The special course for creamery and cheese factory operators and managers featuring the saving of food and fuel at our creameries and cheese factories and the use of milking machines on patrons' farms...

University of Wisconsin. College of Agriculture
Madison, Wisconsin: University of Wisconsin, 1918

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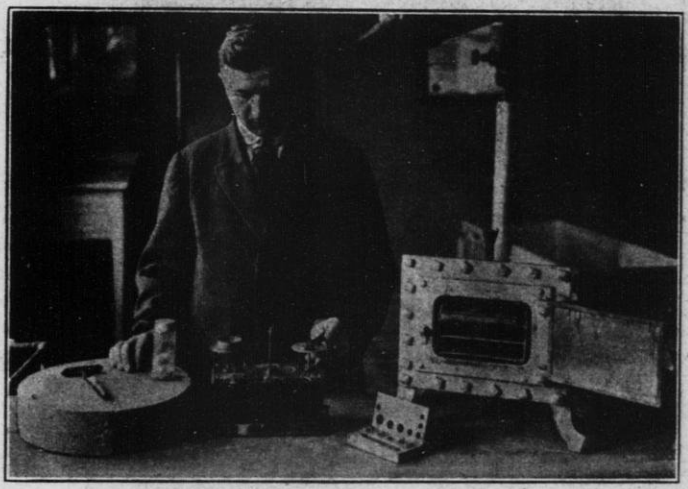
12-Bulletin S.

BULLETIN OF THE UNIVERSITY OF WISCONSIN
Serial No. 891; General Series No. 681

The Special Course For

CREAMERY AND CHEESE FACTORY OPERATORS AND MANAGERS

Featuring the Saving of Food and Fuel at our Creameries and Cheese Factories and the Use of Milking Machines on Patrons' Farms



MOISTURE TESTING WILL BE EMPHASIZED

February 4-8, 1918.

MADISON
Published by the University
January, 1918

Entered as second class matter June 10, 1898, at the Post Office at Madison, Wisconsin, under the Act of July 16, 1894. Issued monthly by the University of Wisconsin, Madison, Wis.

REQUESTS FOR WISCONSIN TRAINED MEN

During the year closing July 1, 1917, the Dairy Department of the University of Wisconsin has been asked to recommend men to fill the following positions:

Buttermakers	183	City milk plants	27
Helpers in creamery	24	City milk inspectors	6
Buttermakers and ice cream men	14	Condensed milk factories	35
Cheesemakers	176	Factories wanted to buy and for sale	23
Helpers in cheese factory	4	Dairy men	8
Combined butter and cheesemakers	16	Traveling men	3
Managers of factories	16	Oleomargarine factories	7
Ice cream makers	12	Instructors in other colleges	25
Cow Testing Association men	4		
Total	583		

The manufacturers of dairy products are realizing more than ever before the greater value of trained men over untrained men because they are beginning to understand the importance of the small leaks and losses from waste that trained men will notice but careless operators will allow to go to waste. Thus a saving of 25 cents per day on fuel, 10 cents on oil, 10 cents on salt, 5 cents on color and $1 on the waste of butter fat in the handling of milk at the cheese factories and cream at creameries may amount to $500 or $1,000 a year in a single factory.

SPECIAL DAIRY COURSE

SAVING FOOD AND FUEL

At no time in the history of dairying have the managers and operators of creameries and cheese factories had more vital questions to discuss than now.

The high prices of both butter and cheese make it necessary to give close attention to the quality of these products and to the profitable use of all the by-products made at these factories.

The moisture content of butter and of cheese is something that must be thoroughly understood both as to its influence on the yield and quality of butter and cheese and the effect of accurate methods of testing on the results obtained.

It is estimated that there are at least 3,000 creameries, cheese factories, milk plants, and ice cream factories in Wisconsin. If the operators, managers, and patrons of each one of these can be shown the saving through many small economies, the result will be a great increase in the total food and fuel supply of the country.

Some of the points to be discussed at this important conference of managers and experienced operators:

1. Reducing the losses of butter fat in buttermilk, skim milk, and whey.
2. Determining the actual yield obtained of the product manufactured.
3. Is the yield up to the legal standard?
4. Is a record kept of the actual weights of products sold in each shipment?
5. Are unnecessary overweights given in packages?
6. Is a record kept of the actual weights of products sold in each shipment?
7. Is there an opportunity for the saving of fuel by covering steam pipes?

8. What is the condition of the boiler as to scale?
9. Are there any leaks in steam pipes?
10. The accurate sampling of milk and cream.
11. Methods and equipment for estimating the moisture content of the butter and cheese made each day.
12. The importance of saving the rinsings.
13. The food value of milk, butter, cheese, cottage cheese and other dairy products.

CREAMERY BUTTER MAKING

Butter scoring 93 has sold recently for 5 cents more per pound than butter scoring 90. This is paying for quality, and is a deserved reward for the managers and operators who are capable of making the higher priced butter.

All our creameries ought to make the quality of butter which brings this higher price, and ways and means of doing it will be discussed and demonstrated during this three day course.

Our creamery is supplied each day with several loads of cream and milk from farms and stations within ten miles of the school. A number of churnings will be made to illustrate certain points in the manufacture of butter. The cream received will be graded, tested and pasteurized, by both the holder and the continuous processes. The school is well supplied with a variety of the pasteurizing machines now in common use in creameries throughout the country.

Cream ripening starters will be made and used in the pasteurized cream, which will be churned and the butter worked in various ways to illustrate the effect of certain treatments on the water content and the leaky texture of butter.

Butter makers are requested to bring one or more packages of butter from the home factory, where the process of making may have been varied, to illustrate some defect noticed at that particular factory.

Prevention of Mold in Butter. Moldy butter was the cause of considerable losses in Wisconsin butter last year. This trouble will, no doubt, arise again, but it may be easily

prevented when the simple method of steaming both the tubs and the liners is thoroughly understood and practiced.

The Value of Skim Milk. Farmers should realize that skim milk is worth seventy-five to eighty cents per hundred pounds for feeding stock at the present time instead of thirty cents per hundred, as has been estimated in years past.

The Control of Moisture in Butter and in Cheese. A factory cannot afford to be careless on this point, especially when the present high prices of these products prevail, as a uniform moisture content in both the butter and cheese each day will materially affect the gross amount manufactured at each factory.

CHEESE MAKING

Several important practical points have been developed in the cheese making experiments carried on at the Dairy School during the past few years.

During this special course, cheese will be made daily so that the experienced cheese maker can follow the process from beginning to end, and pass judgment on the applications of these new suggestions to his work.

Some of the points to be emphasized are the following:

1. Testing cheese for moisture; 2. discussions on the making of milk sugar and primost from whey, also the manufacture of Neuchatel cheese from both whole milk and skim milk; 3. the manufacture of Roman cheese; 4. paying for milk by its test at the cheese factories.

ICE CREAM MAKING

Both the continuous and the stationary types of ice cream freezers will be in use and a conference of ice cream makers held each morning. Among the points to be discussed will be the following:

1. A new method of determining the overrun; 2. influence of overrun on quality of ice cream; 3. milk solids other than butterfat for use in ice cream making; 4. a demonstration of the use of the emulser.

OUTLINE OF COURSE

Monday, February 4

8–10 Registration of Operators and Managers taking this course.

Dairy Building, Room 101

10–12 Conference in Dairy Building and Inspection of Equipment.

1. Creamery men.....Room 103
2. Cheese Factory men.....Room 102
3. Ice Cream men.....Dairy Building, Annex

2–4 Starter Making at Dairy Building.....Room 203

A number of "pure culture" starters will be discussed and propagated for inspection daily during the week.

7:30 Address. Illustrated.

DR. A. S. ALEXANDER. Auditorium, Agricultural Hall

Tuesday, February 5

8:00 Inspection of Starters made previous day.

Dairy Building, Room 203

9:00 Buttermaking in the Creamery from Sweet Cream.

.....A. C. DAHLBERG

10:00 Conference on the Value of Skimmilk and Whey to Patrons.

E. H. FARRINGTON.....Room 302

11:00 Keeping Up the Fertility of Our Land.

C. E. THORNE, Director Ohio Experiment Station.....Auditorium, Agricultural Hall

2–4 Manufacture of Casein and Soft Cheese from Skimmilk and Buttermilk.

J. L. SAMMIS.....Dairy Building, Room 102

7:30 Address

The Discovery and Use of the Babcock Test, in Moving Pictures.

By-Products of Butchering, with demonstration.

F. B. HADLEY, College of Agriculture, Auditorium, Agricultural Hall

Wednesday, February 6

8:00 Milk Testing at the Cheese Factory.
Cream Testing at the Creamery.
E. H. FARRINGTON.....Dairy Building, Room 302

10–11 Buttermaking in Creamery from Pasteurized Cream .....A C. DAHLBERG
Cheesemaking in Cheese Factory from Pasteurized Milk .....J. L. SAMMIS
Ice Cream Making in Factory from Pasteurized Cream .....D. F. MATTSON

11:00 What Wisconsin Farmers Can Do to Get the Most Milk from the Feed Available (with demonstration).
N. A. NEGLEY, U. S. Dept. Agriculture.....
.....Auditorium, Agricultural Hall

2–4 Butter and Cheese Scoring of Entries Received for the Month.
G. H. BENKENDORF.....Dairy Building Annex
Cheese Making and Ice Cream Making Continued from Morning Session.
Testing Cheese Samples for Moisture.
J. L. SAMMIS.....Room 102

7:30 Moving Pictures on Agriculture.
Address—J. B. Reynolds, President Manitoba Agricultural College, Auditorium, Agricultural Hall.

Thursday, February 7

8–10 Saving Fuel at the Creamery and Cheese Factory.
G. H. BENKENDORF.....Dairy Building Annex

10–12 Milking Machine Demonstration.
E. H. FARRINGTON.....Dairy Machine Shop

2–4 Buttermaking in Creamery.
Regulating Moisture Content of Butter.
A. C. DAHLBERG
Cheesemaking in Cheese Factory.
The Use and Tests of Pepsin.
J. L. SAMMIS
Ice Cream Making in Factory.
The Use of the Emulser.
D. F. MATTSON
.....Room 103

6:30 Banquet.....Stockmen and Farmers

Friday, February 8

8:00 Calculating Creamery Dividends and Cost of Manufacturing Butter.
G. H. BENKENDORF.....Dairy Building Annex

9:00 New Methods of Payment for Cheese Factory Milk.
J. L. SAMMIS.....Dairy Building Annex

10:00 Disposal of Creamery and Cheese Factory Drainage by the Septic Tank and Other Methods.
E. H. FARRINGTON.....Room 302

11:00 Butter Moisture Regulation at the Present Time.
G. H. BENKENDORF.....Room 302

2–4 Buttermaking in Creamery.
Leaky Butter; Prevention of Mold and Other Losses in Packing

A. C. DAHLBERG

Cheesemaking in Cheese Factory.
Branding Cheese and Soft Cheesemaking.

J. L. SAMMIS

Ice Cream Making in Factory.
Increasing Solids in Ice Cream Mix.

D. F. MATTSON

Milking Machine Demonstration.

Dairy Machine Shop

7:30 Recognition of Eminent Farmers.
Address

MRS. NELLIE KEDZIE JONES, Auburndale, Wis.