milled, salted and hooped. On scoring them a month later it was found that the heated curds had developed gas in the cheese on the shelf in many cases, while the unheated curds showed no gassy texture. During August and September, 1925, a variety of modifications with temperatures up to 145 degrees were tried, but a good many gassy cheese were obtained. Pasteurization of curd, immediately after drawing whey, appears to stop acid formation more thoroughly than it stops gas forming bacteria. This method is not recommended. It appears desirable to develop more acid in the curd before pasteurizing, than in the work described above.

Pasteurization of Curd After Milling

This method permits the development of acid in curd to any desired degree before pasteurization, and is likely to prevent gas formation on the shelf, as well as to improve flavor.

Nine days cheese were made between Sept. 22 and Oct. 8, 1925, in which the mixed milk was made into curd in one vat, and divided into four parts after milling the curd. Part 1 was handled normally without pasteurization. Part 2 was pasteurized at 145 degrees, part 3 at 135 degrees, and part 4 at 125 degrees in hot water for 30 minutes. They were then cooled with cold water to 105 degrees, drained, salted and hooped. These cheese were judged by different judges, A. T. Bruhn, Dairy and Food Department, Wm. Winder and J. D. Cannon, Wisconsin Department of Markets, each on a different

date, Nov. 4, Nov. 25, 1925 and Feb. 5 and May 26, 1926. The scores were as follows:

Date made 1925	Lot	Scores			
		Nov. 4	Nov. 25	Feb. 5	May 26
September 22	1	92	90½	89	84
	2	91	93	92	93
	3	93	90	84	93
	4	93	87	----------	87
24	1	89	89	81	80
	2	88½	91	90	86
	3	91	89	87	86
	4	91	89½	86	----------
25	1	88½	88½	86	----------
	2	90	91½	91	90
	3	90	87	88	83
	4	90	86	88	85
26	1	86	88	83	87
	2	90½	90½	91	90
	3	91	90	89	87
	4	91½	90	90	85
29	1	89	87	87	82
	2	92	91	91	88
	3	92½	88	90	87
	4	91	87½	85	----------
30	1	89	89½	87	----------
	2	91½	94	91	----------
	3	92	88	89	----------
October 6	4	91½	88	87	----------
	1	91	89	85	----------
	2	93	94½	93	----------
	3	93½	89	91½	----------
	4	94	90½	89	----------
7	1	90½	93	92	84
	2	91½	93½	93	93
	3	92½	94½	89	90
	4	94	93½	90	88
8	1	90½	92	83	80
	2	93½	93	91	90
	3	92½	90	89	86
	4	94½	90	90	84

Average					General Average
1	89.5	89.6	86	82.8	86.97
2	91.25	92.5	91.5	90	91.31
3	92	89.5	87.6	87.4	89.1
4	92.25	89.1	88.1	85.8	88.81

The general average scores show that the three pasteurized cheese lots were better than the raw, and the 145 degree pasteurized were better than those pasteurized at lower temperatures.

The average scores show that the raw cheese deteriorated farther and more rapidly than the pasteurized, and the 145 degree pasteurized curds kept very well. In general the raw milk cheese were undergrade, and the 145 degree lots were fancy or No. 1 grade.

These results warranted further study to determine the effect of different times for pasteurization, different degrees of acidity, the yields obtained, etc. Beginning again in February, 1926, 10 days cheese were made, four lots daily, dividing the curd after milling, for pasteurization at different temperatures, etc., for 30 minutes.

Date made 1926	Scores of cheese made at different temperatures							
	Raw	115F.	125F.	135 F.	145–150 F.	165 F.	180 F.	Acidity when milled
Feb. 24	85.3		90.3	94.1	94.3			.60
25	90				95.5	90		.60
26	86				91	88	88	.80
Mch. 1					89	87	87	.35
2	88				93	92	91.5	.35
8	86				92			
10	89.8		130 F.		93.2			
19	91	92	92		94			
22	89	88.3	93.3		93.5			
Average	88.4	90.1	92.6		92.8	89	88.8	

The general conclusion from these and other trials is that pasteurization at 145 for 30 minutes gives better cheese than other temperatures.

Pasteurization at High and Low Acidities

Beginning in April, 1926, study was made of the effect of pasteurization of curds at different acidities, at 145 degrees, 30 minutes. The acidity was .20 to .35 at milling, and the curd was divided and the parts pasteurized at different times, when the curds had developed low, medium and high acidity. The scores follow.

Date made 1926	Acidity when pasteurized			Raw
	Low	Medium	High	
April				
2	89.3	93.3	92.8	91
5	88.8	93.2	92.75	90.7
6	88.8	94.5	97.7	90
7	92.2	94.2	91	90.7
9	89.8	91.2	90.5	88.8
Average	89.8	93.3	92.9	90.2

Date made 1926	Raw Scored		Pasteurized at curd acidity					
			.40—.50% Scored		.55—.65% Scored		.70—.80% Scored	
	Aug. 12	Nov. 1	Aug. 12	Nov. 1	Aug. 12	Nov. 1	Aug. 12	Nov. 1
July								
7		82		81		89		90
8	88	84	93	93	95	91	93	94
9	90	86	90	92	93	92	92	93½
12	88	82	95	91	94	94	92	93
13	90	84	90	87	94	92	93	95
14	89	85	94	91	94½	92	94	93
15	90	88	91	94½	94	95	94	95½
16	88	88	93	91	95	93	93	94
Average	89	84.9	92.3	90.1	94.1	92.2	93	93.5

The raw cheese and .45% acidity pasteurized cheese deteriorated considerably between Aug. 12 and Nov. 1, while the curds pasteurized at about .65% or higher scored higher throughout, and the highest acidity curds deteriorated little or none during that period.

During August and September, 1926, 8 days further trials were made at high, medium and low acidities, in general according with the results detailed above.

The relation of acidity at pasteurization to cheese quality can also be traced in the following experiments made in 1927, although the principal aim in 1927 was to study the effect of pasteurization for different times as 5, 15, and 30 minutes, on cheese quality and particularly on yield.

Cheese Yield, and Pasteurization for Different Lengths of Time

On March 30, 1927, the study of cheese yield was begun, using as special equipment, four tin pans, 12 inches square, and 7 inches deep, with covers. As soon as the vat of curd was milled, it was mixed well and portions of about 10 lbs. were weighed out exactly alike into the four pans, using scales sensitive to 1/20 lb. One pan of curd was held without pasteurization, covered, to be salted and hooped as raw cheese. The others were pasteurized in different ways, using precise methods.

To 10 lbs. of curd in a pan at 90 degrees, 20 lbs. of water at 173–175 degrees were added, and the temperature immediately observd to be 145 degrees. The covered pan was immediately set in a vat of water held at 145 degrees to maintain the temperature in the pan. Different pans were left there 5, 15, or 30 minutes. The pan was lifted out, the hot water partly decanted through a fine metal strainer, and cold well water was added to bring the pan contents to 90 degrees within 5 minutes. At the end of that period, the water was decanted through the same strainer, and the curd placed on a vat bottom to drain. After 15 minutes, it was salted, and 20–30 minutes later was hooped and pressed. The care was used not to lose any particles of curd. The different hoops were pressed in the same press, together, for at least one hour, and were then removed, weighed carefully, and sampled for analysis for fat and moisture. Special care was used not to stir the curd after adding the hot water, and to stir only slightly after adding the cold water, in order to avoid unnecessary loss of fat, in the water. This precaution should not be neglected.

Date made 1927	Raw	Weights of cheese from equal weights of curd, pasteurized			
		15 min.	30 min.	45 min.	Acidity when milled
March	lbs.	lbs.	lbs.	lbs.	
29	9.00	8.80	8.70	8.75	.65
30	10.75	10.60	10.60	10.50	.60
31	9.60	9.40	9.45	9.40	.52
April					
1	9.40	9.30	9.00	9.20	.45
4	9.35	9.35	9.30	9.30	.42
5	9.30	9.10	9.10	9.05	.40
6	9.12	9.00	9.00	9.00	.35
8	9.20	9.10	9.10	9.10	.25
11	9.28	----	9.15	----	.33
12	9.10	9.00	8.90	8.85	.25
13	9.20	9.10	9.00	9.00	.26
14	9.20	9.00	9.07	9.08	.23
15	9.20	9.18	9.00	9.00	.25
19	9.26	9.24	9.20	9.10	.50
21	9.40	9.35	9.30	9.18	.40
22	9.45	9.35	9.25	9.25	.30
26	9.40	9.38	9.30	9.20	.65
28	9.20	9.20	9.10	9.05	.35
May					
2	9.30	9.30	9.25	9.15	.50
3	9.20	9.20	9.11	9.05	.35
4	9.20	9.20	9.05	9.00	.25
Average	9.34	9.25	9.19	9.16	

The raw milk cheese were salted and pressed at the same time as the 45 minute curds, each day.

Date made 1927	Raw	Weights of cheese from equal weights of curd, pasteurized			
		5 min.	15 min.	30 min.	Acidity when milled
May	lbs.	lbs.	lbs.	lbs.	
23	9.50	9.60	9.38	9.43	.62
24	9.40	9.34	9.24	9.14	.58
25	9.40	9.30	9.20	9.18	.60
26	9.25	9.05	8.85	----	.57
June					
1	9.35	9.31	9.22	9.22	.75
2	9.26	9.20	9.15	9.00	.85
Average	9.35	9.30	9.21	9.19	

Summary of 1927 Experimental Cheese Scores

Lot No.	Days make	Raw	Pasteurized				
			45 min.	30 min.	15 min.	5 min.	.5 m.
1	16	89.7	91.2	88.1	87.5	----	----
2	5	88.8	92.2	92.1	91.6	----	----
3	2	89.5	93.5	----	91.0	----	----
5	5	90.5	----	92.5	92.1	90.7	----
6	1	88.3	----	----	90.8	----	87.7
9	8	90.5	----	93.73	93.52	91.83	----
10	13	88.6	----	89.9	----	----	----
Weighted Ave.		89.48	91.62	90.48	90.31	----	----

Scores of Cheese Pasteurized at Different Acidities

Days make	Acidity milled		Pasteurized, acidity when milled			
8	.3 90.4	.6 91.2	.24 89.4	.35 90.1	.48 92.3	.63 92.7

Pasteurization in Water or in Whey

In view of the possibility that whey with its dissolved solids may extract less material from cheese during pasteurization than does water, a number of trials were made, pasteurizing part of the curd in whey and part in water. It was not expected that the quality would be different in the two cases. The scores are given below, and the weights.

Date made	Raw	Pasteurized at 145 F. for 30 minutes in				Raw lbs.
		water	whey	water lbs.	whey lbs.	
May	Score	Score	Score			
4	88.7	93.4	93.8	10.5	10.5	10.55
5	88.3	89.8	90.3	10.4	10.35	10.5
6	86.7	91.2	91.0	10.5	10.5	10.6
Average	87.9	91.5	91.7	10.47	10.45	10.55

The use of whey instead of water for pasteurizing curds does not notably affect either the yield or the quality.

1928 Scores of Raw and Pasteurized Curds (145 F. 30 min.), Made in Large Vat, on Mondays, From 2 Days Milk

Date made 1928	Raw					Pasteurized				
	Judged by	Bruhn		Moore		Judged by	Bruhn		Moore	
		F	T	F	T		F	T	F	T
March										
12	Pinholes	25	33	23	34½	No pinholes	25	34½	24½	35
19	Pinholes	25	33	22	33	No pinholes	25	35	25	34½
*26	Pinholes	25	33	22	33	Few pinholes	26	35	25½	34
April										
2	Acid	26	34	24½	33½	Not acid	26	35	25	35
9	Pinholes	25	34	23	34	No pinholes	25½	34½	23	32
16	Pinholes	24½	33	22	31	No pinholes	25	34	24	33

*This curd was very gassy when milled; the others were not.

Pasteurized Curd Experiments in Large Vats

Date made 1928	Raw cheese scored on			Curd pasteurized at 145 F. 30 min. and scored on dates		
	May 1	June 2	July 2	May 1	June 2	July 2
March						
12	87.7	87.0	87.2	89.5	93.5	93.2
19	86.5	87.7	87.0	89.0	92.0	91.5
26	86.5	85.2	87.5	89.7	91.7	92.7
April						
2	89.0	86.2	86.7	90.5	91.5	90.5
9	88.0	90.2	88.5	87.5	93.5	91.5
16	84.5	86.2	86.0	88.0	93.0	93.7
Average	87.4	87.1	87.1	89.0	92.5	92.2

Date made	Raw cheese scored on			Curd pasteurized at 145 F., 30 min. scored on dated		
	June 11	July 2	July 28	June 11	July 2	July 28
April						
23	89.5	90.5	84.7	90.7	91.7	90.5
30	90.0	88.7	87.5	92.0	90.0	89.0
May						
9	82.0	84.0	82.5	91.5	92.7	92.0
14	83.5	82.5	79.0	91.0	92.2	86.7
21	88.0	87.2	83.7	89.7	90.7	90.7
Average	86.6	86.6	83.5	91.0	91.4	89.9

There was no difficulty in pasteurizing curd by this process in a large vat. The regular milk supply used in all this work was of poor quality, as shown by the generally low scores on both raw and pasteurized curds.

Among the 24 scores on pairs of cheese, the pasteurized were higher in 19 cases, 8 on flavor and 11 on texture, alike in 4 cases, and in one case the raw texture score was higher than the pasteurized. Using this particularly poor quality, 2 day milk, the raw pinholey cheese were freed from pinholes by pasteurization in all cases, excepting once where the curds were pinholey at the time when milled and pasteurized, which resulted in leaving a few pinholes in the cheese after pressing.

With a very good quality of milk supply, no improvement of cheese quality is to be expected as a result of pasteurizing the curds. Where the milk is gassy, the method of pasteurizing curds in the vat, after milling at about .6% acidity in the drippings is shown to improve the quality of the cheese quite notably and consistently, with an average loss in yield of about .15 lb. on a 10 lb. cheese. The method consists of covering the milled curd, spread out on the vat bottom, with twice its weight of water at 175 degrees without stirring. The vat contents, now at about 145 degrees, are left quiet for 30 minutes. The hot water is partly drained off, and enough cold

water is added to bring the vat contents to about 90 degrees. After 5 minutes, the curd is drained, salted, and pressed as usual.

Care should always be used to secure a perfectly closed rind, and press cloths or starched circles should be removed early enough to avoid danger of sticking to the cheese. We have found that by dipping cloths or circles in hot paraffine, and squeezing out the excess of paraffin while hot, all danger of sticking or tearing the cheese surface is avoided.

It is believed that this method of pasteurizing curds in the vat will be of value to makers in small factories where milk pasteurization equipment is not available.

DISCUSSION

MR. SAMMIS: To really pasteurize the curd, we kept it at 145 degrees for half an hour. This is a very different thing from just slushing some hot water over a curd, and having it warm for two or three minutes. This is a real pasteurization of the curd for half an hour at 145 degrees. Some people would ask, whether after putting hot water on the curd for half an hour, the curd would soak up a lot of water, and give a high moisture cheese. It did not do it. If you put cold water on curd, the curd will soak it up, and people put cold water on the curd in some other states. They know perfectly well if they leave on the cold water for five or six or seven minutes, the curd will be very high in moisture. Cold water soaks in very easily. When the curd is at a high temperature it is tending all the time to give off a little moisture rather than take on moisture. So you won't find any increase in moisture content, from soaking curd in hot water at 145 degrees for half an hour. That is one of the lines of experiment we have been running at the Dairy School, with fairly good success. We may find factories where it will be a very helpful thing. Are there any questions about that particular thing?

A VOICE: Do you have to stir that curd in the hot water?

MR. SAMMIS: No, it isn't necessary to stir it. We didn't stir it at all. The curds are spread out on the bottom of the vat, and just pouring the water on will mix it up plenty. Don't stir it at all. If you stir the curd in the hot water, you will find that the curd may get stringy and melt. Don't stir it. The less you stir it the better. We made it this way for several months, and didn't have any trouble with melted or stringy curd. Before we learned how to do it, we had quite a bit of trouble. Just pour on the hot water and don't stir it at all.

MR. ADERHOLD: How much cold water do you use?

MR. SAMMIS: Just enough to cool it down, and you can stick a thermometer in the water and see if it is about 75 or 80, and if it is a little too warm put in a little more cold water.

A VOICE: Does it take out much fat, or cause much shrinkage?

MR. SAMMIS: No. The hot water we drew off, we tested for fat, and it had about as much fat as good separator skimmed milk, just a little fat off the surface of the curd, very little. No great loss of fat such as you might expect. Of course, if you get in there with a rake and stir the curd up hard, you may get it stringy and lumpy, and cause more loss.

A VOICE: How long after milling before you put the hot water on?

MR. SAMMIS: Right away, mill the curd when the acidity is about six-tenths per cent, have a tank of water 175 degrees all ready and

put in just twice the weight of curd you have there. You can stick in a thermometer and see if it is at 145 degrees. If you want to try it, you can take 20 pounds of milled curd out of your vat some day, and lay it in a dishpan or a good sized can and add 40 lbs. of water at 175 degrees. Don't stir it up, let it lay half an hour. Try it out on a small scale, and see how you like it. Any other questions?

A VOICE: How much salt do you use on that?

MR. SAMMIS: The same amount as usual. The curd doesn't take up any water in the heating. How does it affect the keeping of your quality of the curd? It makes a better cheese out of it. You can see the difference in the flavor. Of course if you have a pretty good cheese to begin with it is hard to improve it. If you have pinholes in the curd at the time you mill and pasteurize the curd, the heat will kill the bacteria, but the pinholes will stay there, and if you put that cheese to press and it is still full of pinholes, they may show up in the pressed cheese somewhat. The hot water is not going to close up the pinholes, but it will stop them from growing. I have seen a cheese that had pinholes in it at the time it was milled, and the same cheese showed pinholes next day because they pressed it quickly without waiting for the pinholes to flatten out. If you can pasteurize the curd before the pinholes develop, they wont' show up. It won't be a perfect cure-all for all your troubles.

How to Avoid High Moisture Cheese

What is the main thing in avoiding high moisture cheese? One man said, I test my cheese for moisture every day, and so I know when I get a high moisture cheese and I can look out the next day to avoid it. I think he said a very true thing. A cheese maker who is trying to work up close to the moisture limit certainly ought to have some way of telling how close he is coming to the moisture limit. Why shouldn't any cheese maker get his cheese tested for moisture, or learn how to do it himself? If you are trying to standardize, if you are trying to see how close you can come to the fat limit, why in the world shouldn't you test your cheese for fat? It is not such a hard thing to do. Of course, it is some work, you have got to know how to do it, and do it right, but it can be done. To avoid getting high moisture cheese, have your cheese tested or test them yourself. One man can make a moisture test very easily. Another man may try to make a moisture test and fail entirely. A man that is determined to learn how can learn how I know perfectly well; but If he doesn't care much about it, the chances are he never will learn how. There are always some people determined to go ahead, and there are a lot of people who are determined not to go any farther than they have to, and to let good enough alone, and say that what our grandfathers did is good enough for us. The wide-awake men come to the Cheese Makers' Convention, and they want to get new ideas and try them out, and those are the ones who do better work year after year.

Experience in Testing Cheese for Fat and Moisture at the Factory

Are there any makers here that run a moisture test? Mr. Dehn of Unity makes moisture tests on his own cheese. Now, Mr. Dehn, can you make two moisture tests on the same cheese and get the same results?

MR. DEHN: No, not exactly.

MR. SAMMIS: About how far apart do those results run when you make those tests on the same cheese?

MR. DEHN: I haven't had a variation over one per cent.

MR. SAMMIS: They don't vary over one per cent. As a general rule, how much do they vary?

MR. DEHN: About one half of one per cent.

MR. SAMMIS: You can make those tests on the same cheese, and as a general rule you get one-half per cent difference on the test. Anybody else?

How do you like it, Mr. Luethy?

MR. LUETHY: Fine.

MR. SAMMIS: When you make duplicate tests on the same cheese, how much do they differ generally?

MR. LUETHY: About the same as this gentleman here says.

MR. SAMMIS: About half per cent? Anybody else, let's see who is trying out these things. Anybody else trying out the moisture test? Nobody else here. I hope we will have twenty or thirty of you testing next year. It is pretty nearly time for us to stop the program, and see the Swiss Cheese film from Southern Wisconsin, and before we do that has anybody got any questions they want to ask about any subject, that somebody else will answer? If there is anybody at all, just stand up.

Why Factory Tests and Cow Tester Results May Differ

MR. FLYNN: Why does the milk test between the farmer and the factory vary?

MR. SAMMIS: Well, that is a very good question. That is down here in the book for discussion. Now, Mr. A. J. Cramer of Madison sent me a telegram, saying he was unavoidably detained and couldn't come, but I was talking to him about that the other day, and he told me some of the reasons why he found differences between the cheese makers' tests at the factory and the farmers' test he got from the cow tester. I will mention some of the reasons for that, and you can think of more reasons probably. One reason was that the cow tester would make his test perhaps on the first day of the month at the farm, and he would get a certain line of tests on the cows, and on the tested milk, but then he wouldn't make another test for thirty days, and so the tests he made on the first day of the month stood for the whole month. Then during the month a lot of fresh cows came into the herd, if it was in the spring, and all the fresh cows had a low test milk until by the middle of the month the average test was considerably lower than the cow tester got. There is a good reason why the farmer's test from the cow tester was different from the cheese maker's test at the factory. How many of you ever saw a case like that? How many of you ever had any trouble with the farmers about that?

Are there any other reasons why there should be a difference in the cheese maker's and the cow tester's tests? Does anybody think of another reason?

MR. MALCZEWSKI, Pulaski: I think where the cheese maker has trouble with the Testing Association, there is one thing for him to do and that is the first thing for him to do. Let's ask the farmer to send his book down and let the cheese maker check it over himself. I happen to be a farmer and a cheese maker, and I belonged to the Testing Association for four or five years, and was secretary of this Association, and in that time we had three different testers, and there wasn't one of them but what would make some mistake, and having the papers there in my place, I would take the computing book and check them over, and my own neighbor belonged to the Testing Association, he had a test of four per cent. His factory test before was 3.6. The testers before had four, and he came on like a hornet's nest

because we only gave him 3.6. He brought his book over that evening, and we figured his book over. The tester in computing the amount of fat, had too many pounds, and after dividing it up the test was 3.70%.

4400 WINTER DAIRY SCHOOL STUDENTS

PROFESSOR H. C. JACKSON, Chief, Dairy Department,
University of Wisconsin.

MR. JACKSON: Mr. Winters, Ladies and Gentlemen: It seems fine to be here again another year. It was suggested to me that I talk about "4400 Winter Dairy School Students." It is impossible to talk about the students without saying something about the Dairy School. The first dairy class was composed of two members matriculated in 1890. I understand the idea of holding the first school was the outgrowth of the Babcock Test, of course, which was developed here in your State. The next year there were seventy students took the course, and in October, 1891, construction was begun on Hiram Smith Hall, our present Dairy School building, and the class of 1892 was the first class to have instruction in it. Down in our halls we have the pictures of all these classes, and those that were beginners in this work. We are still in that old building. At the time it was built, I believe the building, together with the equipment, cost approximately forty thousand dollars. I doubt if any building has ever been put to any better use than that building has been put in the past years.

This number, 4400 students, naturally raises some questions. We could give these figures to a statistician, and I presume he would exercise his prerogative, and he would start to conjure with these figures. He might figure out for you what this meant to the men in increased income, increased earning power. He might figure out what the economic value of this increase or this better training has meant to the industry. He might compare the records of the school with other schools and go on and on, but to me it means a little more than that. The figure "4400" in itself, unless you have some way of getting a picture in your mind doesn't mean very much. But I would like to think of the figure "4400" as individuals and as men, and not think of it in a sort of cool, calculating manner, but think of what it has meant to our men and to our industry. Now, we naturally wonder if the men who have gone through this school in the past have made full utilization of the training they received. Now, of course, you men who are making cheese, you can tell within a short space of time whether you have made good or not. Down here in our contest this year, you know by the prizes you have received whether or not you have made good cheese.

Now, a teacher is handicapped. You have a student in the laboratory and try to teach him what you think he should know, and what you think is essential, and then he goes out. But whether he makes good, you never know. You never know whether he makes good be-

cause of what you have done for him, or in spite of what you haven't done for him, and I think in the beginning the men who have elected to take this course probably were exceptional men. Perhaps they were above the average. You know we talk a lot in the averages.

I heard a story about averages the other night. This is an Iowa story. I don't know whether it was told in Wisconsin or not. There was a man travelling down south in a Pullman one night, rather late, he went in the wash room where the boy was shining up the shoes. He was a rather talkative colored boy, and the man got talking to him, and he said finally, "Does the Pullman Company pay you any money?" "No, not very much." "Then you have to live on tips." "Yes, have to live on tips." "What is the average tip you receive?" "Oh, about a dollar, sir, about a dollar." So when the man got off the next morning he gave the boy a dollar and the boy bowed, and he said, "I thank you, sir. This is the first one come up to my average."

So I say, I believe some of these men that have taken the course are above the average, and we can look at the records they made out at the State. Down at the University we have what we call our job book. A good many fellows used to call the positions jobs. Now, I wonder whether sometimes when they have a position after all it isn't a job. So we have kept in touch with them all these years, or rather the department has, and we know where they are located and the work they have done, and so we can examine these records and so we can have the proof of their success.

For instance, the States of Michigan, Minnesota, Oregon, Florida, Pennsylvania, Mississippi, have called men to head their departments of dairying industry. In various states, some of our former Dairy School students have been heads of the Dairy Department in the College of Agriculture or have been in charge of dairy manufacturing instruction. Two former graduates have occupied similar positions in South Africa, Dairy and Food Commissioners in foreign countries, I mean men who occupy positions similar to Dairy and Food Commissioners. There are Dairy and Food Commissioners throughout the Union who have taken this course. Then we find men who have been leaders in herd improvement association work, used to call it Cow Testing Association Work. Now, we speak of it as Herd Improvement. We have some of the best pure-breed cattle raisers in this State who have taken this course. We find men serving as State Inspectors, men who have been marketing specialists in this State, who were former graduates. Then your leaders in the past and present in this Organization have been men who have taken this course. Not only in this Organization alone, but in our State Butter Makers' Association and in the National Butter Makers' Association we find these men taking their proper place in this good work.

And then we find men who have been successful owners and operators of dairying manufacturing plants.

Now, those are some of the visible things and once in a while we have to look at some of the unseen things, so to speak. I like to think that the men who have taken these courses have a little higher

ideals, perhaps, than they would if they had not done so. It is hardly necessary to ask why these men took the course. It seems to me that they had a feeling that they needed better training. If they were going to stay at the top of the industry, they had to know just a little more than the average, and I think that they wanted to progress in the work. Now, your school, I like to speak of it as your school, because I have been here such a short time, I could hardly call it my school in one sense of the word, but it seems to me that your school here in the State of Wisconsin has been a pioneer in every sense of the word. It is the first school of its sort that was ever instituted. Out of its laboratory has come some of the newest ideas that we have had in cheese factory practice. So, we find three things, perhaps, in which this school has excelled. In the first place it has always been a school where investigation was carried on, and where new ideas have been developed. In the second place, the school has always been forward to bringing to your knowledge, to the classes that have taken the work, and to the industry at large, both through teaching and extension work. In the third place, they have done this in a very effective manner by never losing sight of the practical side of cheese industry. In other words, in the past they have seemed to maintain a proper balance between the theoretical and the practical, and I think that is one of the biggest things, perhaps, that they have done to maintain this proper balance.

Scientists or investigators so many times are criticised for being impractical, and this school has always had that in mind. They have always had an object in view, whenever they have undertaken any investigation or work, and that object has been the betterment of the cheese industry.

Now, of course, it is possible, perhaps, for me to sing the praises of this school in this manner, with all modesty, because I have only been here just one year, and, of course, it is my hope to stay with you that we may go on to better and better things.

The work of our department is divided roughly into three main activities. First, research work; second, teaching; and third, extension work. Now, of course, research work simply means searching out any new truth or new fact. At the present time we like to think that we are digging in a little deeper than we used to go. We feel that the work in cheese making needs more attention. This is one of our greatest industries in the dairy field in this State, in this great dairy State of Wisconsin, and we want to develop the cheese side. So with that in view we are getting another man in the Cheese Department that we think will be a real help, and we sincerely hope we may do such work as will benefit the industry at large.

We need some reorganization in our teaching work. In our course this year, we started that. We have split the twelve weeks' course up into two six week periods. Now, in the former course students were getting the theoretical side of the work, instruction and the practical side along together. A good many would come down there primarily with the idea of being cheese makers or butter makers, and

there was a tendency to let this more fundamental work slide so this year we split that up, and we have added some new work. For instance, we have added a new course in bacteriology, in which the men get some actual laboratory practice. We feel at the school, and rightly I believe, that bacteriology is one of the foundation sciences upon which good cheese manufacturing processes depend. We are giving a special course this year in what we call dairy arithmetic, which will take up the figuring or the mathematical end because we have found many students have gone through the course without possessing that knowledge or how to work out certain problems that they meet with in the factory at Madison, and we plan to include in that course dairy arithmetic, record keeping and some accounting. So in the first six weeks we take up the study of bacteriology, dairy arithmetic, dairy mechanics, milk composition and tests which includes the essential instruction in dairy chemistry, some lectures in veterinary science and dairy cattle.

The second six weeks the men may specialize taking up work, cheese making and butter making and milk plant operation and ice cream making. At the present time in the State of Wisconsin, it seems to me, there is a definite swing or trend towards the building of plants in which more than one activity is carried on, and we have had men come back in previous years who want to take some special instruction along certain lines. Last night one of our graduates of last year who happened to be in the milk business, told me he was thinking of taking on some ice cream work, and he wants to come to the school and get some special instruction. So under this new arrangement it will make it possible for former graduates of the school to come back and take that second six weeks' course without receiving the first part, and it costs less in time and money, and they also have the opportunity this year in specializing to better advantage, in two branches of the work.

The other side remains, the extension side. Perhaps that has not been developed as far as the research and teaching side of our department. And we hope in the coming year to double that to a greater extent. Now, of course, our extension work in the past has been mostly concerned with our monthly cheese scoring that have been held where all the cheese makers in the State are at liberty to send a cheese, or sample cheese and get them scored and get a moisture and fat determination made on the cheese, and we make a number of those determinations throughout the year. We want to do it, and are glad to help all we can in that way. Then we have given considerable aid to friends to help them improve the quality of the milk we are receiving, and I think that is the side of the work or phase of the work which should be developed to a greater extent. Then, of course, through letters and correspondence and visits to some we have been able to help some individual cheese makers, and as far as time will permit we hope to carry on that activity.

Now, we like to have this Organization know what the Dairy School is doing, and we, on our part, like to keep in touch with the Organiza-

tion, and know what you are doing and what your plans are, what your ideas are for the future. We are still carrying on in the old Dairy Building, the oldest dairy building in the United States. At the present time some of our facilities are inadequate to carry on properly some of the work in particular branches of the cheese industry. Some time in the future, probably the near future, we will have to do something about this.

In closing I like to say that it is our aim and ambition, and our only purpose teaching there at Madison is to render service to you out in the field, and we are most happy, indeed, when we feel that we may be of use to you. I thank you.

THE CHAIRMAN: Are there any questions you want to ask Professor Jackson?

MR. SAMMIS: Mr. Chairman, I believe that Professor Jackson, who has recently come to the University in the Dairy School, would be very much interested and pleased to see how many former Dairy School students there are present in the audience. Professor Jackson, would you be good enough to look at the showing of hands. We have probably twenty per cent of the cheese makers in the State here, that is, this audience probably represents one-fifth of the cheese makers in the State. I want to extend in behalf of the Association a very cordial and hearty welcome to Professor Jackson, who comes to the Dairy School, from the Dairy School at Ithaca, New York, and he gives them the benefit of his experience and their ideas and also to Mr. Price, who will be here later on from the same place. For myself I am very glad to tell you, as before, that I hope to see you when you come to the Dairy School. I remember most of the old members and I have not resigned from the Dairy School, and I don't expect to for a good many years; but the Dairy School people make up the backbone of our Association, Professor Jackson, and we have to depend on them a great deal to make this convention a success. I am sure they all join in welcoming you here.

PROGRESS IN SIMPLIFIED PRACTICE

By O. H. LIMPUS, Milwaukee

Mr. Chairman and Members of the Convention: For various reasons I hesitated somewhat, when first asked to speak on the subject assigned me, but finally found sufficient courage to accept. My task for the next few minutes is to give you an idea of what has been accomplished in the way of simplifying or standardizing the various styles of cheese. Right at the outset, I can answer this question by saying that absolutely no progress has been made; in fact, we seem to be farther away from it than ever before. However, an attempt was made to accomplish something along this line, which I will briefly relate.

At the Milwaukee Convention last year, one of the most helpful and interesting talks on the program was that of Mr. W. E. Braithwaite, representing the Department of Commerce at Washington, of which Mr. Hoover was the head. In this talk he gave several reasons why

standardizing was helpful in practically all lines of manufacture, some of these reasons being:

A more economical manufacture through less idle equipment,
A better schedule of work,
A more accurate cost accounting,
A simplified packing,
A simplified inventory,
A reduced cost per unit,
A greater skill of workmen,
A simpler and better inspection,
Less capital tied up in the mechanical equipment, in storage space and in repair parts.

He gave us the example of the Campbell Soup Company's manufacturing cost which declined enormously because at present it concentrates on 21 kinds of soups, with Pork and Beans as a side line, whereas in 1898 they made more than 200 varieties of canned food stuffs.

The American Wringer Company lowered its prices, after cutting an original line from 800 numbers to 60.

The recent reduction in the retail price of Mazda lamps, according to the General Electric Company, has been made possible through simplification. Two years ago there were 45 different sizes and styles of electric lamps—today there are 5. The nine sizes of the 50 watt lamp have been replaced by one.

In 1914 the manufacturers of farm machinery had 240 varieties of the ordinary plow—today they are making 30.

Ten years ago there were 2,135 different implements divided among 12 styles of farm machinery. Today there are but 227—75% having been eliminated as unnecessary.

Automobile manufacturers have applied standardization in the design and fabrication of their products, with consequent decrease in the cost of production, improvement of service, and general benefit to all motorists.

The operations of a certain chain of hotels simplified its requirements and reduced costs of items, releasing $350,000.00 from former inventories and saving $100,000.00 per year.

Referring particularly to the cheese industry, Mr. Braithwaite quoted one large manufacturer by saying: "If a minimum number of sizes could be adopted as standards, cheese factory equipment would be materially simplified. Cheese box manufacturers would have the shooks for only three or four boxes to manufacture and carry in stock. Wholesale dealers would have their inventories in American cheese reduced from ten or more sizes to a minimum of sizes.

With this as an encouragement and a foundation on which to work, the National Cheese Institute appointed a committee to make a survey of the trade and report back to the institute its findings and suggestions. This committee consisted of Mr. W. A. Austin, of the C.

A. Straubel Company, Mr. Wm. Huber, of the Lakeshire Cheese Company, and your humble servant representing the Pabst Corporation.

Working through Mr. Jones' office, letters were sent out to the entire trade and their answers were tabulated. These answers will undoubtedly interest all of you:

Style	For Elimination	Against Elimination
Young Americas	1	23
Long Horns	23	1
5 lb. Sq. Prints	3	22
10 lb. Sq. Prints	4	21
Twin Daisies	2	23
80 lb. Block	0	24
Mammoths	0	24
Single Daisies	24	0
Twins and Flats	24	0
Triple Daisies	0	24
Cheddars	24	0

You will, therefore, see that a great majority of the firms were for the elimination of Young Americas, Square Prints, Double and Triple Daisies, 80 pound Blocks, Mammoths and 5 pound Natural Loaf. And basing our recommendations on these answers, we unanimously recommended the elimination of these styles and the directing of our attention to the making of Horns, Single Daisies, Flats, Twins and Cheddars. In this recommendation you will see that practically every size of cheese is represented; viz., Horns 12 pounds, Daisies 22 pounds, Flats 32 pounds, Cheddars 70 pounds.

We further recommended that inasmuch as there is only a slight difference in the size of Twins and Cheddars, we favored the use of the same sized hoops for both styles.

By thus eliminating these various sizes, we felt that it would relieve some of the financial burden of the average cheese factory in that it would not be necessary to carry unnecessary hoops, presses, bandages, boxes, etc., and also aid materially in stabilizing the general market.

I believe it goes without saying that had this report been accepted and adopted, no cheese factory or business concern would have been obliged to follow it in its entirety. As an encouragement to the trade, the U. S. Government expressed a willingness and a desire to only order such styles as the cheese trade would agree upon. It has been its custom for many years to buy large quantities of cheese in the Young America style, but in order to help, it was perfectly willing to order Horns instead. Immediately after reading this report, at the National Cheese Institute's Convention, the Committee "stubbed its toe." It seems that members of certain firms, when replying to our letter of inquiry, failed to pass on this information to other members of their staff. In other words, these answers only reflected one man's opinion instead of the opinion of the entire company. To say this was humiliating to the various members of the Committee is putting it mildly, indeed. We thought we were representing the minds

and convictions of the firms answering. In one instance the party writing and signing the letter had seemingly forgotten all about it. As a consequence, when the institute began to discuss our report, it was "shot so full of holes" that I venture the assertion no representative committee could be appointed that would accept and properly function again.

It is for this reason that I make the assertion that no progress has been made so far by the committee and that we are seemingly farther away from a solution than ever.

For a moment let us notice the ratio of manufacture for 41 weeks of this current year. In all there was made during this period, a total of 248,305,512 pounds.

Of this

18 % were made into Flats and Twins
18 % were made into Cheddars
34 % were made into Single Daisies
20 % were made into Long Horns
4 % were made into Square Prints
2 % were made into 80 lb. Block
1½% were made into Double Daisies
1¼% were made into Young Americas
1 % were made into 5 lb. Natural Loaf
½ of 1% were made into Mammoths

You will thus see that only 10¼% of entire make was put into these 6 styles that we recommended should be eliminated.

You will thus see that the make in some of these styles is so slight that it hardly seems feasible or important that they should be made at all and that hoops, bandages, presses, etc., should be kept by the factories in order to make them when their particular season arrives. I feel very confident that it would only be a matter of possibly one or two seasons when all of these small and rather unnecessary styles could be forgotten if only the dealers and the cheese makers would discourage their make and attempt to divert their ideas of the trade to some of the regular styles. Besides, as you know, Young Americas and Square Prints are listed on the Farmers' Board at Plymouth, and, naturally, there are times in the year when there is a pretty fair demand for them, and in order to get them made it seems to be necessary—or at least our competitors say it is—to pay a premium to the factories for same, which, eventually, influences the entire market and throws all of the main styles out of their proper range of value.

In my opinion there should be created in the cheese trade a real desire; first, to establish styles that will meet the needs and requirements of most of the people, and secondly, after the styles have been created and established, to allow the law of supply and demand to affect the course of the market.

I realize it is going to be difficult for all of us to see alike and have the same viewpoint, but even though we do not see from the same viewpoint, we can bend our energies in our various ways to accomplish the same end. You, no doubt, have heard the story of the

American and the Japanese boys paying tribute to their dead comrades. The American was noticed strewing his pal's grave with roses while the Jap was scattering grains of rice on the mound of his pal. Noticing what his Jap friend was doing, the American said: "Well, old chap, when do you think your pal will rise from the dead to eat the rice you have just planted?" Immediately, without hesitation, the Japanese explained: "Just as soon as your pal comes forth to smell the roses." Both of these boys were doing the same thing only in their different ways.

SUGGESTIONS FOR IMPROVEMENTS

MR. SAMMIS: We have a telegram here from the next speaker on the program from Chicago saying that he is unavoidably detained by an unexpected court appointment, and is unable to be present. Signed by J. Kent Greene. So, Mr. Chairman, I would like to take a minute or two of time at this moment to talk to the members here about this subject that we discuss at every convention, and without which there can be no progress or improvement, no growth, no gain.

This Convention has grown to be large and to include many people over such a large area, representative people from every part of the State, and many who come in from other states, and we are very glad to have them. No individual alone, certainly not the secretary, can attend to all the details and have everything fixed the way it should be. Not even the group of officers that you elect, can settle all the detail work without your advice, and so at the recent conventions we have taken a few minutes to ask the members for their advice about any part or parts of the Convention, and we sincerely and earnestly want your criticism of anything that is wrong, in order that we may attempt to correct it, and your suggestions about improvements, new steps, what should be done to give us a bigger and a better Convention. And primarily by a bigger and better Convention, we mean a more representative gathering from all over the State, so that the motions passed here, the resolutions adopted, shall represent the ideas of the cheese industry of the State, and not of any group from any part of the State alone. We hope that the program shall contain those subjects that are of interest to the whole State. The cheese exhibit in there, and the commercial exhibits downstairs, should be conducted in ways that will give you the best results and be most useful to you. Of course, the more we undertake the more labor the officers have, but still we want to do everything and anything that will contribute to make this a better Convention. Now, to get down to brass tacks as the boys say, I want to ask you for suggestions on several points. What kind of prizes do you like like for cheese, for the highest scoring cheese? We have been giving you rocking chairs, following the example of Senator Cook who is now departed, who gave us six or eight rocking chairs every year for many years. When he died the Association took up that burden and has been donating these chairs out of its treasury. Now, how about these rocking chairs? Are they good chairs; are you tired of chairs? Is there anybody here that hasn't a first prize rocking chair? Shall we still keep on giving you rocking chairs, what do you say? How many here have won a leather covered rocking chair as a prize? Well, there are quite a few hands up. Are there any other cheese makers who think they would like to win a rocking chair if they could? Well, now there is a man—there are two or three. It is nothing to us what we buy for

your prizes. If you want a tail light for your automobile or a monkey wrench, or anything else, just say so.

A VOICE: Why not automobiles?

MR. SAMMIS: Well, we will see if we can buy them by the dozen and get them cheap. Now, I take it that these prize chairs are probably acceptable and until we hear some direct complaints, we will continue that idea. How many people have received a traveling bag in the past? We have given out I should say about seventy-five traveling bags in the last few years to prize winners. So there must be several cheese makers who won a prize, not here today. This year we gave out about thirty sets of pipe wrenches, six pipe wrenches in a set, and everybody that has seen them likes them. The officers liked them so well, that as soon as they saw them, a number of officers bought them for their own use, and I will add that they paid for them. I will says that these chairs and bags and pipe wrenches and everything you read about in the premium list which is offered by the Association or by the bankers' associations, these things are bought at the factories at wholesale prices. We are buying these traveling bags from the factory that makes the bags with no middleman's price added. We buy these chairs at the factory. We believe in patronizing the home retail stores, but when we buy forty bags at a time, or six or eight chairs at a time, for this Association, we feel we ought to be able to get them at the wholesale prices. The price we to these manufacturers is the exact price that is charged up on the books against the Association. I resent one of the questions one of the members asked me. He asked me how much rake-off I got on the prices of the prizes we bought for the Association. That isn't a very pleasant thing to say, and I might get mad about it, but we will just consider it a mistake and let it go. The Association pays exactly the amount of money that the manufacturers get, and no officers or directors get a rake-off on any of these prizes. I hope that answers the gentleman. I don't see him, but I hope he is here. We like to have your suggestions about more and better prizes. Could we have a single suggestion from anybody in the house as to something they think would make a good prize, or would like to have? Do you want some more of these silver cups? How many of you want silver cups? They have given out something like 100 silver cups, and one man didn't get them all either. Now, has anyone any suggestions to make about the prize list. We earnestly beg and ask you to give us your suggestions. If you don't want to give them here, will you have the kindness to write me a letter at Madison and give me your suggestions? How in the world can we conduct this big business of eight or nine thousand dollars a year to the best advantage unless the members, the stockholders, the owners and the proprietors take a little interest in the thing. Will you do that? Will you write me when you have any kind of suggestions to make?

Now, how about the programs, the things you listen to here, the speeches and talks. We have tried this year to comply with a request made last year that we have a whole half day or more of discussions, by nobody but cheese makers. And you find that feature in the program. Those that were here yesterday took part in the discussions. We always like to hear from our State officials. We want to hear from Professor Jackson of the Dairy School, and the Dairy and Food Commissioner, and the Department of Markets, because they should have important messages for us every year. We want to hear messages that come in from related lines of industry such as Mr. Limpus just gave us, and other things that come up year after year. Now, if you have suggestions about the programs, if you don't like them, tell us, so we can improve them. If you like them, tell the other makers in order that they may come and get the benefits.

In respect to the cheese exhibits, I would like to know if there is anybody here who has any complaints to make about the payments received for his cheese, or the promptness with which they were made. Has anybody failed to get payment for his cheese? I will say that this year before Saturday night the checks will be in the mail for every cheese exhibit that has been sent, for your full payment and prizes, and some of you will find the checks at home when you get there. There may be mistakes in these figures, for we are still human, you know; we all are subject to error. To err is human but to forgive is divine. Suppose you be divine this time, and if you find a mistake write in, and you will get a prompt settlement of the mistake.

It will take only a minute to report that the registration here at Green Bay was 847 members reported just a few minutes ago. I want to give the Green Bay people credit, the Chamber of Commerce, the building officials here, the hotels, everybody, for stretching their facilities to the utmost to take care of this Convention. They have done everything humanly possible in Green Bay to accommodate us. We want to give them full credit. Certainly the officers and all of us go away from here with the utmost good feeling and good wishes for the Green Bay officials for what they have done and our appreciative thanks should certainly be given them in resolutions. With a registration of over 847 people, and with 1462 square feet in this room, I must leave you to draw your own conclusions. The legal seating capacity of this room is 428 according to State officials who have inspected it. The actual number of seats in the room at the beginning of the meeting was 462. Any other information that we can give you about the details of the Convention we will be very glad to give.

CRITICISM OF FOREIGN CHEESE EXHIBITS

By FRED MARTY, Monroe

The criticism, Mr. Chairman, that I will have to offer will be very brief. The Swiss cheese in general I am pleased to state, is of average uniform good quality. A very good lot of Swiss cheeses were in the show. They are an average good lot of Swiss cheeses for this time of the year. On Limburger cheese, the criticism offered would be to the exhibitors if they are here, that in order to score a cheese 100 per cent, the cheese must have reached its maturity. That is, it must be a cured cheese, and I am surprised to find so much cheese on exhibit here in a Limburger class, that is only half cured. Now, I could state and be quite satisfied with myself, that no doubt that particular Limburger cheese that is still curdy in the center and gets nice and pliable on the outside is going to keep right on and cure into a nice piece of cheese, but we can never tell what the partly cured cheese may develop into. Consequently, I just cite that in Limburger cheese, that has gone to the curing stage and stood up and has the body, texture and flavor. Naturally you must give the prize to the cheese that is finished. In the future, for the benefit of the exhibitors present, do not exhibit a half cured cheese. Send in the cured cheese that did its full duty. So much for Limburger.

We are going into the winter months and naturally some of the factories perhaps, are not even running every day. At any rate milk is more apt to be contaminated on account of improper housing facil-

ities. Without a proper milk house, milk more readily becomes contaminated. You find some of the finest Brick cheese on exhibit here. The workmanship on that particular Brick cheese is splendid, but it is beyond science that the maker could apply the raw material he had at hand to better advantage. He got a Brick cheese full of pinholes.

Now, I want to inform the exhibitors of Brick cheese expecting the highest awards. Whatever you do, send no Brick cheese to a convention with the expectation of getting the highest award offered by this Association when it is full of pinholes because pinholes indicate milk that was not properly taken care of, and you have the instrument in your hand to make cheese without pinholes if you go after Mr. Farmer. You have the instrument in your own hands when you try one cheese out of the same batch of which one you have sent to this Convention, and all you have to do is to see whether it has pinholes or not. If it has pinholes, no use sending it to the Convention expecting to get the highest award. You may get the highest award, providing there is no other cheese here, unless it also contained pinholes. That is all I have to say.

"PRESENT DAY TREND AND TENDENCIES IN CHEESE PRODUCTION AND MARKETING"

By J. D. Jones, Jr., Milwaukee

Mr. Chairman, ladies and gentlemen of the Cheese Makers' Convention, I am quite sure when you looked over your program you expected to see a much handsomer man than I, to get up to address you, and I assure you as I am substituting for Mr. J. H. Wheeler, who was to be here today, that you will feel deeply disappointed.

In discussing the topic under consideration this afternoon, it may well be borne in mind that the factor of change is ever present and persistently operative in the affairs of human kind. Old Mother Nature herself furnishes the best example of this indisputable fact. Gigantic mountain ranges are thrown up and almost immediately, utilizing the forces of frost, running water and air currents, a gradual but steady process of disintegration is set up which tends to level the mountain range, and the myriad minute particles of rock and sand resulting from this process may be deposited on some nearby plain or in a remote river valley or in the far distant sea. She may devote a century in growing a splendid forest which may be torn down in a few moments by the hurricane or tornado. In the waste place thus created, another forest may be grown. A slight movement of subterranean rock may devastate a great city. An extensive outflow of molten rock from an awakened volcano may engulf man-made cities, obliterate a countryside and destroy or drive away all forms of life that may be within the area of its spread.

Within the memory of most of you in this audience, the various steps from the tallow candle to the kerosene lamp, to the gas flame

and to the incandescent lamp may be recalled. The ox drawn plow has been supplanted by the tractor; the horse and buggy age has given way to one in which 20,000,000 motor cars are utilized by the American people alone. Only twenty-five years ago, learned men in articles published in leading periodicals demonstrated hypothetically that man could not fly. Had any one been rash enough to predict, during the McKinley-Bryan campaign of 1900, that in the Year of Our Lord 1928 the candidates for the presidency would stand before tiny microphones and address, not a few hundred or a few thousand citizens gathered in a hall but literally millions of American families gathered about magic boxes in their own homes, such a prophet would almost universally have been declared to be crack-brained or worse.

The leather garment has given way to that made from wool; wool has been supplanted in part by cotton fibre. Still again, cotton has been banished in part from the feminine wardrobe and its place has been taken by silk. To such a degree has the demand for the last product grown that the efforts of the humble, industrious silk worm would be futile in meeting it had not the chemist and the industrial plant supplied a synthetic product known as rayon and developed from wood pulp and other cellulose materials.

Fruits and vegetable products, which yesterday were regarded as luxuries, are today found on the table of Mr. Common Man at all seasons of the year. To make this possible, the desert has been made to bloom and fast freight service, employing a horde of refrigerator cars, has been called into being. Mr. Common Man's wife wears silk stockings. When she considers the family food budget, she thinks in terms of proteins, carbohydrates, fats, calories and vitamins. The electric machine has taken the place of the washboard and the vacuum cleaner the broom and the dust pan. Mr. Common Man requires these days, not bread and butter alone, but jam and fruit in season as well. The milk bottle has, in large part, replaced the celebrated schooner, and so we might go on at great length enumerating the changes that have taken place in the fields of production, transportation and distribution to satisfy the ever changing tastes and ever rising standards of living of the American people.

What then can be said of the present day trends and tendencies in cheese production and marketing? At the outset, we must agree that any survey of conditions in the cheese industry must include a view of the great national dairy industry of which the cheese branch is an integral part. In 1920, 23¾ million dairy cows produced 89½ billion pounds of milk. In 1926, 22 1/6 million dairy cows produced 120¾ billion pounds of milk. In other words, in the six-year period, the number of milk giving cows in the United States diminished by 7%, but their total production was increased by 34.7%. This increase in milk production was substantially greater than the increase in population in the United States. It may be noted that this tremendous annual production of fluid milk amounts to approximately 1,000 pounds per capita.

Turning now to the ways in which this tremendous pool of milk is

consumed, we find that whole milk and cream accounts for 46.7% of it, butter 35.9%, ice cream 3.7%, condensed and evaporated milk 3.6%, cheese 3.6% and the remaining 6½% was fed to calves, wasted or made up into minor by-products. During this six-year period, the consumption of milk in its fluid state in the United States increased by 28.6% and the increase in butter consumption during the same period was 21.36%.

Whereas, it is estimated that 20% of the American food dollar was spent for dairy products in 1920, it is believed that 24.8% of the consumer's food dollar was so utilized in 1926. Competent authorities on the diet maintain that, to properly balance the American ration, not less than 30% of our food dollar should be spent for milk and its derivatives. This contention is supported in large measure by Dr. McCollum of John Hopkins University, by the Drs. Mayo of Rochester, Minnesota, by Dr. Sherman of Columbia University, New York City, and by Dr. Herman N. Bundeson, who established an outstanding record as Health Commissioner of the City of Chicago, and who during the last year was President of the American Public Health Association. In 1927, each American used approximately 4.2 pounds of cheese. In the same year, the British people used 8.5 pounds of cheese per capita and each sturdy Swiss ate 26 pounds of this splendid dairy food.

It is estimated that approximately 4½ billion pounds of milk are required each year for cheese making operations in the United States. The dairy map indicates that cheese is produced in commercial quanities in Colorado, Idaho, Illinois, Indiana, Kansas, Maine, Michigan, Minnesota, Montana, Nebraska, Nevada, New York, Oregon, Tennessee, Utah, Washington, Wyoming, Wisconsin and to a small extent in certain districts in the South. Wisconsin of course is the premier cheese making state in the nation with its contribution of approximately 75% of the nation's American or Cheddar cheese and approximately 80% or more of the so-called foreign types.

In this connection, it is somewhat significant that, despite a fairly high tariff wall, there were imported into the United States in 1925 62,400,000 pounds of cheese, in 1926 78,400,000 pounds and in 1927 nearly 80,000,000 pounds of cheese, coming principally from Italy, Switzerland and Canada. The United States is the third largest importing nation on the globe, its tonnage intake being exceeded only by those of Great Britain and Germany.

At the present moment and for several weeks past, the value of milk fat found in cheese has been below the value of milk fat in other dairy products. To such an extent is this true, that considerable quantities of milk in cheese making communities have been diverted into whole milk, sweet cream or butter channels for the time being. The lower levels of current cheese prices as compared with butter may be attributed to the comparatively large stocks of American or Cheddar cheese that were held in cold storage on November 1st. The Federal Government report of cold storage holdings as of November 1st indicates a five-year average of 65,800,000 pounds, the holdings

on November 1, 1927, being 59,000,000 pounds and on November 1, 1928, a trifle over 82,000,000 pounds. It may be noted that the November 1st holdings this year were 13,000,000 pounds higher than those of one year ago, and were approximately 17,000,000 pounds greater than the five-year average.

At this point the observation might well be made that cheese is a most economical source of protein. The price levels of cheese are comparatively low; the price levels of competitive protein foods, namely, meat and eggs, are comparatively high. Why, in the face of this situation, should the American consuming public permit large stocks of cheese to accumulate? The answer to this question will, in all probability, consist of two parts:

1. The American consumer does not fully recognize the economy and health giving attributes of cheese;
2. Too great a spread is, in large part, maintained between primary producer, assembler and the manufacturer on the one hand and the consuming public on the other.

In connection with the first factor, it might be pointed out that the cheese industry as a whole has never yet attempted to promote a greater cheese use by the American people. It is true that several of the larger cheese manufacturers advertise their products extensively and persistently. These efforts without doubt affect favorably the entire industry. At the present moment, the National Cheese Institute is lending financial support to the National Dairy Council, the latter organization being engaged solely with a program of promotion and education to convince the American consuming public that a larger use of milk and its derivatives means health and economy for the American people.

The work of the National Dairy Council is supported by firms, organizations and corporations engaged directly or indirectly in the manufacture, sale or distribution of dairy products. The message of the Dairy Council reaches medical and health workers, school authorities, teachers, extension workers, visiting nurses, club leaders and members and is designed particularly to reach and appeal to the youth of the land. Every one interested in the great five billion dollar dairy industry, be he farmer, factory operator, manufacturer or distributor, is benefited by the work of the Council, and it follows that the entire industry should lend its united support to the Dairy Council program. The members of this organization can readily see that, were the American per capita consumption of cheese increased by only one pound annually, our entire cold storage holdings of 82,000,000 pounds on November 1st would have been absorbed in the channels of consumption and an additional production of 40,000,000 pounds would be required.

One of the significant developments within the cheese industry in the recent past is the growth of the loaf cheese business. It is difficult to say whether the development of so-called loaf cheese has changed somewhat the tastes of the American consumers, or whether

changing consumer requirements and tastes have resulted in the development of the loaf industry. The latter presumption probably carries more weight than the former. Fairly reliable estimates indicate that in excess of 30% of the cheese consumed in the United States is put up in package form. It appears that the prevailing American taste is for a somewhat soft texture and mild flavored product. My own contact with and study of consumer tastes in cheese has convinced me that loaf cheese, because of its convenient form and uniform texture and flavor, will find increasing favor with food buyers. To the individual dairyman, cheese maker and cheese assembler, this question of whether cheese shall be consumed in its natural form or after it has been processed and blended is largely immaterial. The interest of these three groups will be sustained only by a larger use of American made cheese by the American consuming public.

In the light of this fact, I cannot urge too strongly that all of the elements in the industry lend their influence toward the raising of quality standards and to the promotion of larger cheese use. Let, then, the slogan of the entire industry be: "Lower production costs, uniform quality standards and a united effort to educate 120,000,000 consumers, including dairymen and their families, of the economy and splendid health giving qualities of milk and its derivatives—with special emphasis on cheese."

DISCUSSION

MR. JONES: There are one or two matters I wish to discuss with you informally. I noticed here yesterday forenoon you discussed standardizing of milk for cheese making purposes so I will pass over that.

In connection with my remarks concerning educational and promotional work looking to a larger use of cheese, many of you who are interested in the sales end of the cheese business have noted that within the last year the Swiss cheese interests of Switzerland have put on an advertising campaign in this country once a month. Switzerland cheese they have called it, Switzerland cheese they have identified it by stamping that name on the rinds so frequently that hardly a slice can be secured without that name showing. I say eight months during the past year that Switzerland Cheese Organization has carried a full page in colors in the Saturday Evening Post. I don't know what that costs them, but I suppose it is seven or eight thousand dollars a number, at least, and reports are that the results of that advertising campaign in the Uniter States are so satisfactory that they propose to devote their appropriations for the coming year. Now, men, we need to blow our horns just a little bit about our dairy industry and the cheese branch of it. They make good cheese abroad, excellent cheese in Switzerland. The cream of it is shipped to this country, their very best. But I am satisfied that with all of their skill and with all of their natural advantages in Switzerland they produce no better Swiss cheese than we can produce right down in Green County, Wisconsin, and it is a bit of reflection on the industry, and when I say the industry I am starting with the dairy man, and the cheese maker and the cheese dealer and the processer whoever he may be. There is a bit of reflection on us that we stand not entirely idly by, but we do not stand with that degree of activity that should characterize us and permit the foreign competitors to come here with

a product no better than our own skill and seven and a half per cent tariff wall, and take some of our business away that naturally belongs to us.

The next topic that I wish to discuss very briefly is the possibility of large commercial production of cheese in communities other than those I have mentioned. You recall I mentioned a large number of States in my paper where cheese is produced. Within the last few months we have heard a great deal about cheese production possibilities in the South. We have been told about the mild climate down there, and we have been told about the great need for the development of a dairy industry to stabilize economic conditions, and we have been told of the almost year round pastures. We have been told about the moderate cost of dairy barns in the South as compared with the higher cost of barns in this locality, and some enthusiasts have been carried away to such an extent that they feel that the South is the coming promised dairy land. Now, I am not going to say to this group that they can't produce milk in the South, nor will I say that they can't produce cheese down there because I know that they can, but I will venture this opinion that there will never come a time within the next fifty years when we will find an extensive production of cheese south of the Mason and Dixie line, and I base that assertion on the history of the past dairy developments, and which we have noticed in New York, in Ohio, even in Wisconsin, that the city markets at all times have first claim and first call on milk and cream because it will pay more for it. The South at this time is not producing sufficient milk and sweet cream for its cities, and they are growing rapidly. There is an extensive industrial development taking place in the South. Now, I will hazard this opinion, that almost anywhere in the South, if, and when the time develops that there is a small cheese making industry started, and the farmer gets into dairying extensively enough to supply a decent pool of milk of some proportions almost immediately some one of the consuming centers will reach out to that pool and take it away from the cheese industry. That is my conclusion.

Now, the third and last topic that I have to discuss with you very briefly is this, how about the future of Wisconsin, its dairy industry and the very important cheese branches? As indicated to you in my remarks about Green County, you probably suspect that I am a great enthusiast about this State as a dairy producing community, and what I said about Green County I will say with equal enthusiasm for the entire State of Wisconsin, Iowa can grow its tall corn, Nebraska can grow alfalfa, California its citrus fruit—I might tell you a story about California just at this point. There is a chap from Florida met a Californian. He said, now Mr. Man from California, is it true all the stories I hear about California and its growth? Is that true it is growing so fast, and the Californian came back and said, man, you haven't heard the half of it. Why, he said, California is growing so fast that it has resulted in this, every conductor on a transcontinental train going west is carrying a canary with him so he will have company on the way back.

I have said California is noted for its citrus fruit, and I might go on with the various States that are noted for this, that and the other thing. Let's keep this in mind, however, that when you make a survey of Wisconsin, when you take cognizance of its rainfall, the lay of its land, the character of its grasses grown here, the abundant supply of pure cold water, our climate and everything, the setting is complete for the development of one of the greatest dairy industries in the world, and those factors which make that possible are going to be with us for a good many years to come. We are at the top of the heap in the dairy world. We have done great things. In cheese cir-

cles we talk a great deal about high moistures and low fats and undergrading and this and that and the other thing, and we should talk about those things. They are a reflection on this fine industry, they are a reflection on the good dairy cow. Some one has said that if we will only, we men and women engaged in the dairy industry, if we will only turn out as good a product, whether it be butter or cheese or malted milk or whole milk for the city or State in as good a production as the milk is, as it comes from the cow that there will be no cause for complaint. And yet if we may put aside for a few moments the criticism that may be justly made of some of the finer interests of the dairy industries of the State, and if we consider what they are actually doing here in producing quality products, we have very great reason for gratification, men and women. Within the last few days I have had some reports from Commissioner Vint of the Market Department showing the results of examining several millions pounds of cheese from various sections of this State, and more than ninety per cent, it seems to me, ninety-three or four per cent of that cheese graded and scored very high. This was not cheese entered in competition. It was cheese found ordinarily in commercial channels. It was cheese that complied with the requirements, both Federal and State, and one of the most competent cheese men told me of filling out a car of cheese made in one of our north central counties, an adjacent county, selling that at a premium, and it went to a market, and the response that came back from the buyer indicated that it was one of the finest cheese he ever purchased. This in the day of all this talk about high moisture and low fat and what not. So you see, with great pride, men and women, and gratification that despite these caustic remarks, we can reassure ourselves that we have thousands of men engaged in the dairy industry, producing and manufacturing cheese and butter and other milk derivatives that are giving the best that they know how to their work, that they are turning out a wholesome, healthful and legal product upon which this State could well place the stamp of its approval and say, here is what we do in this great State of Wisconsin. And here is our contribution to the food consumers of the nation.

Now, in this connection, without appearing or wishing to offer any thought of criticism, or of what may have been done, as indicated to you before, we have not quite succeeded in capitalizing the good will that should go with this tremendous production of quality dairy products in this state. Only last night a man told me, a man from Racine, John Cunningham of the Wisconsin Agriculturist, of consumers who yet ask for New York cheese, much of which is made in Wisconsin. Coming up on a train a few months ago, I listened in on a conversation between a State official from South Dakota and a cheese buyer from this State, and the State official was asking how it would be possible to develop a cheese industry in South Dakota, and if one were developed would the cheese industry pay the farmer $2.50 a hundred for their milk, as some enthusiastic promoters maintained they might out there, and so the cheese buyer sat down with this State official, and he told him about how many pounds of cheese would be made from a hundred pounds of milk, and he showed him about what the market price of cheese is, and told him what the cost of cheese making is, and figured out that milk, ordinary milk, with the yield of ten pounds of cheese would bring at that time about $2.00 a hundred, but he said, bear this in mind, that the prices that I quoted you are on Wisconsin cheese, and if you make cheese in South Dakota you would have to accept two or three cents a pound less in South Dakota for your cheese than they do in Wisconsin, because you haven't the reputation yet which shows that in parts the great buyers recognize what we have here, but full recognition is not given us yet. There

has been much talk in the last few years, and we say particularly the last few months about State grading of cheese. I am not going into details of recommendations of what I feel ought to be done in this case, except that the best thought in the cheese industry that I know of, the judgment of the men whose opinions I regard as sound, tend to point to this, that we ought to have one grade for Wisconsin cheese, which would be considered our standard, and which has been recommended that our Marketing Department set up a standard grade for Wisconsin cheese, which will include any American cheese going 90 or better, and that trade be eligible to carry the name Wisconsin No. 1; and that eligibility would depend not only on the scoring of the cheese, but its compliance with the legal requirements of the State and of the Federal Government. That is any cheese that was over moisture, any cheese that was under 50 in fat would be ineligible for this classification, and if it scored under 90 it would be ineligible. In other words, the name "Wisconsin" could only be applied to a good grade of merchantable, marketable cheese, and it is my belief that we as an industry should work with our Marketing Department to the end that all cheese made in this State that passed that score and does comply with our legal requirements should have on every Longhorn or Daisy or Twin or Cheddar, as the case may be, a distinctive remark, perhaps an outline of the State of Wisconsin, and the name plainly printed thereon, "Wisconsin No. 1 cheese" so that the buyer or consumer, be he from San Francisco, Maine or Florida, would come to know that mark and that name, and associate it with uniformly high quality, and any cheese that did not come up to that specification should not be eligible to carry the name Wisconsin under any conditions, let it go ungraded if you will, let it be marked ungraded or off grade or No. 2, but under no circumstances should the name Wisconsin be permitted to be associated with any cheese that is not of good, sound, merchantable quality and legal in every way, and it is my candid opinion, men and women, that if it is brought about, that it will be a material contribution to establish for this same product in this State the standing that it richly deserves. I think that is about all I have to say. You have been very patient and very attentive, and I am going to tell you just one more story in conclusion. It seems that down in the State of New York, in one of the upstate counties, where the Republicans always rolled up a large majority, in a recent campaign the County Chairman called 100 workers together one evening to make preparations for the campaign. And after they all gathered in the hall, the chairman called the meeting to order and then stated his purpose and said, now, men, another campaign is at hand and of course we want to win with the Grand Old Party, and so forth and so forth. Now, before we organize, he said, will every Republican in the hall stand up, and 99 men stood up, all except one, Bill Smith over in the corner. He sat down and kept his seat, and after the 99 sat down the Chairman said, now, Bill, you realize that this is a Republican gathering. Do I understand that you are not a Republican? And Bill said, that is right, I am a Democrat. Well, the Chairman says somewhat sarcastic, now, Bill, you have our sympathy, of course you have the right to your views, but many people you know are misguided, would you mind telling us why you are a Democrat. Bill rose up and said, "Well, you see, Mr. Chairman, it is like this, my grandfather was a Democrat and my father was a Democrat, and I presume that is why I am a Democrat." Well, the Chairman said, "Following out that line of reasoning if your grandfather had been a horse thief and your father had been a horse thief then what would you be?" "Well," Bill said, "In that case I reckon I would be a Republican."

ELECTION OF OFFICERS

MR. HUBERT: Mr. Chairman, the nominating committee appointed yesterday, wishes to present to the Convention the following names: P. H. Kasper and E. B. Whiting for President.

MR. FLYNN: Mr. Chairman, I nominate Mr. Albert Graf of Zachow.

MR. BRUHN: I move, Mr. President, that the nominations be closed. (Motion seconded and carried)

THE CHAIRMAN: Has everybody voted; if so, I declare the ballot closed. You will now hear the results of the vote.

MR. SAMMIS: The total number of votes cast was 262, necessary to a choice, 132, of which 1 ballot is blank, 1 ballot is defective, 1 ballot is cast for Ed. Winter, 1 ballot for J. H. Peters, 47 ballots for Graf, 72 ballots for Whiting, and 139 for Kasper. Mr. Kasper has received more than the required number.

MR. OSCAR DAMROW: Mr. Chairman, as there is an absolute majority, I move you that the informal ballot be declared formal, and Mr. Kasper declared elected. (Motion seconded)

THE CHAIRMAN: It has been moved and seconded that the informal ballot be declared formal, and Mr. Kasper elected President. (Motion carried)

MR. HUBERT: The nominating committee delegated Mr. Rath to make the announcement.

MR. RATH: Mr. Chairman and cheese makers, we as members of the nominating committee, suggest that we nominate Mr. John Peters and Mr. Graf for Vice Presidents.

THE CHAIRMAN: Mr. Peters and Mr. Graf are now nominated for Vice Presidents. (Motion made and seconded that the nominations be closed)

THE CHAIRMAN: Has everybody voted; if so, I declare the ballots closed.

MR. SAMMIS: The result of the ballots for Vice President, 254 votes cast. Necessary to a choice 128, of which Mr. Schwantes received 2, Al Smith 3, Mr. Graf 122, and Mr. Peters 127. Necessary to a choice 128. It appears necessary to take another ballot unless somebody has some other suggestion to make. (Thereupon another ballot was ordered)

THE CHAIRMAN: Has everybody voted; if so, I declare the ballot closed.

MR. SAMMIS: The result of the ballot for Vice President: number of votes cast 264. Necessary to a choice 133, of which Mr. Peters received 74 and Mr. Graf 190.

MR. MALCZEWSKI: Mr. President, ladies and gentlemen: First I want to compliment you on the election. I think it was very well done. In the first place you have on it one of the greatest cheese makers in Wisconsin, Mr. Kasper, and then you have elected a young fellow, Mr. Graf, for Vice President. And we all know Mr. Kasper is pretty old to handle the work next year, and so we hope Mr. Graf will come up here and they won't have to have orders like they did this year, but he will come here and run this thing as it should be run. Now, as a member of the nominating committee it has fallen upon me to nominate the secretary. We all know that that is a big job. As there were no presentations before this committee we again placed in nomination Professor Sammis. We think that he is a man that has the time, and although we don't all agree with some of his views of handling things, yet we have to admit that he does the work. I don't believe there is any cheese maker, although there may be a lot

of them that are capable, among this one thousand cheese makers, but they haven't the time, and, therefore, I nominate Professor Sammis. (Motion seconded)

THE CHAIRMAN: Are there any other nominations?

MR. MALCZEWSKI: I move that the nominations be closed. (Motion seconded and carried)

MR. ADERHOLD: Mr. Chairman, I move that the Chairman be instructed to cast a unanimous ballot for Mr. Sammis for Secretary. (Motion seconded)

MR. BRUHN: Mr. Chairman, before you do that you have to suspend the rules. I move that we suspend the rules and then cast the ballot.

MR. ADERHOLD: I admit the amendment, I just wanted to give you a chance to get up and say something.

MR. PETERS: The motion was made and seconded that we suspend the rules, and instruct the Chairman to cast unanimous ballot of this Association for Secretary Sammis for the ensuing year. All in favor say aye. (Motion carried)

THE CHAIRMAN: The next in order is the election of Treasurer.

MR. HUBERT: There were no names presented to your nominating committee, and the nominating committee decided to nominate our present treasurer. We believe he has given you good satisfaction. You haven't heard a kick against him, and for that reason I nominate Mr. Weyer. (Motion seconded)

MR. BRUHN: Mr. Chairman, I move the nominations be closed. (Motion seconded and carried)

MR. BRUHN: Mr. President, I move that the rules be suspended and that the Secretary cast the unanimous ballot of this Association for the election of Mr. Weyer as treasurer. (Motion seconded)

THE PRESIDENT: It is moved and seconded that the rules be suspended and the Secretary cast the unanimous ballot for Mr. Weyer as treasurer. (Motion carried)

THE CHAIRMAN: The next will be the election of one director.

MR. MALCZEWSKI: As a member of the committee, I want to present a few names for director. While we were in the committee room there was another name presented to us, and we felt the man was also capable so we placed his name. The present director is Arnold Schmidt, and the new name, as proposed, is F. A. Flynn. I don't know Mr. Flynn, myself, although I happen to know Mr. Schmidt. I wish they would arise so that we would know them. (Motion made and seconded that the nominations be closed, carried)

MR. SAMMIS: The result of the ballot for director, 212 total votes cast, necessary to choice 107, of which Mr. Vint received 1, Mr. A. C. Flint received 1, Mr. Lindablom 1, Mr. Griggs, 1, Mr. Flynn 100, and Mr. Schmidt received 108, necessary to a choice of 107.

REPORT OF RESOLUTIONS COMMITTEE

MR. GEMPELER: Mr. Chairman, the report of the Resolutions Committee is as follows:

(1) Whereas, during the past year, this Association, the dairy industry, the State of Wisconsin and the Nation have suffered the loss by death of the Honorable J. Q. Emery, for many years Dairy and Food Commissioner of Wisconsin, and active in every good word and work for the best interests of all phases of dairying,

THEREFORE, *be it resolved:* That in honor to his memory and as our expression of the loss we have all sustained, this resolution is ordered to be spread upon the minutes of this convention, and a copy sent to his family, expressing our respect and sympathy.

MR. MALCZEWSKI: I move for its adoption. (Motion seconded and carried)

(2) *Resolved*: That the thanks of this Association be extended to the Green Bay Association of Commerce, to the Columbus Community Club for their building and facilities, to the Green Bay hotels and private homes who have housed our members, to the manufacturers and dealers of dairy supplies, cheese dealers, officers of the Association, speakers who have favored us at our convention and all others who have contributed toward making this convention a success.

MR. MALCZEWSKI: I move for its adoption. (Motion seconded and carried)

(3) *Resolved*: That this Association go on record as opposing the practice of standardizing milk for the making of American cheese. (This resolution was tabled by vote, after discussion)

(4) *Resolved*: That this Association, in order to do greater honor to our best prize winning cheese makers, adopts the following rules:

1. A special class of honor cheese makers shall be created from our membership during the past twelve years.

2. Every cheese maker who, by the records in the secretary's office, is shown to have received either three first sweepstake prizes on American cheese, or three first prizes on Swiss cheese, or three first prizes on Brick cheese, or three first prizes on Limburger cheese shall be placed in this honor class.

3. Members of this class shall hereafter compete only for such prizes as may be offered for this honor class.

MR. MALCZEWSKI: I move for its adoption. (Motion seconded)

MR. HUBERT: Mr. President, I think as one of your cheese judges, it is an honor for any man to be placed in that class. I wouldn't care if I were a cheese maker if I never got another prize if I were put in that class I think it would be the highest honor this Convention could confer on me.

THE CHAIRMAN: You have heard that resolution, all those in favor of that resolution say aye. (Motion carried)

THE CHAIRMAN: Are there any other resolutions offered? (None were offered)

MR. FLYNN: Mr. Chairman, don't you vote on where you are going to hold your next Convention?

MR. SAMMIS: Mr. President, at this time it seems fitting to stop for a moment, and introduce to you Mr. A. H. Ohl, who began making cheese fifty years ago in our State.

Mr. President, we might also be glad for a moment to meet the man who has been more active than any other in bringing this Convention to Green Bay, Mr. Malia, the Secretary of the Association of Commerce. I think you would all like to see him.

MR. MALIA: Mr. Chairman, ladies and gentlemen of the Convention: Two years ago we sought to bring you people to this city. We failed. One year ago we repeated that invitation. We succeeded. I want to say today we are happier than we were when you made that decision. It is a pleasure, we all join in, in having you people in this city.

I was particularly pleased to see the great crowds attending the business sessions. I talked with the exhibitors downstairs, and with the exception of one, I believe, they were glad to come to Green Bay. If I am not in error, I think the registration is practically double of what your registration was last year in Milwaukee.

The City of Green Bay, in itself, the County of Brown in its entirety, and the cheese section of northeastern Wisconsin in its entirety, is delighted and gratified that you people in your Convention came to this section of our State. We are going to hope that some time, in the not far distant future, you people shall come again to the

City of Green Bay, for your Convention, and we assure you we shall be as hospitable then as we have endeavored to be this year. I thank you.

MR. MALCZEWSKI: Mr. President, a year ago I stood before this Convention and asked you to come to Green Bay. I spoke at that time in behalf of the cheese makers of the northeast. If you remember, at that time there was only a handful of us cheese makers from the northeast Wisconsin up there at Milwaukee, and I asked the boys of the south to vote with us, and show their sentiment and come to Green Bay, and I want to say that the majority of them showed their clean American ideals, and I told them at that time that a year from now we want to go back to Milwaukee. And although we know that there is a majority of us here, we ask you that you make it unanimous for the next year for Milwaukee. I thank you.

MR. SAMMIS: Mr. President, at this moment I would like to introduce Mr. Grieb of Milwaukee who will speak to you. Mr. Grieb is the manager of the Milwaukee Auditorium.

MR. GRIEB: Mr. Chairman, ladies and gentlemen: Milwaukee has filed its formal application and invitation to this honorable society to hold its next meeting and exhibition in Milwaukee. Unfortunately, our convention manager is elsewhere, and I, therefore, am acting as a sort of an investigator up here in his place. There isn't any doubt that Milwaukee can afford you every needed facility, and I came up here to make observations as to what we need to do next year or the subsequent year to make you like Milwaukee still better. I candidly admit that I have learned something, and I saw some things that I would not want to repeat, having in mind the success of the big work you are interested in.

It is getting rather late, I don't want to detain you. You know all about Milwaukee, excepting this, that the hotel facilities have been amplified. We are spending about ten thousand dollars in the Milwaukee Auditorium in the small halls which you use, so that in every respect they will be much superior to what they have ever been. I thank you for the privilege of addressing you.

MR. ADERHOLD: Mr. Chairman, this is a State Association getting some support from the State. It is not an American Cheese Makers' Association necessarily; it should include the makers of all kinds of cheese, and we have had them there, and we have had a big contingent of Swiss making fraternity in Green County. They have been a loyal part of this Association, and they have made their exhibits regularly, and have done yodelings for us a lot of times, and they are a long way from Green Bay. There are a lot of cheese factories west of Madison making American cheese.

Since this organization met a year ago the northeastern cheese makers in Wisconsin have organized an organization of their own, and had a nice convention only forty miles from here. And so I think, all things considered, we surely ought to go back to Milwaukee next year. I make a motion that we hold our next convention in Milwaukee. (Motion seconded and carried)

ACTIVITIES DURING THE PAST YEAR AND A GLIMPSE INTO THE FUTURE

By C. J. KREMER, Dairy and Food Commissioner

A year ago I had the honor to address you at your convention in Milwaukee. I then expressed some of the thoughts, the theories and the principles, which guide me in the discharge of the duties of the Dairy and Food Commissioner. I also voiced the hopes I had and the benefits I expected, from a close, well organized cooperation between your association and my department.

Now that a year has passed, we may very well ask ourselves, "What have we done to bring about the results we hoped for?" We may even get personal without becoming offensive. You have a right to ask me, "What has your department done?" And, I think, I may, without being impertinent ask you, "What have you done towards elevating your industry?"

Efforts for Cleaner Milk

Looking back, I find that the Dairy and Food Department has untiringly worked through its inspectors in the field as well as its office force to secure for you a clean flow of milk. I told you a year ago that I believed clean, wholesome milk to be the first essential if the cheese industry is to prosper, not only to maintain its present situation, but to develop. I have not changed my mind on that. I take it that you are all to some extent familiar with the plan we follow. We collect sediment discs from the last portions of milk in cans offered by patrons. During the past year we have collected over 60,000 such sediment discs in about 1800 establishments. Over 6,000 discs that indicated uncleanliness were sent to producers whose milk yielded them. Many letters were written to establishments regarding the character of milk that was being received and several thousand letters were written to patrons whose milk was found to be exceptionally clean. I believe good results were obtained and that there is now less dirty milk than formerly.

Testing Service Offered

Many complaints were received at the office from competing concerns that competitors do not accurately read the test and possibly over read the test for a short time as a means for stealing patrons. Also, there was considerable doubt expressed on the part of producers of milk whether the milk is accurately tested in cheese factories where it is being delivered. Many went as far as to question the correctness of tests made. To afford cheese makers a means of making sure their tests are correct and to help such cheese makers deal with patrons who may be inclined to skim or water their milk, the serv-

ice of the Dairy and Food Laboratory was offered. This laboratory is ready to test all jointly prepared samples of milk, where both the producer and the cheese maker certify that it is a fair sample of the milk, if the sample is forwarded under proper conditions to the Laboratory. As to overreading tests for patrons to secure their good will and as to underreading such tests to be able to show a high yield, the department has made earnest efforts to show this practice up in its proper light. The man who underreads the test holds himself out as a liar and when he overreads the test of one patron, he of necessity, must underread the tests of other patrons to come out even. He who deliberately underreads the test plaintly steals from the patron.

Standardization

The problem of standardization bothered me. Over and over again we were asked "Is Standardization permitted under the law? Does it pay?" On the theory that say five pounds of butter fat may be removed from 1,000 pounds of milk and sold at 50 or 60 cents a pound, while the same butter fat in cheese brings only from 20 to 24 cents a pound, it appears to the superficial observer that it pays to standardize. However, that may mislead. The question whether it pays or not cannot be answered categorically yes or no. Little data was available to show the results of standardization in cheese factories widely differing in equipment, capacity, knowledge and skill of operators and composition of milk received. We therefore decided to make experiments in actually working cheese factories and get definite results. This would give to cheese makers a working basis, a guide as to what must be done and what may be expected from standardization. It would go far beyond the scope of this talk to go into details. The experiments are described in a report which I rendered to the Governor and which will be printed, and, when printed will be available for distribution upon application. I quote from the last chapter of that part of the report:

"Standardization of milk for cheese making requires an adjustment of the fat to the casein ratio of milk so that for each part of milk fat there will not be more than .79 of a part of casein, where the fat loss in the whey is normal and the milk tests 3.3 or slightly higher. To standardize with safety requires accurate fat and casein testing of the milk almost daily. It requires that the fat loss in the whey be carefully watched and controlled because if excessive fat is lost there the required percentage of fat will not be obtained in the cheese.

"It is apparent from the experiments that standardization introduces an additional step in the manufacture of cheese, which step must be carefully controlled and may be unwise under present cheese factory conditions."

Undesirable Features of Standardization

In a factory with one cheese maker and perhaps a helper, if standardization is practiced, it will result in the cheese maker having to

give up the opportunity of examining the quality of the milk delivered because of the lack of time and in turning that important work over to his helper unless a helper can be trained to take care of standardization, and the extra time required for that work may be just sufficient to permit the milk to become overripe, which will result in hurrying the process of cheese making to such an extent as to damage the cheese either by incorporating excessive moisture or losing too much fat in the whey or both. The cost of extra labor or additional fuel cost may well enter into the cost of production. The loss of time through standardization together with putting a part of the milk through a separator and thus incorporating some air may well increase troubles such as floating curd. In large factories where the cheese maker would reject all milk that was not properly cooled on the farm and delivered to the factory in very good condition, and where cheese makers have sufficient time at their command to do additional work, and where the volume of milk is large, and the fat test high enough, standardization might be made to pay.

"The results indicate that by removing a portion of the fat from the milk to be made into the cheese the yield is materially decreased, the quality appears to be adversely affected and the increased hazard and labor may well completely offset the gain obtained by removing a small portion of fat."

Cheese Mineral

There was considerable agitation among cheese makers on account of activities to promote the sale of a so-called cheese mineral. Sweeping claims were made by both salesmen who solicited offers and by advertisements in the public press. Whether or not these claims were based upon facts, the department did not know, and when we were informed that the mineral was to be demonstrated in a factory, we welcomed the opportunity and Mr. A. T. Bruhn was delegated to act as an observer, collect samples of milk used, whey and whey-cream, whey drippings and finished cheese for analysis. The observation was made on ten days between April 3 and April 14. The mineral was added on alternate days beginning on April 3, then on April 5, April 9, April 11, April 13. No mineral was added on April 4, April 6, April 10, April 12 and April 14. This experiment is also fully treated in the report referred to, the closing paragraph of which is as follows:

"On the basis of this experiment made, and considering the analysis shown by the milk to be made into cheese, the cheese and the by-products, the conclusion appears to be inevitable that the use of cheese mineral did not increase the yield, but that any difference in the yield may be accounted for by the differences in the cheese producing constituents in the milk, the bacterial contents thereof and the mechanical methods followed."

In the course of our work a factory was reported where gassy milk had prevailed and the claim was made that by the use of a cheese

mineral, the evil effects of this gassy milk were avoided. This opportunity to observe the effect of cheese mineral on gassy milk was welcomed and inspectors hastened to the particular cheese factory. Upon arriving there, however, it was found that the milk did not come in gassy or abnormal in any way, and we were unable to get any reliable data there. Inspectors for the department were instructed to inquire of cheese makers who had used the mineral for their opinions and a truthful statement of their experience. This was not done with the idea to "get" any one in particular, but with the sole thought of obtaining the whole truth and sifting claims and rumors from actual experiences. In other words, we sought the truth, the whole truth and nothing but the truth. If cheese mineral has a beneficial influence on the cheese in which it is used, I would be very glad indeed to be able to tell the cheese makers that it has. On the other hand, if no beneficial effects on cheese can be traced to the mineral, then its use should be discouraged for cheese makers may rely upon it to neutralize bad conditions existing in their milk and they may become lax in in their own individual efforts.

High Moisture Cheese and a Reasonable Outlet for it

A serious situation appeared to confront the industry last winter. Much high moisture cheese had been made and was found in warehouses. The law would not permit the Dairy and Food Commissioner to close his eyes and have it sold in violation of the statute; and, that a great industry such as the cheese industry should be obliged to go into the "bootlegging business" to dispose of a wholesome product seemed unreasonable. I therefore made efforts to obtain an outlet for this cheese through which it might be converted into legal products. I think I succeeded in doing so and want to tell you now that if you have made high moisture cheese inadvertently, notify the Dairy and Food Department and we will endeavor to assist you out of your difficulty.

Qualifications of Cheese Makers

You will remember that a year ago in Milwaukee tentative rules relating to the qualifications necessary to obtain a cheese maker's license were distributed. I was somewhat disappointed at not getting much more comment on these rules than I did get. I did not see my way clear to put them into effect, partially because the law is not quite as clear on the subject as it ought to be, and partially because the funds of the department were limited so that it was questionable whether the proposed examinations could be held and paid for. I want you to know, however, that I neither forgot nor abandoned these proposed regulations, but hope that they can be put into force and effect in the not too distant future.

Permits

During the year we cancelled quite a number of outstanding cheese makers' permits where conditions were not so that they could be licensed, and have "tightened up" on issuing new permits. We are issuing permits valid in a certain designated cheese factory only, and when the holder of such a permit discontinues working in that factory his permit becomes automatically void. I feel certain that this has kept some irresponsible and perhaps undesirable persons from obtaining cheese makers' permits and has not proven a hardship upon anyone competent and willing to do his share in and for the cheese industry.

A Fair Question

In the foregoing I have given an account to you of what we did as far as it can be done in the limited time available. Now I want to ask you and I would like to have you answer my question candidly, honestly and frankly, "What have you as an organization done during the past year for the advancement of the industry? What has the individual cheese maker and what has the association accomplished?" I shall not undertake to answer that question for you, nor even subgest how in my opinion it might very well be answered. I note there is to be a discussion after my talk and would be very much pleased to hear you take credit for and even boast of your accomplishments during the past year. Have you made progress during the past year?

The Future

The second part of my talk is, "A glimpse into the future." In a mere glimpse we cannot go into details. We cannot describe to a nicety just what we see. Perhaps my hope for the future of the cheese industry would better describe what I have to say than a glimpse.

Better Milk—Better Makers—Better Factories

I hope for cheese makers who thoroughly understand all elements entering into cheese, and are willing to put their sincerest and best efforts into the making of good cheese.

I hope to see less and less men in the factories who regard making cheese merely as an unavoidable, disagreeable daily drudge, a hateful chore, to be partly shirked and avoided whenever possible.

I hope for better milk, milk properly taken care of until it gets into factory vats. I hope for better equipped, more efficient factories in which it will be a pleasure to work and in which cheese can be made at its best.

Package Cheese

There is a feverish activity going on in many establishments to devise new ways for cheese to be used in the American dietary or, in

fact, the dietary of all Nations. Cheese is taken as it leaves your factories blended, seasoned and mixed to a uniformity. It is made up in attractive packages suitable for even the smallest household. Its keeping quality is more permanent and on that account I believe it finds its way in many households frequently, where it often was but seldom used. I hope all cheese leaves the factory better and better every month and becomes more and more acceptable to people who like plain food and who like good old-fashioned cheese that has been a standby for generations.

With better milk, with more competent cheese makers, with better cheese factories, with more uniform products, we cannot fail to develop the cheese industry as one of the outstanding industries of our food supply.

DISCUSSION

MR. FLYNN: Mr. Chairman, I know there are a lot of cheese makers here today that would like to ask this question, but I think they feel like I do, that they don't care much about it.

Is there any law in the State of Wisconsin that will protect us against the big corporations coming in and taking our milk away from us, and offering unfair competition, as high as 85 cents a hundred more for milk? I can take you in a territory 200 square miles, and there isn't a cheese factory there. I am asking in the name of the cheese makers of Wisconsin, is there any law that will forbid you to give those people a permit to come in and take our business away from us. We worked hard to build up this State in the dairy industry, and now, that we have built it up why do we have to turn it over to the millionaires? That is the question I want answered.

You stated before if a man had high moisture cheese and low fat you could take his permit away from him. Did you ever stop to figure the reputation of that poor cheese maker? When I used to go to bed at night I didn't know I would have a pound of milk to make cheese with, after investing all that money in the plant. Is that fair? I, for one, say no, it isn't fair. I am asking you if there is any law that you don't have to give people permits to come into our territory and reap the harvest of our hard labor.

MR. KREMER: I am asked is there any law by which I could prevent big corporations from coming into the State and taking the livelihood of the little man, the little cheese maker, away. I must confes to you men and women that there is no such law on the Statute books, and I must also confess to you that you are not alone in that situation. I must confess to you, as much as I dislike it, the day of the small business man appears to be—I was going to say gone. That does not only hold good as to cheese makers or to the dairy industry, it holds good as to the grocery stores, it holds good as to the drug stores, it holds good all along the lines. But I think the cheese makers and the small business men are in a way to blame for this situation themselves in that they have been fighting each other, and not fighting the common enemy. If you devise laws, if laws can be devised to protect you, come to the Wisconsin Legislature this winter, and I am quite sure these laws will be enacted. The laws will have to be made right. In one of the States, I don't know where it was, Pennsylvania or not, they had a law aiming at these big chains. There they took it to the Supreme Court of the United States, which declared it promptly unconstitutional, but in opposition to these big

concerns there can be only a step taken, one offensive and defensive league of all of you, then you may be able to accomplish something. That is the only remedy that I know. But knowing where the difficulty is, and knowing a remedy that can be applied, are two different things.

DEVELOPMENTS IN CHEESE MARKETING

By J. W. MOORE, Wisconsin Dept. of Marketing, Madison

MR. MOORE: Mr. Chairman and members of the Wisconsin Cheese Makers' Association, ladies and gentlemen: I know it is late and there is still something good coming and I am not going to keep you. The reading of scores will follow what I have to say. Those who wish to leave the room are surely at liberty at this late hour.

But regarding our work with the Department of Markets, many of you know there are six men working that have been known as supervisers and graders, and during the last few months after those men have worked for years as supervising graders we find we have no record of what is being done with the cheese in Wisconsin. We have no record showing what these men actually find in the territory that they have covered that can be referred to as data showing what is actually going on in the marketing of cheese.

Since sometime in July these men have been working together in warehouses and inspection of work that is wholly done by the dealer. These men have sent in reports that are uniform. The idea was to get them uniform from each man to give us a picture of what is going on in Wisconsin regarding the marketing and marking of cheese. In thirteen weeks, just a quarter of a year beginning the 30th of July and ending the 27th of October, some men working entirely in American cheese, and some men putting in a small part of their time in American cheese but a major part of their time with foreign cheese, have reported about as follows: Six men, four men putting in all their time and two men a small portion of their time, report that they have inspected 967 lots of cheese. Those 967 lots of cheese consisted of 5,473,000 pounds or about eight and two-tenths% of the cheese made during that period in the state. You can see that these six men actually saw about one-twelfth of the cheese manufactured in Wisconsin at that time. You can see that is a mighty poor check on all the cheese that is made, especially if these men as supervising graders, see one-twelfth of the cheese that is graded, and eleven-twelfths is done when they are not there. So you can't very well take very much responsibility for that work that is carried out when we were not there.

Out of this five million and a half pounds of cheese, 53,980 pounds or .98 per cent, less than one per cent, were marked fancy by the grader. In fact, this is graded in the warehouse, not by the maker. Now, 5,164,000 pounds or 94.3 per cent of all this cheese was marked number one; 255,582 pounds or 4.7 per cent of this cheese was marked under grade; 429,817 pounds or 7.8 per cent was claimed by our in-

spectors to be misgraded. Two thousand, nine hundred sixty-seven lots of cheese were examined of which 421 lots were claimed to be misgraded. If we told you these men inspected 8.2 per cent of the cheese inspected in this quarter of a year, taking in a part of the time that poor cheese was made over the State, beginning with the 30th of July, inspecting cheese from the 30th of July to the 27th of October, would mean about eight or ten days that cheese was made in July. In July and August a great deal of the cheese was poor, and when you have a high percentage of the cheese poor you have a higher percentage of the misgrading than you do at any other time. But consider that these four months were representative of the year, that these four months averaged about as the whole year would average in yield or in make, we find that for the whole year the same ratio 2,616,000 pounds of cheese would have been marked fancy. Two hundred fifty-one million, seven hundred and seventy-one thousand pounds would have been marked No. 1. Twelve million, four hundred fifty-nine thousand pounds marked under grade, and if these figures are computed for the year, and we add the amount of cheese that was marked fancy to the amount of cheese that should have been marked fancy, during five weeks of the time that these men were doing this work, (to make a record of all cheese that should have been marked fancy that was not fancy) would give us these figures. Had the cheese been marked according to the judgment of these men for the whole year, 28,714,000 pounds, or 10.80 per cent of the cheese produced during the year in Wisconsin should have been marked fancy. It was not a fancy quality, and if there is such a thing as a differential for fancy that should be considered 204,910,000 pounds, or 73.12 per cent was of the No. 1 quality according to the judgment of these men. Thirty-three million, three hundred seventy-five thousand or 12.5 just one eighth was marked under grade. Now, what do these figures mean? If there was a system of grading whereby this cheese had to all be graded due to its quality, according to our standards set forth in distinguishing fancy from No. 1 or from under grade, the amount of under grade would advance because every maker knew that under grade would not bring as much as No. 1 cheese, even though a No. 1 should be there, but on the under grade many times he would see that the amount of under grade cheese would be reduced, the amount of No. 1 probably would increase because the maker who got into the No. 1 grade instead of the under grade, and the amount of fancy would increase if it were put on the market in the manner that people would pay for quality.

Now, the question arises, and it has been stated many times in Wisconsin by dealers and assemblers of cheese, and probably makers, that quality will not count in the marketing of cheese. That a differential cannot be realized in quality. If that isn't right, it is different than any other commodity manufactured or handled in the United States to any extent. For instance, with meats, I would like to compare meat with cheese because it is in competition with meat. If you educate people to use well advertised cheese it will reduce to a certain

extent probably the amount of meat they will use. Cheese is highly perishable and so is meat. What is the raw material? How do they compare with the two? The raw material in the meat is the stock on foot. You will have certain meats that are prepared probably for the market, like butchering hogs that weigh 250 pounds that demand the highest price. You will have packers because they are used for shipment, one purpose, and their meats are cheaper. You will have calf for veal and throw outs which is less than half of the cost of the prime calf. You will have cows outgrown their usefulness as cows and they go on the market. There is no man who grows live stock that will object to selling a calf that is a throw out if they know it, that commands about five cents when calves are twelve. No farmer will hope to get across with that. The same thing with calves. They are put in a grade, and that grade follows all the way through with the marketing of that product. If you start with a packer in hogs, which commands about two-thirds in value of a good prime butcher, no man hopes to get the same price for a packer as for the butcher because it isn't so desirable in the hands of the consumer. The flavor isn't there, the texture, the desirability and like. And like we talk about texture in cheese. If the cow goes on the market as a canner for four cents a pound when a good prime steer brings 12 to 16 cents, that cow goes to the consumer, and that cow has outgrown her usefulness for a dairy cow, but she is put in the channels of the trade as a cheap meat. Quality counts. Now, in preparing your meat for our use, the calf that no one if they saw it alive would want to eat it, is put into a field where its quality isn't identified, and different cheap cuts of meat, different beef and veal and pork are all put in classes by themselves. Summer sausage is made of cheaper classes of meat. Meats are prepared to stand high temperatures and people accept it as such. The man that is producing the meat knows that he can't realize as much out of a poor article as he can out of a good, and unlike cheese they say no matter what your quality or cost of price is, a fair price is all that is due the farmer. The farmer hasn't the variation in the raw material that we have in meat. There are certain conditions which would make it impossible to produce a prime article out of all meats that are offered on the market, but with cheese the raw material is nearly 100 per cent fat to make a good cheese or butter. If a man is tampering with it, it does not spoil it. There is the milk coming from the cow, if there is no dust gets in it and the farmer doesn't contaminate it, and he handles it the way it should be that will make a cheese above the No. 1, if that is manufactured in a reasonable manner. It is unlike meat. But with cheese, I think the pitiful part is this, around 12 per cent of the cheese should be put in an under grade quality. The most of that was made from as good milk as can be produced by Mr. Farmer. Probably one farmer out of fifty will deliver poor milk and that will spoil the whole batch of cheese, spoil it by putting in a poor milk. As long as our makers are in competition, whatever it is, do not let poor milk spoil the chances of the man that produces good milk from getting paid for his efforts.

The man that chooses to be unfair when they are marketing cheese is shown to try to get the factory away from another assembler of cheese by telling him we can accept the high moisture or low fat cheese. We are not afraid of the Department; the other man is too critical; we are not so critical as long as the men can get away with that, as choosing the line he would like to follow.

I believe if the people who are concerned in cheese today, and in formulating a practical way that is more constructive than the one we have, would just make an example of the meat industry, how it is handled, how quality counts from one end to the other. If it costs less to produce an article, the consumer pays less for that article. If that article happens to be cheap, and it is prepared in a manner that will stand abuse, it will cost the consumer less, but it is giving him a convenience. Now, I believe if we would just study the way meat is handled and feel this way about it, if the tables were turned and cheese was handled in the manner that cheese is, we would find that the consumption of cheese would be greatly increased because of the desirability of putting it on the market in such a manner that the consumer can tell what he wants and get it every time. As the time is very short, we all want to hear the scores and get a piece of that fine cheese. Outside of this, that the people that should be concerned in a constructive program for a cheese industry, people feel as though there is some danger of the other States interfering with us, putting their cheese in competition with ours, I might say there is no danger if they concern themselves about quality. We have no competition of the best of quality, but the poor mediocre of cheese finds all kinds of competition. It is the same with men working in a ditch. There is all kinds of competition, but up at the top there is lots of room and it is the same with the quality of cheese. Up at the top there is lots of room. I saw an order a short time ago after talking with a certain dealer who told me a price differential never will come—I saw an order for several thousand boxes of cured cheese at fourteen cents above the price for cured cheese. What does that mean? The price to a chain store concern for thousands of boxes of cheese was about 55 cents over the current price paid by the assembler of cheese at that time. Wouldn't it pay the farmer and the producer of cheese to prepare their product in a manner to demand that extra advantage in value, better than half? I am afraid the thing we are liable to believe is this, that the common price paid for all classes of cheese should be common, that the preparing of that cheese in different classes to command different prices is all absorbed in the preparation. In my judgment it is not true. The American people will pay for price in quality. The only thing you have got to do is put an honest product before them so they can select what they want. The difference in cheese, the difference in honest cheese, as we have made it here, cheese made from whole milk, is very little, the difference in food value in cheese, I should say, the food value of 100 pounds of under grade cheese is about the same as that of fancy cheese, but the difference between the two is the desirability the different people are

willing to spend for the desirability and getting what they like and the food value is there. It is only for our getting after the cheese, honestly marked and being in the hands of the consumers so that he will know that he will be guided as to the quality he wants. There is lots more to be said along that line, what should be done when grading and what probably will be done with grading, but as our time is short, I will say that we should consider this a problem of the farmer and maker of cheese. The other man is in a position, the next man that takes the cheese, to have an influence over the price he pays for the cheese and what he gets for it. The manufacturer of cheese has got to take what they give him if he continues along the line he is going. Why not arrange your product in a manner that quality can be selected from that? And you have your reward in making good cheese. I thank you.

DISCUSSION

MR. SAMPE: I have one question to ask Mr. Moore. The statement he made, that the gentleman got fifteen cents more for the cheese than the market price. Now, the answer to this is, that at every convention for four years we have been asking for quality cheese, and he told us the answer right there. I think I made some of that cheese if I am not mistaken. I didn't get the fifteen cents.

MR. HUBERT: I would like to answer that gentleman. A year ago our cheese average was 24½. I sold a car of fancy in 1927, June cheese, and I got 28 cents, for them. I cured them, took the shrinkage and everything else. I didn't make fourteen per cent nor did this gentleman that he is referring to make the fourteen cents. He is basing them on the present market, not on the price that was paid last year.

MR. SAMPE: No, I don't think you got that question. What we have been discussing for the last few days is quality cheese, and I am not saying you got the money there. I know when you pay more money for good cheese. We make it because we have been making it, and that is the answer to the thing. It shows the man got more money for that cheese, we happen to know the buyer. He won't buy anything he can't depend upon. That man is just buying that kind of cheese, and if you pay us for making good cheese we will make it. I am talking as a cheese maker.

MR. MOORE: I believe Mr. Sampe asked me to answer that question, and I will answer it this way. I saw the order for the cheese and the order called for 34 cents, when the market was 22 or 54.5 per cent over the price being paid for current cheese at that time, and I do say this there is an added quality, there is shrinkage, and there is taking care of the cheese, and the investment and insurance and all that should be taken out, but that is all absorbed. That is a fact, that was paid, and I am not arguing if the difference was reasonable or not, but that is what was done and there will be more of it done.

MR. WINDER: We have been talking about this problem of marketing and grading for a number of years. I have talked to you upon this same subject on several occasions. I was one of those fellows known as "the tax eaters of the State." I was looking at the problem from the angle of the State employee, employed by the Department of Markets, living upon the charity, if you may put it, upon the State. Today, the last two years, the last year and a half I might say, I have been living upon the beneficence of a couple of good friends, cheese

dealers, and I am looking at it from that angle and I might say while sitting in the back of the hall the situation appeals to me very much this way, and I can describe it by telling a little story that I picked up in a magazine years ago, and which just came to my mind. There were two old people living on a farm in a back country part of one of the States, a little railroad one-horse affair, up there today and back tomorrow, going by the door. They had a dog that would chase the train every time it went by. Mary was watching one evening, and Hiram was sitting there smoking his pipe. And after the dog had winded himself chasing the train, she says, "Hiram, do you think that dog will ever catch that train?" He says, "I don't know, Mary, I allow he may catch it, but what I would like to know is what he is going to do when he does catch it." Now, we have caught the train, we have got this grading proposition on our hands, the State Department has it and they are bound to pay out of the State funds a certain amount of money each year and are trying to do something to better the situation for the marketing of cheese. Now, this thing has been cussed and discussed, and there have been a lot of sharp things said. Enmities have been created that may not die out during the lifetime of some of those that have been subject to those remarks. Much has been attributed to the mistakes and indiscretions of the members of the department in the past, and undoubtedly there were many mistakes made. It was something new, it was a pioneer proposition, but we are going on year after year and we are spending money. We can't get any unity of thought on the matter. You can talk with cheese dealers and they seem to feel the way they are running it, is just right. We are making lots of good cheese but we are making altogether too much poor cheese, and they are all beating around, wondering what we can do but when it comes to a show down on this grading proposition, there is the sticker. They don't want to do without it, that is if you can believe them when you talk to them individually, and yet it is a mighty hard problem for any State official to get any place where he can get the backing of all concerned, of the dealers, of the cooperative organizations assembling cheese. The trouble with things is we look at it just from our own little narrow viewpoint as it pertains to our business. That seems to be the big trouble, and we are not looking at it from the standpoint of the welfare and future of the cheese business. Now, I say this, it is a case that we should do one thing or the other, get together on this thing, make use of it, or else let's do away with it. I am not sure that it would be a pretty good move on the part of Commissioner Vint to say, we will consider this proposition until the first of the year. Commissioner Vint can't force anything of that kind upon you. It must be a volunteer proposition. You have either got to come in on something or agree to stay out on something. Commissioner Vint will say at the end of the year if we can't get at some agreeable conclusion, I shall consider it my duty to abolish the whole thing, and I should say if Commissioner Vint would make that move I would say there would be considerable cry from the greater part of the State asking that it not be abolished. I am talking from the standpoint of an employee of a company buying cheese in the State, and we feel that something must be done differently than it has been done in the past.

I very much enjoyed Mr. Jones' talk today. It was wonderful, and it is true what he says about the quality of our cheese and what we have done for Wisconsin. But when we talk about a quality proposition, from a standpoint of comparison of cheese in the State of Wisconsin with that made in other sections of the United States, we know we are making the finest cheese in Wisconsin that is made any place in the world, but any man handling cheese in the State of Wisconsin

knows too, there is too large a percentage of it that doesn't measure up to that high standard, and that is the thing that all complain about. It is not asking that we make a better cheese, it is just that we get something to work, some system whereby we can have more of the real fancy quality and less of the poor, but we are not going to get any place so long as we look at it to see what it will put into our pockets at the end of this month or next month. Differentials are just as possible today as proper grading is under the present circumstances. Until cheese is placed accurately in grades we can look for no differentials. I may be wrong, but in my own mind I am firmly convinced that could we work out this system whereby the cheese could be graded, every particular cheese in the State placed in its proper grade, and the dealer relieved of that responsibility, that work done by men who have no interest in the potential profits, I am sure it would result in a very short time in a differential in price. It works out that way in Canada, and it would work out that way here.

Now, I am going on too long, but think of the thing from this standpoint. We are one of the greatest industries in the State, the largest branch of the dairy industry, and we have thrust on us, or we have accepted a condition, trying to grade cheese. We go along year after year finding fault and not getting any place. Now, there is intelligence enough among the cheese makers and farmers and cheese buyers in this state to decide upon something. Unite upon a plan and accept it and give it a chance, or else say we don't want it and be done with it, and save this money that is going out of the taxpayer's funds. That is the only thing that I have to offer, and I am not concerned as to how it is done, whether it is grading at the factory or grading at the warehouse, whether it is a voluntary proposition by you people to come in and ask for it, or whether the Commissioner decided that he is going to swing the big stick and put it across. Results can be obtained, but not until we get on to a good sound working basis whereby the cheese is going to be graded by an individual who is not influenced by the potential profits that may obtain in that product.

FAULTS SEEN IN AMERICAN CHEESE EXHIBITS

By W. F. HUBERT, of Sheboygan

MR. HUBERT: Mr. Chairman, ladies and gentlemen: We are a little late but we are going to feed you some good cheese as quick as I get out of here. I made it a point to write what I had to say to you, as I wanted to get it right.

Mr. Chairman, ladies and gentlemen: Each year your secretary asks the judges to tell you the faults we find in the cheese exhibits.

This year we had 363 exhibits of American Cheese. We scored 199 out of these 363 with a score of 92.00 and above. Twenty-three were scored under 88.00. Out of these exhibits there were 15 from outside the State of Wisconsin. Three of these out of state exhibits scored better than 92.00; 4 under 88.00. The proportion of these exhibits does not compare with our Wisconsin Exhibits.

Out of the 19 that scored under 88.00, a large proportion of same were in Class One, and these cheese were of a weak texture and by holding same, developed off flavors, were very mushy and a few of them were acidy.

Taken as a whole our Wisconsin Exhibit showed up very well. However, there is still chance for improvement. The highest awards in the sweepstakes and classes 1, 2, 3, and 4 follow:

SWEEPSTAKES ON CLASSES 1-2-3-4

No.	Name and Residence	Score
192	H. G. Wiskow, Clintonville	98.50
253	F. E. Gotter, Thorp	98.00
167	Ray Larsen, Shawano	97.75

Class 1

192	H. G. Wiskow, Clintonville	98.55
167	Ray Larsen, Shawano	97.70
184	Ben Heningsen, Mishicot	97.25
114	F. E. Gotter, Thorp	96.75

Class 2

253	F. E. Gotter, Thorp	98.00
291	John Babler, Campbellsport	97.50
242	Emil Sonnenburg, Cato	97.00
213	H. J. Loehr, Calvary	96.75

Class 3

308	Roy J. Hrabik, Luxemburg	96.50
309	Geo. Ertle, West De Pere	96.00
369	John F. Kalk, Cleveland	95.75
352	W. H. Krumrey, Gillett	95.38

Class 4

402	M. H. Parsons, Dorchester	93.50
414	A. W. Schulte, Cumberland	93.00
407	J. F. Tesmer, Colby	92.87
410	Roland E. Scheel, Spencer	92.50

Out of these 363 exhibits of American Cheese the six leading counties were as follows: Sheboygan, 42 entries; Marathon, 38 entries; Manitowoc, 35; Brown, 25; Fond du Lac, 24; Oconto, 23.

It is rather a surprise to the judges that Brown County ranks fourth with the convention right here at home. They should have ranked first.

Referring to Class 4 we discovered in scoring the Colby Type of these that we had 18 entries. Out of these 18 entries 7 entries were given complimentary scores by the judges on account of not being in the right class. They were not of Colby texture but all were of the regular American texture. However, most of these 7 entries were very high scoring cheese, and if they had been entered into their respective classes, no doubt they would have been among the high scores.

No doubt it would be interesting for you to know something about cheese from out of Wisconsin which were exhibited at this convention. Two of same came from the State of Tennessee. One of these was given a score of 87.00, and the following remarks were made by the judges: mixed curd, weak and mushy. The other one was entered from Henry, Tennessee, and was given a score of 93.75—was very green, but good curd. Mississippi had one entry, this being entered from Olive Branch—was given a score of 91.50. However, it showed some openings and was a trifle weak. One entry was from Blacksburg, Virginia. This was given a score of 89.00—texture, weak, and some flavor. One entry from Gardnerville, Nevada—giv-

en a score of 87.50. This cheese had a very close boring and was of good texture; however, it had developed a very rank flavor. Two entries came from Ozark, Missouri by the same party. One was given a score of 84.00, being of very poor finish, weak texture, and bitter flavor. The other was given a score of 89.50, having weak texture and some gas. Two entries by the same party from Brooking, South Dakota. One was given a score of 93.50, which was a very good cheese. The other was given a score of 88.50, being uneven in shape and weak in texture. Three entries from Michigan. One from Manistique was given a score of 90.50, texture weak and some gas. One from Stephenson, Michigan was given a score of 93.00—good cheese, and one from Daggett, Michigan was given a score of 91.75—texture trifle weak. Three entries from Minnesota; one from Cannon Falls, given a score of 89.50—texture open and weak. One from Pine Island—given a score of 91.00, very tough, curdy, but good texture. Another one from Cannon Falls was given a score of 87.00, very weak and off flavor.

Most of these cheese from out of the state had a very good finish and would be a credit to any cheese maker as to finish. The same holds good with our Wisconsin Exhibits. While most of the exhibitors took pains to have a nice appearing exhibit, there were still a few which had room for improvement.

CUTTING OF PRIZE CHEESE

The first prize American and Swiss cheese were cut up and distributed to the members.

1928 WISCONSIN CHEESE MAKERS' CONVENTION LEADING PRIZE WINNERS

Class 5—Drum Swiss Cheese

No.	Name—Residence	Score
501	Ernest Herrmann, Neillsville	95.00
507	Fred Geissbuhler, Darlington	94.50
506	Eugene Wirz, Darlington	94.00
510	John Badertscher, Rice Lake	93.67

Class 6—Block Swiss Cheese

No.	Name—Residence	Score
604	Fred Geissbuhler, Darlington	91.50
603	Walter Lauper, Winslow, Ill.	89.50
602	Gottlieb Werren, Blue Mounds	89.25
601	Robert Scheidegger, Klevenville	89.00

Class 7—Limburger Cheese

No.	Name—Residence	Score
701	Joseph Konrad, Monroe	96.00
712	Werner Blum, Monroe	95.00
708	Herman Burkhardt, Belleville	94.00
710	John Minnig, Monticello	93.50

Class 8—Brick Cheese

No.	Name—Residence	Score
826	Oswald Schneider, Appleton	94.00
813	Wm. Feutz, Burnett	93.50
822	Ernest Schlaginhaufen, Belleville	93.00
801	Fred Krummenacher, Oshkosh	92.75

Swiss Cheese Industry Movie Shown

By courtesy of the Green County Cheese Day Committee of Monroe and Director Jacob Gempeler, Jr., Monroe, a movie film was shown to the convention during the session, presenting scenes from the dairy farms, the cheese factories, the warehouses, and other sections of Wisconsin's Foreign Type Cheese Industry, and also showing a portion of the displays and exhibits included in the Green County Cheese Day Celebration, which occurred on October 2, 1928, at Monroe. This contribution to the Convention attractions from the Foreign Type Cheese Industry of southern Wisconsin was greatly appreciated by the members present.

Cheese Makers Convention Dance

Under the direction of Director E. B. Whiting as general chairman of the Dance Committee, the convention members and their ladies were invited to dance at the Northland Hotel Crystal Ball Room. Excellent music was furnished, there was a good attendance and everybody had a fine time. The dance committee reported $55 net proceeds as the result of their enterprise, which was turned into the convention treasury as a donation.

Official Dinner at Northland Hotel

As usual, the officers, and many of the active convention workers gathered around the dinner table at the Northland Hotel, for their annual session of discussion as to ways and means to make improvements for next year. Twenty-five were present, and spent over two hours discussing possibilities and plans for the future. Twenty-five dollars was collected and turned into the treasury to pay the expense of the meeting.

Green Bay Chamber of Commerce Entertain Officers

By courtesy of the Green Bay Chamber of Commerce, and the various Service Clubs of the city, the association officers were entertained at dinner at the Northland Hotel on Wednesday noon. Secretary J. L. Sammis introduced the convention representatives to the assembly and spoke briefly to the gathering.

1928 ATTENDANCE BY COUNTIES

Brown	109	Portage	6
Manitowoc	88	Green	5
Shawano	85	Chippewa	4
Sheboygan	70	Jefferson	4
Oconto	59	Waushara	4
Outagamie	52	Ozaukee	4
Kewaunee	49	Waukesha	3
Waupaca	45	Lafayette	3
Calumet	39	St. Croix	3
Door	36	Price	2
Winnebago	35	Polk	2
Fond du Lac	26	Racine	2
Marathon	20	Sauk	2
Dane	20	Washington	2
Marinette	17	Crawford	2
Richland	17	Eau Claire	2
Milwaukee	16	Columbia	2
Clark	10	Adams	1
Dodge	10	Dunn	1
Langlade	10	Florence	1
Lincoln	9	Jackson	1
Wood	8	Rusk	1
Iowa	8	Bayfield	1
Grant	7		

1928 EXHIBITS BY COUNTIES

Sheboygan	42	Lincoln	6
Marathon	38	Waupaca	5
Manitowoc	35	Wood	5
Brown	25	Columbia	4
Fond du Lac	24	Jefferson	4
Oconto	23	Polk	4
Dodge	20	St. Croix	4
Green	20	Langlade	3
Kewaunee	19	Ozaukee	3
Calumet	18	Crawford	2
Shawano	16	Forest	2
Door	11	Washington	2
Clark	10	Chippewa	1
Richland	10	Grant	1
Dane	9	Green Lake	1
Iowa	9	Portage	1
Marinette	9	Price	1
Outagamie	9	Rusk	1
Lafayette	8	Sauk	1
Barron	7	Sawyer	1
Winnebago	7	Taylor	1

LEADING PRIZE WINNERS, WISCONSIN CHEESE MAKERS' CONVENTIONS

No.	Year	Source Annual Rep.	AMERICAN	
6	1898	page 176	J. K. Powell, New Lisbon	96.00
7	1899	page 139	Wm. Zwicky, Van Dyne	99.00
8	1900	page 129	P. H. Kasper, Nicholson	98.25
9	1901	page 138	R. A. Murray, Boaz	99.25
10	1902	page 115	J. S. Kapelka, Cobb	99.00
11	1903	page 129	F. A. Viergutz, Chippewa Falls	99.00
12	1904	page 118	Edward Lepley, West Lima	96.75
13	1905	page 158	P. H. Frawley, Soldiers Grove	99.25
14	1906	page 30	C. A. Bremmer, Plain	99.50
15	1907	page 33	Otis Kidd, Sabin	99.00
16	1908	page 72	J. L. Zehren, Marion, Ill.	97.33
17	1909	N Y P R	M. M. Leick, Greenleaf, Wis.	96.00
18	1909	N Y P R	J. A. Van Epps, Fremont	96.82
19	1911	page 94	A. C. Werth, Appleton	97.50
20	1912	page 106	Math. Meyer, Stanley	97.50
21	1913	page 32	W. J. Schoepke, Clintonville	96.66
22	1914	page 66	Ed Termaat, Plymouth	97.00
23	1915	page 108	A. C. Werth, Appleton	97.37
24	1916	page 55	E. B. Williams, Richland Center	97.50
25	1917	List	Jule Boulanger, Brussels	97.70
26	1918	page 205	H. A. Kalk, Sheboygan Falls	99.20
27	1919	page 113	A. C. Werth, Appleton	99.25
28	1920	page 111	C. H. Schneider, Heller	99.50
29	1921	page 151*	O. F. Gruenke, Granton	99.50
30	1922	page 124*	P. H. Kasper, Bear Creek	99.50
31	1923	page 106*	P. H. Kasper, Bear Creek	99.25
32	1924	page 133*	Paul Kleinschmidt, Merrill	99.55
33	1924	page 99*	P. H. Kasper, Bear Creek	99.00
34	1925	page 87*	Ad. E. Duescher, Pulcifer	99.00
35	1926	page 95*	Edw. F. Winter, Gillett	98.50
36	1927	page	P. H. Kasper, Bear Creek	98.75
37	1928	page	H. G. Wiskow, Clintonville	98.50

No.	Year	Source Annual Rep.	SWISS	
11	1903	page 129	Alex Schaller, Mt. Horeb	94.00
12	1904	page 118	Jacob Marty, Brodhead	97.00
13	1905	page 158	Jacob Marty, Brodhead	96.00
14	1906	page 30	Jos. Ackerman, Monroe	98.00
15	1907	page 33	Jos. Ackerman, Monroe	95.50
16	1908	page 72	John Rothlisberger, Juda	98.12
17	1909	N Y P R	Alex. Schaller, Barneveld	95.48
18	1909	N Y P R	J. Emmenegger, South Wayne	97.00
19	1911	page 94	Gottl. Zumbrunnen, South Wayne	98.00
20	1912	page 106	Fred Beer, Monroe	96.50
21	1913	page 32	Alex Hoerburger, Gratiot	97.50
22	1914	page 66	Fred Emmenegger, Ramona	95.00
23	1915	page 108	Fred Schlappi, South Wayne	95.75
24	1916	page 55	R. Emmenegger, Gratiot	96.75
25	1917	List	Alex Hoerburger, Darlington	96.70
26	1918	page 205	Willy Ernst, Darlington	97.00
27	1919	page 113	Aug. Ruesch, Gratiot	97.50
28	1920	page 111	John Hubacher, Darlington	98.75

No.	Year	Source Annual Rep.	DRUM SWISS	
29	1921	page 151*	John Hubacher, Darlington	98.50
30	1922	page 124*	John Rechsteiner, Blanchardville	97.00
31	1923	page 106*	Val Zibung, Argyle	98.00
32	1924	page 133*	Joe Kuster, Monroe	98.00
33	1924	page 99*	Eugene Wirz, Darlington	96.00
34	1925	page 87*	Reinhart Miller, Clarno	97.00
35	1926	page 95*	Otto Badertscher, Rice Lake	96.00
36	1927	page	Alfred Buhlmann, Monroe	95.50
37	1928	page	Ernest Herrmann, Neillsville	95.00

17—1909—N. Y. P. R.—From New York Produce Review, Jan. 13, 1909, pp. 481-504.
18—1909—N. Y. P. R.—From New York Produce Review, Oct. 27, 1909, page 23.
*Printed in Annual Report of the following year's convention.

BLOCK SWISS

Year		
1921	Gottlieb Werren, Blue Mounds	96.50
1922	Gottfr. Vogel, Brodhead	96.00
1923	Gottl. Werren, Blue Mounds	96.00
1924	Gottl. Werren, Blue Mounds	96.50
1924	Robt. Scheidegger, Mt. Horeb	94.50
1925	Jos. Lauber, Barneveld	93.00
1926	John Anderegg, Juda	98.00
1927	Fred Geissbuhler, Darlington	95.00
1928	Fred Geissbuhler, Darlington	91.50

LIMBURGER

Year		
1921	John Minnig, Monticello	99.00
1922	A. L. Sager, Belleville	97.00
1923	Anton Motz, Monroe	99.00
1924	R. B. Lengacher, Monticello	97.50
1924	R. B. Lengacher, Monticello	96.50
1925	Paul Wyssbrod, Monticello	97.50
1926	Martin Kammer, Basco	97.37
1927	Eman. Hess, Belleville	97.00
1928	Jos. Konrad, Monroe	96.00

BRICK

Year		
1921	Jake Balsiger, Pardeeville	98.00
1922	Henry Egli, Dalton	96.00
1923	A. Zumbach, Darlington	97.50
1924	Fred Feutz, Fall River	96.00
1924	John Feutz, Oconomowoc	96.00
1925	K. Zuberbuhler, Horicon	97.00
1926	O. Schneider, Appleton	97.50
1927	O. Schneider, Appleton	99.00
1928	O. Schneider, Appleton	94.00

HIGHEST HONOR CHEESE MAKERS' ROLL, UNDER RULES OF 1928

P. H. KASPER, Bear Creek, American Cheese, 1900, 1922, 1923, 1924, 1927.
GOTTLIEB WERREN, Blue Mounds, Block Swiss, 1921, 1923, Jan. 1924.
OSWALD SCHNEIDER, Appleton, Brick Cheese, 1911, 1915, 1919, 1926, 1927, 1928.

1927 WISCONSIN CHEESE MAKERS' CONVENTION EXHIBITS

CLASS 1. AMERICAN CHEESE, ANY STYLE, MADE BEFORE SEPTEMBER 1, 1927

		Prizes	Score	Check
101	P. H. Kasper, Bear Creek, R. 2	101, 105, 106, 120, 128, 178, 182, 487A, 509	98.75	$48.75
102	Thomas S. Martin, Navarino		91.00	3.20
103	Henry Sylvester, Gillett	468A, 626	95.75	34.94
104				
105	C. H. Schneider, Merrill, R. 8		96.00	7.85
106	Jacob Strub, Plymouth		95.00	4.88
107	W. H. Krumrey, Gillett, R. 1	628	94.75	4.52
108	M. E. Meisner, New Richmond	478	94.50	11.47
109	A. A. Miller, Elmwood		91.25	2.80
110	Henry Oleson, Highland		95.00	7.94
111	J. J. Voith, Junction City	472A	89.00	6.37
112	W. F. Reetz, Ringle	163	93.50	7.25
113	Carl Schuelke, Cobb		95.75	8.51
114	Wm. Hildebrand, New London	301	95.75	8.20
115	Wm. J. Hemb, Timothy, R. 1		93.00	6.84
116	A. M. Thiel, Sherwood		90.50	2.73
117	Edw. F. Winter, Gillett	469A, 627	95.50	10.34
118	August Brandt		91.75	7.07
119	Fred E. Miller, Tigerton		93.50	4.25
120	Albert J. Schauf, Ableman	481	91.00	8.00
121	Floyd Delp, Avoca		91.50	3.15
122	Eugene E. Lyons, Pulaski	483B	96.75	12.87
123	Chas. Mullen, Highland	537	91.00	8.20
124	Harvey Holmes, Cobb		95.25	8.05
125	Theo. Undesser, Cobb		90.75	6.41
126	A. C. Ipsen, Cobb		95.50	8.40
127	August Schvette, Marathon	½–462A	96.00	8.30
128	M. H. Parsons, Dorchester		94.50	4.67
129	Walter Reisner, Bonduel	484A	95.75	9.94
130	Jacob Strub, Plymouth COMP		95.00	7.16
131	Truman H. Gorder, Platteville	461	94.00	7.46
133	John F. Lensmire, Marathon	½–462A	96.00	8.30
134	H. A. Sutherland, Cazenovia		no score	8.42
135	W. E. Breseman, Granton	137, 438	94.00	10.69
136	Ned Granger, Soldiers Grove	453	93.75	10.67
137	Roy J. Hrabik, Luxemburg, R. 3		96.50	5.25
138	Arthur Bartelt, Oshkosh	489A	93.50	7.25
139	Richard Daun, Hilbert		90.00	2.78
140	Frank N. Zehren, Coleman	464A	96.25	11.15
141	E. H. Peters, Sugar Bush		94.75	8.09
142	Henry Rux, Wausau	147	94.50	7.92
143	Herman W. Behrens, Plymouth		93.50	6.25
144	Ben. J. Hrabig, Luxemburg	445, 488	96.75	14.36
145	Wm. J. Meyer, Fredonia, R. 2		93.50	5.52
146	A. J. Schmidt, Sheboygan Falls, R. 2	172, 244, 421, 662, 669, 679	97.00	3.54
147	M. J. Mayer, Random Lake	161, 673	94.00	16.62
148	A. J. Schmidt, Sheboygan Falls, R. 2 COMP		95.25	2.18
149	A. W. Hahn, Plymouth	179, 670	95.75	7.20
150	Oscar H. Stock, Manitowoc, R. 3	452A, 517, 541, 672	95.75	21.47
151	Wm. Brux, South Kaukauna		94.00	6.73
152	John Young, Granton	437	95.75	15.47
153	Albert J. Reiss, Random Lake		91.00	4.94
154	Walter R. Schmidt, Sheboygan Falls		91.00	2.02
155	G. H. Scannell, Campbellsport	263	90.75	7.10
156	Arthur W. Stolzman, New Holstein		91.00	1.02
157	Erwin O. Wunsch, Cleveland		92.25	5.47
158	Ben Hiningsen, Mishicot, R. 2	275	90.50	6.73
159	Chas. J. Mulloy, De Pere, R. 3	427A	95.75	15.00
160	Wm. J. Hemb, Timothy, R. 1 COMP		93.75	5.36
161	J. H. Hecker, Gardnerville		93.00	5.55
162	Joseph Herold, Maribel, R. 1 COMP		94.00	6.63
163	Henry Nolte, Cleveland	451A, 458A, 490, 514, 671, 680	96.00	25.57
164	Edwin Adermann, Elkhart Lake		91.50	.97
165	Frank L. Schneider, Appleton, R. 2	180, 467A	96.00	10.51
166	Edwin Adermann, Elkhart Lake COMP		93.00	1.92

		Prizes	Score	Check
167	G. M. Matznick, Kiel	½–374, ½–387	91.00	$9.26
168	Herman Hoesly, Antigo, R. 1		95.25	4.67
169	Jacob Strub, Plymouth COMP		91.00	1.92
170	Ralph C. Matznick, Kiel	½–374, ½–387	91.00	7.99
171	L. J. Breher, Sheboygan Falls	153	95.00	9.88
172	Stanley W. Koten, Sheboygan		91.50	.97
173	A. J. Schmidt, Sheboygan Falls, R. 2 COMP		94.50	2.18
174	Arthur Truttschel, Sheboygan Falls		89.00	4.63
175	John Hinz, Cleveland		88.50	3.89
176	Chas. A. Bennin, St. Cloud	160, 278A, 386	94.00	18.46
177	Arthur H. Berth, Sheboygan, R. 2		94.00	6.46
178	Edwin Adermann, Elkhart Lake, COMP		94.00	4.30
179	Arnold Zumbach, Apple River, Ill. COMP		90.00	7.67
180	L. B. Kohlman, St. Cloud	280	92.00	6.62
181	Ed Minniecheske, Clintonville	103	97.25	8.63
182	Edward F. Peck, Coleman, R. 1		93.50	4.25
183	Andy Bjornberg, Fox Lake, R. 3	141, 565	91.00	9.20
184	L. E. Kopitzke, Marion, R. 1	500, 508	94.25	8.06
185	Fred Stapel, Edgar	103A, 104, 422, 461A	97.00	17.95
186	H. G. Wiskow, Clintonville	102, 122, 130, 511, 547	97.75	13.53
187	John H. Peters, Plymouth	1/3–380	93.75	9.83
188	Edgar E. Peters, Plymouth		94.25	5.31
189	Otto E. Luther, Marshfield	1/3–463A	95.75	6.42
190	Julius Wessel, Plymouth, R. 3		94.75	5.46
191	Paul E. Ott, Wausau, R. 2		91.00	17.03
192	Fred W. Nussbaumer, Waldo		90.00	4.05
193	John Bahler, Campbellsport, R. 1	134, 265, 426A	95.50	15.83
194	John Bahler, Campbellsport, R. 1 COMP		94.00	4.36
195	Joseph Bergs, Edgar		93.00	3.53
196	A. F. Schwartz, Merrill	145, ½–245	96.00	8.04
197	O. W. Friemund, Thorp	295, 549	91.00	6.94
198	Leon A. Laack, Brillion	431, 435	94.00	12.20
199	Gottlieb Schubiger, Juneau		91.50	4.10
1901	John Reynolds, Kewaunee	too late		4.10
1902	Ed Decker, Thorp		94.75	4.36
1903	Oscar F. Olson, Osceola	too late		7.67

CLASS 2. AMERICAN CHEESE, ANY STYLE, MADE DURING SEPTEMBER OR OCTOBER, 1927

		Prizes	Score	Check
201	Wm. H. Nelson, Tavera	½–480A	91.00	$2.73
202	Oscar H. Stock, Manitowoc	453A, 518, 542	94.50	17.86
203	John F. Lensmire, Marathon		95.25	3.30
204	Edwin Adermann, Elkhart Lake		91.00	3.38
205	Pirl Burrington, Thorp	552	93.50	4.79
206	Wm. F. Preuss, Mosling		93.00	7.32
207	Alvin Ebel, Two Rivers	524, 528	93.00	11.52
208	Wm. F. Meyer, Fredonia, R. 2		92.00	5.25
209	Stanley W. Koten, Sheboygan		90.50	.73
210	Frank J. Sleger, Stangelville		91.00	5.44
211	A. W. Hahn, Plymouth		96.00	7.67
212	Arthur W. Stolzman, New Holstein		91.00	2.00
213	John Hinz, Cleveland		91.00	4.71
214	Wm. J. Hemb, Timothy, R. 1		90.50	4.44
215	B. L. Splitt, Stratford		90.50	7.40
216	L. J. Breher, Sheboygan Falls	154	91.00	7.71
217	Ben Heningsen, Mishicot	274	92.00	8.45
218	Erwin O. Wunsch, Cleveland		91.00	4.44
219	S. E. Goetschel, Cleveland	515	95.25	7.48
220	Walter R. Schmidt, Sheboygan Falls, R. 1	1/3–380	94.00	8.15
221	Albert J. Reiss, Random Lake		87.00	3.63
222	Henry Nolte, Cleveland COMP		91.75	5.63
223	Frank J. Koenig, Luxemburg		93.25	6.93
224	Henry Nolte, Cleveland	¼–455A, ½–516	94.00	11.06
225	Earl Schneider, Denmark R. 2	428	95.00	11.60
226	Wm. J. Zutz, New Holstein, R. 1	155	90.00	8.43
227				
228	Edwin Danke, Appleton		92.25	6.65
229	Bernard Herold, Maribel, R. 1		91.00	5.71
230	Ralph C. Matznick, Kiel	376	87.50	8.63
231	C. E. Goodrich, Lone Rock		92.00	5.98
232	G. M. Matznick, Kiel	375	90.00	11.90
233	Louis K. Korth, Antigo	½–181	94.25	4.88
234	Ray Rego, Cazenovia	271, 476A, 481A	94.00	41.63
235	H. J. Howe, Nye		93.00	7.07
236	John Greiner, Appleton, R. 1		91.00	3.44
237	Frank Casper, Marshfield, R. 2	491A	95.00	9.11

		Prizes	Score	Check
238	Adolph Gutherz, Edmund		94.00	$6.31
239	Paul C. Kleinschmidt, Merrill, R. 4	469	93.50	8.79
240	P. H. Kasper, Bear Creek, R. 2		96.00	8.43
241	Frank G. Piekarz, Thorp	553	91.25	5.09
242	Earl B. Whiting, Gillett	631	93.00	5.26
243	Wm. Fiedler, Athens, R. 3		95.00	5.60
244	A. C. Magadanz, New London, R. 4		91.75	6.91
245	Frank J. Sleger, Stangelville COMP		90.00	5.36
246	August Brandt, Kewaunee	170	93.50	6.53
247	Peter H. Martens, Stanley		92.75	4.13
248	Lorenz Krueger, Alma Center	444	91.00	6.44
249	C. H. Schneider, Merrill	109, 111, 177	97.50	9.75
250	Truman H. Gorder, Platteville	171	95.50	8.87
251	W. H. Krumrey, Gillett	630	94.75	28.21
252	M. M. Schaetzl, Edgar, R. 5		92.75	5.39
253	Wm. Brux, So. Kaukauna		90.50	3.17
254	Mary Schaetzl, Athens, R. 3		92.75	4.39
255	Aug Schuette, Marathon		91.00	3.44
256	John F. Hoeft, Rice Lake		91.75	3.59
257	G. W. Thielke, Lakewood		93.75	5.67
258	Frank N. Zehren, Coleman		92.75	4.15
259	A. A. Miller, Elmwood		89.50	1.34
260	Emil Sonnenburg, Cato			
		110, 112, 425, 450A, 457A, ½–489	96.25	34.78
261	Arthur Johns, Luxemburg	110A, 371, 446, ½–489	96.25	16.78
262	Anton P. Loehr, Calvary, R. 1		91.75	6.40
263	Edw. F. Winter, Gillett	632	93.00	5.52
264	Roland E. Larson, Highland, R. 3	536	94.00	18.61
265	Edward T. Peck, Coleman, R. 1	465A	94.00	8.55
266	Henry Rux, Wausau		93.25	4.66
267	M. H. Parsons, Dorchester, R. 1		90.50	3.17
268	Oswald Reitz, Calvary	260, 377	94.00	20.31
269	Chas. J. Mulloy, De Pere, R. 3		92.00	7.53
270	Mike Dahler, Darlington, R. 2		90.50	6.46
271	A. M. Thiel, Sherwood	433, 435A	91.75	12.10
272	Ed. Minnecheske, Clintonville		94.00	8.61
273	Ward Markham, Hill Point	480	92.25	9.92
274	C. C. Kraak, Twin Bluffs		91.25	5.87
275	G. E. Strassburg, Randolph	566, 571, 654, 658	91.00	13.44
276	Edgar Lepley, Viola		90.50	6.97
277	F. E. Gotter, Thorp		93.75	4.93
278	M. Karl, Thorp		91.00	3.44
279	Roy J. Hrabik, Luxemburg, R. 3		95.50	5.61
280	F. C. Westphal, Randolph		89.50	2.36
281	John F. Lensmire, Marathon COMP		95.50	16.68
282	E. H. Peters, Sugar Bush		94.00	8.37
283	Fred W. Nussbaumer, Waldo		89.00	1.85
284	John P. Wry, Thorp		90.75	3.31
285	Wm. J. Zutz, New Holstein, R. 1 COMP		89.50	4.30
286	Joe Schmittfranz, Thorp	554	91.00	4.12
287	Harvey Bristol, Denmark, R. 2		91.00	4.38
288	Wm. H. Nelson, Tavera COMP		88.50	1.39
289	Ben J. Hrabik, Luxemburg		91.00	5.99
290	C. F. Heckman, Cleveland	¼–455A, ½–516	94.00	7.84
291	John G. Fischer, Stratford		92.25	5.12
292	L. B. Kohlman, St. Cloud		86.50	4.89
293	Arthur H. Berth, Sheboygan, R. 2		92.75	5.39
294	Herman W. Behrens, Plymouth		91.00	5.44
295	Henry J. Loehr, Calvary, R. 1	277, 283	94.50	11.33
296	Henry Siewert, Dale	379	87.00	5.63
297	Erni Stephenson, Boscobel		87.00	3.10
298	H. J. Kuschel, Pound, R. 1		93.25	4.15
299	Vic F. Miller, Cazenovia	272	90.50	9.48
2201	P. H. Frawley, Blue River		90.50	3.17
2202	Fred Lebeck, Marshfield	493A	91.25	5.82
2203	E. O. Klemm, Manitowoc, R. 1			
		½–181, 454A, 519, 543	94.25	14.14
2204	Ray Larson, Shawano	558, 561	93.00	20.26
2205	Ervin Schreiber, Cecil		94.50	6.07
2206	A. C. Tomeshek, Shawano	559, 562	91.00	9.18
2207	Loyd Parker, Sylvan	½–479A	91.25	8.65
2208	C. C. Totman, Brookings, So. Dak. COMP		90.50	1.65
2209	Otto E. Luther, Marshfield		94.00	5.80
2210	Julius Wessel, Plymouth, R. 3		95.00	6.60
2211				
2212	J. F. Kalk, Cleveland		95.38	6.28
2213	Edgar E. Peters, Plymouth		93.75	5.93
2214	John H. Peters, Plymouth		91.75	5.59

		Prizes	Score	Check
2216	Perry Johnson, Osceola	133, 473A	96.00	$12.45
2216	Ernest Kaufman, Malone, R. 1		93.50	3.77
2217	Paul Mech, Stevens Point	471A	93.00	8.26
2218	L. E. Lopitzke, Marion	504, 507	94.50	6.56
2219	Martin Kubitz, Edgar	1/3–463A	95.75	6.74
2220	J. M. Dillinger, Unity	1/3–463A	95.75	6.50
2221	H. G. Wiskow, Clintonville	108, 121, 129, 131, 175, 488A, 510	98.00	20.96
2222	F. S. Root, Knowlton	148, 546	94.00	11.55
2223	O. H. Yordi, Manawa		94.50	8.88
2224	Wm. Lichtenberg, Beaver Dam, R. 3		90.00	3.13
2225	Paul E. Ott, Wausau, R. 2		91.00	3.18
2226	M. Christopherson, New Franken		94.00	5.55
2227	Joseph Bergs, Edgar		94.00	5.06
2228	A. F. Schwartz, Merrill COMP		96.00	4.10
2229	Oscar H. Schreiber, Cecil		90.50	2.91
2230	L. Bernie Smith, Rockbridge	½–480A	91.00	9.26
2231	Adolph Roelli, Shullsburg		91.25	6.89
2232	Oscar H. Schreiber, Cecil COMP		92.50	5.10
2233	Edward N. Heinen, Junction City	470A, 474A	94.50	26.90
2234	Leon A. Laack, Brillion	430, 434	94.75	17.21
2235	Earl F. Albrecht, Forestville, R. 2		90.75	3.05
2236	Jos. N. Berres, Stratford		94.50	6.86
2237	John Babler, Campbellsport, R. 1	267, 512	94.50	10.33
2238	Leon A. Laack, Brillion COMP		94.25	5.10
2239	Hy J. Possley, New Holstein		91.00	4.36
2240	Ernest Schneider, Knowles		94.00	2.18
2241	Jos. W. Tuma, Bonduel		93.00	4.10
2242	Grover E. Gehrt, Embarrass	too late	94.00	7.67
2243	Lewis Campbell, Valley, Wis.		94.00	7.16
2244	R. H. Sampe, Osceola	too late		6.91
2245	Oscar F. Olson, Osceola	too late		6.91

CLASS 3. AMERICAN CHEESE, ANY STYLE, MADE AFTER NOVEMBER 1, 1927

		Prizes	Score	Check
301	John Hinz, Cleveland	668	91.50	$6.46
302	Arthur Dederich, Lone Rock	477A, 482A	93.00	25.44
303	Mike Sleger, Maribel, R. 1		93.00	6.44
304	Arthur W. Stolzman, New Holstein	432	93.25	7.39
305	Raymond Schmidt, Fond du Lac	261	93.75	13.36
306	Walter A. Tremptow, Randolph	572, 648	90.50	6.41
307	Fred J. Chapman, Sheboygan Falls, R. 3		93.75	7.36
308	Rudolph Jaehing, Two Rivers	¼–455A, 523, 527	94.00	15.48
309	Noah N. Olig, Malone	278, 279	93.50	12.23
310	Otto E. Heller, Chilton		90.50	4.67
311	Oscar H. Stock, Manitowoc	520, 666	93.50	8.97
312	Wm. F. Meyer, Fredonia, R. 2	646	95.25	7.88
313	Wm. J. Hemb, Timothy, R. 1		91.25	5.06
314	Walter R. Schmidt, Sheboygan Falls		91.50	1.48
315	John G. Fischer, Stratford		91.25	4.53
316	Herman W. Behrens, Plymouth		95.50	8.01
317	Emil Abegglen, Eldorado		91.50	11.29
318	Henry Nolte, Cleveland	667	91.50	7.93
319	L. J. Breher, Sheboygan Falls		90.50	5.67
320	O. W. Bartelt, Campbellsport, R. 5		91.75	11.68
321	Henry J. Loehr, Calvary	276, 281, 385, 426	95.50	28.01
322	Erwin O. Wunsch, Cleveland		91.25	4.00
323	Albert J. Gafner, Brownsville		90.50	4.14
324	A. E. Bloy, Marshfield, R. 4		91.50	3.60
325	Edw. Finkelmeyer, Mishicot	273, 456A	93.75	15.30
326	Joe Schmittfranz, Thorp	138, 439, 555	93.75	9.74
327	C. C. Kraak, Twin Bluffs	½–479	91.25	4.27
328	Chas. J. Mulloy, De Pere, R. 3		93.75	8.38
329	Elmer Loeklein, De Pere, R. 3 COMP		95.00	8.16
330	M. M. Schaetzl, Edgar, R. 5		87.00	3.36
331	W. C. Gielow, Bear Creek		94.50	4.96
332	P. H. Kasper, Bear Creek		94.25	7.38
333	Frank Casper, Marshfield, R. 5	492A	94.50	9.47
334	Paul C. Kleinschmidt, Merrill, R. 4	115, 132	96.00	7.00
335	Frank G. Piekarz, Thorp	556	92.25	5.56
336	O. W. Bartelt, Campbellsport, R. 5 COMP		93.00	4.36
337	J. H. Hecker, Gardnerville, Nev. COMP		91.00	6.38
338	Earl B. Whiting, Gillett	634	92.00	27.16
339	Oswald Reitz, Calvary, R. 1	262,378	92.00	12.17
340	W. F. Reetz, Ringle, R. 1	164	91.00	5.14
341	August Brandt, Kewaunee	169	95.00	7.97

		Prizes	Score	Check
342	John Greiner, Appleton, R. 1		91.00	$3.40
343	E. H. Peters, Sugar Bush		94.00	4.70
344	C. H. Schneider, Merrill		94.00	7.51
345	Henry Rux, Wausau		92.50	3.41
346	M. H. Parsons, Dorchester, R. 1		91.50	3.15
347	Arthur Mueller, Sturgeon Bay, R. 2	½–441	91.00	4.40
348	Christ Ehend, Pardeeville		90.00	3.88
349	H. J. Howe, Nye		93.50	7.50
350	T. J. Moore, Highland	538	89.00	10.16
351	H. J. Kuschel, Pound, R. 1 COMP		93.50	4.85
352	Gottfried Hanni, Atwater		89.00	9.13
353	Thomas S. Martin, Navarino		91.00	3.14
354	Edward J. Sleger, West De Pere		91.00	3.40
355	Emil Sonnenburg, Cato	¼–455A	94.00	5.95
356	Chas. A. Bennin, St. Cloud		91.00	4.40
357	Erni Stephenson, Boscobel	454	91.50	6.40
358	Arthur H. Berth, Sheboygan, R. 2	663	92.25	8.05
359	Ed Minniecheske, Clintonville		95.00	8.03
360	Ben J. Hrabik, Luxemburg	116A	95.63	5.81
361	C. C. Totman, Brookings, S. Dak. COMP		87.50	2.18
362	H. J. Kuschel, Pound, R. 1		93.75	4.32
363	Ernest Kaufmann, Malone, R. 1	159, 266, 282	95.25	14.35
364	Wm. Lichtenberg, Beaver Dam, R. 3	564, 570, 653, 647, 657	91.25	16.53
365	Fred Stapel, Edgar		93.50	5.19
366	H. G. Wiskow, Clintonville	114, 117	96.25	6.13
367	M. S. Flachac, Brussels	½–441	91.00	4.40
368	Martin Kubitz, Edgar		93.50	5.44
369	L. E. Kopitzke, Marion	503, 506	94.75	7.84
370	John H. Peters, Plymouth	1/3–380	94.75	10.09
371	J. F. Kalk, Cleveland	116	95.75	6.87
372	Edgar E. Peters, Plymouth		94.50	6.75
373	Paul E. Ott, Wausau, R. 2		92.00	17.75
374	Julius Wessel, Plymouth, R. 3		94.00	5.96
375	Joseph Bergs, Edgar		94.25	5.09
376	Alfred Huebsch, Richland Center	478A	92.75	16.35
377	A. F. Schwartz, Merrill	146	93.00	5.93
378				
379	Adolph Roelli, Shullsburg		91.50	6.46
380	John Babler, Campbellsport		94.00	6.23
381	Earl F. Albrecht, Forestville	440	92.75	6.80
382	Jos. W. Tuma, Bonduel, R. 1	too late	92.00	4.10
383	Ed. Decker, Thorp	too late	94.50	4.36
384	Otis Kidd, Soldiers Grove	too late	93.00	7.67
385	Waino E. Makinen, Brantwood	too late		4.61
386	Oscar F. Olson, Osceola	too late		7.67
387	A. F. Helmer, Dalton	too late		9.97
388	R. H. Sampe, Osceola	too late		7.03
389	Emil W. Ehlert, Thorp	too late		4.83

CLASS 4. AMERICAN CHEESE, ANY STYLE, MADE BY COLBY PROCESS

		Prizes	Score	Check
401	Henry Nolte, Cleveland		92.25	$6.29
402	Ernest Zermuehlen, Two Rivers		no score	2.39
403	L. J. Breher, Sheboygan Falls		90.00	7.57
404	M. M. Schaetzl, Edgar, R. 5	123, 125	94.00	6.60
405	M. H. Parsons, Dorchester, R. 1		87.50	5.16
406	Wm. J. Hemb, Timothy, R. 1	124A	92.75	6.76
407	M. F. Lawrie, Dorchester		89.50	5.42
408	Roland E. Scheel, Spencer		91.00	3.90
409	Wm. Lichtenberg, Beaver Dam, R. 3		89.50	2.10
410	Fred Stapel, Edgar		92.00	4.80
411	Ernest Kaufmann, Malone, R.		no score	3.85
412	A. H. Mandel, Colby	124, 529, 533A	93.00	16.51
413	Fred Feutz, Waterloo, R. 12	too late		8.47

CLASS 5. DRUM CHEESE

		Prizes	Score	Check
501	Fred Glauser, Monroe, R. 5	197, 185, 203	94.75	$76.07
502	Franz Brand, Monroe		93.00	59.68
503	Joe Lauber, Barneveld		88.00	45.16
504	Walter Reber, Rice Lake, R. 3		88.75	67.92
505	Otto Badertscher, Rice Lake, R. 3	196, 192, 198, ½–427	95.00	79.50
506	Leo von Moos, Argyle, R. 4		90.75	54.83
507	Jacob Niffenegger, Darlington		92.25	62.53

		Prizes	Score	Check
508	Jacob Aeschlimann, Argyle		91.75	$64.55
509	Alex Alplanalp, Juda		91.50	49.46
510	Alfred Buhlmann, Monroe, R. 8	195, 183, 184, 191, 199, 202	95.50	87.78
511	Fred Geissbuhler, Darlington		92.50	83.22
512	Christ Koenig, Browntown		94.00	66.72
513	Louis Krauer, South Wayne	197A	94.00	68.74
514	Valentine Zibung, Argyle, R. 4		93.75	52.51
515	Reinhard Mueller, Clarno		93.75	68.63
516	Ernest Glossner, Darlington		93.50	62.62
517	John Badertscher, Rice Lake, R. 3		92.00	58.24
518	Henry Walder, South Wayne	189	93.50	61.38
519	Eugene Wirz, Darlington	188, 193	94.00	62.96
520	Otto Blaser, Darlington		92.75	51.51
521	Ernest Herrman, Neillsville, R. 1	too late	96.00	67.04
522	Otto Anderegg, Argyle	too late	92.50	77.48

CLASS 6. BLOCK SWISS CHEESE

		Prizes	Score	Check
601	Fred Geissbuhler, Darlington	205, 210A, 187	95.00	$12.36
602	Herman Aebersold, Argyle		89.50	4.28
603	David Walser, Monticello	207, 210	94.00	10.50
604	Gottlieb Werren, Blue Mounds	207A, 498	90.25	6.28
605	Arnold Thuli, Hollandale		89.50	4.50
606	Albert Ryser, Argyle, R. 1		86.50	4.28
607	Fritz Loeher, Argyle, R. 1	206, 209, 186	94.25	13.20

CLASS 7. LIMBURGER CHEESE

		Prizes	Score	Check
701	August Thueler, Monroe	217	93.25	$1.38
702	Werner Blum, Monroe	212	96.50	3.91
703	Ernest Kuenzi, Belleville		92.75	2.81
704	Joe Conrad, Monroe, R. 7		94.00	4.33
705	Werner Thueler, Monroe COMP		94.00	1.92
706	F. H. Kaufmann, Monticello		93.25	1.91
707	Ulrich Naef, Belleville		94.00	2.22
708	Rudy B. Lengacher, Monticello	213A	95.00	4.75
709	John Minnig, Monticello	213	95.75	4.31
710	Emanuel Hess, Belleville	211, 214, 219, 423	97.00	6.30
711	Jacob Waeffler, Monticello		92.00	3.73
712	Fred Wyssbrod, Martintown		94.00	1.69
713	Geo. Mintzlaff, Juneau, R. 3	½–393	90.00	5.24
714	Emil Frehner, Beloit	476	90.00	3.77

CLASS 8. WISCONSIN BRICK CHEESE

		Prizes	Score	Check
801	Rudy Stampfli, Barneveld, R. 1		92.00	$4.25
802	Walter Feutz, Neosho	½–229, 237, 569	94.25	13.81
803	Rudolph Haldemann, Watertown	223, 226, 228, 394, 424, 567	95.50	23.43
804	Aug. H. Raether, Watertown, R. 8		90.00	6.05
805	Frank Mock, Fox Lake	392, ½–644	92.00	17.45
806	Mike Durtschi, Barneveld		90.25	2.54
807	Emil Gruber, Cambria	652	91.50	6.88
808	Fred Helmer, Pardeeville		90.00	owes $1.09
809	Fred Helmer, Pardeeville COMP		89.00	
810	Fred Hasler, Hartford, R. 4	234	89.50	3.66
811	Alfonso Caralfi, Monroe, R. 8		90.75	1.17
812	Emil Jenni, Granton	235	89.00	1.66
813	Joseph Willi, So. Wayne		81.50	3.13
814	Gottlieb Werren, Blue Mounds	496	91.00	5.53
815	John Blickenstorfer, Darlington		91.00	5.75
816	Jake Balsiger, Pardeeville	230	93.00	10.17
817	Fred Bachmann, Cross Plains	owes $.79	89.00	
818	Fred Bleuer, Beaver Dam, R. 3		92.00	3.76
819	Marcel Steiner, Cambria	231, 574, 655	92.00	9.74
820	Fred Dauwalder, Woodland	238	93.00	8.93
821	John Feutz, Oconomowoc	466	90.50	2.71
822	Adolph Feller, Mayville, R. 3	233	91.00	3.81
823	Max F. Prag, Randolph		88.00	1.66
824	Fred Glauser, Monroe		90.00	5.56
825	Karl Minnig, Mazomanie	456	92.25	4.94
826	Ernst Indermuehle, Fox Lake	656	90.50	3.46
827	Walter Lichty, Ixonia, R. 1	465	90.50	4.44
828	Ernest Schwartz, Rosendale	643	94.00	31.63

		Prizes	Score	Check
829	Geo. Mintzlaff, Juneau, R. 3	½–391	93.00	$6.91
830	Edward Seeler, Sun Prairie	½–644	92.00	11.99
831	Carl Vogel, Fox Lake	651, 650	93.00	5.44
832	Paul J. Pinck, Beaver Dam		94.00	7.63
833	Adolph Gurtner, Rubicon, R. 1		92.50	6.58
834	John Durtschi, Barneveld	659	93.50	6.28
835	Walter Huegli, Juneau, R. 4	½–391	93.00	7.66
836	Jacob Leuenberger, Monroe	222, 239	96.00	8.29
837	Alois Froehlich, Reeseville COMP		89.00	4.90
838	Werner Rechsteiner, Juneau, R. 3		91.25	4.73
839	Fritz Marti, Argyle, R. 1	645	91.00	15.28
840	Leo Lotscher, Beaver Dam, R. 1		88.00	1.90
841	Walter Reber, Rice Lake, R. 3	223A, ½–427	95.00	10.11
842	Ernest Schlaginhaufen, Belleville		90.00	2.60
843	Karl Berger, Juneau		91.50	4.65
844	Walter Audre, Merrimac		88.00	1.17
845	Emil Abegglen, Eldorado		90.00	2.36
846	Nick Stampfli, Barneveld	661	92.25	8.16
847	Karl Zuberbuhler, Horicon	½–229, 232, 568, 649	94.25	15.81
848	Clarence Dornfeldt, Hustisford	½–393	90.00	5.56
849	Carl Vogel, Fox Lake		92.00	4.49
850	Oswald Schneider, Appleton	221, 224, 227, 466A	99.00	23.89
851	Martin Suter, Blanchardville		91.00	4.30
852	Fred Bahler, Juda, R. 1		93.00	4.46
853	Franz Brand, Monroe		93.50	5.30
854	C. C. Totman, Brookings, So. Dak. COMP	owes $.02	85.50	
855	John Inabet, Watertown, R. 1	395	92.50	7.35
856	John Bieri, Neosho, R. 1		92.00	6.45
857	John Badertscher, Rice Lake, R. 3		89.75	2.66
858	Sam Schober, Mt. Horeb, R. 2	455	92.75	8.78
859	Arnold Thuli, Hollandale		91.00	1.85
860	Fred A. Schaller, Barneveld	660	93.25	9.37
861	Ernest Herrmann, Neillsville, R. 1		93.00	6.42
862	Gottlieb Schubiger, Juneau	573	93.25	11.60
863	Dave Baumgartner, Cross Plains COMP	too late		6.60
	Total			$4,614.87

SECRETARY'S REPORT ON CONVENTION OF DECEMBER, 1927

(Read November, 1928)

PART 1. STATE TREASURY ACCOUNT

Receipts

1927		
July 1	Balance forward from last report	$ 163.82
	State appropriation	600.00
Dec. 28	Deposited—membership fees	617.00
	Deposit, donation	100.00
Jan. 26	Deposit, donation	50.00
	Total	$1,530.82

Disbursements

1927		
Aug.	State printer, 600 Plan Now Letters	$ 6.81
	Binding 2 vol. Annual Report	2.99
	Cuts Hazen tablet, Ubbelohde	8.99
Sept.	State printer, 1000 env. 3000 circulars	5.80
	Annual reports, 975	233.97
	State printer, 1000 mail env. for report	10.84
Oct. 12	Milwaukee Auditorium rental	430.00
	State printer, Bill heads, Circulars	14.46
	State printer, Certificates, Cut	7.31
	State printer, Certificates, Prog. env.	19.26
Nov.	Binding Annual reports	2.72
Dec.	State printer, Labels, Letter heads, Circulars	21.82
Dec. 28	Milwaukee Auditorium, Exhibit and Booth expense	715.50
Jan. 26	Supt. Pub. Property, Postage annual reports	23.07
1928		
Feb. 24	State printer, Printed envelopes	3.11
May 5	State printer, 2000 long envelopes	7.85
June 1	State printer, 1000 envelopes for Annual reports	10.84
	Balance forward	5.48
	Total	$1,530.82

PART 2. SECRETARY'S DONATION AND PROGRAM FUND

Cash prizes, offered for fine cheese exhibits at the convention, are awarded and paid to exhibitors as directed by the donors, the Secretary acting as the agent of the donors for this purpose. As these funds are at no time the property of the Association, and as they are paid out to winners at the Convention, or returned to the donors, these donations are not deposited in the State Treasury, but the receipts, and disbursements are published here, and in the list of prize-winners.

To raise additional funds for the support of the Convention, the Secretary, acting as a private individual, published a Convention program, and rented booths and the proceeds from this enterprise were used for Association purposes, the balance to be finally deposited in the State Treasury, as a donation to the Association, from the advertisers. The program receipts and the disbursements of this fund are shown below.

The Convention cheese exhibits were sold by the Secretary, acting as the agent of the exhibitors, and the proceeds paid at once to exhibitors, as shown in the list of exhibitors in this report.

Receipts from Booth Spaces

Balance forward from last report	$ 924.83
Federal Motor Truck Sales Corp., Milwaukee	100.00
King Ventilating Co., Owatonna, Minn.	55.00

Cream City Chemical Works, Milwaukee	$50.00
Ohio Salt Co., Chicago	50.00
Viking Pump Sales Co., Milwaukee	50.00
Morton Salt Co., Milwaukee	50.00
Super Products Co., Milwaukee	50.00
Sharples Separator Co., Westchester, Pa.	50.00
Jacobi-Ness Sales Co., Fergus Falls, Minn.	50.00
United Coal & Dock Co., Milwaukee	50.00
D. & F. Kusel Co., Watertown	100.00
De Laval Separator Co., Chicago, Ill.	100.00
Colonial Salt Co., Chicago, Ill.	50.00
Cowles Detergent Co., Milwaukee	50.00
Stoelting Bros. Co., Kiel	55.00
A. H. Barber Goodhue Co., Chicago, Ill.	55.00
J. B. Ford Co., Milwaukee	50.00
National Cheese Institute, Milwaukee	50.00
Lakeshire Cheese Co., Plymouth	50.00
Chris Hansen Lab., Little Falls, N. Y.	50.00
Diversey Mfg. Co., Chicago, Ill.	50.00
Woodland Box Co., Woodland	50.00
Toledo Scales Co., Toledo, Ohio	50.00
A. Augliker, Monroe	50.00
Brillion Iron Works, Brillion	25.00
Erwin Schwenzen, Plymouth	75.00
Diamond Crystal Salt Co., Milwaukee	50.00
Howe Scale Co., Milwaukee	50.00
Schwab Boiler & Machine Co., Milwaukee	50.00
Lavo Co. of America, Milwaukee	50.00
Marschall Dairy Laboratory, Madison	50.00
Damrow Bros. Co., Fond du Lac	105.00
Allen Air Turbine Vent Co., Milwaukee	50.00
Kellogg-Leca Laboratories, Westfield, Mass.	50.00
Creamery & Milk Plant Monthly, Chicago, Ill.	50.00
Lotz-Buckly-Rennet Co., Madison	50.00
Wisconsin Dairy Laboratory, Green Bay	50.00
Creamery Package Mfg. Co., Chicago, Ill.	50.00

Program Pages

Badger Box Co., Madison	$10.00
Mojonnier Bros. Co., Chicago, Ill.	10.00
Woodland Box Co., Woodland	10.00
Wisconsin Dairy Supply Co., Whitewater	25.00
Butter, Cheese & Egg Journal, Milwaukee	10.00
H. B. Stanz Co., Milwaukee	10.00
Vacuum Sediment Test Co., Madison	10.00
Marschall Dairy Laboratory, Madison	20.00
Morton Salt Co., Milwaukee	10.00
Pauly & Pauly Co., Manitowoc	10.00
First National Bank, Brillion	10.00
J. B. Ford Co., Wyandotte, Mich.	20.00
H. Iwen Box & Veneer Co., Shawano	20.00
John Kirkpatrick, Inc., Richland Center	10.00
Lakeshire Cheese Co., Plymouth	20.00
Winnebago Cheese Co., Fond du Lac	10.00
Champion Sheet Metal Co., Cortland, N. Y.	10.00
Juneau Boiler Co., Juneau	20.00
Super Products Co., Milwaukee	10.00
Rogers & Johnson, Marion	10.00
Diamond Crystal Salt Co., St. Clair, Mich.	10.00
Wisconsin Dairy Laboratory, Green Bay	10.00
De Laval Separator Co., Chicago, Ill.	20.00
Stoelting Bros. Co., Kiel	20.00
Manhattan Refrigerating Co., New York City	10.00
D. & K. Fusel, Watertown	20.00
H. L. Mueller, Sheboygan	10.00
Bingham & Readon, Green Bay	10.00
Colonial Salt Co., Chicago, Ill.	10.00
General Laboratories, Madison	10.00
Jacobi-Ness Co., Fergus Falls, Minn.	10.00
Torsion Balance Co., New York City	20.00
Kiel Wooden Ware Co., Kiel	20.00
Vilter Mfg. Co., Milwaukee	10.00
Chris Hansen Laboratory, Little Falls, N. Y.	20.00
J. S. Hoffman Co., Chicago, Ill.	10.00
Midland Metal Co., Chicago Ill.	20.00
Kraft Cheese Co. of Wisconsin, Plymouth	20.00
Pabst Cheese Corp., Milwaukee	10.00
Sharples Separator Co., Westchester, Pa.	25.00

L. F. Nafis, Inc., Chicago, Ill.	$10.00
National Cheese Institute, Milwaukee	20.00
Dairy Market Reporter, Sheboygan Falls	10.00
Schmitt Bros., Blue River	20.00
Triangle Cheese Co., Monroe	10.00
A. H. Barber-Goodhue Co., Chicago, Ill.	20.00
Walter Voechting, Sheboygan, R. 2	20.00
A. D. Deland Co., Sheboygan	20.00
Lincoln Box Co., Merrill	20.00
Brillion Iron Works, Brillion	10.00
Republican Hotel, Milwaukee	20.00
Atlantic & Pacific Tea Co., Green Bay	20.00
C. E. Blodgett Cheese Co., Marshfield	10.00
Sheboygan Falls Cry. Co., Sheboygan Falls	10.00
Erwin Schwenzen, Plymouth	20.00
Dairy Supply Co., Minneapolis, Minn.	10.00
Reinhold & Meyer Mfg. Co., Plymouth	20.00
Fairmont Cry. Co., Green Bay	20.00
Ohio Salt Co., Chicago, Ill.	10.00
Invincible Plating Works, Sheboygan	10.00
Manitowoc Savings Bank, Manitowoc	10.00
Buckeye Chemical Co., Akron, Ohio	20.00
Pyramid Co., St. Paul, Minn.	10.00
Fountain City Dairy Co., Fond du Lac	10.00
A. Angliker, Monroe	10.00
Green Beck Bros., Lone Rock	10.00
Johnston Tin Foil & Metal Co., St. Louis, Mo.	20.00
C. A. Straubel Co., Green Bay	20.00
Midwest Cry. Co., Plymouth	20.00
Fairbanks Morse Co., Chicago, Ill.	20.00
R. L. Frome Mfg. Co., Sheboygan	20.00
D. Picking & Co., Bucyrus, Ohio	15.00
Schwaab Stamp & Seal Co., Milwaukee	10.00
Damrow Bros., Fond du Lac	50.00
Lehmaier Schwartz Co., Monroe	20.00
Cream City Chemical Works, Milwaukee	20.00
Lotz-Buckley-Rennet Co., Madison	30.00
A. H. Barber Co., Chicago, Ill.	20.00
Rexine Co., Sheboygan	10.00
Bestin Coating Co., Milwaukee	10.00
Phenix Cheese Corp., Beaver Dam	20.00
Quincy Mkt. Cold Storage & Warehouse Co., Boston, Mass.	10.00
Cry. Pkg. Mfg. Co., Chicago, Ill.	25.00
Dairy Belt Cheese & Butter Co., Spencer	10.00
Cheese Maker Book Co., Madison	10.00
Howe Print Co., Prairie du Chien	20.00

Prizes, etc. in Cash

Cheese Sales, J. W. Cross	$66.57
Cheese Sales, Kraft Cheese Co., Chicago, Ill.	3,692.41
Cheese Sales, U. W. Dairy Dept.	69.63
Jacob Hertel, Chilton, Membership 1927–1928	2.00
34 Booster dinners paid for	34.00
Frank Mock, Beaver Dam, refund	7.00
R. M. Egan, Highland, refund	5.00
Ernest Schwartz, Rosendale, refund	10.00
Morton Salt Co., Milwaukee	10.00
Pauly & Pauly Co., Manitowoc	45.00
First National Bank, Brillion	8.00
Lakeshire Cheese Co., Plymouth	50.00
Winnebago Cheese Co., Fond du Lac	20.00
Johnson Ecklie Co., Cumberland	5.00
Rogers & Johnson, Marion	6.00
Stoelting Bros., Co., Kiel	30.00
Kraft Cheese Co. of Wis., Plymouth	40.00
Dairy Market Reporter, Sheboygan Falls	18.00
Foreign Type Cheese Dealers Assn., Monroe	20.00
A. & P. Tea Co., Green Bay	35.00
C. E. Blodgett Cheese, Butter & Egg Co., Marshfield	45.00
Manitowoc Savings Bank, Manitowoc	10.00
Fountain City Dairy Co., Fond du Lac	10.00
A. Angliker, Monroe	15.00
First Fond du Lac National Bank, Fond du Lac	25.00
Two Rivers Savings Bank, Two Rivers	3.00
Schmitt Bros. & Walther, Platteville	10.00
R. M. Egan, Highland	25.00
Ashippun Box Mfg. Co., Ashippun	5.00
First National Bank, Neenah	5.00

Neenah Cheese Box Co., Neenah	$5.00
D. Picking & Co., Bucyrus, Ohio	5.00
S. D. Cannon, Neenah	15.00
First National Bank, Marion	6.00
Farmers & Merchants Bank, Marion	6.00
Dairymens State Bank, Clintonville	10.00
General Laboratories, Madison	5.00
State Bank, Cazenovia	10.00
Frank Brath, Cazenovia	2.00
Southwestern Box & Veneer Co., Richland Center	10.00
Wm. Nisbet, Richland Center	10.00
First National Bank, Richland Center	10.00
Richland County Bank, Richland Center	10.00
Farmers & Merchants Bank, Richland Center	10.00
C. B. Scott, Cazenovia	10.00
State Bank, Mishicot	10.00
Phenix Cheese Corp., Beaver Dam	65.00
Denmark State Bank, Denmark	15.00
State Bank of Manitowoc	15.00
Manitowoc Savings Bank	15.00
First National Bank, Manitowoc	15.00
American Exchange Bank, Manitowoc	5.00
Two Rivers Savings Bank	5.00
Valders State Bank	5.00
Schroeder Bros., Two Rivers	3.00
Bank of Two Rivers	10.00
Security State Bank, Colby	5.00
Colby State Bank, Colby	5.00
Colby Cheese Box Co., Colby	5.00
Dairy Belt Cheese & Butter Co., Spencer	40.00
Dow Cheese Co., Fond du Lac	10.00
State Bank, St. Cloud	10.00
Farmers State Bank, Calvary	10.00
Hilbert State Bank	5.00
Sherwood State Bank	5.00
Konz Box & Lumber Co., Appleton	5.00
A. M. Thiel, Sherwood	5.00
St. Nazianz State Bank	25.00
Geo. M. Danke, Neenah	10.00
Collins State Bank	5.00
First National Bank, Clintonville	5.00
Clintonville State Bank	5.00
Embarrass State Bank	5.00
R. C. Jorgensen, Denmark	15.00
Juneau Cheese Co., Juneau	40.00
Cheese Makers Mfg. Co., Riplinger	5.00
Chas. Laack, Plymouth	15.00
Watertown Butter & Cream Co., Watertown	10.00
Citizens State Bank, Wausau	10.00
First National Bank, Wausau	10.00
American National Bank, Wausau	10.00
Marathon County Bank, Wausau	10.00
Wis. Valley Trust Co., Wausau	10.00
Bank of Edgar	10.00
Bank of Athens	10.00
Mosinee State Bank	5.00
Citizens Bank of Mosinee	5.00
Stratford State Bank	10.00
Max P. E. Radloff, Hustisford	10.00
Wisconsin National Bank, Shawano	10.00
Citizens State Bank, Shawano	10.00
First National Bank, Shawano	5.00
Aug. H. Raether, Watertown, R. 8	5.00
H. Blanke Cheese Co., Plymouth	18.00
Suring Creamery Co., Suring	5.00
Suring State Bank	5.00
23 Gillett business firms fund	69.50
Peoples State Bank, Thorp	5.00
Farmers Exchange Bank, Thorp	5.00
Calumet County Bank, Brillion	5.00
14 Sheboygan County Banks' Fund	150.00
Kraft Cheese Co. of Wis., Watertown	50.00
Randolph State Bank, Randolph	10.00
F. C. Westphal, Randolph	17.00
Barneveld Produce Co., Barneveld	10.00
Millersville Box Co., Millersville	12.00
J. R. Bruckner, Black Creek, Membership 1927	1.00
3 Pens sold to members	15.75
N. P. Strobel, Appleton, R. 4, Membership 1927	1.00
Total	$9,732.69

Disbursements

	Amount	Check No.
Postage	$20.00	1
Milking stool for exhibit	2.04	2
Schwaab, Stamp & Seal Co., Milwaukee	1.55	3
Netherwood Print Co., rubber stamps	1.25	4
Wellman Ad Cut Service, cut	2.50	5
Business Cartoon Service, cuts	7.50	6
Postage	8.82	
Toggery Shop suit for exhibit	4.00	7
Business Cartoon Service, cuts	1.75	8
Signs, State Fair exhibit	24.40	9
Wax figure for exhibit	20.00	10
Palms and express	8.45	17
Travel and expense, State Fair exhibit	34.00	
Photo Art House, Milwaukee, State Fair photo	6.00	13
Business Cartoon Service, cuts	2.50	14
Addressing programs, mailing, etc	20.00	15
Edw. F. Winter, expense to meetings	23.48	11
Earl B. Whiting, expense to meetings	7.90	12
State Fair signs	4.00	16
Chicago and Milwaukee telephone expense	2.50	18
Telephone calls	1.80	
Postage	20.00	19
Postage on programs	75.00	20
Express, telephone, and telegram	3.85	
Expense to Sheboygan for prize list	11.50	
Express to State Fair	1.93	21
Postage	10.00	22
Business Cartoon Service, cuts	3.75	23
3200 copies prize list and printing	515.58	25
Postage	20.00	24
Postage on cuts returned	2.00	
Supt. of Documents, statistics	1.00	26
Circulars, envelopes, addressing, stuffing	9.93	
Schwaab Co., ribbon badges	13.10	29
Sample knife prize	3.00	27
Express	.88	28
On acct., prize chairs	50.00	30
Sample knife prize	1.29	31
Citizens State Bank, Wausau, refund	10.00	32
Marathon County Bank, Wausau, refund	10.00	33
Convention signs	24.00	34
Envelopes	4.41	
Postage	10.00	35
Arno Schmidt, Director, expense	12.06	58
Ed. F. Winter, Pres., expense	23.86	59
Earl B. Whiting, Pres., expense	23.37	60
Postage	10.00	35
Dairy Market Reporter, ads	14.85	36
Schwaab Co., 1000 badges	62.00	37
R. C. Jorgensen, Denmark, refund	15.00	38
Watertown B. & C. Co., refund	10.00	39
C. E. Blodgett Co., refund	24.00	40
S. D. Cannon, refund	2.00	41
Phenix Cheese Co., refund	19.00	42
R. M. Egan, refund	5.00	43
Juneau Cheese Co., refund	2.00	44
North Star Woolen Mills, blankets	132.30	45
Prize chairs, balance	50.00	46
Embarrass State Bank	5.00	47
Alex Kaempfer, reporter, on acct	50.00	48
Johnson Ecklie Co., refund	5.00	49
E. M. Egan, Highland, refund	5.00	50
Collins State Bank, refund	5.00	51
Cheese Makers Mfg. Co., refund	2.00	52
Wis. National Bank, Shawano	2.00	53
Juneau Cheese, Co., refund	2.00	54
Suring Cry. Co., refund	5.00	55
Suring State Bank, refund	5.00	56
Calumet County Bank, refund	5.00	57
Winnebago Cheese Co., refund	5.00	61
Kraft Cheese Co., Plymouth, refund	22.00	62
Schmitt Bros. & Walther, refund	7.00	63
First Fond du Lac National Bank, refund	2.00	64
First National Bank, Neenah, refund	5.00	65
Neenah Cheese Box Co., refund	5.00	66
First National Bank, Marion, refund	3.00	67
Farmers & Merchants Bank, Marion, refund	1.00	68

	Amount	Check No.
Alex Schaller, judge, expense	$26.50	69
Dairy Belt C. & B. Co., Spencer, refund	34.00	70
Citizens State Bank Shawano, refund	2.00	71
Millerville Box Co., refund	3.00	72
Fred Marty, judge, expense	28.67	73
Clarence Guth, Forestville, helper	13.16	74
E. M. Socec, helper	12.96	75
J. W. Cross, supt., expense	78.99	76
John H. Peters, expense	22.52	77
Otto Weyer, Treasurer, expense	26.81	78
M. M. Schaetzl, Director, expense	43.75	79
W. F. Hubert, judge, expense	59.50	80
Willard Hansen, helper	14.06	81
J. S. Cannon, judge, expense	30.94	82
J. Gempler, Jr., Director, expense	17.87	83
Mrs. W. Lindner, clerk	32.65	84
Mrs. Irma Luetzow, clerk	32.65	85
Jos. L. White, clerk	41.25	86
Hazel Dubiel, clerk	3.00	
M. E. Landgraf, clerk	110.00	88
Office specialties, rentals and supplies	18.40	87
Abel & Bach Co., bags and prizes	82.60	89
Republican Hotel bill	137.38	98
Postage	10.00	
Hubert Meisner, helper	12.54	94
Badger Pharmacy, 21 pens	112.05	96
A. H. Mandel, Colby, prizes 530–533	10.00	90
Postage	10.00	91
John Hinz, Cleveland, refund	1.00	92
E. O. Wunsch, refund	1.00	93
H. G. Wiskow, Clintonville, prizes 108–114	25.00	95
Postage on diplomas	10.00	97
North Star Woolen Mills, bal. on prizes	18.00	99
Fred Geissbuhler, Darlington, prize 187	5.00	100
Alex Kaempfer, bal. official reporter	50.00	101
Paul C. Pinck, Beaver Dam, ½ prize 643	15.00	102
State Treasury deposit	100.00	103
Jake Balsiger, Pardeeville, ½ prize 644	10.00	104
Geo. Mintzlaff, Juneau, ½ prize 644	10.00	105
John Durtrschi, Barneveld, prize 659	5.00	106
John Feutz, Oconomowoc, prize 466	2.00	107
Adolph Feller, Mayville, prize 233	3.00	108
Karl Minnig, Mazomanie, prize 456	2.00	109
Ernest Indermuehle, Fox Lake, prize 656	3.00	110
Walter Lichty, Ixonia, prize 465	3.00	111
Geo. Mintzlaff, ½ prize 391	2.50	112
Carl Vogel, Fox Lake, prize 651	3.00	113
Walter Huegli, Juneau, ½ prize 391	2.50	114
Jacob Luenberger, Monroe, prize 222	1.50	115
John Feutz, Oconomowoc, refund	1.00	116
Olsen Pub. Co., Convention page ad	25.00	117
Checks to exhibitors, books 1–2–3	4,614.87	
W. F. Hubert, judge	20.00	118
J. D. Cannon, judge	20.00	119
Fred Marty, judge	10.00	120
Alex Schaller, judge	10.00	121
Edw. F. Winter, chairman 2 days	10.00	122
J. Gempeler, Jr., chairman 1 day	5.00	123
Otto Weyer, Treasurer	15.00	124
Secretary office, travel	131.31	
Express on 7 prize chairs	15.83	126
Postage on returned programs	2.00	125
Photo Art House, Convention photo	5.00	127
O. H. Limpus, Milwaukee, boxes	3.30	128
Terminal Warehouse Co., Milwaukee, cartage	15.00	129
Express on 1 prize chair	1.52	
Mimeograph paper	2.05	130
Express and chart material	1.59	
Deposited with State Treasurer	50.00	131
Express and membership list typed	5.91	
Secretary	400.00	
Telephone	.90	
Balance forward	1,515.56	
Total	$9,732.69	

O. K.

Auditing Committee.
M. M. SCHAETZL,
JOHN H. PETERS,
EARL B. WHITING,