STRETCHLEARN · WORKBOOK

Cheese Making — Workbook

This workbook turns the Cheese Making course into a working batch. Each section follows a course module, giving you the exercises, worksheets, and checklists to choose milk, build acidity, set and cut the curd, then press, salt, and age a wheel. Fill it in as you go, and the editable templates become your reusable make sheets and aging logs for every cheese that follows.

Getting Started: Milk, Equipment, and Sanitation

Choose and pasteurise the right milk, set up your kitchen dairy, and lock in a sanitation routine before you make a thing.

Checklist: Kitchen Dairy Setup Checklist

[ ] Acquire a heavy stainless stockpot of at least 10 litres, ideally for use as a double boiler
[ ] Acquire an accurate thermometer reading 0 to 100 degrees Celsius
[ ] Acquire a long curd knife and a stainless slotted spoon or ladle
[ ] Acquire butter muslin or fine cheesecloth, much tighter than loose basting cheesecloth
[ ] Acquire a colander, food-grade containers, and a small digital scale reading to 0.1 gram
[ ] Source good milk that is not ultra-pasteurised, and read the carton to confirm
[ ] Obtain mesophilic and thermophilic cultures, rennet, calcium chloride, and non-iodised salt

Checklist: Pre-Make Sanitation Routine

[ ] Wash every milk-contact surface with hot water and detergent, scrubbing off the protein film
[ ] Rinse thoroughly so no detergent residue remains to taint the milk
[ ] Sanitise pot, knife, ladle, thermometer, colander, moulds, and containers
[ ] Boil or hot-launder butter muslin and cheesecloth before use
[ ] Let no-rinse sanitiser drip or let bleach-sanitised gear air-dry completely
[ ] Avoid scented or anti-bacterial dish soap whose residue carries into the cheese
[ ] Smell the milk for a clean, sweet, lactic note before starting

Worksheet: Milk Selection and Pasteurisation Record

Record exactly what milk you are starting with and, if pasteurising raw milk, log the hold. Knowing your starting milk makes every later step predictable.

Batch name and date

Milk type (cow, goat, sheep) and source

Pasteurisation on label (standard pasteurised, raw, or ultra-pasteurised)

Fat content / whole or reduced

Homogenised yes or no

Batch volume (litres)

Home pasteurisation used yes or no (63 C for 30 min)

Calcium chloride added (millilitres of 30 percent solution)

Setting temperature reached before culturing

Exercise: Read the Carton and Predict the Yield

Use your milk label and the course rules to confirm your milk will work and to estimate your output. Show your reasoning.

• Does your carton say ultra-pasteurised or UHT, and if so why must you replace it before going any further?

• Using the rule that 8 litres of whole milk yields roughly 800 grams to 1 kilogram of pressed cheese, what yield does your batch volume predict?

• Does your milk need calcium chloride (store-bought, pasteurised) or not (fresh raw), and how much will you add?

• What cheese style are you aiming for, and does it call for a mesophilic or a thermophilic culture?

Cultures and Rennet: Acidity and the Set

Choose and dose your culture and rennet, then time a clean set with the flocculation method.

Exercise: Match the Culture to the Cook

Decide on a starter culture for your specific cheese using the course guide. Tie the choice to your cooking temperature.

• What is your cheese's cooking temperature, and does it stay below about 39 degrees (mesophilic) or rise to 45 to 55 degrees (thermophilic)?

• Which specific culture format will you use (direct-set powder, cultured buttermilk, or live yoghurt), and at what dose?

• How long will you ripen the milk after culturing and before adding rennet?

• Why would cooking a mesophilic culture too hot ruin the make?

Worksheet: Rennet and Calcium Chloride Dosing Record

Plan and record your rennet set. Dilute both calcium chloride and rennet in cool non-chlorinated water and keep them apart undiluted.

Rennet type (animal, microbial, or FPC) and strength

Batch volume (litres)

Calculated rennet dose (millilitres or teaspoons)

Dilution water volume

Calcium chloride dose and dilution

Stir-in duration (target under 1 minute)

Time rennet stirring finished

Setting temperature held during the set

Exercise: Time the Set with Flocculation

Use the floating-bowl flocculation method and your style multiplier to calculate when to cut. Show the arithmetic.

• How many minutes from finishing the rennet stir until the floating bowl stopped spinning (your flocculation time)?

• What flocculation multiplier does your cheese style use (about 2.5 to 3 for soft, 3 to 3.5 for firm)?

• What total set time do you get when you multiply flocculation time by the multiplier, and at what clock time will you cut?

• When you tested for a clean break, did the curd split cleanly with clear greenish whey, or did it need more time?

Checklist: Culturing and Setting Sequence

[ ] Bring milk to the setting temperature and confirm it on the thermometer
[ ] Sprinkle culture on the surface, rehydrate a few minutes, then stir gently up and down
[ ] Ripen at temperature for 30 to 60 minutes to let acidification begin
[ ] Add diluted calcium chloride, then a minute later add diluted rennet
[ ] Stir in the rennet for under 1 minute, then still the surface completely
[ ] Start the flocculation timer and float the test bowl
[ ] Hold the pot dead still and covered until the calculated set time, then confirm a clean break

From Curd to Cheese: Cutting, Cooking, and Fresh Cheeses

Make a fresh cheese to learn the cycle, then cut and cook a renneted curd to control texture.

Checklist: First Fresh Cheese Make (Ricotta or Chevre)

[ ] Choose ricotta (acid-set, fast) or chevre (culture-set, slow) for your first make
[ ] For ricotta, heat whole milk to 85 to 90 degrees Celsius and add about 60 millilitres acid per 4 litres
[ ] For chevre, culture at about 22 degrees Celsius with a drop of rennet and rest 12 to 24 hours
[ ] Let curds form and rest before ladling so they do not shatter
[ ] Ladle gently into muslin and drain or hang to your preferred texture
[ ] Salt lightly to taste and refrigerate
[ ] Save the whey for a second cheese or for cooking and baking

Worksheet: Cut and Cook Control Sheet

Record the curd size you cut and the cooking curve so you can connect those choices to the texture of the finished cheese.

Cheese style and target texture (soft, semi-hard, hard)

Curd cube size cut (centimetres)

Heal time after cutting (minutes)

Cook target temperature

Rate of temperature rise (degrees per minutes)

Total cook time to firmness

Curd firmness test result (springs back, holds, breaks clean)

Elapsed time or measured pH at draining

Exercise: Set Your Moisture with the Knife

Use the course relationship between curd size, cooking, and moisture to plan the texture you want. Justify each choice.

• What final texture do you want, and what cube size does the course recommend for it (large for soft, medium for semi-hard, small for hard)?

• What cook temperature pairs with your culture family, and why can you not exceed it for a mesophilic cheese?

• Why must you raise the heat slowly rather than quickly, in terms of what happens to the surface of each curd cube?

• How will you test the curd by hand to decide it is cooked enough to drain?

Checklist: Cutting and Cooking the Curd

[ ] Confirm a clean break before cutting
[ ] Cut a grid of vertical lines, then a second grid at 90 degrees, then angled horizontal cuts
[ ] Aim for even cubes so the whole batch drains and ages uniformly
[ ] Let the curds heal about 5 minutes before stirring
[ ] Begin gentle, continuous stirring to keep cubes separate
[ ] Raise heat slowly, no faster than about 1 degree every few minutes, to the cook target
[ ] Test curd firmness by hand and stop when it springs back and breaks clean

Pressing, Salting, and Aging a Wheel

Press and salt the cheese to firmness, then protect and age the wheel while watching for faults.

Checklist: Draining and Pressing

[ ] Line the sanitised mould with damp butter muslin, smoothing out wrinkles
[ ] Ladle in the drained curds evenly and fold the cloth neatly over the top
[ ] Apply light pressure first for 30 to 60 minutes
[ ] Flip, redress the cloth, and increase pressure in stages over hours to overnight
[ ] Confirm the surface is smooth and closed with no open seams
[ ] Confirm whey has stopped dripping before removing from the press
[ ] Record each pressing stage, weight, and flip in the make sheet

Worksheet: Salting and Brine Record

Record how you salt the wheel. Use only non-iodised salt without anti-caking agents, and scale brine time to the wheel weight.

Salting method (brine, dry-salted curd, or surface dry-salt)

Wheel weight before salting (grams)

Brine concentration and volume, if brining

Brine temperature

Calculated brine time (about 3 to 4 hours per 500 grams)

Curd salt percentage, if dry-salting (about 2 to 2.5 percent)

Air-dry duration until surface is dry to the touch

Notes on rind firmness after drying

Worksheet: Aging Log

Track the cave conditions and the wheel through aging. Turn on a schedule and note how the cheese smells and feels each week.

Surface protection (wax, vacuum seal, natural rind, or bandaged)

Target aging temperature (about 10 to 13 degrees Celsius)

Target relative humidity (about 80 to 90 percent)

Date entered the cave

Turning schedule and dates turned

Weekly observations (smell, feel, any surface mould)

Planned aging duration for this style

Date opened and tasting notes

Exercise: Diagnose the Fault and Plan the Next Wheel

If a fault appears, trace it to a controllable number, then commit to specific changes for your next make.

• Did you see blowing, bitterness, a slimy rind, cracking, or mould under wax, and which controllable cause does the course tie it to?

• Which single number (cook temperature, salt level, humidity, or rennet dose) would you change first, and

why?

• What were your flocculation time, cook temperature, salt method, and cave conditions, and how did they compare to your targets?

• What worked well that you will keep exactly the same on the next wheel?

Your Action Plan

1. Source good milk that is not ultra-pasteurised, set up your kitchen dairy, and sanitise everything that touches the milk
2. Pasteurise gently if using raw milk, cool to setting temperature, and add calcium chloride if the milk is store-bought
3. Make a fresh ricotta or chevre first to learn ladling, draining, and reading curds with a quick reward
4. Culture the milk with the right mesophilic or thermophilic starter and ripen it before renneting
5. Dilute and add calcium chloride then rennet, time the set with the flocculation method, and confirm a clean break
6. Cut the curd to the cube size for your target texture, heal, then cook slowly while stirring to firmness
7. Drain into a lined mould and press in increasing stages, flipping between stages until the rind closes
8. Salt by brine or dry salt using non-iodised salt, then air-dry the wheel until the surface is dry
9. Wax, vacuum seal, or bandage the wheel and age it at 10 to 13 degrees and 80 to 90 percent humidity, turning on schedule
10. Log faults and final conditions, then plan one specific improvement for your next wheel