



Goats

Transcript – Basic Cheese Making

Cheese making is extremely hard work. You're gonna need a lot of very expensive equipment. You'll actually want to have a laboratory-style kitchen so that you can keep everything perfectly sterile and you are going to need to buy a lot of supplies that cost a fortune on a regular basis if you want to make good cheese. That's why really only sophisticated people like to make it. I'm just kidding guys. Tasha Greer, contributor at The Grow Network, here to talk to you about the real deal on making cheese. Cheese is so simple. It is basic, human stuff that has been taking place for thousands of years, so don't let the process intimidate you. I'm going to show you just a couple techniques today to get you started, but even when you get into the more complicated stuff that requires aging and special cultures, it's still just a few extra steps. It's not a complicated process, so don't ever be intimidated by cheese.

I did bring you outside to do this though because it's a nice summer day. It's about 85-86 degrees out here and that is actually the perfect conditions for making cheese. When you walk out of the milk room, your milk is still warm from coming out of your goat's udder and you have warm conditions outside. This is perfect, perfect conditions for culturing cheese. Now you can totally just strain your milk and let nature do its thing for a couple of hours and develop some fun aromas and flavors and things like that. And that's how people have done it for ages and then if you find a nice flavor, then you can just take a little bit of that, you know, and save it for the next batch. You add it to the next batch, and you keep it going. And that's really all about making natural cultures. I'm gonna give you a link to a book for making that kind of cheese in your homework.

Personally though, I like just a little bit more control and I like the process to be a little expedited. So, I use a few tiny, special things that will cost you a couple dollars. To make cheese quickly and safely, you need some sort of acidifying agent and for me, I use citric acid. This costs about a dollar, this container right here. I just got it at sort of the bulk goods store in my area. Amish stores have it. You can even find it any place you can get canning supplies, so this costs a little over a dollar and this will last me a couple of years. And so that basically just -- I put about, you know, 1/16th of a teaspoon, 1/8th of a teaspoon depending on how much milk I've got. Not a whole lot, but that'll just sort of start the process of culturing the milk a little bit faster.

You also needs some cloths, and these are just for straining and honestly you can buy these bulk online, you can get them at home goods stores. They're just flour sack towels, you know. They cost less then \$10 for a batch of nine or ten. You can even find them less expensive if you want to buy more at the same time. Now as far as equipment, I really use everything I already have. So, for example, I've got a tall pot here. This is what I use to acidify and culture my milk in; this, you know, stainless steel, basic. I already had it on hand, so I didn't even have to buy anything. I'll just take that cloth I told you about. I'm gonna drape it over my pot so that it's on all the edges and not about to slip off. That milk I just got from my goats, I'm just gonna slowly pour it through. After we strain that milk, then we're gonna add culture. Now like I said, today we're using citric acid because it's extremely inexpensive and it's a really great way to get started making some simple cheeses, but there are a lot of culturing choices.

I have a little bag of tricks that I keep in my freezer and it's a little beat up bag because I've been using it for a long time, but I have cultures like this is called the MM100. And this is what I use as sort of my base starter when I'm doing soft ripened cheese. You can buy these in bulk online. They're not terribly expensive because they last a really long time. This package, for example, sets up like 50 gallons of cheese. If you want to make a blue-veined cheese, like a Roquefort-style cheese, you can also buy the specific cultures for that and if you want to make cheeses that are like a mozzarella or something that you have to cook a little bit, raise the temperature on, you can get what's called a Thermophilic culture

and so when you get to the point where you want to start experimenting with fancy cheeses, I want you to understand that the process is not very different from what we're doing today. There are a few more steps involved, there's a little bit more precision required, but it's the same fundamental process. You get fresh, good milk, you're gonna strain it to prepare it, make sure it's at the right temperature, you're gonna add culture. So, for example, right now we're gonna add some citric acid. Now citric acid is really easy to work with cause it's super forgiving. It doesn't contribute a lot in terms of flavor, it just adds a little tanginess and starts the milk sort of working. I've got maybe like 1/8th of a teaspoon here and I'll just sprinkle it over the surface of my milk and I'll just let that rehydrate for a minute or two because this is a dry product and you know, it's just like when you put sugar in a coffee cup, you give it a sec and then swirl it and it'll dissolve a little bit better.

Now that we've added the culture to the milk, we just need to give it a little time to do its magic and this is not a very sophisticated culture. It's actually like a, "get it done" kind of culture and so it's gonna be ready in about 20-30 minutes. And I'll know that because when we come back to look at the milk, it won't just look like sheen, glossy milk. It'll have a sort of separating kind of look to it. So, you'll be able to see streaks in the milk and those streaks are just sort of an indication that the milk has started transforming and will be in a good place to move onto the next step.

All right, I am back. It's a little more than 30 minutes since I let this sit here. Let's see what it looks like. So, it's starting to get a little bit of texture to it. You can see just a little bit of sort of separation going on here in the milk. That is perfect. That means it's started to develop a little bit of flavor and a little bit of acidity, so it's going to taste a bit better than it would if it were just a sweet milk without that citric acid. The next thing I'm gonna use is what's called animal rennet and this you do have to buy usually online or at a specialty store. It's a few bucks. It's not -- I mean, it's under \$10; maybe 5 or 6. I don't exactly remember because I really only buy one of these every year and a half or so, but it stays in my refrigerator. So, don't bring this out when you first start culturing it. You can just take it out of the fridge right when you need it. A lot of people take a little cup and put 1/4 cup of water and put a few drops of this in there and stir it up and then throw it in the milk. Me, I just put a couple drops in my milk, stir it up and then that way I don't have to clean another cup. And then I'm gonna cover this back up and we'll wait about another half an hour. And everything will set up in nice curds and then we'll be able to make some cheese.

And we're back again about a half an hour later. Let's see what's going on inside. Oh, my goodness, look at that. Do you see how it's coagulated? You see the whey that's run free. That is exactly the result we're looking for, so now all we're gonna do is basically strain this out and then later we'll add some salt and it'll be cheese. I brought a few more tools out to the table just to finish this process. I just have this little sieve that I already had in my kitchen. It works great. Another extra pot. It doesn't really matter so long as you've got a sieve or a colander that fits inside. You know that towel we just used, it's not really dirty. So I'm gonna go ahead and use it again and I'm just gonna set it on top of that and you know a lot of people will cut their curds and that's great, but I never really bother with it. I just kinda pour them all out into my pot. You may need to take just a little bit of time, so it doesn't overflow. It overflowed a little bit, but no big deal. That way you can get everything in there. All right, once that's all in there, then I just take that little towel, kinda bunch it up, lift my sieve and just kinda force a little bit of the liquid out of there. It's not a huge amount here. I'm not applying a lot of pressure because we're really going to let gravity do the work for us here. I just want to get out some of that whey and then I'm gonna set it over there.

When I'm using lower fat, milk like from an Alpine, it takes a little bit longer for the cheese to dry. When I use the higher fat stuff from the Nigerian, it's just a little bit less drying time and I'm not entirely sure why that is. I think it's just because there's more water fluid and whey fluid in the leaner milk than there is in the fatter milk, but usually I let it sit somewhere between 6 and 8 hours. A lot of times I'll do this at night and so I'll just let it do its thing while I sleep. I'll wake up in the morning and my cheese is ready.

Now I don't want to make you guys wait all that long, so I have brought some with me that I have drained last night. So, this is just a little container that I used last night. So, I let that do exactly what it's doing there overnight and now I have something that is very much like cheese. It's still very moist and I want that because I'm going to use this as a spreadable cheese. I'll put it on toast, I'll break it up in my omelets, I'll mix it in my pasta sauces. So, this is really just a nice, soft,

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fresh cheese that I'll eat within the next three days. So other than what we already did, this process you've been watching, the only thing I need to do is add a little salt and salt is entirely personal here. It's what you like. So, for me, you know, something like a teaspoon works for me and then I just take a fork and I kinda mash it all together. Then you can just kinda shape into some goat cheese logs and let these dry a little bit more. Once they're to the drying consistency that you want them to, then throw them into the refrigerator and use them whenever you want to. I would use them within just a few days; two or three is usually what I shoot for. Every once in a while, I'll push to four days at the outer limit, but this is fresh cheese. It's meant to be enjoyed fresh and so it's just a lot better if you go ahead and use it up right away. So really, I make these small batches because I just make what I need for a few days' time. That cutting board will just take up a little bit more of that liquid, so that will sort of get you the nice consistency that you like for a nice goat cheese and don't be afraid to lick your bowl. So good.

I just want to show you a quick variation on the recipe we just used. Basically, you start with the citric acid, you do the culturing and then you also add the rennet and you let the milk until it coagulates. Just like everything you saw, but now instead of straining it, head to your kitchen stove, put your pot on your stove, get yourself one of these nice little spoons with holes in them. I bought mine at the dollar store for \$1 and then turn the heat on your stove on low. And let the whey start to warm up a little bit. As it warms up, use your spoon to kinda break apart the curds and move them around just to make sure that nothing sticks to the bottom of the pan. It'll take a few minutes, but then you'll notice that the curds start to get just kind of rubbery and a little bit sticky and they'll start to form a little bit of a cohesive ball. So just use that spoon you've got and start to push the curds towards each other at one side of the pan and then just sort of keep grouping them together until they start to stick and become this little gooey ball. When we get to the point where the ball is a solid form and all curds have stuck to it, then you can kinda just take it out of the whey and use your fingers to push out just a little bit of the extra whey and form it into a little ball and then you can salt it and cool it in a separate bowl. And voila, you have a very fast and easy mozzarella-like cheese with almost no effort. And you can just slice that up and serve it with basil and tomatoes and a little bit of balsamic vinegar and it makes the most delicious cheese-based meal.

Now you might be wondering, what do you do with all that leftover whey that comes off after you strain your cheese? I use it for so many things. One of my very favorite things is to actually make vinegar and lucky for you, I have a recipe for it in the vinegar book that's available for download. So, I'll give you a link to that in your homework, that way you can make your own whey vinegar at home. I promise you whey vinegar is absolutely delicious and another nice thing about it is once you've got your vinegar, then you can actually use that whey vinegar to make other kinds of cheese. So, for example, paneer which is a fresh cheese that's used in Indian dishes like palak-paneer, if you've ever had that, that stuff is so amazing. And a lot of people use lemon juice to make it, but I just use my whey vinegar and it makes perfect paneer that has a sort of nutty, really delicious taste. I also use whey to help treat fungal problems in the garden.

So, I have a small vineyard and I'll just dilute this 50/50 with water and I'll spray all the leaves of my vineyard to help reduce some of the fungal pathogen problems. I do use it in the garden because most of the time when I test my pH on my whey, it comes out to about six and so sometimes if my garden is tending towards a 6.8 and I need it really to be closer to 5.5 or 6 to grow something really well, what I'll do is I'll just add a little bit of whey every time I water and then I apply that to my garden soil and that just brings the pH down just a little bit. It's a temporary fix, so it works really well if you're growing something like turnips that like a little bit more of an acidic soil than what most of your garden plants like. So, it's really good for watering things like turnips to get good production. I also have chickens and my chickens really love if I soak their scratch for a couple of days in the whey. It helps ferment the scratch a little bit and makes them more nutrient available and it also just adds all the good benefits from the whey. So, I very frequently use the whey for my chickens because they absolutely love it.

If you want something kind of a little bit unusual, you can use this whey along with your salts to make your fermented pickles. Not everybody likes it, but I like it every once in a while, for just a little bit of variety. This really basic cheese that we made today is really just a starting point. It's the tip of the iceberg as they say to all the amazing cheeses that you can make with goat's milk. You will not duplicate every kind of cow's cheese using goat's milk, but you can some sort of

suitable substitute. So, for example, I make a soft ripened cheese out of goat's milk. I also make something that works as perfect substitute for cheddar. I make mozzarella, halloumi, paneer. I even make something that's kind of like a Manchego. I can get very close to a parmesany kind of cheese as well. Of course, that's a regional specialty, but you have a lot of control as a cheese maker using different cultures, different temperatures, different aging times and so there is an endless world of cheese, but even just on the home scale, make simple cheese for every day use, it really only takes a couple of minutes and there's no reason that everybody can't do this at home when you have great, healthy goats and you use their milk fresh right out of the milk when it's at exactly the right temperature for culturing and you do everything here out in fresh air and your happy, comfortable home. All that influence goes into the cheese and it's going to come out delicious because you made it and because you raised your animals right. So, cheese making isn't just about the process. It's about everything behind the scenes that comes to this culminating point here where you get a product that is amazing, fresh and delicious.