

Cheese Caves

QUESO DIEGO
THE SAN DIEGO CHEESE CLUB

Chris Banker

May 15 2018

Outline

- Cheese Cave Basics
- Famous Cheese Caves
- Cheese Cave Requirements
- Control System Basics
- Cheese Cave Components
- Putting It All Together
- Storing Cheeses In The Cave



Basics: What is a cheese cave?

- “Cheese Cave” is used loosely to describe any cheese aging space
- “Cheese Grotto” refers to natural cave
- Generally keeps a cool “cellar temperature” and fairly high humidity
- Historically, natural caves were used to achieve these conditions
- Natural caves are still used by some creameries



Basics: Why use a cheese cave?



- Many cheeses need a proper aging environment around 50-55 degrees and 75-90% humidity
- Having a cheese cave opens up a whole new world of cheese styles
- This environment is very difficult to attain in a typical home
- Underground cellars are very rare in Southern California

Famous Cheese Caves / Grottoes



Swiss Alpine Grotto

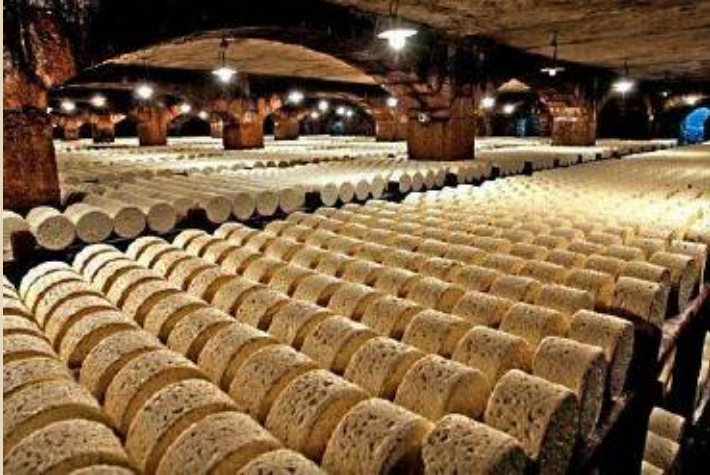
Located in Gstaad, extends 25m underground, 3,000 wheels of Berner Alpkäse AOC



Italian Grottoes

Underground tunnels, military bunkers
e.g. Formaggio di Fossa DOP

Famous Cheese Caves / Grottoes (2)



French Roquefort Grottoes

By law, Roquefort must be cave-aged in the Combalou grottoes of Roquefort-sur-Souizon



English Cheddar Wookey Hole

Caves in Somerset with natural temperature and humidity control

Cheese Sample: Alt Schlossberger

- Kaserei Glauser
- Emmental, Switzerland
- Raw cow milk
- Alpine cheese aged 18-23 months in caves next to Schlossberg Castle



Cheese Cave Requirements

- Maintain a temperature in the 50-55 degree (F) range
 - Acceptable for majority of cheese styles
- Maintain a humidity level in the 80-90% range
 - Most cheeses do well in the 80-85% range
 - Some mold-ripened cheeses (bloomy-rind and blue) do better closer to 90%
- Fit enough cheese for your cheesemaking operation
 - Plan for expansion as you get more excited about cheesemaking
- Be easy enough to access for frequent checking
 - Be prepared to check often during initial aging of a cheese

Control Systems: Basics

- At a basic level, a control system watches an input and controls an output
- For our purposes the output is an AC outlet that provides power to a cooling or humidifying device
- Dual-stage (bidirectional) control is faster and more accurate, but is not necessary if you are far from the ambient conditions in one direction
 - OK: target: 52F, room temp: 65-75F - temperature difference warms
 - Not OK: target: 70F, room temp: 55-80F - likely to stay too cold

Control Systems: Examples

- Temperature (cooling) example
 - Temperature reads too warm, the fridge turns on
 - When temperature reaches set point, fridge turns off
 - Temperature naturally warms up again, fridge turns back on
- Humidity example
 - Humidity reads too low, the humidifier is turned on
 - When humidity reaches set point, humidifier turns off
 - When humidity lowers again, humidifier turns back on
- These two control systems can operate simultaneously

Cheese Sample: Jeff's Select



- The Caves of Fairbault
- Minnesota, USA
- Pasteurized cow milk, natural rind
- A gouda-style cheese aged with natural rind for 9 months in underground caves

Cheese Cave Components

- Fridge or Freezer
- Temperature Controller
- Humidity Controller
- Humidifier



Components: Fridge

- Wine Fridges
 - Compact, glass door
 - Built-in temperature control
 - Expensive, can be inefficient
- Mini-Fridges
 - Compact
 - Readily available
- Full-size fridges
 - Lots of space
 - Available very cheap



Components: Temperature Control

- Not needed for wine fridges
- Regular fridges do not usually run at 50-55 degrees
 - If they will, temperature may be inaccurate in that range
- 2 Good Options:
 - Wine-fridge with built-in temperature control
 - External temp controller on a fridge or freezer
- My favorite: Inkbird ITC-308
 - Digital controller for about \$30-35 on Amazon
 - Pre-wired with temp probe, plug, and outlets



Components: Humidity Control



- You can control humidity with sponges and water trays, but it's difficult and inaccurate
- Automated humidity control will make things easy
- Digital controller + humidifier
- Favorite humidity controller: Inkbird IHC200S
 - Digital humidity controller that runs \$35-40 on Amazon

Components: Humidifier

- Must be “cool mist” style ultrasonic humidifier
 - Cannot be “warm mist” heat-based
- Important: Must resume when power is applied
 - Many devices use a “soft” switch that needs to be pressed manually if power is cycled
 - Look for a physical knob or switch or one that is always on
 - Read reviews or ask questions to seller
- Consider the size
 - Higher water capacity mean less frequent refills
 - Larger humidifier means less cheese space



Components: Cheaper Humidity

- Manually controlled humidity with sponges and ripening boxes
- Cigar humidifier trays are like special sponges
- Much more effort to maintain
- Consider how much your time and cheese are worth



Cheese Sample: Caveman Blue



- Rogue Creamery
- Oregon, USA
- Organic Pasteurized Cow Milk, Natural Rind
- Unique natural-rind blue cave-aged for 6+ months



Putting It All Together

- Start with a mini-fridge
- Adjust, add, or remove shelves to fit cheese and humidifier
- Place humidifier in the cheese cave, run cable through seal
- Plug temp and humidity controllers into always-on outlets
- Run temperature and humidity probes into fridge
- Plug fridge and humidifier into respective controllers
- Adjust humidity and temperature settings
 - 52F and 85% humidity are good starting points
- Fill with your favorite cheeses to be aged.

Putting It All Together: Parts List

- Mini-Fridge
 - 4.4 cu ft All-Fridge Model - \$130 CostCo
 - Often very inexpensive on craigslist
- Temperature Controller
 - Inkbird ITC-308 - \$35 from Amazon
- Humidity Controller
 - Inkbird IHC200S - \$37 on Amazon
- Humidifier
 - Pureguardian H500 - \$20 on Amazon
- TOTAL: \$222
 - Can be much less with a used mini-fridge



Putting It All Together: Photos



Storing Cheeses Inside Cave

- Use grates and/or cheese mats to allow airflow
- Many styles can be waxed or vacuum sealed
- Use ripening boxes for high-humidity cheese
 - Blues, Soft-Ripened, etc.



Questions?

