HOW TO MAKE THE BEST LIMBURGER CHEESE

Letter by Carl Frehner, South Wayne, Wis.

Mr. President: In making good Limburger cheese, it is best to receive the milk twice a day, clean and sweet.

The milk should be set at 96% with enough rennet extract so as to be ready to cut in 25 or 30 minutes. If the milk thickens quicker you will have dry, short, curdy cheese. When ready to cut, I use the curd knife and cut lengthwise and once across the vat and let the curd rest for about 10 minutes. Then I take the scoop and stir slowly for 10 minutes, afterwards heat the curd to 98°, while stirring with the rake. This stirring is continued for 30 minutes. By that time you can let the curd settle and 2/3 of the whey can be drawn off. The molds should be filled quickly and taken as soon as possible to the cellar. They are turned twice during the next 24 hours and are then cut in to the correct size and taken to the salting table. The cheese should be well salted once every 24 hours, for three days.

In making Limburger cheese, if you use too much salt or not enough, the cheese will not be first-class but will be bitter or strong in flavor. The cheese on the shelf should be tended as often as possible until they have a golden yellow color. If the cheese becomes too dry, it can be wetted with a little sweet whey. If the cheese is packed too young or too old it will lose some of its flavor. Limburger cheese making is not easy work. It takes years of practical experience, and all day work in the cellar.

BOVINE TUBERCULOSIS AND ITS RELATION TO THE CHEESE INDUSTRY

By C. P. Norgard, Commissioner of Agriculture

Mr. President: I want to say that I am responsible for the state fair and I want to say that everything said here about delay in last years payments is absolutely just from the standpoint of the cheese maker and I want to say that I have been so angry about the matter that I have felt like thrashing the state fair department in our office. It is unwarranted this delay in getting this money and is against my orders. The only excuse that we can offer for that is that the government came along and took over the fair and was going to use it for a school in connection with the war and they took it out of our hands until after the war was closed, and at the same
time our assistant secretary, who has charge of the books, was in the draft and we got in a new man and this new man has not been able to handle the books as there is such a tremendous amount of detail work. But there is absolutely no excuse why the money should not have been paid long ago and you are perfectly just in censuring everyone in charge of the fair for not getting paid. I can only say that I am going to see that that cheese money is paid immediately. There is no reason in the world why that money should not be paid on the day the cheese leaves the fair.

The subject which I am supposed to speak on was presented by Dr. Eliason yesterday, so I hardly need to speak but I felt I ought to be here to represent the state department of agriculture, not so much for what we have done for your business but so that you realize that the state of Wisconsin stands behind the cheese makers and the cheese industry of Wisconsin. I personally feel that I would like to have you feel that the department of agriculture is behind you in every way and I would like to have you feel that it is our pleasure to have you call on us for whatever we can do for you. And it is because of my desire to express to you that feeling towards you that I hurried away from Washington to get here. I wanted to be here at the time that I was supposed to speak on the program but I had a very important matter to take care of at Washington for which reason it was absolutely necessary that I be there.

I might say that we completed a piece of work at Baltimore, where the convention of National Association of Commissioners of Agriculture had their annual session. Four years ago, when it was organized, I took up the proposition of getting the fields of work so arranged that they would harmonize, so that they would not overlap, and we were able by the cooperation of the departments of agriculture to establish such a field of work in Wisconsin. I wanted to have that field of work established nationally so that if Dean Russell and I as heads of the two departments should leave that the work might go on just the same; that there be no overlapping. In other states there is such overlapping which is not wise. By the work we have done the last four years we have established the work of the departments of agriculture on the same plan as Wisconsin has established. The experiment station has the experimental work, the college of agriculture does extension and educational work and the department of agriculture does the administrative work.

The regulatory work, aside from what has been done by the dairy and food commission, has been done quite largely throughout the United States as a coordinate part of the work of the experiment station. Now, the primary work of the experiment station is experimental work and educational work. Therefore, this other type of work has been rather poorly done in many of the stations. Now, by taking away from the college and experimental station, this work, where it is subordinate, and putting it in the departments of agriculture, whose primary duty it is to carry on these lines of work,
you obtain a primary piece of work instead of secondary work. In the department of Wisconsin the agricultural statistics work, the state fair, the immigration work, the control of the live stock diseases and the control of plant diseases, the seed inspection work, the feed and fertilizer work, etc. and in some states the dairy and food work are also carried on in this department.

Now, I want to say for the benefit of those who were not here before when the matter of the payment of premiums and the money for the cheese at the state fair exhibit was under discussion, and a resolution was brought up censuring the state fair authorities for not making this payment. I want to say that the state fair authorities are worthy of censure for the delay in paying for this cheese. Mr. Marty has no blame in this matter whatever. I called up our state fair secretary, asking why it was not paid. The reason why it has not been paid is that the assistant secretary of the state fair was drafted and the new man did not understand the work and this has caused the delay.

Now, I want to express to you gentlemen also an appreciation of the way the most of you have taken hold of the pasteurization of the by-products in your cheese factories. I know that all of you have not been able to do so by a good deal but I want to congratulate you on the attitude you have taken toward it because you have not gotten angry because this extra work was put on you. I realize that it meant more work for the cheese maker, a thing that we do not wish to do, but the situation in regard to tuberculosis in the state of Wisconsin, as you heard yesterday, no doubt, has become so serious that it is threatening the sale of live stock out of Wisconsin. We have a glaring and threatening example of danger of that kind in another state where the danger has gone farther along and has affected the state more than Wisconsin and that is the state of New York. And every state in the union knows that New York has a tremendous amount of tuberculosis. Probably the statements made regarding New York are worse than the situation. They are always magnifying any situation of that kind, and for that reason, the danger is so much more. And that is the reason why we have been very anxious indeed in regard to the situation and the reputation that is going out of the state of Wisconsin.

Tuberculosis has been spreading. The northern part of the state has 2 to 6% of tuberculosis and the southern from 6% to 10%. There are some counties in this state where the buyers are not going to buy cattle very much. Why? Because they know those counties have too much tuberculosis and they are keeping away from it. We don't want that situation to continue in those counties. Those counties are improving and I want to say one county in particular in which the cheese makers gave me a meeting last summer that was the hottest proposition I ever tackled, over in Green County. I did not blame those cheese makers. They later discovered a way in which to pasteurize their whey in about fifteen minutes and felt
better about it. There is an opportunity to evade, to get out of pasteurizing, by having the cattle tested for tuberculosis. Now, a good many of the people in Green County are taking advantage of the opportunity and there has been more testing for tuberculosis in Green County the past four months, I believe than has been done in any county of its size in the world. They are cleaning up and that county, which was one of the bad counties, will soon be cleaned up and have a good reputation. We want to be very careful that we do not arouse people to the fact that Wisconsin has lots of tuberculosis and you do not want to think we are sitting still and doing nothing. We have begun an aggressive activity to eradicate this evil too late. But because it is pretty late, I am exceedingly anxious that we shall put forth such an aggressive program to clean up tuberculosis in Wisconsin, so that people of the United States will not think of the tuberculosis we have but of the program to clean it up. That is why we have studied this very carefully, and when we found that 23% to 24% of hogs coming from Wisconsin had tuberculosis, and when we found the packers were looking that matter up, and we found that they were saying that unless we took means to clean up tuberculosis they were going to cut down the rate paid for hogs coming from Wisconsin and discriminate against the same, then we got a hurry on us and found out where the hogs got it, and one of the main sources of infection was the milk that was fed to the hogs, the skim milk.

The United States Department of Agriculture wanted to experiment for two reasons on feeding hogs tubercular milk. One was to compare the effect the tubercular germ acting on the intestinal tract of the young pigs with the effect of the tubercular germ that babies get into their intestinal tracts that were fed tubercular milk. It has been proven that tubercular germs came from the milk by these government tests. Not only are the pigs infected but the calves are also infected by the whey milk they drink.

I was glad to be able to report at the meetings in Washington and Baltimore, where the question of tuberculosis came up, that the state of Wisconsin is carrying on an active campaign on tuberculosis by pasteurizing in the cheese factories and creameries, by the accredited herd plan, by advertising those herds that were being tested all over the United States. That we, are not going back. We are going to continue to make progress and to keep clean, and with the other measures we are carrying forward in the aggressive campaign, there was not another state that came anywhere near it. That is the sort of reputation we must have to overcome the bad reputation that has been going out on account of tuberculosis among our cattle throughout the state.

As I said last year, in talking to you, I don't come to you as a creamery or cheese factory expert on how to do this thing. Wisconsin has first class experts in all cheese factory and creamery work. You have good men in the dairy and food department who are going about the cheese factories and distributing valuable in-
formation on how to do these things, and I know I have met you in various cheese factories and that many of you are working out very fine methods of doing this pasteurizing work.

Now we have a good many problems before us at this time after the war and one of them is this problem of pasteurizing. There were a good many complaints because it took too much coal to pasteurize the whey and buttermilk. Complaints because we could not get boilers and other facilities with which to do the pasteurizing, and there were certain situations where we had to say: "You can't get what is needed and therefore, we will have to let you wait a little." Now since the war is past, those things are behind us. We can get the boilers and necessary apparatus and while we are not going to be unreasonable, we are going to enforce the law. I might say that one of the reasons why that is so also, is the fact that one of the men we had working on that subject got the "flu" and he was laid up and could not go out at all. We have had no one to take charge of that work since.

I want to say that the problems of reconstruction after the war are just as big and important as the problems of the war. They are built on the basis of taking advantage of what we have gained in this war which was forced upon us. A war is a bad thing. Humanity ought never to have it, but after all, there are some things about a war that are good. We have gotten together in a whole united patriotic country. We have a feeling in our country we never had before. We have gotten methods of work and effort that we probably would not have gotten except during the war. We have found out what we can do as a nation and now we are right at the opening day of the problems of peace, and the great heroes of peace who solve the great problems, in a way are just as big as the heroes who gave their lives on the battlefield to save their country.

DISCUSSION

Mr. Moore: Does not the subject of tuberculosis apply to the human as well as to animals?

Commissioner Norgord: I want to say that the main and fundamental reason we are cleaning up tuberculosis among cattle is for the protection of human kind. Their protection financially, which is the second reason, and the protection of the human race, which is the first reason. It is not very long back you will find that Dr. Koch said that bovine tuberculosis was different from human tuberculosis, but he has taken it back and stated that bovine tuberculosis will cause human tuberculosis. Germany appointed a commission of ten to study this question and they found that it was possible to make a culture of bovine tubercular bacteria and also human tubercular bacteria and they could tell whether the culture was human or bovine type. They examined a tremendous number of cases of tuberculosis, post mortem, bodies after persons were dead, and they found that of persons under sixteen years of age, 25% of them had
the bovine type of bacteria. England followed that experiment in a similar way and obtained the same results. Dr. Park of New York reviewed their work and verified it and then he started extensive experiments and investigations in this country and he got the same results also. Throughout the world practically 25% of the deaths from tuberculosis have the bovine type of tuberculosis.

Mr. Marty: I would like to say a few words in regard to the point brought up by Mr. Moore and the possibility of transferring the germ from the calf to the human race. When this question came up in Green County, there were different meetings held. Some were long meetings, as Com. Norgord will perhaps recall, and even after that meeting, they were undecided and kept running to me about it. I finally told them my candid opinion of the law, and I said: "In order to do us all good, humans as well as the cattle, take the bull by the horns," and the result is as Com. Norgord has stated, they are testing the cattle down there. It is a good deal like the liquor question that Uncle Sam permitted the manufacturer where the root of the evil existed, to remain. Why not start in at the root if it is an evil? Why not test the cattle throughout the United States? As Com. Norgord says, they have sort of interlocked the different agricultural commissions throughout the United States. Why not make laws that are of importance in regard to tuberculosis national laws? I ask Com. Norgord to apply such rules in their annual convention to make any question of importance national.

I might add this. Some of the things that have been going on during this convention here. You have had the moisture test here. You are right on one point about the moisture test. I have had experience, traveling three years as a cheese salesman out of Chicago, selling 27 different kinds of cheese. That means that a whole lot of that cheese is imported cheese. An enormous amount of imported cheese is imported by this country. Go no further than Detroit, Michigan, or Cleveland, Ohio, and you bump into an absolute boycott against Wisconsin cheese. What did I find there? Everybody was underselling me on the American cheese. I could not get in. What did I find in all the Central Markets as they have them down East in any city of importance? It was Michigan cheese that was predominating there. Do you realize that we have in Wisconsin to-day a moisture law on American cheese? Personally, I am in favor of it. It is a standard and we must have it. The law is good and it will regulate us all. We are going to put it on some more lines of cheese in Wisconsin, but the point is this. Is it fair to the State of Wisconsin to put a limit on ourselves and have the limit off across the line, necessarily encouraging the dairy industry of that locality where we are holding ourselves down? We ought to encourage national legislation along these lines like our whey butter law and the 82 1/2 standard that we have in the State of Wisconsin. It is not fair. We are not making any progress at all. We are standing still. Here is the State of Wisconsin without laws on imported cheese. Is it possible with all the things said about the great State of Wis-
consin, nationally known as the greatest cheese state in the Union, that here we are with our hands tied, no prohibition against the foreign brands of cheese to be introduced? Other states are alert on this question and they are taking the initiative. We should make a strong resolution and send men to the legislature. I ask that this organization should absolutely go on record to provide standards and open the doors to the world for the different brands of foreign kinds of cheese, if you please, skim milk cheese as a great many of the foreign brands are made of, classify them, attach standards to them. Is there any right that Wisconsin should make that kind of cheese when we know it is going to be manufactured in the United States? I think it is up to the convention here that provision be made that a committee be delegated to present the same to the legislature and see that that law will be enacted. If we don't do it this winter, we will have to wait two more years. Delegate the secretary of our association, who is very well versed, and have him act either as a committee of one or with someone else, he is located in Madison, Wisconsin. I ask you to act upon it at the present time.

Mr. Chaplin: I agree with Mr. Marty on the foreign types of cheese, but it is a question that we should have acted on when we had many more present, because we have that feeling in the legislature, that fight for a skim cheese law, allowing them to make cheese in the shapes of American cheese. We don't want to get those two laws mixed up. We want them to be allowed to make skim milk cheese in the shapes of foreign types but the feeling all over the state is against anything where the word "skim" comes in.

Mr. Marty: There is a unanimous howl at the word "skim." It seems to chill everybody. I get it.

Mr. Chaplin: I feel that you are right, but what I mean is that the people of the state, among the farmers, you will hear that just as soon as the word "skim" is introduced. They don't understand foreign types of cheese and they drop right on it.

Chairman: Is there any provision made for the northwestern part of the state where they have no cheese factories?

Com. Norgord: Of course, the creameries are supposed to pasteurize their buttermilk in that case. The case of the skim milk coming from the hand separator, that is a thing we would like to get at, but it is impossible to do it by any practical way we can see just now. We have got to reach those people by cleaning up the cattle. I did not mention the area plan we were working on. The legislature provided $18,000 a year for the department of agriculture to use for cleaning up tuberculosis by area where a county or township makes provision for it and we are anxious to have that work done first in the northern part of the state. The matter of requiring every farmer to pasteurize his milk is something that we could hardly look on as a practical thing to accomplish, so we must get at that the other way.

I just want to say as to national legislation. One of the reasons that I got the Wisconsin plan made the national plan was to be able
to get national legislation because we had a big national organization and to get aid from the federal government on the regulatory and administrative problems in agriculture which we have not been able to get in the past. When I went to the secretary of agriculture on this proposition, he said, "This is what I have been looking for. If we could make appropriations for certain types of work to one agency in one state, there will be a lot of states that have not such agencies. Under the plan we are using now, we are cooperating with 26 different kinds of agencies and we must investigate whether the agencies are safe agencies to work with.

Mr. Marty: I move that the secretary act in conjunction with the legislative committee in every case of legislation.

Mr. Kalk: I think that at least $50 ought to be paid to the president and treasurer for their services for the last year and the coming year.

Chairman: Is that in the form of a motion?

Mr. Kalk: Yes.

Member: Second the motion.

By a unanimous vote the convention voted to grant the president and treasurer $50 each for their services each year. This to include the last year and the year to come.

RESOLUTIONS ADOPTED BY THE ASSOCIATION

Whereas: On November 22nd, 1918, death removed from this life Wisconsin's most distinguished citizen, William Demster Hoard, who did more than any other individual in the development and advancement of the great dairy industry of the State and Nation. It is therefore,

Resolved: That this Association express its deep appreciation of the valuable services he rendered the dairy world during his long life of usefulness and its sincere and profound regret of his passing.

Whereas: Since our last annual meeting death has taken from this Association in the person of Hon. S. A. Cook of Neenah, one of its most ardent supporters, financially and otherwise and in appreciation of his great service to the cheese industry in securing the passage by Congress of a law which gave "Filled Cheese" its knockout blow. Therefore, be it

Resolved: That we feel a deep sense of gratitude for his loyal service and never failing interest in the work of this Association, and sincere appreciation of his inspiring presence at our annual meetings.