

CottageCrafts.co.nz

How to make cheese at home



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More and more people are looking for ways to have a better, healthier and more self sufficient lifestyle. Others are just looking for a rewarding hobby which allows them to share their home made goods with their family and friends. Cheese making is the perfect craft. It allows you to make a cheese every now and then if you want something special and it also allows you to produce most or even all your families' cheeses at home. You can decide how much you want to do and how much time you are willing to spend.

Please keep in mind, that his guide doesn't replace a good book about cheese making or even one of the good cheese making courses which are available. This guide should be used only to get started.

Frequently Asked Questions

What milk should I use?

You can make cheese from milk you buy in the supermarket, you can get milk from a dairy farmer (Yes, they are allowed to sell up to 5 litres to one person per day over the gate! See section 11A of the Food Act 1991, which allows for the farm gate sale of up to five litres, at any one time, of raw milk intended for consumption by the buyer or their family) or have your own house cow. We are milking two dairy goats which give us (two people) more milk than we can use.

As a rule of thumb, 1 litre of milk gives 100gm of cheese.

What equipment do I need?

For basic cheese making you will need a form or mould, some cheese cloth, a thermometer, some form of rennet and culture. If you want to make hard cheeses you need a way to press the cheese in the form.

In addition to this you will need a pot big enough to take the amount of milk you want to process, some method to keep the milk in the pot at a certain temperature (we use the sink with hot water as a water bath for a 10 litre stock pot) and you need time. Cheese making is not something you can do in a couple of minutes.

How long does it take to make a cheese?

A basic cheese like a fresh cheese with herbs can be made in an hour (not counting any time it needs to drain or be pressed). Other cheeses take most of a day because they need to get stirred regularly or there are many processing steps to follow. We recommend to start with an easy one first and then develop your skills into more complex cheese making.

What type of cheese can I make?

Basically there is no limit! We can deliver all the cultures you need. The limit is only your time, your commitment and how much time you can spare. But keep in mind that some cheeses are special because they are made with special milk

i.e. Mozzarella is made from Buffalo milk. Some cheeses are matured in rock caves where there is a special blend of natural bacteria. Even the atmosphere, the climate and time of the year has an impact. So don't be disappointed if your cheese comes out different than expected. You should always keep in mind; you are working with living organisms here. Milk, rennet and cultures are all organic ingredients which can be different and produce different results. But this is the fun in cheese making, you learn every time more about the process and the materials.

Do the cultures need to be shipped frozen?

Many people worry about shipping the cultures when it is warm outside. And I must admit it is partially my fault. My wife always tells me I worry too much. We do not ship cultures on Thursdays or Fridays to avoid them being in some van in the blazing sun etc. But we want to err on the safe side of things.

Cultures are a mix of living bacteria. They are sealed in a vial or sachet straight after manufacture. As long as they are sealed they are absolutely fine for some weeks to be outside of a cooled environment. If they are stored warm for a longer time or after they were opened the bacteria cells start to die off and the culture becomes weaker.

Cultures for cheese factories are shipped in the same way as our cultures. As a matter of fact some of our cultures do come from the same distributor the cheese factories buy from.

Nevertheless, we give a full warranty for all our items. Should you think your culture is not working properly we will replace them at no extra cost (except some shipping cost)

How do I use rennet?

Rennet is an enzyme which reacts with the milk and makes the milk coagulate. This transfers the milk solids from a fluid state into a solid state and allows you to separate the whey from the curd. Always mix rennet with ten times the amount of water. So if you need to use 3 ml of rennet mix it with 30 ml of

water. This dilutes the rennet and makes sure that it is evenly distributed in your milk. The water should always be boiled and cooled at least to room temperature. All equipment which comes into contact with your rennet should be sterilised using boiling water. Be careful when using sanitizing products since they can destroy or weaken rennet.

A note about quantities and measurements?

Milk is a food which can differ between areas, time of the year even the food the animals get to eat. Then there is store bought milk, milk from different animal breeds such as Goat's milk etc. So if we say "Use 3 ml of Rennet" then it can happen that this doesn't work for you and the milk you use. Making cheese is a lot about trial and – yes, sorry – error aka. "producing chook food". The best guidance will be the experience you will build up over time. So please don't blame us if 3 ml of Rennet doesn't set your curd. Try to use a bit more but don't overdo it. Too much rennet can make your cheese bitter. But this then is just another experience.

Some basic recipes to get you started

Before you start, one word about sanitation.

Everything which gets into contact with your milk, any of the ingredients and your cheese needs to be clean and sterile. Most of the things can be sterilised with boiling water. This is especially important with your cheese cloth. If your cheese cloth sticks to the cheese and you can hardly pull it off it wasn't sterile enough.

Make it second nature to sterilise everything.

Feta

Feta is a typical Mediterranean cheese. Mostly made from goats milk but can be made from cow's milk as well.

Method

1. For one square Feta mould heat 4 litres of milk to 32 degrees Celsius. Add **an sixteenth of a teaspoon (1/8 per 10 litres)** of starter Culture 03 to the milk. Mix in well.
Add about an eighth of a teaspoon (quarter of a teaspoon per 10 litres) Lipase powder to 25ml of boiled cooled water. Mix until dissolved then

- pour into the milk. Lipase is only needed in Cows or sheep milk!
Feta can be made without lipase but it gives it the traditional flavour
2. Add Rennet, use 2.5 ml of rennet diluted in 10 times the amount its volume of cool boiled water. Pour the diluted rennet into the milk stirring all the time! Mix in well and maintain the setting temperature.
 3. Allow the milk to set. This will take 45-60 minutes.
 4. Cut the curd into 1cm cubes, then let stand.
 5. Turn the curd very gently over after 60 minutes, then again after 60 minutes. Drain off the whey and pour the curd into your feta moulds,
 6. Invert the mould after half an hour and then again after half an hour. Keep turning for the rest of the day. Or place a light weight on top(this will be more user-friendly for busy people 😊)
 7. Let stand overnight.
 8. Next morning remove from the mould and place into a 15% brine. Store the cheese in the brine. Choose a container which is only slightly bigger than the feta to avoid over salting.

Fresh Cheese with herbs

You need

6 litres of fresh milk

2 ml Vegetable Rennet

1/8 tea spoon Flora Danica Cheese Starter Culture

Boil some water and let it cool to room temperature (if you need to speed it up put the boiling water in a cup, cover with glad wrap and put in the freezer)

Put the milk in a pot and put the pot in a basin with hot water. Heat the milk to 32 degrees Celsius. Once you reached 32 deg. Sprinkle the Flora Danica Cheese Starter Culture over the milk and let rest for at last 30 minutes. The culture will now be activated and starts growing.

Mix the 2 ml of Vegetable Rennet with 20 ml of the boiled and cooled water. Stir this mixture into the milk. This will make sure that your rennet is evenly diluted in the milk. Stir for 1 minute.

Let the milk rest for 40 minutes. The curd should now have separated from the whey and should be solid so that you can cut it with a knife. Use a knife and cut the curd vertically and horizontally (it doesn't matter if you cut in an angle) into approx. 1 x 1 cm cubes. Let rest for 5 minutes

Line a colander with cheese cloth and drain the curd through this. I recommend saving the whey because it can be used for all sorts of good things. Form a bag with the cheese cloth and hang it somewhere so that the remaining whey can drop out of it. Leave it there for 4 hours.

Put the curd into a bowl and mix it with salt (we use coarse rock salt. Normal table salt can make the cheese bitter) and herbs or garlic. Use some creativity! We also made cheese with sundried tomatoes and olives. Or basil or....

Line a cheese mould with cheese cloth and put the curd into the mould. Cover with the cheese cloth and add a lid. Press the cheese for 15 – 30 minutes using a light weight of approx. 1 kg. A jar with water etc. will do. The longer you press the drier and more solid the cheese will get.

Remove the weight and let the cheese rest in the mould for 12 hours. Then remove the cheese from the mould. You can keep this cheese for 7 – 10 days in the fridge. If it lasts that long!

Enjoy!

Camembert

Camembert is not difficult to make. For 1 camembert hoop you need 2l of milk. If you wish to pasteurize raw milk do it now.

For **2 camembert hoops** you need:

Boil **2 litres** of water for later use before starting. Let it cool down to **60 degrees**.

- 1. 4 l of milk**

Bring the milk to 32 degrees Celsius. Then add

1/16 of a teaspoon starter culture A or B. Add

tip of a pointed knife Penicilium Candidum, the white mould powder
Mix both in well. Leave for **30 minutes**.

2. Add rennet, **0.5ml for 1 litre** of milk. E.g. **4l milk = 2ml rennet**
Dilute rennet in 10 times its volume in boiled, cooled down water. Mix in well. Maintain setting temperature.
3. Allow the milk to set. This takes 30 to 45 minutes.
4. Cut the curd in **2cm cubes!**
5. Let **sit for 5** minutes, then turn the curd with a flat ladle.
6. Repeat turning the curd after 10 minutes and then again after 10 minutes.
7. Drain off a third of the whey and replace the same amount it with boiled, cooled down water. The temperature should be now around 35 degrees.
8. Turn the curd over and repeat turning the curd after 10 minutes and then again after 10 minutes.
9. Drain off half of the whey and ladle it into the sterilized hoops. The hoops should be placed on a draining tray with cheese cloth covered sushi mats. Hold the hoops firm on the tray or your curd will slip out.
10. Invert the hoop **after 10 minutes** by using a second cloth lined tray. Hold both trays firmly and turn them over. Turn again after 30 minutes, then after another hour, the after 3 hours, 5 hours. Leave overnight.
11. Prepare a 20% Brine solution. Let cool down over night.
12. Next morning remove the cheese from the hoops and place into the cold brine. **30 minutes one side**, then turn and leave the cheese in for **another 30 minutes**. 250 g of cheese needs 1 hour of salting.
13. Place on a rack **to dry for 24 hours**.
14. Place cheese in a place at **11 to 15 degrees for 10 days** to ripen. The cheese need to be turned on the **3rd, 6th and 8th** day after drying. You can wrap the cheese in foil wrap and store **for another week** at 11 to 15 degrees.
15. The cheese should be ready for eating **after 3-4 weeks** after making!

Haloumi

Haloumi is a hard cheese, which can be eaten shortly after making!

It is mostly made from goat's milk but can be made from cow's milk as well.

Method

1. Heat 4 litres of milk to 32 to 34 degrees Celsius
2. Add Rennet, use 2.5 ml diluted in 10 times the amount its volume of cool boiled water.
Pour the diluted rennet into the milk stirring all the time! Mix in well and maintain the setting temperature!
3. Allow the milk to set; this will take between 30 and 60 minutes. The curd should be firm by now.
4. Cut the curd into 2cm – 4cm cubes. Let stand for 5 minutes before stirring gently. Heat the curd up to 40 degrees over 20 minutes!
5. Allow the curd to settle on the bottom and form into a solid mass.
6. Remove all whey! **Save it for later use!!!** Then press the curd down to help it to knit together. Remove whey. Place the mass into a cheese cloth.
7. Press the curd in the cloth by tightening it around the curds. If wanted place a weight on top to achieve the wanted firmness.
8. Heat the whey to 90 degrees. Collect all curd that rises to the surface. Bring the whey to boiling point.
9. Remove the cheese from the cloth.
Cut into blocks of approximately 4cm X 4cm X 10cm and place into the hot whey. The curd will sink to the bottom. After 45 minutes the curd will rise to the surface. Wait some 10 to 15 minutes, then remove and place on a rack to cool.
10. After cooling place the cheese into a cool salt solution by adding 300gram of salt to 1 litre of boiled water.
11. You can store the Haloumi in the solution but you can also store it dry if consumed within 2 weeks. This shouldn't be a problem I guess! ☺

What to do with Haloumi?

Cut the cheese in small dices or stripes, pan fry with good olive oil and add to your garden salad instead of crostini. Or put it on the BBQ. Good for vegetarians! *Haloumi* cheese won't melt when you are heating it.

Gouda Style pressed cheese

You need

10 litres of fresh milk

3 ml Vegetable Rennet

1/8 tea spoon Flora Danica Cheese Starter Culture

Boil some water and let it cool to room temperature (if you need to speed it up put the boiling water in a cup, cover with glad wrap and put in the freezer)

Put the milk in a pot and put the pot in a basin with hot water. Heat the milk to 32 degrees Celsius. Once you reached 32 deg. Sprinkle the Flora Danica Cheese Starter Culture over the milk and let rest for at least 30 minutes. The culture will now be activated and starts growing.

Mix the 3 ml of Vegetable Rennet with 30ml of the boiled and cooled water. Stir this mixture into the milk. This will make sure that your rennet is evenly diluted in the milk. Stir for 1 minute.

Let the milk rest for 40 minutes. The curd should now have separated from the whey and should be solid so that you can cut it with a knife. Use a knife and cut the curd vertically and horizontally into approx. 1 x 1 cm cubes. Let rest for 5 minutes.

Boil 2 litres of water and let cool to 60 degrees Celsius. We need this later.

Now you need to stir the curd approx. Every 5 – 10 minutes for the next 50 minutes. Watch the temperature. It should stay at 32 deg. Celsius. Add some hot water to your water bath if necessary.

Let rest for 5 minutes. Now remove 5 litres of the whey so that you end up with half the volume you started with. Over the next 15 minutes add the two litres of water which should have 60 degrees Celsius. The mix in your pot should reach a temperature of 38 deg. Celsius. If it doesn't reach this temperature, add some hot or even boiling water to your water bath. Keep stirring frequently but do not break up the curd.

Stir the curd for the next 30 minutes at least every 5 minutes or so. Again, don't break up the cubes too much! Remove as much of the whey so that the

curd is just covered with the remaining whey. Put the whey you removed on the side, we might need this later.

You now need another pot or container where you can put your cheese mould in. This has to be big enough so that you can add whey to a level where it covers the cheese mould. Everything you do in there should happen below the whey level. Put your cheese mould covered with cheese cloth into this container and fill the mould evenly with the curd. Also add the whey from the pot and fill up with the whey you put aside earlier to cover the cheese mould completely. Press the curd into the form slightly. Once everything is in the mould, cover with the cheese cloth and add some 1 – 2 kg of weight. I use a filled 2 litre jar. But remember, the mould with the cheese should still be under the whey level. You don't want to press out the whey from the curd at this stage but just firm up the structure of the cheese in the mould. Press for 15 minutes.

Remove the mould with the cheese carefully without disturbing the curd and press overnight with a 10 kg pressure.

Next morning prepare a 20 % salt brine solution using i.e. 200gm salt for each 800 ml of water. Use water you have boiled before and cooled down to room temperature. Leave in the brine for several hours. A rule of thumb is to leave it in there for two hours for every 250gm of cheese.

After you finished the step leave the cheese to dry out. This will take at least 1 day. Turn the cheese regularly so that it dries out evenly. You will feel when it is dry, when there is no moisture at the bottom end of the cheese.

You can apply two or three layers of cheese wax and store the cheese in a cool place at 10 – 15 degrees Celsius. The cheese should be matured at least for 2 months. Better longer. 6 months will give you a tasty Gouda cheese and longer maturing time will harden up the cheese and you get mature Gouda. Turn the cheese every second or third day.

It will be hard to leave it in the storage for that long because you want to try your creation. But let me assure you, it is worth it!

What to do with all this Whey?

Whey is a very nutritious food and you shouldn't pour it down the drain. Athletes are buying whey in powdered form for a lot of money in health stores! It can also be a refreshing drink mixed with orange juice and some sugar. Or mix it with honey and cool it in the fridge. It is very healthy and helps the digestion and is a source of proteins. It can even be used as a garden spray to keep away mildew. Mix it with grain and bran and feed it to your animals. Pigs raised with whey are healthy and produce very well.

And why not make a cheese from whey? Yes, the famous Italian fresh cheese Ricotta is made from whey. Perfect with a mix of herbs on fresh bread!
Yummy!

Ricotta Cheese

5 litres of fresh whey
Two cups of fresh milk
approx. 40ml of White Vinegar
1 tsp. salt

You should use Whey as fresh as possible. It needs to be not older than one hour. And it also has to be "Sweet whey" which is whey not very acid. Whey from fresh cheeses is high in acids.

Bring the whey up to 60 deg. Celsius. Stir while heating to avoid burning. Once you reached 60 deg. C add the milk and salt. Keep heating the whey up to 95 deg. Celsius. Stir all the time.

Dilute the 40 ml of white vinegar in 200 ml of water and gradually stir it into the whey/milk mix quickly. As soon as there are some white bits of curd appearing stop adding vinegar. Let it rest for five minutes and then scoop off the white curd and put it into a colander lined with cheese cloth.

You can mix it with herbs and garlic. Add a bit of salt. Maybe some pepper if you like. You can keep it in the fridge for up to a week.