10-1924

Soft Cheeses that are Easily Made

E. F. Goss
Iowa State College

Follow this and additional works at: https://lib.dr.iastate.edu/iaes_circulars
Part of the Agriculture Commons, and the Dairy Science Commons

Recommended Citation
https://lib.dr.iastate.edu/iaes_circulars/151

This Report is brought to you for free and open access by the Extension and Experiment Station Publications at Iowa State University Digital Repository. It has been accepted for inclusion in Circular by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
Soft Cheeses that are Easily Made

Abstract
The high food value and palatability of properly made cheese are not fully appreciated by the people of the United States. That is indicated by their low per capita consumption of this fine dairy product. In 1922 the consumption of cheese per person in the United States was 3.7 lbs. while in some European countries it was four or five times that amount. Among the larger nations the United States is ninth in per capita cheese consumption.

Disciplines
Agriculture | Dairy Science

This report is available at Iowa State University Digital Repository: https://lib.dr.iastate.edu/iaes_circulars/151
SOFT CHEESES THAT ARE EASILY MADE

AGRICULTURAL EXPERIMENT STATION
IOWA STATE COLLEGE OF AGRICULTURE
AND MECHANIC ARTS

C. F. Curtiss, Director

DAIRY SECTION

AMES, IOWA
SOFT CHEESES THAT ARE EASILY MADE

By E. F. Goss

The high food value and palatability of properly made cheese are not fully appreciated by the people of the United States. That is indicated by their low per capita consumption of this fine dairy product. In 1922 the consumption of cheese per person in the United States was 3.7 lbs. while in some European countries it was four or five times that amount. Among the larger nations the United States is ninth in per capita cheese consumption.

Cheese is valuable as food because it carries a large amount of very high quality protein. Some proteins are less valuable to the human body than others but the protein in cheese is of the highest quality. Then, too, whole milk cheeses carry large amounts of milk fat which is an unexcelled source of heat. Associated with the milk fat is that vitamin, Fat Soluble A, which is so essential to growth and well being and which milk and its products supply in such abundance.

Cottage cheese has often been called "lean meat", due to the fact that one secures approximately the same food value from four ounces of cottage cheese as one does from the same amount of lean beef. In the case of the whole milk cheeses the food value is much greater on account of the large portion of milk fat present.

Among the many varieties of cheese, with their wide differences in kind and degree of flavor, almost anyone ought to find some types which would particularly appeal to him. Those who do not care for the flavor of any of the cured cheeses, should find the mild soft cheeses, such as the neufchatel, cream or cottage, very acceptable. These various soft cheeses are generally liked and may be easily made, both in the home and the factory, by the methods given in this circular.

NEUFCHATEL CHEESE

This is a very smooth, creamy type of cheese with a mild, sour milk flavor. Used plain or as pimento, olive or nut neufchatel, it is unexcelled for sandwiches or salads. It may be made easily. The equipment required is not at all extensive nor is the making process difficult.
For neufchatel, sweet whole milk, produced under very clean conditions, is cooled to 75°F. To each 10 gallons of milk add 1 pint of good starter or an equal amount of clean, smoothly clabbered milk. Dilute 2 ½ c. c. (½ teaspoonful) of liquid rennet extract in a half glass of cold water and stir well into the 10 gallons of milk. When using smaller amounts of milk, add 4 or 5 drops of rennet per gallon. Junket tablets may be used in place of the liquid rennet and one tablet will then be needed for each 3 gallons of milk. It is convenient to place the milk for curdling in pails or shot gun cans holding 20 to 30 lbs. each. These are placed where the temperature of the milk can be maintained at 75°F. for the next 16 to 18 hours. The temperature is very important, for if the milk cools during this period it will not become sufficiently soured to produce a smooth, creamy cheese. The pails may be placed in warm water or wrapped well with cloths. If there is danger that the temperature will fall below 70°F. during the setting period it is advisable to let the milk at 70°F. to 85°F. instead of the 75°F. first mentioned.

After 16 to 18 hours there should be at least ⅜ to ⅙ inch of clear whey over the curd and this whey should taste sour. Lack of either of the above characteristics indicates that insufficient acidity has developed and that the curd is not ready to dip. The curd may be either poured from the pails onto the muslin drain cloth or dipped with a large sharp-edged ladle. In either case great care should be taken that the curd does not break up, but remains in as large pieces as possible. Muslin cloths made from yard wide muslin cut about 5 feet long will hold the curd from 30 pounds of milk. A simple rack for such cloths is easily made. If desired the curd can be drained on muslin squares which are placed over a mixing bowl for receiving the curd. A 27 inch square of muslin will hold 10 pounds of curd and can be hung up to drain by means of short tapes at each corner.

During the draining process, if the position of the curd on the cloth is changed occasionally by raising and lowering the cloth, the whey will drain away more easily and quickly. When most of the free whey has drained away and the curd is about half its former volume, fold the muslin cloth over the curd to form a bag and put light continuous pressure on the cheese with a board or rack weighted down with pails of water. During the pressing process occasionally open the bags to work over the curd and mix, bringing the dry portions away from the edges to the center of the curd mass. When the curd is sufficiently dry, add salt at the rate of 1 ounce to each 4 pounds of cheese. Mix the curd only enough to distribute the salt, as too much working at this time causes it to become greasy. From 10 gallons of average Fig. 2—Neufchatel curd is drained on muslin cloths.
testing milk, one should obtain 13 to 14 pounds of finished cheese. The cheese is ready for use as soon as the salt is dissolved and although it may be kept for several days in a cool place, it is always at its best when perfectly fresh.

Neufchatel is the base used for the next three varieties of cheese.

PIMENTO CHEESE

The method used in making pimento neufchatel cheese differs from the method for making the plain neufchatel only in two particulars. First, cheese color is added just before the rennet at the rate of 5 c. c. or 1 teaspoon for each 10 gallons of milk or 7 to 10 drops for 1 gallon. Although this color is not necessary and may be omitted if desired, it does give a richer appearance to the finished cheese. Second, finely ground sweet pimento peppers are added at salting time at the rate of 1 ounce to each pound of curd. A pinch of cayenne pepper assists in bringing out the flavor. Aside from the addition of cheese color and pimentos, the process for pimento cheese is exactly the same as for the neufchatel described in the preceding paragraph. The setting temperature, amount of starter and rennet, and all following details are identical.

OLIVE NEUFCHATEL CHEESE

After removing the stones, grind green olives fine by running through a food chopper. Add the ground olives to the plain neufchatel curd at the same time as the salt at the rate of 1 ounce to each pound. Cream cheese curd described later may be used instead of neufchatel curd if a richer cheese is desired.

SANDWICH NUT CHEESE

Grind fine equal parts of English walnuts and almonds or any desired mixture of nuts and add to neufchatel cheese at the rate of 1 ounce to each pound. The skins are easily removed from almonds after steaming or immersing in hot water for a few minutes.

CREAM CHEESE

This cheese is similar to neufchatel except that it is smoother and richer on account of the higher percent of fat in the milk used. It is made in the following manner:

Milk containing 6 to 10 percent fat is brought
to a temperature of 85° F. Starter is added at the same rate as for 10 gallons of milk. Rennet is added at the rate of 7 or 8 drops for each gallon, the rennet being first diluted in an ounce of cold water. The method is now the same as for plain neufchatel except care must be taken that the curd is given plenty of time to drain and is cooled during drainage so it is not too warm when pressed, as fat is then easily lost. It is best to allow drainage to cover a period of several hours. When the curd is sufficiently dry, salt is added at the rate of one ounce to each 4 pounds. In mixing salt, do not stir curd any more than necessary as so much fat is present, it will quickly become greasy. Cream cheese may also be made by adding 1 or 2 pounds of rich cream containing 40% to 50% fat to each 10 pounds of plain neufchatel curd. As noted above this mixture should not be worked any more than necessary to mix the cream or distribute the salt.

**SKIM MILK NEUFCHATEL**

Many people prefer to make skim milk into this type of soft cheese rather than the cottage cheese described later. Skim milk neufchatel has a flavor similar to cottage cheese, but is much smoother and is particularly well suited for use in sandwiches and salads. The method is the same as that used for plain neufchatel, except in the following respects: fresh sweet skim milk is used instead of whole milk. Rennet is added at the rate of 1.3 c. c. per 10 gallons or 3 or 4 drops per gallon of skim milk. A curdling temperature of 75° F. and one pint of starter to 10 gallons of skim milk are as noted for plain neufchatel. Salt is also added at the same rate. It will be found that due to the absence of fat, skim milk neufchatel curd drains more readily and rapidly and it is much more likely to become too dry next to the cloth, while pressing, than plain neufchatel. The yield should be about the same or a trifle less than for plain whole milk neufchatel.
COTTAGE CHEESE

This cheese is one of the most easily and commonly made types of soft cheese. Care and attention to details, however, are requisite to secure a high quality and uniform product.

Perfectly fresh, sweet skim milk is necessary if the flavor of the finished cheese is to be right. The temperature at which the milk is allowed to curdle depends somewhat upon the time at which it is desired to cook the curd. At a temperature of 90° F. the milk will curdle quite rapidly while at a temperature of 70° F. a much longer time is required. A considerable quantity of starter or clean clabbered milk will of course also greatly hasten the curdling and give better control of the process. With good quality skim milk, very satisfactory results are usually secured at the higher temperature as the curd then forms quickly and it is possible to raise it to cooking temperature without so much agitation and the curd is less easily broken. In any event the curdling process should be adjusted so that it is possible to cook the curd quite soon after it forms and while it still possesses a very mild acidity.

As soon as a sufficiently firm curd has formed so that it will not break up into fine particles the mass is broken and stirred gently, slowly raising the temperature at the same time. The curd may be cut with American cheese curd knives or broken with a stirring rod or ladle. The curd should be broken as evenly as possible and not too finely. The whey should now separate rapidly. If this part of the process has been started before too much acidity has developed and the curd becomes too firm, it will seldom be necessary to heat to a temperature above 110° F. Often a temperature of 100° F. is sufficient to produce a well firmed cheese. As soon as the whey runs freely from between the curd particles and when a piece of the curd rubbed between the thumb and finger does not go back to the milky stage but feels slightly tough, then the cooking is complete. A little experience will soon enable one to judge the proper firmness with a fair degree of accuracy. The whole cooking period need seldom require over one-half to three-quarters of an hour.

The curd is drained on cheese cloth or other open texture fabric. The whey will quickly separate from the curd and pass thru such a cloth rapidly. As the last of the whey is draining away, it is well to dash a little cold water over the curd, which cools it, stops further cooking and produces a milder flavored cheese. Salt is now added at the rate of 1 ounce to 4 or 5 pounds of curd. A yield of 12 to 15 pounds per 100 pounds of skim milk can be expected when making a fairly dry cheese.

Raw milk, if produced under cleanly conditions and properly

Fig. 6—Salt and ground pimentos are carefully mixed with the curd.
cooked and cared for, will make good quality soft cheese. However, pasteurization is a great help in producing cheese which is uniform in quality and which will keep well and is to be strongly recommended where practicable. For pasteurization the milk should be heated to 145° F. and held at that temperature for 30 minutes, followed by rapid cooling.

**BUTTERMILK CHEESE**

When the buttermilk is from raw sour cream, a cheese somewhat resembling cottage cheese but with a buttermilk flavor may be made from it by simply heating to 135° F. to 140° F. Stir the buttermilk during heating only enough to insure a fairly even temperature as the curd is soft and easily becomes too finely divided. If 160° F. is reached, it will do no harm. After an hour at cooking temperature, the curd is drained on a muslin cloth. Allow to drain without too much agitation at first and do not allow to cool too rapidly. When sufficiently dry, the cheese is salted at the rate of one ounce to 4 or 5 pounds of curd. If some skim milk is available a mixture of half skim milk and half buttermilk will give more uniform results and a product more closely resembling cottage cheese than the buttermilk alone.

**CLUB CHEESE**

This type of cheese is made by mixing well ripened American cheese with butter. Care should be taken that the cheese used is well cured and has a pronounced flavor or the result will be disappointing. Remove the rind from the American cheese and cut into convenient sized pieces. Pass the cheese through a food chopper, at the same time evenly mixing with it one part of butter to each six parts of cheese. Mix well with a paddle and after adding a little cayenne pepper, put the mass through the chopper a second time. The cheese is now ready for use.

The equipment needed to make the soft cheeses described above will depend largely upon the amount of milk it is desired to utilize in this way. For making small amounts of cheese in the home, the dairy equipment which one already has for other purposes may be used and no additional expense for equipment need be incurred. Where cheese is made in larger quantities for sale, some equipment may be required in order to more easily and efficiently control the process and promote efficiency. Bennet or junket tablets can usually be obtained through the local druggist or if not, can be purchased from a dairy supply house. A good dairy thermometer is an important part of the equipment. Clean fresh milk and temperature control are more important than the details of the equipment.

It should be remembered that all soft cheeses are best when perfectly fresh. They may, however, be kept for a number of days if cooled promptly and kept at a cold ice box temperature. It is well to make up only sufficient cheese for immediate needs whether for one's own use or for sale. It is under these conditions that the types of easily made soft cheeses described will be found most satisfactory and profitable.