

Country Cheese – A Primer

By Dan Gill, Ethno-Gastronomist

My wife, Barbara, recently made her special meatless lasagna, featuring handfuls of fresh basil and parsley, and bemoaned the fact that she no longer had my good homemade dry curd cottage cheese and had to resort to ricotta. Ricotta cheese, made from acidified whey, lacks the flavor and meaty texture of dry curd cottage cheese. Commercial (wet curd or creamed) cottage cheese is not an acceptable substitute: It is insipid, entirely too wet, and contains all sorts of additives, including phosphates and stabilizers to bind the added liquids from milk and whey so that we can be sold more water. Dry curd, or acid curd cottage cheese contains nothing but fermented milk and maybe a little salt. It is crumbly, pleasantly tart and can easily be made at home. Due to the health and nutritional benefits of naturally fermented milk products, dry curd cottage cheese has received a lot of attention recently. It is an excellent source of protein, calcium and digestible carbohydrates for dieters, and meets the low-lactose requirements of the Specific Carbohydrate Diet.

I used to make a lot of cottage cheese (and butter and Cup Cheese) at home until our cow died. When we started Something Different, I made cottage cheese from powdered milk so that we had the whey to make our bread. Whey reinforces gluten in bread flour, resulting in a chewier texture that holds up well to our hearty sandwiches. Cottage cheese was actually the by-product. We sold it to the few customers who knew what it was and used it to make dips, spreads and real cheesecake. I then discovered that powdered whey works just as well, so I stopped making cheese at the store.

Cheese making is an art and a science that can be quite technical, but basic country cheeses are easy to make at home, and most methods are quite forgiving. Though the process may take some time, it requires minimal attention and is adaptable to even busy schedules.

Cheese is only coagulated milk protein along with other milk constituents and varying levels of butterfat depending upon the desired end product and method of coagulation. Milk protein can be coagulated by the action of enzymes, heat or acid, each with differing properties, fat content and tastes. Most cheeses rely on enzymes in the form of rennet to stimulate curd formation. Rennet is a family of compounds obtained from calves' stomachs or certain plants that cause milk to coagulate quickly, resulting in firm curd formation before the milk sours or the cream separates. Since rennet-set cheeses, including most farmers and bakers cheeses, do not depend upon lactic acid formation to set, they are relatively high in lactose. Commercial cottage cheese is high in lactose because some is rennet-set and because whey and other milk products are added at the end of the process.

Acids such as vinegar or lemon juice may be used as a shortcut to coagulate milk proteins and make a buttermilk substitute or make cheeses such as some Queso Blancos, Ricottas and Mozzarellas, thus bypassing fermentation. Ricotta (meaning "recooked") is a soft cheese made from whey and/or milk that has been acidified with vinegar and then heated

to precipitate the protein. It is a fine, granular, high-moisture cheese that holds up well at cooking temperatures, but has very little flavor and is high in lactose.

The easiest and most basic way to make cheese at home, and the subject of this article, is to coagulate milk with the lactic acid created when milk is allowed to ferment naturally, resulting in soft cheeses and fermented milk products such as buttermilk and yogurt. Raw milk contains a number of competing microorganisms; some cause spoilage, some cause disease and some are beneficial. The objective of fermenting milk, as with any natural food preservation technique, is to create conditions favorable for beneficial microorganisms to out-compete bad ones. Raw milk contains various strains of Lactobacillus bacteria, which digest lactose (milk sugar) and excrete lactic acid, thus creating an environment hostile to spoilage bacteria. Even with raw milk though, it is a good idea to add a little buttermilk or commercial culture just to make sure that you are starting with a sufficient population of desirable bacteria. Because most of the lactose is converted to lactic acid, cultured or naturally fermented milk products are very low in lactose and can often be consumed by those who are sensitive.

When cow's milk is allowed to sit for a while, the cream naturally rises to the top and is skimmed off. Natural fermentation requires 12 to 24 hours or so in a warm environment for the milk to acidify and thicken (clabber) and so, unless homogenized milk is used, the resulting cottage cheese contains very little fat. Goat's milk does not separate as readily and so soft cheeses made with goat's milk will contain more butterfat.

No cow? No problem! Any milk will work for country cheeses, including store-bought pasteurized milk or even powdered milk. Since such products lack the necessary bacteria, they must be added either by incorporating a commercial freeze-dried culture or by adding a little cultured buttermilk.

To make curds for country cheeses, start with a good non-reactive pot, avoiding aluminum or iron. Enameled canning kettles work well as do stainless steel pots or large Crock-Pots. Dump in whatever milk you have and warm it gently to between 80° and 85°F. Stir in approximately ¼ cup of cultured buttermilk per gallon or the appropriate amount of freeze-dried buttermilk culture. Cover the pot loosely and put in a warm place until the milk curdles and attains the consistency of soft, tender *Jell-O*. Test by tilting the pot to see if the clabber separates from the sides of the container or gently move your finger or thermometer through it. If it splits just in front of your finger, it is ready to cut into curds. If stirred with a whisk or shaken in a jar at this point, you have buttermilk. It is a good idea to put some of this buttermilk into sterile jars to inoculate future batches. Using a long knife, cut the curd all of the way to bottom of the pot into approximately one-inch squares. Then, holding the knife diagonally, undercut the curd as well as you can, or, using a large ladle, scoop one-inch thick layers into another container, resulting in one-inch cubes. Handle curd gently. It should be firm enough to hold shape when scooped, but is soft and easily falls apart to mush if mishandled. After the curd is cut into fairly uniform squares it is allowed to rest for a while as the watery whey begins to leave the soft curds. If eaten at this point it is called "curds and whey." Heat slowly in a sink of hot water or Crock-Pot to between 105° and 110°F, occasionally stirring very gently to

avoid hot spots – hands work fine for this. If heated too fast, the curd will become rubbery. It should take at least 30 minutes to reach temperature, then another 30 minutes or so for the curd to constrict and expel whey. Watch for large pieces and break them with your fingers. The longer you cook it and the higher the temperature, the harder and drier the curd becomes. It is ready to drain when a piece of curd squeezed between the thumb and forefinger separates cleanly without leaving a milky residue. At this point, some people rinse the cooked curds to remove some of the sourness of the lactic acid. I prefer to leave mine tart. Pour or ladle the curd into a cheesecloth-lined colander to drain briefly, then tie the ends and hang to drip over night. If you don't have cheesecloth, any porous coarse-weave cotton fabric will do, such as an old bed sheet or tee shirt. Don't discard the whey, as it contains proteins, minerals and lactose and can be used to make bread, feed animals or to make health or anabolic drinks. When the curds are drained, you have dry curd cottage cheese. Crumble in a bowl and add a little salt, if desired. I usually do not salt the curds initially, preferring to season as the cheese is used. If you mix in a little cream or milk, you have creamed or wet curd cottage cheese that is infinitely better than commercial varieties. If your drained, salted and creamed cottage cheese is lightly pressed with a weight to squeeze out more whey and make a solid block, it becomes the original version of farmer's cheese.

Now that you have a nice tart homemade cottage cheese, there are many things you that can do with it. We sprinkle on a little salt and eat it plain or use it in salads. Our favorite is canned peach halves or pineapple rings filled with cottage cheese and served on a bed of lettuce. It can be flavored with any herbs, spices or seasonings that strike your fancy or can be transformed into spreads and dips by mixing in some sour cream or milk and creaming in a food processor or mixer. As mentioned earlier, Barbara also makes fantastic lasagna using my dry curd cottage cheese. It holds up well in cooking and contributes a somewhat meaty texture.

The Pennsylvania Dutch and Amish do some strange things with cottage cheese. Smearkäse (spreadable cheese) and Kochkäse (cooked cheese, also known as Cup Cheese) are old-world specialties, which are no longer readily available. Smearkäse is ripened acid curd cottage cheese and can become quite rank. With age, the curds soften and can be spread on bread. To ripen, place curds in a container with a loose fitting top or cover with cloth. Place in a warm room and stir a couple of times a day for at least three days. Scrape off the mold before eating.

Cup Cheese is a thick, viscous, tan colored cooked cheese in which acid curds are dissolved by baking soda and heat. It is poured into cups or molds, cooled and becomes semi-solid. The consistency is somewhere between Camembert and silly putty. It can be made with fresh curds, but ripened curds have more flavor. Though fairly bland, it tastes great spread on crackers or homemade bread, is highly nutritious and fat free. It is easily flavored by just about anything. We warm it slightly and mix in diced hot peppers, or garlic powder and chives, or ground country ham, or whatever comes to mind. I have made quite a bit of Cup Cheese in my day and even developed a method for making a flavorful no-fat hard cheese by inoculating Cup Cheese with cultures and molds. I

developed my method to the stage of patenting it, but decided that life was too short to spend it defending patents and moved on to other things.

To make Cup Cheese place fresh or ripened curd from two gallons of skim milk in a stainless double boiler and start to heat. Add one tbsp. of baking soda and stir occasionally. I use a long-handled wooden spoon so that I can leave it in the hot mixture and the handle stays cool. As it heats, it will foam and bubble vigorously, so allow plenty of room in your pot – at least 3 times the volume of cottage cheese. Cook at around 180° F. until foam subsides to a skim (about 2 hours) and the curds melt completely. If you started with unsalted cottage cheese stir in one half tbsp. of salt. Pour into heat resistant containers to cool, uncovered. I usually remove the thin layer of remaining foam as the cheese cools so that I get a solid skin to protect it during storage. You are now faced with a pot that looks like an industrial accident. It will clean up fairly easily, though. Fill your pot with hot water and a couple of tablespoons of baking soda and let it soak over night. Scrape off the softened residue with a knife and clean with a scouring pad and soap.

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