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Proceedings of the Wisconsin Cheese Makers' Association annual convention 1921 assembled in its twenty-ninth annual convention in the Milwaukee Auditorium, January 4, 5 and 6, 1921. 1921

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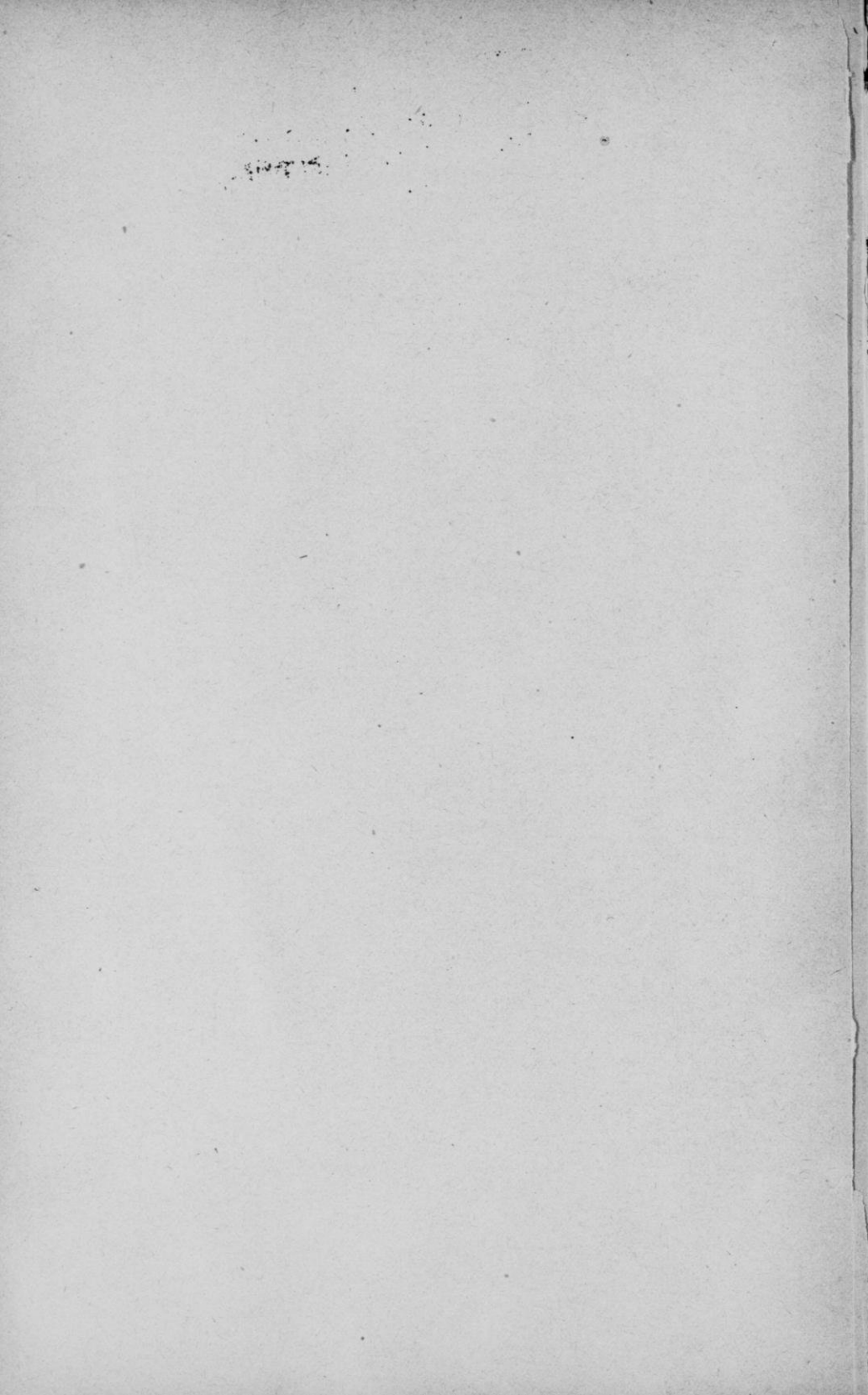
PROCEEDINGS
OF THE
WISCONSIN CHEESE MAKERS'
ASSOCIATION
ANNUAL CONVENTION 1921

Assembled in its Twenty-ninth Annual Convention in the Milwaukee
Auditorium, January 4, 5 and 6, 1921.

Compiled by
J. L. SAMMIS, Secretary



Madison, Wisconsin
1921



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LETTER OF TRANSMITTAL

Office of the Secretary,
Wisconsin Cheese Makers' Association,
Madison, Wis., 1921.

To His Excellency, JOHN J. BLAINE,
Governor of the State of Wisconsin.

I have the honor to submit report of the twenty-ninth annual meeting of the Wisconsin Cheese Makers' Association, showing the receipts and disbursements the past year, also containing papers, addresses and discussions had at the annual convention held at Milwaukee, in January, 1921.

Respectfully submitted,

J. L. SAMMIS,
Secretary.

WISCONSIN CHEESE MAKERS' ASSOCIATION

TWENTY-NINTH ANNUAL MEETING

Auditorium Building, Milwaukee, 1921

Officers

CHAS. E. REED, President **Thorp**
H. A. KALK, Vice-President..... Sheboygan Falls
J. L. SAMMIS, Secretary **Madison**
T. A. UBBELOHDE, Treasurer..... Glenbeulah

Directors

JACOB KARLAN, JR..... Monroe
A. T. BRUHN Spring Green
O. A. KIELSMEIER Manitowoc

Judges of Cheese

WILLIAM HUBERT Sheboygan
JOHN CANNON New London
FRED MARTY Monroe
ALEX. SCHALLER..... Barneveld

Superintendent of Cheese Exhibit

J. W. CROSS Milwaukee

Life Members

H. J. NOYES, Muscoda, Wis. J. D. CANNON, New London, Wis.
E. L. ADERHOLD, Neenah, Wis. J. W. CROSS, Milwaukee, Wis.
P. H. KASPER, Bear Creek, Wis. JACOB KARLEN, JR., Monroe, Wis.
JOHN KIRKPATRICK, Richland Center, Wis.

Official Reporter

Miss Louise D. Mason, 425 East Water St., Milwaukee.

Official Organs

The Sheboygan County News and Dairy Market Reporter,
Sheboygan Falls.

The Butter, Cheese and Egg Journal, Milwaukee.

PROCEEDINGS OF WISCONSIN CHEESE MAKERS'
ASSOCIATION IN ANNUAL CONVENTION
MILWAUKEE, WIS., 1921

The twenty-ninth annual meeting of the Wisconsin Cheese Makers' Association was called to order Tuesday, January 4, 1921, in the Auditorium Building, Milwaukee, by President Chas. E. Reed. An address of welcome was given by Mr. Frank Cleveland, Assistant Secretary of the Milwaukee Association of Commerce, who said in part:

ADDRESS OF WELCOME

By FRANK CLEVELAND, *Asst. Secy. Milwaukee Association of Commerce.*

Mr. Chairman, Officers and Members of the Wisconsin Cheese Makers' Association and Ladies and Gentlemen: In the name of the City of Milwaukee and the Milwaukee Association of Commerce I welcome you to the City of Milwaukee for your annual convention.

I am here to make a confession that you people of the State of Wisconsin could get along without Milwaukee much better than Milwaukee could get along without you, but neither of us can get along so well without the other as we can working together. Let the Wisconsin Cheese Makers' Association and the Milwaukee Association of Commerce from now on work together for the interests of the State.

I know that perhaps you would not be satisfied if I did not comment for just a moment this morning on some of the conditions throughout the country that are foremost in the minds of business men.

I could almost assure you, if I were a prophet or tried to pose as a prophet, that the latter half of the year 1921 will be very prosperous. January and February will be conservative if not rather depressed. Men will begin to see by the first of March that much of this conservatism has been based on a lack of confidence.

The cost of living is going down. Labor costs are certain to follow living costs. They are not going down any too fast, but three billion dollars in the last two months is the approximate total in reductions in commodities already manufactured. Neither of them ever will reach a pre-war basis, but they will come mighty close to it. Look for good times after June 1st, and possibly earlier.

Let us get rid of two dominating influences that are harming not merely the United States, but the entire world, pessimism and prejudice. Let us do not have so much prejudice from a political point of view as to forget that one of the best things operating in this country today is

the Federal Banking System. It will help us through a crisis that otherwise would have taken three or four years, and it will help us through the crisis in a matter of four to six months. I am not a Democrat, I did not vote for the people that put the Federal Reserve Bank on the map, but I believe I have sense enough to know a good thing when I see it.

It would help the situation in business very much if we could find some way of establishing credits in Europe, in South America and the East. I am frank in stating that I think of all the large nations the United States is the slowest in the matter of establishing foreign trade. But we have enough business on the two American continents to make us prosperous.

As to the matter of personal prejudice in this country, I want to say here that a man is no less loyal an American, no less loyal to the constitution of the United States because he loves whatever is good in England and the English people. A man is no less loyal to America because he loves whatever is good in Germany and the German people. It is American to know good wherever we see it. There is no place in the heart of Americanism for hatred in any of its forms, and I want to say, as to men representing business, that it is mighty poor business, and I think you know it already.

Then the matter of pessimism. If we can see an opportunity to make the cheese business good, let us go ahead and make it good. Imagination, however, has a good deal to do with success in business. A man tries to feel an atmosphere of success and afterward he is at a loss wondering how it all happened. It was merely because it is in his spirit. There is a story about what imagination will do. Two colored privates in the United States army were discussing the merits of the buglers in their different companies. Each contended that he had the best bugler in the United States army. "You jes' ought to heah ouah Rastus Johnson. When Rastus Johnson picks up dat bugle o' his an' plays 'pay day,' you jes' thinks its Alexander's Band playin' the Fifth Symphony." "Oh, youah Rastus Johnson can't play, but you should heah Thomas Jefferson Andrew Jackson. When he done wrap his lips 'round that silvah bugle o' his, boy, and play 'mess call,' Ah jes' looks down at mah beans an' Ah says, 'Strawberries behave, you done kicking the whipped cream all ovah mah plate.'" Imagination! Imagination does a lot if it can change beans into strawberries and cream, and there is a lot of that same sort of thing in business.

You are the people who make two-thirds of the cheese made in the United States and have taught the whole world what good cheese is and have put Wisconsin on the map as a production state. Let us get together in a good spirit of optimism, looking forward carefully, taking our place on a basis of common sense, remembering that America has resources and that the American people have the faith necessary, so that when they see a thing that is to be done they always do it. Did you ever know them to fail in a final crisis? I thank you.

RESPONSE TO ADDRESS OF WELCOME

By Secy. J. L. SAMMIS, Madison.

Mr. President, Mr. Cleveland, and Gentlemen: In response to the kind greeting of Milwaukee's representative to the Wisconsin Cheese Makers' Association, I have to say that we highly appreciate their hospitality and thank them for the good wishes and suggestions. The friendly sentiments expressed are shared by each of us. We all come here with a greeting to Milwaukee, and with good will to each other. This year many cheese makers will be here for the first time, and, as older members, our first duty is to give them a hearty welcome, see that they enjoy the Convention, and make them want to come again every year. At our 30th Annual Convention next year, our aim is to have 1,500 or 2,000 members present and to make it the biggest celebration we have ever had.

The main purpose of this Association and Convention is educational. Therefore, I wish to speak to you for a few minutes on the subject:

"THE MODERN METHOD OF EDUCATING CHEESE MAKERS."

The year 1890 was a great year for dairymen, and may well be considered the dividing line between the ancient and the modern in dairy education, for about that time three important events occurred; the invention of the Babcock test, the starting of the Wisconsin Dairy School, and the organization of this Wisconsin Cheese Makers' Association.

Under the ancient system of educating the boy or young man to any trade or occupation, he spent a great deal of time doing chores, working about the place, running errands, etc., and learned his trade so slowly that several years of apprenticeship were considered necessary to begin with. Afterward, the young man worked as a journeyman for several years, travelling about from one shop or factory to another wherever he could find employment, before he finally was acknowledged to be a competent master workman, capable of running his own factory, and hiring helpers and apprentices. In this way, many a young man spent 5, 10, or more years learning his trade. And this occurred mainly because under the old system the training of the young was always secondary to the commercial work of the shop.

It was recognized 100 years ago or more that children could be taught reading, and writing and arithmetic much better and more quickly in a school than in the home, because parents are generally too busy with housework and business to give the necessary time. The result today is a public school in every township, and the public school has come to stay.

Beginning about 30 years ago, it was recognized that the dairy industry was of sufficient importance to the state of Wisconsin, to

warrant establishing a special school for the training of butter makers, cheese makers, ice cream makers, etc. It was recognized that these men could more quickly become efficient and capable workmen by attending the Dairy School than if they had to get all their training in commercial factories and creameries. It was recognized that very few cheese makers or butter makers have the time or the inclination to teach helpers as rapidly as possible, but many good helpers are kept busy doing the routine cleaning and scrubbing and get little opportunity to learn the more important parts of the work.

At the dairy school equal emphasis is put on all parts of the day's work, from scrubbing the floor to inspecting the milk, judging and testing the cheese or butter, and figuring patrons' payments.

The dairy school student becomes equally familiar with all the different tests, with the making of starter, milk inspection, different kinds of curd mills, separators and machinery of all kinds. He learns how to set up and repair any part of his factory equipment.

He is taught the reasons why each step of the work is done in a certain manner, and he learns several ways of doing each part of the work, so as to be ready for emergencies.

Since the Wisconsin Dairy School was founded, over 3800 students have attended its annual Winter Dairy Courses of three months, and these young men and a few young women, have gone out into practical work all over this state and the United States, and many foreign countries. Several of the Dairy School graduates are now Dairy and Food officials in different states. Many of them are managers of large commercial plants. A number of them are instructors in other Dairy Schools in some of the newer dairy states.

The success of the Dairy School method of teaching has led to the extension of the plan to other occupations on an enormous scale throughout the country. In 1911, the legislature of our own state passed a law requiring all cities of 5000 population or more to establish vocational schools where men and women too, can learn a great variety of occupations. Forty-eight cities in 33 counties in Wisconsin now have such schools. Over 50,000 people in Wisconsin are attending them this year. Right here in Milwaukee, thousands of young men are learning machine shop work, foundry work, forge work, pattern making, carpentry and the steel square, sheet metal work and drafting, plumbing, electrical wiring and construction, printing, office work, etc., in these free schools. A fine bakery school is conducted here in Milwaukee. And let us remember that all these 50,000 people attend these schools for the same reason that Dairy students attend the Dairy School, which is that they can learn the necessary facts, and get the information about all parts of their business quicker and in many cases better, at the school than by work as a factory helper.

Besides the teaching of students, the Dairy School conducts experiments along practical lines, and often the students are permitted to assist in this work and profit thereby.

These two great enterprises, the Cheese Makers' Convention and the Wisconsin Dairy School, established so many years ago, have proved

their worth and have taken the lead over all similar cheese conventions and dairy schools in any part of the country.

I urge every cheese maker who is now a member of our state Cheese Makers' Association to advise every licensed maker of his acquaintance to attend and take part in next year's convention and to send his cheese; and to advise every factory helper of his acquaintance to attend the Winter Dairy School at Madison, after he has worked one or more seasons in a factory.

The Dairy School and the convention exert a wide influence reaching every corner of the state, lifting the standards and the ideals of the makers in the factories and bringing the young men now working as helpers, on whom the future of the industry depends, more quickly to take their place as skillful and reliable cheese makers.

The Wisconsin Dairy School offers to all experienced cheese makers special opportunities every year to attend the Winter Dairy Course of 12 weeks beginning about November 1, and thus review and bring their knowledge up to date. Brick cheese makers should arrange to come to Madison on January 10.

The one-week course for factorymen about Feb. 1 of each year affords the opportunity for any maker to come to the school for a few days, and study any one subject in which he is particularly interested, such as starter making, cheese moisture testing, cheese judging, milk inspection, etc.

In addition, a one-week course for Swiss cheese makers was held in Monroe last winter during February, and we had 40 students in attendance in 1920.

The Winter Dairy Course at Madison, from Nov. 1 to Feb. 1 of each year, gives to cheese makers the most extensive and thorough course of instruction, both practical and theoretical, relating to all branches of the cheese industry, offered anywhere in the United States. Every cheese maker is welcome and is urged to make use of the Dairy School, by taking a course there, by sending cheese for testing, or by writing for information at any time. Let us fully develop and utilize our State Cheese Convention and our Dairy School.

When you go out of this room, read the motto on the back wall. It is for 1921. "Let us make 1921 a **Better Cheese year.**"

PRESIDENT'S ANNUAL ADDRESS

By CHARLES E. REED, Thorp.

Fellow Cheese Maker's, Members of the Wisconsin Cheese Makers' Association: Again we are assembled in convention mainly for mutual education, incidentally for an annual event which we all look forward to.

Some suggestions which have been handed to me throughout the past year, I will put up to you for your honest criticism and consideration. Several makers have asked me, "Why can't we have a uniform statement of returns from all factories, making it compulsory that

all are alike line for line and word for word. One that can easily be figured out by the average cheese factory patron. One that will prove as easily as a simple example on long division does?" I have in my line of work occasion to visit a large number of factories. I fail to find any two of them that have the same printed statement on the regular patrons' pay envelope. All seem to be fair and honest but many are very misleading, and very few can be figured out to adhere to the old adage: "It's a very poor rule that will not work both ways." Some have the factory totals and price gross, and the amount of money due the patron figured from the net price. Others are mere nothing at all; many do not have the totals of cheese sold, etc. I will leave it to you to thresh out; would it not be well for this convention to go on record to have some law passed, if that is not already a power of the Division of Markets; to have a committee of five factory men appointed to pick up different samples of these statements from many different parts of the State. Draft one that would be most fair to all concerned. Then have it made compulsory for every factory to use the same official form of statement. Factory men have told me that in their opinion this wide difference in form of statements causes some of the most unfair competition between neighboring factories. I wish you to take notes of these items and be ready at any time to bring them or others that you may have in mind before the meeting. You will be given a hearing.

I wish to say a few words in regard to the use of the stamp required by the Division of Markets used on your cheese. This stamp is quite large in itself, purposely to be easily read. I have noticed that only a few make a neat job of it. Some are put on crossways, some at an angle, and some are all ways on the cheese. A great many are blotted and blurred. Now if you will stop and think the matter over, this does not add to the neatness of appearance of your cheese. It is an assured fact that neat, well put up packages of food are pleasing to the eye of the consumer, and are more called for than those that are not pleasing to the eye. Don't say you haven't time to place the stamp on the seam of the bandage in a neat way. The time spent on the neatness of your finished job is always well spent. As to the blot and blur of the ink, remember that cheese when removed from the press is always more or less moist on the surface. Your stamping ink has the same effect that the stencil stamp has on wet boxes, it blurs and is very hard to read. Would it not be a good plan to remove the cheese from the press in the morning, place them on the curing shelves subject to the air for the day, making it a rule to visit the curing room the last thing of your day's work to stamp them. This would soon become habitual and you would see a marked difference in the appearance of the stamp on the cheese. The surface of the cheese being somewhat dried, the ink would not have such a tendency to blur.

Another suggestion is to have more Dairy Boards of Trade; one each in as many places in the State as the output of cheese from the different sections will warrant. How is it that one board of sales with only a few pieces offered, makes the market for all of Wisconsin's

three-fourths of all the cheese made in the Union? This does seem to be a queer situation. Why not have boards in at least ten different places in the State, and a law enacted making it compulsory that all cheese be sold on the nearest board at open sale. This would put the selling of cheese on a fair basis, and have a tendency to do away with the idea that some people have always had that the prices are manipulated. But bear in mind that unless the order is made compulsory that all cheese made in the state must be sold on open boards, these proposed boards would be of no benefit to the factories nor the producer or consumer, all of whom are concerned in such questions. I would like to hear the opinion of Mr. O. A. Damrow, Mr. E. A. Rindt and others on this question.

Another suggestion that is in my mind is the idea of an exhibition booth at the Wisconsin State Fair the coming year. Are you as the membership of the Association in favor of the plan as I will here outline it? A booth rented and made up in an artistic manner bearing the name Wisconsin Cheese Makers' Association. The cheese to make up the exhibition to be furnished by members; same to be sold by our Secretary to be removed at the close of the fair by the purchasers. The proceeds of the sale to be returned to the makers who sent in the cheese, less a certain fee for space rental.

If the members see fit to do so we can have a booth and sell the cheese at the time the iron is hot, give the people a chance to eat more cheese while they have the taste in their mouths. In other words have the goods on sale at the time they are being so widely advertised. And further have some able man to lecture on cheese and its many points of value as a wholesome and nutritious article of food, and perhaps have some cheese recipes in pamphlet form to pass out.

I will not take up more of the time because I know you are all anxious to go on with the program and that each one has some suggestion to make or question to ask in the discussions. Remember the time of discussions is yours and the time is unlimited.

Members, try to be present through all of each session. Visit the supply booths between the sessions. Some of the supply men have said, "We would like to attend the sessions but do not get a chance." Now be liberal, divide your time and give them a chance also. I thank you.

REPORT OF BOARD OF DIRECTORS

By A. T. BRUHN, Spring Green.

Jan. 4, 1921.

We have examined the books of the Secretary and Treasurer of this Association, and found them to be correct.

Signed: A. T. BRUHN
O. A. KIELSMEIER,
RAY A. YOUNG.

It was moved, seconded, and carried that the report be accepted and placed on record.

REPORT OF TREASURER

By Mr. T. A. UBBELOHDE, Glenbeulah.

Mr. President, Ladies and Gentlemen: The only money I handle is what I take in at the door and it is turned over to the State Treasurer, immediately after I get it, so practically I have no report to make. I took in 600 memberships last year at the door and that was turned over to the State Treasurer. All our funds now pass through the State Treasury which does away with my paying it out.

H. J. NOYES, Muscoda

Mr. President, Ladies and Gentlemen: It gives me great pleasure to stand before you once more, as I have attended nearly every convention since the Association began.

I wish first of all to make mention of the wonderful paper we heard first this morning, going over the situation of the times, what they will be, and I believe the gentleman has read the times very correctly. I believe he points out the way straight. And also the wonderful paper our Secretary has read, to give us an incentive to go on and do more and better work than we have ever done. I hope we may go into this convention with a stronger determination to raise the quality of Wisconsin cheese. While we manufacture the largest part of the cheese manufactured in the United States, we have, this last year, in competition with New York cheese, had an opportunity to sell some blocks of cheese against New York cheese and a few times we have lost out. We don't want that. When we put a block of Wisconsin cheese against any cheese made in any state in the United States, we want our block of cheese to stand higher, and when we can do that, we can say to any gentleman in the country, "We manufacture the best cheese in the United States, we have the best cheese makers in the world."

During this convention I hope we can get closer together than ever before. We have hard things to contend with, we have some competition that is unfair, I believe. We have got to meet those things fairly and squarely and stand up for our rights.

We have a good program before us. I will be here and am glad to support this convention, and as our Secretary said, we ought to have more cheese makers here, all 3,000 if you please. We ought to get up a greater sentiment and interest among them, as the cheese industry is the largest in the state. We have a Dairy School, and many other things which will help us. I thank you.

SECRETARY'S REPORT

By J. L. SAMMIS, Madison.

The last Annual Convention of our Association was notable for growth in all departments.

The total membership of the Association in 1919 was 538, and in 1920 was 772. The number of cheese exhibits in 1919 was 177, and in 1920 was 273. The number of prizes awarded in 1919 was 91, in 1920 was 138, and this year the number of prizes offered is 185. The increased demand this year for booth space made it necessary to place some booths in this audience room, and next year more space will be provided.

The total amount of money received and disbursed in connection with the 1919 Convention was \$5,764, and in 1920 was \$8,055. The books of the Secretary are carefully compared with the State Treasurer's books at the State Capitol in Madison. The Secretary's books are also audited by the Secretary of the State Board of Public Affairs at the Capitol, and audited by the officers of the Association just before the convention opens. The complete statement of all funds handled is printed in the annual report, so that anyone can check it.

This Association raises money only to pay the necessary expenses of running the Convention, and to offer prizes for the best cheese exhibits. We aim to hold our expenses and charges for booth space and advertising as low as possible. We have no money in the treasury to donate to anybody, as we raise only enough money each year to pay our estimated costs.

The purpose of the Convention is and always has been purely educational. We consider that the commercial exhibits of the various business firms in the booths are educational, and serve to show to our members all the new wrinkles brought out each year in factory equipment, supplies, etc. The cheese exhibits and the programs are educational.

The convention grows and prospers each year because it is planned for the benefit of all cheese makers throughout the state. Here we may discuss all matters of general interest to cheese makers, and to our state's cheese industry. As a result, we find that everybody is ready and willing to help make it a success. Your Secretary urges every member to send in any criticisms or suggestions which may be used to improve our next Convention.

First among the generous gifts which help to support the Convention is the \$600 state aid which we receive each year from the legislature. Next, the citizens of Milwaukee and the Milwaukee Association of Commerce give us the use of this fine Convention Room, heated and lighted, free of charge, and we are very grateful and appreciative for this. This year the Butter, Cheese and Egg Journal gave us free a full page cover ad, and generously offered to print our Convention program for us at

the actual cost of printing, without making any charge or profit. Their price was lower than any other printer's bid on the job. They also print each year a complete list of exhibitors, scores and prize winners, for free distribution to you on the last day of the Convention. Our official organs are the Sheboygan County News, and the Butter, Cheese and Egg Journal, and these with several other papers read by cheese makers have given us free space for advertising the Convention.

In the 30 exhibit booths, you will meet liberal friends of the Convention who bring their goods here to show you, and help make the Convention attractive. You have already seen in the program the names of 90 firms which give us advertising, and the multitude of friends who donate most of the 185 prizes for fine cheese this year.

There are many more friends of the industry throughout the state who will next year be glad to give us further aid, as soon as the opportunity is called to their attention. Among the new features this year are prizes offered by the Live Stock Breeders' Association, and by banks in the leading cheese counties. A number of other firms this year have offered prizes of a new class, which we call post-office prizes, for cheese sent to the Convention by all makers who get mail through the post office in a certain town. All these and other classes of prizes offered in increasing numbers each year will help to attract more members, so that we confidently hope in the near future to have the majority if not all of the 3000 cheese makers in the state attending our Conventions and exhibiting cheese here.

To attain this purpose, and attract all the makers in the state, this Convention must remain what it always has been, strictly educational in its character. If we should change our aims and methods so as to become a trade convention or a convention to boost the private business of our members only, we should at once be in danger of losing the state aid which the legislature gives us, and the free use of this Convention Hall, now so freely donated to us by the citizens of Milwaukee. We should lose a great part of the donations, prizes and backing now given to us by commercial firms of all sorts throughout the state. Recent events have brought out this fact.

The outlook for the future is bright. The past 29 years' history of our Association and its steady growth is sufficient guarantee of its continued usefulness and prosperity along the broad educational lines laid by its founders. The room we are now in seats only about 750 persons, and next year we will probably be obliged to go up stairs in the larger Plankinton Hall, where 1000 members can be seated at one time. In that case both of these two rooms on this floor may be filled with commercial booth exhibits.

In the efforts of this Association to interest and attract every one of the 3000 Wisconsin cheese makers to attend our conventions, there is no greater or more important factor than the influence of each member's words and enthusiasm upon his friends in other factories.

You can depend on your officers, whoever they may be, to boost with all their power, but the real, speedy growth of the Convention depends

more on the words, efforts and influence of each of you who now attend than upon anything your officers can do.

Will you all boost for next year when you get home? If you get anything good out of your Convention, will you urge others to come for their own good? We want every Wisconsin cheese maker here at our 30th Convention next year. Shall we have 1000 good boosters for the coming year throughout the state, and will you be one of them?

SECRETARY'S FINANCIAL STATEMENT, JULY 1, 1919, TO JULY 1, 1920

By J. L. Sammis, Madison.

Association Account with State Treasurer. Receipts.

1919			
July 1	Balance in State Treasury.....	\$1,111.39	
July 1	State Appropriation.....	600.00	
1920			
Jan. 12	Deposited Membership Fees from T. A. Ubbelohde....	610.00	
Jan. 12	Deposited Membership Fees from J. L. Sammis, etc.....	95.00	
Jan. 12	Deposited from Donation-Program fund by J. L. S.....	103.00	
Apr. 14	Deposited from Donation-Program fund by J. L. S.....	400.00	
Dec. 13	Deposited balance from Donation-Program fund by J. L. S.....	369.63	
Total	\$3,289.02	

Association Disbursements from State Treasury.

1919			
Sept. 20	H. A. Kalk, Expense, director's meeting	\$ 5.92	
Oct. 29	State Printer, Annual Reports (600).....	166.06	
Sept. 20	J. Karlen, Jr., expense, director's meeting.....	9.86	
Sept. 20	O. A. Kielsmeier, expense, director's meeting.....	7.37	
Sept. 20	T. A. Ubbelohde, expense, director's meeting.....	5.68	
Sept. 24	Postage stamps.....	20.00	
Sept. 24	C. E. Reed, expense, director's meeting.....	17.59	
Sept. 24	State Printer, annual report envelopes.....	3.21	
Sept. 24	Postage on annual reports.....	16.14	
Dec. 26	Schwaab S., and S. Co., 600 badges.....	97.65	
Dec. 26	Convention premium chairs.....	144.00	
Dec. 26	Abel and Bach, prize hand bags.....	92.50	
Oct. 28	Milwaukee Auditorium rental.....	165.00	
Nov. 1	Netherwood Printing Co., rubber stamps.....	16.78	
Nov. 5	W. C. Thomas, diplomas, tickets, tags, envelopes.....	52.49	
Nov. 8	Louena Findorff, revising mailing list.....	7.25	
Nov. 19	Postage convention programs.....	110.00	
Dec. 2	Postage convention programs.....	15.00	
Nov. 4	500 printed certificates, State Printer.....	1.96	
Dec. 23	4,000 entry blanks, 1,000 score cards, 250 gummed labels, 3,500 placards, 500 No. 10 envelopes, 500 manila en- velopes	31.63	
Dec. 28	Butter, Cheese, Egg Journal, 1 page ad.....	20.00	
Dec. 28	Green County Herald, ½ page ad.....	20.00	
Dec. 28	Sheboygan County News, 24-inch ad.....	7.20	
Jan. 9	Milwaukee Auditorium, booths, etc.....	498.41	
Jan. 9	J. W. Cross, Supt. of exhibit.....	50.00	
Jan. 9	Chas. E. Reed, convention expense.....	34.29	
Jan. 9	A. T. Bruhn, convention expense.....	16.76	
Jan. 9	J. D. Cannon, convention expense.....	21.56	
Jan. 9	T. A. Ubbelohde, convention expense.....	40.33	
Jan. 9	T. A. Ubbelohde, treasurer.....	50.00	
Jan. 9	Alex Schaller, cheese judge.....	15.00	
Jan. 9	W. F. Hubert, cheese judge.....	15.00	
Jan. 9	J. L. Sammis, secretary.....	400.00	
Jan. 9	J. L. Sammis, convention expense, etc.....	197.56	
Jan. 9	Office Specialties Co., typewriter rent, etc.....	4.60	
Jan. 29	State Printer, 300 receipts, bound.....	3.26	
Feb. 29	L. Schwartz, convention report balance.....	90.00	
Mar. 3	A. L. Cross, convention photographs.....	8.00	
Mar. 31	State Printer, 2,000 letterheads and envelopes.....	17.08	
Apr. 29	State Printer, 800 circular letters.....	4.85	
Balance in treasury.....		789.03	
Total	\$3,289.02	

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, and the balance 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.

Cash Prizes Received from

H. J. Noyes & Son, Muscoda.....	\$ 5.00
Stoelting Bros., Kiel	20.00
C. A. Straubel Co.....	48.00
De Laval Separator Co.....	15.00
Plymouth Cheese Co.....	10.00
Fairmont Creamery Co.....	30.00
C. E. Blodgett Co., for chair.....	25.00
C. E. Reed, Thorpe.....	10.00
Sheboygan Dairy Products Co.....	62.00
A. H. Barber Cheese Co.....	25.00
Pauly and Pauly Cheese Co., for chair.....	25.00
Jos. Dusek Co., Chicago.....	25.50
John Kirkpatrick, Richland Center.....	10.00
Sharples Separator Co.....	40.00
S. D. and J. D. Cannon.....	15.00
F. C. Westphal, Randolph.....	10.00
Wis. Cheese Factory Supply Co.....	7.50
Marty, Gempeler Co., Monroe.....	5.00
Wis. Dairy Protective Association.....	50.00
Brillion Iron Works.....	10.00
Neenah Cheese and Cold Storage Co.....	25.00
Cheese Producers' Federation, Plymouth.....	15.00
Kraft Bros. Cheese Co., Plymouth.....	35.00
Winnebago Cheese Co., Fond du Lac.....	10.00
Viking Rennet Co., Juneau, Wis.....	50.00
Central Wisconsin C. B. & D. Association.....	5.00
Kielsmeier Co., Manitowoc.....	30.00
Ripon Produce Co., Marshfield.....	20.00
Received from Gressenbach & Son for Cheese.....	3,030.16
Received from J. W. Cross for cheese.....	26.25
Received from cheese sale.....	6.18
Received from cheese sale.....	6.30

Received from Program Enterprise

C. E. Blodgett Co., Marshfield.....	12.00
Grunert Cheese Co.....	6.00
Marschall Dairy Laboratory.....	12.00
Republican House	12.00
Butter, Cheese and Egg Journal.....	12.00
Schwaab Stamp and Seal Co.....	6.00
Brodhead Cheese and Cold Storage Co.....	6.00
Sheboygan County News.....	12.00
Kiel Woodenware Co.....	12.00
Plymouth Cheese Co.....	12.00
Winnebago Cheese Co.....	6.00
Brillion, Iron Works.....	6.00
Vilter Mfg. Co., Milwaukee	12.00
Kielsmeier Co.....	12.00
A. H. Barber Creamery Supply Co.....	12.00
De Laval Separator Co.....	12.00
Manitowoc Plating Works.....	12.00
Fairmont Creamery Co.....	12.00
C. A. Straubel Co., Green Bay.....	12.00
Oakes and Burger, Cattaraugus.....	12.00
Hunter, Walton & Co.....	12.00
Jalco Motor Co., Union City, Ind.....	12.00
Carl Marty & Co., Chicago.....	12.00
Stoelting Bros. Co., Kiel.....	24.00
Sheboygan Dairy Products Co.....	6.00
Elliott and McGarraghy, Chicago.....	6.00

Colonial Salt Co., Chicago.....	6.00
Iwen Box and Veneer Co., Shawano.....	6.00
Eagle Chemical Co., Milwaukee.....	12.00
A. H. Barber Cheese Co., Chicago.....	12.00
Joseph Dusek Co., Chicago.....	12.00
Pauly and Pauly, Manitowoc.....	12.00
Lincoln Box Co., Merrill.....	12.00
Juneau Boiler Works.....	12.00
J. S. Hoffman Co., Chicago.....	12.00
Northern Wisconsin Produce Co.....	6.00
John Kirkpatrick, Richland Center.....	6.00
Woodland Box Co.....	6.00
Milwaukee Hotel Association.....	12.00
Standard Oil Co., Milwaukee.....	12.00
Wisconsin Dairy Supply, cover page.....	17.00
R. Gerber & Co., Chicago.....	6.00
"Nafs", 54 Washington Blvd., Chicago.....	6.00
Plymouth Refrigerating Co.....	6.00
Reinhold and Meyer, Plymouth.....	6.00
Refrigeration Sales Co., Milwaukee.....	12.00
Mojonnier Bros. Co., Chicago.....	12.00
Creamery Package Mfg. Co., cover page.....	17.00
Lewis Mears & Co., 127 Reade St., N. Y.....	6.00
H. C. Liebszeit, Plymouth.....	12.00
Kraft Bros. Cheese Co., Plymouth.....	12.00
Wisconsin Cheese Factory Supply Co., Marsfield.....	6.00
Chris Hansen's Laboratory, Milwaukee.....	12.00
D. and F. Kusel Co., Watertown.....	12.00
Parke, Davis & Co., Chicago.....	12.00
Fairbanks, Morse & Co., Chicago.....	12.00
Milwaukee Dairy Supply Co.....	12.00
Armour and Co., Chicago.....	12.00
Sharples Separator Co., Chicago, cover page.....	17.00
Milwaukee Corrugating Co.....	12.00
Wisconsin Pure Culture Co.....	12.00
J. B. Ford Co., Wyandotte.....	12.00
J. G. Cherry Co., St. Paul.....	12.00
H. L. Mueller, Sheboygan.....	6.00
Neenah Cheese and Cold Storage.....	12.00
Universal Oxygen Co., Sheboygan.....	6.00
Van Tilburg Oil Co., Minneapolis.....	12.00
Viking Rennet Co., Juneau.....	12.00
Wm. J. Haire Co., Boston.....	6.00
Lehmaier, Schwartz Co., New York.....	12.00
C. L. Santee Agency, Fond du Lac.....	6.00
Conley Foil Co., New York.....	12.00
L. O. Rehm, Kiel.....	6.00
Torsion Balance Co., New York.....	12.00
Quincy Market Cold Storage Co., Boston.....	6.00
San-O-Lav Sales Organization, Plymouth.....	6.00
R. L. Frome Mfg. Co., Sheboygan.....	12.00
Office Specialties Sales Co., Milwaukee.....	12.00
Damrow Bros. Co., Fond du Lac.....	24.00
Dix Printing Co, Fond du Lac.....	6.00
Refund on statement No. 101.....	12.41
Refund from expense account, W. F. H.....	5.00
Refund of express charges.....	.57
Donation from friend.....	127.00

Booth and Space Rentals at Convention

Marschall Dairy Laboratory, Booth 19.....	35.00
Sharples Separator Co., Booths 27-28.....	70.00
A. H. Barber Creamery Supply Co., Booth 18.....	45.00
De Laval Separator Co., Booths 20-21.....	70.00
Manitowoc Plating Works, Booth 23.....	35.00
Chris Hansen Laboratory, Booth 14.....	35.00
Damrow Bros. Co., Booth 1.....	45.00
Stoelting Bros. Co., Booth 15.....	35.00
Eagle Chemical Co., Booth 5.....	35.00
Milwaukee Dairy Supply Co., Booth 2.....	35.00
Creamery Package Mfg. Co., Booth 16.....	35.00
Milwaukee Corrugating Co., Booth 24.....	35.00
D. and F. Kusel Co., Booth 22.....	35.00
Parke, Davis & Co., Booth 4.....	35.00
Office Specialties Sales Co., Booth 13.....	35.00
J. B. Ford & Co., Booth 17.....	35.00
J. G. Cherry Co., Booth 3.....	35.00
Viking Rennet Co., Booth 25.....	35.00
Dalton Adding Machine Co., Booth 26.....	35.00
Rexine Co., Sheboygan, Booth 12.....	35.00

Frint Motor Car Co., Space 6 and 7.....	70.00
Security Food Co., Booth 8.....	35.00
Toledo Scale Co., Table space.....	10.00
Cloverland, table space.....	5.00
B. F. Randall, table space.....	5.00
Creamery and Milk Plant Monthly, table space.....	5.00
Chas. Ahlowed, table space.....	5.00
Kimballs Dairy Farmer.....	5.00
C. L. Santee Agency.....	5.00
Hoard's Dairyman.....	5.00
Total	\$5,639.10

Disbursements from Donation-Program Fund

Distributed by checks to exhibitors for prizes and cheese sales. (See printed list of exhibitors).....	\$3,673.07
Program and Convention Expenses Paid	68.58
Dix Printing Co., 3800 programs.....	420.10
C. E. Reed, President.....	50.00
Fred Marty, cheese judge.....	15.00
J. D. Cannon, cheese judge.....	15.00
Express on moisture ovens to Milwaukee.....	4.72
E. L. Aderhold, convention expense.....	12.82
W. F. Hubert, convention expense.....	25.70
Ray A. Young, convention expense.....	20.80
Fred Marty, convention expense.....	24.30
Fred R. Ueberlohde, convention expense.....	27.88
Wm. Waterstreet, convention expense.....	17.76
H. A. Kalk, convention expense.....	9.72
H. L. Naumann, convention expense.....	10.24
H. J. Noyes, convention expense.....	21.73
Van Tilburg Oil Co., refund on advertising balance.....	7.00
J. C. Grieb, express on prize chairs to winners.....	6.13
H. C. Davis, convention expense.....	12.00
Express on cheese to convention.....	3.35
Alex Schaller, convention expense.....	19.48
Prof. Geo. C. Humphrey, convention expense.....	11.22
O. A. Kielsmeier, convention expense.....	20.00
210 mailing tubes for diplomas.....	3.15
Postage on diplomas.....	18.00
Frank Schujuhn, convention expense.....	10.16
Jacob Gempeler, Jr., convention expense.....	13.40
L. Schwartz, convention report.....	40.00
Oakes and Burger, refund.....	12.00
W. S. Walsh, refund.....	1.00
Jan. 12 Donations paid to State Treasurer.....	103.00
Apr. 14 Donations paid to State Treasurer.....	400.00
Dec. 13 Paid to State Treasurer, balance.....	369.63
Total	\$5,639.10

ADVERTISING DAIRY PRODUCTS AT HOME

By J. FRED THOMAS, Milwaukee.

Secretary of the Wisconsin Dairy Council

Cheese makers and friends, I want to call your attention to the fact that the Wisconsin Dairy Council is an educational organization, operating in your state to increase the consumption of the different dairy products. We have an exhibit back here in the corner that will show you in a few minutes time much more than I can tell you talking to you for several hours. So I invite all of you, cheese makers and students in the Dairy School, to come and study the exhibit.

You will see the model less than 3 inches tall, that represents the 3.8 lbs. annual per capita consumption of cheese in the United States, while the average consumption of cheese in Switzerland is 26.4 lbs. and in the exhibit is 20 inches tall. Why is it that the American people

are not cheese eaters? Simply because they haven't been educated to eat cheese. Lots of people think cheese is something to eat with pie. There is the old saying, "Apple pie without cheese is like a kiss without a squeeze." We have got to tell the people the facts about cheese. As long as you make cheese and put it in cold storage and expect somebody to come and get it, you will always have a low consumption of cheese.

When we consider that one pound of cheese is equal to a gallon of milk in the concentrated form, we begin to realize that there is something to cheese. One pound of cheese is equal to two and one-half pounds of steak, and when you study the difference between them, you will find the cheese much better than the steak. In cheese you have no refuse at all, in beef steak you have about 15% of refuse. The protein in cheese is 25% but meat only about 15%, and the protein in cheese is much better than the protein you find in meat. The experiment station has told us many times about the protein in milk. We have in cheese 33% of butter fat, and in steak we have only 15% and sometimes less than that. Cheese contains from 30 to 35% of moisture and your beef steak, 50 to 60%. Cheese contains 3.8% of mineral matter and your steak, .7%.

Many of the people of the United States are meat eaters, and haven't become educated to the food value of cheese. The average annual consumption of meat in the United States is 195 lbs. per person, 50 times more than that of cheese, yet one pound of cheese is equal to two and a half pounds of steak. If the people only realized this difference, they would be using more cheese, but they don't take the trouble to find out. So it is up to some organization to let the people know some of these facts and that is what the Wisconsin Dairy Council is trying to do. We expect that the advertising we put out will reach a majority of the people, and you cheese makers are the men who have got to bring the problem to the consumer. We have got to have the co-operation of the cheese makers, the cheese dealers and the supply men in putting across this advertising.

I dare say a majority of the people in this room have never seen any advertising of cheese, and yet at any time you can take up papers or see bill boards advertising the value of Spearmint gum. The spearmint gum people have spent, in the last three years, \$23,000,000 in advertising gum, and what have they got to tell? "It aids digestion, purifies the breath, sweetens the teeth." The Dairy Council of course is working to educate the people to the fact that they should use more cheese, and if you men will put up the money, we can do it. In 1918, the cheese industry of Wisconsin, representing a good many million dollars, put \$140 into the Wisconsin Dairy Council. This last year, 1920, they put in \$392. How far is \$392 going to advertise your product? We have got to do more than that. But I am not going to blame you cheese makers for that. You are making the cheese for the farmer who is reaping the majority of the profits. But here is a thing you can do. When you make your new contract with your farmers for making their cheese next year, you can have it in that contract that

they support the Wisconsin Dairy Council and help advertise the product you are making. Boost your own business and get it on a higher plane, so that you are head and shoulders above the other fellows. Then the cheese industry will pick up, but you can't sit idly by and let George do it.

I am putting out what we call an associate membership to the Wisconsin Dairy Council. We are going to let you join the Wisconsin Dairy Council for \$1 to the man that is just making cheese. To the man who owns a cheese factory, the membership will be \$2 and then one cent for each 100 lbs. of cheese manufactured in 1920. In that way we will be able to raise enough money in this state to put cheese where it belongs. But without your co-operation the whole thing fails, because one man or a dozen men can't call upon the 2700 cheese factories in this state and secure enough memberships to keep the advertising going. Last year the Wisconsin Dairy Council had 130 creameries members, and we have 110 more in line for next year. We had 50 cheese factories in 1920. How many cheese factories are we going to have in 1921? We ought to have at least 1,000. Without your co-operation, gentlemen, we can never expect it. I want to say to every one of you here, you must help us.

The Wisconsin Dairy Council in the last year have distributed 300,000 of those different pamphlets in the state of Wisconsin. We also put up 2,000 posters. Our representatives have attended at least 40 Breed Association picnics, county picnics and different meetings and talked of the food value of different dairy products. We have had our material at at least 35 county fairs in the state. We had an exhibit at the State Fair, at the Milwaukee Food Show, at the Bankers' Convention, and we have an exhibit here. Over in Waukesha we put on a county-wide campaign. We put posters in every school, we gave prizes to children who wrote the best essay on the value of dairy products. That was possible because the Waukesha County Farm Bureau was willing to put up the money. Rock County expects to do the same. We would like to carry that campaign to every county in the state. If your county has \$500 or \$600 to spend in advertising, we are willing to help. I want to secure your co-operation and want you to take the word home to your farmers.

BUREAU OF MARKET REPORTS

J. B. McCREADY, Fond du Lac.

Mr. President: It sure pays to advertise. I want to tell you that you are not doing your share, when you are using only four pounds of cheese per capita in the United States. We use over a hundred pounds of cheese a year in my family. I have a wife and one child, and they told me we were going to kill that baby girl at two years.

Uncle Sam has got something here to give away. I want to call your attention to the significance of these cards. Some of you no doubt are already receiving reports of the Bureau of Markets from our Fond

du Lac office. The daily report of the different distributing markets like New York, Philadelphia and Boston, shows the principal receipts of cheese at the present time. The weekly cheese review gives you a review of the cheese situation throughout the country for the week, and should be in your hands every Wednesday.

On the reverse side of this report is shown the amount of cheese carried over in Wisconsin, cheese in private storage and public storage as well as the amounts received. These figures are mighty interesting. In a few days we will issue a report for the entire year showing the high and low point of production.

These reports are for you, but you have got to ask for them, and if I am not here at the desk all you have to do is to fill in one of these cards. A good many of you that are on the list will receive a circular from our office enclosing a card and if we don't receive that card back in two weeks you will be taken off the list. Be sure to request them again for next year. Those that are not receiving them, just come up and help yourself.

CHAIRMAN: We will adjourn this meeting. The afternoon session calls at 2:30 and you are all invited and urged to examine this piece of cheese. How many are in the habit of sticking their trier into a cheese to reduce bloat?

APPOINTMENT OF COMMITTEES

MR. CHAIRMAN: I will appoint on the Legislative Committee the following members: J. D. McCready, A. J. Noyes, J. D. Cannon and Secretary Sammis ex-officio member; on the Resolutions Committee, A. T. Bruhn, W. F. Hubert and O. W. Schwantes.

MR. MCCREADY: I would be very glad to act if I dared to, but in my position I do not dare to.

MR. CHAIRMAN: Sometime during the afternoon, then, or tomorrow I will appoint another member in the place of Mr. McCready, if his position prevents his acting. (Later, Mr. J. H. Howe of Antigo was appointed).

The first number on our program for this afternoon is "Why and How to Organize New Counties" by J. B. Linzmeyer, but there has been a little change made in this on account of Mr. H. C. Larson of the Wisconsin Butter Makers' Association being unable to take his place at the latter end, and therefore we will transpose these two. Mr. Larson's subject is "The Reorganization of the Butter Makers," but that is not the point wanted. What we wanted of him is to come over here to give us in a short, brief talk in a few minutes some of the things that the Butter Makers' Association is doing. The only way we can find out what the Butter Makers are doing is either to listen to their representative or go to their convention.

THE REORGANIZATION OF THE WISCONSIN BUTTER MAKERS' ASSOCIATION

By H. C. LARSON, Secretary, Madison.

Mr. President, Members of the Wisconsin Cheese Makers' Association, Ladies and Gentlemen:

When your worthy Secretary invited us to address you on the subject of the "Reorganization of the Wisconsin Butter Makers' Association" we were not just sure that a discussion of that subject would be of value to you as cheese makers. However, upon more careful consideration, we became convinced that fundamentally the butter makers and cheese makers interests were identical, and that what was good for the butter maker is also good for the cheese maker.

To be of real and lasting value to those who form an association and to the interests they represent, such an association must originate and be brought about because of an absolute need. That there was a need for a butter makers' association, organized as the Wisconsin Butter Makers' Association is now organized, there is not the slightest doubt. We have seen the creamery butter business of the state develop from an annual revenue of about \$8,000,000 to over \$53,000,000. Our close association with the creamery business of the state as a butter maker, salesman, and while connected with the Dairy and Food Commission, altogether covering a period of nearly thirty years, has afforded us great opportunity of becoming acquainted with the real conditions under which butter is manufactured; and we are forced to admit that there are many very bad conditions at our creameries, and a great deal of inefficient work on the part of altogether too many butter makers in our creameries. There is not a person in this or any other state that knows anything about the creamery butter business who does not know that what I have just said is true. The bad conditions in our creameries, and especially the inefficient work on the part of the butter makers, is costing the dairy farmers of Wisconsin enormous sums of money annually.

To appreciate the proportion of this inefficiency one has but to read Professor Farrington's address at our annual convention meeting last November, on the subject of "Some Creamery Losses." We could recite many cases of inefficient work on the part of the butter makers, but will illustrate our point with the following only. Take for example the question of overrun. You understand that in manufacturing butter the term "overrun" means the difference between the fat content of a given quantity of milk and cream, and the amount of butter manufactured. Under present standards, a butter maker can easily obtain a 20 per cent overrun, and do honest weighing and testing. To obtain anything short of a 20 per cent overrun may properly be termed inefficient work. We have just recently checked up some butter makers who have taken charge of creameries where incompetent or inefficient

butter makers had been operating. In one case the overrun obtained by the inefficient butter maker never exceeded 12 per cent and at times was found to be as low as 8 per cent. Just here we will state that a butter maker who does not obtain an overrun of over 12 per cent cannot be trusted to do efficient work in any respect. A new man was put in charge of this particular creamery, and he has obtained an overrun exceeding 20 per cent for every month that he has been in charge. It was learned that this creamery received about 90,000 pounds of fat a year. The inefficient butter maker using the maximum overrun obtained as a basis for figuring, manufactured 100,800 pounds of butter out of 90,000 pounds of fat; and on the same basis of figuring the efficient butter maker would have manufactured 108,000 pounds of butter or 7,200 pounds more, which at the average Chicago price 1919, to July, 1920, was a little over 61 cents per pound, and would in that case amount to a loss of \$4892.00 in the one case, and in the other case a saving of \$4392.00.

Another case where 220,000 pounds of fat were received at the creamery for the year, the largest overrun obtained was 14 per cent, and on the same basis of figuring, such inefficient work represented a loss to the creamery of \$8052.00 or through efficient work, a saving of like amount.

In February, 1901, the Wisconsin Butter Makers' Association was organized, and the association has held annual meetings ever since. Good programs have been arranged, and able speakers have been provided for those annual meetings who have discussed and re-discussed the problems of the creamery butter making business. These annual meetings always wound up by the adoption of a fine set of resolutions but that was about as far as it went because when the annual meetings closed, the work of the association stopped until the next annual meeting. The association had no means of working in an organized way among the butter makers through the year. Many of the butter makers felt the need of such an organization, however, and at the annual meetings held in 1918 and 1919, the subject of reorganizing the association in such a way that would result in something real and effective was discussed but without result. During this time the Minnesota butter makers realizing that inefficiency among their butter makers was costing the dairy farmers a tremendous amount of money, had seriously considered and in fact had reorganized their association, and had determined through organization to eliminate the inefficient butter maker, and thereby save to the creamery patrons of the state great sums of money.

In February, 1920, at the annual convention meeting at La Crosse the question of reorganizing our association was again brought up and discussed, and as many of our best butter makers were greatly encouraged by what had been accomplished through organization in Minnesota, this discussion resulted in the appointment of a committee of three butter makers, namely, H. B. Hoiberg, Albert Erickson, and R. P. Colwell, to confer with the officers of the Minnesota Association; this committee went into the matter very carefully, and made their report

at a special meeting held at Eau Claire, on June 8th, 1920. They submitted and recommended proposed amendments to the articles of incorporation and by-laws of the Wisconsin Butter Makers' Association which were approved and later were somewhat amended and unanimously adopted at the annual convention meeting held at Madison, last November. As stated in the new constitution the object of the association "shall be to improve and protect the position of the creamery butter maker and manager, and promote the welfare of the dairy industry." And "the association shall employ lawful means only to obtain its object, and especially the following:

"By each member pledging himself to support and abide by the constitution and by-laws of this association." Every member must support and abide by the constitution and by-laws of the association to continue as a member in good standing. And "By establishing and maintaining districts of the members, as provided for in this constitution."

Where about 15 or 20 butter makers can be gotten together a district association is organized. All matters pertaining to the welfare of the creamery and the work of the association in the district are handled through such district associations; always of course in conformity with the constitution, and under the general supervision of the state association. And "By regulating and supervising the apprenticeship and training in creamery butter making and in creamery management."

Sooner or later the good butter makers of today will have to give up their work and the inefficient butter maker must be eliminated, but the work of the butter making will go on. We aim to train young men in the art of butter making and have them ready when the good men drop out and also place them in the position of the inefficient butter maker just as rapidly as is possible. And "By improving working conditions of our members in respect to safety, healthfulness and sufficiency of help."

Many of our creameries are not constructed in a way to be safe or healthful for the butter maker, nor are they suitable for manufacturing of the best quality of butter. It costs too much to take chances in that matter. Again the chances taken by the creamery companies because of insufficient help in many cases are too great. Every creamery should employ sufficient help so that the butter maker could look after all the details of the work with regard to weighing, testing, pasteurizing, and ripening and churning the cream, and working and weighing the butter. Absolutely, daily tests and records should be made and kept especially with regard to the moisture and salt content of the butter. Great losses are experienced every day by not making these tests and in other cases great chances of paying fines may be taken, especially if the moisture content exceeds the limit. We expect to lead the creamery companies to see the importance of all these matters and provide accordingly. And "By obtaining and maintaining the proper relationship between the compensation and the efficiency of our members."

Through lack of appreciation of the value of an efficient butter maker on the part of many of the creamery companies in the state

the butter makers' salary has been much too low. The term **Butter Maker** has not meant much in the past, and we know of many cases as before stated where inefficient butter makers were employed, it would seem for no other reason than because he worked cheap. And because such men who did not care what kind of service they rendered could be employed at low salaries, and the creamery companies were not awake to the situation, these inefficient butter makers really set the salary for the efficient butter maker. When a good butter maker asked for a salary consistent with the kind of service rendered he would be met with the statement that "we can get so and so for such and such a salary, and if you don't want to work for us you can quit." Such experiences as these and a full appreciation on the part of our best butter makers of the value of efficient service, if the cooperative and local creamery companies were to survive was really what lead to the reorganization of our association. Therefore the new constitution provides for absolute efficiency in the operation of a creamery and the manufacture of butter, and for a profit sharing salary. We have always believed in paying for results. We believe absolutely in determining a butter makers' salary on the basis of how much he does and not how long it takes him to do it. The constitution adopted at our annual convention provides for a butter makers' salary of \$100 per month, and one half cent per pound for all butter made during the month up to 300,000 pounds made during the year, providing that no minimum salary shall be less than \$1800 per year. Surely there is a fair amount of service that a butter maker should be expected to render to entitle him to a given salary. Then when that salary is earned, surely it is fair that he should share in the additional profits of the creamery, otherwise he is only like all humanity, he will lose interest. But if the creamery company pays the butter maker \$100 per month and one-half cent per pound for butter made, he is in effect working with the creamery company, and he will never lose interest in overcoming all losses, and will at all times see to it that the maximum amount of butter is manufactured out of every pound of fat received at the creamery. Why? Because he will get one-half cent a pound for all butter made. If such a policy does not result in affecting a butter maker in this way, there is something wrong with his process of reasoning, and really we would hesitate before employing him at any kind of salary. Good salaries don't make good butter makers; good butter makers make their own salaries, and if the cooperative and local creamery companies of Wisconsin are really going to succeed those are the only kind of butter makers to be employed. The association is more than willing; it is anxious to serve the creamery companies of the state. It must serve them; otherwise it will fail. Of course any creamery company in the state may hire any butter maker it desires. Our association is not trying to pull off any union stuff. A union association wants more money for its members. So do we. We are not concerned, however, about how many hours it takes to earn more money, but we are concerned about the kind of service our members render to the creamery companies employing them. We are deeply concerned about the success of the creameries and will insist first, last and all the time, that

our members plan and work for the best interests of the creamery companies. Did you every hear of a set of union men representing any line of work who were worrying about increasing the income of the concerns or companies employing them? No, of course not. But we do. We have got to; that is the big part of our business. We would not be working for our own best interests if we did not work for the best interests of the creameries, because poor creameries mean poor jobs and poor salaries, and good and successful creameries mean good jobs and good salaries.

We want to be perfectly frank in this matter. If a creamery company is employing a butter maker who is rendering efficient service and in whom they have confidence, such a butter maker is absolutely worth the salary provided for in the constitution. On the other hand if he is not rendering efficient service and the creamery company does not have the confidence in him, as a business proposition that creamery company could not afford to employ him at any kind of a salary. In fact, no creamery company has a right to employ such a butter maker, because they have no right to accept the patrons' cream and return to those patrons anything short of what they are entitled to.

What we mean is this: no creamery company has a right to receive from its patrons the fat in the form of milk and cream, and manufacture that fat into butter, and through inefficiency on the part of the butter maker return to those patrons an overrun of 14 per cent, when by employing an efficient butter maker a 20 per cent overrun could be obtained.

Such inefficiency is nothing more or less than criminal, and applies to the creamery company or the creamery board employing a butter maker, who is inefficient as well as to the butter maker himself. We predict that the day is not far distant when such practices will not be tolerated.

We are getting a line on a number of creameries employing butter makers who are rendering inefficient service. And we shall acquaint the creamery owners, and the creamery boards and patrons of those creameries with the exact conditions, and we feel confident that just as soon as they realize the tremendous losses they are experiencing, these matters will be corrected; if they are not corrected, you may depend upon it that those creameries will very soon close their doors. They cannot long meet the competition that they will be forced to meet and continue to put up with inefficient work on the part of the butter maker.

During the last two years the Minnesota butter makers have accomplished great things through the plan of their organization. They have served creamery companies so well that today there is hardly a creamery in that state that will employ a butter maker who does not have the support of the Association and the Association will not support a butter maker who does not make good. Our association is organized along practically the same lines as is the Minnesota association and what the Minnesota butter makers have done for the Minnesota creameries, the Wisconsin butter makers can and will do for the Wisconsin creameries.

WHY AND HOW TO ORGANIZE NEW COUNTIES

By MR. J. B. LINZMEYER, Green Bay.

Mr. President, Ladies and Gentlemen: My subject needs very little discussion. I think it is agreed by most of the cheese makers that every county ought to be organized.

Years ago cheese making was considered, I believe, a profession, but later on it kind of degenerated until it became a job and in some cases a very ordinary job at that, so much so that everybody with very little experience could make cheese. This condition, perhaps, was partly brought about by the greatly increasing demand for cheese with almost a continuous advance in price, and partly by the extreme competition amongst the buyers. But those conditions are changing or have changed, and I think the time is coming, if it is not already here, that cheese making will be not a job, not a profession, but an art.

In view of all the new laws and the new rulings and this changed market condition, I believe it will not be so easy to make cheese in the future, and I think it is not now, as it was in the past. The cheese makers will have to come down to brass tacks and make a little better stuff than they have been making. No doubt, there are going to be a great many bills introduced in this Legislature that affect the cheese business, and if you want to have a voice in the framing of those bills the only way I can see you can do that is by being thoroughly organized. The banks were consulted when laws were considered affecting their business, but the cheese makers were not only not consulted, but in many cases they did not know anything about the laws until they were in force. For instance, this pasteurizing law which you did not know about until it was ready to be enforced. The same with the so-called whey butter branding law. The only way you can have a voice in the framing of the laws that govern your business is to be thoroughly organized.

There is perhaps another reason why you ought to be thoroughly organized. In view of the fact that the prices on farm products have come down very materially recently, the farmers are inclined to think that everything else ought to come down in proportion, but they seem to think that the cheese makers' pay ought to be cut down in proportion to the lower price they have to pay for their milk. What is the fact about the cost of making cheese? With the exception perhaps of cheese bandages, there is but very little that goes into the making of cheese that has come down, and we are informed by the manufacturers and dealers in cheese makers supplies that there is very little lowering of prices in sight. The cheese maker is the nearest to the farmers. He is the handiest man to get at and the easiest to cut down, so he will no doubt be asked to make cheese for less this year than last year. If one factory brings down the price it makes all the factories in that locality come down. But if

some of you, by organized effort, by belonging to an association, work together, you can get someone to come down and explain to the farmers. It does some good and I know in many cases where the cheese maker later on would not be able to get the price that he ought to have without any outside help. Belonging to an association, where you can get the assistance of the association field man if you need him, it is bound to help in a general way. It may not be able to help each one individually, but in a general way it has done a great deal of good.

I think this all goes to show that you ought to be a good deal better organized now than you have been in the past. I think every cheese maker now ought to join the Wisconsin Dairy Protective Association.

REPORT OF CENTRAL WISCONSIN ASSOCIATION

MR. J. G. MOORE, Milwaukee: Mrs. Dix has been sick for a year, but I am in receipt of a letter from her saying that she expected to be here. She was very much improved and that she wanted to stay. She was making her plans for a very successful meeting at Marshfield the 26th of this month. Last year the Central Wisconsin Association voted to become a member of the Wisconsin Dairy Protective Association.

MR. LINZMEYER: I also had a letter from Mrs. Dix asking me to make this announcement: "As it will be impossible for me to attend the convention at Milwaukee, will you announce our coming convention at Marshfield the 26th of January, and extend a hearty welcome to the Protective Association and the Cheese Makers and ask them to send their exhibits and win the value of the prizes offered."

MR. CHAIRMAN: The next is Brown County, E. H. Groth of De Pere. There was no response from that county.

REPORT FROM CALUMET COUNTY

By MR. A. R. VALLESKY, Brillion, President.

This county has stood strong and in the past year has received considerable benefit through its organized effort. The scoring contests held the past year were of great value to the dairy industry insofar as quality and advancement in the manufacturing of cheese is concerned. Mr. Wm. Hubert and Mr. J. Cannon were the judges at these contests and I am proud to state that the exhibits were grand and proved to be higher in quality from time to time. Mr. Wm. Hubert, I would like to have you give your opinion regarding these contests.

MR. HUBERT: I have not given any large consideration to it, but I noticed quite an improvement in the quality of cheese from time to time, yes. The exhibits, if I remember right, improved at each meeting. The audience seemed to be very enthusiastic. One thing

I know, they enjoyed was the very good time in the evening. I happened to miss that. But I am satisfied that the contests did very good work for Calumet County, and I am satisfied the boys took quite an interest in it and I hope they will continue.

MR. VALLESKY: For improving the sound quality, make-up and appearance they were fine. The business men of Calumet County were right there to reward the makers for helping the county prosper, with substantial donations. These donations amounted to close to \$800, probably a little better. The Sheboygan Dairy Market Reporter in one of their December issues showed the complete contest report.

REPORT FROM LANGLADE COUNTY.

By **MR. J. H. HOWE**, Antigo, President.

Fellow Cheese Makers, Ladies and Gentlemen: If I can only get out to you fellows what I have in my head in five minutes we will be going some. I believe, as we have heard, organization is the very best thing in the world, and I don't know any people that it would be more fitting to be organized in the right sense of cooperation and acting in that capacity than this body of men here. When I look at this body of men it gives me great pleasure, but again it hurts me to think that as a body of men holding positions as you do in one of the greatest industries in our state, we have laid down upon our oars and have been sleeping altogether too much, and I believe this is about the proper time to get busy and let us have a little reaction on our part, on the part of the men who have left the job undone. As Brother Linzmeyer stated, we want to get representation in laws confronting us.

Langlade County, as some of you know, is well located for a real, live Cheese Protective Local, because we have the city of Antigo, I believe the largest city in the county, and it is properly located with territory of the cheese country out around that place and a great many factories are tributary to Antigo. The cheese industry has not been very prosperous up to the last two or three years, but now we feel the industry is improving. We have a cheese house there, and in fact we have everything necessary to go ahead and get on the job and be something and do something. Last year, in January, I left the factory and have been out of the game until the latter part of October. I was president of our local and it was turned over to our vice president, and for some reason or other these cheese makers got the idea that they wanted me back, for some reason Langlade County didn't have very many meetings, but when they met I am glad to report we had at least half a dozen makers **who** look to me to have the foundation, the stability to go ahead and do something. I want to say if I have my way Langlade County is going to be on the map in pretty good shape with a good report.

I have been engaged more or less in cooperation and organization among the farmers. In such an important industry, and with people

that are socially and educationally starved—and we ourselves are in that position more or less—if any three of us get together for a good talk we are bound to be benefited. If two or three men can be benefited, how great can that power become in one county, if we all cooperate and suggest ideas to each other. That is going to make us wake up. I believe the main thing in the lack of progress in our organization is the fact we have been isolated.

The next thing is this: I believe that coming together for social cultivation means doing away with one man trying to get the best of the other farmer—deviltry, I guess, would be the proper name for it. That is the way I feel about it. We have come together for a good cause. Cultivate the social side of life. We have come together for the purpose of being educated. It takes continued effort, you and I getting together today, and tomorrow, and being able to give and take. I have got to learn you have a mind, you knock off those rough edges, and I believe there is some chance of our getting together on good, progressive grounds. I can't begin to tell you all the good that results from that.

I know there is some friction. We have had some men—this is hearsay—some representatives of our state or institutions have gone about through the country and have given this Cheese Makers' Protective Association a black eye. If I am hired by the State or any other association and I go out and give something a black eye or throw cold water on it in any way without a just cause, there is something wrong with me. But rather I think of it in this way, if that thing is wrong and I see it is wrong, those men need all the help they can get to correct their faults. They should get that cooperation. Anybody who goes out and throws cold water is barring and hindering the progress of this organization.

I believe the butter makers and the cheese makers should be able to come under one head. Some makers are fearful that it is going to turn into a graft game. That is a very foolish idea. Gentlemen, let us forget it, let us have our Local anyway. That is what Langlade County is going to do. We are going to build up our Local. We are going to try to get every cheese maker in Langlade County in that Local, and then we will be in shape to get on the inside. If we can't right it after giving it a thorough test, we will know what to do because we will cooperate.

REPORT FROM KEWAUNEE COUNTY.

By MR. G. J. BUCHEN, President.

Mr. President and Fellow Cheese Makers: The organization of the Wisconsin Protective Association has, in my estimation, done wonderful things. The Kewaunee Association was organized in 1918, at which time Brother Linzmeyer was with us, and at that meeting I had the courtesy extended to me to become president, and was re-elected as president by courtesy of the boys for the year 1920. But in the fore

part of April I moved from that county and I resigned as president of that organization of Kewaunee, although I am still a member.

We have had in Kewaunee rather an uphill proposition before us. The majority of the cheese makers of Kewaunee County, I am sorry to say, are rather backward—not probably in the line of making their cheese, but in the line of progressing. I take it in the main this organization of the Wisconsin Protective Association is for the purpose of the general good for the cheese industry in general. I think that county has done its share, or at least tried to do what it could, as far as it was possible, for the organization of the Local. The Secretary, Mr. Blahnik, since that time has sold his factory and retired upon the farm. Through his efforts as well as mine, we have tried to impress upon the cheese makers the necessity of an organization, and especially asking the legislature of the state for the repeal of that so-called damnable whey butter law which is yet in force upon our statute books. We have tried to do as much as possible in our county. One of our main efforts was for the repeal of that bill. I myself feel that I have in a way taken an indirect part in asking for the repeal of that bill as in a political way we have beaten one of the men in Kewaunee County who would have gone to Madison and voted for the bill, and I am proud to say our representative in the Senate, Mr. Peterson, did vote for the repeal of that bill, mainly through the request of the cheese makers in the different counties of his district. I also hope that this organization, the Wisconsin Cheese Makers' Association, will take this matter before the legislature this year. It is a necessity to show the members of the legislature that that law, forced upon the industry, should be repealed. It is not right we should have to brand whey butter. I am a butter maker myself. I made butter this last summer, but I have said it before and I will say it now, the cream of whey is better than 75 per cent of the hand separator cream that comes into the creameries and comes into the market. Why not have that branded also as farm hand separator butter?

I would like to see this convention make some kind of an effort in proposing before this next legislature, which will soon be in session, a request asking for the repeal of that law. We are entitled to it. That whey butter is too good a product to have it branded with a brand which is misleading in the eyes of the public.

REPORT OF SHEBOYGAN COUNTY.

By MR. O. A. DAMROW, Sheboygan Falls.

Mr. Chairman and Fellow Cheese Makers: I don't know why I have been asked to give this report because I am not an officer. I am only a private in the ranks.

I am sorry to say Sheboygan County is only about half organized, only about forty or fifty per cent of the cheese makers of Sheboygan belong to the Local of the Wisconsin Dairy Protective Association.

There seems to be a lack of interest. The only thing that seemed to create interest was the September meeting when they started a scoring contest. We should be thankful to the committees and especially to Mr. Hubert for staying in the evening and pointing out the defects, and why each cheese should be scored as it was.

I am not a public speaker, but I want to say this, that tomorrow night there is going to be a meeting and every cheese maker here ought to attend this meeting and hear what our Secretary of the Wisconsin Dairy Protective Association and our local council have to say.

REPORT OF MANITOWOC COUNTY.

By MR. A. R. VALLESKY, Secretary.

Mr. Weyer is absent and I will read the report.

Our county was not asleep, but showed good results, especially in carrying off the highest honors at the National Dairy Show. Through our local efforts the business men of our county have brought in a Post Office prize, contributions amounting to about \$300.00 for our convention here this year.

The members are very enthusiastic, and at the annual meeting elected a board of nine directors to take steps toward a drive which should result in a hundred per cent membership the coming year.

To show how enthusiastic the members are, Mr. J. G. Moore has made arrangements to show the members, celebrating at the County Fair and at the annual picnic, tomorrow evening. (Applause.)

CHAIRMAN: The Southern Wisconsin Association by Mr. Fred Marty. (Mr. Marty was not present at the time.)

CHAIRMAN: Are there any other associations throughout the state who wish to report?

MR. BLANKE: I am no public speaker, but I heard that law has passed for grading cheese. We have inspectors to come around and inspect our work, but I should think we ought to have inspectors to go around and inspect the farmers' barns, because I have found that there is milk going into cheese that is hardly fit to take. A big farmer comes in with a lot of milk and if you don't take it he will take it somewhere else, but as soon as we have to guarantee the cheese, and it should be graded, I think we should have inspectors to go around to the farms. (Applause.)

MR. JINDRA: I think this brother cheese maker should take a little different view on that. I think any man who is a cheese maker should have backbone enough to inspect this milk himself. I think through this organization here we should be strong enough so that the cheese makers can do a whole lot more than the inspectors can. If the milk is not fit to take, reject it, and we will all do the same.

MR. CHAIRMAN: Your idea is to have a local organization and stand by it. I know a factory where seven farmers were prosecuted for unclean cans and the neighboring factory took that milk and the milk hasn't come in since. There is the trouble. Organize, as Mr.

Howe has put it, but stick after you are there, don't back out and think you will get a little bit of advantage over the other fellow.

MR. DAMROW: You just said a minute ago that the milk didn't improve. Did you handle the cheese?

MR. CHAIRMAN: The other products of those same parties has not improved, nor their place nor their premises. And furthermore these patrons and others of this same factory noised it all through the community, what is the use of our patronizing our own factory when we can go to the other fellow. Farm and milk inspection is needed whether you say so or not, and more of it.

REPORT FROM WAUPACA COUNTY.

By **MR. O. D. SCHWANTES.**

MR. CHAIRMAN: I am from Waupaca County, and Waupaca County has been talking more or less about having county inspectors, or instructors rather, under the state inspectors inspecting farms and testing the milk throughout the factories. By giving an inspector about twenty-six factories for the month, he could overcome a lot of trouble and a lot of things which happen between brother cheese makers, causing hard feelings. There are places where nearly fifty per cent of the farmers go by one factory and haul to other factories just because they claim they get higher tests. Is there something to do? That is the question. I know farmers. I have been a cheese maker eighteen years and I know how they worked me—"If you ain't going to give me more test I am going over there, that fellow promised it to me." I feel that the county inspector should always be in the county and report if the farmer brings dirty milk. When he visits the factory once a month he would have time enough to go through the farms. He would not have to go through all the farms every time. I was in Madison and talking about this matter. We have cheese makers called not capable for the work. As a general rule they spoil a lot of cheese, but if you have this county instructor to inspect this cheese coming in every month and going from factory to factory every month they could help a whole lot, and I believe that would be the best way to work this out.

MR. CHAIRMAN: Anyone from any other counties? The Central Wisconsin Association is pretty strong in its territory. It is comprised of part of Marathon and all of Wood, Clark, Chippewa and part of Eau Claire Counties. Is any man from Eau Claire County, Chippewa County or Clark County here who can report on what is done in his county? Wood County. **Mr. Byemers,** what are conditions around your territory?

MR. BYEMERS: I don't think they are any better than they are any other place. They seem to be seesawing back and forth all the time. We find between two factories six miles apart the patrons go from one factory to another.

CHAIRMAN: Can you suggest a remedy?

MR. BYEMERS: Inspector locally in the county.

CHAIRMAN: I think we ought to go on record furthering this movement. It was supported last year and when we get the report of our Legislative Committee for the past year we want to find out whether they have done anything towards this.

MR. MCCREADY: Instructors or inspectors?

CHAIRMAN: Instructors with inspector's power, police power. That was the idea that was brought up last year, and it seems to me more unanimous now and more talk about it than there was then.

MR. CHILKE, Waupaca: We have had quite a lot of trouble with Association testers in our territory, overreading tests. I have got a case in my territory, he didn't have quite his full amount of farmers and I suppose in that way he could get more, so he made the farmers believe I didn't give them enough test. He had one average test of 4.3 and I could only get 3.6. I had Mr. Rindt make another test. This man was a big farmer and he told me I was crazy because the Association man was really right and he went over to the neighboring factory and he took him. If the Protective Association can stop anything like that I would like to see it. I was left alone and I couldn't do anything. That man thought I was wrong, but I was not. I had other cheese makers test that milk too.

CHAIRMAN: Did the idea occur to you while you were testing his sample of milk that that was going on and there might be a kick later? If it did, you might have got help in a hurry if you had sent out to the State Chemist.

MR. MOORE: Did you notify the Wisconsin Dairy Protective Association of that trouble?

MR. CHILKE: No sir.

MR. MOORE: How did you expect to get any help if you didn't ask for it?

MR. GUTTEN: I had the same trouble with the condensary and I let Mr. Weigle know and he paid no attention to it. How about that?

MR. SCHWANTES: I had similar trouble. I wrote to Mr. Weigle about it and I got no answer, so I got the County Attorney to write to him and he hasn't got any answer to it and it is two weeks.

MR. CHILKE: We have some of the officials out there to give the farmers a little talk, and I know we had to pay good and proper too.

MR. KALK: If they had the inspector we have, they wouldn't have any trouble.

MR. BUCHEN: The only inspector I ever called up there was Mr. Larson and I never saw Mr. Larson. I had a patron who was trying to hold milk over in the summer time. I sent that milk home, it was two days old. At the same time I sent word for Mr. Larson to come down. As soon as he got to Luxemburg he said that milk wasn't bad. He got down the line and every farmer along the line knew that Mr. Larson was coming. The next cheese maker took his milk. He belonged to the Association at that and has stayed with it ever since. As far as I was concerned I was a black dog at once. Mr. Larson said I was too severe with that man.

MR. KALK: The inspector in our part of the state wouldn't take a back seat for anybody. He is here to prove it.

MR. THIAS: My neighbor factory only charges 2 cents. What can be done? They paid 66 for butterfat in the month of November, I paid 62.6 and the average price was 2.46.

MR. CHAIRMAN: All of these things you are talking about this afternoon are what are grinding you. They should be thrashed out. While you are in a bunch, do something. Don't forget it, but stick with us.

MEMBER: It is suggested that it is foolishness to report to an official at Madison. I would like to ask what will correct that error? What is the greatest power that will correct that error? True cooperation.

MR. MATSON: I have just one thing to say in regard to an inspector. He has got to have the cooperation of the cheese makers. I found that out when I went to the Dairy and Food Commission. The only way I could accomplish my work was to get the cooperation of the cheese makers, but at the same time if the cheese maker was wrong, I was never afraid to go to him. I feel I would be only a small man if I tried to do the whole thing without the cheese makers. I appreciate the compliment Mr. Kalk gave me a while ago, but I couldn't do it without the cooperation of the cheese makers.

PLANS OF WISCONSIN DAIRY PROTECTIVE ASSOCIATION

By MR. J. G. MOORE.

Mr. President and Cheese Makers: Your Secretary this morning said that there were no doubt many of you here for the first time, and with that thought in mind I am going to repeat a few things I said last year and with which a great many of you are perfectly familiar.

I think it was in 1917, the Wisconsin Protective Association was first organized, to fill a need caused by the increased competition of condensaries. That it did some good along those lines I think is true. Somebody said they would like to see the whey butter law repealed. Two years ago the butter makers appeared at the legislature through their counsel, which cost them a good deal of money, and endeavored by all honorable means to have that law put off the statute books, and through the opposition of the Dairy and Food Commissioner and his assistant, Mr. Lee, they were unsuccessful. Getting together as they did made them feel that even though they were unsuccessful for that particular time, it would be a good thing to be organized for other matters as they came up, and so an association was formed in August of 1919. After we were organized some time it was felt it was going to be too many organizations, and an invitation was extended to the Wisconsin Dairy Protective Association to affiliate with this organization of butter makers and manufacturers, and this was done, and the speaker became the secretary of the organization.

There are about fifteen states in this Mississippi Valley that are so organized with paid secretaries. The average cheese maker is something like a papoose strapped on his mother's back, he doesn't see anything until it has gone by, and so in order to remedy that situation they are employing a secretary to see what is going on in time. I wonder how many of you cheese makers knew that the emergency tariff legislation didn't include butter and cheese? We got a wire and we immediately took it up with our congressmen from Wisconsin trying to get that included. It was too late, but we are informed that the Senate will not probably pass the emergency tariff bill, but after the 4th of March, after the new congress comes in, there will be some tariff legislation. Somebody has got to be on hand to see that dairy products are included. We are all suffering through the importation of foreign products, both butter and cheese. There is just enough coming into the market to depress our market.

It was felt by those who are at the head of your association that it was as yet loosely organized, and through the efforts of our association counsel, Mr. Nohl, who will be here tomorrow afternoon, we all organized into divisions. We have a division for the cheese manufacturer, and here I want to make a distinction. The Butter Makers' Association is composed of employees only, the cheese makers are manufacturers and have as a usual thing their money invested in the business besides. The butter makers are assessing themselves \$15.00 apiece for their dues this year. We also have a division for the butter manufacturers. We have two other divisions, one for the cheese dealer, and they have a meeting tomorrow to see about joining the organization, and I have been invited to attend the Wisconsin Ice Cream Manufacturers' Association convention to lay the proposition before them for them to come into the association as a division, because there are many things coming up which affect the different branches of the industry. They can be properly and more cheaply carried on through one organization.

Last year we had the privilege of this room for our meeting, and we had a very nice attendance. We started in here a little after seven and stayed until after twelve. This year we are determined that we will not be bothered as we then were, and no one but members of our association are going to be permitted tomorrow night. Professor Sammis arranged to have our program here tomorrow night, but Mr. Grieb wanted to soak me \$75.00 extra, so we are going to meet in Frei Gemeinde Hall, which is just one block over here on Fourth Street.

We find the cheese makers' greatest trouble is the cost of making. You heard what Mr. Larson said in regard to the butter makers raising their salaries. The same thing ought to be done for the cheese makers. Through the Inspection Division of our association the Wisconsin Division of Markets has been working on a uniform cost accounting system and Mr. Wilson, the accountant, called on me a week ago and he expects to have his bulletin out soon. One of the fundamental things to my mind is a uniform statement for the patrons. I

had a year's statements sent to me by one of the cheese makers, but I was unable to figure them out and I sent them to the Dairy and Food Commission and they couldn't make them out. I then sent them to the Dairy School. With the uniform statement there are no figures there but what can be checked up, and so by such a statement, which would require certain facts and figures, every cheese maker and farmer ought to be able to figure out if it is true.

The Federal Trade Commission charged that unfair practices had crept in and it was their business to see that this condition did not prevail and they have asked the creamery men to say what in their judgment constituted unfair practices, and so the creamery men got together and they formulated a lot of rules they considered would be unfair. The Federal Trade Commission has investigated the creamery business throughout the country, and where they find things they are calling a meeting and are to thrash the thing out. The Division of Markets in Wisconsin have all the powers of the Federal Trade Commission in intrastate business, and the creamery men through the Wisconsin Dairy Protective Association have also set out some things that will be unfair, and if any of you cheese makers find anything that is being done by your competitors if you will tell us of them—we are not mind readers—we will then take this matter up before the Division of Markets and see if it can be stopped.

The cost of making is the main thing. We found by sending out a questionnaire last spring that very few of the cheese makers kept records, and those that did did not charge a price that would remunerate them. Mr. Nordman, the director, does not feel he can come up and say what would be a reasonable price for making, but I suggested to find out what the reasonable price for the cost of the making would be for making 100 pounds of cheese, and Mr. Nelson will be present at our meeting tomorrow night to submit facts and figures to us. I submitted to the Division of Markets a list of the figures on a lot of materials so that they would have first hand information. They can then give authoritative figures from the Division of Markets as to what the cost of supplies are. I was talking to a cheese maker this morning and he told me he was making by the pound, getting a cent and a half a pound for making. We know the cost of supplies would be three cents, that would be four or four and a half cents for making. I recommended to the farmer giving the cheese maker the whey cream. I would suggest as a reasonable price for separating the whey 50 cents a thousand pounds because we know that many cheese makers are getting a lot on the side through their whey cream. It is a bad practice.

We realize some of these county locals are a little too big for effective business. For instance Marathon. It seems to me it would be a wise thing to divide up these into smaller districts, but the success of that particular local depends almost entirely on the energy of its officers. I just want to call your attention to Calumet County, 100 per cent organized through the efforts of its president. Of course he had the cooperation of the other fellows. When you elect officers

see you elect a secretary or a president who is a live one. This man has moved over to Manitowoc County and I venture to say he will have Manitowoc County 100 per cent.

I want to tell you a story. When I was a youngster I lived in the city of Philadelphia. On South Street there were a lot of secondhand clothing stores, and the proprietors used to walk up and down in front of their store and cry their wares. You know a Jew thinks if he can sell his first customer on Monday morning it will bring good luck for the week. On this particular Monday morning a man from the country came along and one of the Jews got hold of him and tried to sell him a coat. The coat he tried on hunched up at the neck, but the Jew said to the man, "Mein friend, that coat fits you like the paper on the wall." Finally after a good deal of talk the country man paid the Jew a dollar and a quarter for the coat and went off. A few days later he came in very irate and said, "You remember that coat you sold me the other day?" "Why, yes, wasn't it cheap?" "It was cheap enough, but I found a bedbug on it." The Jew looked surprised and said, "What do you expect to get on a coat for a dollar and a quarter, mocking birds?"

The membership in the Wisconsin Dairy Protective Association is \$10.00, and a lot of fellows are saying that the Wisconsin Dairy Protective Association hasn't done anything for them. Not long ago we were holding a meeting when I got a long distance call from a fellow saying, "Just been arrested for making skim milk cheese." I said, "Plead not guilty." The facts were against us, he had three cans of skim milk starter in the factory, and the inspector came in. This was a matter which affected every cheese maker, and I know whole milk starter is not better than skim milk starter so I instructed our Association counsel to go ahead on the case and he licked the socks right off the state, and you have all got the right to use skim milk starter if you want to, but don't do too much of it because we will prosecute you.

Here is another case. One of the factories in the state was looking for a better market. They got in touch with some rascal in Philadelphia and they sent him two lots of cheese amounting to \$100. They were finally told that cheese was rotten and was going to be dumped by the State Board of Health. We first took it up with the Post Office attorney's correspondents in Philadelphia. I think it was true this fellow had some cheese there that was rotten, but they felt there was something wrong there and they wired us to send that man from that factory to identify his cheese. It was not the rotten cheese either. You can easily see what the scheme was. We got every dollar from that fellow, we got that man's expenses from the northwestern part of Wisconsin to Philadelphia and back again. We felt we had done so much for that particular factory it was only fair for him to pay a little of the expenses we were to, and we instructed our attorney to make a charge of \$25. I venture to say no attorney would handle that case for that amount. What kind of a letter do you suppose we got? "If that is the kind of an association you are we don't

want to belong to you." What do you expect to get for your \$10? Do you expect to get a mocking bird?

MR. NOYES: Did that cheese prove to be first class?

MR. MOORE: First class. But they were going to switch the cheese. Last year, I think it was, some of the fellows felt we ought to have a mutual insurance company to protect cheese factory property, but the thing fell through. But personally I felt that the mutual insurance company was a good idea and our Association ought to look it up and through Mr. Kielsmeier, vice president of both organizations. A meeting was called in Green Bay to find out what could be done about it. We are going to have a meeting of the Wisconsin Dairy Protective Association and the Mutual Insurance Company and some definite steps will be taken.

This gentleman over here talked about the cheese maker raising the test. You are not the only one. We have taken it up with Madison and we have gotten those things straightened out for them. Don't carry them under your hat. The Association has an office in the old Germania building. We want you to be members of our Association, and you can't get into the meeting unless you are a member. We have some matters of interest to discuss.

As I said before, two weeks ago we tried to get this whey butter bill repealed. You don't find anybody making butter from whey cream labeling it, and you don't find the Dairy and Food Department prosecuting them.

MR. NOYES: Didn't the butter makers block that? Some of the small cream fellows did it.

MR. BUCHEN: Isn't it a fact that Mr. Weigle found people making whey butter which wasn't labeled, and he prosecuted those people?

MR. MOORE: In 1906 Prof. McKay, who was then in charge of the H. H. Wright and some more of those big western creameries, went down to Washington to see the Chief of the Dairy Division to get him to abrogate the 82½ per cent standard for butter. We objected to that. The simple reason to that was this, that the local creameries had no way of telling what they were putting in their butter, but the big creameries did. After that, in 1907, in that convention we had on the program Prof. Gray to talk to us on the test he had invented. Since that time a great many tests have come into use so we are not particularly interested in the high standard for this reason, the foreign countries, all the other producing states require only 80 per cent, and I think it is a bad business proposition to our farmers. That bill was passed in 1907 and it has been lying quiescent all these years. I never heard of a case tried under it. But just a little while ago Dr. Pilgrim of the Milwaukee Health Department here evidently discovered the law for the first time and he had some butter in the city he found to be as low as \$2.15, and we held meetings over there and I tried very hard to get him to see that as long as it had lain quiescent so long it might lie a little longer and that at the next session of the legislature we would endeavor to get that bill repealed. We can't do it individually. The only thing

I am afraid of is through political wire-pulling in the capitol our chances for the repeal of that law will be mighty slim unless we do have the backing of every cheese maker and every creamery man in the state. The same thing with the repeal of the whey butter bill.

The Association ought to pass a resolution of thanks for the time and expenses Mr. Kielsmeier and Mr. Linzmeyer are spending. They are doing things that were for the benefit of everybody and the industry ought to be glad there are some such men. Mr. Damrow is another one. We realize there are always some fellows who will not come into an association who are receiving all the benefits that an association can give them, but try to smoke them out, fellows, and try to get them in the Association. Come tomorrow night.

THE EARLY HISTORY OF THE WISCONSIN CHEESE TRADE IN SOUTHWESTERN WISCONSIN

By MR. JOHN KIRKPATRICK, Richland Center.

Gentlemen, not being a public speaker you will have to bear with me in reading this paper. I don't like to appear in public, but my only apology is the insistency of my old friend, Prof. Sammis, who forced me onto this job, one which I don't like at all.

I went into the cheese business in Chicago as a traveling salesman in 1881 and got some experience in buying skim milk cheese in the Elgin district. I bought in the summer months, and traveled principally in the southern states in the fall and winter, selling, and thereby getting a good knowledge of the business.

In June, 1885, I got my first experience in southwestern Wisconsin by being sent to inspect a carload of Cheddars on the shelves of a factory near Richland Center. Arriving at the factory on a beautiful Sunday morning in June, I found the salesman and cheese maker waiting and on being taken into the curing room I found about three hundred of the worst looking cheese I think I had ever seen before or since. Most of them were swelled and bursted—many of them dished so much that the surfaces were like soup plates and all of them more or less covered with mites and skippers and the flavor very bad and unclean. The maker, who had been a school-teacher and a very intelligent man, was green at the business. He was nearly heart broken when I said that I could not accept them at the price previously agreed upon, namely 6½c, and as I also was a green-horn and did not know the value of such cheese I was at a loss to know what to say or do. So I telegraphed the dealer I represented, who was a great Methodist, that I had rejected the cheese and asked for instructions. I knew he would be at church and as I wanted quick action I addressed the telegram to him in care of the church he attended. I got a prompt reply as follows: "Did not send you to reject—sent you to accept—ship the cheese." The maker's and salesman's faces were wreathed in smiles and "happiness once more

reigned supreme." The cheese were shipped and paid for in full but what became of them I have forgotten.

Now the question was "What could be done to improve the make of this factory?" About this time the first cheese instructors had been appointed by the State and were at work and it occurred to me that if I could get in touch with one of them, he would straighten out this maker in a hurry, for he was as I have already stated, a very intelligent man and anxious to succeed in his new undertaking. So I wired one of the instructors whom I knew to be an expert maker, named Phillips, whose headquarters were at Fond du Lac, to come at once. He stayed at the factory for several days and showed this maker how to make good export cheese and ever since that time until today this factory has turned out as fine goods as is made in Wisconsin. Mr. Phillips revolutionized the make of cheese all over Richland County and I venture to say he had more to do in raising the standard to what it is today than any other man I know of.

Along this line it reminds me of a story. There was a large factory in a small town and something went wrong with the machinery and the local mechanics couldn't find out what the trouble was, and there were several hundred or thousand employes out of work because the machinery wouldn't work. So the owner of the factory telegraphed to a large city for an expert to come. He came the following morning with a little hand bag, the kind that has all the tools in it, and a pair of overalls. He went into the office, got his overalls on and was introduced to the chief engineer who took him over to the factory, and he fooled around the machinery for a while, opening up a pet cock here and tying a little wire around there, then he told the engineer to turn on the steam, which he did and the wheels went round and everybody was happy. He was called into the office and asked what his bill was. He said fifty dollars and fifty cents. Well satisfied, the owner of the factory said to him, "That is quite reasonable, but I am very curious to know what that fifty cents was for." "Oh," he said, "that is for doing the job and the fifty dollars is for knowing how," and I think that applies to the cheese business just as much as it did to this cotton mill or whatever it was. It takes experts to do things these days.

In the old days of say thirty years ago before there were any Boards of Trade in southwestern Wisconsin, cheese were bought and inspected on factory shelves strictly on a quality basis—and were cured for ten to fourteen days before shipment. Factories had curing room enough to hold them for a month and they frequently had to do so, as buyers only visited the factories when they wanted cheese. There was lots of fun in those days when two or three buyers competed with each other and all kinds of tricks were played and schemes concocted to fool one another. Sometimes an arrangement was made whereby two or three buyers would divide the territory to be covered, but not often. It was usual for buyers to have purchase and sale tickets to be signed by the salesman and buyer and a dollar was paid to bind the bargain.

One of the things to be guarded against in those days was skipped cheese, and while the cheese were greased every day with what was called Fly Proof Cheese Grease, and turned on the shelves every morning it was not a sure preventative as factory windows and doors were not screened as they are today.

Cheese makers of today have little conception of the labor and time a maker put on his cheese in the old days. They did not get their cheese to press at anywhere from noon to two o'clock as some of them are doing now. I made a drive last July in a certain part of the state and found several factories closed at 1:00 P. M., and the so-called cheese in the press and only one day's cheese on the shelves. No wonder people complain that cheese now-a-days disagrees with them. If cheese were better cured on the shelves before paraffining I firmly believe the consumption would be doubled in a comparatively short time.

In the old days, curing rooms were warmly built and stoves kept them at a curing temperature. Today some makers do not think of using stoves except to keep the cheese from freezing on the shelves, if they have shelves enough—if not—in the boxes. I think the Division of Markets have been very easy on you in compelling you to hold your cheese on the shelves for three days as it takes about that time to dry them thoroughly so as to enable them to start curing. I am in hopes that this Division, when they learn something of the cheese business, will lengthen the time of curing and thereby stimulate the consumption of real cheese instead of curd. Especially is this necessary during the late fall, winter and early spring months. As it is today eastern markets such as New York, Philadelphia, Boston, etc., absolutely refuse to buy our late fall and winter cheese at any price. This I think is one of the prime causes for the drop in the price just now.

When the Boards of Trade were formed at Muscoda and Lone Rock, buyers from Chicago had to travel all night to get to these places, arriving at four or five o'clock in the morning. Salesmen began to come in from ten to twelve o'clock. The number and style of cheese were put on a blackboard as at Plymouth, but there was no bidding. These boards were what was called button hole boards. Buyers circulated among the salesmen and tried to learn what prices were being offered and it was frequently five P. M. before the market was made. On a close trade a straw hat, a corn cob pipe or a dollar on the side frequently closed the deal. The cheese were subject to inspection and weight at Chicago if the buyer was well and favorably known, but when a new buyer butted in he had to inspect the cheese in the factory and in some cases pay spot cash for them before delivery, but that was not very often. Payment was made by check from Chicago any time inside of a month. When the cheese were rejected on the shelves or in Chicago they were sold on commission. A great many produce houses received cheese on consignment and these were bought by the dealers. Little or none of this kind of business is done today. At one time there were twelve or fifteen

regular cheese houses in Chicago but most of them moved to Wisconsin many years ago or went out of the business. When the cheese arrived in Chicago every box was closely inspected, principally in the summer for skippers, and one of the regular tools of the inspector was a bottle of alcohol and red pepper. A few drops were poured into the skipper hole and immediately the skippers wriggled out of their holes and were brushed off. High acid and sour cheese brought half price or less. These were the days when seven to seven and one-half cents was a good price for summer makes and nine to eleven cents for Octobers. In 1892 six to six and a half was the June price.

The Muscoda and Lone Rock Boards usually closed about December 1st in those days, and any cheese made after that were well cured and shipped on commission. There was then a good export trade and southwestern Wisconsin cheese were well liked on account of their good keeping qualities, as most of the makers came from Scotland, Canada and New York State, where they had learned to make real Cheddar cheese. These men worked early and late, their whole object being to turn out fine quality. They took pride in their work and readily acknowledged the fact when they had an off day's make and in consequence were very leniently dealt with if at all possible. Those were good old days and much more interesting than they are today. I mean from the standpoint of a buyer. There was plenty of excitement. Now we take in cheese and pay the price somebody else makes and try to look pleasant, which is very difficult just at this time.

There is little or no demand today for off grades, caused very largely by prohibition, for there are no bar rooms to take them and few Welsh rarebits made in hotels, as there is no beer to go along with them. My advice to you, old and young cheese makers is to accept nothing but good sweet clean milk. Put in plenty of time in making the cheese. Dress them well. Avoid cracked rinds. Turn them on the shelves daily and take pride in your work, for what is worth doing at all is worth doing well.

I think a great mistake was made when the Dairy Commissioner changed the duties of the instructors to that of inspectors and was not for the best interests of the cheese business. As I understand it, these inspectors are not to instruct but merely to inspect and see that factories and surroundings are sanitary. I believe this Association should go on record and appeal to the Legislature to appoint enough instructors of experience and turn them loose in the State, to come at the call of any maker who is in trouble and stay long enough to straighten him out. This instructor should also be this inspector. A small charge for his services as an instructor might be made but not as an inspector. I think this has been done in Canada for twenty or thirty years and has resulted in making the Canadian product as fine as anywhere.

We are living in topsy turvy times. The war has unsettled the orderly methods of business and has produced a crop of reformers and politicians, who are trying to remedy all the ills that flesh is

heir to, including your business and mine. You and I have little to say as to how we shall conduct ourselves in trading together and even University professors are taking a hand in regulating us and even going so far as to assure us that it is entirely possible to judge what the quality of cheese three or four days old will be when they are three or six months old. Probably they know more about it than you and me, but only time will tell. We are going bye and bye to discuss matters of vital importance and I hope the outcome of this discussion will be for the benefit of all of us and the large cheese markets of the country will adopt the new methods of buying and selling cheese that we are trying to force on them and on which at the present time they are thinking of with a great deal of interest and anxiety. (Applause.)

DISCUSSION.

MR. BRUHN: I have enjoyed this talk very much. I have known Mr. Kirkpatrick for many years. As I understand it he has been in the cheese game for forty years. I believe this is a good time to confer the honor of honorary life membership on Mr. Kirkpatrick. I make that as a motion.

The motion was duly seconded and unanimously carried.

MR. KIRKPATRICK: I certainly appreciate this honor, gentlemen, and all my thought is that we do things after thorough consideration and without jumping at conclusions, and before any laws are passed changing the present methods of business let the cheese maker and the cheese dealer and the factory man be consulted by those who have the power. So far as I am aware at present, cheese dealers have never been consulted until after certain rules have been passed. I don't think it is for the good of the business. It is not just for the cheese dealer or cheese maker, and I would like this Association to go on record before any more regulations are passed that those who have had experience of ten, twenty, thirty and forty years should have a little say or be asked to give a little advice before these regulations are passed.

MR. UBBELOHDE: We have just added another life member to our list. I have in mind another man I think should be accepted as a life member. He has been a member of this Association for a good many years and also a cheese dealer. He has been one of the best workers we had in the early days for this Association. He isn't able to be with us today, but he sent a representative. I refer to Mr. Jacob Karlen, Jr., of Monroe. I make a motion we accept him as a life member of this Association.

The motion was seconded and unanimously carried.

MR. KALK: I would like to know what Mr. Kirkpatrick thinks, whether the cheese should be cured on the shelf or cured in the vat. I would like to know if he ever made cheese where it was cured on the shelf or in the vat.

MR. KIRKPATRICK: I don't pretend to be a cheese maker. I did make a few skim cheese near Elgin. I believe the cheese should be cured in the vat as well as on the shelves.

MR. CHAIRMAN: The questions that Mr. Kirkpatrick was talking about, some of them seemed to me very vital. There are always two sides to every question and there are lots of by-ways and we should work harmoniously on these subjects, thrash out the whole thing before allowing anyone to jump to any conclusions.

There are two brother cheese makers here this morning who have asked permission to speak concerning market conditions, and we will now hear from Mr. H. A. Rindt.

MORE CHEESE BOARDS

By H. C. RINDT, Clintonville.

Mr. Chairman, Ladies and Gentlemen: I was approached by a few of the members with the question about the Plymouth Board, the ruling board where all the cheese is bought through the state, where the price was set that governed all cheese throughout the state of Wisconsin. They couldn't see why there should not be more boards say, for instance, ten at different points through the state where cheese could be gathered. This is quite a problem. Past experience has taught us many different things on this particular line. We have had the Appleton Board, the Seymour Board and many other boards where it was difficult to get the makers to offer cheese and the results were the board was abolished in a year, or a few months.

I think these boards wouldn't be successful unless they were compulsory, so that in these districts where they would be established a certain number of factories would have to sell their cheese on these boards. There is no question in my mind but that there is no need for more boards unless it is compulsory. It has been tried out before and it seems impossible to get the factories to stick to a board or to induce them to deliver that cheese on the board and have it sold on open markets. It has got to be made compulsory. If our members feel that way, it would be the best, in my mind, that we appoint a committee of five members to see what could be done and what ought to be done, and introduce this into the legislature. That would be my only solution to the problem. These open boards would sure have to be patronized, there is no question, but from what I have learned the past few hours it seems as though the most of the makers are not interested in it. They seem to be willing and in favor of more boards through the state, but when it comes to the question of offering their cheese on the board they will not give you a satisfactory answer. They don't know whether they should or whether they ought to, but they would like to see the cheese offered on more boards and distributed through the state.

When these little boards were established a few years ago there was not a man, except a very few, who sold cheese at the factory on

those smaller board prices. Every man went according to Plymouth, and it seemed as though these smaller boards had only a little amount of cheese and their board prices as a rule were way below Plymouth, so by watching these boards it stood every man in hand to sell his cheese on the Plymouth board basis.

DISCUSSION.

MR. DAMROW: Mr. Chairman and Gentlemen: I am not here to make a speech of any kind, but I have heard what Mr. Rindt had to say about the board and about a monopoly or price fixing on Plymouth board. If there is such a thing as a monopoly on the Plymouth board, and there being a farmers cooperative organization, I never heard of the prices of that organization being any higher than the prices paid by the individual cheese dealer. For years I have always been a strong advocate of the Board and I was president of the Sheboygan board for pretty nearly eight years. I went out of business at that time, but we had as many as 63 factories selling on the Sheboygan board and I believe 70 or more sold on the Plymouth board. As times have changed, and as said before, this farmers organization was created, it took a lot of cheese off both of the boards. I have always talked to my patrons about selling the cheese on the board, but when this organization started, I was told to sell my cheese where I could get the most money, and from then on I quit the board.

I believe it should be compulsory. I believe there would be a way for the Market Division to make a ruling that cheese should be sold on the open board to the highest bidder, and there would not be anything said then about a monopoly or fixing prices, and when these boards close every farmer in the state of Wisconsin should know what he is going to get for his cheese the following day. Today it is based on the Plymouth board. Farmers that belong to certain organizations I do not believe know what they get for the cheese until thirty days or longer. They only go by the price established on the Plymouth board. It behooves everybody interested in the dairy business to get the most money he can for the products, and I do believe our only salvation is that boards be established throughout the state and make it compulsory that the makers should sell there on the open board to the highest bidder. I would like to hear some of the dealers, what they have to say about it.

MR. KALK: I think what Mr. Damrow said was true, every word. I believe we can stand back of that.

MR. SCHWANTES: I sold cheese on the board for years. I sold it on the London board and on the Appleton, and afterwards they switched over and sold on the Plymouth board, but my experience showed that while they came down to London and bought my cheese, I was paying for that traveling expense, and if I shipped it to them without their coming after it, they used me that much better. So in establishing boards throughout the state I don't see where that

is going to help the case unless it is made compulsory. As it has been, some factories would offer cheese where others will not take advantage of this.

MR. RINDT: I want to ask Mr. Schwantes what he means by using him better in one instance than in another.

MR. SCHWANTES: There is no two ways about it, if the man has to come after my cheese and buy it on the board I pay for that expense, and the other way I ship it to him without him coming after it. Dealers told me right straight out.

MR. KALK: Did you get any less than the board price?

MR. SCHWANTES: We got what the dealers paid us.

MR. KALK: Don't you know any overhead expense of your factory is all paid by us? At the end of the year it has either got to be on one side of the ledger or the other.

MR. DAMROW: How many factories would there be contributory around New London?

MR. SCHWANTES: It would depend.

MR. DAMROW: Would there be such a thing as 30 factories or so? Take for instance 30 factories contributory to the New London board. I believe you would have as many buyers as the Plymouth board and you would not have to pay anybody's expenses. I know at the Sheboygan board cheese makers were driving seventeen miles and they got there and sold the cheese on the open board and everybody that sold on the open board had a right, before the call of the board, to reject any man's bid, and I have never seen where it worked out better than those days when we had those boards, and those fellows that didn't sell on the open board were looked upon as not doing the square thing to the cheese business. I don't believe in Sheboygan County there was one-fourth that didn't sell on the board, either the Plymouth or the Sheboygan board. I think if this could be made compulsory you will have one price uniform throughout the state and everybody would know what they are getting for the cheese.

MR. ADERHOLD: How can you make it compulsory for anybody to sell his commodity at a certain place only?

MR. DAMROW: If the Market Division says that the cheese throughout the state shall be sold on an open board, and I believe if they have the power, it can be done. I believe the farmers of this state would believe in it. It would be an open board where anybody can buy, and every farmer would know what he got for his cheese.

MR. ADERHOLD: There is a hall full of people here. I think it is impossible to thrash this out today. I don't think anybody has the power to compel anyone to sell his goods in a certain place. If they haven't the power, there isn't any use of wasting this time.

MR. RINDT: It seems to me the difficulty arising in the question, as Mr. Aderhold states here, is that it cannot be made compulsory. Maybe I am in the wrong, but maybe I am right, but here is the place to discuss the question. If the Dairy Marketing Division has

the power to force you to sell any grade 3 cheese for a certain price, say for 14 cents, and where you could get 20 cents otherwise, I think they have the power to force you to sell cheese on the board.

MR. KALK: We want a working price for making cheese and they have no power; but when they put a load on the cheese maker they had all kinds of power.

MR. EAGAN: I believe I have had as much experience in running small boards as any man in the state. I was secretary of a board for twelve years. I used every effort to keep it on its feet. I worked faithfully for it. There are two reasons why they did not pay. One of the reasons given was that they paid a lower price than the Plymouth board. That statement is not true. We paid as much more for twin cheese as any other board in the state of Wisconsin. The principal reason is that the farmer does not want to pay the man he sends up with his cheese. A man should not be expected to work without he is paid for it. If he does, his work is not good. It got so after a while that they would telephone me to sell their cheese for them and they would not come in at all. The board dwindled down to about four factories. As Mr. Aderhold says, I do not think it is possible, I do not think it is constitutional, that you can force any man to sell his product any place except where he sees fit. You may be able to get the law through the legislature, but the Supreme Court will decide that the law is unconstitutional.

MR. KALK: Here is a report from the Oregon Cheese Makers' Association. "Oct. 28. Resolutions opposing the market commission bill appearing on the November ballot were adopted at the last meeting of the board of directors of the Tillamook County Creamery Association, composed of representatives of 24 cheese factories. Opposition developed because it is believed that passage of the bill will put the marketing control of Tillamook cheese in the hands of a political appointee, over whom the manufacturers would have no control." It is the same thing here.

MR. ADERHOLD: I don't think it is the same thing here. The producers of Tillamook cheese had an organization and they are marketing their own product and grading it and branding it. That is not the case here. They are very successful. It is a case of where the producer of cheese is doing the same as the producers of the California fruits are doing. I believe myself if the producers could do it they could do it better and more conscientiously than if they were forced to do it. But we haven't that situation here. We haven't a situation here in any section where the producers are doing what the Tillamook people are with their cheese.

MR. KALK: Isn't the Plymouth Federation on the same plan?

MR. ADERHOLD: They have been branding and grading. The more successful operations of this kind are carried on by the producers themselves voluntarily.

MR. KALK: Can you show better results and pay a better price?

MR. ADERHOLD: Go and ask the Fruit Growers Association of California and ask the Tillamook people and find out about that.

MR. KALK: You are in the same organization too.

MR. ADERHOLD: I am just trying to show you people where you are off the track. Mr. Damrow was off the track when he said you could compel a man to sell his cheese at a certain place.

MR. KIRKPATRICK: Mr. Aderhold, will you kindly let this convention know how the Tillamook people make the price on their cheese?

MR. ADERHOLD: I didn't say they made the price.

MR. CHAIRMAN: They sell cheese.

MR. KIRKPATRICK: They brand it and grade it. They have a salesman by the name of Mr. Haberlach. How does he make the price?

MR. ADERHOLD: I don't know.

MR. KIRKPATRICK: I can tell you. I was in Portland, Oregon, a few years ago and met Mr. Haberlach. I asked him how he came to sell his cheese, how he made the price. He said he waited until he got the Plymouth board price and then added the freight thereto. That is how he made the price on the cheese. The Plymouth board made the price for Oregon, Washington and California.

MR. DAMROW: They work it on the same principles as the fruit growers.

MR. ADERHOLD: I know that there have been times last year when the Tillamook people got from two to three cents more for their cheese than the Plymouth price.

MR. KIRKPATRICK: The freight on those cheese was about 2½ to 3 cents a pound.

MR. CHAPMAN: I want to comment on that last. They add the freight. I have been there myself and talked to Mr. Haberlach about it. In all that section of the country they simply take Plymouth board prices and add the freight. They can get from 2½ to 3 cents over what we can because it will cost them that much to lay our cheese down there.

MR. ADERHOLD: They are getting a mighty good price for their cheese because it is not as good as our best cheese.

MR. KIRKPATRICK: I take exception to what Mr. Aderhold says. I have been out in Oregon and I have seen some of the finest cheese ever made in the United States come out of the Tillamook Valley.

MR. CHAPMAN: I would not agree to that on the whole. They make a very good grade of cheese in Tillamook. Their cheese does not average very high in moisture.

MR. CHAIRMAN: It seems to me that the sympathy of the members are with this resolution to have more cheese boards but the question is whether or not we can make it compulsory. The only way we can settle that is in this way. Mr. Reis is present and I will call upon Mr. Reis to go ahead with "The Powers of the State Division of Markets."

THE POWERS OF THE STATE DEPARTMENT OF MARKETS

By MR. ALVIN C. REIS, Madison, Counsel, Division of Markets.

Mr. President, Gentlemen of the Convention: Mr. Kirkpatrick sounded the keynote of my remarks when he said that in relation to the cheese industry the State Division of Markets must be fair. Another man emphasized that point when he said that for any action to be constitutional it must be fair, and I hope that I can assure you gentlemen, that though we may go wrong sometimes because our judgment is only human, we shall try, considering the interests of the cheese maker, the cheese buyer and the cheese consumer, to be fair.

The powers of the State Division of Markets are four. The first, regulation of unfair business acts, practices and methods of competition in trade. Second, assistance in the organization of cooperative marketing associations. Third, standardization of food products, packages and labels. Fourth, investigation of prices, profits, costs, supply, demand and market conditions.

There is no power in the Division of Markets to regulate prices, there is no power to compel you to sell a No. 3 cheese for 18 cents or 18 dollars. That power was absolutely not conferred by the legislature of Wisconsin, and under the constitution I doubt if it could be conferred.

The principal power, that of regulating unfair business practices, is the same power which the Federal Trade Commission exercises in interstate commerce. To indicate just what that authority is let me point out to you ten cases which are now before me affecting the cheese industry.

1st. A retail grocer advertising as New York cheese what is Wisconsin made cheese. That is fraudulent advertising, in violation not only of the Division of Markets' law, but also of section 1747k of the criminal statutes and that man, if it is in my power to do it, may go to jail.

2nd. A case, reported to me by Mr. Kirkpatrick, of a cheese buyer purchasing from factories in a certain locality at an eighth or a quarter of a cent above the prevailing market price in order to drive his competitors out of that locality. That method is in violation of the state anti-discrimination statute (section 1791n) and unfair within the meaning of section 1495-26 of the Division of Markets' law, and for that offense, if it can be proven that the intent to suppress competition was the reason for the high price, the man may suffer.

3rd. A case reported from Oxford, Wisconsin, of a creamery paying excessive prices driving the patrons away from the cheese factory. There again, if it can be shown that the creamery is paying a higher price in that locality than in others, the creamery will suffer.

4th. A case of a creamery buying by tests where they had the competition of the cheese factories and according to weight where they had none. This is clearly contrary to the anti-discrimination statute and an unfair method of competition.

5th. A cheese buyer urging a certain cheese factory to make poor cheese for a competitor in order that the latter might lose thereby. This is an intentional injury—and unlawful.

6th. A creamery loaning cans to a shipper to influence shipments to it. This is declared to be an unfair practice in rules adopted by the Wisconsin Dairy Protective Association on February 27, 1920.

7th. A cheese buyer interfering with the contract of sale between cheese factories and a competing buyer of cheese. This is a civil wrong giving the injured party a right of action for damages and is, further, an unfair practice and subject to order by the Division of Markets.

8th. A very important case of a Swiss cheese buyer buying graded cheese as of No. 2 grade and selling it again as No. 1, and I say to you, gentlemen, that if that case can be proven it represents one of obtaining goods from the cheese maker under false pretenses, which is a penitentiary offense under section 4423 of the Wisconsin statutes.

9th. A conspiracy between a cheese buyer and cheese maker under the following circumstances: The cheese maker was manufacturing an off grade of cheese. The buyer agreed not to cut him off on the price, but to dock him on weight—pay him for high quality cheese so that his patrons might not know he was making poor cheese. That is a violation of 4432, 4430, 4568 and 1495—26.

10th and last. A cheese maker underreading the butter fat test in order to show an increased yield, and that case I leave to your own consciences. The most important order issued by the Division of Markets under its power to prevent unfair practices is the order of September 27th demanding that buyers of American cheese pay for the full weight, defined to mean all the even pounds plus the quarter, half and three-quarter pounds. You know the background of that order. There existed prior to it the Plymouth method of taking the fractions of pounds without payment or to make a flat fractional deduction upon each box. That is, on boxes of Daisies payment was not made for the fractions of pounds; payment was made for an even 20 pounds per box.

There was the Marshfield method of making a deduction on each box of $\frac{5}{8}$ for Daisies and $\frac{7}{8}$ for Twins and Longhorns. That practice was stopped and the buyers directed to pay for every pound which is on the scales, and for every quarter, half and three-quarter pounds. The significance of that order is indicated in the remittance slips of one little factory up in the Marshfield district which were turned over to me for surveyance. That single factory between the 1st day of July, 1919 (when the Division of Markets law went into effect) and September 27, 1920 (when the order was issued) show a shortage below factory weight of 6,450 pounds with a weighted value of \$1,766.82. This was one factory out of two thousand making American cheese in Wisconsin.

Gentlemen, there are two points in that order which cheese makers have not understood, and I hope I can make them plain to you. The first point is this, that the weight for which the buyer is to pay is the warehouse weight, not the factory weight. No order of the state of Wisconsin could compel a cheese buyer to pay for factory weight which had shrunk away in transit before it got to him, and you can't do that under the constitution of the state of Wisconsin, but you can compel him to pay for all of what he gets, and one factory up in northern Wisconsin was paid for $103\frac{3}{4}$ pounds more than it would have been paid for if the order was not issued.

The second point in that order is that the weight which was paid for is the weight without paraffine. If the buyer puts on the paraffine, of course he need not pay the producer for the weight of it. If the producer puts on the paraffine, the buyer may pay him whatever he wants for it, but he cannot be compelled by law to pay the cheese price for six-cent paraffine. You ask, does not the buyer turn around and sell the paraffine to the consumer? But I think that practice is wrong. Taking a cheese that weighs 25 pounds and 6 ounces and then adding 2 ounces of paraffine and selling $25\frac{1}{2}$ pounds of cheese is a violation of section 4601aa of the statutes. There can be very little difference between wrapping the cheese in paper and charging the cheese price for the paper. Unless I am blocked in the matter or unless I am shown by the experience of cheese buyers that I am wrong, that practice ought to be stopped and it will be stopped.

Two other opinions have been rendered on the full weight order which may interest you. The first point is, may the cheese buyer weigh after paraffining and taking off the weight of the paraffine, or must he weigh before? The rule is that he may weigh after paraffining and take off the weight of the paraffine providing his deduction is accurate.

The second point put up to me has been—and that is an important point—what redress does a cheese maker have if a dispute arises between a maker and a buyer as to the weight. Gentlemen, that is a problem that the order does not reach. Your disputes between yourselves and your buyer existed for years before the order was issued, it is human. The buyer today, and always, went by the warehouse weight, as he had the right to do. He didn't go by the factory weight if the factory weight was different from the warehouse weight, he went by the warehouse weight. But a case has been referred to me of a buyer misrepresenting the weight for which he pays his factories, and I want to only say this, that no matter what the age of the man may be or his standing in the community, if that buyer is remitting to the factory for less, he is violating the full weight order, and that man is going to suffer.

There are three other points I am just going to throw out but not discuss.

1. Can cheese factories recover double damages for fractions taken by the buyers after the Division of Markets law went into effect, which was July 1, 1919, but before the full weight order was issued, which was September 27, 1920? I am not going to answer that question

now. I have got six years in which to answer it, because the claims do not expire for six years.

2. Is the fractional weight order affected by the fact that the Boston and New York mercantile exchanges voted not to pay Wisconsin dealers for quarter pounds, except on single Daisies? I am not called upon to answer that question. The ninety days for disputing the order have passed and will be reopened only upon our own initiative.

3. Should the fractional weight order be extended to the Swiss cheese industry?

The second power of the Division of Markets—and upon these things I shall pass over very hurriedly, the second power is assistance in the organization of cooperative marketing associations. That is not only a power, that is a duty imposed under section 8 of the law. In compliance with that duty the Division of Markets has given aid in the cheese industry in the organization or re-organization of certain agencies, particularly one which you have mentioned here this morning, the Wisconsin Cheese Producers' Federation of Plymouth and the United Foreign Cheese Producers who are organizing in the vicinity of Mount Horeb and Monroe.

There is a conflict in your ranks as to the merits of these marketing agencies. When I am drawing the articles of incorporation I am not interested in their dispute with the private dealers or with the meat packers. To be sure I am going to give to the Cheese Federation every ounce of strength just as I give that to you, but as to their fight with Armour and Swift, with Wheeler and Davis I have nothing to do. If Mr. Pauly, who is here today and ships to a packer, Mr. Straubel or Mr. Dow, who ship to packers, if these three men came to me tomorrow and say, "Reis, we want you to help us organize a co-operative association to sell cheese", I am going to help them, because it is my duty, unless the powers above me order me to stop.

I am not blind to the fact that the growth of co-operative cheese associations and the substantial control of the market by the producers themselves means the ultimate elimination of the private dealer from the cheese business. That is competition, and so long as that competition is fair, no one has a grievance. I want to say to this, not as advice, but as warning, because I am in a position to give warning, that the Wisconsin Cheese Producers' Federation on the one hand and its so-called enemies on the other hand, when they fight they have got to fight fair. You can send your men out to work against each other, but you can't misrepresent your competitor's business, you can't slander his character, you can't lie, and I want to say to you this, it doesn't make a bit of difference to me whether it is Charlie Blodgett, William Olson or Reuben Paulson, who is organizing the foreign cheese producers at Mt. Horeb, it makes no difference to me whether it is Pauly, C. A. Straubel or Henry Krumrey, when those men commit things unjust they have to answer to the law of Wisconsin if it is in my power. (Applause.)

The third power of the State Division of Markets is one which I am going to leave for others more competent to discuss, that is the

power to standardize food products, packages and labels. Standardizing means only one thing, it may be right or wrong, in the cheese industry—I express no opinion upon that point—but it means when stamped upon the product that Wisconsin has got to put out the best. You can't use the word "Wisconsin" on your cheese unless it is the best or unless you mark it to show it is not the best. I will leave it to Potts of the Federal Market Division, to Michels and Bruhn and others who know more about it than I.

The fourth and last power of the Division of Markets is to investigate prices, profits, costs, supply, demand and market conditions. That power, as I have said, contains no power to regulate prices. It contains power to subpoena witnesses, demand books, in fine, to get at the facts and lay those facts before the Attorney-General of Wisconsin or the Legislature of Wisconsin.

I want to say just one word in closing. Judging by what you men have said here this morning, some day there may be a need for that power in the conducting of a probe of the Plymouth Cheese Board, officially known as the Wisconsin Cheese Exchange. I want to say to you that I express no opinion because I have none as yet as to the legality or illegality of that board's transactions. I have the greatest respect for young George Mooney who drew that, just as I have confidence in Leo Nohl. So long as that board is open, so long as its membership is free to you and me if we are in the cheese business, so long as its transactions are fair and above board, that board has the right to live, and perhaps as someone has said, all cheese must be free to go where it will, it cannot be compelled to be sold on the board. But on the other hand if the day comes, or if it has come, when that board ceases to be responsive to the factors of supply and demand, if the day comes when that board resolves itself into a price-fixing mechanism for monopolies by the few against the interests of many, then if the State of Wisconsin gives me the power I am going to drive that board out of Wisconsin, and every cheese maker doing business on that board will have his license to do business in Wisconsin revoked.

MR. HUBERT: Mr. Reis stated there that he had a case of representing Wisconsin cheese and selling it as New York cheese. Isn't it just as bad for a man working for the Bureau of Markets to go into an open meeting and make misstatements? There was a misstatement made at a meeting up at Merrill. I picked that out, I wrote the gentleman a letter, I asked him who he meant. I got a reply very evasive. With the permission of this Association I would like to read the question I put to him and the answer I got.

MR. REIS: Did I make that statement?

MR. HUBERT: No sir. I am asking for information. You said you were going to be fair. I wrote this to Mr. Michels. This is the Sheboygan News, in which he is supposed to make this statement at Merrill: "It is not the retailer who is making the exorbitant profit! It is the wholesaler. The farmer is receiving from 24 to 26 cents for cheese for which the retailer must pay 46 cents. He in turn sells

it at 55 cents and stands considerable of the shrinkage, the wholesaler practically none."

This is the question I put to him: "Will you kindly advise whether you are correctly quoted in this article, and, if so, whom do you mean by the wholesaler, whether the wholesale cheese dealer or the wholesale jobber who again sells to the retailer?"

I got his answer at the bottom, very evasive: "The above should be 36 cts. instead of 46—retailers are paying 29c for aged cheese in Fond du Lac today and sell same for 45c."

That wasn't the question I asked him. He evaded me again. I stand here prepared today to show you when this statement was made that Wisconsin cheese was sold to the retailer at not over 30 cents, with the evidence in my possession. Why should we have these mis-statements?

MR. MICHELS: (Applause) What the gentleman said there I will repeat again, that I did say it. I was in Mr. Fleischman's grocery store in Fond du Lac and bought two pounds of cheese which cost me 55 cents a pound. He produced the bill. It cost him 36 cents a pound. I am not here to say anything I can't back up. Just one week ago the Northwestern Grocery Store in Fond du Lac showed me bills for cheese which cost them 29 cents which they were retailing at 45 cents a pound, and I want to say that is a mis-quotation, I never said anything like that.

MR. HUBERT: I am in a position to prove by taking the statistics of the United States Government showing what the dealers of Wisconsin got for their cheese, St. Louis, Cincinnati, Des Moines, Iowa, in all the big centers, and I can show you their price current given over 30 cents.

Gentlemen, the man that produces the milk, the cheese maker, the transportation company that hauls to the market that gets anywhere from a cent and a half to three cents, the wholesale cheese dealer, the wholesale grocer pays 30 cents and retails at 50 or 60. The wholesalers do not get any more than the retail grocer. I think our Marketing Division should take steps with the Federal Government and see that the retail grocer of the United States does not bleed the consumer, which would create more of a consumption of cheese.

MR. YOUNG: You mentioned the fact that a Swiss case was up where a buyer had sold what he bought for No. 2 at a No. 1 price. You understand in buying Swiss cheese it is simply a gamble, and in buying he fakes the cheese for No. 2 or No. 1. If it is such a misdemeanor for him to sell a No. 2 cheese at a No. 1 price, what action do you take when he buys cheese as fancy and has to sell it at a No. 2 price?

MR. REIS: That is a matter of poor judgment on his part. I am simply saying this, if you are a Swiss cheese buyer, we pay you 18 cents and then you turn around the next day and sell it at 28. I don't see how you can get around it.

MR. YOUNG: You understand the majority of buyers going into the factories bore that cheese not more than once. If that cheese bores

a fancy cheese, that is what it is taken for. That cheese is taken into your cellar. I may take that cheese and bore them three or four times, and have got to sell that cheese on an 18-cent grade. Why? Oftentimes a cheese maker will say, "Bore it again." If it is, it may show up an extra fancy.

MR. REIS: You have got to have a clear intent as a basis for any claim. But you have a positive case where a man knows what he is at when he buys No. 2 and turns around and sells it for No. 1. That is a wrong intent.

MR. DAMROW: Suppose I am a buyer and I buy No. 2 cheese and I sent that cheese outside of the state to several different houses, and I would sell that cheese for No. 1?

MR. REIS: The gentleman asks whether it would be wrongful to buy this cheese for No. 2. The fact it is sold in Chicago, if you can prove it, doesn't make the crime any less. The offense is getting the goods as No. 2 when he knows it was not No. 2.

VOICE: What if the buyer lives in Chicago?

MR. YOUNG: The buyer and the cheese maker grade that cheese in the factory. The cheese is a No 2, yet the buyer comes in to buy this cheese and says, "that is a good No. 1 cheese, I will take it." If I bought that cheese as No. 2 am I criminal?

MR. REIS: The question turns on your intent in buying.

MR. DAMROW: Suppose this cheese is sold for No. 2, but a No. 1 price paid, or a fraction less. Is that discriminating, unfair practice? Bought it as No. 2. Suppose No. 2 is 18 cents and No. 1 is 20. Is it an unfair practice for a cheese dealer to pay me 20 cents for a No. 2 cheese?

MR. REIS: Absolutely not. The cheese buyer can pay you anything he wants to and can take it away from you. We have got no power over the prices of cheese. This gentleman said we ought to have power over the retail prices, and perhaps we should, but there is no man in the State of Wisconsin who can put that through. It seems to be too radical for most people to swallow.

MR. CHAIRMAN: You are establishing a fixed grade and may have 1, 2 and 3. How are you going to say that two different men in two different localities are going to call that same cheese No. 1 grade, because if you take the same cheese, and three different men grade it, you may get three different grades.

We will have to adjourn a little earlier on account of its being afternoon now, and we will have to call earlier, but we are only half done with our forenoon program. The program reads 2:30. We will call at 1:30 this afternoon, one hour earlier than the program states.

NEEDED REFORMS IN THE CHEESE INDUSTRY

By GEORGE J. WEIGLE, *Dairy and Food Commissioner, Madison*

We have in the audience today men whose experience harks back to the period of filled cheese in this country. Those of you who were not engaged in the cheese business at that time have undoubtedly a knowledge of that period and the ruinous results it had upon the reputation of Wisconsin cheese. Prior to that time our cheese was in good repute in foreign markets and our export was large in comparison with the total output of the country. In 1884, the United States sent to foreign ports 150,000,000 pounds of cheese. Reading from the first annual report of the State Dairy and Food Commissioner of 1890, H. C. Thom, the Commissioner, says: "No year since has so much been sent abroad." There was a reason for this restriction of the export trade made and in no other manner can this reason be so briefly and completely explained as by quoting the following letter to the American Consul at Liverpool:

Liverpool, England, January 8, 1890.

"The directors of this association respectfully wish to draw the attention of your government to the exportation from the United States to the United Kingdom of what is termed 'filled cheese.'

"This article is a compound of skim milk and grease, such as old butter, oleomargarine, or lard, the favorite ingredient being at present stale butter, on account of the belief of the manufacturers that they can thus defy the analyst.

"My directors believe that this product is exceedingly harmful to the dairy farmers of your country. It is not the natural product of the cow, known as cheese. It is a well-known fact that, for the past five years, since this fraud has been practiced, the price of pure cheese, instead of advancing in the spring months has steadily declined.

"This product is neither wholesome nor palatable, but is injurious to the American cheese trade, as it curtails consumption of the pure article, disgusting the community with American cheese as an article of food.

"We believe the true remedy lies in prohibiting the production of filled cheese, which is manufactured in the western states, chiefly in Ohio, Illinois and Wisconsin. We are informed that New York state has prohibited its production.

"We ask you for your assistance in this matter, and trust you will not only put this matter in the hands of the government, but suggest they should draw the attention of the dairy association and governors of the various states where this article is produced."

(Signed) J. L. HARMOOD BANNER, *Sec.*

Liverpool Trade Association.

The effect of this nefarious practice of making filled cheese was far-reaching. It ruined the reputation of the U. S. product in foreign markets and at the present time there are those among foreign buyers who have not forgotten the attempt to foist upon them a fraudu-

lent product and still look upon our cheese offered for export with a degree of suspicion.

In 1889 a law was passed relating to the use of animal fats or oils in milk or cream which products were to be manufactured into butter and cheese. The framers of this law intended that it should provide the means whereby the production of this fraudulent cheese could be stopped, but they did not know the real character of the people engaged in this evil practice. The wording of the law was such as not to prohibit the manufacture of cheese made with skimmed milk combined with butter and a certain class of producers evaded the law by using stale butter.

Later Section 4607c pertaining to the manufacture and sale of imitation cheese was passed and not until 1920 was it necessary to bring action under this law. The framers of the present law well knew that no loophole could be left and just how well they did the job has been proven by the long years that have passed before it became necessary to bring action under this law.

The experience of those bygone days with their fraudulent product in guise of cheese and the ruinous results, one would think would be lesson enough for all time. Unfortunately there are still men in the cheese industry that have no other interest than the immediate dollar. They have not the vision to see into the future and to realize that if the industry is to continue to thrive and prosper it must be by producing honest products of good quality. During the past year cheese was manufactured in this state by putting cocoanut oil into skimmed milk. As you all know, action was begun against the guilty party and the manufacture of the imitation product was discontinued. There is no substitute for cheese just as there is no substitute for butter or for any other honest dairy product and the manufacture of these frauds and imitations is a menace to the industry and are deceptive to the consumers thereof.

Today there confronts the cheese industry of this state a menace subtle, far-reaching and more dangerous than that of the days of the filled cheese frauds.

After the years of fraudulent filled cheese the reputation of our goods gradually improved, the result of an honest product honestly made. As the years went on, Wisconsin cheese acquired a reputation for superior quality. We were proud of that reputation and justly so.

For some few years past the reputation of Wisconsin cheese has been dropping back. Favorable comment gradually became less until finally it ceased entirely and today in the place of praise we are getting unfavorable notice and our cheese does not command the attention of critical buyers as it once did. It is not unusual to hear in market reports such remarks as "dealers had no trouble cleaning up fine New York State lots." "Not much business on Wisconsin Twins and Daisies." Large handlers of cheese write letters asking "What is the matter with Wisconsin Cheese?" and stating that New York State brands bring several cents per pound more. If any of you have doubts

as to the accuracy of these statements all that is needed to convince anyone is to regularly visit the warehouses as cheese are being received from the factories.

It is a fact that at our State Fair, the National Dairy Show, and the Cheese Makers' Conventions we do exhibit cheese of excellent quality equal to and much of it superior to any cheese made elsewhere. But we cannot hold our rightful place in the markets of the world on the strength of our showing at the exhibits and scoring contest, from an advertising standpoint and for the educational features, but any advertising to accomplish its purpose must be backed up by goods of similar quality. The plain fact is we are not backing up our advertising. The percentage of really fine cheese made in Wisconsin the last few years is lamentably small, ruinously small.

We must make quality goods on a larger scale or pay the inevitable penalty. What that penalty will be is apparent to anyone. We have already commenced to pay.

We have on exhibit in this building cheese almost ideal in quality. Cheese of a quality that cannot be surpassed in any state in the Union. If this exhibit were truly representative of the total output of the state we need not fear any competitor in the world. The output in this state of cheese of like quality as exhibited here is too small to make the necessary showing on our markets. We have everything necessary within our state to enable us to market annually a very large proportion of our total cheese production of a quality equal to the cheese exhibited here. To get such results, however, we must reform. We must get away from the careless, indifferent, rough and ready methods of today. We must realize that quality is the one thing necessary to uphold our position as first in quality as well as in quantity, a thing so necessary to the continued prosperity of our cheese industry and to the well-being of every person connected with it.

The farmer producing the milk that is to be made into cheese must waken from his dream, from that sense of perpetual security, whereby he has led himself blindly to believe that milk for cheese making purposes needed but little attention. With the high prices of recent years and the keen competition he has not deemed it necessary to give the attention required to deliver milk in the proper condition for manufacturing the finest quality possible. He has in all too many instances made himself believe that the prices brought about by a condition of war would last indefinitely. Within recent months he has been confronted with the fact that prices for his product had reached the limit. He has seen one branch of the dairy industry brought face to face with a market condition that practically prohibited the further manufacture of canned milk, compelling the people engaged in the milk condensing business to turn their milk into butter, cheese or market milk.

If the cheese industry is to continue prosperous the dairy farmer must realize the necessity of quality products. He must also realize that upon him rests the responsibility of making it possible for the cheese makers of the country to manufacture a fancy grade of cheese.

Without the proper attention on the part of the milk producer to furnish clean, sanitary milk, the best efforts of the makers will only result in cheese of an inferior grade.

Among the cheese makers of the state a general awakening is necessary. There may be those engaged in the business who have not had the training necessary for them to become proficient in the art and science of making cheese. This condition, bad as it may be, is far from the worst trouble we have to contend with. The large majority of our makers are competent and skilled men, but the most regrettable and outstanding feature of the whole situation is that for various reasons they are not making the high grade of cheese that they so well know how to make.

The unprecedented demand and keen competition of the last few years has demoralized the cheese industry and there has been almost a total absence of any grading system among the buyers and distributors of cheese and with the lack of discriminating inspection on the part of the buyer the makers have reduced the time required for making up a vat of milk to the minimum and beyond. To get a good yield and get the curd into shape of cheese has been the sole objective in a very large number of our factories.

So accustomed in many instances have the makers become to incorporating as near to 40% of moisture as possible and employing hurry up methods that makers have made the statement that they scarcely know how to make a fancy article.

A keener and more uniform inspection on the part of the buyers of cheese and a substantial reduction in price on other than fancy grades would work wonders in refreshing the memories of those makers who from long continued habits of carelessness and indifference have almost forgotten how to make good cheese.

A moisture standard for cheese was established in this state in 1917. Before the time of its passage as a law considerable work was done to determine the proper percentage of moisture. Expert cheese men from various parts of the state were consulted and it was finally determined to make 40% the maximum. The enforcement of this law and the subsequent knowledge gained has proven that 40% moisture in American is too much. It is seldom that a cheese containing 40% can be classed as a good marketable cheese. It is a fact that all really fancy cheese scores less than 38%, usually 35% to 37%. The demand for cheese with moisture of 38% to 40% is small. The real fancy goods, the cheese that has made our reputation and upon which we must depend for future success in the markets of the country, will run 38% and lower. Consequently, I believe that the moisture law should be amended making 38% the maximum moisture content for American cheese.

In the matter of unfair practices among cheese factories the chief is the issuance of false and misleading statements. Many statements have been sent to the Dairy and Food Commissioner asking whether the same were correct. In most instances the information given on the statement was of such a nature as to render the statement abso-

lutely useless and usually it was impossible to arrive at any conclusions of a definite nature. False and misleading factory statements constitute an unfair practice and should be considered as such and dealt with accordingly.

The enforcement of the license law up to the present has had to do chiefly with sanitary conditions, but experience has taught the necessity of its further application to makers. We find makers today so far as good factories or sanitary conditions are concerned, above reproach. In their curing rooms, if they have one, may be found cheese of very inferior quality, the result of carelessness and indifference. In the future not only shall the sanitary conditions of the factory and the cleanliness of the maker be considered, but the maker's ability to make good cheese and his willingness at all times to do his best must be demonstrated before license will be granted.

The questions have often been asked, "Why do you allow a maker to continue from day to day in turning out an inferior quality of cheese?" "Why not revoke his license?" Many makers maintain their factories and equipment in good condition, yet rarely do they turn out cheese of good quality and frequently it is absolutely within the control of the maker to make a fancy product. The desire on the maker's part to shorten the day's work is usually the cause. To go into this a little further we will assume that a cheese maker has had his license revoked upon the grounds that he has, due to carelessness and indifference on his part, been turning out cheese of a uniformly low grade and it does not need any great degree of imagination to conceive of such a situation. We can produce evidence to show that the cheese is of poor quality, but we cannot show it to be illegal cheese. The maker will be able to produce evidence to show that the cheese he has been making has brought the market price. He may make a legal cheese and it still be of anything but fancy quality and it may bring the market price. The law provides certain standards and definitions for cheese, but there is no law saying what grade or standard of quality he shall make.

The cheese dealers of the state have at times complained bitterly at what they considered lack of assistance on the part of those enforcing our dairy law. It must be remembered that there is a limit in law making and law enforcement beyond which it would be ruinous to pass. At the best, laws and regulations are only an aid in controlling and improving an industry. The extent to which any law can be enforced and the benefit derived from such enforcement depends entirely upon the sentiment of those of the public who are most directly interested. The cheese dealers and distributors by nature of their business are in a position to do more to correct the evils in the cheese industry and to improve the quality than any other body of men in the state. New laws and regulations and a stricter enforcement of the same will avail us nothing so long as the dealers cannot unite and adhere to a standard of grading and corresponding price. Just as long as we have men engaged in buying and handling cheese who are willing to accept under grade cheese and pay the market

price, just so long will we have makers that will make that quality. Law enforcement alone will never place the standard of quality of our cheese where it should be and where it must be if we are to maintain our place in the world's markets.

The real vital need of the cheese industry today is a full and complete realization on the part of every one engaged in it of the necessity of better methods, of the application of more concerted and intelligent effort and with a vision looking into the future instead of the blind policy of considering the immediate penny at the expense of the future dollar.

MR. CHAIRMAN: The next thing on the program is the "Weighing of Cheese to Quarter Pounds" by Mr. Math Michels of Fond du Lac, and others.

MR. MICHELS: I believe Mr. Reis has so well covered that subject that I am willing to give up my time.

THE CARE OF CHEESE NECESSARY TO PRODUCE A GOOD RIND

By MR. A. T. BRUHN, Spring Green.

As this talk of mine is merely for the purpose of opening a discussion I have outlined the conditions which in my opinion affect the rinds, in the expectation that the discussion following will clear up any hazy points.

To remedy any evil the cause of the evil must be removed, therefore the first thing to do is to find the cause. The great indirect cause is perhaps the fact that the cheese dealers have, in the past years, paid full price for cheese with a tendency to develop defective rinds, and as long as that was the case we cheese makers soon became careless, lazy or indifferent, and shipped them anything in the line of cheese curd that would stick together long enough to get it off of our hands.

It is of no use to dodge the issue by saying "I couldn't help it; it wasn't my fault; I did the best I knew how with the appliances and raw material at hand." It would be impossible for me to prove that you did not do the best you knew how, but I do say that in ninety-nine cases out of one hundred it was your fault, and that you could have helped it if your cheese did not arrive at the paraffining plant with a good rind.

If you do not know how to obtain a good rind on your cheese, work long enough under the direction of a good cheese maker or go to some good dairy school until you learn how; and if you cannot learn how then, take your medicine and get out of the business and leave room for the man who can.

The first cause of poor rinds, but one perhaps not so frequently encountered, is in the milk supply. It happens occasionally that in times of short pasture cows will eat vegetation which will cause cheese made from the milk of those cows to be abnormal. As before stated, however, this is so seldom the case that this cause is practically elim-

inated. Under this head would also come milk from sick cows or from cows kept under abnormal conditions.

The first real cause that we have to contend with is probably over-ripe milk and that should be rejected at the weigh can, as any milk that is sour enough to cause trouble in the process of manufacture can easily be detected by the sense of smell or taste, and the cheese maker has therefore no reason to run it into the cheese vat.

If for any reason you should get overripe milk in the vat there is no more reason you should get poor rind on that cheese, than there is for you to get a sour cheese, and it has always been my opinion that sour or high acid cheese is entirely the fault of the maker, unless the milk is so sour that it is impossible to stir in the rennet before coagulation takes place and such a condition should only be possible when some accident occurs to prevent you from adding the rennet as soon as the milk is all received and heated to its proper temperature.

During the process of manufacture, that is from the time the rennet is added to the milk till the curd is pressed, there are a number of things that might affect the condition of the rind of the finished product; for instance, insufficient cook on the curd at the time of drawing the whey, too much acid on the curd at that time, poor drainage of curd while matting, insufficient matting, uneven distribution of salt or not enough salt, curd greasy when salted, too cold or too warm when pressed.

Of the above named causes, insufficient cook is undoubtedly the most frequent cause, for even though you may not have much acid at the time of running off the whey, the extra moisture gives impetus to the development of acid and you may have a high acid cheese before it is a week old which is almost certain to develop poor rind.

Where considerable acid is developed before drawing the whey the moisture must be reduced, or sour and often leaky cheese and checked rinds is the result.

Where the curd is not turned properly, leaving whey standing in pools on curd, the result is liable to acid spots causing checked rinds wherever these spots come near the surface.

Where the curd is insufficiently matted before salting the moisture is not evenly distributed and especially where considerable moisture is retained in the cheese it is almost certain to produce a leaky cheese unless it has been practically cured before it is paraffined.

The old saying that one hour in the vat is worth one week on the shelf seems to hold good in this case.

Lumpy salt causes the uneven evacuation of moisture, leaving spots in the curd so dry that it will not cement properly, leaving open spaces in the rind giving mold a chance to start.

Where curd is lumpy, salt does not penetrate it evenly causing faster fermentation in certain places, often producing gas which in turn causes the cheese to huff and sometimes blistering the rinds.

When curd is greasy or too cold when salted and pressed it does not cement, causing open rind. In either case the curd should be

rinsed with water at a temperature of 105 to 110 degrees F. before salting and hot water poured over the surface of the cheese when dressed and turned in the press.

When curd is too warm when pressed the fat is apt to press out, start the grease is the common expression, preventing the curd from cementing together and forming perfect rind.

Though you may have a curd that is practically perfect when ready to put to press you may still spoil the rind if your hoops, followers and cap clothes are greasy or coated with what is commonly called milk stone. In order to get a good rind you must keep your hoops, followers and cap cloths clean. Right here it might be well to tell how to keep the hoops clean without too much extra work. I will confine myself to speaking of the hoops for daisies, flats and prints and will leave the other styles to be discussed by someone else.

When the wash sink is close to the press I find it easier to wash my hoops and followers daily, and when a coating forms place as many of them as I am not using to soak over night in the whey tank. After that the coating washes off as easily as grease. If you should happen to be using all your hoops every day take about $\frac{1}{2}$ cup of sulphuric acid to two pails of water, place in a wooden tub and soak hoops and followers in this solution for from five to fifteen minutes and they will wash up easily and clean up bright as new tin.

Another cause of imperfect rinds is wrinkled bandage. Care should be exercised, not only in bandaging the hoops, but every cheese should be inspected before being placed on the shelf to see that the whole cheese is covered smoothly, that the caps lap over the bandage leaving no exposed surface.

If you have a perfect rind on the cheese when it leaves the press that is no guarantee that it will stay that way unless you will take proper care of it afterward and particularly during the first few days of curing.

If I could always have my choice I should want my cheese to go directly from the press into a room where the temperature was not above 55 nor less than 45 degrees F. and kept at that temperature by air, which was at the time of entering the curing room, cooler than the air in the curing room. This of course would mean artificial cooling for the greater part of the cheese producing season, in other words it would mean cold storage.

If you must keep your cheese in curing rooms which have not these qualifications, a well constructed room or building that is well insulated and kept as close to the temperature stated above as possible with air which is cooler than the air already in the room, is the next best thing.

You will notice that I am laying particular stress on the matter that the air which enters the curing room should be cooler than the air already in the room. I will explain why. The higher the temperature of the air the more moisture it will carry.

You have all noticed that on a warm day the moisture will collect on the outside of any container filled with cold water. The reason

for this is that the warm, moisture laden air when coming in contact with the cold surface of the container will become cooled and consequently cannot carry all the moisture which it contained and this moisture is deposited on the container. Practically the same thing takes place in a cellar curing room. When the warm air coming in from the outside strikes the cheese in such a room it is cooled and being unable to carry its original amount of moisture the moisture is deposited on the rind of the cheese and the result of this, as each and all of you who have had experience with cellar curing rooms, know, is mouldy cheese.

The only remedy I know of for this evil is to eliminate the intake of warm air as much as possible and stimulate the circulation of cooler air. Theoretically a good subearth duct should do this to perfection, and what it does in practice there are men here who can tell us from experience.

A curing room half basement, half frame, well insulated, with a good ventilating flue, having most of the windows on the north and west side and awnings over those windows where the sun strikes has proven satisfactory where the cheese is kept only sufficiently long to be acceptable at the paraffining stations.

My reason for having the windows on the north and west sides is to get as little direct sunlight into the curing room as possible, also you have all noticed that the wind coming from the north and west is always cooler and drier than that coming from the east and south. My method therefore is to open the windows on the north or west side during the night or early morning when the air has been cooled and lost some of its moisture in the form of dew, closing them again as soon as the outside air is as warm as that in the curing room.

If the same precautions regarding ventilation are observed in the above ground curing rooms as in the part cellar curing rooms, on rare occasions only will you have much trouble with mould unless your cheese are defective or loaded with moisture when first placed in the curing room.

In the above ground curing room the trouble is usually that the air is too warm and dry, causing the grease to start and often checking the rinds of the cheese. In such cases the awnings over the windows are even more essential and during especially hot and dry weather a quantity of ice placed in pans near the ceiling or having cold water in opens pans may be beneficial.

Where cheese must be shipped within three days of the press or as soon as the law allows, it is sometimes advisable to strip the cap cloths as soon as the cheese is removed from the press and then turn the cheese as often as is necessary to prevent the rind from checking. This, however, is encroaching on a topic which is to be discussed later. (Applause.)

DISCUSSION BY MR. KALK.

Mr. President: I am making Long Horn Cheddar cheese and the minute I take them out of the press I put them in some brackets. Each Long Horn has a place for itself and it cannot get away. The wind or weather can get around each cheese, I turn the cheese each day. It depends on where you have your cheese. After cheese is in cold storage 24 hours take it out and paraffine. The minute cheese stands too long it gets a little moldy and you cannot paraffine it any more. A cheese has got to be dry. You cannot say whether it is one day, two, three or five. The minute your cheese is dry take off your cap cloths. There is no way of telling whether it is just three days. Allowing the cheese to stand without paraffining permits it to get kind of wet and moldy. If your cheese is moldy you cannot make a good job. If it is made right, and has enough salt in it, cure your cheese in the vat and not on the shelf. The minute you have your cheese out of the hoop put it in cold storage no matter how solid it is. It cures quicker in three hours in the vat than in two months in cold storage.

MR. CHAIRMAN: A great many of the cheese makers in some parts of the state don't agree with you about curing in the vat.

MR. KALK: Inspectors looking to find trouble can find it all over. That don't help our cheese. We want men to show us how to make it. If you don't have good men to show you it is no use to inspect it. Years ago when we had instructors we got better results than we have now. Passing laws don't do any good. Be with the boys and show them how to do it and you will get results. The minute you do that we will get good Wisconsin cheese. The way I started, in the second year I ran a factory alone and we sent the cheese to Stevens & Company and Mr. McCready was buyer and he used to tell how to use a little more salt or a little less. If they do that you will learn. If they don't tell you anything you don't know it. The first cheese I ever sent to be scored I got 81. I had to learn. If you have got a good cheese, I don't care where you sent it, it is good all over.

MEMBER: What about the inspectors of the Dairy and Food Commission? Don't they understand their business? What are they on the road for?

MR. KALK: I don't know; they are not instructors, they are there to inspect.

MEMBER: Don't the law require them to be scientific dairy men? I am not an inspector, I am only an old cheese maker and a farmer at that.

MR. NOYES: They pass an examination before they are accepted.

MEMBER: Wouldn't it be a good thing for this body of cheese makers to demand instructors?

MR. CHAIRMAN: The sense of this discussion is that some one of the members is going to bring in a resolution to be passed upon, to recommend to the next legislature a bill creating a new commission, and an instructor in every county and this instructor to have inspec-

tion police powers. If a fellow is unsanitary he can go after him on that. He is instructor in the factories in his own county. Whether the state stands that or the county, I don't care. In a large county like Manitowoc or the county where I come from, with 112 factories while the one next to us has only 17, it would seem as though the state should help. We will have instruction and inspection throughout the State of Wisconsin if we pass that.

SENATOR H. BILGRIEN: When will this resolution be read? If you have that in your mind, bring it in. I came here purposely to find out what was up. I am the oldest cheese maker of Dodge County. I commenced in '82 and have been at it ever since.

MR. BRUHN: I think that resolution was passed last year.

MR. KALK: It was passed last year.

MR. BRUHN: We will pass it again.

MR. BILGRIEN: I think we are lacking on the same point today. I was working hard and I got my bill through on moisture in brick cheese and I don't want to have my county going back. It passed without any trouble.

MR. MARTY: I would like to say a few words in regard to this inspection and instruction proposition. It sounds good, but never forget this that without the assistance and the aid of the man that deals in that commodity the instructor can talk until he is black in the face, as long as there are men in the business who will come around and gobble up that article for the sake of getting it away from his competitors. I will say and I believe that if the dealers that are so engaged in the distribution of that commodity in the State of Wisconsin could have a system of their own demanding quality we would be surprised with the material that is on hand. We have come here for the last 25 years listening to the same old story year in and year out. What progress have we made? Let me tell you if the milk was graded and the dealers would specifically make payments according to quality, it would immediately adjust itself and I am here to tell you that the cheese makers today in the State of Wisconsin are competent enough, if the demand asked for it, by next week they will make a better product.

MR. MCCREADY: There is no doubt but what Mr. Marty is to a great extent correct. I had the distinction and the honor of being an instructor in the State of Wisconsin for the State Dairymen's Association and they had sufficient funds to employ two of us at one time. Mr. Aderhold and myself were the last two and we had a charge we made at the factory which helped out on our pay. The idea is this, I don't care how good a cheese maker a man is, a little outside help may do him good. I didn't always pretend I could find his trouble, but I could help him out. The Dominion of Canada has instructors all over the Dominion, and the quality of cheese they are turning out is somewhat better than we have today. You have these instructors to follow up the Dairy School. It pays to help a man out of trouble. We used to have evening meetings to talk to the patrons. I want to tell you, gentlemen, it is because I was an old instructor that I

know that the instructor is a mighty good thing and you need to have him.

MR. MARTY: I was instructor in the same department at the same time, the old Wisconsin Dairymen's Association. My duty at that time was this, to go from factory to factory to instruct. I am here to tell you that we did wonderful work as Mr. McCready said, but remember competition in those days amongst cheese dealers was not as competition is amongst cheese dealers today. It is very different, and I refer to an instructor talking until he was black in his face. It came to that point in my days, as an instructor, going from factory to factory, and I came to the conclusion "what is the use trying to help when the dealers come right along and laugh about the instruction work?" I again want to put that matter up to the man that is engaged to put his foot down, and until then all the instruction will not do us any good. The man, that is the dealer must discriminate, but it is the unfair competition that brought about the existing conditions.

MR. MOORE: Gentlemen of the convention, I just want to read you a telegram received from J. J. Farrell, representing the Dairy Products Committee at Washington:

"J. G. Moore,
Wisconsin Dairy Protective Assn.,
Milwaukee, Wisconsin.

We are to have hearing on tariff bill Tuesday eleventh. Whom will you suggest to represent the cheese people or will you represent them yourself? You could also wire some eastern cheese men to meet you at our office, 602 Southern Building, Washington.

J. J. FARRELL."

You know that just a few days ago the House of Representatives passed an Emergency Tariff bill putting a tax on milk, but leaving out manufactured products. We understand that the proposed Emergency Tariff legislation will receive rather rough treatment in the Senate, and I presume this tariff bill hearing Mr. Farrell refers to, is the tariff bill as it is in the House. Our Association will take some action in sending somebody to that hearing. People manufacturing dairy products should have a reasonable tariff put on them. At the present time the butter people know the effect of the tendency upon its butter, the effect it has on the market, and the same is probably true to a lesser degree with cheese. You gentlemen ought to be interested in seeing a proper tariff put on your product. The original tariff on cheese was, I believe, 6 cents. Under the Underwood bill it was reduced to 2½.

MR. KIRKPATRICK: Twenty per cent ad valorem.

MR. MARTY: I would like to hear from Mr. Koos.

MR. KOOS: My only suggestion, if you want to raise it, go down and ask for a raise. I don't think you want to go down and ask to have it lowered. I should think 20 per cent would be considered a reasonable tariff by the people in power down in Washington.

MR. MOORE: That is about the same as the automobile manufacturer has, 20 per cent. I just want to know whether this Association wants to take any action.

MR. KALK: I make a motion that this Association try to send a man down.

MR. BRUHN: Is this still open for discussion?

MR. CHAIRMAN: Yes.

MR. BRUHN: Last year there were a few things came up that take financing, and it was then decided that wherever it is necessary to use any of the Association finances, unless the resolution carries some provision for financing the thing, it should be turned over to the Board of Directors. I don't know whether this holds good this year or not. This resolution is not making any provision for financing.

MR. KALK: I make a resolution this Association pay the expenses of the man.

MR. UBBELOHDE: As I understand it now, aside from Canada, the cheese imported, except a little Swiss cheese, is very small and I don't think it injures our market, competes with our market at all, except the Canadian cheese. I don't think it is worth while to send parties down there. All the competition we have now to amount to anything, aside from Canada, is so small that it doesn't affect our cheese trade very much, and if we have a 20 per cent tariff with Canada I think we are reasonably safe.

MR. KIRKPATRICK: The only cheese from Canada that has come into this country has been during the war when there were a few 90 to 100 pound Cheddars and also some Cheddars that were split into twins, so you can imagine the size of those twins which would probably run 40 to 45 pounds each, flat. Those cheese didn't come into competition as they were re-exported, as they were inferior in every way to the Wisconsin product. I think it would be a waste of money to send a man to Washington at this time when there is no competition of foreign with American cheese. It would be a useless expense. I don't believe it would be to the interest of this Association to be represented at Washington now.

MR. CHAIRMAN: Mr. Bruhn, that rule remains good until it is revoked, that whenever a proposal is brought up requiring financing, if there is no provision made for financing the scheme at the time it is brought out, it is up to the discretion of the Board of Directors.

MEMBER: As I understand, we have at the present time a 20 per cent duty on cheese, that is approximately 4 cents a pound. The only question is whether there is any idea of its being lowered. If there is any possibility of its being lowered, then we should be represented.

MR. KALK: I withdraw the motion with the consent of the second.

MR. KIRKPATRICK: As I understand it, this hearing in Washington is a temporary one to take the place between now and the regular session of Congress. The whole question of tariff will be gone through again and there is no necessity between now and the 4th of March or next summer to interfere with the present tariff of 20 per cent. This is merely a separate business for a few months until Congress

can take the matter up in regular session when the whole tariff will be gone through by the new administration.

MR. MARTY: I would offer this resolution:

RESOLUTION.

"It is the sense of this Association that if the present duty is 20 per cent ad valorem that this Association recommends that it shall remain as it stands today."

Resolution seconded.

Upon being put to a vote the resolution carried.

MR. CHAIRMAN: "Standards for Grading Cheese," by Messrs. A. C. Reils, Math. Michels, and others.

MR. MICHELS: I want to say just one word to the audience. While I am on the program for this subject, I know we have a man who is very much better. He is a man, not from this state, but he is connected with the Bureau of Markets in Washington, D. C. He can tell you more in fifteen minutes than I can in an hour, and I am willing to give up my time in favor of Mr. Potts.

STANDARDS FOR GRADING CHEESE

By MR. ROY C. POTTS, Bureau of Markets, Washington, D. C.

Mr. Chairman and Gentlemen of the Convention: The subject which we are to discuss I am sure is of much interest to you, but before taking up that discussion let us get down to the two fundamentals in any business, and one of them is the question of whether there is an incentive for improvement. If I judge from some of the discussions which I have heard today a greater incentive is needed in the cheese industry in Wisconsin if that industry is to go forward.

I put this proposition forward to you, that the two fundamentals for improvement or advancement in your industry are these: first, an incentive on the part of your producer to produce a better quality, and second an incentive on the part of the consumer of your product to buy more of your product, because the consumer is better satisfied with your product. Those are the fundamental considerations before us in considering this question of standards.

We then ask ourselves this question, how can these incentives be offered to the producer on the one hand and the consumer on the other? My answer to the question is standardization. If you agree with me that those two incentives should be offered, then I feel that I can convince you, if you are not already convinced, that standardization is the solution of the problem of offering those incentives.

What process can be used in providing that standardization, that grading, that inspection, that determining of the quality of your product that the producer who produces a better thing will be properly remunerated for the production of that quality that the consumer

who has the money in his pocket and is willing to pay a better price for a better quality will be assured of getting a better quality?

The question of standards is not a new question. The Chicago Mercantile Exchange has had standards for butter and cheese. The New York Produce Exchange has established standards for your product. But when we study those standards we find that the Exchange in one section of the country has established one standard and the Exchange in another section another standard, and in the State of Wisconsin a good commercial quality has been the quality that has been chiefly recognized. You know in general what it is, but you haven't general, set-up standards which fully describe it.

So the question of standardization is not a new one. It is one on which considerable thought has been given. It is one which has been fully recognized by the trade organizations of the country as absolutely essential or fundamental for trading among themselves, but no particular effort has been made to carry that inspection back to the producer on the one hand or to the consumer, and I hold it to be true when we carry that back we are making progress.

In the Wisconsin Division of Markets which Mr. Reis outlined this morning, one of the purposes was to establish standards for food products produced in this state. They are proposing to establish standards for cheese. They sought assistance from the United States Bureau of Markets at Washington, and we are very glad to render assistance wherever it is possible for us to do so, and when we received a request we responded. We came, Mr. Freyhofer from our New York office, and for three days we went into conference. We needed to work out some practicable method of grading and inspecting cheese, applicable not only in the State of Wisconsin, but anywhere in the United States. We want to see such a method of inspecting, grading and branding cheese that a dealer in Wisconsin can pass those same standards on to the cheese trade anywhere in the United States.

In taking up that question we found as a result of our study that we could greatly clear up the contention that seemed to exist in the minds of people in regard to a good type or quality of cheese. Therefore we classified cheese, and I am going to call your attention to this chart on the left. If you go to England and say you want to buy corn they will offer you wheat, because wheat to them is corn. Why? Because they have traded so long and called wheat corn that wheat is corn to them. If you go to certain sections of this country and you say a high quality cheese, they will think of a certain type of cheese peculiar to their conditions which they consider to be the best type of cheese. You bring a man from another section of the country and you hand to him this piece of cheese, which is considered in that section of the country the best, and he will tell you no, it is not, this other is the kind of cheese that is the best type of cheese.

We found that confusion as to what was the best was due to certain things. In one section of the country, take that second column, they would classify as a good, close texture, another section of the country would class as a good cheese, medium texture. Under those words

you find a description as to what is meant by a medium close cheese. In the eastern markets they will tell you the best type of cheese is an open type of cheese. In other parts of the country they will tell you differently. We decided to establish those three classes so that we could agree with all of them. The man who says an open type of cheese is best, we will agree with him that that open type of cheese or a type of cheese which to them is the best, and if they want to buy that type of cheese we will have that type of cheese to sell to them. The man who says this medium close is a better type and states their needs to be that type of cheese, we will agree with him. We will put just as high a score upon an open or medium close as we place upon a close type of cheese. In other words we will not discriminate because of the condition of its texture, but we will sort these cheese according to texture and then score or inspect those cheese irrespective of their texture, giving them, as we will point out, a score on the basis of these points you find here, flavor, body and texture, medium, close or open, the appearance and the color.

In other sections of the country we find people prefer a fresh cheese, others a more aged, so that in order to straighten that out we establish those three classes so that we will have no dispute whatever with the buyers of cheese in this country over the question of fresh, mild or aged as terms applied to cheese.

I couldn't help but feel this morning in the discussion of Swiss cheese if we were to classify that we would first classify Swiss cheese according to the size of the hole or the eye in the cheese. A man says, "I want to buy a large eyed cheese." He would not expect to receive then medium eyed or blind cheese.

It seems to me you can clear up conditions of different classes, and that is what we have attempted to do in establishing these classes of cheese as to description, flavor, as to texture, then as to color. Cheese may be uncolored, medium color or high colored.

A question that may be going in the minds of some of you people may be this question, who will be competent to inspect cheese? If in the State of Wisconsin, with the intelligence that you have to deal with the questions of manufacture of cheese, you haven't confidence enough in your own intelligence to inspect cheese, then I haven't very much faith in you. I feel that men who are competent to manufacture cheese with the intimacy of the process, men who are competent to receive cheese in warehouses and grade cheese for the trade are men who could be trusted to inspect cheese under such a sort of inspection system as this because it seems to me this sort of inspection system is practical. I would say a man who has been given fifteen or twenty lessons in cheese judging would be able to say whether this cheese is fresh, mild or aged, whether it is medium, close or open. If he can't, then that man, it seems to me, must be lacking in something. It seems to me he ought to be able to determine those things. If he is able to determine those things, then can you go further and determine the things offered on this chart? Take a cheese, for instance, which is mild in flavor, which is medium close, and try that

cheese from the standpoint of flavor and determine whether or not the cheese has a pleasing flavor or whether that cheese has a desirable flavor or an objectionable flavor, or whether it is poor or off in flavor, and as you are able to determine whether or not that cheese possesses those flavors, with a developed knowledge, you will be able to place upon that cheese a score of 37 points or, according to the score basis, or whether that cheese would score 92, 3 or 4, if it is perfect in all other things except flavor.

The same thing would be true in reference to body and texture, finish and appearance and to color. I grant you to use a basis of determining quality such as indicated on these two charts will require some study, but I don't think you are through being students of your cheese industry, and if there is any one thing you need to study more than you studied it before, it is that question of quality, that standard which can be used as common ground between the cheese dealers and the buyers of cheese in every part of the country so that if that buyer says, "I want a certain kind of cheese," that buyer will be educated to know if this cheese is brand No. 1 fresh, medium, close, and if that is the kind of cheese most in demand, the people demanding that particular kind of cheese will understand that the establishment of standards has nothing to do with prices. Prices of cheese will be left as they always have been left to the trade according to supply and demand conditions.

Perhaps I have said all I could say, but perhaps I have not made it perfectly clear to all of you. It is just the purpose, the intent and the way in which standardization, inspection, grading, and branding of cheese will be brought about in the State of Wisconsin by the Wisconsin Division of Markets. Perhaps I should proceed a little further and say in considering practical plans for the putting into operation of these cheese grades promulgated by the Wisconsin Division of Markets that in addition to these grades there would be another grade, ungraded cheese. If factories and dealers, after these grades are promulgated, prefer not to use these grades you will go right ahead as you have been going formerly, marking your cheese ungraded, but if you are to attempt to grade your cheese, then you will be obliged to use these grades, and if you use these grades, and you prefer to use these grades, you will make application to the Wisconsin Division of Markets for a license to use these grades. That license will be issued to you. You will be given a license and you will be furnished rules and regulations which you will conform to in inspecting and grading and branding cheese in accordance with these standards.

Who could that person be who applied for a license? Any citizen of the State of Wisconsin, man, woman or child, whom the Wisconsin Division of Markets was willing to grant a license to the same. The State of Wisconsin undoubtedly will provide supervisor inspectors whose chief duty will be to instruct and aid those to whom licenses have been issued to grade cheese, in other words to interpret these grades. It seems to me such a system would be absolutely fair to

everyone because the road is absolutely open to you to use this, but if you choose not to use it, then you are forced to make your cheese ungraded and mark them as ungraded cheese. If I was a dealer in cheese I might choose my grade 1, grade 2 and all the rest ungraded, grade 1-A and grade 1 and all the rest ungraded, and I might choose not to put any grades on them at all. When the Plymouth trade begins and the man says, "What are you offering," immediately you are going to establish differences in value to cheese according to its quality.

As I stated in the beginning, there are two incentives: the first incentive to the producers is to receive that better price, and if you want increased consumption down at the other end, produce a better product. If you want high prices for your cheese, move that cheese down to the consumer with a stamp on it so that the consumer who pays the high price expects to get high quality, and the result of it will be that you will have a difference in price for the different qualities of cheese. There will be an incentive it seems to me for every cheese maker to make the highest quality, and when that quality of cheese is made higher and consumption of cheese in the United States will be increased, your cheese industry in Wisconsin must increase, and that is the end towards which the cheese industry of today is looking forward. That is your vision it seems to me.

DISCUSSION

MR. DAVIS: Mr. Chairman and Mr. Potts. I want to try to clear up something in my own mind. You refer us to two charts, and as I understand it—and if I am wrong I want to be corrected—according to this chart over here we can have by the selection a No. 1 grade of a soft cheese, open but good flavor, and another No. 1 grade of a firm cheese, close and heavy bodied, and a No. 1 grade of a new cheese, close, heavy bodied, and so forth. Still you have a soft cheese that is not a No. 1 grade for the south. That soft cheese might not be a No. 1 grade for Boston, but be a No. 1 grade for New Orleans, so we are to grade our cheese according to the market that we send them to and not the quality of the cheese?

MR. POTTS: No, you grade your cheese according to this general classification. What kind of a soft cheese does the Boston market require? You describe it.

MR. DAVIS: Boston likes a medium texture.

MR. POTTS: Medium close?

MR. DAVIS: Medium close of a rather softish nature.

MR. POTTS: Very soft body?

MR. DAVIS: Not very soft, but one rather slick bordered, one that is, when you take it and bore it, soft, not a dry or heavy texture cheese.

MR. POTTS: A fresh cheese or a mild?

MR. DAVIS: That doesn't make so much difference. They have trade for both kinds. Michigan, then, will come in with a soft, very open cheese and don't object to pin holes. Cheese made at Else

which broke the bandage and ran onto the floor was considered very fine goods.

MEMBER: There is a very limited demand for that.

MR. DAVIS: The demand they have was enough to take them to Chicago where they had a demand for several years. I am trying to get at Mr. Potts, clear up my own mind and maybe the mind of many others here who are dealers, and I confess I am a little bit puzzled, don't quite comprehend your proposition of establishing a first grade of a different quality of cheese.

MR. POTTS: For instance, a grade of a certain class—let us get the classes clearly in mind.

MR. DAVIS: How am I going to grade cheese in my warehouse or in a factory I go to inspect, or in the inspection here so that I can say this is a first class cheese for one section of the country and it is not a first class cheese for another section of the country? We have always been grading cheese here so much for texture, so much for moisture and make-up of this cheese, and if it was open we would not say that.

MR. POTTS: We would not say that, because we would not want to disappoint that man who wanted an open cheese.

MR. DAVIS: My inspector, whom you give a certificate to as an inspector, has a difference with your inspector. Your inspector comes in, "you are paying too much for this soft cheese." My inspector will say, "I grade this for the Boston market."

MR. POTTS: Let me say one thing, gentlemen. We are here to reason this thing out. I think you men are here to get something out of this. I am just going to answer his question. The inspector has nothing whatever to do with what you have to pay. Let us drop the whole question of price. Take this particular piece of cheese. We say it is cheese of a close texture, a medium close, or an open texture. My inspector and your inspector would agree on that irrespective of the market cost. It is a condition in the cheese. You agree on that, don't you?

MR. DAVIS: Well, let it go for sake of argument.

MR. POTTS: Let us take, for instance, the next, and determine whether or not this is a fresh, mild or aged cheese, they ought to agree on that.

MR. DAVIS: That is easy to agree on.

MR. POTTS: And then we begin to take up each of these factors, the factor of flavor, and we state whether or not this cheese has a pleasing flavor or not. They ought not to differ on that.

MR. DAVIS: There will be no difference between us. What I want to get at in this inspection or grading is knowing what we are doing. We for years in the State of Wisconsin have built up a grading on the system we have used of so many points for texture, body, flavor, color, etc. We go into a factory or we go into our exhibits like we have here and one cheese could be one thing at one market and another thing at another market. It was the actual conditions of that cheese the way we graded it, and that is why I am asking

you, when I heard your explanation that got me mixed; according to this chart here I could have one grade on one cheese higher for one market than I could have on that same cheese for another market.

MR. POTTS: No, you would have practically the same, but here is a man, this Boston man says, for instance, I would place a score of 94 on that cheese. That might be a very soft, open cheese, and we agree with him because we have a standard for inspecting the soft, open cheese. Another man says, here is a cheese here that I like much better. We find that is a firm, close body cheese, and the man says, I will put a 94 score on that cheese, and we will say we agree. If you don't establish these classes for open cheese and firm cheese you couldn't give those the same score.

MR. DAVIS: You are having two men correct on different grades of cheese. You are having one man with a soft, open grade as a No. 1 cheese and another man with a firm No. 1 cheese, but according to our ideas the soft, open cheese would be less desirable and don't stand up and we don't grade it as No. 1.

MR. POTTS: You couldn't fill any orders for No. 1 that were soft unless you use a classification of this kind. I think the man who prefers a soft cheese is entitled to a No. 1 soft cheese.

MR. DAVIS: I have here a Long Horn. That cheese is suitable for Cleveland. It is a cheese that will go as a soft, large, open cheese, but a cheese like that, open, curdy, would not grade 90 points.

MR. POTTS: According to what standard are you using? Are you using a standard for a class? If you are then you are always going to be in difficulty in grading cheese for the Cleveland market because you would always have to give them a cheese that would score 86. If you would establish two standards, soft open and firm close, and give them a proper score in its class, then the man in Cleveland would say to you, send me a No. 1 soft open, and he would get just what he called for.

MR. DAVIS: A No. 1 soft open, Mr. Potts, is not as good a cheese and it does not encourage the making of fine quality of cheese in the State of Wisconsin like a No. 1 cheese there that is firm and close.

MR. POTTS: What are you doing at the present time? What are you doing with that man in Cleveland?

MR. DAVIS: We have informed him that according to the laws of the State of Wisconsin according to moisture, he cannot get the low grade of cheese that he used to, and I believe that is what the marketing of the country requires to handle, a better grade of cheese and not a poorer grade.

MR. POTTS: When you brand, possibly the trade would take more readily to this other, a few boxes shipped in would encourage him to buy the other, he never would drop out as a buyer of this soft open cheese. It is not going to be difficult to deal with the trade because they will get the same cheese, but with a proper designation on them and there will be no confusion. He will eat this cheese and he will order more. If you could slip in some of these others, then he will come back with orders for this other. It seems to me this grading

of cheese will tend to establish a common language between you and your dealer in Cleveland, and it is going to help in marketing cheese.

MR. NOYES: It might be you could get rid of some cheese of that quality, but the great volume of cheese made in Wisconsin and the cheese that has to be carried, that cheese won't stand up. If you get a good cheese that is good flavor and all that, it will sell anywhere. I have sold cheese to a Minneapolis man who thought he wanted soft cheese and when he bought five cars of cheese to carry, over two-thirds of those were rotten. It is my business as a cheese dealer to educate that man to what he does want. I don't believe we can have half a dozen grades to please the trade.

MR. POTTS: A man says he sold to a firm in Minneapolis a cheese which was soft which that firm carried and which rotted. If those cheese were inspected and branded would that man have come back the next year and bought that kind of cheese? If he found that cheese would not carry for his purpose he would buy a firmer cheese, and there would be no market for that cheese.

MR. NOYES: We know there is no market for that cheese.

MR. KIRKPATRICK: I have been in the cheese business many years. Forty years ago we were making this stuff you are talking about as cheese. It is soft, open stuff. We have gotten away from that, we have educated our trade away from that, and yet you want us to go back forty years to make this kind of stuff.

MR. POTTS: We merely give it a place in the inspection.

MR. KIRKPATRICK: If a man was to bring in cheese with this open texture I would refuse him, I would put him down to 70 or 80 points.

MR. POTTS: The price of that particular grade of cheese would put it down there.

MR. KIRKPATRICK: It would not be No. 1 cheese to me or to my trade. I have shipped dozens and dozens of cars of firm, close cheese and I have gotten a quarter of a cent in many cases over the open made cheese. I can ship those Richland county cheese to Boston and they will take more. I can't get enough of that class cheese, whereas if I were to ship that open stuff you are talking about I would go out of business.

MR. POTTS: We are not here to recommend open cheese. We merely provide a place in the inspection for that class of cheese. If the man doesn't want it he won't take it.

MR. KIRKPATRICK: No, but somebody else might come in here. He might ship down to Chicago.

MR. POTTS: It goes to Chicago now.

MR. KIRKPATRICK: It is practically that very thing we want, to keep up our standard of quality that we have built up for forty years. Our cheese are going fine as they are, but we don't want to make an open cheese grade up 96 points with a close one under any conditions. I think it is all wrong. Every cheese maker in this room knows that his cheese would be rejected if they were scored as they are on that chart.

MR. POTTS: How could they be?

MR. KIRKPATRICK: He could go to work and make those cheese open.

MR. POTTS: He doesn't have to make them open. If he makes them close and firm he would get just as high, perhaps higher score because in that class of cheese we have carrying quality.

MR. KIRKPATRICK: We have no carrying cheese in this open cheese.

MR. POTTS: What will happen to it? It takes care of itself.

MR. KIRKPATRICK: We don't want that kind of cheese. We want cheese that scores 92 or over. I don't think there is a cheese dealer or maker in this room that will agree with you.

MR. SAMMIS: Mr. Potts, the cheese up to the present time has been graded with one standard in mind, and that is export standard. Presumably that is your close texture cheese. A 98 score has meant only one thing, having in mind the export type of cheese as the ideal. The difficulty arises if you are going to have three ideals. When you put down 98 on a cheese, then you must put down also what you have as an ideal. Not say 98, but 98 close, 98 medium, or 98 open. What is the advantage of that new system over this present old system of marking this cheese 98 having the export type as the ideal, but if it is medium, 94, or open, 90. Why isn't the old system, 98, 94 and 90, as good as the new system?

MR. POTTS: Just this, that you would have a condition on the New York market where you would have a 90 score cheese selling for more money than a higher score cheese. They are interested in that particular type of texture of the cheese. If the cheese has the texture they want, they will pay the price for it. That cheese will be branded not according to its score, but according to the market value. Certainly I would not put them all below 90 because the best of them with the pleasing flavor is there. That cheese is entitled to a higher score. If you have firm cheese by the side of them you are considering a different type of cheese. In Wisconsin you have put them all together and you have satisfied your trade.

MR. KIRKPATRICK: You are talking about New York. We are dead willing to have those New York men make those cheese. We don't want to make them in this state. We have a standard of our own here which we think is satisfactory, and the fact we have taken the trade away from New York state proves we are right. Twenty or thirty years ago you could go to the Southern states and sell Wisconsin cheese for more money than New York could get, and ship them through New York City. Why should we go to work and change our ideal for the sake of New York? I think we are ahead of New York and we are dead sure we are ahead of Michigan making that Else cheese.

MR. POTTS: This will educate them still more because your consumer will know what he is getting.

MR. KIRKPATRICK: We are going along just fine, Mr. Potts, the way we are now.

MR. POTTS: If you were to see some of the cheese I bought in Washington and say that the consumers in Washington are getting along fine! If I could say to that man, I want to buy a close, firm, mild

cheese of No. 1 quality, he could cut me off a piece, but I don't get that. I very often get something that is soft. I would rather have the other. Today you are putting all of this cheese on the market and calling it cheese and the consumer don't know how to differentiate.

MR. KIRKPATRICK: Couldn't the Bureau of Markets say they are cheese when they are three days old?

MR. POTTS: They are cheese.

MR. KIRKPATRICK: No they are not, they are curd.

MR. POTTS: How could you have cheese if they were not there in the process of manufacture? If you sold them you would sell them as cheese and invoice the man so much cheese. You and I agree exactly.

MR. KIRKPATRICK: What I am trying to get at, we have established a trade, we have got the State of Wisconsin at the head of the list. We are making more cheese than any two states in the Union, and we can sell them the way we are grading them now, but we don't want to have those three grades as far as texture is concerned. We want to keep on the way we have built up our business, on quality, and not on the standard of cheese made in New York or anywhere else.

MR. POTTS: Do you think the consumer would buy twice as much cheese as he is buying if he knew when he was buying a pound of cheese that he was getting a firm, close texture cheese?

MR. KIRKPATRICK: Sure.

MR. POTTS: That is exactly what we are trying to do, place upon that cheese a brand according to texture.

MR. KIRKPATRICK: We are dead willing, Mr. Potts. The people want that cheese. Go to New York state and Michigan for that soft cheese, it won't pay us to make them and it will be a cause of endless trouble.

MR. POTTS: Understand we are not advocating that you make that kind of cheese.

MR. KIRKPATRICK: You are compelling our graders to accept loose, open make cheese as 92 score when we consider it should be a close bodied, heavy body cheese to score 92 points, and that cheese maker would compel us to take that. We don't want them at all.

MR. POTTS: You don't need to where the price they would sell for would simply rule them out. You are trying to make a standard for the whole of Wisconsin which rules out the other fellow's product.

MR. KIRKPATRICK: No, we are making a standard for ourselves, and all who have been taught in the University have that standard.

MR. POTTS: I made a little study of this from the consumers' standpoint and when I came along to a booth that was selling cheese I watched consumer after consumer buy cheese and that consumer more often bought quarter and half pounds of cheese and they said so often, "I can't get the quality I want." It leads me to think if that cheese were actually graded on a quality basis so the consumer could get it he would buy more.

MR. DAVIS: I have been in Washington a number of times and I have sold cheese to those booth men and I know Washington and they will buy cheese at two and three cents under the market.

MR. POTTS: They need some education.

MR. MICHELS: I am afraid there is a wrong impression down here from what Mr. Kirkpatrick told me. I would like to ask Mr. Kirkpatrick why there is a difference in the price of cheese between New York cheese and Wisconsin cheese. Explain to me why this so-called Colby cheese is selling for two cents above any other Wisconsin cheese at the present time if there is no market for it. Why are all these things taking place at the present moment?

MR. KIRKPATRICK: Where do you get your information?

MR. MICHELS: Through the press.

MR. KIRKPATRICK: The New York Produce Review? You say New York cheese are selling in New York for four or five cents a pound higher than in Wisconsin?

MR. MICHELS: About four cents.

MR. KIRKPATRICK: What kind of cheese?

MR. MICHELS: The cream of Wisconsin today is sold as New York cheese. It is sold into the markets of every city in the country. I know I have seen my own cheese sold across the counters of Fond du Lac as New York cheese.

MEMBER: How about the misbranding act?

MR. KIRKPATRICK: If you will look at the New York Produce Review or any of the bulletins you will notice those cheese quoted; four or five are held cheese and are so quoted as held cheese.

MR. MICHELS: What about the so-called Colby cheese?

MR. KIRKPATRICK: That is a local trade cheese.

MEMBER: Those cheese you were talking about in New York at four or five cents over Wisconsin are not fresh goods.

MR. COON: The prices paid in New York State were from another year. In one case I paid 22 cents for one lot of cheese that was very well ripened.

MR. MICHELS: They were part skim?

MR. COON: They were full cream.

MR. KIRKPATRICK: It is so stated in all the market reports, those 27 to 28 cent cheese are held cheese. I bought them and put them in my own cold storage.

MR. COON: The amount of cheese I bought last week was about four thousand boxes.

MR. KIRKPATRICK: Mr. Coon is one of the oldest cheese dealers in the east, Coon & Company, Philadelphia, and I venture to say he is selling Wisconsin cheese at his store. I bet he is getting 30 or 40 cents a pound for it now, because they are the right kind of cheese. Is that true?

MR. COON: I would hardly say that.

MR. HUBERT: The Secretary made a statement a few minutes ago that the cheese be scored for export. Four years ago I started as one of the judges, judging your cheese. Mr. Cannon at that time—and if he is in the hall will bear me out—is a state man. We didn't quite agree on the judging of cheese. He was judging cheese for export, I was judging cheese for the United States consumption. Do you remember that?

MR. CANNON: I do.

MR. HUBERT: Both of us have judged your cheese for four years and we have got more and more to judging the cheese for what the people of the United States want.

MR. CANNON: But you never changed my opinion of a good cheese.

MR. HUBERT: Nor you haven't changed mine. We never took a cheese for the United States consumption that was poor. I have a cheese right here, I don't know what score we gave it, but I am willing to go on record as a man who has been in the cheese business twenty-seven years, shipping cheese. I can put this cheese into Texas, New York, Cleveland, Ohio, and I won't have a kick on it. I will take this soft open fellow and I can send it anywhere on commission. We don't want that funny kind of score. We want a good cheesè. Don't make three different kinds of cheese in the one grade. If you do you are going to have trouble. I don't care what anybody says that comes from Washington, the cheese dealers in Wisconsin know what the people in the south want. We have got Wisconsin on the map. We don't want your junk like this, it has got gas holes in it.

CHAIRMAN: The question is this, Wisconsin don't want to have made the soft stuff. We are breaking away from it and we don't want any place for that stuff because it has a tendency to make more yield out of the milk. We have established a big trade on firm cheese.

MR. SCHUJAHN: I believe that Mr. Potts has meant to be fair. I think the man establishing grades has done justice to the consumer that wants a soft cheese and the consumer that wants firm cheese, but I fear we will get into trouble. A cheese three days old is good in appearance. I have graded that cheese as an open cheese. I am going to say that cheese grades less than 90.

MR. RINDT: Under the present system I think every cheese maker is at a loss. If the cheese buyer has a market for that stuff he can grade that stuff in your factory for No. 2 and still get No. 1 price for it.

CHAIRMAN: This is an experiment. They are experimenting to find out where we are and what we will do.

MR. RINDT: I know in the Colby district when people get accustomed to use an open cheese, then they have gotten some acidy stuff. I think if we sell them close cheese and leave the holes out the demand will be just the same.

MR. BUCHEN: I would like to ask Mr. Potts a question. Suppose under this system of the Division of Markets that cheese was to be scored. Who is the one that does this scoring, and does this scoring hold good from the time that man does the scoring until the time it reaches the consumer's market? Or does the next fellow that buys the cheese have another chance at the scoring?

MR. POTTS: Mr. Chairman, the scoring, as I said, would be done by licensed inspectors. Two weeks later certainly that cheese would be subject to another inspection and a new score. If this cheese was inspected two weeks old it certainly would be fresh cheese, two months or four months, mild cheese, and if in storage it is an aged cheese.

MR. BUCHEN: According to that we would naturally think all inspectors would have the same idea.

MR. POTTS: If they were having the same standards.

MR. BUCHEN: I believe that the cheese scored for this convention for the last four years are as good as any in the country, but at the same time I want to bring back to you a cheese I had here. It was a cheese of a regular make on the factory taken off the shelf without any extra records as to finish or anything else. That cheese scored 93½ at this convention last year. Here were the two judges scoring the same cheese. But these two judges carried a different idea as to different points on that cheese. There was as much as four points difference alone between these two men on the scoring of flavor in that cheese. Now suppose that cheese was to be scored by a man of the Market Division, and went to the next fellow. He would say there would be four points on flavor alone, and then to the other fellow, it would bring it into class 1 or class 2. No one would know the system. I believe in a single standard for Wisconsin and I can see where this would bring to the makers of Wisconsin the greatest trouble we have ever experienced. (Applause.) I have made American cheese for twenty-eight years and I have had cheese at this convention, but not this year, and I can see if we follow this system we would not hold the good standard we try to aim at. It is true that during the war we as makers of Wisconsin did not put upon the market what we should have put. It was a shame and a disgrace to some of the makers of this state. I myself would not put over 40 per cent moisture in the cheese, and I was asked to quit my job because they said they could get another man who would. I stayed until my contract expired in spite of the fellows, but I didn't make any high moisture cheese.

MR. HUBERT: I may have had my ideas on an older make cheese. I maintain today, gentlemen, these points you are scoring cheese on are altogether wrong, 45 for flavor, 30 for texture. Texture is what we want. As a cheese dealer we don't have one kick on flavor where we have five hundred on texture. Every cheese dealer here will bear me out. I wish you would reverse those things. I brought this matter up a few weeks ago with Mr. McCready with that standard going on all over the United States. Wisconsin always leads. Add a little more to your make-up, cut down your flavor and add to your texture.

MR. BUCHEN: I think we are getting closer together. He brings out exactly my contention in this, there were two men as he said but working on two different ideas or principles of scoring, one on American make and one on foreign or export make. With three of them to do that and a whole lot of other stuff to go along and score our cheese, I don't think under this system we as makers of the State of Wisconsin would put upon the market a cheese that would be desirable.

MR. ADERHOLD: I would like to ask Mr. Hubert if a well made cheese, a cheese that is right in every respect, would score as much when it is two weeks old as it does when it is old?

MR. HUBERT: Wisconsin cheese is sold new. We are trying to sell Wisconsin cheese. We are selling the cheese these boys are bring-

ing in to us three days old. I believe in scoring this cheese. I want to see them make these new cheese and I want them to get a fair, decent score on these new cheese. Last week in opening our mail we found a concern in Trenton, New Jersey, "Please quote us fresh cheese." It is going to be more and more difficult to sell old cheese in the south. In the southwest they wouldn't take old cheese. This year it is absolutely impossible to sell an old cheese in the south. Give these new cheese a decent score. We won't care a continental what they do with the old cheese. Furnish us a cheese that will go anywhere in the United States, I don't care whether you put it in Texas or any other place, make such a grade of cheese and score that.

MR. DAVIS: I would like to ask Mr. Hubert one question. Don't you believe that the cheese scored here should be taken from the vat's make day by day and not special vat's make for that purpose?

MR. HUBERT: Yes I do. We ought to judge your cheese not over a month old, the cheese that really go out to the trade.

MR. DAVIS: Certain factorymen in the State of Wisconsin will take the milk from a certain herd of cows and work up a 500 vat. The cheese should be taken from your week's make, your month's make, and not some special lot.

CHAIRMAN: This has not been a rule here in the Wisconsin Cheese Makers' Association, but our Central Association has a ruling that all entries shall be made by the 26th day of this month and all the cheese which is judged shall not be older than two months old nor younger than one month old.

MR. DAVIS: I am making a suggestion to this convention that no special make of a test vat be allowed in competition. The object of this scoring is for the improvement of the quality of cheese in the State of Wisconsin, and that means we want every maker in the state to make the best cheese each day he possibly can make, and he is going to pick one cheese out of one vat through the months for exhibit at this convention. I say it should be the current make from some current vat some day during the month.

CHAIRMAN: We are still discussing on the grading of cheese.

MR. MICHELS: Mr. Chairman, there is just one word I would like to say in closing and that is this, the Division of Markets is anxious to do something for the betterment of the cheese industry of the state. These charts represent a good deal of work. With it the Federal Government has given us a handbook. There is lots of good valuable information in that. This scoring is only an outline and we wanted your criticism, and I think we have gotten it. I am not satisfied to call the criticism we got constructive. We all agree that the standards of Wisconsin cheese have gone down from year to year until everybody seems to agree it is demoralized to the extent that it is hurting the dairy industry. I would like to think of these grades and have you tell us where to better them so as to write the Division of Markets.

MR. NOYES: What would happen to Wisconsin cheese if we all make cheese like Colby cheese?

MR. MICHELS: High moisture cheese and open cheese do not necessarily go hand in hand.

CHAIRMAN: We are not discussing high moisture cheese, but the idea is we do not want soft cheese to enter into the game.

ELECTION OF OFFICERS

CHAIRMAN: Whom will you elect president?

MEMBER: I will nominate Herbert Kalk. Nomination seconded.

MR. NOYES: I will nominate our present president, Mr. Reed, who has served us well the last three years, and this convention shows it. Nomination seconded.

Upon a ballot being taken it was announced there were 152 votes cast, 77 being necessary for a choice of which Mr. Aderhold received 1, Mr. Michels 1, Mr. Hubert 1, Mr. Kalk 49 and Mr. Reed 100.

PRESIDENT REED: Gentlemen, I thank you. We have had a hard 1920, but we are not only going to make 1921 a better convention year, but a better cheese year. The next in order is election of vice president.

MR. BUCHEN: I nominate Mr. O. A. Kielsmeier.

CHAIRMAN: You can't do it.

MEMBER: I will put up Mr. Charlie Swendt. Nomination seconded.

MR. BRUHN: I nominate Mr. H. A. Rindt. Nomination seconded.

SECRETARY SAMMIS: Sometimes people think that the office of vice president does not carry very much responsibility, but you should certainly consider that if anything happened to the president the entire management of the convention meetings would devolve upon the vice president. One should pick out just as good a vice president as you do a president. The office of vice president is not merely an honorable position, but a responsible one.

MEMBER: I nominate John Fuhrman as vice president. Nomination seconded.

MR. DAMROW: I move that the nominations be closed. Motion seconded and carried, and ballot taken.

SECRETARY SAMMIS: The total number of votes cast were 108, necessary to a choice 55; of which Mr. Michels received 1, Mr. Casper 3, Mr. Kalk 4, Mr. Fuhrman 23, Mr. Schwend 11 and Mr. Rindt 66.

CHAIRMAN: I declare Mr. Rindt elected. We have the secretary, treasurer and a director to elect.

MEMBER: I think the people are well satisfied with our present secretary and I do not think it is necessary that we vote. I move we instruct the President to cast the unanimous vote for Mr. Sammis as secretary of this Association. Motion seconded and unanimously carried.

CHAIRMAN: The next is treasurer in place of Mr. Ubbelohde.

MR. HUBERT: I move you that we suspend the rules and that the

secretary be instructed to cast the ballot of this Association for Mr. Ubbelohde.

MEMBER: I nominate Mr. A. F. Zelm. Nomination seconded.

MR. DAMROW: I move the ballots be closed. Motion seconded and carried, and ballot taken.

SECRETARY SAMMIS: The total number of votes cast were 96, necessary for a choice 49, of which Mr. Schwantes received 1, Mr. Ubbelohde 25 and Mr. Zelm 70.

CHAIRMAN: Mr. Zelm, having a majority of the votes, is therefore elected. The next officer is a director in place of Mr. Karlen.

MR. HUBERT: The Swiss cheese industry of Wisconsin should be represented upon the Board of Directors. For that reason Mr. Karlen was elected, as I understand. I move you that it be the sense of the Association that the Secretary cast the unanimous vote of this Association for Mr. R. A. Young for director in place of Mr. Karlen.

CHAIRMAN: Mr. Hubert is nominating by acclamation Mr. R. A. Young as a director. Mr. Jacob Karlen was placed on the life membership list today. Mr. R. A. Young, is his son-in-law, and has been the active member of the Board of Directors for the past three years for his father, who has been unable to get here. Motion seconded and carried.

DETECTING SICK COWS BY THE MILK

By DR. F. B. HADLEY, Professor of Veterinary Science,

University of Wisconsin

The changes occurring in milk as a result of disturbances in the cow vary widely in both character and importance. Moreover, the appearance of the milk is no index to the significance of the change, as in some diseases the milk is not perceptibly altered, yet would be unwholesome for use, while in other diseases the milk appears changed, yet would not be harmful when used.

In order to keep within the time limit, I will discuss only those changes of milk which are present when the milk is drawn from the udder. It should be understood, however, that a great many other changes occur in milk, but practically all of them are caused by the action of bacteria which contaminate milk subsequent to its leaving the udder. These changes are beyond the scope of this paper, but experience has demonstrated that they may invariably be stopped by making a general and vigorous clean-up of all dairy utensils and by guarding the milk against contamination with water or other agents capable of carrying germs.

Abnormal changes* in milk naturally fall into two groups: (1) changes that may be detected by sight, smell, or taste; (2) changes that require chemical tests, or a microscopic, a bacteriologic, or a biologic examination for detection.

Generally but one cow, or at most, only a few cows, in a herd will be found secreting abnormal milk at a given time. If the total quan-

tity produced by a herd is great, the abnormal milk of one cow may be so diluted when mixed that it would not attract attention, although by itself might be markedly changed in appearance. The diluting of milk in this manner is a means whereby milk from a diseased cow is not only made difficult to detect, but also, very fortunately, is rendered harmless. The exact extent to which this applies would depend (1) on the quantity of diseased milk, (2) on the quantity of normal milk, (3) on the nature of the organisms in the milk, and (4) on the temperature and length of time the milk is kept.

To detect the member or members of the herd which are causing the trouble, the following method is advised: Draw a small quantity of milk from each cow in the herd directly into a recently sterilized, pint fruit jar. Then seal and cool the jars and set them aside. These samples should be inspected daily for the various changes to be described.

Before mentioning specific changes in milk, it seems advisable to describe briefly the one disease, above all others, that is responsible for alterations in the appearance and composition of milk. This disease is commonly known as "garget" or "caked bag," but is more properly termed inflammation of the udder, mastitis, or mammitis.

GARGET

The udder of the dairy cow is frequently affected with inflammation, because this gland has been highly developed by careful breeding and selection over a long period to a wonderful capacity, which renders it very susceptible to disease influences. Garget may affect one, two, or more quarters of the udder. It occurs in two forms, one is not transmitted to other cows and is non-contagious in nature, while the other is readily transmitted and is contagious.

It seems certain that most cases of garget are caused by bacteria gaining entrance to the udder. These minute organisms may pass directly from the circulating blood to the gland tissues, or gain entrance from the outside through the canals of the teats. Mechanical injuries, like cuts, bruises and tears, are common means for the entrance of bacteria to the tissues. Exposure to drafts, and lying on damp, cold concrete floors are indirect causes. Heavy feeding of concentrates, with the accompanying constipation, is another frequent indirect cause of garget. The changes in the cow's body incident to calving are also a contributing factor to the onset of garget.

The symptoms appear suddenly and are well-marked in most cases. Little milk can be drawn from the affected quarters, and that which does come is abnormal in appearance, being flaky, or otherwise changed. In severe cases the cow develops a fever; the udder becomes red, hot, swollen, and painful; lameness occurs when walking, due to pressure of the udder between the thighs.

Simple cases of garget may be relieved and the progress of the disease arrested by promptly giving $1\frac{1}{2}$ pounds of Glauber's salts dissolved in water; by taking away all high protein feed; by providing a laxative ration; by applying to the udder woolen cloths, wrung

out in hot water, for half an hour at a time three or four times a day, then drying the surface quickly and anointing with cottonseed oil or unsalted lard, which is to be rubbed in well with the palm of the hand.

That form of garget which affects several cows in the herd at one time and is distinctly contagious requires expert veterinary skill to check and treat. Since the cause of each outbreak is likely to be different and since the cause must be determined before intelligent treatment can be prescribed, it is evident that no set rules can be laid down for handling all cases. One should promptly consult the best informed veterinarian within call and follow his advice to the letter, whenever contagious garget is believed to be present in a herd.

The question as to the harmful properties of milk from a gargety udder is important. According to Klein, such milk nearly always contains bacteria which may be harmful to man. Moreover, such milk is objectionable from the fact that it also contains puss which gives it an unpleasant taste and frequently causes it to putrefy and curdle quickly. Therefore, when a cow is found to be suffering from garget, the milk should not be used for food and, if possible, the cow should be removed from the dairy herd until the udder returns to the normal condition.

FLAKY OR CLOTTY MILK

The presence of small flakes or curd-like clots in milk when it is drawn from the udder is indicative of garget, the disease just described. In severe cases of garget the milk becomes viscid or slimy. When such milk is centrifuged, or allowed to stand, the particles are seen as a greyish-yellow sediment. The cream on the surface appears granular or clumpy. Although some slime (mucus) is found in the separator bowl after normal milk has been separated, an excessive amount of this substance is a sign that at least one of the cows producing the milk has garget. As the steps to be taken in a case of this kind have already been discussed, no further comment is necessary.

PUS AND STREPTOCOCCI IN MILK

The presence of pus and pus-producing organisms do not change the appearance of milk, unless large quantities are present. Such milk, however, coagulates readily when boiled. On microscopic examination it shows an enormous number of bacteria occurring as long chains. These bacteria belong to the class known by bacteriologists as streptococci. When virulent streptococci are present in the udder they cause the disease which has been described as garget. Many cases are on record where persons have been made very sick by drinking milk from an udder infected with these micro-organisms. Among the diseases of man directly traceable to milk containing streptococci and pus are diarrhea, septic sore throat, colic, and fever. These affections are more likely to occur in children than in adults.

There is still a question whether the harmfulness of milk containing streptococci is due to a poison produced by these germs or to the products of their activity in the udder, although the latter is surmised. However, this is not important from a practical point of view, for it is clear that they may cause disease in man, so an effort should be made to reduce their number to the minimum and to exclude from the market milk containing pus organisms.

Among the diseased conditions other than garget, which have been found in cows secreting milk contaminated with pus streptococci are the following: blind abscess, wounds, tuberculosis, actinomycosis, fever, teat obstructions, and diseases incident to parturition. This list is indicative of the variety of diseases associated with the production of milk contaminated with pus and pus-producing streptococci.

LEUCOCYTES IN MILK

These cells are also known as white blood-corpuses. Some of them may be found in every sample of normal milk. Most cows normally secrete milk having an enormous number of leucocytes per cubic centimeter, the average for most herds being above 500,000. They pass from the blood to the udder during milking. Leucocytes have been found in many cows to increase in number at the beginning and near the end of lactation, also following delayed or incomplete milking. A pathologic increase occurs as a result of inflammatory changes in the udder (garget). When numerous streptococci are found in company with an excess number of leucocytes, they should be taken as evidence that the milk contains secretion from an inflamed udder. There is still considerable difference of opinion as to the significance of both leucocytes and streptococci in milk. It is safe to conclude, however, that the mere presence in milk of great numbers of leucocytes is not sufficient to condemn milk as unfit for use. When examining sediment of milk for leucocytes, care must be taken to differentiate between them and epithelial cells from the lining membrane of the udder, as this type of cell is also present in most milk but are relatively fewer.

WATERY MILK

This change in milk is mentioned because it may be mistaken for an abnormality when it is not. Normally cows of certain breeds give milk which has a more watery appearance than that produced by cows of other breeds. This is a distinct breed characteristic and has nothing whatsoever to do with disease. It is safe to say that the milk of a given cow does not take on a watery appearance even when the ration is greatly restricted or is very poor in quality. Therefore, little or no significance can be attached to what is termed watery milk at least, insofar as disease is concerned. This is contrary to the belief of some practical men who claim that the excessive feeding of malt, or turnips, or other feeds high in water content, may result in the secretion of a watery-appearing milk.

FISHY MILK

Freshly drawn milk may have a fishy taste which is very objectionable in both the fresh and the manufactured product. Investigation has failed to connect this taste with any particular disease. For a long time it was believed to be caused by the cows having been fed on fish meal, or other substance having a fish-like odor, but attempts to produce it experimentally in this way have failed. This taste has been traced in some cases to cows which have been secreting milk over a long period, i. e., near the end of lactation. Therefore, when milk from any one farm is found to have a fish-like taste, the owner should be advised to discard as unfit for use all milk from cows which are nearly dry.

GRITTY OR SANDY MILK

The occurrence of small granular particles in fresh milk is an indication that they were formed in the cow's udder. Some men believe that these formed substances may be the result of feeding a ration very high in mineral matter, but this is doubted by others who are in a better position to know. In certain cases these granules are found to have nucleus, or center, made up of a mass of bacteria around which mucus, salts and dead cells have accumulated. As they seldom occur in milk, little significance need be attached to them.

BLOODY MILK

Blood in milk gives it a pink or red color if a considerable quantity is present. When only a few red blood-corpuscles are present they can be demonstrated only with the aid of a microscope. These blood-corpuscles may be intact, or shrunken from the action of the milk constituents into thornapple like bodies. The milk when drawn may be a uniform color or streaked with blood. Sometimes clots of blood and curd-like particles are observed. When bloody milk is centrifuged all of the coloring matter in some samples will be thrown down; in other samples, the milk serum remains blood-tinged, indicating hemolysis of the blood-corpuscles, that is, a liberation of their pigment.

The most common cause of blood mixing with the milk is the great congestion of the udder accompanying calving and resulting in the passage of blood-corpuscles through the unruptured walls of the vessels. In these cases the condition usually lasts for a fortnight or less and gradually disappears without treatment. Another cause is a tearing of small blood vessels when a cow with a very full udder walks. In other cases it may be the direct result of injuries as blows, rough handling, and excessive bunting of the udder by the calf.

Bloody milk is obviously unfit for use even for a considerable period after the red color has disappeared, as blood would still be present in small quantity, yet would escape detection by the unaided eye.

Cows giving bloody milk should be milked last and care taken to avoid further injuring the udder. When symptoms of garget are

present the line of treatment advised for it should be followed. In addition the patient may be given one-half ounce of fluid extract of hydrastis in a cup of warm water once daily to advantage.

TUBERCULOUS MILK

While tuberculosis of the cows' udder is not very frequent, the presence of tubercle bacilli in milk is of common occurrence. In explanation of this statement, which sounds contradictory, it should be said that the germs of tuberculosis commonly find their way into the milk with the fine particles of manure that fall into the pail from the flanks of the cow during milking. This demonstrates that tuberculosis in cattle is usually a disease confined to the digestive and respiratory organs, rather than to the udder.

It seems needless to remark that milk containing tuberculosis germs cannot be detected with the naked eye, as everyone knows this. Even a microscopic examination of the sediment secured after centrifuging milk cannot be relied upon to detect these extremely minute disease-producing micro-organisms. The most reliable tests are to inject guinea pigs with the sediment, and to feed the suspected milk to swine. Since the former test can be conducted more economically, it is usually followed in practice.

Instead of tiring you with a long technical discussion of this subject, I will recite an actual experience to show how the germs of tuberculosis nearly bankrupted a farmer by producing the disease in a large number of his animals. From this you may draw your own conclusions as to the importance of tuberculous milk.

In March, the farmer in question brought a sick pig to the University for the purpose of finding out the nature of the disease with which it was suffering. The pig was killed and a careful postmortem examination was held. We found the animal had generalized tuberculosis, practically every organ in the body showing evidences of this dreaded disease. As the lungs were involved most extensively, we made a diagnosis of tuberculous pneumonia as the immediate cause of death. The owner, on being closely questioned, said he had about 40 pigs and 5 brood sows on his farm November 1st. Between then and February, seven of the pigs had died. At this time he killed seven more which were sick with a disease. The following symptoms were observed in these hogs: Unthriftiness, coughing, nasal discharge, difficulty in breathing, and fever. During February several more pigs had died.

We visited the farm for the purpose of getting first-hand information and learned the following facts: the hogs were mostly pure bred Poland Chinas. A year before the farmer had bought three Duroc Jersey sows. These had been kept in a separate pen, as had five of the Poland China sows. The pigs were the progeny of these sows and had been raised on the place. After weaning they were fed the skim milk produced on the farm, ground feed, and corn. At night they

were kept, during the winter, in the barn with the cattle. In the day time they were allowed to work over the manure pile in the barn-yard.

As several of the other pigs in the herd were coughing, we advised the owner to sell all of them for immediate slaughter, subject to post-mortem examination by a federal meat inspector. He readily consented to sell all but the Duroc sows. Accordingly, on April 2nd he shipped 14 head to Milwaukee where they were killed in a packing house operated under government supervision. With two exceptions all showed lesions of tuberculosis, four to such an extent that the carcasses were condemned as totally unfit for food.

It is a well-known fact the hogs usually acquire tuberculosis from cattle, therefore we surmised that the dairy herd on the farm was tuberculous. Accordingly, we suggested that the tuberculin test be applied to the herd, which consisted of nine mature cows, one yearling bull, and seven two-year-old heifers. After explaining to the owner just what this test is and how it would be applied, he was anxious to have it carried out. The results of the test showed that seven of the cows and the bull had tuberculosis, as they reacted in a characteristic manner. While the other two cows gave suspicious reactions. None of the heifers showed a rise of temperature following the injection of the tuberculin. The eight reacting cattle were shipped to Milwaukee and killed under the supervision of a federal inspector. All showed lesions, four to such a marked extent that the carcasses were consigned to the rendering tanks, since the disease in them had become generalized.

One can readily conceive of the damage which might have been done had this farmer taken his whole milk to the factory and the by-products been distributed to other farms in the community.

The importance of the rule of the Wisconsin Department of Agriculture requiring the heating of all by-products of creameries, skimming stations, cheese factories and condensaries, before they may be returned to the farmer is also well demonstrated by the facts brought out in this investigation.

OTHER ABNORMALTIES OF MILK

Milk of cows suffering from any disease accompanied by fever is always diminished in quantity and changed in quality. It is likely to become thick like colostrum, to acquire a peculiar flavor, and to turn putrid quickly. Foot-and-mouth disease has been transmitted to man and calves by milk from infected cows. It is known that the germs of contagious abortion are harbored in the udder of some cows for a long period. The milk of such cows has been proved to contain these micro-organisms in enormous numbers. Fortunately, milk containing the abortion bacilli seems to be perfectly safe for use and is certainly satisfactory for manufacturing purposes.

VITAMINES OF MILK

Any discussion of milk would be incomplete without reference were made to the recently discovered organic substances termed vitamins, as these are found in abundance in normal milk. Since the vitamins are attracting much attention these days a brief account of their nature, origin, and significance should be of interest.

Study has shown that vitamins are of three distinct classes, viz., water-soluble vitamin, fat-soluble vitamin, and the anti-scorbutic, or scurvy-preventing vitamin. Each differs in several ways from the others, but all are equally important in maintaining the health of man and animals. This is shown by the fact that when an animal is deprived of any one it develops malnutrition and other diseases indicative of disturbed metabolism.

The water-soluble vitamin is found in skimmilk and in the leaves of plants. It seems to have something to do with cellular metabolism. It is not destroyed by moderately high degrees of heat, neither by drying, nor by exposure to light.

The fat-soluble vitamin is very plentiful in butterfat, but is also present in a large number of other natural substances. It appears to be especially influential in promoting the growth of animals. When butter fat is heated for four hours at the boiling temperature, it loses this property.

The third vitamin prevents scurvy, hence is termed the anti-scorbutic vitamin. It is present in fresh whole milk, but is very unstable and easily destroyed by heat, drying and exposure to light. Milk heated at 248 degrees F. for ten minutes loses its anti-scorbutic properties. Even pasteurization at 145 degrees F. for thirty minutes materially reduces the amount of this type of vitamin in milk.

From this brief account of the vitamins present in milk, it is evident that in the preparation of condensed, evaporated and dried milk, and in the pasteurization process the scurvy-preventing vitamin is destroyed. It is also interesting to know that milk produced by cows on a ration consisting of dry roughages has been shown to be very low in this vitamin, as compared with milk produced on green feeds. Investigations are now under way at the Wisconsin Agricultural Experiment Station to determine whether good corn silage and roots are capable of adequately augmenting dry ration, and to determine more about the stability and occurrence of the scurvy-preventing vitamin.

The fact that raw milk contains an adequate supply of all three of these essential vitamins, makes it a particularly valuable food. This is one reason why milk should be advocated as a "perfect food" by all who are interested in the welfare of mankind.

CHAIRMAN: How many of these young cheese makers in front of me can tell when a cow has been milked too long, without seeing the cow, just simply from the milk?

MEMBER: The milk would stick.

CHAIRMAN: A man comes to your factory in the morning with a can of milk. How do you detect there are one or more cows in that herd that have been milked too long?

MEMBER: I found out those cows gave milk that was some bitter.

CHAIRMAN: You can find out right around the edge of your strainer where the milk was; you will find a little sticky, gummy substance. I detect that this morning and tomorrow morning I will find out which one it is.

IMPROVED METHODS OF MANUFACTURING SWISS CHEESE

By MR. C. M. GERE, Dairy Division, Washington, D. C.

Before entering into the details of any method or methods of manufacture let us first go over briefly the Swiss cheese situation with regard to the present opportunities of this great industry in America and determine whether or not it is an opportune time to improve the quality of the product and prepare to meet foreign competition, which such competition is at a low ebb. In fact, for the past two years a considerable quantity of American Swiss cheese has found its way to European and other foreign markets.

From recent issues of our trade journals we learn that former importers have come to America and are purchasing considerable quantities of American Swiss cheese to supply European trade. Due to conditions brought about by disease and war, Switzerland's cheese production has materially decreased. We understand, however, that at the present time it is possible for Switzerland to export one carload of cheese provided two carloads are imported for each carload which leaves the country. This information seems to indicate that the importations of Swiss cheese to the United States will be very limited for some time to come.

While this condition is unfortunate for the industry of Switzerland it presents a great opportunity to improve the quality of American Swiss cheese and establish a high standard whereby we may supply foreign trade with high-grade cheese and be prepared to meet foreign competition in the future.

During each normal year we have been importing twenty million pounds of Swiss cheese, which is about equal to our annual production. Since it is now possible for us to manufacture as good a cheese as can be imported, we should at least produce enough for our own consumption, and by improving the quality of this product for the next few years, it should not be difficult to create an export market for double this amount.

The quality of the manufactured product, as in the manufacture of any article, depends largely on the quality of the raw material. If we were to make a suit of clothes of poor, shoddy material, we could not hope to obtain a satisfactory garment even though more labor had been given to making up than if first-grade raw material were

used. The same holds true in the manufacture of Swiss cheese to some extent. If we attempt to handle too poor milk, no matter how many hours of labor we give, the resulting product is quite likely to be on a par with the quality of the milk. Of course it is impossible to get absolutely perfect raw materials for Swiss-cheese making, as there are always undesirable bacteria present in the milk more or less, and unless there are certain types of bacteria introduced into the milk during the manufacturing process the resulting cheese will be almost certain to have defects.

By twelve or more years' work, both in the laboratories and in commercial plants, the Dairy Division of the United States Department of Agriculture has found it possible to control the conditions within the cheese by the use of cultures, one capable of suppressing gas and the other forming eyes, whereby a much higher percentage of fancy and No. 1 cheese can be produced than by the ordinary methods

The fermentations in Swiss cheese must be controlled to insure a uniform high-grade product. Abnormal fermentations which occur in Swiss cheese, such as gas that causes nissler cheese or in bad cases brings about a condition known among the Swiss makers as bloating or blowing on the press, can be controlled to a large extent by the use of the proper acid-forming organisms. It has been found that a pure starter of *Bacillus bulgaricus* gives the best results in the formation of acid in Swiss cheese. *Bacillus bulgaricus* is a high acid-forming bacterium which changes the milk sugar to lactic acid rapidly and is especially adapted for Swiss cheese making because of its ability to grow vigorously at a high temperature. Apparently *bulgaricus* has no harmful effect directly on the flavor or on the formation of eyes. It does, however, aid in suppressing gas-forming bacteria which are present in the milk and which may have a decided influence upon the flavor. Some of these, if they have the opportunity, may change the sugar of milk into gas and acids, forming pin holes in the cheese. Therefore the purpose of using *bulgaricus* is to change milk sugar into lactic acid before the destructive gas formers can get in their work. In other words, it is a race between the two or more kinds of bacteria, and with the use of *bulgaricus* the kind that produces desirable results uses up so much of milk sugar by the time the curd cools down in the hoops, that the undesirable bacteria have little raw material from which to make destructive gas.

In the usual method employed by the Swiss cheese maker, this high acid forming organism *bulgaricus*, or some closely related organism, has been shown to grow in the home made rennet, and if this rennet is kept free from contamination, the cheese maker may control the abnormal fermentations up to a certain point; but if milk is too heavily contaminated the amount of this rennet which it is possible to use is so small that it has little effect in suppressing the multitudes of gas forming organisms.

Another decided disadvantage in the use of home made rennet is the fact that there are so many sources from which it may become

contaminated. This may be brought about in various ways. The rennets used are many times produced under very insanitary conditions, and improperly cared for from the time they are produced until they enter the cheese. Often, due to improper curing, they are in a putrid condition, and many times these rennets are carried from year to year and left in places where they become more or less contaminated. Many times, too, if the rennets are not contaminated, the whey in which the rennets are set contains more or less undesirable bacteria, and if these bad organisms predominate the result is that a poor cheese will be produced.

The distinct advantages in the use of *bulgaricus* starter are that we have a pure culture of the desired acid forming organisms, and it can be used in amounts sufficient to produce the desired results and requires no more labor than the preparation of home made rennet. By its use we can depend on rennet extract for our coagulation, which is usually free from contamination and does not vary in strength. Taking into consideration these facts, we may eliminate many of the sources of trouble.

Nevertheless it should be remembered that *bulgaricus* is not a cure-all in Swiss cheese making. In other words, if milk is too highly contaminated or contains much more than .18 per cent acidity, it is impossible to make a high grade cheese by any ordinary method. These conditions do not exist in the average Swiss cheese factory as far as high acidity is concerned, but in a few instances we have observed these extreme conditions where milk is received once a day. I might state in this connection the difficulties experienced at the Grove City Creamery during some of the summer months. They began making Swiss cheese late in the summer of last year from milk delivered once a day, and from that time until early this summer they were able to produce a large percentage of high grade cheese. But as the summer season advanced this year the milk became so poor that even by the use of a very heavy starter the gas could not be suppressed, and the result was nissler cheese.

It is possible many times, however, to use enough starter to practically or wholly suppress the gas formation, yet at the same time bring about undesirable conditions, such as blind, cracked, and off flavors; and bad cases may result in sour cheese.

Many cheese makers will probably wonder why it is not just as well to use the ordinary lactic starter such as is used in American cheese making. The reason for this is that *bulgaricus* starter will withstand the high temperature at which the curd is cooked in Swiss cheese making and forms acid much more rapidly than the lactic starter. Lactic acid bacteria would be so weakened by this high temperature that it would be of little or no value in suppressing the undesirable bacteria.

The method of handling this starter is extremely simple, and it can be carried for a long period by a careful cheese maker. To do this most successfully, it is necessary for the cheese maker to provide him-

self with a sterilizer; an incubator; 4 to 6 pint milk bottles, or small top jars; and porcelain kettles, large enough to make up the desired amount of bulk starter. A sterilizer which will answer the purpose can be made of galvanized metal by a tinner. It should be large enough to admit a 10-gallon or shotgun can, together with the kettles, glass jars, etc., and should be constructed with a door which will close reasonably tight to prevent too much steam from escaping. A wood covering protects the sterilizer and holds the heat better than the metal alone. This wood covering should have a door also. Steam should be so connected that a little pressure can be had, enough to slightly brown the milk in an hour and a half to two hours.

An ordinary chicken incubator may be used for incubating the starter, provided a temperature of 110 to 113 can be maintained.

The starter is made each day, and the mother starter which is used for propagating the bulk starter is carried separately. It is necessary to exercise great care in propagating and handling the mother starter, since any contamination which gets into it is carried along in this as well as in the bulk starter and causes trouble; but if the mother starter is maintained in pure condition, little or no trouble will be experienced with the bulk starter. It is best to carry two jars of mother starter; in case one becomes contaminated the starter is not lost. Both the mother starter and the bulk starter may be made from whole milk, skim milk, or whey. Some cheese makers have had good success in growing the starter in whey. Whey is not generally recommended, however, since in case the starter should become contaminated it could not be detected in whey, but if grown in milk, usually any contamination is discernable in the coagulation.

The milk for the mother starter is put in the pint jars and the mouth of the jars covered with parchment paper or any strong paper, extending well down over the neck of the jar and held tightly by means of a string or rubber band. After this milk is prepared it is placed in the sterilizer. After steaming for $1\frac{1}{2}$ to 2 hours it is cooled down to about the temperature of 110° to 113° F., for incubation. This temperature need not be exact, except that it must be low enough not to kill the starter which is added for inoculation. This can usually be judged by feeling of the outside of the bottle; never open the bottle until ready to inoculate, nor use a thermometer, as there is a possibility of introducing contamination thereby.

To inoculate the mother starter, raise the cover of the bottle and pour in about a tablespoonful of the culture received from the laboratories, and place in the incubator until the following morning, by which time it should be coagulated and ready for use. Mother starters should be made each day and inoculated from the mother starter made the preceding day. Some makers prefer a mother starter to develop an acidity of 1.40 per cent to 1.80 per cent. This can be regulated by the amount of inoculation and the period of incubation.

Milk for the bulk starter should be prepared by sterilizing for an hour and a half to two hours, as in the case of the mother starter.

The milk may be sterilized in a shotgun can or an ordinary ten-gallon milk can, but the starter itself should be made in an enamelware pail or kettle. Tin receptacles will not answer the purpose, as the high acid which forms in the starter readily attacks the tin, and they soon become unfit for use.

After sterilizing, the bulk starter is cooled back to 110 to 113 degrees F., the incubating temperature, and then inoculated with the mother starter remaining after the fresh mother starter is made. The exact amount to use for this inoculation varies in accordance with the amount of acidity desired in the starter and the period of incubation. It is usually considered that a starter developing 1.4 per cent to 1.8 per cent acidity would be about right for factory work. Under laboratory conditions acidity could probably be much lower and still have a pure starter, but under factory conditions it is usually desirable to develop a higher acidity, as there are more possibilities of the starter becoming contaminated, and by using a heavier inoculation and developing a higher acidity such contamination may be overcome. In general an inoculation of about 2 per cent of the bulk starter is sufficient. After the inoculation the bulk starter is placed in an incubator together with the mother starter. In about twelve hours the starter should be coagulated and ready for use. Before using the starter, it should be well mixed by stirring, so that the coagulation will be thoroughly broken up. Before adding the starter to the milk it should be diluted with an equal amount of cold water; otherwise if the starter is added directly to the warm milk, the high acid in the starter will have a tendency to coagulate the milk and small quantities of curd will be seen floating.

The amount of starter to use in making cheese varies with the condition of the milk. We have observed conditions under which $\frac{1}{16}$ of 1 per cent would be sufficient to suppress gas formation. This amount may be increased to $\frac{1}{2}$ of 1 per cent. It is not advisable to use much more than this amount. Some makers, however, have used more than this amount with good success, while in other instances large amounts of starter have shown a tendency to oversour the cheese. Apparently there is a little danger in using $\frac{1}{2}$ of 1 per cent and we believe that when this amount will not hold the gas in check the condition of the milk is very bad and it should be more closely graded. The fermentation test, with which you are all familiar, will assist very materially in locating the source of poor milk. This can be handled very easily and the tubes incubated together with the starter. It is always well to take samples of the milk before adding the bulgaricus, and after. This should assist the maker in determining whether or not he is using a sufficient amount of bulgaricus to suppress the gas. The coagulation in which bulgaricus is present should be free from gas, and this assists in determining the condition of the finished cheese. Some makers take samples of the fermentation test after the rennet is added. In this case, if the curd in the tubes is solid and free from gas the following morning, the cheese probably will also be firm and will not sound on the press.

As I have stated before, bulgaricus is not a cure-all in Swiss cheese making. It is possible, however, by using very small amounts to make Swiss cheese of milk which could not be handled under any circumstances with home-made rennet.

Now that we have considered the suppression of gas, let us next discuss flavor, and the production of eyes, the most important factors concerned in the manufacture of a high grade Swiss cheese.

Many makers contend that the characteristic eyes cannot be developed in Swiss cheese where rennet extract is used. This is probably true in many localities where the milk lacks the natural inoculation for the production of eyes. We are familiar, however, with a few instances where normal eyes were developed when rennet extract was used, but in most cases such cheese lacks the characteristic nutty, sweet flavor which is one of the most important factors which enter into the quality of high grade Swiss cheese.

To overcome these difficulties the Dairy Division has developed a culture which will produce the characteristic eyes and give the cheese the sweet flavor which is so noticeable in the imported cheese. The flavor develops slowly when this culture is used. No particular change may be observed until the cheese is about three months old. The eye development, however, begins to take place as soon as the cheese is placed in the warm curing room. It is quite essential that the cheese be at a low enough temperature. If the temperature is too high the cheese is likely to set too many eyes. This can be regulated to some extent by using less of the eye-forming culture and salting a little more heavily after removing the cheese from the brine. We have observed some instances, in factories where the temperatures of the curing rooms get too high, there was difficulty in checking the eye formation. In such cases the cheese should be placed, if possible, in cold storage at a temperature of 50° to 55° F.

The distinct advantages of using the eye-forming culture are that it insures eye-formation and develops the characteristic flavor of the imported Swiss cheese, enables the maker to use rennet extract and thus eliminate many sources of contamination. It also enables a factory to operate in winter as well as during the summer months.

The method of manufacturing Swiss cheese when starters are used varies but little from the regular routine process. To avoid confusion regarding the time of adding the cultures we will go over the different steps briefly.

The milk is first heated to 27° or 28° Reaumur. The desired amount of bulgaricus is first diluted with an equal amount of water and then thoroughly mixed with the milk. Next the eye-forming culture is added directly to the milk as it comes from the laboratories. Enough rennet extract is then used to coagulate the milk in about 30 minutes, diluting the rennet in the usual way. The regular procedure of turning the top of the curd and cutting is followed. At the time the harping is completed the particles of curd should be about the size of wheat kernels. Some makers by the ordinary method vary the size of the kernels in accordance with the time of year. This may assist in de-

veloping eyes by the usual process, but where the eye-developing culture is used, it is desirable that the curd be cut finer to reduce the moisture content; otherwise the cheese is likely to have an over-development of eyes.

The period of foreworking also has an influence on the moisture content and the texture of the cheese. This consists of stirring the curd at intervals of 5 minutes or so until the curd is reasonably firm, this step occupying a period of from 20 minutes to an hour after the final harping of the curd.

If the heat is applied too soon after cutting, the curd particles are likely to become hardened on the outside, imprisoning the moisture within them.

The cooking temperature may vary from 41° to 44° Reaumur, depending upon the conditions of the curd; usually if the milk is normal, a temperature of 42° Reaumur is sufficient to firm the curd properly in 20 to 30 minutes. After dipping, the cheese is handled in the usual way on the press and in the salt tank.

After the cheese is removed from the salt bath it should be held about 2 weeks in the cold room before being placed in the warm room. The preferable temperature for the cold room is about 55° F., but unfortunately in many local cellars it is difficult to maintain a temperature much below 65° F. in the cold room during the summer months.

The temperature of the warm room should range from 70° to 72° F. Many makers carry temperatures of 80° to 85° F., and some raise the temperature as high as 90° F. Such high temperatures would have a tendency to develop eyes too rapidly, and too many of them, in cheese where eye-forming culture is used. Difficulty with cracking would probably be experienced also.

As a summary of conclusions arrived at as a result of the past three years' work with these cultures, we believe it inadvisable to use either the eye-forming culture or bulgaricus with home-made rennet. In many sections, however, bulgaricus and home-made rennet have been used with good success, while in other instances the results have not been satisfactory. During the past season some factories here in Wisconsin which used bulgaricus together with home-made rennet failed to get good results. In some instances enough starter was used to suppress the gas. While this heavy starter did overcome the gas, it also had a tendency to suppress the eye-formation, resulting in a blind cheese. We are familiar with instances where in spite of the fact that a heavy starter was used with home-made rennet the cheese developed pin holes.

As most cheese makers know, home-made rennet produces acid, and it must be remembered also that there are many undesirable bacteria that produce acid but also form gas. In view of the fact that it is impossible by the ordinary method of preparing home-made rennet to keep it entirely free from contamination, there is danger that we may, by reason of this contamination, develop a type of bacteria which produces acid and gas, and which cannot be held in check by the use

of bulgaricus without using it in such large quantities that the combination of acid-producing organisms would ruin the cheese.

I might state in this connection that one of the Dairy Division bacteriologists has isolated one of these acid and gas producing organisms which if added to milk in sufficient quantities will cause the cheese to blow on the press and cannot be entirely suppressed by the use of bulgaricus without using an amount large enough to damage the finished product.

Another reason why I emphasize the fact that bulgaricus starter should not be used with home-made rennet is that cheese makers who have always used the home-made rennet with fairly good success would naturally condemn the starter unjustly if they failed to get good results by its use.

While we do not contend that good cheese cannot be made with home-made rennet, we believe it is possible to make a higher percentage of high grade cheese under all conditions by the use of the cultures and rennet extract. In fact this has been clearly demonstrated in factories in Pennsylvania, New York, and Ohio. This with special reference to two large commercial factories, one in New York and one in northern Pennsylvania, the latter of which is one of the largest in the United States. Both of these plants receive milk once a day and both attempted to make cheese with home-made rennet, but as a result of serious losses from poor cheese they turned to the use of cultures and have been successful in producing a high percentage of fancy and No. 1 cheese since.

Two years ago about three factories in Ohio began using cultures, and the past season ten factories in that State have taken up their use with uniformly good results.

In the past the Department of Agriculture has experienced considerable difficulty in supplying these cultures in large quantities, together with the necessary personal supervision for their use. It is hoped, however, that this coming season some arrangement will be made between the Bacteriological Department of the University of Wisconsin and the Department in Washington whereby the cultures can be furnished from the laboratories in Madison. I believe that if such an arrangement could be made it would result in a marked improvement in the quality of Swiss cheese in the State of Wisconsin. (Applause.)

SECRETARY SAMMIS: Mr. Chairman, under the head of discussion of this paper we have a letter from a Swiss cheese maker who was unable to be present. He says:

"I will gladly give you a few points, out of my own experience, about the bulgaricus starter.

"I found out I could get a better coagulation with bulgaricus starter than with home-made rennet. With home-made rennet, in this factory, I never could get a nice coagulation. It always was mushy and short no matter what temperature or length of time I set the milk.

"Also the cheese did not expel the whey enough no matter how I made it.

"It was altogether different so soon as I started to use bulgaricus. As I stated before, the coagulation was better, also the whey expelled freely, and I had a better body to the cheese and made in a shorter time.

"If different factories use bulgaricus they each will have to work out their own salvation, as all milks are not alike. Some will need more and some less, according to the acidity of the milk delivered. The cheese makers will have to use the acid tester every day, so they will have control over the milk, and also the culture. Of course the cheese maker must take good care of his culture. If he does it only in a 'good enough' way, he had better not use it.

"For my factory I used $\frac{1}{4}\%$, and in bad times I raised it to almost 1%. I like to have my starter between 1.4% and 1.8% of acidity.

"Also I used with the bulgaricus another starter called the eye-developing culture. I sincerely believe that starter is a great thing for the Swiss industry. But only when factories are so equipped so they have strict control over the temperature in their cellars, or can put cheese in a cold storage in short notice or when it is necessary, otherwise they should not use that starter as cheese may go too far for them and crack. We had that trouble with a few cheese. When the cheese was worked open to go to the cooler, it had to lay over a week or fourteen days because of poor railroad conditions, we couldn't get any car. The cheese worked with eye-developing culture must be stored below 60°. And in country factories in southern Wisconsin the lowest temperature is above 70° in summer time in the cellars. That is the reason I say the eye-developing culture isn't for the country factories.

"I only know one man that used bulgaricus in Hollandale. He was also in the second week Swiss dairy school at Monroe with me. That is all I could say. If I was at Milwaukee I couldn't say more than I stated in the letter. If you want to use this letter for a statement you can."

He is well known to you all. His name is Fred Blumer of Poplar Grove Factory.

MR. CHAIRMAN: Any questions or any other discussion on Swiss cheese making? Are there any of the Swiss cheese makers who have any questions to ask here before we go on?

SECRETARY SAMMIS: Mr. Chairman, we have present with us this morning Prof. W. W. Fisk of the Dairy Department of the University of New York. I am sure we would be glad to hear from Mr. Fisk a few minutes about his observations of conditions in New York State.

NEW YORK STATE CONDITIONS

By PROF. W. W. FISK

Mr. President and Members of the Wisconsin Cheese Makers' Association: It is a great pleasure for me to be here and be present at your meeting this morning and the other sessions that you have had. I have heard a great deal about your meetings and have read the report with a great deal of interest. In your state at the present time you make more cheese than New York State and it is going to continue to grow, but we are still interested in producing better cheese than ten years ago, so that if you compete with us you have got to make good cheese.

I would like you to consider this morning the cheese industry very similar to a painting, a very large painting. You know there are two ways to look at a painting, one up close and the other far away, and just for a moment let us take a far away look at the picture. During the war there was a demand for all the cheese we could make and most of it brought the top price, but now we have entered the reconstruction period and I think I am right when I say that quality is going to begin to count or we are going to grade our cheese and pay more for the better grades. We are going to begin to recognize quality in cheese, so it is up to you to make better cheese, and in the background of this picture I should like to make quality very pronounced. You will find that the demand will be lessened, competition greater, and so if you are going to get the highest price, and are going to be sure of a ready market, you must make high quality material.

If you go up close to this picture you will find a picture is nothing more or less than daubs of paint, and I am going to speak of these daubs of paint that don't just satisfy us. The first one of these daubs of paint is the milking machine. Gentlemen, in New York State many cheese makers refuse to take milking machine milk, because they say it is an inferior quality. I believe the milking machine has come to stay and I believe a good deal of poor milk has been produced with a mechanical milker, but that is not the fault of the mechanical milker but the man that operates it. We as dairymen must insist that the dairyman will keep his mechanical milker clean and you can make just as good cheese. There is only one way to keep a mechanical milker clean and that is to wash it and cool it the same as any other dairy equipment.

The other daub of paint is a new one, one we have been working with, because we believe that if you can't remove the cause of a flaw the only thing to do is to correct the flaw, and I speak now of the quality of the milk. It is hard work to get your patrons to produce the very best quality of milk. We do get some poor milk in New York State, and so at the School at Ithaca we have been doing a great deal with a clarifier. We have found we can improve the qual-

ity of the cheese by the use of the clarifier. It doesn't affect the yield, but it does affect the quality. It doesn't entirely remove the gas, but it will change it. In two hundred cheese we have made the average score has been raised about 1.8 points. In some instances we have been able to raise the quality three or four points.

In this picture you will find that sometimes there will be specks and little spots which do not appeal to the eye, and that is when the cheese maker becomes careless. You must realize the need each day of becoming just as careful as you can.

I want to make one broad statement. Some of you won't agree with me, but I think if you will study on it a while you will. There is no defect in a cheese that a cheese maker can't overcome. I want to repeat that. That is a very broad statement. There are five factors that go to make it up. The first, that the cheese maker should not accept anything but good milk. That means a cheese maker must be a good judge of milk. Second, practice the use of the clarifier to clean up some milk that may go by him. Third, the use of a moderate amount of starter. We see a good many of your Wisconsin cheese and see beautiful ones, too. We see a lot of them that seem too acid. That is one of the worst defects in your Wisconsin cheese, they run up quite high in acid. Fourth, take plenty of time to make cheese, exercise all the energy you have. And fifth, and I should say the most important, ship your cheese in storage when it is three days old. Take proper care of your cheese in the curing rooms. We keep our cheese in storage for ten days to two weeks.

If you are going to find a market for your cheese, and if you are going to maintain the prestige you have, you have got to make quality the common end, and I hope quality will be the watchword of this convention.

MR. DAVIS: You are probably aware that during the war there was a great shortage of rennet and a lot of pepsin or curdelac was used, and the character of that was more like a bulldog, it took hold of the cheese in its younger state and when you take the trier it piled up. Complaint was made of the character of acidity they didn't understand which was produced by a curdelac instead of rennet.

MR. CHAIRMAN: We have got away from that now. We can get all the rennet we need.

MR. DAVIS: That is a difficulty we had two years ago.

MR. CHAIRMAN: We had the same difficulty.

MR. MARTY: The statement that was made in regard to the use of a clarifier. This morning in this particular meeting there are a great many sweet curd cheese makers present. That use of a clarifier will aid towards better cheese is a question in my mind. I think personally the University of Wisconsin is on record today that it has not shown any material improvement by the use of a clarifier. I don't think a clarifier would have the slightest bit to do with the aiding of manufacturing of cheese, either brick, Limburger or Swiss cheese. I have seen cheese makers who used a clarifier on part of a batch of milk and the other part didn't go through, and both of them were

just as lousy with pinholes as could be, and I therefore do not see where a clarifier had anything to do with the quality of that cheese. It always appears to me like this, straining milk, that is clarifying it to some extent. Straining milk. What do you strain milk for? Let us not get away from the original intent by getting a piece of apparatus that is going to improve the raw material by the use of that apparatus. Let us preach cleanliness to begin with, and forget about clarifying and straining milk.

MR. BUCHEN: The Professor just spoke there about the mechanical milker. I had an experience a year ago last summer in a factory in which I was and there was at that time three mechanical milkers in that factory. Two of those men had their milk at all times in as good condition as anyone's, but the third one also had a mechanical milker. He had quite a large farm and the brother and the hired man were the only ones doing the work, and he had more things than he could rightly attend to, and the consequence was every little while I had to remind him to be careful of his milker, and every time I reminded him to be careful he knew what that meant and his milk would come in dandy good shape again.

The foundation of this is cleanliness to begin with, and the only thing that cheese makers have to do is to keep pounding away at these farmers to be clean. In the past when the dealers wanted to sell separators and mechanical milkers they would say they were easy to clean. "You don't have to clean them every day, only run some water through and rinse them and use them the next time." It is true these statements have been made all over the country. The farmers will say the agent said we don't have to clean them so often. It is something like the story of the old lady who got on the train at Fond du Lac. Her home was in Marinette. In the depot she asked whether this train was going through to Marinette. They told her yes, this train would, but she would have to change cars at Appleton Junction. She says, no, that ain't the way to go to Marinette. She says, "My people came down here five years ago and they never said anything about changing cars at Appleton Junction; I know that ain't my train." They finally induced her to get on the train and the conductor was telling her the same thing. The consequence was the old lady got off at South Oshkosh and she wouldn't go any further. (Laughter.) That is about the way it applies to some of those people where the dealers have been telling them to do something with their separators or their mechanical milkers; they will believe them and they will not believe us. If there is any dealer here who has been doing this I say to you, you are doing an injustice to yourself and to the industry. That is a condition I have found concerning farm separators and mechanical milkers to a certain extent.

PROF. FISK: I believe very heartily what Mr. Marty and the other gentleman said, that the desirable thing is to get that clean milk, but we are of the opinion that taking out of that dirt is also important.

MR. ADERHOLD: I wish Prof. Fisk would tell us some of his specific cases where he improved the milk by the use of the clarifier. Tell us about your experiments and your results.

PROF. FISK: I hate to take your time because that is all coming out in bulletin form, because we are getting out that bulletin, it is in press now from Ithaca.

SECRETARY SAMMIS: Mr. Chairman, Mr. Marty referred to some experiments made at the University of Wisconsin with the clarifier, and since he mentioned it I will speak of it a little further. We did make some brick cheese with the clarifier. Part of the milk was clarified and the other half of it was not clarified. We made it up into brick cheese just exactly alike in two vats at the same time. The cheese after it had been put in the mold, taken out the next morning looked very much alike, and both lots were pretty full of gas. In my opinion there was a slight difference and perhaps the clarified cheese was a slight amount better, a trifle better. But it seems to me that from the experience I have had so far with it, which is limited, that at the present time I would not recommend any cheese maker to buy a clarifier because I rather feel it is quite possible if he did buy one, in six months' time he would be telling me I was wrong. I am in doubt in my own mind as to whether a clarifier will do enough good to take the cheese out of the second grade and put it in the first grade so as to make any difference in the price. I think clarification may take out some germs, but at the present time I would not want to recommend any cheese maker to buy a clarifier. Possibly after I have had more experience with it I would be willing to recommend it. We hope to do some more with this and test it more thoroughly.

MEMBER: What speed did Prof. Fisk run the clarifier? Did he increase the speed any or not?

PROF. FISK: We have done work both ways. We found at the normal speed they were not entirely efficient. They didn't take out the dirt. We did increase the speed.

CHAIRMAN: Regarding the mechanical milking machines, they are very good. I have had experience with one. It is run at the home farm, and there are several machines in the neighborhood. Just as Mr. Buchen said, the trouble with them is to get cleanliness, but the way to do that is not to let the whole family run the milking machine. Let one run it and one take care of it. Keep the thing in good shape and you will have no trouble with the milking machine.

ADVERTISING WISCONSIN CHEESE TO THE NATION

By RAY A. YOUNG, Monroe

The subject Mr. Sammis wanted me to talk about, not conflicting with the Dairy Council at all, was more advertising of Wisconsin cheese. Those of you who were at the State Fair remember the free cheese booth. That, to my knowledge, is the only exhibit of its kind that Wisconsin ever had where the people could sample the cheese.

Shortly after the State Fair the National Dairy Show was held in

Chicago and the Southwestern Cheese Makers' Association received a letter asking them to display some cheese, but the organization didn't take hold of it. I took the matter up with Mr. Skinner, Manager of the National Dairy Show. I also took it up with Mr. Sammis and Mr. Weigle, but they said it was out of the jurisdiction of the state. I talked with Mr. Sammis soon after that and he said we should have some way that Wisconsin is represented at the State Fair and at all National Dairy Shows and at any big food shows. To my knowledge Wisconsin never displayed in that way, and it is the cheapest form of advertising we could possibly do.

I would like to see this Association either appoint a committee or turn it over to the officers and directors to formulate some plan to work with the Dairy and Food Commission, also with the Division of Markets, and arrange some way to advance it. One way I think it can be advanced is for the dealers and the makers and the Dairy and Food Commission to display a box of cheese and then sell it and from the proceeds of that pay for the exhibit.

I want to say that in all this propaganda that is going on now against the industry, the cheese maker and the cheese producer haven't a better friend in the business than the dealer. The dealer has been the only one so far blowing the horn of the Wisconsin cheese industry. The dealers have been pushing the Wisconsin industry, they have been spending the money and they are going after it all the time. Now we are getting a black eye. If there is any way to advertise the Wisconsin cheese industry we are for it.

MR. MARTY: I wish to speak for the Southern Wisconsin Cheese Makers' and Dairymen's Association. That question was brought up in regard to the distribution of cheese for advertising purposes at the State Fair. The Southern Wisconsin Cheese Makers' and Dairymen's Association donated a large Swiss cheese for that purpose and it was cut up at the State Fair. What this organization did is more than I know, but the suggestion made by Mr. Young I think is a question which should be considered by this organization. There ought to be some concerted action taken whereby all will share in it. You are all vitally interested in it. If a committee or the Board of Directors of this organization will be empowered to act upon that matter for advertising purposes, it can be left to the Board of Directors, and they can act when anything of the kind comes up.

I feel you, just as well as any other organization, want to advertise your cheese, but it takes money to advertise cheese, and it did to advertise Swiss cheese. The Swiss cheese at that time was about 55 cents a pound. In order to buy a loaf of 170 or 175 pounds meant money, but the organization went on record and they donated a fancy Swiss cheese. There were hundreds and hundreds of them had a little piece of it and they were anxious to go right back and find out where they could get some more like it. It was only a beginning, and I think advertising pays.

CHAIRMAN: Mr. Young and Mr. Marty's idea is correct. That was a very fine Swiss cheese, and I can see many faces smile when the

subject is brought up. Everybody wanted to buy, but there wasn't anything to buy. Mr. Young was ready to sell cheese and he had quite a mail order business the next few weeks. You southern cheese makers with your foreign cheese have done it, we are going to do it. I spoke about it in my opening address soliciting cheese from the different cheese makers and returning them the sale proceeds of that cheese, but since then speaking with Mr. Sammis he has suggested another idea. The exhibition of cheese be there at the State Fair grounds in the cooler for premiums and prizes is to be sold the same as our exhibition cheese here was sold the other morning. Let us take that suggestion in hand as this Association and sell it. We won't have to put any extra cheese there for our advertising booth and sell it in the Fair booth and all is done up and the slate is clean. There are two suggestions, either use that exhibit or put up another exhibit, but don't forget the booth and don't forget the name, "Wisconsin Cheese Makers' Association."

MR. BUCHEN: I believe that is a mighty good idea and I believe that is some of the best advertising. I believe we should take steps to do that and ask every cheese maker in Wisconsin to donate a cheese for that purpose. If I am in the cheese business this summer or fall, which I expect to be, I am willing to donate a daisy cheese or its equal. How many are willing to donate a daisy cheese or its equal? (Nearly every hand was raised.)

I want to make a motion at this time that the President, Secretary and Treasurer be a committee appointed for that purpose. They are the ones actively in touch with the organization, they are the ones that have the books and records and everything else and I think they are the ones that should have charge of that.

The motion was duly seconded.

MR. MARTY: I would like to add that instead of having a separate committee on that proposition, why not empower the Board of Directors?

CHAIRMAN: It takes more than three men to do that job.

MR. MARTY: Take the Board of Directors.

MR. BUCHEN: I will take that in, then, take the officers and the Board of Directors.

CHAIRMAN: The motion is that the officers and the Board of Directors be empowered to enter into a plan whereby the cheese making industry of Wisconsin shall be advertised under the name of the Wisconsin Cheese Makers' Association at the Wisconsin State Fair.

MEMBER: Also take in the idea and the National Dairy Show.

MR. YOUNG: And I would like to say any other shows where the committee thought best.

MR. BUCHEN: I want to just say anybody can donate as much more as they want.

MR. YOUNG: I think you should explain to the Cheese Makers having the Board of Directors act as a committee would not incur very much of an expense at the time of the State Fair as the Board is always called at that time.

MR. LEE: I think before you put that motion Mr. Thomas should make his statement.

MR. THOMAS: Gentlemen, I represent the Wisconsin Dairy Council. You probably have all heard of that and have discussed it more or less. We want to work with you fellows in regard to advertising of Wisconsin dairy products. I know because we are advertising milk more than we are some of the other dairy products you feel we are not with you, but gentlemen, when the men that produce milk put up the money we have got to advertise their milk. As I told a few fellows here day before yesterday, the cheese industry put into the Dairy Council last year \$140, and this year only \$392. Our creamery fellows put in \$3,000 and the milk fellows \$1,500. If you cheese fellows want to cooperate with the Dairy Council in advertising cheese we are with you. You have passed your resolutions supporting the Dairy Council, but resolutions don't go very far unless you give us some money to advertise with.

I was glad to see the number of hands that went up here this morning, but men, you only reach a small amount of people at these conventions. There are a hundred and fifty million of them in the United States that want to know about cheese. We want you to cooperate with us, the Dairy Council, in putting the proposition over. We realize you cheese makers and you cheese dealers are not getting the whole benefit from this. We want to get back to the producer, but we want some organization. I explained this to you before and I asked you at that time if you members would become members at the rate of \$2.00 as an associate membership, and then pay one cent for each hundred pounds of cheese manufactured, and then we will be in a position to advertise. Of course the Dairy Council so far has only advertised cheese, but only the Southern Foreign Cheese Makers' Association paid us enough money to advertise their cheese.

I would like to have the opinion of the different men here this morning in regard to the Dairy Council work, whether they think exhibits of this nature as we have in the back end of the hall will do some good, whether they want to help us distribute the 300,000 pamphlets. That is the support we want. We want to work with the Wisconsin Cheese Makers' Association. We are willing they should come to the State Fair. We want to help them. We are trying to help you and we need your support. Without it we both fail.

MR. LEE: A little more should be said in reference to what Mr. Thomas has to say. We have Sammis representing the cheese makers. He asked for the cheese maker on the Dairy Council Board. We have a meeting next Monday. Advertising pays, that we do know, and there isn't a better field in Wisconsin today than to advertise cheese right here in Milwaukee, and it seems to me since we have a state organization for that purpose, to have a representative on that Board,—Thomas is our field secretary—the Cheese Makers of Wisconsin lend their support to the organization already established to advertise dairy products.

CHAIRMAN: I think, Prof. Lee, that the sense of the members of this Association is in sympathy and in harmony, and wish to aid all they can the Wisconsin Dairy Council, but I don't quite agree with Mr. Thomas on everything. There is one thing he spoke about, advertising in little conventions don't get anywhere, but all great things begin small. Our State Fair this year is the beginning. The boys at home in the cheese factories will have to give two cheese. You have got to have cheese for your give-away and your cheese to sell. That is a start. We have to have the start, we can't grab it big on the start. The dealers, I am aware of that, have to give us lots of advertising matter that goes in the car I ship. Why didn't they advertise at home? Home people wouldn't buy the cheese. We cheese makers are advertising at home, the dealers are advertising in far away channels, we are starting them to advertise at home on a small scale. As we can increase we will increase. We may advertise in England some day, we don't know.

I am not going to repeat that motion. It has been repeated by both Mr. Buchen and me.

MR. BUCHEN: I can't see where this motion conflicts any with the Dairy Council. They have our hearty support, but we as an organization of cheese makers take a little pride in what we are giving away and we want the people to know who the fellows are who are doing this donating. It is an advertisement for the Wisconsin Cheese Makers' Association when we exhibit at the State Fair and the National Dairy Show and the boys back home that are sweating while they are down there giving away the cheese.

Upon the motion being put to a vote it was unanimously carried.

CHAIRMAN: We will go on with the discussions.

MR. ZELM: The proposition here yesterday, I was told that all the time the cheese makers were not getting paid enough for their salaries. I would make a motion we raise the President's fee from \$50.00 to \$100.00 for this convention and the coming convention.

Motion duly seconded.

The motion, upon being put by Mr. Davis, was unanimously carried.

CHAIRMAN: Gentlemen and Fellow Members: I heartily assure you I appreciate that. If you had not done that you would have gotten all the work you are going to get, and if you hadn't paid me the \$50.00 you would get the same amount of work.

CONDITIONS IN THE SWISS CHEESE INDUSTRY

By FRED MARTY, MONROE

I didn't hear the letter of Mr. Blumer. I don't think I happened to hear Mr. Gere. There is one thing I would like to say on the Swiss cheese proposition as it stands today. There developed during the period of the war in the Swiss cheese section a condition that needs considerable reconstruction. If you read the Sheboygan Dairy Market Reporter, I have in a little article there, giving you the actual truth of the foreign cheese markets of the day. Now we were talking advertising. The Swiss cheese industry certainly needs considerable advertising in the next year, and I wish to say to Mr. Thomas, who is here, I would like to invite him to be present at the Southern Wisconsin Cheese Makers' and Dairymen's convention the latter part of this month, and put up an argument for advertising the Swiss cheese industry. Let me tell you what has happened. They are paying for Swiss cheese with large eyes at the present time 48 cents straight for factory run, providing they run about 90 to 95 per cent fancy. There was a time when it had reached 55 cents a pound. It had brought about a condition that in a strained effort on the part of the cheese maker trying to grab that great big high price he fell down completely. The reason why was this: It meant a tremendous fermentation process to develop these large eyes in that Swiss cheese. Some of them were successful in doing it, but 75 per cent of them, and perhaps I could safely say more than 75 per cent were not successful in doing that. This demand for large eyed Swiss cheese was brought about by a certain market, we had word here it was the New York market, and particularly the State of New York they kept hollering "Fancy, fancy." Nothing would do but a fancy Swiss. The demand for that cheese was brought about through the non-importation of Swiss cheese from Switzerland and Italy, and consequently the fancy cheese dealers who before the war did not give a continental for cheese made in this country—they depended entirely up to the year 1915, upon the foreign market and they did not care for our domestic Swiss cheese. Before the war they paid a discriminating price for a foreign Swiss cheese. The dealer would sometimes say that ought to be worth a little bit more. They called them A1, or so. When there was a division made in the price per pound it was 1½ cents, at the outside 2 cents per pound. That was Swiss cheese with a good normal fermentation, sound in texture, well flavored, it had everything a Swiss cheese ever ought to have, all the ingredients were there. The food value was there, the flavor was there, the texture was there. The markets were satisfied with the domestic Swiss cheese made in Wisconsin at that time and what is more they used up every pound of it. But during the war that big voice from down east kept hollering fancy, fancy, with the result that the State of

Wisconsin almost went under so far as the Swiss cheese industry was concerned. I feel like telling New York, for heaven's sake you have milk enough down there, make it yourself. It has spoiled more cheese in Wisconsin than the good it did the individuals that got that 55 cents a pound for fancy.

Right now advertise, let the consumer know that the Swiss cheese with a medium size hole has all the nutritive value, it has more flavor, it has a better flavor than that fancy cheese, and a better texture. But the State of New York and city of Philadelphia were used to those large eyed imported Swiss cheese. Switzerland is across the water and scientific in the manufacture of Swiss cheese, but by no means can they turn out 100 nor can they turn out 80 per cent nor can they turn out 60 per cent on an average. When a nice big cheese with large eyes develops it is natural for them to figure that is an export for America. The factories round them up and put them into a big storage warehouse. When they suddenly run into a big eyed Swiss cheese they said, "That is an export for New York, they have a market for it out there just as much as they have for that fancy, and the producer gets just as much money for them." There are something like four hundred factories in the State of Wisconsin insufficiently equipped with fermentation processes in the curing rooms to put that Swiss cheese in a fermentation requiring a temperature of 90 to 95 degrees Fahrenheit. Then when the cheese is opened it is mushy, working. What is the result? About an average of eight out of every ten were damaged, that had gone too far, you couldn't control them, a damaged cheese, it was no more a fancy, it was no more No. 1 or No. 2, and the dealers would pay all the way from 10 to 12 to 14 cents a pound. We must come back to the pre-war days. We must let the people know that the Swiss cheese made before the war is just as good. Here is Mr. Ostrander. Have you heard of more trouble than the last two years?

MR. OSTRANDER: More than we ever heard of before.

MR. MARTY: I would suggest that we go on and make a good normal Swiss cheese with a medium size hole, and if New York don't want it there are plenty of other markets that do want it.

SOME ANSWERS FOR PATRONS' QUESTIONS

By PROF. GEO. C. HUMPHREY, Madison

Solomon must have been a cheese maker. He at least appreciated the wisdom of carefully answering questions when he said, "A soft answer turneth away wrath, but grievous words stir up anger." It will be well for every cheese maker to read his Bible daily and to acquire the wisdom of Solomon if he is to answer all of the questions that may be put to him by patrons. On the same shelf with his Bible, it will be well for him to have his trade journals, books and bulletins,

from which he can continually keep his mind refreshed with the things that will enable him to have a ready answer for the numerous questions that for all time will naturally be put to him.

It may be said that the cheese maker is the hub of his factory community. He at least has the opportunity for doing a great deal, and in fact is expected to do many things to influence the wheel of fortune that turns about the cheese factory and gives to this and that patron what is due him. Very frequently he is called upon to become the spokesman and answer numerous questions that make him feel the tire and friction of this wheel of fortune that carries a load of success for many, and more or less of disappointment to others who play its game.

Farmers, like everybody else, are human; and on some occasions seem to forget that they even belong to the human race, and offer complaints and threats in a manner that naturally requires lots of patience on the part of the cheese maker. Prices are a natural source of complaint. The milk check is too small. Dairying does not pay. The cows are no good. The test was not right. Cows go dry in fall and winter. The milk gets sour in the summer. The whey kills the calves. The creamery or condensery pays better. The price of gasoline and garage repairs is out of proportion to prices received for farm products. Politics are in the hands of the wrong class. The devil is to pay, and the good Lord seems far away.

"Well, I declare!" says one old dad,
 "Conditions do seem awful bad,
 The cheese maker's all at fault
 When cows get plenty of salt
 And don't test up to what they ought
 With all the feed I've bought."

"He says to us, and it's a lie!
 'You can't get test on feed you buy;'
 He tells us how, and thinks he's smart,
 We ought to get a better start
 By buying cows that have some style
 And feeding rations that cost a pile."

"Well, maybe after all he's right,
 For he didn't get mad when I was tight
 And mixed the evenin's can of milk
 Which otherwise'd been fine as silk.
 I guess I'll stick and stay by him,
 For after all through thick and thin
 There's nothin' just like dairyin'."

OPTIMISM WINS

After all has been said, we appreciate the fact that it is natural for us to complain more or less at times. This tendency is the safety valve that gives vent to feelings that develop when conditions seem to go wrong for one reason or another. However much the cheese maker's patience may be tried by complaints from the patrons, or

however many questions they may put to him, it will pay to be optimistic and to make the best of the situation. All questions do not have to be answered by yes or no. Questions offer an opportunity for conversations and may be the means of making most profitable and mutual friendships. He will find it well in attempting to answer questions, to put himself in the position of the patron, which will naturally call for more or less knowledge of the business of dairy farming.

In many instances the farmer is credited with knowing a lot more than he actually does about dairying, and for this reason answers to his questions do not get the consideration they should receive. In other instances, farmers do not get credit for knowing as much as they actually do, and are sometimes miffed by being taken for an ignorant set who believe that the moon is made of green cheese. The age of autos, advanced means for education, and greater social development is rapidly changing conditions and establishing a closer relationship between all classes of people, and at the same time making it necessary for all of us to understand the ways of one another better if we would live most harmoniously and successfully. All classes of industry today demand a dignity and standing that will command the highest degree of respect on the part of all. Cheese makers as a class can well afford to know and understand the dairyman's interest and more or less concerning his business of dairying. Therefore, what about some of these questions of patrons and their answers?

IS DAIRY FARMING A PERMANENT INDUSTRY?

The answer is most decidedly, yes! Milk and milk products are absolutely essential. The consumption of milk and of milk products per capita is increasing. During the past five years our population has increased approximately ten per cent. Prices for milk products may waver, due to market conditions, the consumption of milk substitutes and the interests farmers will have in producing a given supply; but at present there could easily be a shortage of dairy products by slightly increasing the amount of milk consumption per capita, using less of milk substitutes or increasing our export trade. The following statement shows how we use our milk supply in various forms:

Butter	35%
City milk	20%
Cheese	5%
Condensed milk	5%
Ice cream	5%
On farms where produced.....	30%

Our own country may always be expected to consume the greatest per cent of our supply of milk and milk products. In fact, as population increases we shall be fortunate indeed to produce milk enough to supply our needs. Our greatest amount of exported dairy products occurred in 1919, and was only 2.5 per cent of the total production; in other words, 97.5 per cent of our total production was consumed

at home. Farmers, and manufacturers as well, can well afford to look seriously into the matter of improving the quality of our dairy products, which will do as much to increase consumption and extend the opportunities in dairying as any other one thing. Every can of sour or filthy milk produced, and every batch of cheese that is off quality prevents an increased consumption of dairy products.

IS DAIRY FARMING PROFITABLE?

The answer to this question is yes and no. It is unprofitable, as are many other types of farming and lines of industry, where business organization is lax and little attempt has been made to learn and follow the best methods of dairy practice. Practically all of the human cry about milk checks being too small, feed prices ranging too high, and dairy farming in general being unprofitable, may be traced to farms on which there is too little appreciation of the fundamentals that underlie successful dairying. It should not be understood from this statement that there are no reasons for bettering our dairy farm conditions in general, for it is true that many things can and will be accomplished to make it possible for dairy products to be produced and put onto the market in a better manner than present costs and prices of all that is associated with the business will now permit. It is true, however, that for families who are willing to work, to be satisfied with inextravagant modes of living, and to find enjoyment in accomplishing work and owning well-to-do homes, dairy farming offers excellent opportunities. Many young men, and older men as well, are too ambitious to "get rich quick" to appreciate the opportunity to establish and acquire a successful dairy farm and herd. Time, patience and earnest effort have resulted in many a profitable dairy farm home.

IS WINTER DAIRYING PROFITABLE?

On a well-organized farm, one cannot afford to practice only summer dairying. Winter dairying makes such a farm most productive of profits; it provides an opportunity to get the greatest returns from field crops like corn silage, clover, alfalfa or mixed hay, and for cereal grains that may be fed or sold in exchange for more economical concentrates; it enables the farmer to secure the most and best kind of manure to put back on the land, and thus secure better crops from year to year; it offers the best means for keeping labor most profitably employed and for securing the best prices that are paid for dairy products. The dairy farmer should aim to do his best dairying in winter when he is not so busily engaged in looking after the tilling of the land and harvesting of the crops.

DOES IT PAY TO BUY FEEDS FOR COWS, ESPECIALLY IN SUMMER?

As a matter of policy, it does not pay to buy feeds that can just as well be produced on the farm. The aim should be to make the farm as productive as possible of the best dairy feeds. The farm that cannot be made to grow an abundance of most suitable feeds for dairy

cows had better be put to some other use. The farm which is neglected and as a result does not produce an abundance of clover, alfalfa or mixed hay, silage or roots, and more or less grain, is a neglected opportunity and is likely to result in an unprofitable dairy farm, however good the herd and equipment may be. The profit in buying feed is in supplementing farm grown feeds in a manner to make rations complete, and in thus securing a milk production that will pay the greatest amount in return for farm grown feeds. Purchased feeds, under a system of intelligent feeding, should always be worth while as supplements to feeds that are not sufficient in nutrients and palatability to keep cows working up to their full capacity. When pastures fail to keep up the production, silage, soiling crops and concentrated feeds are usually profitable to feed to cows that are in a stage of lactation to make productions worth while.

DO FEEDS INFLUENCE THE PER CENT OF FAT IN MILK?

Radical changes in feeds and abnormal treatment of cows may cause the per cent of fat in milk of different milkings to vary quite markedly. Studies indicate that on the average 50 per cent of a herd in seven days may show a variation in per cent of butter fat between 1.1 per cent and 2.0 per cent; that for about 30 per cent of the herd a range of variation of 0.0 per cent to 1.0 per cent may occur; and about 14 per cent of the herd will range in variation between 2.1 and 3.0 per cent; while 6 per cent of the herd may vary in a much greater degree. Man has learned to his sorrow that tampering with samples is the only way in which he can change the test of milk from what the cow designs it to be.

SHOULD THE CHEESE FACTORY TEST AGREE WITH COW TESTING ASSOCIATION TESTS?

H. C. Troy of the Cornell University Agricultural Experiment Station, Ithaca, N. Y., has made an extensive study of this question to overcome what seems to be the source of a lot of dissatisfaction. From his study of 22 herds, there appears to be no reason why there should be any bad feeling between cow testers and cheese factory or creamery operators, if both are fair in their work of testing milk. Only in testing identical samples could there be a likelihood of securing identical results. The following is a quotation from Mr. Troy's summary, in answer to this question:

"The average fat percentage in the milk secreted at two successive milkings of a herd, as found by the association tester, commonly ranged from 0.2 to 0.3 per cent above or below the fat percentage for the month as found by the creamery.

"In herd milk, differences between the association test and the creamery test of more than 0.5 per cent of fat for monthly periods were not unusual.

"The differences between the fat percentages found by the two tests were less than 0.1 per cent in 59.375 per cent of the 32 complete annual records; were between 0.1 per cent and 0.2 per cent in 31.25 per cent of the records; and were greater than 0.2 per cent in 9.375 per cent of the records.

"When all the milk produced during a year by a herd in a testing association is delivered to a creamery, and there is an average difference between the association test and the creamery test of more than 0.1 per cent of fat for the year, an effort should be made to determine the cause of the difference."

IS WHEY A GOOD FEED FOR CALVES?

In a study made of this question, it was interesting to learn that in one of the prominent cheese districts of Wisconsin, very few calves were fed whey. The whey in this district is fed to pigs; and the calves, which are raised in a manner to give that district the reputation of being one of the very best dairy communities of the state, are raised on whole milk, oil meal gruel, and hay and grain. The usual practice is to feed whole milk regularly until the calf is from four to six weeks old; then a tablespoonful of oil meal thoroughly cooked and added to a pint of water is substituted for a pint of the whole milk. Every third day following, an additional pint of water and a tablespoonful of cooked oil meal is substituted for a pint of the whole milk until half of the ration consists of oil meal and water. This half-and-half mixture is usually continued until the calf is from three to four months old, and able to do well on the ration of hay and grain.

If an attempt is made to raise calves on whey, it should be sweet and clean and fed at about the temperature of freshly drawn milk. The patron should have special cans for getting as much whey each day as will be needed for the calves, and these cans should be filled directly from the cheese vat. Whey from the general whey vat is likely to be sour or otherwise unfit for feeding to calves. Sweet whey should only be fed after the calf has been well started on whole milk. One man reports good results from feeding sweet whey, shelled corn, good hay, and pasture when in season. The corn was thrown into the whey and eaten immediately after the calf had finished drinking. This method, with lots of attention to good care, gave good results for this stockman.

CONCLUSION

This article could profitably extend into a book so far as questions and answers might go. There will naturally and always be many questions that will call for answers, regarding the practice of dairying. A most friendly and mutual relationship developed between the cheese factory operator and the patrons should result in their working out together answers that will greatly add to one another's profit. The College of Agriculture and Experiment Station at Madison always

stands ready to help in answering questions that may call for information it has at its command. Any inquiries on your part will be cheerfully received and answered.

I thank you for your courteous attention, and extend to each of you and to your association the best of wishes for a success that will make dairying most profitable to both patrons as producers, and you as manufacturers of milk products.

HOW TO REDUCE THE SUNDAY WORK AT A CHEESE FACTORY

By LOUIS C. WAGNER, Oconto Falls

In outlining the discussion of "Decreasing the Sunday Labor" at cheese factories, I must say that the cheese maker is entitled to have one day of rest out of seven, same as the others, but what is to be done with the Sunday's milk is the question before us. It, of course, is a known fact that in Ontario, Canada, there is a law forbidding manufacturers to operate on Sunday. There they have a system to take the milk in on Saturday morning and Saturday evening as well. They make the cheese from Saturday evening's milk on Saturday night and, as close as I can make out, on Monday they receive milk from three milkings, Sunday morning's, Sunday evening's and Monday morning's. I personally do not favor such a plan one bit. In the first place when a maker is closed up in a factory for six days a week he does not care to add any night labor to this; for another reason, during the flush of the season at the majority of the Wisconsin factories the makers are running to their very fullest capacity to take care of the two milkings on Monday, same as other days of the week, say nothing about adding another milking to this. I myself am in this boat. Last summer I handled about 800 pounds milk more than my vat is supposed to hold. I used my weighing can and some milk cans besides to take care of it all. I don't care to add another milking to this, and I know that many others are in the same fix. I have a different plan in my mind and think it will be favored by the most of the makers. I have not tried it out, but think it is well worth while to study this over to get the best possible plan worked out to reduce the Sunday's labor for the cheese maker.

My plan is to separate the Sunday's milk and get rid of the cream the best way we possibly can. We all own a whey separator and by inserting a different cream screw and reducing its capacity to about two-thirds we can separate the milk very well and the loss of fat in the skim milk would be about the same as by using a regular cream separator and if any of the makers that have a large flow of milk would find it too slow work I think it would be well worth while to install a cream separator to hasten the skimming. I have been told that a cream separator will separate whey very satisfactorily if a different screw is used, therefore it would be a great thing to have

another separator to separate whey for emergency use as well. If this could be well explained to the farmers I am badly mistaken if they would not give us the privilege because the loss that would take place would hardly be noticed by them and I think they would enjoy seeing the makers off on Sunday. The cheese maker's pay for this work could be arranged to suit the farmers and the cheese maker. It could either be set on percentage or certain amount per thousand pounds of milk. I think that working this on a percentage would be more satisfactory to the farmers, but some may think different, however, this could well be arranged. At present price of cheese and butter considering that the farmers would have skim milk in return in place of whey, there would be only a few cents difference on a hundred pounds of milk and maybe a good many of us could find a steady market that would bring us a few cents more per pound of fat that we could pay the farmers practically the same as if there was cheese made on that day and by starting the separating as soon as we receive enough milk to keep the separator going we could be all done with our work by about 9 o'clock, having everything washed to leave the factory.

MR. BUCHER: I want to say in regard to what Mr. Wagner says there, in certain factories it works out well. In certain factories where I worked we separated the Sunday's milk Sunday morning. Some farmers that had separators of their own separated it at home, and that milk was all churned into butter. They didn't want the factory to run on Sunday. We always were done at nine o'clock.

CHAIRMAN: Is the practice of not running the factory on Sunday in Kewaunee County and the Northern Manitowoc factories still in force?

MR. BUCHEN: They are running on Sunday.

MOISTURE TESTS ON CONVENTION CHEESE

By E. L. ADERHOLD, Neenah

Mr. President and Gentlemen: The judges while they were scoring the cheese saved out some of the samples for me to test out for moisture, and all I knew about the samples was the numbers. I tested out seven samples of brick cheese. Four of them were high scoring cheese as I found out afterwards, very fancy cheese, and the average moisture of those was 39 per cent. I tested out two of medium scoring brick cheese and one of them tests 42.6 and the other 43 per cent. One of the very poorest brick cheese they had tested 48.4 per cent of moisture. That got a very low score.

Of the American cheese they handed me 20 samples. Ten of them were on high scoring cheese and ten of them on low scoring cheese. The lowest scoring cheese averaged 39.2 per cent of moisture. Some of them were under 37 per cent and two of them are over 42 per cent. It surely seems as though the exhibitors of those two cheese that run over 40 per cent probably are poor judges of cheese or they would not send adulterated stuff to the convention. I think it would be well

for the exhibitors of these two cheese to find out about it as soon as possible and to remodel their method of making. I take it that anyone who exhibits cheese here means to improve if possible. I hope they are poor judges of cheese. The older cheese makers, the experienced ones, could tell by judging that cheese that it was of a pasty nature and a poor article. The newer cheese makers who have learned cheese making within the last two years when ordinary conditions were not as they had been and nearly everything went, may not know and I may call your attention to this fact, that if after the cheese is broken down you will take a little piece of it and keep on working it between the thumb and finger. If it shows sticky it has more moisture than it ought to have, and probably more than the law allows.

I have tested out many cheese for moisture both in winter and summer, and it is my experience in the winter time cheese will have a good body with about one per cent more moisture than in the summer. That is speaking in a general way. For instance in the summer time the cheese that has a good body usually does not have much over 37 per cent of moisture when it comes into the warehouse, may be as high as 38. In the winter time it may have 1 per cent more moisture than in the summer and have a satisfactorily good body, but when you get it pasty or sticky you are very liable to have 40 per cent or more in the winter time, because you are so close to it, with a good body you are closer to the 40 per cent limit than you are in summer with the good body.

Of the ten high scoring cheese the highest per cent of moisture is 38.4, the lowest is 32.8. The average of the ten is 35.02. Call it 35 per cent. That is the average per cent of moisture in ten of the high scoring cheese. That is not new cheese. That cheese all had more moisture when it was new, but that is aged, ripened cheese. A cheese will lose a little moisture while ripening, even after paraffining and in the coolers. The highest scoring cheese was 216, the per cent of moisture is 34.8. The second highest is 56 and the per cent of moisture is 32.8. I think in both cases that was June cheese. In the case of the second highest this cheese is the prize of all, 32.8 per cent. I understand he cut his curd ten times, he got his curd very fine and the curd was kept quite a while. When he had milled the curd there was hardly a bit of moisture showed turning over the whey, so that would explain why the moisture content is so low, 32.8. It is a very fine and a very meaty cheese or it would not have received the second score.

That is all of the report unless there are some questions.

CHAIRMAN: Has anyone any questions on this report of Mr. Aderhold's?

MR. ADERHOLD: Is Mr. Gruenke in the hall? He told me when his cheese was three weeks old he tested for moisture and it tested 35. My test here is 34.8.

MR. BUCHEN: I would like to ask Mr. Gruenke when that cheese was made.

MR. GRUENKE: The first of June, 1920.

FAULTS SEEN IN CONVENTION CHEESE

By WM. HUBERT, Sheyboygan

Mr. President: Mr. Aderhold told you a few minutes ago he scored on moisture ten of the low and ten of the high scoring cheese. I am sorry I cannot bring you in the highest scoring cheese, it is already cut up, but I have right here the high moisture boys. I have three of the highest moisture cheese in the room. This one here, 205, tests the highest. Between these there is only .6 of 1 per cent, between this and that 2 per cent. If you will after a while step up here and feel of these two cheese you will get an idea what that means, 2 per cent. A lot of you think it don't mean much, but it does.

I have with me some samples taken on January 1st, on the various cheese. This 205 got a score of 84.25; 225 got 92.25, a little better but it is not a good cheese. The texture is pretty fair, but there are some holes there. Two hundred sixty-five here, that is not a very good cheese. I am going to set them up here and you people can look at them yourself, some model cheese.

I want to show you this cheese, because it is not a Long Horn, it is not American, it is too small for American. A young American should weight 48 to 50 pounds to the box, this weighs 44 to 45 pounds. If we were grading cheese according to these figures you would be cut on that. A good many of the boys were of the opinion they didn't dress the cheese to show the shoulder. They were going to be cut down on that. In order to cut a 12 pound cheese it would have to come out here. You want to be sure with your follower so that your cheese is straight. The objection to this cheese is checks under the bandage and molded in. The gentleman was cut three points, on those checks. We tried it and didn't find the mold going in very far.

Here is a cheese the fellow made with very poor followers. He had better buy some new metal followers. You have heard a good deal of discussion at these county local scoring contests. Mr. Cannon and myself have scored quite a number of them and we have found more and different kinds of curd in the same cheese. We called the attention of the cheese makers to that fact and we are very fortunate to get this sample. Right here is a sample of cheese shipped back from the south and it was where the cheese maker incorporated old, held-over curd right in that cheese. We get that lately in quite a number of cheese, and it is about time our Dairy and Food Commission prosecuted a man who will hold over curd and incorporate it in the center of the cheese. We have more trouble by putting that curd in the cheese than all the other kicks we get back. We get kicks about cheese being moldy and full of streaks, and when it comes back by express it shows this. If our present Dairy and Food Commissioner is in the room he will take notice of this cheese and instruct his inspectors to prosecute any man sending out cheese like that

FAULTS SEEN IN THE CONVENTION CHEESE

By FRED MARTY, Monroe

Mr. President: There are different causes for faults in brick cheese. Those of you that have dairy course training and have taken bacteriology in connection with it probably in the University of Wisconsin, were taught the different elements in milk. In the latter part of the period of lactation you will find there is a less percentage of calcium salts in the milk.

What has calcium salts to do with the manufacture of cheese? I want to tell you it is the only factor that has to be reckoned with. Here is a match box. Without this match box you cannot light this match. In the manufacture of cheese the calcium salts is one of the ingredients, one of the factors that takes hands with Mr. Rennin in the stomach of the calf. When the two meet, coagulation takes place.

How many of you have had the experience in the manufacture of brick cheese and in the manufacture of American cheese or any kind of a cheese where you had floaters, a curd that was rising to about an inch of the top surface and if you reached down into your vat the majority of the curd was at the bottom, but still if you run your hand around you meet curd particles? What does that indicate? That indicates that particular batch of milk that was in that vat at the time the rennet was added acted so much slower than did the milk that had the right elements to properly act with the action of rennet. If you had used the Swiss kettle, you would run into a channel, milk that was not so thoroughly coagulated as milk on either side of it. In the vat you would find the same condition, milk that wasn't as much curdled in a certain part of your vat. When you come to make that cheese you would find you get that light curd. It will do it in the Swiss cheese kettle when you run your arm down into it. A lot of those troubles you experience along these lines can be laid to strippers.

MEMBER: I would like to say it is worse in the winter than in the summer. I hardly have any trouble in the summer. I laid it to silage.

MR. MARTY: In the Swiss cheese section they fought it hard. In spite of all the effort that is put forth they cut the use of the silage off. Some of them say they use it with the best of results, but I have yet to see any factory that has good results.

The use of silage I explain in this way. Good silage is hard to find. The time is coming when it may come better because every farmer may in time have his own silage fillers, but as a rule today the fillers run around a certain neighborhood and the farmers wait for the machine to come. One man has a clean corn field, the next man has corn and mostly rag weeds and it is all cut in the same machine. If you cut your corn at the proper time, the improper acids

do not develop in the fermentation process when it is in the silage. I have gone into barns and I have gone to silos where the tears would run out of your eyes. It nearly killed the cows.

MR. BUCHEN: I notice in the farm papers a great many places they are advocating and sometimes do use sun flowers for silage.

MR. MARTY: I have had absolutely no experience with that. I have not heard of it being used.

CHAIRMAN: They use sunflowers where they are not sure of a corn crop.

MR. MARTY: The brick cheese exhibit this year is great with the exception of two lone entries. It is something like the biggest in the history of the Association, 73 exhibits of brick alone, and it is a splendid exhibit. The workmanship is splendid, the finish of the cheese is splendid, but there is in the majority of the brick cheese a condition that should not be there. The cheese makers to a large extent have drifted away from a very important method that should be employed every time he takes in his milk. No matter if your smeller is no good, if you can't tell good milk from bad milk when you smell of it, boys, smell of it anyway, and if there is something bad there, smell of it again. You needn't say one word. That wise old farmer there noticed you. He knows there is something not quite right. Employ that one method. Start in gradually and keep it up after you have started it once and you will have a greater success in getting milk that has been properly taken care of. In the brick cheese out there, workmanship is splendid, but there is that one failure, pinholes. Splendid curd well worked up, but pinholes. There is absolutely no excuse for pinholes in cheese, not when God Almighty prepares temperature as you have it today without ice, without air, all it needs is stirring until the animal heat is removed. Never let a cover form on milk before the heat is out of it. At the factory, when the farmer pulls the cover off all you have got to do is to have a good ray of light and wait one second before you take that can of milk. If those little cream particles show, you will never be able to incorporate them in the cheese. It is a loss of yield. When there are little fine cream particles, it means that the milk was not stirred before the animal heat was out of it. The average fellow thinks the cream will go into the cheese, but it will never go into the cheese.

Milk inspection is one thing I would like to have you carry home with you. Every time the farmer comes to that factory he has got his eye on you. You will say he is an easy-going fellow, he will take anything. What an amount of trouble and after effects you would save if you would only go through that course of inspection of your milk.

HOW TO IMPROVE WISCONSIN CHEESE QUALITY

By ALVIN JINDRA, Two Rivers

Cheese making for many years has been an art, but today, thanks to the investigations and experiments conducted by the National and State Governments, cheese making has become a science. That is, known conditions will produce known results. But it requires that the cheese maker have the skill to use the knowledge at his disposal, which can only come through experience gained through years of hard application.

In order that men with a sufficient amount of education to appreciate and apply the knowledge at our disposal may be attracted to the business of making cheese the remuneration must be sufficiently high. As conditions are today, the best cheese makers are looking for opportunities to get rid of their factories, so that they can get into other lines that promise better incomes.

Wisconsin farmers can produce the necessary quantity of milk to maintain the cheese factories, but do not seem to appreciate the necessity of allowing a price for making that will attract and keep good men at the business of making cheese and in our opinion this matter is the crux of the question of how to improve the quality of Wisconsin cheese.

If the laborer is worthy of his hire, then the cheese maker who invests his capital and his experience in the business should be paid more than laborers' wages. As it has been this past year or so, with the increased cost of supplies used in manufacturing the cheese, the maker has had little or nothing for himself at the end of the year.

In this connection, we believe that the work of the Wisconsin Division of Markets in getting out a uniform cost accounting system is a step in the right direction and every cheese maker should install it and in addition use the uniform patron statement worked out by the Division of Markets. This will enable any one to figure them and be in a position to make comparisons as to the results obtained by neighboring factories that will, in our opinion, result in a cleaner competition.

The production of clean milk for making cheese is the farmer's problem, but is one of the maker's problems as well, and he should be able to give such information as is necessary to those patrons who may deliver milk not up to the standard required.

We believe the rule promulgated by the Division of Markets requiring cheese to be held three days from the hoop before shipping or paraffining is a step in the right direction toward improving Wisconsin cheese but had the time limit been set at from seven to ten days it would have been better.

So far as the matter of grading cheese is concerned as a factor in improving Wisconsin cheese, we are rather doubtful. The old saying that one man's poison is another man's food holds true in the matter of what people like in a cheese. It is well known to those who handle cheese that the close meaty textured cheese, suitable for export would not be relished in some parts of these great United States and that a moist, soft loose bodied cheese would be considered preferable; but such cheese under the proposed grading would, if we interpret the proposed grading system correctly, compel the receivers of such cheese to brand it No. 2 which would in effect, stop us from supplying markets demanding this type of cheese and selling it at a reduced price.

People's taste for cheese is, no doubt, as varied as their taste in other matters such as style and color of clothes or wives and it would seem that that being so we should be permitted to cater to those tastes without having to brand our cheese as seconds when in fact it is a first in some sections of the country.

Supply and demand ought to take care of this automatically for if there is no demand for loose bodied cheese, makers will soon know it and turn to making what the market does want.

What we need more than anything else is to have the business of cheese making so stabilized that it is a safe business for a man to invest his money in a factory and equipment and make more than the bare living some of us have had to accept in the past.

We believe it would be wise for our Dairy School to boost the requirements for entrance into that institution so that its graduates could at once take their place in the profession as skilled makers and that the license requirements be raised as well so that men who have had but a few months experience as a helper would not be able to operate factories.

To sum it all up then, what we need to improve Wisconsin cheese is first, better qualified makers; second, a price for making that will attract and keep good men in the business; third, to have the business so stabilized that a man's investment will be reasonably safe from loss through the building of factories where the community is already well served, and fourth, a revision of some of the laws now on the statute books so as not to handicap our makers and producers in competition with other states and foreign countries, and last, a good strong working organization like the Wisconsin Dairy Protective Association to look after our interests both at home and abroad and to which every cheese maker in the State should give his loyal support and cooperation.

In conclusion, just a few words regarding the discussion of yesterday afternoon about grading cheese.

If the Division of Markets wants to do justice to the poor consumer, who in his ignorance of what constitutes a good cheese, is supposed to be asking for a soft, open texture, gas holey cheese, educate him to the greater food value in a firm, meaty texture cheese.

Let us continue to make that kind of cheese that has made Wisconsin famous as a cheese state and let the Division of Markets cooperate with the Dairy Council in educating the consumer what is good cheese; we can make it and our continued success is dependent upon our maintaining quality.

"A CHEESE DEALER'S ADVICE TO MAKERS."

BY HORACE DAVIS, Plymouth

Mr. Chairman and Members of the Cheese Makers' Association of the State of Wisconsin: The first thing that a cheese maker wants to do, if you haven't done it already, is to join a cheese makers' association. You want to join the local or the Wisconsin and attend their meetings. To participate and take part in the legislation of the State of Wisconsin, to see that proper laws beneficial to your business are passed, and that improper laws are rescinded. That is the best and strongest advice that I think I can give you.

Cleanliness is next to Godliness. How many makers amongst you, after you have taken in your milk in the morning and commenced to handle that milk, go to a wash basin and wash your hands? How many amongst you, when you press your cheese or you take your cheese out of the hoops wash your hands before doing so? I have had lots of cheese come into the warehouses where I saw the print of four fingers and thumb on the side of the cheese, showing that the hand was dirty. One of the most essential, necessary conditions of any man handling milk and its product is cleanliness.

A year ago I talked to you about the moldy cheese or the green mold that went into cheese in the hands of the dealers and the grocers over the United States. I am mighty glad to say that is somewhat better, but the other day I saw a cheese cut where there was a short piece of broom straw imbedded in the cheese and all along and surrounding that piece of broom straw was green mold. It is evident that on that broom straw there must have been a germ that produced that mold. That being the case, how many of you sterilize and scald your brooms? Do you, after using your broom in the evening, scald it or sterilize it to kill all the germs that may be in that wet broom? If you don't, you should.

We find still that a great many of the makers over the country often have a little curd left over, and they have some box to put that curd in, and I am sorry to say that they don't cleanse that box every day or sterilize it when they empty that curd into the vat. This is an important thing and I recommended then and I recommend now that where you carry curd over that you shall be very careful how you carry it, and it is better that if carried over it be kept together and be put into one hoop and not scattered through a vat of milk. It may be different in color, in acidity, or texture, and if you

carry it through that milk you will have a mottled or a spotted curd cheese.

I am sorry to say that a great many makers in the state of Wisconsin have no eye as to the make-up of cheese. They will make daisies from 20 to 24 pounds, and in some cases as high as 25 pounds. That is a bad state of affairs. A Daisy wants to be about 21 to 22 pounds, and if you can't get uniformity you should weigh your curd before you put it to hoop. Make your cheese of a uniform size in Daisies, they look so much better. It is what is required. I regret to say that many Long Horns come in where the difference in height of Horns in a box is two, three and four inches. A buyer opens a box and he finds a tall cheese and a small cheese. Some of them that are ragged on the edge. One cheese may be too tall and the weight of the box on it has crushed it down and cracked it open. What right have you makers to box cheese that way? You have no right. It is an imposition on your part to try to make cheese of that kind. It is easily corrected and it will have to be corrected. The buyers have for the last few years tried to help you through, but conditions on off goods are so serious that second and third grades have to drop so severely in price that they have no market for those goods and if you continue to be as careless you will have to suffer material losses. Avoid them. You can do so.

The cost of the material you buy has become a very serious question with you. Many of you are going back to have your meeting with your patrons. I think you will find that the cost of material will necessitate that you know what that cost will be or otherwise you will probably be making cheese without any wages the coming year. You have got to get over $1\frac{1}{2}$ cents, 2 cents, $2\frac{1}{2}$ cents or even 3 cents to make some styles of cheese. Post yourself thoroughly as to what it is going to cost and then demand living wages. Gentlemen, I thank you.

Mr. ADERHOLD: I would like to say a few things about the holding over of curds that Mr. Davis mentioned. If you would go from factory to factory every year as some of us have done you would be very much surprised to see in what a large number of factories it has been practiced. I have sometimes looked at that box of old curd, nothing over it, the top of it deep red and yellow and the bottom of that curd was foul, unclean and moldy, and I have thought to myself if that cheese maker wanted to hatch out some scheme whereby he could insult his patrons, I don't know what better scheme he could have than to let that curd rot and mix it into the farmers' curd. And then this broom straw. You would be surprised to find in how many factories they use curd brooms that are absolutely foul. They not only cause mold in cheese but other troubles.

There is a resolution coming up, I believe, condemning that practice and I hope that resolution will pass, of holding over curd. I don't believe it should be done at all. If you haven't room for the extra curd amongst your hoops, you should make a small cheese to use at the factory and not mix that with another batch of curd. (Applause.)

CHAIRMAN: Speaking about left-over curd and mottles and spots in cheese I have a case of that just this past week. Seventeen boxes of Long Horns, one day's make of one man, and those red spots were all over through those Long Horns and the Daisies the same. I called the man on it and his story was that he had come to the bottom of a jug of color and that was tailings in there and he didn't know it until he made that cheese, but I might have known better. It would have been better if he had told me "I had that one day's curd left over with that color in there."

A CHEESE DEALER'S ADVICE TO CHEESE MAKERS

By H. J. NOYES, Muscoda

Mr. President and Gentlemen of the Convention: I realize you have a whole lot of work to do here this afternoon and I am wonderfully pleased to see so many boys here at this time, the third day of the convention.

The idea of going back to the old method when the instructor went from factory to factory and instructed the cheese maker is good, for we had more uniform cheese than now. Not only that, but now we get the cheese out of the factory, and let the dealer cure them.

There is one thing more I want to say, this holding over curd. You know there is another thing held over sometimes, even this summer we had makers that took cheese that were sour to pieces, put it inside of a cheese they made that day and sent it over to the buyer. That is absolutely unreasonable, it is dishonest and it is criminal, and the boy that does that ought to stop it. Don't make your cheese too big. Mr. Davis brought out that point. We have received Daisy cheese this summer that weighed 26, 27 and 28 pounds. They stand up above the box and when those cheese are paraffined and go into cold storage, that cheese that is above the box is pressed down, your cover is open and the mold goes through the cheese. They had a bottle here the first part of the convention showing how quickly the mold goes through the cheese when it gets a start.

The question of excessive moisture is what is bothering the trade these days and something must be done about it or our reputation is at stake. We heard a cheese maker say that it did not matter whether cheese contained 40 or 50 per cent moisture, if it were well made. I would ask such men what they call a well made cheese, if they disregard one of the most vital points of good cheese making. If I were to tell you, that during last season much of the cheese contained more moisture than before the law went into effect you would scarcely believe it; but I am sure the cheese dealers will bear me out in this statement. This foolish practice probably came about by some

makers trying to beat his neighboring factories in yield. Then to satisfy their patrons the neighboring manufacturers must do likewise and thus the ruinous work goes on. If the neighboring factory produces honest goods—though he does not get as much cheese from one hundred pounds of milk, his patrons, not understanding are dissatisfied and threaten to take their milk to the factory which pays the larger dividend. Therefore the high moisture maker not only makes a cheese which will not keep but is creating dissatisfaction among the farmers in general.

Like many other laws this excess moisture law is not enforced as it should be. Excess moisture causes the rind to rot and the cheese to mold when placed in cold storage, therefore it must be placed on the markets sooner than it should be. On an average, such cheese as this is delivered at the warehouses from the hoop up to five days old, making a poor cheese worse by paraffining and placing in cold storage.

A little over a year ago a few cheese makers were arrested for disobeying this law, which had the effect of making some of the makers more careful. It is possible that a small percentage of excess moisture cheese might be put on the market without loss, but when you consider the great volume of three hundred million pounds manufactured in Wisconsin annually, you can readily see it is best to eliminate any *excess*.

Seeing the bad effects of allowing cheese to be delivered when too green, the dealers came to an agreement to take no cheese less than five days from the hoop; but owing to the anxiety of some dealers to obtain larger quantities they did not stay by the agreement. Then they compromised on three days and some disregarded any stated time, and took the cheese from the hoop. In this way again we met our old trouble of too much moisture, rind rot and moldy cheese. As many makers skilled themselves to come just as near the limit and not go beyond it, we found that 40 per cent moisture to be too high. Therefore we strongly recommend that the law be changed to say 38 per cent instead of 40.

Some of the makers say that people like soft cheese with plenty of moisture. True, but is it not a fact that if the cheese are well made, cured and aged properly these same people would wonder how they could ever have liked the unripe cheese?

I put some of this green, excess moisture cheese in cold storage in June and took them out in October. Some of them were rind rotten and a few were half moldy and rotten through and through. We have had cheese testing 40 per cent that would not stand up and cure out good in storage. Bad rind and off flavor is sure to result.

After we obtained a law, many years ago, prohibiting filled and skimmed milk cheese, the Cheddar or Canadian system was adopted. The state sent out instructors who went from factory to factory teaching this method, which is the best that has ever been tried—it took more time than the old way. The milk as soon as it was delivered was tested and ripened. It should take about two and one-

half hours from the time of setting until dipping or drawing the whey. Then it went through a matting process until there was half the amount of acid required. The curd was then ground and held until the proper amount of acid was developed. After salting, the curd was held until the salt was dissolved and the curd presented a smooth, silky appearance. At that time Wisconsin cheese was more uniform and of better quality. It took more time to make but the time was well spent.

Now we seem to have no regular method, it is hurry up and get off for a joy ride. Then get the cheese out of the press and out of the factory the same day and let the dealer do the rest if he can. The maker has not had the cheese in the factory long enough to know what kind of a cheese he is making, whether they are too soft, open or sour. When you call these makers into the warehouse and show them their poor cheese they do not recognize them as their own make.

Now we have a law that requires the cheese to be held in the factory until they are three days old. It would be better if it were eight days instead. But, if they were made as they should be, firm, with a solid rind, of 38 or less per cent of moisture, I believe they would come out of storage in good condition. There are too many slipshod methods and with sales made too soon after the cheese have been taken from the press, the makers have been getting by with it too easy, depending on the dealer to cure and develop the cheese. Poor under grade cheese should not bring market price. If they were sold for what they were worth the maker would take more pains as he could not afford to lose the money or his reputation as a manufacturer. I heard one maker say that he believed he could make fancy cheese nearly all of the time if he got paid for it. This being the case let us have a graded cheese law.

DISCUSSION.

CHAIRMAN: Yesterday there was considerable discussion here on the word instructor, but there was a considerable misunderstanding on it. There was some discussion from this corner of the hall concerning instructors. They wanted inspection. Some others wanted farm inspection, but the idea of the convention was instructors with inspection power. The principal idea of that instructor's duty is if I am in trouble of some kind he is the man I will notify, and he is right near me, I will get him today or tomorrow, and it is his duty to stay with me as long as he can or until the trouble is settled. If we have instructors then we will get a uniform quality of cheese without our going out and instructing people how to make it.

MR. NOYES: When we had our instructors they came and stayed with us two days or longer. We didn't stay around the cheese vat. When we had a patron that had trouble at the barn we drove out to the farm and did what we could, and we went to his home at night and showed him how to cool his milk. That is a proper way for an in-

spector or instructor to go right along through a community and help them out at once. An instructor is right at your door and you can get him right away. It has been suggested in this convention that they asked for help from the Dairy and Food Department and couldn't get help. This force is covering too much ground.

CHAIRMAN: Early this summer a man had very poor cheese and I took one of those cheese in the back seat of my Ford car and drove to his cheese factory. The cheese factory is in Rusk County, in Lady-smith. I went into that man's factory, and he is a Sheboygan County man, Mr. Davis has handled many a box of that same man's cheese. He was in trouble. I had a piece of his goods with me but he didn't know it. I talked to that man, you couldn't talk to him and you couldn't reason with him. He couldn't have found his trouble if he had stayed in that factory all night. I started to question the man, asked him conditions. I talked to him on many different things, and before I got done talking with him one of his little boys said, "Pa, there is an old horse and an old cow that has been dead down in the old pasture, the bones are sticking out now and none of them have been buried." I said, that is where your trouble is. He didn't believe this, he thought that boy was telling a fish story. Two weeks after that I got a letter from him stating that he found what the boy had said was true and after he had buried them that was the end of the trouble. He finished by saying, "I have a nice bunch of Twins, the nicest I have ever had, coming down next week."

MR. MARTY: Mr. Chairman, I want to cite one little instance similar to our President's experience. It seems hardly possible that it can happen. In Lafayette County there was a cheese maker. All summer long, when the cheese were about three weeks old they began to crack. He said, "that thing will stop" almost every day. The first part of September his patrons held a meeting there and they decided to quit, and they did quit for ten days. One of the farmers distributed his milk in one direction and another, with the result that wherever the farmer went with the milk there was peace in the factory. They decided to start in again. The farmers said it is not the milk, it must be you. The same old trouble started again. Then the cheese maker and three farmers came to Monroe, and they wanted me at once to come right out with them. I drove down to that factory and you wouldn't believe it, I was in that factory fifteen minutes and I told him where his trouble was. His trouble was in his well. Gas disturbances are caused by foul, stagnant water. I didn't have to plug the cheese that they had laid out there for me to look at. I called the maker by name and I said, "it is in the water." He said he knew it was in the milk, and he wasn't the cause of it. I said, "where is your pump?" We took a pail and we pumped out some water there and there were green substances coming into the bottom of that pail. I smelled of the water, and it was foul. I said, "for heavens sake, have you been using any of this water in the making of Swiss cheese?" He used a considerable amount of water every day in his manufacture of cheese. To 3,000 pounds of milk he used

150 pounds of water and for the inoculation of his rennet he used that water. What else could you expect but trouble? We stopped that pump right there, and I put a label on it. I went out to bring in sufficient water from other places. We took the cheese and everything off the press, sterilized the cheese cloth and the table, sterilized the tanks all the way through and that night we started in. I said, "you go ahead and make that cheese and use the water that was brought in from outside." I wish he was in the audience. From that day on to the last day of that season he made a fancy A1 Swiss cheese, and he had had the trouble in the cheese factory all by himself all summer long. The trouble was this. He had a drain in a side building of the make room, which had sprung a leak right close to the pump stock. That drain was supposed to join the main factory drain and run into a cess pool. All the washing slop of that cheese kept working over onto his pump stock. If you ever saw a mess it was there, clear down to the water. When we broke the cement floor underneath it affected every farmer at work there. A minute at a time was all they could stand. They started to haul in dirt and unslaked lime, and they put a pump on that well for about a week. Then he started in and the water was tested by the laboratory at Madison and found O. K. and he started to use that water again.

You may think a man going from one factory to another will not be able to find trouble. After you have done that for one, two, three, five, ten years you are bound to find out where the trouble is.

CHAIRMAN: Mr. Marty's story must have happened before the war. If it had happened now they would have had gas masks.

REPORT OF RESOLUTIONS COMMITTEE

By MR. A. T. BRUHN, *Chairman*

To the Officers and Members of the Wisconsin Cheese Makers' Association:

Your Resolutions Committee respectively submits the following report:

1. Resolved, that the thanks of this Association be extended to the Milwaukee Association of Commerce, 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.

2. Whereas, since our last annual meeting, death has taken from our ranks Mr. Robert Johnstone, Woodstock, Ontario, and Mr. Louis Kortbein, Clintonville, Wisconsin, members of this Association who attended our meetings for many years and who were always helpful to the Association, therefore be it

Resolved, that we feel a deep sense of gratitude for their loyal services and never failing interest in the work of this Association. Be it further

Resolved, that a copy of this resolution be sent to the families of these departed members, expressing our respect and sympathy.

CHAIRMAN: On the first two resolutions, what is your pleasure, members?

It was duly moved, seconded and carried that the resolutions No. 1 and 2 be adopted as read.

MR. BRUHN: (Reading)

3. Resolved, that it is the sense of this convention that the maximum legal moisture standard for American or Cheddar cheese should be 39% instead of 40%.

MR. DAVIS: Mr. Chairman, the original 40% moisture was considered only at that time so as to make a cheese in the winter with sufficient moisture in it to allow it to be cured up in reasonable time for consumption. It has been demonstrated, and clearly demonstrated, that many cheese makers over the state of Wisconsin that were formerly making a better cheese along 36 or 37% at once said, "There is a law of 40%, and we will try to make our cheese up to 40%," and the result has been there was more poor cheese in some cases made with high moisture than there was preceding that. Your exhibits of cheese have demonstrated you know how to make cheese, for they show 36 and 37 and the highest has not been 38. It is clear that 38% moisture would put you on an equality with your neighboring factories, making the moisture maximum for all of 38%. I therefore offer an amendment to that resolution that it be changed from 39 to 38.

MR. ADERHOLD: I want to make a little argument in favor of lowering the standard from 40%. At the last three conventions I have been making moisture tests on the cheese exhibited here, always on a number of the highest scoring ones, and for the past two conventions the average moisture of the high scoring cheese averaged a little less than 36%. One year it was 35½ and the other 36.1. This year ten of the high scoring cheese averaged 35% moisture; ten of the lowest scoring cheese averaged 39.2%. I have done very considerable moisture testing in the last three or four years and I am absolutely satisfied that for the good of the Wisconsin cheese industry the maximum standard must be lower, and also for the good of the competent cheese maker the maximum standard should be lowered. We have to get the thing back onto a basis where skill in cheese making is of some value to those who have it. It was stated here yesterday that some cheese is made by competent cheese makers and other cheese is made by somebody that has just got a job in a cheese factory, and it is a serious thing when skill in cheese making is not of any value, and I want to tell you if the moisture standard is lower our good cheese makers will find their skill is more of an asset to them than if the standard is not lowered. My idea was to put it at 39%. I know there are people in the business that want it 38%, but the Bureau of Markets of the Department of Agriculture have de-

cided on a 39% standard. I think we ought not to overlook that fact in fixing our standard. I am very sure 40% is too high, and it ought not to be left there.

MR. DAVIS: The Bureau of Markets will be guided very extensively and to a great extent by the advice of this Association. I most earnestly call upon every cheese maker and cheese dealer in this meeting who is interested in the improved quality of Wisconsin cheese to recommend in this bill here a moisture of 38% for the cheese in the State of Wisconsin. It protects the good cheese maker, it sets a standard on which competition cannot be injurious to you caused by your neighbor, and from the years of watching this moisture in the various factories of the cheese that is shipped to us I am strong in my advice and my belief that the 38% moisture will be the best standard for the State of Wisconsin.

CHAIRMAN: It has been moved and seconded that resolution 3 be amended to read 38% instead of 39%.

Upon a rising vote being had, 71 voted in favor of and 48 against the motion. The motion was carried.

MR. KIRKPATRICK: I move we adopt the resolution as amended to read 38%.

The motion was seconded and carried by a rising vote, there being 70 voting for and 45 against the motion.

CHAIRMAN: The resolution is carried.

MR. BRUHN: (Reading)

4. Resolved, that we oppose any combination of the State Dairy and Food Commission and the Marketing Division. The Dairy and Food Commission has served the people of this state for many years and we consider that the work of both these commissions is of such magnitude and importance that each should be organized separately, although they should cooperate in their work.

It was duly moved, seconded and carried that this resolution be adopted as read.

MR. BRUHN: (Reading)

5. Resolved, that at our next convention all cheese made prior to October 1st be entered and judged as a separate class.

That means we will have two classes. It is not fair to compare a fresh made cheese with an old made cheese, for the old made cheese will always get the highest score.

CHAIRMAN: As explained to me by Mr. Hubert, the cheese made by Mr. Greunke was made the 1st day of June. If any others had been July cheese or older than that, running up to October 1st, that would be in one classification as aged cheese. We have another classification for green or young cheese, with a set of prizes for each. The object of the committee is to encourage more makers to stop taking them off their shelves and get more of the every day make. The older

makers will still be exhibiting their old cheeses. If he is highest in the different class he comes in the prize line. What is your pleasure?

MR. BUCHEN: I move the adoption of that resolution.

The resolution was seconded and carried.

MR. BRUHN: (Reading)

6. Resolved, that all American cheese made in Wisconsin should be graded and branded.

We suggest that two grades be used during the first year's trial of the plan. We suggest grade No. 1 and grade No. 2; that all cheese paid for at or above ruling market price be branded "Wisconsin No. 1" and that all other cheese be branded "No. 2" in letters not less than $\frac{3}{4}$ of an inch high.

MR. HUBERT: The intention of the committee was—"Wisconsin No. 2," we don't want "Wisconsin No. 2," just "No. 2."

MR. ADERHOLD: I am opposed to the passage of that resolution. The problem of grading cheese, branding cheese is a very big problem. There are not five men in this room that understand very much at all about it. It is a very deep problem. The discussion you heard yesterday touched only on one little phase of it, and you heard a strong objection on account of the soft, open cheese here, as to its classification. Some of you got a wrong impression of the whole thing. Because you don't know anything about the problem of marketing I don't believe you are competent to pass a sensible resolution on it. I think we ought to leave that to the Division of Markets who have been holding conferences with cheese makers and cheese dealers and let them continue to hold such conferences until all sides are satisfied. You will get something better out of it than what you can recommend here today, I think. That resolution ought to be defeated.

MR. MCCREADY: I believe that was pretty well covered this afternoon at the conference held in the hotel. Mr. Potts, Mr. Michels and the others met with the cheese dealers, I believe that can be taken care of.

MR. ADERHOLD: I move that resolution be laid on the table.

The motion was duly seconded and carried.

MR. BRUHN: (Reading)

7. Resolved, that the next convention score card for American cheese shall read as follows:

Make-up	20
Color	10
Flavor	35
Body and Texture	35
Total	100

MR. DAVIS: Mr. Chairman, the old method of 45 for flavor was felt by many of us to be too high, especially in the winter time when there is more absence of flavor. The cheese that is made every other day in the winter time has not the flavor. The best you can do is an absence of flavor. Therefore in this conference this afternoon we

figured, as I said, that flavor should be figured at 30 points, texture 40 points, finish 20 points and color 10 points, making a total of 100, and I would move an amendment to this resolution that flavor be made 30, texture 40, finish 20 and color 10.

Motion seconded.

MR. HUBERT: As one of the Committee on Resolutions, those figures that Mr. Davis gave were mine, but in order to compromise with the other two gentlemen who were cheese makers I agreed with the figures.

MR. MCCREADY: I believe the Bureau of Markets will agree with those figures, 30, 40, 20 and 10.

MR. HUBERT: But the make-up first.

MR. MCCREADY: That is a good suggestion.

On vote the motion carried, and the amended resolution also carried.

MR. BRUHN: (Reading)

8. Whereas, in recent years the character of the dairy inspection service of our state has suffered because of insufficient compensation for such service, therefore

Resolved, that we recommend that our Dairy and Food Commissioner raise the salaries of the dairy inspectors to a point which will attract those most competent for such service.

MR. DAVIS: This matter goes beyond the Dairy and Food Commissioner. He has not a private fund to raise his employees. They are employees of the state and the state has to provide the money. The state legislature has to appropriate the money for the Dairy and Food Commissioner before he can have any money to pay out, and I think if the Legislation Committee of this Association would be instructed to call on the Finance Committee of the Legislature to place before them the need of increased appropriations for the Dairy and Food Commission that the work will be well worth your attention. I am heartily in favor of this, but Mr. Weigle personally, or the Dairy and Food Commissioner, can't increase his force or increase their pay unless the state gives him more money.

MR. ADERHOLD: Making up the salaries is in the hands of the Dairy and Food Commissioner. He gets his budget so much a year to work with and he can make his salaries more if he wants to. Our present Dairy and Food Commissioner has been weak in that respect that he has not put the salaries up where they belong. The men have used the position as a stepping stone to something better and the service has suffered. We ought to add to that resolution that we appeal to the Legislature to increase the appropriation of the Dairy and Food Department. I will make a motion that the resolution be amended to add that to it.

Amendment seconded.

CHAIRMAN: It is moved that we add to the resolution as it is now "and we appeal to the Legislature for increased appropriations to the Dairy and Food Commissioner."

On vote the motion carried, and the amended resolution carried.

MR. ADERHOLD: I want to say further, complaints are always coming up that the inspection force is not big enough or they are not doing their work generally enough, but we have always been doing our complaining where it doesn't count. It counts with the men we sent to the Legislature. Every one of us at home ought to work with those men, tell them, all kick, go and kick in the same direction and in the right spot, then we will get results.

MR. BRUHN: (Reading)

9. Whereas, we feel that much improvement is needed in the care of milk on the farm, testing of same at the cheese factory, instruction in manufacturing same into cheese.

Resolved, that we favor any legislation by which a sufficient number of instructors can be secured, under the direction of the Dairy and Food Commissioner, to be able to visit each cheese factory at least once each month, do testing of milk and give such other instruction as they see fit, the expense to be divided equally between the state and counties in which they work.

MR. KIRKPATRICK: I move its adoption.

Motion seconded and carried.

MR. BRUHN: (Reading)

10. Resolved, that the practice of holding over curd and mixing it with curd of the following day, is very detrimental to the cheese quality, and that we condemn such practice.

Mr. Davis: I move its adoption.

Motion seconded and carried.

(For resolution on tariff rates, see index.)

The announcement of the prize winners was made by Secretary Sammis, who also announced that every prize winner will receive a letter as to what prizes he won, every donor will receive a letter in regard to who won his prize, and that all the money from the sale of cheese and all the prizes will be mailed to exhibitors before Saturday night of this week, or early next week.

CHAIRMAN: As you leave the convention hall make one strong resolution to "make next year a Better Cheese Year."

Convention adjourned.

STATE PRIZES OFFERED TO WISCONSIN MAKERS OF AMERICAN CHEESE

(See Also Special Prizes, County Prizes, Premiums and Diplomas.)

CLASS 1. CHEDDARS, FLATS AND DAISIES

- (1) **First Prizes, for American Cheese in Class 1.**
 \$10 in gold from Stoelting Bros. Co., Kiel, Wis.
 One Icy Hot Vacuum Bottle, Quart Size, from the J. B. Ford Co.,
 Wyandotte, Mich.
 \$5 cash from the De Laval Separator Co., Chicago, Ill.
 \$5 from the Sharples Separator Co., Chicago, Ill.
 One gallon of B-K from The General Laboratories, Madison, Wis.
 (See also Sweepstake Prizes.)
- (2) **Second Prizes, for American Cheese in Class 1.**
 \$30 Leather Cushioned Rocking Chair from the Pauly and Pauly
 Cheese Co., Manitowoc.
 One gallon of B-K from The General Laboratories, Madison, Wis.
- (3) **Third Prizes, for American Cheese in Class 1.**
 \$25 Leather Traveling Bag, from the Association.
Special Prizes, for American Cheese in Class 1.
- (4) \$35 Waltham Gold Watch, 16 size, with 25 year gold filled case,
 and 17 jeweled adjusted movement, from A. J. Marschall, of
 the Marschall Dairy Laboratory, Madison, Wis., for the best
 cheese made with Marschall Rennet Extract, and so stated
 on the entry blank. The cheese must score at least 95
 points. No maker can get more than one watch, and only
 one watch can go to the same factory. At least ten cheese
 must be entered in the class.
- (5) Pair Silver Salt Shakers from the Diamond Crystal Salt Co., St.
 Clair, Mich., for the highest scoring cheese made with their
 salt, and so stated on the entry blank.

CLASS 2. LONG HORNS, YOUNG AMERICANS AND SQUARES

- (6) **First Prizes in Class 2.**
 \$10 in gold from Stoelting Bros. Co., Kiel, Wis.
 One Icy Hot Vacuum Bottle, Quart Size, from the J. B. Ford Co.,
 Wyandotte, Mich.
 \$5 from the Sharples Separator Co., Chicago, Ill.
 \$5 from the De Laval Separator Co., Chicago, Ill.
 One gallon of B-K from The General Laboratories, Madison, Wis.
 (See also Sweepstake Prizes.)
- (7) **Second Prizes in Class 2.**
 \$30 Leather Cushioned Rocking Chair from the Association.
 One gallon of B-K from The General Laboratories, Madison, Wis.
- (8) **Third Prizes in Class 2.**
 \$25 Leather Traveling Bag from the Association.
Special Prizes in Class 2.
- (9) \$35 Waltham Gold Watch, 16 size, with 25 year gold filled case,
 and 17 jeweled adjusted movement, from A. J. Marschall of
 the Marschall Dairy Laboratory, Madison, Wis., for the best
 cheese made with Marshall Rennet Extract, and so stated
 on the entry blank. The cheese must score at least 95
 points. No maker can get more than one watch, and only
 one watch can go to the same factory. At least ten cheese
 must be entered in the class.
- (10) Pair Silver Salt Shakers from the Diamond Crystal Salt Co.,
 St. Clair, Mich., for the highest scoring cheese made with
 their salt, and so stated on the entry blank.

SWEEPSTAKE PRIZES IN CLASSES 1 AND 2

- (11) **First Sweepstake Prizes, for the one best cheese in Classes 1 and 2.**
 Silver Loving Cup, engraved with the Winner's Name, from W. C. Thomas of the Sheboygan County News and Dairy Market Reporter, Sheboygan Falls, Wis.
 \$10 from A. Grossenbach Co., Milwaukee, Wis.
 \$10 from L. O. Rehm Bandage Factory, Kiel, Wis.
 \$10 worth of Vanite Washing Powder from the Pyramid Oil Co., Minneapolis, Minn.
 \$5 from the Bank of Sturgeon Bay, Wis.
 Four Cheese Hoops, any style, from Damrow Bros. Co., Fond du Lac, Wis.
 The Manitowoc Plating Works will retin three hoops free of charge.
- (12) **Second Sweepstake Prizes in Classes 1 and 2.**
 Silver Loving Cup, engraved with the Winner's Name, from W. C. Thomas of the Sheboygan County News and Dairy Market Reporter, Sheboygan Falls, Wis.
 \$3 from the Bank of Sturgeon Bay, Wis.
 \$3 from Hunter, Wolton Co., New York.
- (13) **Third Sweepstake Prizes in Classes 1 and 2.**
 Silver Loving Cup, engraved with the Winner's Name, from W. C. Thomas, of the Sheboygan County News and Dairy Market Reporter, Sheboygan Falls, Wis.
 \$2 from the Bank of Sturgeon Bay, Wis.
 \$2 from Hunter, Wolton Co., New York.

SPECIAL PRIZES ON AMERICAN CHEESE, ANY STYLE

- (14) Bundle of Bandages for the American cheese receiving the highest score on texture at the Convention, from H. L. Mueller, Sheboygan Bandage Factory, Sheboygan, Wis.
- (15) \$5 from the Winnebago Cheese Co., Fond du Lac, Wis., for the best American cheese from Fond du Lac county, and so stated on the entry blank.
- (16) \$5 from the Central Wisconsin Cheese Makers, Butter Makers and Dairymen's Association, for the best cheese sent to the Convention by any of its members, and so stated on the entry blank.
 \$15 in three prizes offered by the Wisconsin Cheese Producers' Federation, Plymouth, for cheese sent to the Convention from any Federation factory, and so stated on the entry blank, provided that the cheese must score at least 93 points, and not more than one of these three prizes may go to the same maker, as follows:
- (16A) \$7 for the highest scoring cheese, described above.
 (16B) \$5 for the second highest.
 (16C) \$3 for the third highest.

PRIZES OFFERED TO WISCONSIN MAKERS OF
DRUM SWISS CHEESE, CLASS 3

(See Also Special Prizes, County Prizes, Premiums and Diplomas.)

Special Sweepstake Prize on Wisconsin Swiss Cheese, Classes 3 and 4.

- (17) \$35 Gold Waltham Watch, 16 size, with 25 year gold filled case, and 17 jeweled adjusted movement, from A. J. Marschall of the Marschall Dairy Laboratory, Madison, Wis., for the best cheese made with Marschall Rennet Extract, and so stated on the entry blank. The cheese must score at least 95 points, and at least ten cheese must be entered in the classes. Only one watch can go to the same factory, and no maker can get more than one watch.
- (18) **First Prizes for the Highest Scoring Drum Swiss Cheese.**
 \$5 from the De Laval Separator Co., Chicago, Ill.
 \$5 from the Sharples Separator Co., Chicago, Ill.
 One Quart Size Icy Hot Vacuum Bottle from the J. B. Ford Co., Wyandotte, Mich.
 One gallon of B-K from The General Laboratories, Madison, Wis.
 (See also Sweepstake Prizes on Foreign Cheese.)

- (19) **Second Prizes for Drum Swiss Cheese.**
\$30 Leather Cushioned Rocker from the Association.
One gallon of B-K from The General Laboratories, Madison, Wis.
- (20) **Third Prizes for Drum Swiss Cheese.**
\$25 Leather Traveling Bag from the Association.

SPECIAL PRIZE OFFERED FOR DRUM SWISS CHEESE

- (21) Pair Silver Salt Shakers from the Diamond Crystal Salt Co., of St. Clair, Mich., for the best cheese made with their salt, and so stated on the entry blank.

PRIZES OFFERED FOR WISCONSIN BLOCK SWISS CHEESE, CLASS 4

(See Also Special Prizes, County Prizes, Premiums and Diplomas.)

- (22) **First Prizes for the Highest Scoring Block Swiss Cheese.**
\$5 from the Sharples Separator Co., Chicago, Ill.
One Quart Size Icy Hot Vacuum Bottle from the J. B. Ford Co., Wyandotte, Mich.
\$5 from the De Laval Separator Co., Chicago, Ill.
One gallon of B-K from The General Laboratories, Madison, Wis.
- (23) **Second Prizes for Wisconsin Block Swiss Cheese.**
\$30 Leather Cushioned Rocking Chair from the Association.
One gallon of B-K from The General Laboratories, Madison, Wis.
- (24) **Third Prizes for Wisconsin Block Swiss Cheese.**
\$25 Leather Traveling Bag from the Association.

SPECIAL PRIZE FOR WISCONSIN BLOCK SWISS CHEESE

- (25) Pair Silver Salt Shakers from the Diamond Crystal Salt Co., St. Clair, Mich., for the best cheese made with their salt, and so stated on the entry blank.

PRIZES OFFERED TO WISCONSIN MAKERS OF LIMBURGER CHEESE, CLASS 5

(See Also Special Prizes, County Prizes, Premiums and Diplomas.)

- (26) **First Prizes for the highest scoring Limburger Cheese.**
\$5 from the De Laval Separator Co., Chicago, Ill.
One Quart Size Icy Hot Vacuum Bottle from the J. B. Ford Co., Wyandotte, Mich.
\$5 from the Sharples Separator Co., Chicago, Ill.
One gallon of B-K from The General Laboratories, Madison, Wis.
- (27) **Second Prizes for Limburger Cheese.**
\$30 Leather Cushioned Rocker from the Association.
One gallon B-K from The General Laboratories, Madison, Wis.
- (28) **Third Prize for Limburger Cheese.**
\$25 Leather Traveling Bag from the Association.

SPECIAL PRIZES FOR WISCONSIN LIMBURGER CHEESE

- (29) \$35 Waltham Gold Watch, 16 size, with 25 year gold filled case, and 17 jeweled adjusted movement, from A. J. Marschall of the Marschall Dairy Laboratory, Madison, Wis., for the best cheese made with the Marschall Rennet Extract, and so stated on the entry blank. The cheese must score at least 95 points, and at least ten entries must be made in the class. No maker can get more than one watch and not more than one watch can go to the same factory.
- (30) Pair of Silver Salt Shakers from the Diamond Crystal Salt Co., St. Clair, Mich., for the best cheese made with their salt, and so stated on the entry blank.

PRIZES OFFERED FOR WISCONSIN BRICK CHEESE, CLASS 6

- (31) **First Prizes for the Highest Scoring Brick Cheese.**
\$5 from the Sharples Separator Co., Chicago, Ill.
One Quart Size Icy Hot Vacuum Bottle from the J. B. Ford Co., Wyandotte, Mich.
\$5 from the De Laval Separator Co., Chicago, Ill.
- (32) **Second Prizes for Brick Cheese.**
One gallon B-K from The General Laboratories, Madison, Wis.
\$30 Leather Cushioned Rocking Chair from the Association.
One gallon B-K from The General Laboratories, Madison, Wis.
- (33) **Third Prize for Brick Cheese.**
\$25 Leather Traveling Bag from the Association.

SPECIAL PRIZES FOR BRICK CHEESE

(See Also Special Prizes, County Prizes, Premiums and Diplomas.)

- (34) \$35 Waltham Gold Watch, 16 size, with 25 year gold filled case, and 17 jeweled adjusted movement, from A. J. Marschall of the Marschall Dairy Laboratory, Madison, Wis., for the best brick cheese made with Marschall Rennet Extract, and so stated on the entry blank. The cheese must score at least 95 points, and there must be at least ten entries in the class. No maker can get more than one watch and not more than one watch can go to the same factory.
- \$20 offered by August Westphal, Hartford, Wis., in three prizes for the best brick cheese sent to the Convention from factories shipping to August Westphal, and so stated on the entry blank.
- (34A) \$10 for the highest scoring cheese, as above.
- (34B) \$7 for the second highest scoring cheese.
- (34C) \$3 for the third highest scoring cheese.
- (35) Pair of Silver Salt Shakers from the Diamond Crystal Salt Co., St. Clair, Mich., for the best cheese made with their salt, and so stated on the entry blank.
- (36) \$5 cash from the Winnebago Cheese Co., Fond du Lac, for the best brick cheese made in Dodge County, and so stated on the entry blank.
- (37) \$5 cash from the Winnebago Cheese Co., Fond du Lac, for the best brick cheese made in Fond du Lac County, and so stated on the entry blank.
- (38) \$5 cash from the Winnebago Cheese Co., Fond du Lac, for the best brick cheese made in Washington County, and so stated on the entry blank.

SWEEPSTAKE PRIZE FOR THE BEST FOREIGN CHEESE, CLASSES 3, 4, 5, AND 6.

- (39) \$10 from A. Grossenbach Co., Milwaukee, for the highest scoring foreign cheese of any class at the Convention made in Wisconsin.

SPECIAL PRIZES OPEN TO MAKERS OF ANY CLASS CHEESE

(See Also State Prizes, County Prizes, Premiums and Diplomas.)

- Kielsmeier Co., Manitowoc, Wis., offers \$30 in cash prizes for the highest scoring cheese sent to the Convention by cheese makers shipping cream to the Kielsmeier Co., at either Plymouth, Manitowoc, Owen, Wausau, or Spring Green, and no two prizes to one maker.
- (40) \$15 First Prize for shippers to Kielsmeier Co.
- (41) \$10 Second Prize for shippers to Kielsmeier Co.
- (42) \$5 Third Prize for shippers to Kielsmeier Co.
- The Sheboygan Dairy Products Co., Sheboygan, offers \$60 in cash prizes open to all shippers of cream to one of their six branches, and so stated on the entry blank.

- (43) \$5 First Prize for shippers to Sheboygan Dairy Products Co. at Madison, Wis.
- (44) \$3 Second Prize for shippers to Sheboygan Dairy Products Co. at Madison, Wis.
- (45) \$2 Third Prize for shippers to Sheboygan Dairy Products Co. at Madison, Wis.
- (46) \$5 First Prize for shippers to Sheboygan Dairy Products Co. at Antigo, Wis.
- (47) \$3 Second Prize for shippers to Sheboygan Dairy Products Co. at Antigo, Wis.
- (48) \$2 Third Prize for shippers to Sheboygan Dairy Products Co., at Antigo, Wis.
- (49) \$5 First Prize for shippers to Sheboygan Dairy Products Co. at Fond du Lac.
- (50) \$3 Second Prize for shippers to Sheboygan Dairy Products Co. at Fond du Lac.
- (51) \$2 Third Prize for shippers to Sheboygan Dairy Products Co., at Fond du Lac.
- (52) \$5 First Prize for shippers to Sheboygan Dairy Products Co. at Green Bay, Wis.
- (53) \$3 Second Prize for shippers to Sheboygan Dairy Products Co. at Green Bay, Wis.
- (54) \$2 Third Prize for shippers to Sheboygan Dairy Products Co. at Green Bay, Wis.
- (55) \$5 First Prize for shippers to Sheboygan Dairy Products Co. at Stevens Point, Wis.
- (56) \$3 Second Prize to shippers to Sheboygan Dairy Products Co. at Stevens Point, Wis.
- (57) \$2 Third Prize for shippers to Sheboygan Dairy Products Co. at Stevens Point, Wis.
- (58) \$5 First Prize for shippers to Sheboygan Dairy Products Co. at Sheboygan, Wis.
- (59) \$3 Second prize for shippers to Sheboygan Dairy Products Co. at Sheboygan, Wis.
- (60) \$2 Third Prize for shippers to Sheboygan Dairy Products Co. at Sheboygan, Wis.

PRIZES OFFERED FOR CHEESE MADE IN THE LEADING COUNTIES

(See Also State Prizes, Premiums and Diplomas.)

- (61) **First Prize for the Highest Scoring Cheese made in the County sending the Largest Number of Cheese to the Convention.**
 \$10 Prize offered by the Convention President, Chas. E. Reed, Thorpe, Wis.
 \$5 cash from the Manitowoc Savings Bank.
 \$5 Gillette Safety Razor offered by Secretary J. L. Sammis, Madison, Wis.
- (61A) \$10 from C. Reiss Coal Co., Manitowoc, as second prize in the leading county.
- (61B) \$10, Glander Art Studio, Manitowoc, third prize in the leading county.
 The Sharples Separator Co., Chicago, offers \$20 in cash prizes for the best cheese made in factories using the Sharples Separator, and so stated on the entry blank, in the four leading counties, as follows:
- (62) \$5 in the county sending the largest number of cheese.
 (63) \$5 in the county sending the second largest number of cheese.
 (64) \$5 in the county sending the third largest number of cheese.
 (65) \$5 in the county sending the fourth largest number of cheese.

COUNTY PRIZES OFFERED BY CHEESE DEALERS AND OTHERS

For the Highest Scoring Cheese in the County Named.

	County	Prize	Amount	Donated by
(66)	Brown	First	\$3.00	C. A. Strauble Co., Green Bay.
(67)	Brown	Second	\$2.00	C. A. Strauble Co., Green Bay.
(68)	Brown	Third	\$1.00	C. A. Strauble Co., Green Bay.
(69)	Calumet	First	\$3.00	First National Bank, Brillion.
(70)	Calumet	Second	\$2.00	First National Bank, Brillion.
(71)	Clark	First	\$3.00	Kraft Bros. Cheese Co., Plymouth.
(72)	Clark	Second	\$2.00	Kraft Bros. Cheese Co., Plymouth.

COUNTY PRIZES—Continued.

	County	Prize	Amount	Donated by
(73)	Door	First	\$3.00	C. A. Strauble Co., Green Bay.
(74)	Door	Second	\$2.00	C. A. Strauble Co., Green Bay.
(75)	Door	Third	\$1.00	C. A. Strauble Co., Green Bay.
(76)	Dodge	First	\$5.00	Jos. Dusek Co., Chicago.
(77)	Dodge	Second	\$2.50	Jos. Dusek Co., Chicago.
(78)	Dodge	Third	\$1.00	Jos. Dusek Co., Chicago.
(79)	Dunn	First	\$5.00	Jos. Dusek Co., Chicago.
(80)	Dunn	Second	\$2.50	Jos. Dusek Co., Chicago.
(81)	Dunn	Third	\$1.00	Jos. Dusek Co., Chicago.
(82)	Grant	First	\$2.50	Kraft Bros. Cheese Co., Plymouth.
	Grant	First	\$2.50	H. J. Noyes & Son, Muscoda.
(83)	Grant	Second	\$1.50	Kraft Bros. Cheese Co., Plymouth.
	Grant	Second	\$1.50	H. J. Noyes & Son, Muscoda.
(84)	Grant	Third	\$1.00	H. J. Noyes & Son, Muscoda.
	Grant	Third	\$1.00	Kraft Bros. Cheese Co., Plymouth.
For Iowa County \$30 have been received as follows: \$10 from the Iowa County Holstein-Friesian Breeder's Association, H. R. Noble, Secretary, Dodgeville; \$10 from A. H. Barber Cheese Co., Chicago; \$5 from Kraft Bros. Cheese Co., Plymouth, and \$5 from Plymouth Cheese Co., Plymouth. This sum of \$30 will be awarded in five prizes:				
(85)	Iowa	First	\$10.00	From five parties listed above.
(86)	Iowa	Second	\$8.00	From five parties listed above.
(87)	Iowa	Third	\$6.00	From five parties listed above.
(88)	Iowa	Fourth	\$4.00	From five parties listed above.
(89)	Iowa	Fifth	\$2.00	From five parties listed above.
(90)	Kewaunee	First	\$3.00	C. A. Strauble Cheese Co., Green Bay.
(91)	Kewaunee	Second	\$2.00	C. A. Strauble Cheese Co., Green Bay.
(92)	Kewaunee	Third	\$1.00	C. A. Strauble Cheese Co., Green Bay.
(93)	Langlade	First	\$3.00	C. A. Strauble Cheese Co., Green Bay.
(94)	Langlade	Second	\$2.00	C. A. Strauble Cheese Co., Green Bay.
(95)	Langlade	Third	\$1.00	C. A. Strauble Cheese Co., Green Bay.
(95A)	Manitowoc	First	\$3.00	First National Bank, Brillion.
	Manitowoc	First	\$3.00	Manitowoc Savings Bank.
(95B)	Manitowoc	Second	\$2.00	First National Bank, Brillion.
	Manitowoc	Second	\$2.00	Manitowoc Savings Bank.
(96)	Marathon	First	\$3.00	Kraft Bros. Cheese Co., Plymouth.
(97)	Marathon	Second	\$2.00	Kraft Bros. Cheese Co., Plymouth.
(98)	Marinette	First	\$3.00	C. A. Strauble Cheese Co., Green Bay.
(99)	Marinette	Second	\$2.00	C. A. Strauble Cheese Co., Green Bay.
(100)	Marinette	Third	\$1.00	C. A. Strauble Cheese Co., Green Bay.
(101)	Outagamie	First	\$3.00	S. D. and J. D. Cannon, Neenah.
(102)	Outagamie	Second	\$2.00	S. D. and J. D. Cannon, Neenah.
(103)	Oconto	First	\$3.00	C. A. Strauble Cheese Co., Green Bay.
(104)	Oconto	Second	\$2.00	C. A. Strauble Cheese Co., Green Bay.
(105)	Oconto	Third	\$1.00	C. A. Strauble Cheese Co., Green Bay.
(106)	Pierce	First	\$5.00	Jos. Dusek Co., Chicago.
(107)	Pierce	Second	\$2.50	Jos. Dusek Co., Chicago.
(108)	Pierce	Third	\$1.00	Jos. Dusek Co., Chicago.
(109)	Portage	First	\$3.00	Kraft Bros. Cheese Co., Plymouth.
(110)	Portage	Second	\$2.00	Kraft Bros. Cheese Co., Plymouth.
(111)	Shawano	First	\$3.00	C. A. Strauble Cheese Co., Green Bay.
(112)	Shawano	Second	\$2.00	C. A. Strauble Cheese Co., Green Bay.
(113)	Shawano	Third	\$1.00	C. A. Strauble Cheese Co., Green Bay.
(114)	Sheboygan	First	\$3.00	Plymouth Cheese Co., Plymouth.
(115)	Sheboygan	Second	\$2.00	Plymouth Cheese Co., Plymouth.
(116)	Taylor	First	\$3.00	Kraft Bros. Cheese Co., Plymouth.
(117)	Taylor	Second	\$2.00	Kraft Bros. Cheese Co., Plymouth.
(118)	Waupaca	First	\$3.00	C. A. Strauble Cheese Co., Green Bay.
	Waupaca	First	\$2.00	S. D. and J. D. Cannon, Neenah.
(119)	Waupaca	Second	\$2.00	C. A. Strauble Cheese Co., Green Bay.

	Waupaca	Second	\$2.00	S. D. and J. D. Cannon, Neenah.
(120)	Waupaca	Third	\$1.00	C. A. Strauble Cheese Co., Green Bay.
	Waupaca	Third	\$1.00	S. D. and J. D. Cannon, Neenah.
(121)	Winnebago	First	\$3.00	S. D. and J. D. Cannon, Neenah.
(122)	Winnebago	Second	\$2.00	S. D. and J. D. Cannon, Neenah.
(123)	Wood	First	\$3.00	Kraft Bros. Cheese Co., Plymouth.
(124)	Wood	Second	\$2.00	Kraft Bros. Cheese Co., Plymouth.

COUNTY PRIZES OFFERED BY THE ASSOCIATION

For the Highest Scoring Cheese from the Counties Named.

	County.	Prize.	Amount.	Conditions.
(125)	Barron	First	\$2.50	If 5 or more entries from county.
(126)	Barron	Second	\$2.50	If 10 or more entries from county.
(127)	Buffalo	First	\$2.50	If 5 or more entries from county.
(128)	Buffalo	Second	\$2.50	If 10 or more entries from county.
(129)	Chippewa	First	\$2.50	If 5 or more entries from county.
(130)	Chippewa	Second	\$2.50	If 10 or more entries from county.
(131)	Columbia	First	\$2.50	If 5 or more entries from county.
(132)	Columbia	Second	\$2.50	If 10 or more entries from county.
(133)	Crawford	First	\$2.50	If 5 or more entries from county.
(134)	Crawford	Second	\$2.50	If 10 or more entries from county.
(135)	Dane	First	\$2.50	If 5 or more entries from county.
(136)	Dane	Second	\$2.50	If 10 or more entries from county.
(137)	Fond du Lac	First	\$2.50	If 5 or more entries from county.
(138)	Fond du Lac	Second	\$2.50	If 10 or more entries from county.
(139)	Green	First	\$2.50	If 5 or more entries from county.
(140)	Green	Second	\$2.50	If 10 or more entries from county.
(141)	Jackson	First	\$2.50	If 5 or more entries from county.
(142)	Jackson	Second	\$2.50	If 10 or more entries from county.
(143)	Jefferson	First	\$2.50	If 5 or more entries from county.
(144)	Jefferson	Second	\$2.50	If 10 or more entries from county.
(145)	Lafayette	First	\$2.50	If 5 or more entries from county.
(146)	Lafayette	Second	\$2.50	If 10 or more entries from county.
(147)	Lincoln	First	\$2.50	If 5 or more entries from county.
(148)	Lincoln	Second	\$2.50	If 10 or more entries from county.
(149)	Ozaukee	First	\$2.50	If 5 or more entries from county.
(150)	Ozaukee	Second	\$2.50	If 10 or more entries from county.
(151)	Polk	First	\$2.50	If 5 or more entries from county.
(152)	Polk	Second	\$2.50	If 10 or more entries from county.
(153)	Richland	First	\$2.50	If 5 or more entries from county.
(154)	Richland	Second	\$2.50	If 10 or more entries from county.
(155)	Rock	First	\$2.50	If 5 or more entries from county.
(156)	Rock	Second	\$2.50	If 10 or more entries from county.
(157)	St. Croix	First	\$2.50	If 5 or more entries from county.
(158)	St. Croix	Second	\$2.50	If 10 or more entries from county.
(159)	Sauk	First	\$2.50	If 5 or more entries from county.
(160)	Sauk	Second	\$2.50	If 10 or more entries from county.
(161)	Shawano	First	\$2.50	If 5 or more entries from county.
(162)	Shawano	Second	\$2.50	If 10 or more entries from county.
(163)	Vernon	First	\$2.50	If 5 or more entries from county.
(164)	Vernon	Second	\$2.50	If 10 or more entries from county.
(165)	Washington	First	\$2.50	If 5 or more entries from county.
(166)	Washington	Second	\$2.50	If 10 or more entries from county.
(167)	Waukesha	First	\$2.50	If 5 or more entries from county.
(168)	Waukesha	Second	\$2.50	If 10 or more entries from county.

In any other counties, for which no prizes are offered above, the Association will award similar first and second prizes of \$2.50 each, providing five or ten exhibits are sent from the county to the Convention, and so stated on the entry blank.

	County	Prize	Amount	Donated by
(169)	Kiel P. O.	First	\$6.00	From State Bank of Kiel.
(170)	Kiel P. O.	Second	\$4.00	From State Bank of Kiel.
(171)	Manitowoc P. O.	First	\$6.50	From Schuette Bros.
(171)	Manitowoc P. O.	First	\$6.50	From Wernecke-Schmitz Co.
(172)	Manitowoc P. O.	Second	\$5.00	From Schuette Bros.
(172)	Manitowoc P. O.	Second	\$5.00	From Wernecke-Schmitz Co.
(173)	Manitowoc P. O.	Third	\$3.50	From Schuette Bros.
(173)	Manitowoc P. O.	Third	\$3.50	From Wernecke-Schmitz Co.
(174)	Manitowoc P. O.	Fourth	\$5.00	From M. Hasenfuss.

For Highest Scores Not Winning any Other Prize.

- (180) 1 Thousand Bandages from Culver Mfg. Co., Winchester, Ind.
- (181) 1 Thousand Circles from Culver Mfg. Co., Winchester, Ind.
- (182) 100 Press Cloth Circles from Culver Mfg. Co., Winchester, Ind.
- (183) 1 Dozen Knit Wrist Canvas Gloves from Culver Mfg. Co., Ind.

1920 EXHIBITORS, SCORES, AWARDS AND PAYMENTS

American Cheese, Class 1.

	Awards	Scores	Check
Theo N. Fortney, Unity, Wis.....		93	\$ 4.30
Leo Nett, Spring Green.....		93.5	5.80
G. F. Ridderbush, Unity, Wis.....		91	3.80
Dell Hunt, Sauk City.....		87.5	3.00
Silvan G. Schweiss, Plain.....		96	5.80
A. H. Lindow, Medford, R. 5.....		89	2.40
Albert Drone, Muscoda.....		92	5.50
Edward Keller, Hilbert, R. 2.....		90	4.40
Jacob Heinrich, Seymour.....		85	3.70
J. A. Hernke, Hilbert.....		92.25	4.30
Reuben Abraham, Oshkosh, R. 3.....		92	4.90
Wm. A. Deering, Seymour.....		94.75	5.00
Henry Beck, Spring Green.....		94.75	6.30
Wm. S. Walsh, Platteville.....	95	93	15.30
A. W. Hahn, Plymouth.....		95	6.70
Jule Bouleanger, Casco.....	46, 97	96	16.20
P. C. Battes, Bear Creek.....		92.5	4.10
Chas. Bleser, Manitowoc.....		95.25	5.80
J. H. Howe, Antigo.....	102	93.25	6.70
C. H. Schneider, Heiler... 1, 4A, 9, 15, 16, 18, 20, 23, 36		99.50	60.00
Clarence A. Norlander, Star Prairie.....		94.50	8.35
M. E. Meisner, Clintonville.....	124	97	10.94
P. W. Knudson, Barneveld.....	Tie 96	95.50	16.54
Aug. Zimmerman, Waterloo.....		93	6.27
Elmer G. Everson, Dodgeville.....		91	8.24
P. H. Kasper, Bear Creek.....	3, 17, 122	98.75	61.75
Art E. Henschel, Marion.....	49, tie 79, 1/3 of 123	97.50	20.88
John Greiner, Kaukauna, R. 3.....	14, 58	97.75	17.65
R. J. Vogt, Fremont, R. 2.....		94.75	9.92
John Fischer, Boaz.....		95.50	10.34
A. T. Wachsmuth, Catawba, R. 1.....		80.25	6.44
Rich M. Schmitz, Unity, R. 1.....		92	6.76
Mathias Holzmann, Unity, R. 1.....		95.50	8.16
John Dormer, Yuba.....		95.50	10.93
C. M. Engebretson, South Wayne.....		95	8.55
John D. Behm, West Bloomfield.....	74	95.50	22.25
Ernst Boll, Sheboygan, R. 2.....		97	18.61
Ed J. Scray, De Pere, R. 2.....		92.50	7.37
J. F. Bachmann, Fremont.....		92.50	7.55
W. H. Thurk, Sugar Bush.....	2, 10, 12, 55, 107	99.25	28.40
Jesse L. Johnson, Bear Creek.....		93.50	4.80
Alvin F. Jindra, Two Rivers, R. 3.....		94.50	6.50
Geo. J. Buchen, Luxemburg.....	99	93.50	6.10
Otto Voeks, Sister Bay.....	85	95.25	3.80
Herman Kalkofen, Greenwood.....	tie on 51	95	7.70
Oscar Olson, Tavera.....		93.5	4.20
Hy Schuelke, Manawa.....	1/3 of 123	97.50	9.03
H. J. Kuschel, Pound.....	105	94.5	10.20
Raymond G. Stocker, Omro.....	125	96	16.50
Otto Kielsmeier, Manitowoc.....	Complimentary	96	6.60
Emil B. Schultz, Clintonville.....		95.50	5.90
H. A. Rindt, Clintonville.....			
.....Tie for 35C, 60, tie 79, 1/3 of 123		97.50	19.23

	Awards	Scores	Check	
Louis Schultz, Antigo, R. 4.....	40,	100	96	13.80
Hans Puellman, Manitowoc.....			95.25	6.40
Otto Glawe, Antigo.....	Complimentary		95.25	5.70
Geo. A. Wegner, Van Dyne, R. 1.....	22		79.50	8.00
Aug. H. Kautz, Clintonville.....	68		96.25	9.50
Alvin F. H. Bartelt, Kewaskum.....			85	5.60
Wm. Hintz, Polar.....	41,	101	95.25	10.50
Frank Van den Heruvel, Seymour.....			95.25	4.60
John G. Fischer, Stratford.....			95	5.10
A. C. Werth, Appleton.....			96.50	6.00
Louis C. Wagner, Oconto Falls.....	110		94.75	9.00
Wm. F. Bennin, Luxemburg.....	Tie on 98		94	8.60
O. B. Schwantes, Clintonville.....	(tie) 47,	48	95.50	8.80
Emil Sonnenburg, Cato.....	Tie for 52, 64,	75A	97	12.00
A. G. Tuma, Beaver.....	106		94.25	7.10
Arthur A. Bastian, Brillion.....			94	5.30
E. H. Kielsmeier, Columbus.....			93.50	5.50
Ella Hendrix, Askeaton.....	Tie on 81		95	8.40
Theo. J. Dickrell, New Holstein.....			93.75	5.90
John N. Dickrell, New Holstein.....			94	5.70
Walter L. Koepke, Larsen, R. 3.....			96.25	6.20
Albert Albert, Thorp.....			81.50	4.30
Bert McKinney, Gratiot.....			95.50	6.30
Walter H. Miller, Merrill, R. 6.....			94.50	5.90
Otto Schwartz, Walsh.....	104		95.75	7.30
Wm. C. Dahl, Medford, R. 2.....	121,	132	91.75	14.70
P. E. Ott, Wausau.....			90	4.40
George J. Feit, Cato, R. 2.....	70		96	8.00
Wm. J. Frank, Manitowoc.....	66		96.75	9.70
Albert Koopman, Jr., Grafton.....			92.25	5.60
Frank J. Pivonka, Peshigo.....			89	3.30
L. J. Breher, Sheboygan Falls.....			94.50	6.50
Wm. P. Grimes, Neenah.....			94.25	6.40
Wm. Buckley, Greenleaf, R. 1.....			84.50	0.00
Wm. J. Hoffman, Ringle.....			90.25	3.50
Ralph W. Leeseburg, Suring.....	109		95.25	11.50
Math. Meyer, Stanley.....	62,	tie 127	97.25	13.17
Louis J. Blahnik, Kewaunee, R. 2.....	Tie on 98		94.00	7.00
Earl Stetler, Muscoda.....			93.75	5.90
Otto H. Yordi, Bear Creek.....			95	5.70
John Tischauser, Tilleda.....	118		93.75	6.30
Albt. Gruenstern, Tigerton, R. 3.....	Complimentary		95.50	6.00
W. A. Zeitlow, Marion.....	4		96.75	5.50
Fred Stapel, Clintonville, R. 1.....	65		97	9.50
P. H. Mickle, Twin Bluffs.....	116		96.25	25.34
Chas. A. Flemming, 255 27th St., Milwaukee.....			93.50	17.80
Chas. Mullen, Lone Rock.....	39		95.25	11.94
Geo. M. Wright, Loganville.....	37		96.75	14.25
P. H. Kasper, Bear Creek.....	Complimentary		99.38	10.41
Robert Druckrey, Gillett.....	111		93	6.60
Alb. Gruenstern, Tigerton, R. 3.....	117		95.50	9.30
John F. Jeske, Antigo, R. 1.....			92	4.50
Edw. Gruenstern, Marion.....	63		97	10.50
Frank B. Hinz, Rice Lake.....			96	5.80
Thos. Jahimiak, Sobieski.....			90	3.70
Ernest A. Cobb, Sun Prairie.....	38,	115	96.25	13.60
M. Christopherson, New Franken.....			90	3.10
J. F. Wederwart, Seymour.....			94	5.70
Bert McKenney, Gratiot.....			96	6.80
J. J. Voith, Junction City.....	115		93	9.30

American Cheese, Class 2.

	Awards	Scores	Check
A. G. Schwanke, Brillion.....		95.50	8.29
Wm. J. Frank, Manitowoc, R. 4.....		95.50	7.37
W. H. Thurk, Sugar Bush.....	61	97.25	11.37
Erwin O. Wunsch, Cleveland.....		95	5.86
Otto Kielsmeier, Manitowoc.....		92.25	6.07
A. W. Hahn, Plymouth.....	7, 13, 35B, 57	98	37.67
H. J. Possley, Reeseville.....		71	11.84
Rich Gotter, Greenwood.....	50	95.5	10.67
W. A. Scott, Waldo.....	8	94.5	0.00
Oscar Stock, Manitowoc.....		92.75	14.26
John H. Peters, Plymouth.....	67	96.50	10.07
Thos. S. Martin, Navarino, R. 1.....	119	91	6.49
E. H. Junker, Brillion.....	72	95.75	9.39
L. J. Breher, Sheboygan Falls.....	6, 8A, 35A, 56, 120	98.50	58.87
Alex Witt, Loyal.....	Tie for 51	95	9.47
Mrs. O. E. Dix, Auburndale.....		93.50	6.57
O. E. Heller, Chilton.....	Tie 47, Tie 48, 73, \$2.50	95.50	12.98
R. H. Gruenke, Auburndale.....	126, tie 127, 131	97.25	21.18
O. F. Gruenke, Grafton.....	Tie on 128	97.13	4.50
C. F. Heckman, Cleveland.....	69, 76	96.25	17.67
Frank F. Oetlinger, Kewaskum.....		91.75	6.17
C. H. Schneider, Heller.....		95	7.17
Hans Puellman, Manitowoc.....		93	6.98
H. A. Kalk, Sheboygan Falls.....	77	97	18.58
Chas. J. Fokett, Reedsville.....		90.25	6.19
W. L. Sommer, Cleveland, R. 2.....		93.25	7.39
Albert Koopman, Jr., Grafton.....		95	7.47
A. G. Tuma, Beaver.....		92.50	5.55
Herman Kalkofen, Greenwood.....		92.50	6.47
A. F. Zelm, Plymouth.....		94.50	7.89
John Fuhrman, Brillion.....		95.25	8.19
Ernst Boll, Sheboygan, R. 2.....		97	8.58
Otto W. Sixel, Cleveland, R. 2.....	Tie for 52, 75B	97	21.08
Raymond Masanz, Edgar, R. 3.....		92.75	5.27
Otto Weyer, Manitowoc.....		94	7.38
Chas. Blaser, Alverno.....		93	5.67
L. Dyke, Waldo.....		94.75	6.99
Allen Fokett, Reedsville.....		92.50	6.09
Aug. C. Reis, Waldo.....		88.25	0.00
Edwin Jort, Cleveland.....		93.50	5.95
Joseph Wick, Alma.....		94.25	12.40
Alfred H. Lerche, Hilbert.....		86.50	1.08
Arthur A. Bastian, Brillion.....		93.50	5.87
A. C. Werth, Appleton.....	5, 11, 108	99	9.00
Alvin F. Jindra, Two Rivers, R. 3.....	71	95.75	14.62
John Weyer, Manitowoc.....		95.50	7.06
E. H. Junker, Brillion.....		94	6.46
Math Meyer, Stanley.....			
.....	21, tie for 35C, 59, 84, tie 128, 129	90	21.55
Alfred H. Lerche, Hilbert.....	Complimentary	76	3.38
Fred Benishek, Manitowoc.....		93	11.52
E. H. Fischer, Random Lake.....	54	95.25	9.27
Chas. A. Flemming, 255 27th St., Milwaukee.....		93.25	8.62
Fred T. Borchert, Kewaskum, R. 3.....		93.50	7.18
Ed J. Scray, De Pere.....		90.25	5.57
Arwin Kalk, Plymouth.....		93.50	5.34
Fred W. Nussbaumer, Waldo.....		90	2.09
Albert A. Liebetrau, Plymouth.....		94	7.38
A. C. F. Witt, Granton.....		95.75	7.77

J. H. Deicher, Glenbeulah.....	93.50	2.49
C. W. Cootway, Wrightstown.....	80	97
L. F. Roesler, Hortonville.....		97
B. L. Splitt, Wausau, R. 4.....	103, 130	94.50
G. C. Riedel, Hilbert.....	\$2.50	95.50
John Babler, Barton.....		92.50
E. G. Hodges, Marshalltown, Ia.....	Complimentary	96.13
John Jenni, Deerfield.....		93.50
E. H. Kielsmeier, Columbus.....	78, tie on 88	96
O. R. Schwantes, Clintonville.....		94.25
Otto C. Giese, Big Suamico.....	Tie on 81	95
Art Giese, Big Suamico.....	82	94.50
Eugene Buergi, Dodgeville, R. 2.....	Tie on 96	95.50
Walter Popp, Marinette.....		93.50
A. G. Schwanke, Brillion.....		94.00
Wm. A. Biedenbender, Hilbert.....		90

Class 3—Swiss Cheese.

	Awards	Scores	Check
Jacob Blaser, Mt. Horeb, R. 1.....	26A	94.50	\$ 11.52
John B. Wittwer, Black Earth.....		94	8.76
Adolph Wyssbrod, Arena.....		94.75	9.06
Fred Schaller, Mt. Horeb.....		94.50	10.42
Nick Engelbert, Mt. Horeb.....		93.75	10.12
Anton Bauz, South Wayne.....		96	59.08
Arnold Klossner, Monticello, R. 1.....		93	69.14
John Bussman, South Wayne.....		95	56.97
Jacob Aeschlimann, Woodford.....		95.25	62.20
Emil Baumgartner, Monroe.....		96	38.72
John Mubacher, Darlington, R. 1.....	24, \$5	98.75	81.97
Christ Koenig, Clarno.....		93	66.86
Arnold Zumbach, Monroe, R. 9.....		94.75	70.41
Marty-Gempeler Co., Monroe.....	Complimentary	93.50	54.72
Xaver B. Buholzer, Monroe.....		95.75	57.70
Christ Stettler, Juda.....	25	98.50	73.19
Fred Kratzer, Gratiot, R. 2.....		92.50	102.14
John Christen, Monroe.....	\$5	97.25	62.87
John Badertscher, Rice Lake, R. 3.....		95.25	75.88
Robt. Emmenegger, Gratiot.....		96.25	72.29
Joseph Lauber, Blanchardville.....		94.50	63.47
Ernest Feuz, Gratiot.....		93.50	89.86
Albert Schlappi, Browntown.....		94	65.69
Robt. Hermann, Dallas, Wis.....		97	62.33
Albert Oertig, Argyle.....	26	98	70.88

Class 4—Limburger.

	Awards	Scores	Check
August Martini, Monticello, R. 3.....		94.50	\$ 9.63
Fred Kehrli, Beloit, R. 27.....		93.50	8.88
Hans Soliva, Brooklyn.....		92	20.30
Fred Bahler, Darlington.....		93.25	6.06
Martin Kammer, Monticello.....	27	96	1.58
George Schickert, West Bend.....		93.50	3.70
Fred Wittwer, Blue Mounds.....		93.50	5.30
Rudy Lengacher, Monticello, R. 2.....	28	95	5.57
Edw. Wittwer & Bro., Monticello.....	Complimentary	93.50	0.00
Edw. Wittwer & Bro., Monticello.....	Complimentary	93.50	0.00

Class 5—Brick Cheese.

	Awards	Scores	Check
N. B. Henkels, Specht's Ferry, Ia.....		92	\$ 7.00
Hans F. Widmer, Rosendale.....		92.50	5.10
Fred Schaller, Mt. Horeb.....		93	6.20
Ernest Schwartz, Rosendale.....	45	95.75	8.40
Fred Mani, Mt. Horeb.....		90	5.90
Jacob Disler, Hartford, R. 3.....		94.50	5.80
Hans Kuepfer, Pardeeville.....		95	6.60
Fred Baertschi, Albany.....		95.50	8.00
Joe G. Heinecke, Allentown, R. 1.....		94.75	5.30
Emil Baumgartner, Monroe, R. 9.....		94	7.70
Wm. C. Nass, Ixonia, R. 1.....		94.25	7.90
Rudolph H. Schaller, Mt. Horeb.....		92	5.50
Oswald Schneider, Appleton, R. 1.....		96	7.10
Alfred Hirsig, Lomira.....	90	94.75	6.70
Adolph Wyssbrod, Arena, R. 2.....		94	7.50
Jacob Aeschlimann, Woodford.....		93.25	15.20
Jake Balsiger, Pardeeville.....	32, 34B, 43, \$5	96.50	23.30
Fred Buetschli, Cambria.....		94.25	5.10
Joe Schmidt, Beaver Dam, R. 1.....	89	95	8.80
Harry Weaver, Beaver Dam, R. 1.....		94	4.10
Fred Baertschy, Mayville.....		90.75	4.60
Jacob Tschau, Brandon, R. 1.....		94	4.40
Gottlieb Schubiger, Rosendale.....	33, 44	96.25	21.70
Gust E. Strassburg, Columbus.....	Tie for 34C	96	8.70
Henry Egli, Dalton.....		94.50	14.00
Robert Schaller, Riley.....		92.50	7.80
John Bremser, Watertown, R. 1.....		94.50	8.60
John Durtschi, Barneveld.....		94.25	7.00
David Gobeli, Bruce, R. 2.....		90	12.80
Arnold Klossner, Monticello, R. 1.....		90	16.20
Ernest Wuethrich, Bruce.....		95	15.70
Alfred Tschau, Oconomowoc.....		91.25	6.10
Walter Reber, Juda, R. 2.....	31	96.75	16.40
Carl F. Schmidt, Waupun.....		92.75	6.30
Abraham Blattner, Rubicon, R. 1.....		94	6.60
Emil L. Roll, Mayville.....		94.50	4.90
Ulrich Furrer, Hollandale.....		94	6.00
Fred Indermuehle, Brownsville.....		92.50	4.70
X. B. Buholzer, Monroe.....		95.5	6.30
Emil Schneider, Lomira.....		94.75	5.70
Wm. Lichtenberg, Beaver Dam, R. 4.....	34A, tie 88	96	9.30
Chas. Meyer, Alma.....		93.25	6.30
John J. Peirick, Beaver Dam.....		94.5	7.00
Aug. H. Raether, Watertown, R. 8.....		90.75	6.50
Hugo A. Lautenbach, Pardeeville.....	Tie for 34C, 53, \$6		11.80
Peter J. Hiesler, Theresa.....		95	2.10
E. W. Buntrock, Cambria.....		94	5.10
Anton Sutter, Sun Prairie.....		94	4.40
Max Prag, Randolph.....		94	4.40
Total			\$3,673.07

Additional Payments.

	Awards	Scores	Check
W. A. Scott, Waldo, prize.....			\$ 6.58
Otto Schwartz, prize.....			6.00
R. H. Gruenke, Auburndale, prize.....			3.00
W. H. Thurk, Sugar Bush, prize.....			5.00
Wm. Lichtenberg, Beaver Dam, prize.....			5.00
Emil Sonnenberg, Cato, prize.....			5.00
Refunds on fees charged by error.....			16.00
Refund C. O. Strauble Co., Green Bay.....			3.00
Refund Jos. Dusek & Co., Chicago.....			17.00
Refund Sheboygan Dairy Products Co.....			2.00
			<hr/>
Total refunds, etc.....			\$68.58

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