

The S&S Homestead Foodbook

Chapter Five

Dairy



Dairy

Our decision to purchase a dairy cow and produce our own dairy products was a natural step in our move toward self-sufficiency. We already produced beef, lamb, pork, chickens, eggs, vegetables, fruit, and herbs. We were still dependent on outside sources for organic grain (for animal feed) and dairy products. So Henning planted a two-acre field to barley, and he and I went in search of the perfect cow. We found her at Our Lady of the Rock, the farming monastery on Shaw Island. Mother Therese had a Jersey old enough for breeding.

Jerseys are an heirloom strain, bred for their high butterfat milk, their hardiness, and their gentle nature. They are also beautiful: brown, with distinctive black and white markings on face and legs.

Loveday supplies us with the best milk, butter, buttermilk, cream, ice cream, sour cream, yogurt, whey, and cheese that can be had. Our owning our own cow also precludes our participation in a particularly abusive aspect of agribusiness – dairy farming.

The contrast between our family cow and cows exploited by commercial dairies is beautifully expressed by our friend Tanya Barnett, who wrote an article for *Earth Ministry* about Loveday after Tanya spent a weekend with us on the farm. She writes:

With the little that I know about the dairy industry in our country, I realized how unique it is for a cow to be treated as a co-worker rather than a machine – or, more accurately, a dispensable cog in a larger industrial machine. This industrial dairy machine works to produce the greatest quantities of milk with the smallest input costs (e.g. feed, acreage, buildings, etc.). For decades, farm policies in our country have supported and subsidized this mechanistic model, which requires placing large numbers of cows on as little land as possible. Most cows in our country (over 85 per cent) now live in Concentrated Animal Feeding Operations, or “CAFOs”. But such a mechanistic system is actually “too” productive: milk quantities far exceed consumer need. Our current oversupply of milk floods the national economy and threatens to supplant remaining small-scale, sustainable milk production here and around the world. The problem of overproduction is so great that, for example, in 1985 our government paid over fourteen thousand dairy farmers to kill their cows and get out of the dairy business. These cows were “dispensable cogs” and their milk a waste product.

CAFO cows don’t live like Loveday. Loveday produces a quantity of milk that’s natural to her body (about twenty pounds a day); after receiving stress/disease-producing (e.g. mastitis, uterine disorders, enlarged internal organs) injections of recombinant Bovine Growth Hormone (rBHG), her cow sisters can produce a painful forty-nine pounds of milk. Loveday grazes freely and eats food that her body was created to consume; CAFO cows typically never taste fresh grass – they’re confined to small areas and fed a highly concentrated diet that is foreign and stressful to their bodies. Loveday’s manure is a blessing to the land;

the enormous quantity of CAFO cow manure is almost always an air/water pollutant, an environmental curse. Loveday is treated as a co-worker and source of God's grace; CAFO cows are treated like expendable chattel, and their abundant milk like a problem to be solved. Loveday can expect to produce her milk for at least twelve years; her CAFO counterparts usually "wear out," cease milk production, and are slaughtered within two years (Barnett, 8).

I would like to thank Tanya for her insightful comments (*please see Works Cited for a reference to the entire text of her article*).

The sad news about dairy cows moves right into to the American fast food industry. People not only ingest hormones and antibiotics with the non organic milk they drink, but with the hamburger they eat. MacDonald's "proudly" purchases meat from cows raised in America. That might ease consumer consciences about ravaged rain forests, but what MacDonald's doesn't make public is that their cheap hamburgers are made from the carcasses of worn out, hormone and antibiotic-riddled dairy cows. (Schlosser 204).

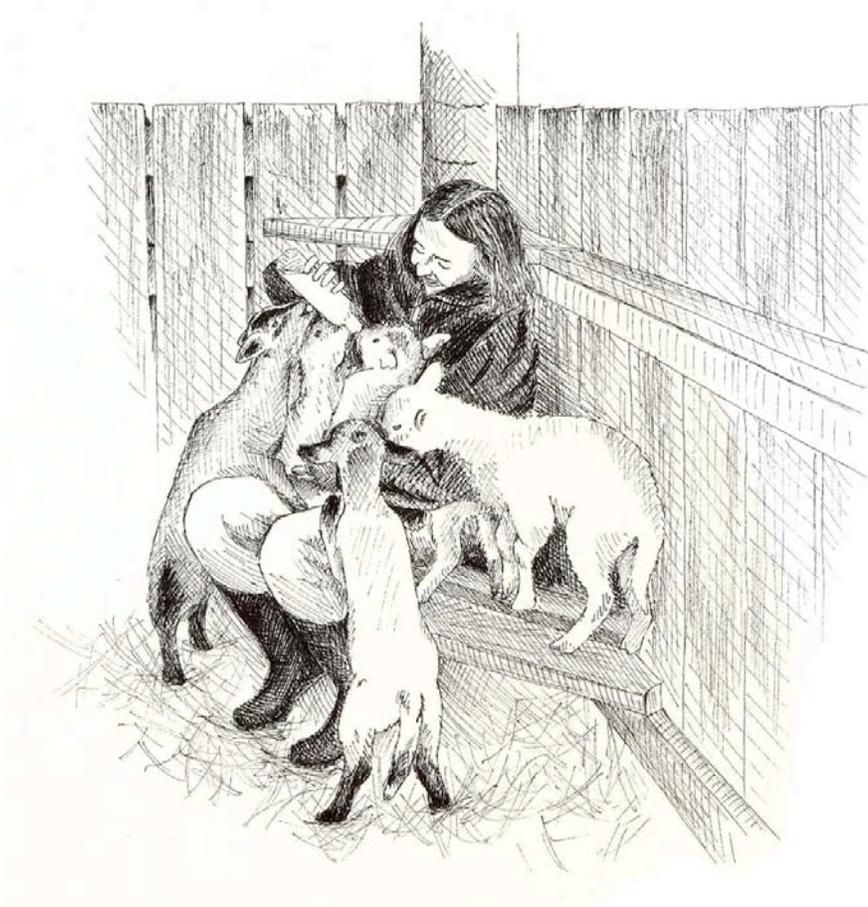
The good news is that, despite the fact that we don't hear much about them, family cows are not uncommon. In his book *The Family Cow*, Dirk Van Loon notes that when he set out to find a dairy cow for his family's use, the county extension agent assured him that there were none. That is, none had made it into the records. But Van Loon knew of many such cows, and secured one without trouble. So did we.

Having Loveday establishes the rhythm of our days on the farm. Morning and evening milkings begin and end our workdays. The whole process takes about an hour each time: cutting up feed for her (typically potatoes, sugar beets, apples, greens, pumpkins, cabbage, or whatever else is in the garden), washing the jars and milking pails, getting her in from the pasture (never a problem) cleaning, milking, and grooming her, decanting the milk. Two months before parturition we dry her off so that all of her energy can go into growing her calf, but we continue to have daily sessions with her. We freeze butter and milk to use while she is dried off.

Loveday's milk changes with her natural cycles, and with the seasons. When the calf is born, it must ingest colostrum in order to obtain natural antibodies that build its immune system. Although the calf must take these in during the first twenty-four hours after birth, the cow continues to produce them for about three weeks after parturition. So even after the colostrum has ceased to dominate the taste and appearance of the milk, we cannot make quark, cheese or yogurt from it, because the natural antibodies crowd out the bacteria necessary for fermentation. It takes about three weeks before we can process her milk successfully. In winter, when Loveday eats hay, the butterfat content is relatively low; with the first flush of spring grass, you can stand a spoon in the cream, and make plenty of butter.

Regardless of its stages and consistency, raw milk from grass fed cows is one of the best foods you can ingest. High in omega-3s (derived from grass) low in omega-6s (derived from grain), it provides vitamins, minerals, protein, and enzymes, and helps prevent high blood pressure, stroke, and osteoporosis. It is a whole, living food.

Pasteurization



Unfortunately, in this country, “food security” usually means that the food we buy in the store has been processed, which means it is pasteurized, which means it is dead. Pasteurization relies on heating food, such as milk, to such a temperature that the enzymes (and many of the vitamins) are killed, and the minerals less accessible.

Enzymes are complex proteins that act as catalysts in almost every biochemical process that takes place in our bodies (Fallon, p. 46). Unless they are present in the foods we ingest, the pancreas must produce them. Americans suffer from pancreatic disorders (including pancreatic cancer) at a rate much higher than cultures whose food traditions include raw and fermented foods.

In pasteurized dairy products, the vitamin C content has been reduced by 50%; other water-soluble vitamins by up to 80%; and the availability of the minerals (such as calcium, chloride, magnesium, and potassium), has been compromised. Calcium, the mineral most people are concerned about because of its bone-building function, cannot be absorbed in the body without vitamin D, which is destroyed during pasteurization. So after pasteurization, two different forms of synthetic vitamin D may be added to milk. One form (vitamin D2) is a toxin linked to heart disease; the other (vitamin D3) is difficult for the body to absorb (Fallon 35).

Pasteurized milk is also usually homogenized, a process in which the fat particles of cream are forced through tiny pores at great pressure, so that they remain in suspension rather than rising to the top as they do in natural milk. This process changes the cell structure of the fat particles, so that your body does not recognize them as food.

The sad fact about pasteurization is that it is totally unnecessary. It has been embraced by an industry that relies on long-distance shipping. Milk produced in Oregon may travel to Wisconsin for packaging, then back to Oregon to sit in grocery store coolers, and then in your refrigerator. After the expiration date, it becomes rancid.

Furthermore, pasteurizing milk does not guarantee its safety: in fact, the only cases of milk-borne salmonella have occurred in commercial pasteurized milk. Johne's disease, (a wasting disease affecting the intestinal system of cows) and paratuberculosis both survive pasteurization. Crohn's disease, which is a debilitating form of colitis in humans, is caused by the same bacterium that causes Johne's disease in cows. Whether or not the illness suffered by bovines can be transmitted to humans is still under investigation. There are people, including Dr. Jordan Rubin, author of *The Maker's Diet*, who claim to have been cured of Crohn's disease by drinking raw milk and its fermented products. The cure is effected by the presence in raw milk of the natural bacteria necessary for us to digest and metabolize our food.

Raw milk from a healthy cow, properly handled, will remain sweet for over a week. After that, it turns pleasantly sour, and can be used for cooking; at both stages, it is perfectly safe, because raw milk has built-in defenses – beneficial bacteria that fight off harmful bacteria.

There have been cases of e-coli outbreaks from non-certified raw milk dairies, caused by egregious mishandling, where the milk has been contaminated by cow manure. If you obtain your raw milk from a neighboring farmer, you should observe the process yourself. Is the cow healthy? Are the pails and jars washed before milking? Are the milking parlor and the processing kitchen clean?

An option to purchasing raw milk is to enter a co-operative, where you milk and care for the cow yourself, and take responsibility for the pails and jars. The experience is deeply rewarding.

There are many products to be made from raw milk.

Yogurt

People who are lactose intolerant and cannot digest sweet milk can usually digest fermented milk products, yogurt especially.

Heat a quart of milk until the surface is dimpled and the milk is steaming; then let it cool to 115 degrees. Whip in ½ cup commercial yogurt as a culture.*

Pour the milk and yogurt mixture through a strainer to remove any lumps. Pour the strained yogurt into cups in a yogurt maker. (People use all kinds of containers and methods to make their own yogurt, but we find that a commercial yogurt maker keeps the culture at a steady temperature, and makes an excellent product.) The instructions on most commercial yogurt makers will tell you that in four hours your yogurt will be firm – we find that overnight works better.

We like yogurt with a little fruit, honey, or maple syrup as a high-powered lunch, or on pancakes. Yogurt can be used instead of sour cream for many recipes.

*Choose your yogurt culture carefully. If you want to avoid the dried milk or pectin that make yogurts firm, your choice of culture will be soft. Your own yogurt will reflect the consistency of the culture. Check the label to see that the culture contains all of the important bacilli that your digestive system needs, such as acidophilus, bulgaricus, thermophilis, and bifidus. Books about food processing will tell you that you can use the last bit of your own yogurt as a culture for a new batch, but you may find that the bacteria grows weak and will not inculturate the new yogurt effectively.

Dill and Yogurt Dressing

This is my favorite salad dressing. I often double the ingredients and keep a batch on hand for use over fish, rice, baked potatoes, or vegetables.

1 ½ C yogurt
½ C mayonnaise
2 cloves garlic, peeled and diced
2 T fresh lemon juice
½ C dried dill
Pepper to taste

Mix all ingredients and chill.
(Note: Henning prefers this dressing without mayonnaise.)

Custard

This is a favorite for desserts, lunches, or even a quick breakfast. We like to top the custard with fresh or frozen raspberries.

2 C milk
2 eggs
¼ C honey
1/8 tsp salt
½ tsp vanilla
Nutmeg

Beat together the milk, eggs, honey and salt, then add the vanilla and beat again. Pour the custard into six custard cups, and sprinkle nutmeg over the top. Place the cups on a rack over a baking dish. Place the dish in a preheated 300 degree oven, and pour an inch of hot water into the baking dish. Bake for 40 minutes, or until custard is firm.

Rice Pudding

This recipe comes from my mother. It is a true comfort food, and we eat it for breakfast, lunch, dinner, or dessert.

½ C white rice
½ C sugar
½ tsp cinnamon
½ tsp nutmeg
1 generous T butter
4 C milk
1 C raisins

Mix ingredients (except raisins) in two casserole dishes. Bake at 350 degrees for two hours, stirring every half hour. Add raisins the last half hour. You might want to place the casseroles on a cookie sheet to prevent spills.

Butter

The first move Henning and I made was from margarine to commercial butter. The second move was to unsalted organic butter. The difference in taste was incomparable, as well as the assurance that we were not ingesting trans fats, hormones or antibiotics. With Loveday came our final move to making our own butter. It is as superior in taste as fresh milk is from milk that has been pasteurized, homogenized and shipped countless miles from producer to consumer.

People make butter by using hand churns, or just shaking it up in a jar. I use a food processor. I pour a quart of chilled cream into a 14-cup food processor, turn on the power and let it run until the cream has separated into buttermilk and butter. I drain off the buttermilk, reserve it for pancakes, biscuits, waffles or cake, then “wash” the butter by pouring in a little cold water and pulsing it in the bowl with the butter for a few seconds, repeating about five times until the water is clear. I put the butter in a bowl and with a spatula press out the water, careful not to spread the butter up the sides of the bowl, so it does not become oily. I finally divide the butter into fist-size chunks, knead out any remaining water with my hands (remaining moisture will make the butter hard) and then wrap it in plastic wrap and foil and then freeze whatever we won’t use right away.

Buttermilk Pancakes

1 C white flour
1 tsp sugar
½ tsp salt
¾ tsp baking powder
½ tsp baking soda
1 egg
1 C buttermilk

1 tsp melted butter

Combine all dry ingredients in one bowl. In a second bowl, beat egg, and mix with buttermilk and butter. Combine dry and wet ingredients with a few swift strokes of a whisk. Cook in a little vegetable oil on medium heat, or without oil in a non-stick pan. We like to serve these with butter, applesauce, yogurt, and a little maple syrup.

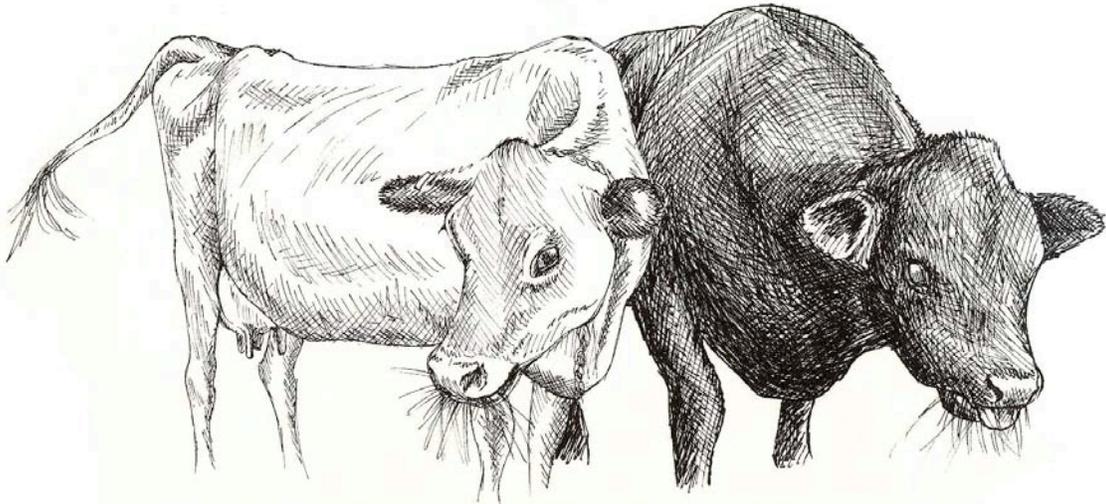
Buttermilk Biscuits

2 C white flour
2 tsps sugar
2 tsps baking powder
1 tsp salt
½ tsp soda
1/3 C butter
2/3 C buttermilk

Heat oven to 450. Measure flour, sugar, baking powder, salt, and soda into a bowl. Cut in butter thoroughly, until the mixture looks like meal. Stir in buttermilk.

Round up the dough on a lightly floured board. Knead gently for a minute, and then roll out the dough to ½ inch thickness. Cut with a biscuit cutter. Place on ungreased baking sheet. Bake 10-12 minutes, until golden brown.

An alternative is to make drop biscuits. After stirring, drop large spoonfuls of dough onto a lightly greased cookie sheet. Bake as above. These are superb for shortcake.



Buttermilk Spice Cake

This cake is delicious, very easy to make, and serves large numbers of people.

2 & ½ C white flour

1 C sugar

¾ c brown sugar (packed)

1 tsp baking powder

1 tsp soda

1 tsp salt

¾ tsp cinnamon

¾ tsp allspice

½ tsp cloves

½ tsp nutmeg

1 & 1/3 C buttermilk

½ C butter, melted

3 eggs

Heat oven to 350. Grease and flour large baking pan (13" x 9").

Measure all ingredients into large electric mixing bowl. Blend 1 minute on low speed, scraping bowl constantly. Beat 3 minutes on high speed, scraping bowl occasionally. Pour into pan.

Bake 45 minutes, or until a knife inserted into the center of the cake comes out clean. Cool in pan.

Quark

Quark is a European-style light cheese, made by fermenting raw milk. It has high food value (four times the protein of whole milk or yogurt, four times the folic acid of milk, and twice the B2 and B12 vitamin levels, but one-tenth of the fat and cholesterol), and is especially recommended for children because it contains a number of trace minerals required for healthy bone development, particularly calcium and phosphorus. In the long run, it builds bones. It is also a great source of energy. Henning and I find that a breakfast that includes quark keeps us satisfied all morning.

Some uses of quark:

- Mix with honey or fruit for a delicious breakfast dish or dessert.
- Mix with herbs and minced garlic and serve over baked or boiled potatoes.
- Spread over toasted bread, and cover with jam.
- Combine with other soft cheeses for a sandwich spread.
- Combine with caraway seed, tomatoes, ham, radishes, cucumber or herring as a side dish.
- Use in place of ricotta cheese – quark is especially good in lasagna.
- Mix with minced onion and a bit of salt, and stuff celery with it. Sprinkle with paprika.

To make: skim the cream from raw milk (one half to a full gallon is the best quantity), and heat the milk slowly until it reaches 80 degrees. Pour it into a glass or enamel container, cover it lightly with cheesecloth (just to protect the surface; do not cover it tightly) and let it sit at 85 degrees for about two days. My spot for doing this is a cupboard that Henning rigged up for rising bread – it's a storage cupboard with a light bulb and a thermostat, which keeps the temperature constant. You might try the top of your water heater, a gas stove with just the pilot light on, or a heated floor. If the heat is not constant, the milk will turn sour without solidifying.

The amount of time the milk needs to clabber properly can be from one to four days, depending on the cycle of the cow, and ambient temperature; just check it every day. When the quark is ready, it is solid, with a bit of fermented butter on top. Skim off the butter; you can use it on baked potatoes or anywhere else you would use sour cream.

Cut the curd with a knife into ½-inch chunks. Line a colander with cheesecloth, and put the colander over a deep bowl to catch the whey. Pour the quark into the lined colander and cut the curd again, so that the whey can drain. Drape the cheesecloth over the colander, and put the container in the refrigerator (or another cool, protected spot) until the whey has drained into the container. Lift the quark by gathering the edges of the cheesecloth together, and then gently squeeze out any remaining whey.

To finish the process, press the quark through a strainer, using the back of a spoon. You will have a delicate, fine-grained cheese, very sweet smelling, and delicious to the taste.

We eat quark several times a week. Henning also uses it in a cheesecake that is so light and delicate in taste that even I, not much for desserts, can't get enough.

Henning's Cheese Cake

Crust:

6 T butter

1 egg

1 & ½ C flour

1 T baking powder

4 T sugar

A dash of salt

(Note: All ingredients should be at room temperature.)

Sift flour, salt, and baking powder on a counter top or board, and make a shallow well. Put in the egg and sugar, cut the butter into flakes and distribute it around the rim of the flour. With a fork, mix eggs and sugar, distributing small amounts of flour into the mix until it is like fine meal.

With your hands, rapidly incorporate the remaining flour and butter into the egg and sugar mixture. Knead as little as possible until the dough is smooth. Use a little of the flour to dust hands and board to keep dough from sticking.

Form dough into a ball and place on a foot-long sheet of waxed paper dusted with a little flour. With a rolling pin, roll into a round shape about 2 inches larger than a 9-10 inch spring form pan.

Grease the pan and place it upside down onto the dough and, placing one hand gently under the waxed paper, turn the dough upside down so that the dough settles evenly at the bottom of the pan. With your fingers, press a 2-inch high edge in place. With a fork prick the dough on bottom and sides, and bake at 350 for 15 minutes. Remove from oven.

Filling:

3 C quark
3 T vegetable oil
1 & ½ C sugar
3 egg yolks
¼ C corn starch
½ tsp vanilla extract
3 egg whites
Coarsely grated peel of one small lemon.

Place the quark in a mixer. Add oil, sugar, egg yolks, cornstarch and vanilla. Mix until airy, but do not over mix.

Beat the egg whites and fold into filling.

Using a spatula, spread filling into crust, mounding it slightly to the middle.

Bake in a preheated oven at 350 for about 45 minutes on the second rack from the bottom. Do not open oven door until the last ten minutes of baking. Test for doneness with toothpick or knife.

Let the finished cake cool in the turned-off oven with the door open. The filling is a custard, and will collapse if the cake is removed too early.

The cake can be served immediately, but is best after it has rested in a cool place (but not in the refrigerator or at normal room temperature) for at least 12 hours.

Henning's Quarkstollen

Stollen is a traditional German Christmas bread. One recipe is available in *The Joy of Cooking*. I prefer Henning's version because the addition of quark makes the bread light and delicate in flavor. It is especially good for a holiday breakfast.

4 C flour
2 & ½ tsp baking powder
2 C quark
2 eggs
8 T sugar
1 tsp vanilla
A pinch of salt
2 T grated lemon peel
2 T chopped almonds
2 T chopped raisins
2 T chopped citronade (see below)
2 T chopped orangeade (see below)

To make citronade and orangeade, start with 2 C each of finely chopped lemon and orange peel. Place each in a heavy pan; cover each with 1 & ½ C cold water, bring to a boil, and simmer for 10 minutes or longer to reduce bitterness. Drain and repeat 3-5 times. For each cup of peel, make a syrup of ¼ C water and ½ C sugar. Add peel and boil until all syrup is absorbed and the peel is transparent. Roll in powdered sugar and spread on a rack or a plate to dry. The resulting candied fruit will keep for years in an airtight bag. Please do not insult this cake by using commercial “candied fruit”.

Glazing:

4 T melted butter

6 T powdered sugar

Butter and flour for baking sheet

Grease and flour baking sheet. Preheat oven to 375. Mix flour with baking powder. Sift onto a counter top, and make a shallow well.

Place quark, eggs, sugar, vanilla, salt, lemon peel, almonds and dried fruit in the well. Quickly knead all ingredients into a firm dough. Dust hands and counter top with flour as needed to prevent the dough from sticking.

Roll the dough out with a floured rolling pin into a large flat oval, about 1 foot square. Fold over so that the edge of the upper fold is about 3 inches back from the lower edge. Shape into a 12x6 inch loaf. Place on prepared baking sheet. Bake on lowest rack for an hour.

Remove cake and cool on a rack. For glazing, melt butter, and brush it over the top of the loaf. (It will soak into the loaf.) Sift powdered sugar thickly over the top and sides of the loaf.

Wrap the cooled *Stollen* in plastic wrap and tin foil, and store it in a cool place, but not in the refrigerator or at room temperature. Flavor and texture improve with age. The *Stollen* will keep for several weeks, or it can be frozen.

Whey

Little Miss Muffet knew what she was doing. Whey – the liquid left from the curds that make up quark – is cholesterol free and contains substantial levels of B vitamins. We used to feed the whey to the chickens or pigs until Henning’s niece, Henriette, showed us a far better use for it:

Smoothies

Place a cup of fresh or frozen berries (we like raspberries best) in the bowl of a food processor, and pour over it about a third cup of honey. With the machine running, pour whey into the feeding tube. The mixture will foam up immediately – you’ll have to scrape it out of the bowl. Serve in glasses, with a spoon. This drink is very high in protein, and absolutely delicious! We find that if we drink this for breakfast or lunch, it

provides enough energy to keep us going for a long time. It is nice to serve this to guests on holidays. When Henning needs a power drink, I add a raw egg along with the whey.

Sour Cream

Homemade sour cream is very easy to produce, and is far superior to what you can buy in the store.

- Sterilize three half-pint jars and lids
- Heat 1 C minus 2 T cream and 1 C whole milk to 72 degrees
- Stir in 1 T plus 2 tsps cultured buttermilk (you cannot use the buttermilk you have made with your own butter – it has to be cultured)
- Fill jars and place at 72 degrees for 16-18 hours
- Stir up the cream in each jar and place in the refrigerator to set for 48 hours
- Use within a week.

Cottage Cheese

Like homemade sour cream, homemade cottage cheese is much better than anything you can buy. Although the directions seem demanding, it is not difficult to make, though I find it handy to be doing other cooking in the kitchen while the cottage cheese is on the stove so that I can monitor the temperature.

You will need a glass or ceramic bowl that will fit on top of a stove-ready pan. I use a ceramic crock pot that balances nicely on a small water bath canner.

You will use ½ gallon raw milk and 2 tsps sea salt. Fresh cream is optional.

Start the process as for quark. Heat ½ gallon of raw milk to 80 degrees. Put it in a warming cupboard, in a gas stove next to the pilot light, or anywhere else that will maintain a steady 80 degree temperature and thus clabber the milk. This process will take from 1-4 days. Check it every day. When it separates into solids when cut with a knife, it is ready.

Leave the quark in the bowl and cut it in parallel cuts to make ½ inch strips from one end of the bowl to the other. Then rotate the bowl and make parallel cuts perpendicular to the first, also in ½ inch strips, forming a crisscross pattern on top.

Fill the pot with hot water, and fit the quark pan into it so that it is held steady by its handles or size; it should fit on top of the pan. The hot water in the pan should go up the sides of the bowl containing the curds. Insert a milk or candy thermometer in the curds. Slowly raise the temperature of the curds to 110 F, stirring occasionally.

Hold the temperature of the curd at 110 for about five hours. This sounds difficult, but can be done even on an electric stove with only occasional adjustments. If the temperature falls below or exceeds 110, persevere! You will have a firmer curd at a higher temperature, a softer one at a lower temperature, but you will have cottage cheese at the end of the process.

Line a strainer with several layers of cheesecloth and pour the curds and whey through. Allow the curd to drain until most of the liquid is gone (reserving whey for smoothies), then pour 1 cup cold water over the curd and drain the liquid, gently moving the cheesecloth to get all the liquid out.

Place the curds in a bowl. Sprinkle the salt over the curds a bit at a time, and stir to combine, tasting as you go. Transfer the cottage cheese to a glass jar, place in the refrigerator and eat within a week. You can pour a little fresh cream over the curds before serving if you like.

Queso Blanco ***(White Cheese)***

This recipe is adapted from Ricki Carroll's *Home Cheese Making*. This book is an excellent source for cheese making: clearly written recipes that take the mystery out of this ancient craft.

Queso Blanco is a firm white cheese, widely used in Latin America. It is very fast and easy to make. The result is a curd that can be cut into pieces and eaten by itself, or used in soup, casseroles, and stir-fries without losing its texture. It has a mild, sweet flavor.

1 gallon whole milk

¼ C apple cider vinegar

Using the same double-pot method as for cottage cheese, heat the milk to 185 degrees, stirring occasionally so that the milk heats evenly. Slowly add the vinegar, a little at a time, stirring, until the curds separate from the whey. Do not allow the milk to boil.

Ladle the curds into a colander that has been lined with several layers of cheesecloth, and drain. Tie the cheesecloth into a bundle and hang to drain completely. (I tie the cheesecloth edges together with cotton string, and use another piece of string to tie the bundle to the handle of a spoon suspended over the pot.)

Drain the curds thoroughly. Store in the refrigerator and use within two weeks.

Panir

Panir is an Indian cheese. It is mild, and readily absorbs the flavors of anything it is cooked with.

I prefer this recipe (also adapted from Carroll's book) to Queso Blanco in that it makes more curd and a lighter cheese.

1 gallon whole milk

8 T lemon juice (use bottled lemon juice – fresh lemons vary in their acidity)

Using the same double pot method as for Queso Blanco, heat the milk to a gentle boil, stirring occasionally so that the milk heats evenly. Reduce the heat to low and, before the foam subsides, drizzle in the lemon juice. Cook for 10-15 seconds.

Remove from heat and continue to stir gently until large curds form. Once you have a clear separation of curds and whey, remove from the heat and let set for 10 minutes.

When the curds are settled below the whey, they are ready to drain. Ladle the curds into a colander lined with a double layer of cheesecloth. Tie with a string and hold the bag under a gentle stream of lukewarm water for 5-10 seconds to rinse out the lemon juice. Gently twist the top of the cheesecloth to squeeze out extra whey.

Hang the bag of curds to drain for 2-3 hours, or return to the colander and place a 5 lb weight on top and press for 2 hours.

Unwrap the cheese. Eat it right away, or store in the refrigerator for up to two weeks.

Neufchatel

For this wonderful soft cheese, you will need rennet and mesophilic starter. I get these supplies and other cheese making equipment from Hoegger Supply Company.

- 1 gallon pasteurized whole milk
- 1 pint pasteurized heavy cream
- 4 oz (1/2 C) prepared mesophilic starter
- 3 drops liquid rennet diluted in 1/3 C cool, unchlorinated water
- Sea salt
- Herbs and garlic (optional)

Mesophilic Starter

It takes some time to prepare this culture properly, but you will have enough for several batches of cheese, and the starter keeps for months in the refrigerator.

1. Sterilize a clean 1 quart canning jar and its lid by placing them in a water bath canner filled with sufficient water, and boil them for 5 minutes.
2. Cool the jar and lid and fill the jar with fresh skim milk, leaving ½ inch of head room. Tightly cover the jar with the sterilized lid.
3. Place the jar in a water bath canner with the water level at least ¼ inch above the top of the lid.
4. Place the pot on the burner and bring the water to a boil. Let it continue at a slow boil for 30 minutes.
5. Remove the pot from the heat and let the water cool until you can lift the jar out of it with your hand. Remove the jar from the water and let it cool to 72 degrees, away from drafts. (Monitor the room's temperature with a thermometer to avoid contaminating the milk.)
6. Inoculate the milk (still at 72 degrees) by adding the contents of the freeze-dried mesophilic starter culture packet. (If the starter is not premeasured into separate packets, the package directions will tell you how much to add.) Add the starter quickly to avoid contamination. Cover the jar with the lid and shake gently to mix.
7. Place the jar where the temperature can be kept at 72 degrees for 15 to 24 hours during the ripening period. (For me, this is our heated bathroom floor or the warming cupboard in the barn kitchen.)

8. The culture will have the consistency of good yogurt. It will separate cleanly from the sides of the jar and have a sweet, slightly acidic taste.
9. Once the culture has thickened, refrigerate it immediately. Freeze the remaining starter powder. Unless you intend to make a lot of cheese within a few days, keep the culture you will need within a week in the refrigerator and freeze the rest. To freeze the prepared starter culture, sterilize two plastic ice cube trays. Fill the trays with starter culture, cover with plastic wrap, and freeze them solid in the coldest part of your freezer. Transfer the frozen cubes into airtight plastic bags and put them back in the freezer. They will keep their strength for up to a month. Be sure to label them with the date you made the culture. Each cube is a convenient one-ounce block which can be thawed and used during that time.

To Pasteurize the Milk

Pour the milk and cream into a stainless steel or enamel pot, and place the pot into another, larger pot containing hot water. Put the double boiler on the stove top. Heat the milk to 145 degrees, stirring occasionally to promote even heating. Hold the temperature at 145 for 30 minutes. The temperature and time are important: Too little heat or too short a holding time may not destroy all the pathogens. Too much heat or time can destroy the milk protein and result in a curd that is too soft for cheese making.

Remove the pot of milk from the pot of water and put it into a sink filled with ice water that is at the same level as the milk. Stir constantly until the temperature drops to 40 degrees. Rapid cooling prevents the formation of unwanted bacteria.

To Make the Neufchatel

1. Combine the pasteurized milk and cream. Heat to 80 degrees.
2. Add the starter and mix thoroughly (I use a whisk.)
3. Add 1 tsp of the diluted rennet. Stir gently with up and down motions. (Too little rennet, and the cheese won't set; too much, and the cheese will be rubbery.)
4. Cover and let the mixture set at a room temperature of at least 72 degrees for 12-18 hours, until it is a thick curd that looks like yogurt.
5. Pour the curd into a colander that is lined with double layers of cheesecloth, and place the colander in a pot with room to drain the whey. Tie the corners of the cheesecloth over the curd. Place a plate (I use a wooden salad plate) and a nine-pound weight (I use a nicely shaped rock) on the plate. Cover and refrigerate for 13 hours. (If there isn't room in your refrigerator, put the colander in a safe, cool place outside.)
6. Remove the cheese from the bag and put it in a bowl. Divide it into four rounds. Any cheese you are not going to eat within a week or so, you can wrap and freeze.
7. When it comes time to eat the cheese, add a little salt, and herbs to taste. We are partial to minced chives and garlic, but you could use fresh herb you like. Add a little fresh cream until you have a smooth, spreadable cheese.

This delicious prepared cheese makes a wonderful hostess gift.

Cream Cheese

This recipe is adapted from Ricki Carroll's *Home Cheese Making*. She provides several recipes for cream cheese. This one I prize because it is easy, because the end product has not been heated above 75 degrees, and thus remains a whole food, all of its enzymes intact, and because the results are fantastic.

1 gallon skimmed raw milk.

½ C cultured buttermilk (remember, this is not the buttermilk you get when making butter, but the cultured product you buy at the store).

½ tsp liquid rennet

In a large pot (I use a stainless steel stock pot) heat the milk to 75 degrees. Add the buttermilk and stir well. Add the rennet and whisk it into the milk, stirring briskly for 1 minute. Cover and let sit at 72 degrees for 12-15 hours.

After the cheese has set, ladle the curds into a strainer lined with cheesecloth, and let the whey drain for a couple of hours. Then place into perforated plastic cheese molds, or the improvisation I use – clear plastic food grade containers with holes punched in the bottom (be careful not to use opaque containers that will transfer a plastic taste to the cheese). Place a rack on a casserole dish, put the containers on the rack, place in a refrigerator or cool spot, and let the last of the whey drip. This will take about six hours.

Remove cheese to the refrigerator, where it will keep at least a month. This smooth, creamy cheese does not need salt, herbs, or any other condiments. Spread it on bread, use it in omelettes or pizzas or lasagne or in stuffed celery – the possibilities are endless!

Recommended Reading

Fallon, Sally. *Nourishing Traditions*. Washington, D.C.: New Trends Publishing, 1999.

Grohman, Joann Sills. *Keeping a Family Cow: A Complete Guide to Raising Cows and Producing Dairy Products*. New York: Charles Scribner's Sons, 1981.

Schmid, Ron, ND. *The Untold Story of Milk: Green Pastures, Contented Cows, And Raw Dairy Foods*. Washington, D.C.: New Trends Publishing, 2003.

Van Loon, Dirk. *The Family Cow*. USA: Garden Way, 1976.