

CHEESEMAKING

PERSIAN FETA, CAMEMBERT AND
BLUE VEIN CHEESE

WORKSHOPS



**ELISABETH
FEKONIA**

AWARD-WINNING &
ACCREDITED
PERMACULTURE
TEACHER

WWW.PERMACULTUREPRODUCE.COM.AU

ABOUT THE PRESENTER



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Elisabeth has been **food self-sufficient** for the past twenty years on 6 acres at Black Mountain west of Cooroy on the Sunshine Coast. **She has been fermenting** for much of this time and has been **teaching classes** on cheese making, sourdough bread, kimchi, sauerkraut, miso, tempeh, and many other ferments **for nearly 9 years** in her workshops and seminars in various locations in Southeast Queensland. All the fermented recipes that she teaches in her classes are the result of **her own experiments** in her kitchen as they make up part of the daily diet on the farm.

FOR CHEESEMAKING UTENSILS YOU WILL NEED

- Holey stirrer
- Thermometer that will show the individual centigrade markings
- Stainless steel cooking pot about 7- 10 liters
- Curd cutting knife
- Flat disc ladle (optional)
- Scooped slotted disc ladle
- Cheese baskets
- Tray to catch the dripping whey
- Wire racks
- Strainer



FERMENTED DAIRY PRODUCTS

Raw milk is becoming very popular and while it is illegal to purchase it, many people are trying to get hold of it. Cheese made from raw milk tastes so much better and is actually better for you, as is butter made from fermented cream. Cultured milk drinks such as kefir and yoghurt are all superior in taste and good health. I have my own cows and goats so I usually have my own supply of raw milk to make my cheese and fermented dairy products, but most people don't have access to raw milk and will have to make do with the pasteurised variety.

When the milk is pasteurised it undergoes a heating process that is designed to kill any pathogens. The problem is that it kills all the friendly bacteria and enzymes as well and this is where the trouble starts. People who suffer from lactose intolerance will fare better on raw milk as the galactase enzyme will break down the milk sugars when the milk is ingested but the pasteurising process kills this sugar-digesting enzyme and consequently people can feel bloated and uncomfortable when they drink this milk.

CONTINUATION.....

There are lots of lactic-forming bacteria found in raw milk and these help the milk to sour and turn it into clabbered or curdled milk. Naturally soured milk can be made into quark and the resulting whey has many uses to start new ferments. Milk is also an excellent vehicle to grow many more friendly bacteria that will help with our inner health. pasteurised milk can be transformed by fermentation and turned back into the healthy living food it was meant to be. Whilst it isn't the same as raw milk with its many diverse strains of bacteria and enzymes, fermenting the milk will make it a much better product. The taste of fermented dairy products is superior, and it has many health benefits.

Hygiene is of utmost importance when dealing with milk as it wouldn't do well to grow pathogens whilst growing the beneficial bacteria and enzymes. All utensils need to be hot water rinsed and air-dried (not wiped with a tea towel). The milk used for cheese making should be as fresh as possible to get the best results, except for making the quark.



MAKING CHEESE

You will need cheese-making cultures to make cheese. Rennet is an enzyme that will set the milk into a solid curd. Use the rennet according to directions as there are various types of rennet available with differing strengths. Cheese-making bacteria are used to influence the texture and they also help to acidify and mature the cheese. White mould spores can also be purchased to grow the mould on camembert and brie cheese as well as the blue mould for blue vein cheese. I purchase my cheese cultures from Cheeselinks based in Victoria, Australia, but there are many other places you can buy them from. A quick search on the internet from anywhere in the world will get them to your letter box, or try various home brew shops in a town near you.

Cheese-making utensils can be improvised from what you can find in your kitchen. A large pot of at least 7 litre capacity is useful and a curd cutting knife can be a metal ruler or a long icing spatula. A curd cutting knife has a blade that can reach right down to the bottom of the pot. When cutting the solid cheese curd the handle of the knife would otherwise mess up the curd too much. To make the horizontal cut you can take a flat round ladle and submerge it just under the surface area of the curd and make horizontal cuts spiralling down as many times as you can manage until you get to the bottom of the cheese pot. Trays are also very useful for catching the whey from the cheese making, and for the cheddar cheese you will need a cheese press which is easily made by a handy person. Milk to be used for cheese and yoghurt should be of the Jersey and Guernsey variety. Their milk is rich with milk solids so it will give you more cheese for your \$\$ and a thicker set yoghurt. Goat milk for cheese and yoghurt making is best from the Anglo Nubians for the same reasons.





PERSIAN FETA

(A GERMAN CHEESE MEANING BUTTERY CHEESE)

It is wonderfully soft and creamy with a lush buttery finish cheese with a salty tang that is made from cow's milk, marinated in garlic, bay leaves, peppercorns, fresh thyme and olive oil. It is suitable for rockets, chickpeas, roast root vegetables or crumbled over tarts, stuffed in ravioli. It is said to be great accompaniment for sparkling wines, pear or apple cider and Rose. Pasteurised milk will work well at any time of the year.

- 5 litres of rich creamy milk
- 1/32nd teaspoon of starter culture type A
- 2 ml Cheeselinks Rennet

1. Bring the milk slowly to 30C

2.- Add the starter culture and stir in lightly

3.- Prepare the rennet by diluting 2 ml in 20 ml (one tablespoon) of water then add to the pot while stirring in a figure of eight. Stir just over a minute but no more than three.

4.- Allow the curd to form, approximately 45 minutes

5.- Cut the curd with a curd cutting knife into 4 cm vertical cuts. You can use the flat disc ladle to make a spiral for the horizontal cut or use the curd cutting knife at a 45-degree angle instead.

CONTINUATION...

7.- Scoop the curd into a strainer and allow to drain out the excess whey. You can help this process by cutting into the curd to allow the whey to drain through. (Do not press as the cream will escape into the whey).

8.- When the curd is reasonably firmed up transfer into cheese basket. It is best to have a larger size cheese basket, so the cheese will not end up higher than 2-3 cm. This will ensure faster drainage of the whey overnight on the bench.

9.- The next morning take the slab of feta and sit in the brine for 24-36 hours in the fridge. The brine consists of a heaped dessertspoon of salt in enough water to cover the cheese.

10.- After 36 hours lift the cheese out of the brine and allow to dry thoroughly on a wire rack over a tray in the fridge.

10.- When the cheese is touch dry it can be cut into chunks to fit inside a jar. Place any Mediterranean herbs such as rosemary and thyme, sundried tomatoes etc and fill to cover the feta with your best olive oil. Place in the fridge for 4- 6 weeks. Take the jar of Persian feta out of the fridge and allow the oil to go back to liquid, and you will have them eating out of your hand!

Other additions suitable for Persian Feta in oil: Use either fresh or dried, lime, dill, parsley, cilantro, basil, chives, fenugreek, tarragon, spearmint, saffron, sumac. The left over olive oil can be used as a salad dressing- so good!

NB: Do not add garlic to the oil as there are some concerns with possible botulism. Garlic is safe when it's sitting in an acidic medium such as vinegar or lactic acid.

Notes:



CAMEMBERT CHEESE

- Four litres rich cow/ goat/ sheep milk
- 1/32nd teaspoon of starter culture type A
- 1/32nd teaspoon white mould powder (penicillum candidum)
- 1.5 ml Cheeselinks rennet

1.- Heat the milk to 32°C and add the starter and penicillum candidum.

2.- Dilute the rennet in 20 ml of water and add to the pot while stirring in a figure of eight for over a minute but no more than three.

3.- Allow the curd to form for about 45 min and cut the curd into 2 cm cubes and leave to sit undisturbed for about 20 minutes.

4.- Heat the curd to 38C whilst stirring gently over a low to medium heat, then leave to rest for a few minutes.

5.- Ladle the curd into two small round cheese baskets and place on a wire rack over a tray to catch the draining whey.

6.- Allow the whey to drain out for several hours and invert the cheese while keeping it in its basket. Leave to sit on the bench until the next day to drain out the rest of the whey.

7.- Lightly rub a teaspoon of fine salt on top of each of the two cheeses and place in the fridge into a microclimate to encourage the growth of the penicillum candidum. Once the camembert is covered in white mould it can be loosely wrapped in aluminum foil or an eco-wrap. This allows the breaking down of fats and proteins in the camembert whilst conserving moisture.

CONTINUATION.....

8.- The camembert will feel softer to the touch when its ready to eat. The white mould will take around four weeks to cover the camembert cheese. The cheese can be kept in the container or loosely wrapped in the fridge. It can be kept for another four to six weeks before it needs to be consumed. Leaving the camembert cheese for a few hours at room temperature will make it soft and ripe to eat. Enjoy!

The container to sit the camembert in should have a false bottom with ample drainage below and a lid with holes drilled into it. This will create a humid environment to encourage the mould growth over the cheese without having condensations droplets drip onto the cheese. Mould loves a humid environment but not wet, and airflow is also important for cheese.

Notes:





BLUE VEIN

- 5 litres rich creamy milk
- 1/32nd teaspoon of starter culture type A
- A sprinkle of Roquefort mould powder or a few drops of blue emulsion
- 2 ml Cheeselinks Rennet

1.- Heat the milk gently to 32C.

2.- Add the starter and the Roquefort mould and stir in lightly.

3.- Dilute the rennet in 20 ml of water and add to the pot while stirring in a figure of eight for over a minute but no more than three.

4.- Allow the curd to form for about 45 min and cut the curd into 1 cm cubes and sit undisturbed for 5-10 minutes.

5.- Stir every now and then to work out some of the whey until the curd starts to sink a little when sitting undisturbed for a few minutes.

6.- Ladle into a strainer sitting over a pot to catch the whey.

7.- Keep working the curd by cutting into it to allow the whey to escape.

8.- When the curd is nearly firm enough to pick up by hand then ladle into a cheese basket sitting on a wire rack over a tray.

9.- Allow the whey to drain out on the bench for 24 hours and rub a fine grade salt over the cheese then sit in the fridge on a wire rack to air dry and firm up.

CONTINUATION.....

10.- After a week you can take the cheese out of the fridge and with a sterilised crotchet hook, knitting needle or wire skewer, push it deep into the cheese from all sides to create holes. This is essential as the Roquefort mould needs air to form inside the cheese.

11.- Sit the cheese in a container to create a microclimate like the camembert and leave in there for 4-6 weeks. Check for any undesirable mould growth and most likely you will need to wash the cheese with a brush reserved especially for cheese making. When the cheese has been cleaned up leave the lid off the container until the cheese has become touch dry then replace the lid.

12.- This cheese needs patience and will take a full two months to develop the blue veins inside the cheese. It's worth waiting for as when it is sitting at room temperature for half a day it simply melts in your mouth!

Notes:



CHEESELINKS ORDER FORM 2008

STARTERS				
	Pack Size	Unit Price	Qty	Price
Type A	250 L Pack	\$16.00		
Type A Farm	50 L Pack	\$8.00		
Type B	250 L Pack	\$16.00		
Type B Flora	250 L Pack	\$16.00		
Type C Cheese	250 L Pack	\$16.00		
Type C1 Yoghurt	250 L Pack	\$16.00		
Type C3 Yoghurt	250 L Pack	\$16.00		
Type C aBy	250 L Pack	\$28.00		
Type C aBt	250 L Pack	\$25.00		
Type E	250 L Pack	\$16.00		

MOULD SPORES				
White mould	250 L Pack	\$18.00		
Blue - Strong	250 L Pack	\$15.00		
Blue - Mild	250 L Pack	\$15.00		

AROMA CULTURES				
B. linens	250 L Pack	\$12.50		
Yeast Culture	250 L Pack	\$34.00		
Geotricum	250 L Pack	\$37.00		
Propioni	250 L Pack	\$30.00		

HAND SANITISER				
Aquim	375mL	\$10.00		

CHEESEMAKING BOOK				
Home Cheesemaking		\$26.40		

LIPASE				
Animal	40g	\$6.00		

RENNET 190 IMCU/ml				
Vegetarian	125 g	\$10.00		
Vegetarian	500 g	\$16.00		
Vegetarian	1 kg	\$26.50		
Vegetarian	5 L	\$140.00		

STERILE BOTTLES AND SYRINGES				
Sterile Bottles	Pack of 3	\$2.00		
Sterile Syringes	Pack of 4	\$2.00		

ANNATTO COLOUR				
	125g	\$12.50		

SUBTOTAL COLUMN 1				
*Postage costs are within Australia only- please				

CHEESECLOTH				
Double tube	Per metre	\$16.50		

CALCIUM SOLUTION				
125 g		\$4.40		
500g		\$8.80		

CHEESEWAX				
1kg		\$12.00		
Red	Yellow	Black	Blue	Natural

PLASTIC CHEESE COAT				
500g		\$13.20		
1Kg		\$22.00		

CHEESE WRAPS				
Perforated foil 210mm 50pk		\$20.00		
Unperforated foil 215mm 50pk		\$20.00		
Perforated foil 320mm 20pk		\$20.00		
Perforated gold foil 210mm 50pk		\$25.00		
Perforated polypropylene 240mm 50pk		\$25.00		
Wraps single 240mm 50pk		\$20.00		
Perforated foil 240mm 50pk		\$20.00		
Perforated polypropylene 420mm 20pk		\$25.00		
Mixed Wrap Pack		\$30.00		

THERMOMETER				
Testo Mini with hook		\$60.00		
Lollipop with hook		\$50.00		

CHEESEMAKING BASKETS				
Heart Shape		\$5.50		
O800015		\$4.40		
P27321		\$2.50		
P00663		\$2.40		
P61321		\$2.75		
P45340		\$5.50		
P45350		\$6.00		
800516		\$9.90		
P00631		\$3.50		
P45330		\$2.40		
O800002		\$7.70		
P57330		\$33.00		
P00689		\$1.50		
P00709		\$1.00		
P43310		\$25.00		
P00640		\$5.00		
P00654		\$12.00		
P00653		\$7.00		
P00742		\$7.00		

	Unit Price	Qty	Price
F0361700	15.00		
P00682	\$10.00		
P57320	\$12.50		
P00608	\$12.00		
P00627	\$6.50		
P00662	\$12.00		
P00645	\$7.70		
P00641	\$9.00		
P39340	\$7.00		
P00718	\$2.50		
P29310	\$6.60		
P00712	\$10.00		
F0435700	\$9.00		
P00691	\$7.70		
Maturing Cont.	\$11.00		

DRAINAGE MATTING				
P00676		\$45.00		
P00729		\$45.00		
P00684M		\$50.00		
P00725		\$55.00		

pH TESTING				
pH test papers		\$54.00		
POSTAGE COSTS (tick appropriate amount- or if above 5Kg, please contact us)				

Less than 500g		\$10.00		
Between 500g and 3Kg		\$15.00		
Between 3Kg and 5Kg		\$18.00		
Above 5Kg- please contact us				

SUBTOTAL COLUMN 1				
SUBTOTAL COLUMN 2				
SUBTOTAL COLUMN 3				
POSTAGE				
GRAND TOTAL				

Name: _____
 Address _____
 State _____ Postcode _____
 Telephone No. _____
 Method of Payment: Cash Cheque Money Order, Visa Mastercard
 Card No: _____
 Expiry Date _____
 Name on Card: _____
 Signature _____

CHEESELINKS ORDER FORM 2008

P.O. BOX 146
LITTLE RIVER
VICTORIA 3211
AUSTRALIA

Phone: (03) 5283 1396

Fax: (03) 5283 1096

E-mail: cheesemaster@cheeselinks.com.au

<http://www.cheeselinks.com.au>

Type A Starter

This is a medium temperature (mesophilic) starter, consisting of *Lactococcus lactis subspecies cremoris* and *Lactococcus lactis subspecies lactis*. (Now you may understand why we have chosen alphabetical codes!) It is selected when acid production only is required. If you are preparing your own starters, they should be incubated at a temperature between 22 and 30°C. The optimum is about 30°C, but it can be grown at a lower temperature to delay the setting of the culture. They are used for the production of Cheddar, Fetta, Camembert, Blue Vein, Cottage Cheese and Quarg.

Type B Starter

This is a medium temperature (mesophilic) starter, flavour type, consisting of *Lactococcus lactis subspecies cremoris*, *Lactococcus lactis subspecies lactis*, *Lactococcus lactis subspecies diacetylactis* and one or more *Leuconostoc* species. If you are preparing your own starters they should be incubated at a temperature between 22 and 30°C. They are selected because of their acid, flavour and gas production. They are used for the production of Edam, Gouda, Camembert, Havarti, Tilsit and other cheeses. They are also used for the production of sour cream and cultured butter.

Type C Starter

There are two categories of type C starter, those for cheese and those for yoghurt. The strains for yoghurt are selected

because of their ability to produce polysaccharides which enhance the yoghurt viscosity. The strains for cheese do not have this characteristic. Type C starter is a high temperature (thermophilic) starter, consisting of *Streptococcus thermophilus* and *Lactobacillus bulgaricus*. If you are preparing your own starters they should be incubated at a temperature of 37°C. They are selected for their acid and flavour production. They are used for making yoghurt and many Italian cheese varieties.

Type D Starter

Type D starter consists solely of strains of *Lactobacillus acidophilus*. It is used for making Acidophilus milk and is best grown at 38°C.

Type E Starter

Type E starter consists of specially selected strains of *Streptococcus thermophilus* which are acid sensitive. It is thermophilic and when incubated should be kept at 37°C. The culture is used in the modern version of Camembert and Tikmilk, a delightful cultured milk drink.

Type F Starter

This is a culture for making a special type of cultured milk similar to yoghurt, but containing *Lactobacillus acidophilus* and *Bifidobacterium* species. The product made from these cultures is very popular in Scandinavian countries and has a number of health claims made about it. These are naturally occurring bacteria found in the human digestive tract. They are incubated at 38°C. These should be used directly into the milk. Due to their long incubation times, they cannot be effectively propagated as starters. If other