



# PECORA DAIRY

ROBERTSON

*Handcrafted Ewes Milk Cheeses*



# Raw milk cheese? Why?



Terroir  
Provenance

The expression of the farm on a plate:-

Season  
Pasture  
Animal (lactation cycle)  
Microbiome of the farm

Combine to create a cheese that cant  
be replicated.



# What is a raw milk cheese?

## The Popular Definition

If cultures and rennet  
untreated  
milk it is a  
raw milk cheese.

## The Food Safety Definition

If the milk is neither pasteurised nor  
thermised and the curd remains uncooked.



# What is a raw milk cheese?

Its about the Inactivation.

Conventional Cheese inactivates  
Pathogens by heating.

Raw Milk Cheeses inactivate pathogens  
Through maturation.

Hostile environment for pathogens = die back over time  
(time and temperature)



# A Potted History

1998 - Exemptions to the food standards code were made for the Swiss cheeses Gruyere, Sbrinz and Emmental.

2003 - Will Studd was forced to destroy 85 kilograms of Roquefort that had been in storage for 18 months.

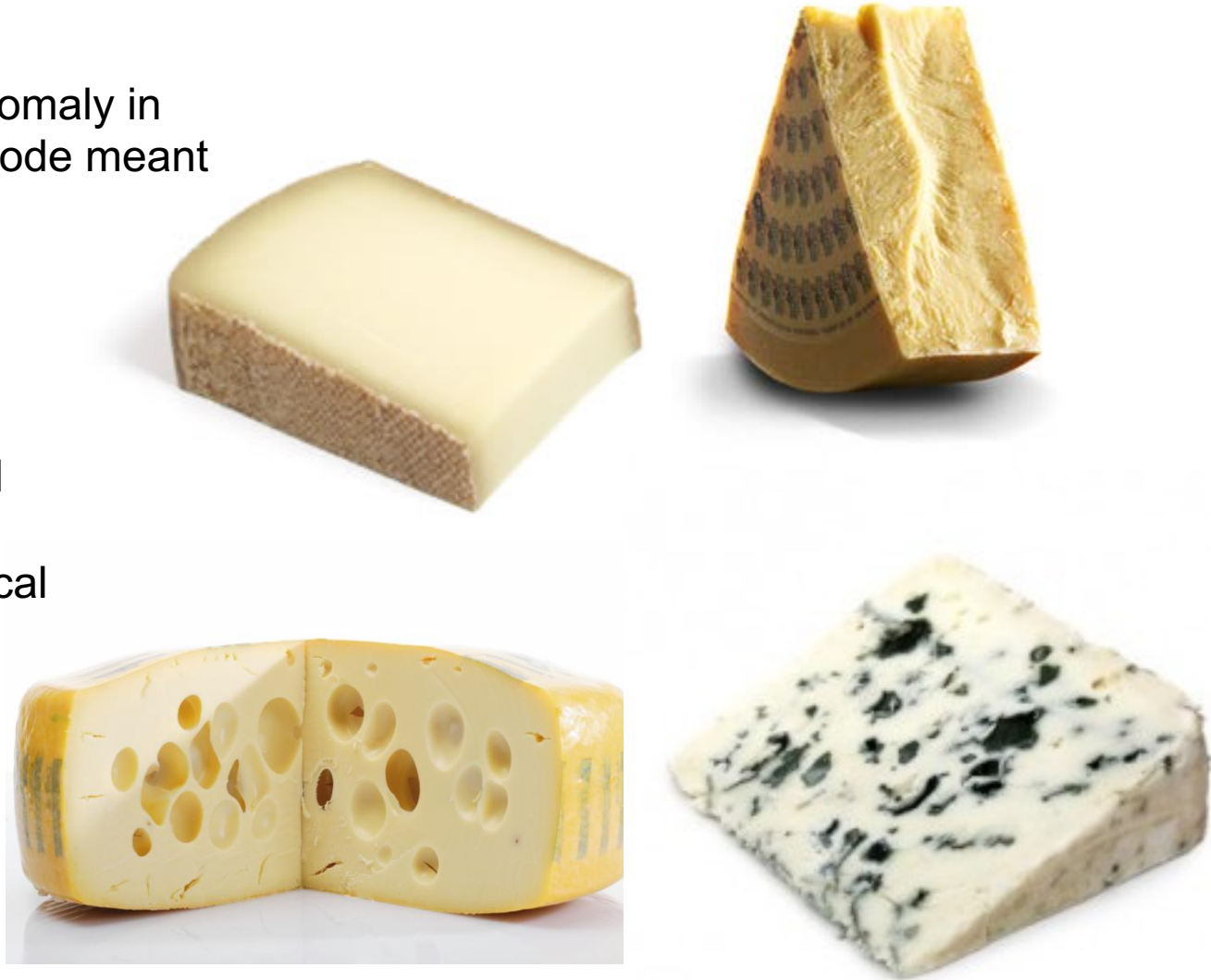
2005 - An exemption to the Food Standards Code was made for Roquefort.

2009-2012 - Alterations made to the standard to allow hard cooked curd cheeses to be made. Essentially Australia's first raw milk cheeses.



# Unlevel Playing Field

For many years an anomaly in the Food Standards Code meant that **Gruyère**, **Sbrinz**, **Emmental** and **Roquefort** raw milk cheeses could be sold in Australia while near-identical local products remained illegal.



In 2015 this :”theoretically changed” with introduction of new standard allowing Australian Raw milk cheese. None approved yet.

# Naturally Caution

The tragic death of a young child and four other illnesses in Victoria linked to the consumption of raw 'bath milk' made headlines across Australia in December 2014.



In 2012, 26 consumers were affected by the Jindi Listeria outbreak associated with 3 deaths, the loss of unborn child.

Raw milk and Raw Milk cheese are two very different things  
Pasteurisation on its own does not equal safe.  
Cheeses like Camembert are not allowed under the new standard.

# What makes a safe cheese?

There are many aspects that contribute to the quality, stability and ongoing preservation of a cheese.

## Hygiene & Good quality Milk

### Milk Quality

High hygiene standards for production areas and delivery chain.

Food handling procedures

Post process handling

Maturation environment

Herd health

## Making a relatively low risk cheese

Low Ph

High salt

Low water activity

A hostile environment for bad bugs





# What makes a safe cheese? cont....

## Who are the bad guys

- EColi
- Listeria
- Salmonella
- Staph aureus

## Our weapons?:-

- Pasteurisation,
- Cooking of Curd,
- Cold Pressing and
- Maturation time to ensure bacterial die-back.



Safe raw milk cheese is about making low risk cheese and modeling out a safe maturation time. Given enough time and temperature and the right cheese = safe & delicious cheese.

# Regulatory response

FSANZ Standard 4.2.4 was amended in 2015 to permit raw milk cheese providing enhanced food safety requirements for milk producers, transporters, and the processor.

## 2 Major Qualifying Criteria

Cheese must be produced using a process where the combination of control measures ensures:

- 1) A clean final product, and
- 2) A final product that cannot host new pathogens

Great But.....

**Absolutely no regulatory framework to allow practical implementation by local authorities.**



# Establishing a Pathway

The changes to the code were a great first step but left the industry at a loss as to how to meet the new criteria and satisfy the concerns of local authorities.

DFSV, NSWFA, FSANZ co-commissioned the development of a support tool (software) to inform regulators and cheese manufacturers if a cheese has indeed met the criteria. The work was performed by professor Tim Ross and his team at UTAS.

State Authorities also aim to establish a nationally consistent approach



# How does the software work?

- 1) Provides checks to ensure **milk quality**, handling and transport meet the criteria.
- 2) Establishes whether the **cheese is suitable**. That it will not support pathogen growth.
- 3) Assumes milk has pathogens to start then models the growth and die-back of pathogens as a factor of **time and temperature to create a clean final cheese**.



**Study found that modeling the growth and die back of pathogens, a properly handled raw milk cheese is no more risky than other forms of pathogen inactivation like pasteurisation**

# Our Brand New Cheeses?



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