

paper that is on the chair. We have no objection to distributing things but the paper is not signed and if the party who distributed it is present; we would just like to know who it came from. Whoever distributed it or who is responsible for it will you kindly hold up your hand and let me know who it is who printed this article. (No reply). Well, he got away. (Laughter).

“HOW TO MAKE FANCY CHEESE”

By MR. P. H. KASPER, of Bear Creek

Ladies and Gentlemen: If we want to make a fancy cheese we have to go right back to where Hiram Smith started in and follow up the same system. We have to improve on the system some but to look at it from the right standpoint we haven't done much in the last forty years. Years ago, most cheese factories were connected with a big farm. The individual cheese maker never had enough money to own a factory and they were generally owned by the farmers and they used their own milk. It was taken to the factory in the evening and strained in the cheese vat and if the cheese maker didn't have to help milk, he had to stay there with that milk and cool it. Our forefathers taught us what we did there, they always told us in the morning watch the weather. If the temperature goes down to about 50 degrees or 60 degrees start the fire a little earlier under the vat to warm that milk a little; to get it a little riper. There was no such thing as a starter in those days. In real hot weather we didn't start to warm it up until all the milk was in. We used a rennet test forty years ago. We used about a quart of milk, the rennet that we had wasn't of uniform strength. When the milk was all received, we always set the vat and it was cut fine. Most of the trouble of the factories is our curd isn't cut up at all. I have been in factories where there was big chunks; as big as your fist and the cheese maker didn't make any attempt to break them up whatever. If we don't make cheese out of that we will make whey cream out of it.

There was no such thing as to hurry the process. It didn't make any difference if the babies had to be christened—this probably had to wait until the cheese was set. It didn't make any difference if it was dark, and that is what is the most fault now. If we spend four hours more in the process of our cheese making, we could improve it 200% and raise the price 20%. Our cheese is too poor. People don't eat it—you can't force them to eat it—you can't blame them, that is all there is to it. If any of you are over at our factory, look around at the condenseries on three sides. At the same time we are getting good milk and the farmers know they can't offer bad milk to us. We had only one man this summer who did that. He came around this summer, and I told him we are not in the habit of accepting milk like that. Well, he says: if you don't want it, you know the condensing wagons go past my place and I says: If they want it they can have it.

When the first milk comes in the morning, we empty our starter in the weighing can. We take in all our milk, we don't warm it up until we get the milk well mixed up. Lots of cheese makers think they have got to warm up that milk in order to ripen it up. But milk will ripen just the same without warming it up. Nine times out of ten if you warm milk up early, the starter will go down to the bottom and you will have no use of the starter. You might as well get along without it. In ordinary weather, heat your milk up to 86, but in extreme hot weather you can heat your milk up to 82. Generally, you set the milk at 86 at 3 on the rennet test. Once in a while in the summer when the weather gets real hot and your milk is a good deal riper you want to set your milk at 3.2. How do you do that? Set it at a lower temperature. The trouble with high acid cheese is that you set that milk too warm and you can't cut it. Set that milk about at a temperature of 82 or 84 and you can cut it up fine and get a good cook on that curd and you will have as good cheese as you have any other day. You have got to figure on at least 2½ to 3 hours time in preparing the whey. You cut your curd with the knife about 2½ times and cut it fine. If you cut it very coarse you have got to have three hours. Start your curd with the agitator and heat it up slow. Generally at home we set it at 3, but the Marshall tests are not all alike. Use enough rennet. Most you cheese makers are too stingy—you use 2 to 3 ounces, but I say 4 ounces is not too much if you want to make good cheese. Use four ounces of rennet and your curd will be ready to cut in about 25 minutes. I use a knife with ¼ inch wires from center to center. The most of your knives you got cut about ¾ to ½ inch, but I believe in cutting up a curd fine no matter how sweet it is or ripe. You want to get a good cook on that curd. You must always remember that it is not the whey that is going to make a nice meaty-cheese. You have got to have your curd nice and dry. Cook up your curd to 100 or 102, if your test runs down less than 3, cook it a little higher 1 or 2 degrees. If it is real sweet 100 degrees is plenty. You have got 2½ hours time and 100 is plenty for normal working cheese. Fast working cheese you got to cook more. As soon as you got your curd cooked up, take out the agitator and wash them off and use the rake for stirring. You want to get your curd more to the rear end of the vat before you run off the whey. You can start using the whey separator as soon as the curd settles down after about an hour or an hour and a half and keep your whey running off gradually. After you get your whey off in the nick of time your curd wont need much stirring. The minute your curd gets more acid than it ought to have the curd will hold up the whey and the curd will stick to the whey. If you watch this process you won't need any hand stirring. Dip it in the nick of time. Let it go 15 minutes longer, and your curd gets whey soaked, and that is what makes that high acid cheese that we have so much of on the market today. When you get your whey off and cut your curd off generally, in the center and cut your curd into strips about 5 inches wide. I notice the most of you fellows cut them

about as big as a barn door. Don't cut any wider than 5 or 6 inches and tip them over. Lay them close together; if your curd is dry enough your whey will drain off. Let them lay about 15 minutes, if your curd hasn't got any too much acid. Afterwards double it up in two pieces. The first time you double it up don't let it lay too long, about 5 or 10 minutes, but keep on piling them. Don't pile them 5 or 6 deep, that won't do you no good. Two deep is plenty. Don't leave any space between for the whey to drain out. Keep piling until you get about $1\frac{1}{2}$ inches of acid and when you got about 1 inch (about two hours to two and one-half hours after dipping) put on your curd mill and cut it up. Keep the curd well stirred while you are cutting it up and keep on stirring that curd until it will pack, about 20 to 25 minutes. After that the curd don't take much stirring. Then keep on stirring your curd until you get a nice meaty curd. It takes some time $2\frac{1}{2}$ to 3 or 4 hours. Don't try to get out of that factory at one o'clock but take all day if necessary. If the cheese don't make a fancy cheese that way, don't blame me for it. I tell you boys you got to make up your mind for one thing—the old hose cart is a thing of the past and so is the coach and horses. If we want to get a good cheese maker we can't get a man for \$75.00 a month. Mr. Ubbelohde is right, we have got too many factories. We have got to have factories to employ all the boys. Years ago if a man got more than \$10.00 a month he did well and was satisfied. No man ever learned the trade unless he wanted to be just a good cheese maker. When you get your curd ripe and meaty rinse it with warm water. I used to use hot water years ago but I am going back all the time, I am always going back again to what I learned 40 years ago. Always rinse your curd with warm water, put on 3 or 4 pails of warm water. It is just like pouring 3 or 4 pails of water on gravel. If your dealers wants you to hold your cheese for a year, use a little more salt, but generally I use 2 pounds of salt. When your salt is well dissolved put your cheese in the hoops, but don't dump it in the press right away. I always let my curd stand on the hoops until I had the vat washed out and all the work done. Then put them into the press and put on the pressure slow. Generally after half an hour or so you can tip them up and turn the bandage over. I have a convenient pressure press—I never had one until the last month or so but I always used my old one, but now I am doing a great deal better work with this press. In the morning get the cheese out of the press put them on the shelves, and clean up your hoops and your hoops ought to be bandaged by the time the farmers come so that when your regular work comes you have nothing to do but just take care of your cheese. When you got the cheese in the curing room and after they are there $2\frac{1}{2}$ hours, turn the cheese in the curing room and turn the rest of your cheese and keep on doing this every day. We never used to turn the cheese the same day what we took out of the press but we started in last Fall and we turn the cheese two hours after we take them out of the press. You get a nice good square cheese. We want to make as nice a package

as we can. Appearance is like a good suit of clothes. Appearance has got to do with quality. That is all.

The President: Mr. Kasper stay on the platform for a few minutes. I want to say I think it is a pleasure and also a credit to the state of Wisconsin and this Association to have Mr. Kasper in our midst. I have been Mr. Kasper's competitor for many years, he is one of the best competitors I have ever had in the cheese business. If you have any questions to ask Mr. Kasper I think he will be glad to answer them. You can get the benefit of his past experience which should be of great help to you.

SHORT COURSE AT THE DAIRY SCHOOL

SECRETARY SAMMIS: Mr. Chairman, I believe that many of you; particularly those in the back of the room, wish you could have been closer and hear everything that Mr. Kasper said. Many of you would like to talk to him for half a day, but it would keep him busy a year if all of you took a turn at that.

Last year we had a course over at the Dairy school for experienced cheese makers—a four day course and Mr. Kasper came over and was there for the four days and the men who were there could talk with him every day and hear what he had to say all day long and they appreciated it very much. Now that is the best opportunity I know of to get right close to this prize winning business and learn how to make a real fine cheese. We are planning to do the same thing again this year during the first week in February at the Dairy School in Madison. There are no fees or expenses connected with the course, you simply come over there and stay for the four days or as long as you can and you will meet Mr. Kasper every day and he will show you how to make cheese and you will see the other work at the Dairy School and learn any particular thing you want to learn about starters or testing or anything else, but I take this opportunity of mentioning this fact to you that in the first week in February there will be a course for experienced cheese makers at Madison at the Dairy School. We have about 100 students now at the winter dairy course. At the close of that course beginning the first week in February on Tuesday morning, the special course for experienced cheese makers begins. If you want to come over there at that time we would be glad to have you write a card and let us know that you are coming so that preparations can be made for all who attend. As I said before, there is no expense connected with the course or school, you pay no fees. I feel that so long as Mr. Kasper is alive and active and still making cheese we ought to take every advantage of this and learn all we can from him while he is going good.