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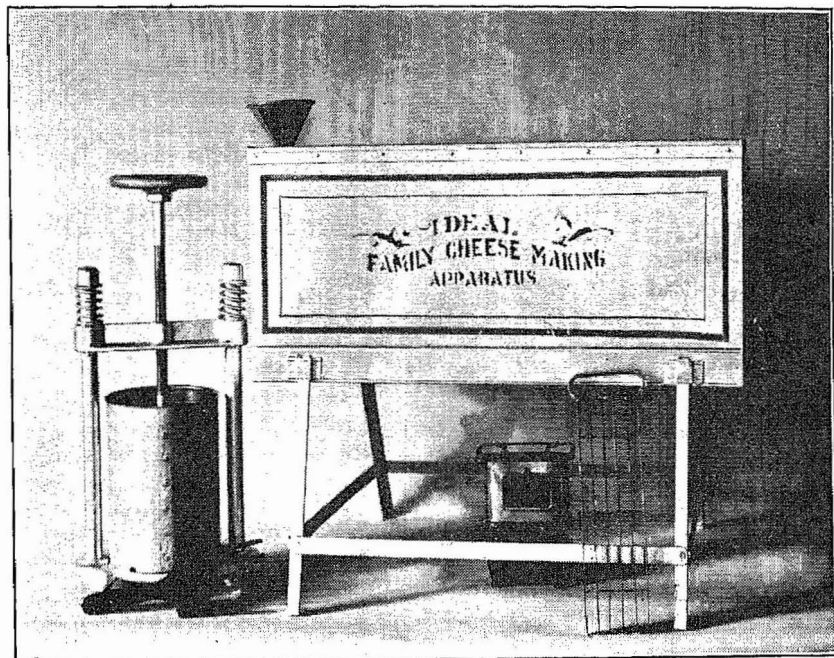
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Farm Cheese Making



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Farm Cheese Making

A number of kinds of cheese can be made to advantage on the farm. It is a good way to utilize to advantage the surplus milk or skim milk any time of the year. The practice is growing in many rural communities and is a means of providing a splendid food supply as well as bringing added revenue from the cows.

There are several varieties of cheese that may be made to advantage with a little practice if the milk is of high grade and the directions are carefully observed. Cheese contains nearly twice as much of the tissue-building material and more energy value than beef, pork, mutton or chicken. It is a very concentrated product and there is no waste in using as is the case with meats, hence it is economical as a food supply. It is always ready to serve and may be combined advantageously in the preparation of many other foods.

EQUIPMENT FOR CHEESE MAKING

In attempting to make any kind of cheese without proper equipment, one is usually inviting failure. The average home kitchen usually has all the utensils required in making cottage, buttermilk, or club types of cheese, but the brick and Cheddar require more apparatus. A small complete outfit for cheese making may be obtained from any dairy supply house.

Vat. A small vat may be made at a tin shop and placed inside a wooden tank with an intervening space sufficient to hold several gallons of warm water. A metal wash tub, wash boiler or any large vessel may serve the purpose of heating the milk on the stove.

Thermometer. A dairy thermometer is absolutely necessary when making any kind of cheese. The simplest kinds of cheese are frequently ruined by overheating in the process of cooking. Dairy thermometers are inexpensive and indispensable, as one must know at all times the exact temperature of the milk.

Press. To make a lever press, take a two-by-four about 8 feet long, cut a small notch on the under side two feet from one end and cut three or four notches 6 inches apart on the opposite side at the other end, to hold the handle of the pail from slipping.

Bandages. In making Cheddar cheese a cloth bandage is necessary to close up the rind of the cheese. These may be had ready made from any dairy supply house or may be cut from flour sacking or cheese cloth obtained at a dry goods store. No bandages are necessary in making the other types of cheese.

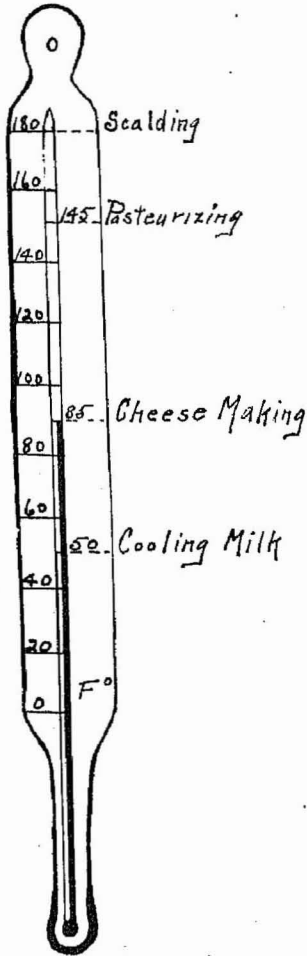


FIG. 1. Dairy Thermometer.

Rennet tablets. The rennet tablets, the junket tablets or the liquid rennet are used to coagulate the milk. These may be secured at the drug store or from supply houses.

Coloring. It is not necessary to color cheese but if colored cheese is desired the cheese coloring may be obtained from supply houses. Often the rennet tablets which also contain coloring may be purchased. Butter coloring will not do in cheese making as it colors only the fat.

Knives. A knife for cutting the curd, similar to those in figure 3, may be made in a blacksmith shop by bending a piece of iron, attaching a handle and winding with a fine steel wire.

Hoops. A good hoop can be made by melting the top off a gallon syrup pail and punching a few nail holes in the bottom or made from sheet iron 7 inches in diameter and 10 inches high, inside measurement.

Brick molds. For brick cheese the molds can be made from any wood that is free from knots and pitch. The molds are 10 inches long by 5 inches wide by 6 inches high, inside measurement, without bottom. Saw parallel slits a half inch or so apart and one sixteenth of an inch deep on the inside of the mold to facilitate removal of whey. Cut a board to fit loosely

in the mold to serve as a follower when pressing the cheese. See fig. 2.

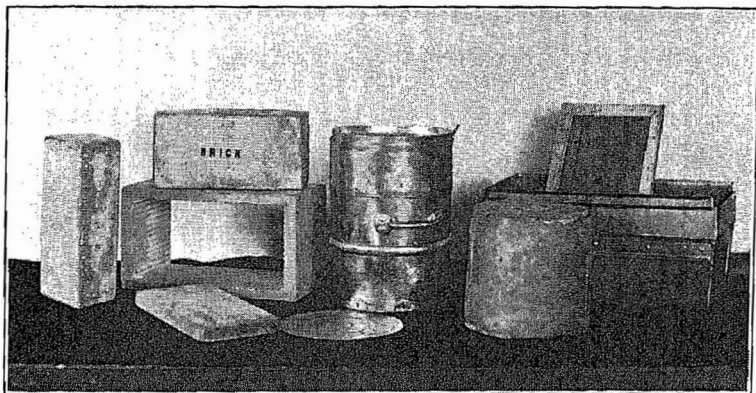


FIG. 2. Hoops for different types of cheese.

AMERICAN CHEESE

The making of Cheddar cheese in the factory requires careful application in every detail. On the farm, the process will vary from the factory methods somewhat. High quality milk is always necessary in cheese making. If precaution is taken in the care of the cows and handling the milk, little difficulty should be met in making a good grade of cheese. In winter, the milk may be kept for two days or longer if it is not allowed to freeze or become sour. It is well to measure or weigh the milk at the start in order to know just how much coloring, rennet and salt to use. A gallon of milk weighs eight and a half pounds.

Setting. After measuring the milk into the vat, carefully heat it to 85° F. The coloring of cheese is not necessary but if desired add about one-eighth of an ounce of cheese coloring for each 100 pounds of milk. If rennet or junket tablets are used they often contain the coloring matter. The coagulating material is next added. This may be in the liquid or the tablet form with directions on the box. If liquid rennet is used, add half an ounce or a tablespoonful for each 100 pounds of milk. Rennet weakens with age so the amount may need to be increased—the point being to use enough to set the milk in from 20 to 25 minutes,

If liquid is used dilute with cold water or dissolve the tablet in cold water before adding, then stir well and let the milk remain perfectly quiet until ready to cut.

Cutting. In order to tell when it is ready to cut, allow the milk to set or thicken until it is quite firm, then insert the forefinger into the curd and by means of the thumb start the curd to breaking as the finger is raised. If fine particles of curd are left sticking to the finger it is too soft to cut but when ready the curd should break over the finger with a smooth cleavage.

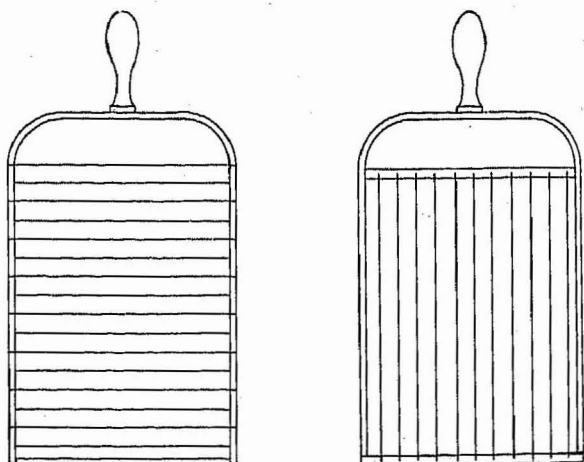


FIG. 3. Curd knives.

At this point, cut the curd into small cubes about half an inch square in order to let the whey escape. Regular curd knives, which cut both ways, are the best for this purpose. A wire bread-toaster is sometimes used with small amounts of milk.

Heating. The whey will readily escape from the curd as the cubes contract. At first the curd is very tender and should be stirred gently, but as the heating continues it becomes firm. Ten or fifteen minutes after cutting begin to raise the temperature of the vat about 2° at intervals of five minutes until about 100° is reached. Continue stirring the curd during the process of heating so that no particles stick to the sides of the vat or to each other. Hold the temperature of the vat at

100° until the proper acidity has been developed. This may require from an hour to an hour and a half with occasional stirring to maintain a uniform temperature throughout.

It is very important to remove the whey at the right time in order to have the proper amount of acidity. This may be determined by pressing a handful of curd. If it appears rubbery and reasonably firm and tends to fall apart, it is time to remove the whey. Another test is to touch a piece of the curd when firmly compact to a hot iron. If on removing the curd from the iron a fine thread strings out for a quarter of an inch, there is sufficient acid present.

Draining. A good plan in draining is to dip the curd onto a rack made of slats a half inch apart over which a cheese cloth is spread to prevent loss of curd particles. Stir the curd a little to facilitate the removal of the whey. Keep the curd warm by covering with a cloth to facilitate the development of acid. When the curd shows threads an inch long by the hot iron test or when the whey from the curd shows about .7 (seven tenths) of one per cent acidity by the acidity tester then the curd is ready to salt. Add the salt at the rate of 3 ounces or 6 level table-spoonfuls per 100 pounds of milk or for 10 pounds of curd. Sprinkle over the curd evenly then mix thoroughly and put into the hoops.

The hoops are made ready for the curd by lining with a circle in the bottom and a bandage on the sides secured at the top by a band. Put the same amount of curd into each hoop so the cheeses will be of uniform size when finished.

Pressing. After filling the curd into the hoops place a cloth circle on top then put the follower into position and it is ready for the press. A weight of 30 or 40 pounds may be had by filling a pail with sand and hanging it in the first notch or one nearest the hoop on the lever arm. Apply the pressure gently at first so as not to squeeze the butter-fat from the curd. After half an hour, remove the cheese from the press, take out the follower and turn the edge of the bandage neatly over the top of the cheese. In dressing the cheese, see that all wrinkles are removed by pulling the bandage up. Cut off the bandage if too long then replace the cap cloth and follower, return the cheese to the press

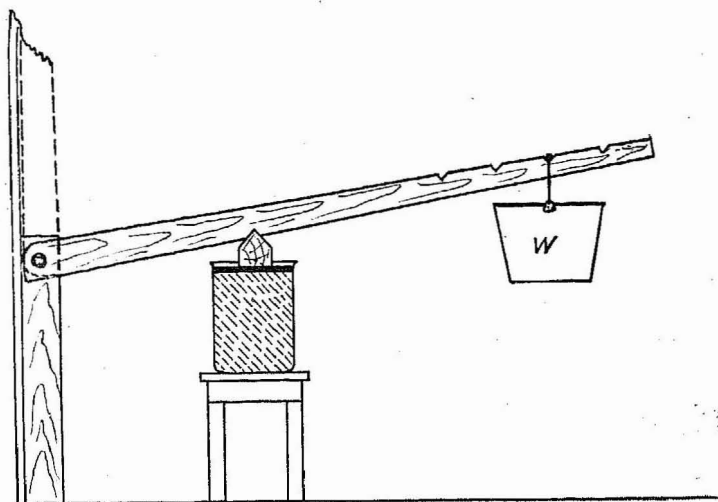


FIG. 4. Improved cheese press.

and apply strong pressure by moving the pail of sand out on the lever a notch at a time. After 24 hours remove the cheese from the hoops. In case the rind of the cheese is not well closed up, place the cheese in a pail of hot water for 20 minutes and return it to the hoop, put it back in the press and apply a little more pressure for several hours.

Curing. Curing cheese is a very particular operation. It is necessary to have the curing room under reasonable control at all times. A cellar or cave can be kept the most uniform both in humidity and temperature. If the curing room is too dry, the cheese will check and crack on the surface. If too damp, molds will appear.

A good range in temperature is from 50 to 65°. Low temperatures retard curing while the higher temperatures hasten curing. Turn the cheese over on the shelves daily until the surface is dry then if molds appear brush well and dip them into paraffin. Heat the paraffin to about 250° then all molds left on the surface of the cheese will be destroyed and a thin coating will be left on the cheese. Cold paraffin forms a thick coating which will crack, readmit the molds and does not retain the moisture in the cheese. Cheddar cheese may be used

after it has cured for two or three weeks, although many prefer to let it cure for several months, until it begins to feel mellow.

BRICK CHEESE

The brick cheese gets its name from the shape into which it is molded or from the fact that bricks are used as weights in pressing the cheese. The method of making brick cheese is very easy to learn but requires close application to detail. The reason why so many people fail in making cheese is because they do not follow detailed directions. This is a sweet curd cheese and is often made twice a day shortly after milking. In order to secure the best results, the milk must be of the highest quality and free from all contamination. Clean, fresh milk is heated to 85° F. when it is ready for the rennet.

Setting. Put the milk into a vat or container as described previously, then add about a half ounce or tablespoonful of liquid rennet diluted in cold water for each 100 pounds of milk. If rennet tablets are used dissolve in cold water then add enough to set the milk in about 25 minutes. If the rennet is weak more will be necessary in order that the curd be firm enough to cut before the cream begins to rise.

Heating. After cutting, stir the curd carefully for ten or fifteen minutes, then gradually raise the temperature to 110° or 115°. This will require from an hour to an hour and a half of heating to firm the curd sufficiently for dipping.

Filling molds. Put a piece of burlap cloth on a draining board and set the molds close together. With a small strainer, dip the same amount of curd into each mold. After filling lay the follower in position and place one brick on top. At intervals of 20 minutes during the next two hours turn the molds upside down, push the cheese down, replace the follower and the brick on top. This will facilitate draining. Before leaving for the night place two bricks on each cheese.

Salting. Remove the cheese from the molds after twenty-four hours and place them in the curing room. Rub dry salt over the surface and place the cheeses close together on table or shelf. Repeat the salting for three days then place the cheeses on edge a few inches apart on the shelves. The salt penetrates the cheese and at the same time facilitates in expelling the moisture.

Curing. The curing room needs to be kept at a uniform temperature of about 65° to 70° F. and somewhat moist. During curing the surface of the cheese changes from a whitish to a reddish brown and will feel slippery and somewhat sticky. Brick cheese becomes mellow with ripening. Under proper conditions the cheese will cure in about four weeks if the temperature is right and the floor kept damp. Good brick cheese will appear smooth in texture, mold like wax in the fingers and have a pleasant odor. It is rich and delicious in flavor, rather mild and sweetish, and is relished by many people.

COTTAGE CHEESE

The use of cottage cheese is growing. It is an easy cheese to make and is best when used fresh. For that reason it is usually made in smaller quantities. The equipment needed is very simple and may be found in any home kitchen. A pan, kettle, double boiler, thermometer, large spoon and cloth strainer will be sufficient.

This cheese is made either from whole milk, skim milk or butter milk. The milk from which cottage cheese is made needs to have a clean, pleasant acid flavor. If it is kept too long or becomes too sour, a bitter flavor may appear in the cheese. If not enough sour or clabbered milk is on hand, mix a pint of sour milk or clean flavored butter milk with a gallon of sweet milk and let it stand at a temperature of about 80° until well clabbered. It is not a good plan at this point to try to hasten the souring by raising the temperature. After the milk is well clabbered, warm it up ten degrees more and hold it at this temperature until the whey escapes. At this point, one needs to be very careful not to heat the milk over 100° nor to stir the curd too much, or a dry, mealy, crumbly, tasteless cheese will result.

Dip or pour off the whey as soon as it is free from the curd, then empty the curd into a cheese cloth supported in a fruit strainer or on a frame. Let the curd drain until the whey ceases to drip. A little stirring at intervals will hasten draining.

JUNKET METHOD

A quick method of making cottage cheese is to use liquid rennet or a junket tablet. The use of either one of these will hasten the curdling of the milk, require less time in making and

give a fine uniform quality of cheese. This method is not much different from the former except that, after the milk has stood for several hours at 80° F. and has become a little sour, for every gallon of milk take two or three drops of liquid rennet or one-eighth of a junket tablet, broken fine and diluted in an ounce of cold water, and mix well with the milk. This method requires no further heating. Allow the curd to stand until the whey begins to appear on the surface then cut into pieces with a knife and dip into a cheese cloth with a strainer. If stirred too much the curd will be tender and will be easily broken which will retard the draining.

In making cottage cheese by any method, it is very important not to heat above 100° nor cook too long. After draining salt to suit taste. A little cream, chipped olives, pimento, caraway seed or nuts are often added to lend variety and additional flavors.

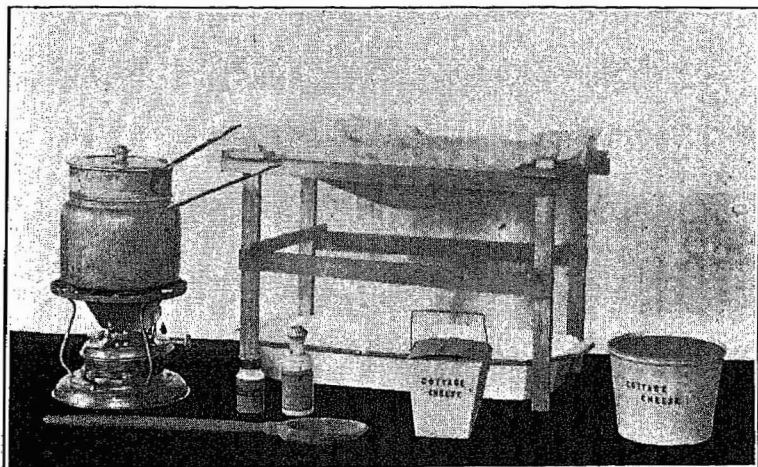


FIG. 5. Cottage cheese equipment.

BUTTERMILK CHEESE

On the farm where fresh, clean flavored buttermilk is available, a fine grade of buttermilk cheese can be made. Place the sour buttermilk in a pan on the stove and heat slowly to about 140°. Stir very little so as not to break up the curd, then

remove and allow it to stand for an hour at the same temperature. If the curd is not collected sufficiently at this point to separate from the whey repeat the heating process again. Drain, salt and serve the same as described under cottage cheese.

CLUB CHEESE

A club cheese is made by mixing dry or old pieces of Cheddar cheese with butter and grinding in a meat chopper. In preparing it, take five parts of well ripened Cheddar cheese to one part butter and run them through the chopper until all lumps are removed and the butter and cheese are thoroughly mixed. If ground too often it may become soft and sticky. The cheese will have a fine soft texture and will spread easily, which makes it desirable for sandwich and picnic purposes. If variety is desired, add a little pimento, chipped olives or other seasoning.

Club cheese is sold under a number of trade names but can be made up at home far more economically. It can be packed tightly in glass jars and sealed with paraffin. If the sides and bottom of the jars are covered with butter before filling air spaces will be eliminated. The cheese may be molded into small blocks and wrapped with parchment paper and tin foil or placed in cartons.

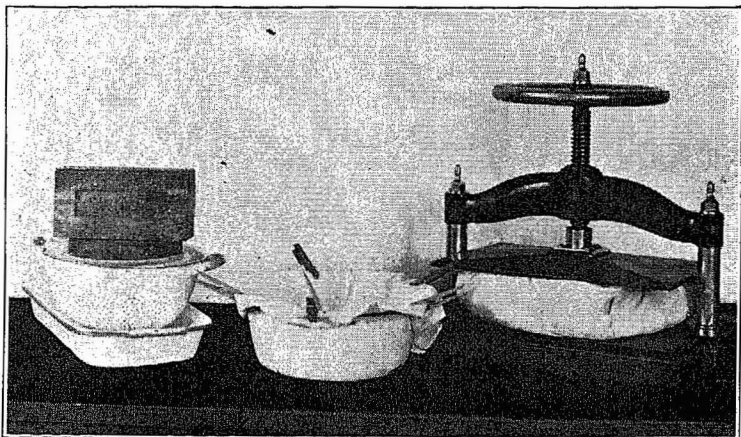


FIG. 6. Methods of straining and pressing.