19 EASY WAYS

TO MAKE

CHEESE

AND

YOGURT

(FOR BEGINNERS)

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American Cheese

Recipe No. 19

Once you become familiar with the techniques, it will be easier to add more complicated cheeses to your list, such as Mozzarella, Monterey Jack, Cheddar, Colby and Gouda. You can obtain recipes for these and other cheeses by 'surfing the web' or writing to the Department of Agriculture in Washington, D.C. Most serious cheese makers collect as many books and recipes as they can on the subject in order to expand their cheese list. It is preferable to obtain some basic cheese making skills before attempting more complicated cheeses.

When I tested the Provolone Cheese (recipe included herein), I wondered how it would taste smoked. I put it in my "Little Chef" electric smoker with some pulverized Hickory Wood Chips, and 'cool' smoked it. I have never tasted a better Provolone.

The "Little Chef" smoker is manufactured by:

Luhr Jensen & Sons, Inc. P.O. Box 297 Hood River, Oregon

They are sold in retail stores all over the U.S.

If you like the taste of Hickory (or other woods) smoked cheese, most hard cheese can be put thru this process just before waxing and ageing. Just follow the instructions that come with the smoker and/or shown in the Provolone recipe.

It is important to study the "Introduction" section of this book. It will tell you:

- 1. What household equipment you need, and how to make or improvise what is not standard in your kitchen.
- 2. Simple starters you will need.
- 3. Rennet (calf or vegetable) and where they can be found.
- 4. How to pasteurize raw, fresh milk.
- 5. Other types of milk that can be used.
- 6. Color (optional).
- 7. How to cut the coagulated curd.

- 8. Types of cloth needed.
- 9. The importance of salt.
- 10. Preserving with cheese wax or paraffin.

11. Curing.

For those of you who haven't heard the story, cheese making was discovered by accident. Shepherds fashioned bottles from the stomach of sheep to hold water and wine. One day a shepherd filled his bottle with milk and went to shepherd his flock under the warm sun. The natural enzymes in the lining of the bottle reacted with the milk, coagulating the milk. It proved to be edible, as well as tasty. Today, a rennet tablet (or liquid) is made in laboratories using enzymes from a calf. Strict vegans may prefer to use a vegetable rennet tablet or vegetable liquid instead of calf rennet. I have never used the vegetable rennet, but it is said to have the same strength as calf rennet, and can be substituted in the same proportions.

INTRODUCTION

No commercial cheese making equipment is required to make the recipes in this book. Most of the items you will need may already be standard utensils in your kitchen. The main ones are as follows:

- 1. Cheese thermometer a must for 1 to 180 degrees Fahrenheit. (Some long heavy candy thermometers will do.)
- 2. Double boiler Make one by placing one pot inside a larger pot with a rack separating the bottoms for better water circulation (or with two handles on the top pot to hold it above the bottom of the lower pot.) The bottom pot should be around 2" shorter and 2" to 3" wider.
- 3. Slotted spoon for dipping.
- 4. Long wooden spoon for stirring.
- 5. Cheesecloth and muslin from your local fabric store or a cheese supply source. One yard each will be sufficient with which to start.
- 6. Glass, plastic and/or earthenware containers with lids.
- 7. Chopping boards for pressing some cheese.
- 8. Colander for draining. I use a long wire strainer that extends across my kitchen sink.
- 9. Forms (Molds) Wood or plastic hoops are good, but you can make your own forms out of cans 4" and 5" in diameter. Smooth sides are better, but you can use 1 and 2 lb. Coffee cans. Make several assorted heights. Some should be open at both ends and some should have 1/8" holes punched in the bottom from the inside out. Also, a few holes punched at random in the sides will give you better drainage on all forms in which you use a lining.
- 10. Press You can also make your own press. Begin with your form. Then cut out a round disc out of hard oak or maple, 1" thick and just slightly smaller in diameter than the form. When using a form open at both ends, line it with cheesecloth or muslin (depending on the hardness of the curd and instructions in the recipe), insert the curd, fold the cloth over the top and place the wooden disc (this is called the follower) on top. You will then need an object about the same size as the follower in diameter, but tall enough to protrude well above the form to allow for compacting

of the cheese when weights are added. Place a board across the top and add weights, bricks or other heavy objects to weight it all down. I use round, flat 5 lbs weights from the athletic store. Weights are applied gradually, usually starting with 5 lbs. as shown in the recipes. (It is important that you only add 1/3 of the total weight to be used at the beginning and slowly add the remainder of the weight at intervals to keep the curd from oozing out.) When using the form with holes only in the bottom, cut a round piece of cheesecloth for the bottom and top instead of lining the whole form.

If you are a real serious cheese maker, you might want to make a more professional cheese press. One idea is to cut two hard oak or maple boards into 8" by 6" each. Bore four holes, one in each corner, half way thru the bottom board ½" in diameter. Glue four ½" dowels into the holes. Drill four holes all the way thru in the top board just slightly larger so that the dowels can fit thru easily. The dowels will help prevent the weights from slipping as the cheese compacts. Even with the high cost of dressed hard wood, you should still be able to make this type of press for a reasonable cost. There are presses available thru cheese making supply houses, but they run from around \$100.00 to \$200.00 or more. I use a cheese press with the dimensions shown above for small forms or cheeses pressed without a form. I made a larger one for cheeses that use a taller form.

MILK

It is not advisable for reasons of health to use fresh raw milk. In addition, you can control your cheese making better with pasteurized milk. The process for pasteurizing is very simple.

Place milk in a double boiler with water in the outer pot to the level of the milk. Quickly bring the temperature of the milk to 143 degrees Fahrenheit. (In about 5 to 10 minutes.) Heat at that temperature for 30 minutes. You may have to turn the heat off and on, but it is important to maintain the proper temperature. After 30 minutes, set the pot with the milk in a container of cold water and rapidly bring the temperature down. If making cheese right away, bring the temperature down to the degree required. If not using immediately, reduce to 50 degrees or 60 degrees Fahrenheit and refrigerate.

It can be tricky sometimes to keep your thermometer at the right degree required for your recipe. Temperature control is very important so watch closely and turn your heat off and on as needed. When the temperature first begins to rise turn down the heat and as it climbs near what you want, turn the heat off a few degrees before you reach the maximum. When it has stopped climbing it will be easier for you to establish the degree you need.

When setting up milk (coagulating) for any length of time at room temperature, leave your thermometer in the milk as a guide for the temperature. Once milk has been set aside to coagulate do not stir or disturb in any way until it is set.

Although pasteurized fresh milk is the best for cheese making, most of the recipes in this book can be made also from regular pasteurized-homogenized milk, which is more readily available in your grocery stores. Although all homogenized milk is pasteurized, I have indicated "pasteurized or homogenized" to indicate that "pasteurized" is fresh milk, which has only been pasteurized. Except where otherwise indicated, "milk" means "cow's" milk. Goat milk will work in all these recipes, but is harder for 'city' dwellers to obtain. Some grocery stores do carry it at a higher price than cow's milk.

When I was testing these recipes, I was fortunate to find a little 85 year old lady about 20 miles from my home who kept five milk goats. I would go down at milking time to get my supply and immediately pasteurize it for later use.

STARTERS AND FLAVOR PRODUCING ENZYMES

The different tastes produced in cheese are mainly due to the flavor producing enzymes and cultures (otherwise known as starters) used and the ageing time, temperature and humidity. Other factors effecting the type of cheese produced are type of milk, length of coagulation (also called setting up), use of rennet, temperature and cooking time, how small the curd is cut, how the cheese is pressed and the time and weight used to press it, and how much whey is drawn out of the curd. The longer the coagulation period the more acid is developed. More acid, higher cooking temperature, and finer cutting of the curd = more whey drawn out of the curd. Drier curd makes harder cheese.

The reasons for using a starter are:

- 1. It controls the flavor, body and texture of the cheese.
- 2. It aids rennet action thru the acid it produces.
- 3. The acid aids in the expulsion of moisture.
- 4. The acid produced has a favorable influence on the change that takes place during the process.
- 5. It checks the growth of undesirable bacteria in the curd.

Usually, starters are required when using pasteurized or homogenized milk. Raw fresh milk can be coagulated without starters, but it is still a good idea to use a little.

There are many different starters used in commercial cheese making. Some of the recipes in this book call for both a lactic and a combination starter. To make it simpler for you, we have used <u>cultured</u> buttermilk as our lactic starter and <u>plain</u> Dannon (brand name) yogurt for our combination starter. (Make sure it is fresh and not near the expiration date to ensure active enzymes.)

Fresh cultured buttermilk is shown as the only starter for some of these recipes. The culture in commercially sold buttermilk may die or become weak after about a week, so it is imperative that your buttermilk be as fresh as possible.

Specific flavor producing enzymes, freeze-dried and packaged in foil, are available thru most dairy and cheese making supply houses. In compiling our list of cheese recipes, we have attempted to keep away from cheese requiring special cultures, which can become a costly venture. There is only one recipe in this book wherein a flavor-producing enzyme is optional.

RENNET

Most of the cheese recipes in this book require the use of rennet. There are a number of brands on the market and you can usually find them in 'ethnic' (especially mid-eastern) stores around the country or from cheese making supply houses. These recipes were tested using animal rennet tablets. However these days, I primarily use 'calf liquid rennet'. For the recipes in this book, I substitute $\frac{1}{2}$ teaspoon liquid for each tablet called for in the recipe, which I mix in a little distilled water before adding to the milk. This works well for me. (Curd too soft = too little rennet. Curd too hard = too much rennet.

Liquid and powdered animal rennet, as well as vegetable rennet tablets and liquid, can be purchased from the following source:

New England Cheesemaking Supply Company 85 Main Street Ashfield, Massachusetts 01330 Telephone: (413) 628-3808

This company also carries a fine line of cheese molds, presses, cloths, etc. if you cannot or do not want to make your own.

CHEESE COLOR

We have not specified any cheese coloring for these recipes. Color is strictly for looks and does not affect the taste. But, if you get tired of plain white cheese, like I sometimes do, <u>use only</u> cheese color tablets. The coloring principal of cheese is

obtained from the seed of the Annatto tree, which grows in the tropics. It should be protected from freezing and from extremely high heat.

Cheese color is an alkaline solution, the very opposite of rennet. It will neutralize the rennet if not handled properly, so always add the color 30 minutes before adding rennet, and never put rennet in the same container that has held cheese color.

CUTTING THE CURD

The foremost important step in cheese making is temperature control. The next is cutting the curd.

When cutting the curd, make perpendicular cuts (straight up and down) from back to front and then left to right – the size as shown in your recipe. (This will appear as cubes cut into the coagulated milk in the pot.) Then repeat the cuts in the same place, but on the second cutting hold your knife at about 45 degree angle while you follow the first cut lines. (With some recipes you will find this second cutting impractical – in this case it can be deleted.) Use a sharp knife long enough to reach from the top to the bottom of the curd.

MUSLIN AND CHEESE CLOTH

You will need both types of cloth – muslin for the soft uncooked curd, and cheesecloth for the harder curd and for rapid drainage. When you purchase your supply, cut them into squares to fit your drain colander. Make sure it is big enough to have plenty of overlap, otherwise when you pour your curds and whey into the colander the edges will slip down into it and you will lose some of your curd.

Take some of the squares and run a seam up the sides and bottom to make a bag. (You will find a lot of uses for bags.) Then turn inside out and run another seam up the sides and bottom again so there will be no loose edges. (You could also use a child or doll pillowcase, which is already seamed.) When you use your bags, turn them so that the smoother side will be next to the curd. Thoroughly wash your bags and/or squares after each use. It's also a good idea to boil them in a pot of water for five minutes to sterilize them before use, especially if the cheese you are making requires ageing. This will help prevent spoilage of your cheese while ageing.

SALT

The reasons for salting are:

- 1. To season the cheese.
- 2. Check the development of acidity by retarding the growth of lactic acid bacteria.

- 3. Cause further drainage of whey, particularly if moisture expulsion has been slow.
- 4. Assist in regulating the ripening (ageing/curing) process.
- 5. Check the growth of undesirable bacteria in the cheese during ripening (ageing/curing).

Cheese should definitely be salted to stop the acid-producing bacteria if it is not to be consumed within a very short period of time. Otherwise your cheese will spoil. A <u>coarse</u>, slow dissolving clean cheese salt, canning salt or kosher salt should be used for all recipes, except where indicated. <u>Never use iodized salt.</u>

BRINE SOLUTION

When salting or storing cheese in a brine solution (brine bath), prepare the solution by dissolving coarse salt in cold water (or whey if indicated) until no more salt will dissolve; then add another cup of water (or whey) and stir thoroughly. I have stored cheese in brine solution at normal room temperature for months, but it is recommended that it be refrigerated or kept in an area where it will stay around 50 degrees to 60 degrees Fahrenheit.

WAXING

When cheese is to be cured for any length of time, it is waxed to prevent mold and drying. There is cheese wax in the market specially made for coating cheese, or you can use paraffin. The cheese must have dry, unbroken surfaces to prevent mold from getting down into the cheese and spoiling it. (Surface mold, which appears during curing, can just be wiped off.) To prepare your paraffin, use a double boiler. Heat the paraffin to 212 degrees Fahrenheit. This is just to boiling; so do not use your thermometer. Use only enough paraffin so that when you dip the cheese it will cover one-half. Hold in the hot paraffin for about 10 seconds. Let it dry for a minute or two before immersing the second half. (If the wax is not hot enough, it will cake on and later peel off.)

CURING

This can present a problem when making cheese at home. Here again, we have tried to avoid recipes where you would have trouble to cure properly. Most cheese that has to be cured requires specific humidity control as well as temperature control. For the recipes in this book, you can make do with your refrigerator, basement or cellar. Cheese aged in a refrigerator lower than 50 degrees Fahrenheit will require a longer period to age. A spare refrigerator that "sweats" a lot is good, but on the other hand, a frost-free one is usually too dry.

To make good cheese, it is essential that all your utensils are as clean as possible and the area in which you are working be as dust free as possible. Wash and scald utensils before using <u>except</u> your thermometer – <u>do not</u> put your thermometer in boiling water.

Just to refresh your memory, water boils at 212 degrees Fahrenheit.

Depending on the recipe, you will get any where from $\frac{1}{2}$ to 3 lbs. of cheese. You can double or triple the recipes for larger quantities. Your yield on larger batches should be higher proportionately per gallon of milk.

Cheese making can be both satisfying and a money saver. The recipes chosen for this book are simple to make and most of them require little or no ageing time. Once you have mastered the basic techniques, try experimenting to develop your own varieties. Soon you will be enjoying your own homemade cheese, which will have no preservatives, nor additives, to detract from the natural flavor and enjoyment.

BE WARNED!!! Once you learn to make your own natural cheese, you will never again be satisfied with store bought varieties.

Recipe No. 1

QUICK POT CHEESE

1 gal. - milk – homogenized 1 - rennet tablet

Dissolve rennet tablet in $\frac{1}{2}$ cup cold water and stir into milk. Place pot with milk (double boiler not required) over low heat and stir counter-clockwise constantly until curd separates from the liquid (15 to 20 minutes). Turn off heat and let stand for 2 minutes without stirring.

Line colander with muslin. Place colander over another pot to catch the liquid. Pour curd and liquid into the colander and drain for 2 minutes. (There will still be liquid in the colander.)

Then begin to press a small amount of curd tightly in the palms of your hands to squeeze out the excess liquid. Press into patties – any size you prefer. (8 to 10 patties is a good division). Sprinkle salt on both sides of the patties and place on a rack to drain for 1 hour.

Then place the cheese in a glass or plastic container, add 1 tablespoon salt and pour enough of the liquid into the container to just cover the cheese. Close lid and refrigerate. Save the rest of the liquid to make cottage cheese if you like, otherwise discard. It can be eaten immediately, but is even better after it has had a chance to chill for a while in the salted water.

This is a bland cheese, which is an excellent taste treat when eaten with pita bread, black or green olives, tomatoes, cucumbers and green onion.

CHEESE BERNADET

4 qt. - milk – homogenized 1 qt. - half and half cream 4 – rennet tablets 2 tbsp. – coarse salt

Heat milk to 70 degrees. (Double boiler not required.) Dissolve rennet in $\frac{1}{2}$ cup of cold water and stir thoroughly into the milk. Let the heat continue to climb very slowly to 100 degrees, then turn off the heat. Let stand without stirring for 10 minutes. Turn heat back on low for about 5 minutes, Whey will appear on top or around the solids. Turn the heat off again and stir. (It will look like clabbered milk.)

Pour into a muslin lined colander. Gather edges into a bag and gently squeeze to expel most of the whey. Spread the cloth with the curd out on a tray. Fold the cloth over the curd making a square and press with your hands to expel more of the whey. Unfold the cloth and then refold into a tighter square and press again.

Place a chopping board over a tray (to catch the whey), place the curd, wrapped securely in the muslin, onto the board. Place a second board on top and weight it down with 5 lbs. of weight. Let set for 30 minutes.

Remove weight, unwrap cheese, salt the topside generously, rewrap, place between the boards and put 10 lbs. of weight on top. Press in this manner for 2 to 3 hours until nice and firm.

Then remove weight and take cheese out of the cloth. Salt both sides using remainder of the salt, cut into squares and place in a container with a lid. Chill and it is ready to eat.

SEASONED BOILED CHEESE

1 lb. – Cheese Bernadet (Recipe No. 2)
1 qt. - water
1 tsp. – caraway seed
1 tbsp. – black cherry kernels, ground (mahleb)
1 tsp. – salt

Cut cheese into 2" squares approximately ½" thick. In a pot, bring water to boil. Put the salt, caraway seeds and ground black cherry kernels each in separate small dishes.

Have a slotted spoon handy. Boil gently 3 or 4 pieces of cheese at a time for 1 to 2 minutes, or until it feels medium soft.

Remove cheese to a colander, shake dry, and immediately start to season the cheese by dipping fingertips into each seasoning, separately, and pressing it into each square.

After seasoning, spread each square out a little, fold in half, press flat, and place in a jar with $\frac{1}{4}$ cup of boiling water. Repeat the process until all the cheese is finished.

Cover and store in the refrigerator. The cheese is ready to eat.

COTTAGE CHEESE (SMALL CURD) Mid-East Style

6 cups – fresh liquid left after making Recipe No. 1 6 cups – milk – pasteurized or homogenized juice of 1 lemon – or ½ cup reconstituted lemon juice

Warm the leftover liquid from the Quick Pot Cheese. Add milk and place over a low heat. (Double boiler is not required.) Bring temperature to 98 degrees and add lemon juice.

While stirring, slowly raise temperature to about 110 degrees. Continue stirring until curd forms and the liquid begins to look watery. Then turn off heat and let set for 25 minutes, gently stirring every 5 minutes.

Pour into a muslin lined colander and drain until the liquid has been expelled. Shake or gently stir occasionally to keep curd from sticking together. Discard liquid, it cannot be used again.

Place cheese in a bowl and stir in ¼ teaspoon salt. (Omit salt if you are going to sweeten or flavor the cheese.) Place in a covered container and refrigerate. It is ready to eat.

If you choose, you can add sweetener, vanilla or other flavorings, rose water, 2 ounces cream, half and half or a combination to taste.

YOGURT

2 qts. – milk – homogenized
4 tbsp. – starter – from a previous batch of yogurt (use <u>plain</u> commercial yogurt for your first starter.) Using a new plain commercial yogurt as starter each batch will result in a milder, sweeter yogurt; whereas using from a previous batch will give it a more tart taste.

Heat milk over a low heat until it rises up in foam. (Double boiler is not required.) Immediately remove the milk from the heat and pour into a heat resistant bowl such as pyrex or corning ware, etc. (Or you can leave it in the pot in which it was heated.) Place the container on a towel folded in two. Cool to lukewarm. Test temperature by immersing your little finger until you can count up to ten without discomfort (about 115 degrees).

Add 4 tablespoons warm milk to the starter and stir until smooth. Stir starter thoroughly into the warm milk. Cover with a lid, then cover entire container with a blanket or several towels making sure all air and light are shut out. Set on a table or counter, without disturbing, at room temperature until it thickens (about 6 hours). Gently remove the towels or blanket then refrigerate carefully so as not to disturb the yogurt while it is still warm. Refrigerate for 12 hours before using.

After the first serving is taken out, the whey will collect in the indentation. (Also, if your room temperature has been too high during coagulation time, whey may have collected on top of the yogurt.) Place folded paper towels on top of the yogurt for a few minutes to absorb the excess whey and then remove. The more this is done, the thicker the yogurt will become. When it reaches a point of thickness you prefer, gently stir the yogurt, and it will remain at that consistency.

The taste of homemade yogurt is somewhat tangy. If you prefer a more sweet, creamy yogurt, you can add $\frac{1}{2}$ cup of light sweet cream before heating the milk.

Note: The fresher the starter, the sweeter the yogurt.

TO FLAVOR YOGURT

It is very popular now to eat flavored yogurt. If this is your preference, we can recommend the following:

- 1 Flavor yogurt after coagulation just before the 12-hour refrigeration period. To add flavor or fruits by this method will reduce the thickness to a buttermilk consistency-like state. To prevent thinning, mix dissolved plain gelatin with your flavoring or fruit, stir into yogurt and refrigerate. When the gelatin stiffens, the yogurt will thicken.
- 2. Yogurt can be flavored after it is chilled with fruit preserves, honey, wheat germ, maple syrup, chocolate syrup, fresh fruit purees, artificial sweetener, etc. The result will be tasty, but makes a somewhat thinner yogurt.
- 3. Spread fruit on a plate and gently spoon yogurt on top.

Plain, herbed or flavored yogurt can be used in salad dressings and as marinade for chicken, beef and lamb.

YOGURT CHEESE Labneh

SPREAD

To any quantity of plain yogurt you choose, add salt to taste and stir. Pour into a muslin bag and hang over the sink or other container to drain for 5 or 6 hours until all the whey is drained away. The longer it drains the thicker the spread will become, but also, the longer it drains the more tart the taste. Experiment to find the right taste for you.

After it has drained, place the bag with yogurt spread into a container and refrigerate until thoroughly chilled. Remove the spread from the bag and place in a shallow dish. Cover with a thin layer of olive oil and it is ready to eat with pita bread or toast.

Note: You can make a nice party dip by adding finely chopped walnuts and stirring into the paste. Separate the two layers of pita bread and toast them on the rack in your oven. Break into small pieces to use with the dip.

BALLS

Follow directions for yogurt spread until it has been refrigerated and taken out of the bag. Then roll into balls about 1" to 2" in diameter. Place on a cloth lined tray, cover with saran wrap and refrigerate for 4 days until dry.

On the 5th day, place the yogurt balls in a glass jar. (If your refrigerator has a very high humidity (because it 'sweats' a lot) and your balls are still moist, let them set on a tray uncovered at room temperature for an hour or so before placing them in the jar.) Cover all the balls with olive oil and secure lid. It is now ready to eat with pita bread or toast. When eating, dip a little of the oil out with the balls.

Keep refrigerated. It has an excellent shelf life.

OLD TIMERS YOGURT CHEESE

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1 qt. – yogurt – (Recipe No. 5)

1 cup – half and half cream

7 cups – milk – pasteurized or homogenized

1 ½ tsp. – salt

1 – plastic or glass container with lid – 12-cup capacity

4 tbsp. – buttermilk
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In a plastic or glass container, mix the yogurt with the half and half and stir in the salt. Cover and refrigerate for two days.

After 2 days, add 1 cup of milk and stir thoroughly. Cover container and return to the refrigerator. Repeat this step every other day until all 7 cups of milk are used. (2 weeks). Stir in buttermilk when adding the 7th cup of milk. Then let set without stirring in the refrigerator for another 2 weeks (or more if necessary) until it thickens.

It will then be ready to eat as is, or you can roll the cheese into balls, place in a container, cover with olive oil and store in the refrigerator.

ALTERNATIVE METHOD

Follow the same procedure as above until the 7th cup of milk and the buttermilk has been added. Then place in a double boiler and bring the temperature to 115 degrees. Let set at this temperature for 30 minutes. Pour into a muslin-lined colander and drain for 30 minutes. Then gather edges of cloth into a bag, tie close to the cheese and hang over the sink to drain for 7 or 8 hours until whey is expelled. Place bag with cheese in refrigerator to chill and it is ready to eat. The taste will be milder using this method.

This cheese can also be spread out on a cloth and air or sun dried for use in cooking.

POTATO CHEESE

German

2 qt. – milk – pasteurized or homogenized (cow-goat-ewe)
2 tbsp. – fresh cultured buttermilk
½ - rennet tablet
½ cup – boiled and peeled potatoes – mashed or strained
1 tsp. – caraway seed
2 tsp. – salt
1/8 cup – beer, cream or wine (optional)

In a double boiler, heat the milk to 86–90 degrees, and stir in the buttermilk. Let set 1 hour at this temperature. Watch your thermometer carefully to maintain this temperature. Then dissolve rennet in $\frac{1}{4}$ cup of cold water and stir thoroughly into milk, and let set for another 30 minutes.

When coagulated, cut into 3/4" squares (see Introduction), and stir gently for 5 minutes, then let set for 5 minutes.

Very slowly, raise temperature to 100 degrees and hold at this heat for 1 hour. After 1 hour, pour into a colander lined with a double layer of cheesecloth and drain for 10 minutes. Transfer curd to a warm pot and stir in the warm mashed potatoes, caraway seed and salt. Stir thoroughly. Spoon mixture into a 5" form, open at both ends, lined with cheesecloth. The form should be just deep enough to hold all the curd. Place on a thick cloth, such as a folded towel, in a tray to drain. Invert the form every half-hour for the next three hours. Then place a follower into the form and press with 5 lbs. of weight for 2 hours. After 2 hours, remove the cloth from underneath the form and place the form, holding the cheese, on a board. Add another 5 lbs. of weight on top and continue to press for another 8 hours.

After the cheese has been pressed into a firm block, remove the press, form and cheesecloth and place the cheese in a container, preferably wood. Add the beer, cream or wine at this time, if you choose. Cover and refrigerate for 2 weeks before eating.

CREAM CHEESE Salt Free

1 qt. – homogenized milk 1 qt. – half and half 1½ - rennet tablet

In a double boiler, mix the milk and half and half. Bring the temperature to 115 degrees and hold at this temperature. Dissolve rennet in \(^{1}\)4 cup cold water and stir into milk. Let set while holding temperature at 115 degrees.

When the milk is coagulated, cut into 3/4" squares. Stir by wiggling the inner pot for 2 minutes, then let set for 15 minutes. Temperature should still be 115 degrees.

Pour the curd into a colander lined with a <u>muslin bag</u>. (At this point it will still appear to be in a liquid state.) Drain in the colander for 2 hours. Scrape the sides of the bag occasionally. After 2 hours, tie the bag close to the cheese with a cord and hang over the sink, or another container, to drain for another 7 hours. (If your room temperature is very hot, i.e. above 75 degrees, you can hang the curd in the refrigerator to drain.)

After the whey has been expelled, place ice cubes in the colander, then the bag with the cheese and cover with more ice cubes. Place colander over a drip pan and put in the refrigerator to chill (about 1 hour).

When the cheese is thoroughly chilled, remove from the bag. Form into a ball and place in a clean muslin square or bag. Tie close to the cheese, and place the cheese between 2 boards with the tied end to the side. Place 5 lbs. of weight on top, put a catch pan underneath and refrigerate for 8 hours.

It is now ready to eat. Rich, creamy and salt free.

(If you prefer salt, add 1 teaspoon while it is still draining in the colander or rub salt over all surfaces after it has been pressed.)

PROVOLONE Italian

1 gal. – milk – pasteurized or homogenized 4 tbsp. – fresh cultured buttermilk 3 tbsp. - plain yogurt 1 – rennet tablet cheese color – optional

In a double boiler, very slowly heat milk to 86-90 degrees. Hold at this temperature. Stir in both starters (also cheese color if you choose to use it), and let set for 30 minutes. After 30 minutes, dissolve the rennet in $\frac{1}{2}$ cup of cold water and thoroughly stir into the milk. Let set uncovered for another 30 minutes at the same temperature.

Test by inserting a knife at the edges of the pot and gently pulling toward the center. If the curd breaks away cleanly, it is ready. With a sharp knife, cut the curd into 3/8" squares as shown in the 'Introduction'. Gently stir by wiggling the inner pot for 5 minutes, then let set for 5 minutes without stirring.

Raise temperature 1 degree during the first 5 minutes; 2 to 3 degrees during the next 5 minutes; then at the rate of 1 degree per minute until 114 degrees has been reached. This should take a total of 30 minutes to raise the temperature properly.

After the cooking temperature has been reached, very gently stir the curd in a counter clockwise motion for 10 minutes. Dip off $\frac{1}{2}$ of the whey (but save it in another container) over a 10-minute period. Then stir for another 10 minutes. (Total cooking time is 30 minutes.)

Pour curd into a form that has holes punched in the bottom from the inside to the outside and lined with cheesecloth. Place the form over a container to catch the whey because it is necessary to complete the process, and also, it can be saved to make Ricotta Cheese. Insert your wood follower and press with 5 lbs. of weight for 1 hour. In the meantime, return the whey to your double boiler.

After the curd has been pressed, heat the whey to near boiling (180-200 degrees). Remove the weights from the press and place the cheese, still in the form and cheesecloth, into the hot whey. Turn off the heat and let it cool normally to lukewarm.

When the whey is lukewarm, remove the cheese from the form, but leave the cloth

on. Place it in a pan of cold water with ice to harden for 2 hours. After the cheese has hardened, remove the cheesecloth and place in a brine solution (see Introduction) for 2 days.

Next, for those of you who have the facilities, hang in a smokehouse for 2 to 4 hours to give it a light, smoked flavor.

Let the cheese dry completely, <u>at least</u> a day or more. When dry and smooth with no cracks, dip into paraffin (see Introduction) and <u>hang</u> to age at 50 degrees for 1 to 4 months. (If using a refrigerator colder than 50 degrees, the ageing time should be a little longer.)

It can, of course, be eaten without ageing, but the taste will be milder and somewhat non-descript. However, smoked Provolone is quite tasty even without ageing.

TO PRODUCE A MORE PRONOUNCED PROVOLONE FLAVOR (OPTIONAL)

A glandular lipse enzyme preparation can be added for a more specific flavor. (Available thru the supply house listed in the 'Introduction' section of this book.) This preparation should be added at the time of adding rennet. Follow the manufacturer's directions for the amount to be used.

RICOTTA Italian

10 cups – fresh whey saved from Recipe No. 10 4 cups – milk – pasteurized or homogenized ½ cup – strong vinegar – apple cider vinegar is good

In a double boiler, heat the whey until a cream forms on top (about 130 degrees). Add milk and stir. Increase temperature to around 180 degrees. When curd appears, add the vinegar and turn off heat. Continue to stir occasionally for 15 minutes.

Pour curds and whey into a colander lined with a double layer of cheesecloth to drain. When most of the whey has drained away, place the colander, with the cheese, over a drip pan, then place everything into a plastic bag. Tie the end and refrigerate for 8 hours before eating.

It has a sweet, creamy taste and is very good for making lasagna and other pasta dishes. (You might want to press the cheese between boards for 2 or 3 hours with 5 lbs. of weight if you intend to use it for cooking.

Use it within one week.

LARGE CURD COTTAGE CHEESE

American Style

1 gal. – skimmed milk – pasteurized or homogenized ½ cup – fresh cultured buttermilk 1 – rennet

Heat the milk in a double boiler to 72 degrees and add buttermilk. Dissolve the rennet in ½ cup of cold water and stir into the milk thoroughly.

Remove the inner pot and set on a counter or table in a place where the milk temperature will remain at around 72 degrees. Cover pot with a lid and blanket or several towels and let stand undisturbed for 12 to 18 hours.

When coagulated, cut the curd with a sharp knife into 5/8" squares (see Introduction) and let stand for 5 minutes. With a large slotted spoon, gently lift the curd from the bottom of the pot raising it to the top. Stir in this manner for about 1 minute. Allow to stand for 5 more minutes, then stir again in the same manner.

Return pot to double boiler and <u>slowly</u> heat until the temperature of the curd reaches 110 degrees. Stir the curd gently every few minutes as you heat it. When it reaches 110 degrees, turn off the heat and let it set for 2 minutes.

Dip off the whey down to the curd. Pour remainder of curd and whey into a colander lined with several layers of cheesecloth. Drain for 3 minutes.

Pour out the hot water from the outer pot and refill it with cold water. Gather the cheesecloth into a bag around the cheese and dip it into the cold water. Work the curd inside the bag to make sure water reaches all the curd. After 3 minutes, return the bag to the colander to drain.

Pour the water out and refill with fresh cold water. Add a tray of ice cubes. Immerse the bag with the curd into the ice water and work gently until thoroughly chilled (about 5 minutes). Return to the colander to drain until the whey stops dripping (about $1\frac{1}{2}$ hours). Shake occasionally to prevent sticking. Now it is ready to eat.

- ... Note 1: If you prefer salted cheese, use 1-teaspoon salt for each drained pound.
- ... Note 2: For creamed cottage cheese, add 2 oz. milk, half and half, or cream per pound of drained cheese.
- ...Note 3: Vanilla and other flavorings, such as sugar or sweetener, can be added according to taste. (In this case, do not add salt.)

GOAT MILK CHEESE Lebanese

1 gal. – fresh pasteurized goat milk 4 tbsp. – fresh cultured buttermilk 1 – rennet tablet 2 tbsp. – coarse salt

In a double boiler, heat milk to 86-90 degrees. Add buttermilk. Dissolve rennet in $\frac{1}{4}$ cup of cold water and stir thoroughly into milk. Let stand at this temperature for 30 minutes. After a thin film of whey has collected on the firm coagulated milk, cut by a sharp knife into $\frac{1}{4}$ " to $\frac{1}{2}$ " squares. Let stand for 5 minutes, and then gently stir for 5 minutes by wiggling the inner pot.

Heat slowly to 100 degrees and hold at that temperature for 1 hour. Turn heat off and on as required to maintain temperature. After 1 hour, turn off heat; remove inner pot and cool back to 86 degrees. When temperature is reduced, pour off whey and let set in pot to dry for 15 to 30 minutes. Continue to pour off whey as it collects. Stir curd occasionally to prevent sticking.

After it is dry, add salt and stir thoroughly. When salt is dissolved, place cheese in a press lined with cheesecloth, 5" in diameter, (see Introduction) for 10 hours, with 10 lbs. of weight. It is now ready and can be eaten immediately.

If an aged taste is preferred, thoroughly dry surfaces of cheese. Makes sure there are no cracks, then bandage in cheesecloth and dip in paraffin. (See Introduction.) Cure at 60 degrees for 2 or 3 months. A spare refrigerator can be used, but a cellar or other cool building is preferred.

For milder ageing, just wrap the cheese tightly in tinfoil and refrigerate for a week or two. You can also age this cheese in a brine bath.

NEUFCHATEL CHEESE French

1 gal. – milk – pasteurized or homogenized – goat or cow 4 tbsp. – fresh cultured buttermilk ½ rennet tablet 2 tsp. – coarse salt

Heat milk in a double boiler to 72 degrees. Add buttermilk. Dissolve rennet in ¼ cup of cold water and stir thoroughly into the milk.

Remove inner pot and set on a counter or table. Cover with a lid and blanket or towels, and let set for 12 to 16 hours in a room as near 72 degrees as possible.

After the milk has coagulated, spoon curd into a muslin bag placed in a colander and drain until the liquid almost stops dripping. Stir in the salt.

Tie the bag with a cord close to the cheese and form into a ball. Surround the bag with ice to chill. When chilled, remove the bag with curd and place it on a chopping board with the tied end of the bag to the side. Place another board on top and gently press down. Place 3 to 5 lbs. of weight on top. Set everything into a pan to catch the whey and refrigerate for 8 hours. This cheese can be eaten immediately.

DOMIATI CHEESE Egyptian

2 gal. – fresh pasteurized milk – cow, goat or ewe ½ cup - fresh cultured buttermilk 2 – rennet tablets 3 tbsp. – coarse salt

Thoroughly stir salt into 2/3 of the milk (24 cups) and set aside. In a double boiler, heat the remaining 1/3 (8 cups) to 170 degrees. Then mix the two portions of milk.

Reduce heat to 105 degrees and add the buttermilk. Dissolve rennet in $\frac{1}{2}$ cup of cold water and stir thoroughly into the milk. Remove inner pot and place on a counter or table. Cover with lid and blanket or several towels and let stand 3 hours until coagulated. Pour into a muslin-lined colander and drain over a container to catch the whey. (You will need the whey for the curing process.) After 2 hours, scrape curd from sides of the colander and stir the curd thoroughly. Continue to drain for 1 more hour.

Spoon the curd into two 5" metal or wood forms, open at both ends, lined with cheesecloth, and cut down to fit the amount of curd. (The cheesecloth should be long enough to fold over the top of the cheese.) Place form with cheese in a cloth lined rack over a drip pan. Invert the form frequently until the cheese is dry (6 to 8 hours, or more if necessary).

To cure, prepare a brine solution (see Introduction). Use the whey from the cheese instead of water for the brine. Place brine in a crock-pot or other earthenware container. Place cheese in the brine, cover with lid and store at room temperature for 1 to 4 months. Cheese will remain good well over a year.

When fresh, it will be mild and salty. When aged, it will develop a strong, cleanly acid flavor and will darken in color.

This is one of my favorite cheeses. When fully aged, it has a very unique taste.

FETA CHEESE Greek

2 gal. – fresh pasteurized milk – goat or ewe
8 tbsp. – fresh cultured buttermilk
2 – rennet tablets
2 tbsp. – coarse salt

Heat milk in a double boiler to 95 degrees, Add buttermilk. Dissolve rennet in $\frac{1}{4}$ cup of cold water and stir thoroughly into milk. Let stand at this temperature for 30 minutes until coagulated. Cut into $\frac{5}{8}$ squares. Wiggle inner pot for 2 minutes, then let set for 5 minutes.

Dip off whey down to the curd. Pour curd into a muslin lined colander and drain until the whey is expelled (about 30 minutes). Gently place curd in one piece on a coarse cloth on a rack to drain. Cover with a dry cloth. When firm (about 2 hours), cut into strips and rub half of the salt on one side. Two hours later, turn the cheese over and rub the other side with the remaining salt. Cover with a dry cloth and leave overnight (at least 12 hours) to dry.

When dry, cut into 1" to 2" slices and place in a brine solution at room temperature for 5 days. While the curd is at first sour, it gradually becomes less so, and finally develops a sweet and agreeable flavor.

After 5 days, remove the cheese from the brine, rinse in cool water, and drain on a rack for about 1 hour. Place in a container with lid and refrigerate.

If it is too salty, or becomes too hard, you can put it in cold tap water for about 30 minutes before eating.

You can sauté this cheese in butter or oil over a low heat. It is very tasty.

KOPANISTI CHEESE Greek

2 gal. – fresh pasteurized milk – goat or ewe 2 – rennet tablets mold starter – from commercial bleu cheese 2 tbsp. – coarse salt

Heat milk in a double boiler to 95 degrees. Dissolve rennet in $\frac{1}{2}$ cup of cold water and stir thoroughly into the milk. Maintain 95 degrees for 2 hours until well coagulated. Cut into $\frac{1}{4}$ squares, then agitate by wiggling the inner pot for 5 minutes. Let set for 5 minutes.

Pour curd into a colander lined with a double thickness of cheesecloth and drain for 30 minutes. When drained, gather corners of the cloth into a bag, tie close to the cheese and hang over the sink or a drip pan for 2 hours.

When the whey is expelled, place curd into a bowl and knead by hand until the consistency becomes smooth and a little pasty. Form into balls 2" to 3" in diameter.

Place balls in a crock-pot or other earthenware container. Scrape some mold from a piece of store bought bleu cheese and sprinkle over the balls in the crock-pot. Cover with lid and place in the refrigerator. This will act as a starter for the mold to grow.

As soon as the cheese balls are covered with a blue-green mold (4 to 5 days) add the salt and knead until the salt and mold are mixed thoroughly. Pack tightly in a crock-pot or other earthenware container, cover with a dry cloth, and age for 1 to 2 months. This cheese should be aged at around 50 degrees, and needs a high humidity. It can be aged in a refrigerator, but most <u>frost-free</u> refrigerators are too dry.

After ageing, the cheese will have a very sharp, peppery flavor.

ITALIAN HARD CHEESE

2 qt. – milk – pasteurized or homogenized – cow, goat or ewe 2 qt. – skimmed milk 4 tbsp. – fresh cultured buttermilk 3 tbsp. – plain yogurt 1 – rennet tablet cheese color – optional

In a double boiler, combine both milks and heat to 96 degrees. Add buttermilk and yogurt (also color if you choose to use it), and let set for 30 minutes at this temperature. After the 30 minutes, dissolve rennet in $\frac{1}{2}$ cup of cold water and stir thoroughly into the milk. Let set for another 30 minutes. Continue to maintain 96 degrees.

When it is coagulated, cut into $\frac{1}{4}$ " squares (see Introduction). With a wooden spoon, gently stir the curd for 5 minutes, then let set for 5 minutes. Keep at the same temperature.

Dip off whey down to the curd (BUT SAVE WHEY). Pour curd into a muslin lined colander to drain for 30 minutes (keep this whey also). Return whey to the double boiler (you need the whey to ferment the curd). Fold ends of muslin firmly over top of curd making sure all curd is well covered, and place between two boards. Weight it down with 10 to 15 lbs of weight and press for 2 hours.

Heat the whey to boiling. Remove curd from the boards and cloth and place it in a container, preferably wood. Pour enough of the hot whey to just cover the curd. Let it set to ferment. Keep the whey hot at all times by removing some and replacing it with hot whey. You can reheat the whey that is removed. Keep the whey temperature between 135 and 150 degrees.

After a vigorous fermentation begins, it will take about 5 hours to be ready. It is ready when you can dip a small piece into hotter water and stretch it out into a tough elastic fiber. When ready, remove the curd to another pot and cover with hot water from the faucet. Work the cheese with a wooden spoon until it becomes elastic. Do this by gently raising and lowering the cheese and using a gentle pushing motion lengthwise of the cheese. This step should take about 15 minutes. Keep the water hot during this step.

By hand, form the cheese slowly into a ball, dipping it often in the hot water as you

are forming it. (TAKE CARE NOT TO BURN YOUR HANDS IN THE HOT WATER.) After it is formed and smooth, wrap cheesecloth around the ball and tie the ends with a cord. Fill a pot with water and ice. Lay a stick or wooden spoon across the top, tie the cord around it and suspend the cheese into the ice water to harden 2 to 4 hours. Add ice as needed. When hard, place in a brine solution for 2 days. (See Introduction for how to make a brine solution.)

After it is salted, hang up a few hours to dry. (It can be smoked at this point if you choose.) It is now ready to be sealed in paraffin (see Introduction). After the paraffin has been added, it can be aged in the vegetable keeper of your refrigerator for 2 to 3 months for table use, or 6 to 12 months for grating. Wipe off any surface mold, and wash your keeper often. The best curing temperature for this cheese is 62-65 degrees, with 80 % humidity.

ALTERNATE METHOD OF AGEING

Instead of coating with paraffin, oil the cheese with olive oil, make a salt bed 2" deep, place the cheese in the salt and cover with another 2" of salt making sure the sides are also covered. Store in the basement, cellar or springhouse to age. At least a month for table use, 2 to 4 months for grating. The salt will draw the moisture out and reduce the ageing time.

AMERICAN CHEESE

3 gal. – fresh pasteurized milk ½ cup – fresh cultured buttermilk 1 – rennet tablet 2 tbsp – salt cheese color – optional

In double boiler, heat the milk to 86 degrees, and add buttermilk. (Also add color at this time if you choose – see Introduction.) Let set at that temperature for 30 minutes. After 30 minutes, dissolve rennet in $\frac{1}{4}$ cup of cold water and stir thoroughly into the milk. Let set another 30 minutes. Continue to maintain 86 degrees.

After the milk is coagulated, cut into 3/8" squares. Wiggle inner pot for 5 minutes, then let set for 10 minutes (still at 86 degrees). Slowly heat the milk to 100 degrees by raising the temperature 2 degrees every 5 minutes. This should take about 35 minutes. Cook at this temperature until firm (about 1 hour). You can test for firmness by gently squeezing a handful of curd and releasing it suddenly. If it breaks apart easily and shows little tendency to stick together, it is ready.

Remove inner pot and let the curd settle to the bottom. Dip off most of the whey. Pour the curd into a cheesecloth lined colander. Let stand until the whey is expelled. Stir occasionally to prevent lumping.

When the curd temperature has cooled to 90 degrees (stick your thermometer into the curd while it is draining), add salt and mix thoroughly. As soon as the salt is dissolved and the curd temperature is 85 degrees, put the curd into a form. (For this cheese, you can use a No. 10 can and punch holes in the bottom from the inside so the rough edges will be on the outside.) Cut a round piece of cheesecloth to fit the bottom of the can and one for the top. Place cloth in the bottom of the can and fill the can with the curd. Place the second cloth on top.

Make a follower out of a non-resinous wood and place it on top of the curd. Make sure it protrudes well above the top of the can to allow for compacting. Place a board across the top and weight it down with 12-15 lbs. of weight for 10 minutes. Increase the weight to 25-30 lbs. and press for 1 hour.

Remove cheese from the press and dip into warm water. Cut a cheesecloth bandage 2" wider than the cheese and long enough to wrap around the sides with 1" overlap.

Turn the cheese on its side and roll the bandage tightly around it. Replace the bottom round cloth into the press, return the cheese to the press, add the top round cloth and follower and press with 30-40 lbs. of weight. Press for 20 hours.

Check to see if the surfaces have any openings or cracks. If so, remove the bandage, dip into warm water to soften the surface, smooth it out, re-bandage and put back into the press for about 1 hour.

When the surface is smooth and has no cracks, put the bandaged cheese in the meat or vegetable keeper in your refrigerator until dry (about 4 to 6 days). As soon as the rind has started to form, and it is dry, it should be coated in paraffin (see Introduction). It should then be returned to the meat or vegetable keeper to age at least 3 weeks. It can be aged for months. The longer it ages, the sharper the flavor. Turn and wipe the cheese with a dry cloth often to prevent mold from growing on the surface. Also, wash and dry your keeper often.

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