An aerial photograph of Jasper Hill Farm in Greensboro, VT. The scene features a large red barn with a grey metal roof and a smaller blue barn with a grey metal roof. The blue barn has a mural of a horse and a moon. A white utility truck is parked in front of the red barn. The farm is surrounded by green fields and rolling hills under a blue sky with white clouds.

JASPER HILL FARM

Greensboro, VT



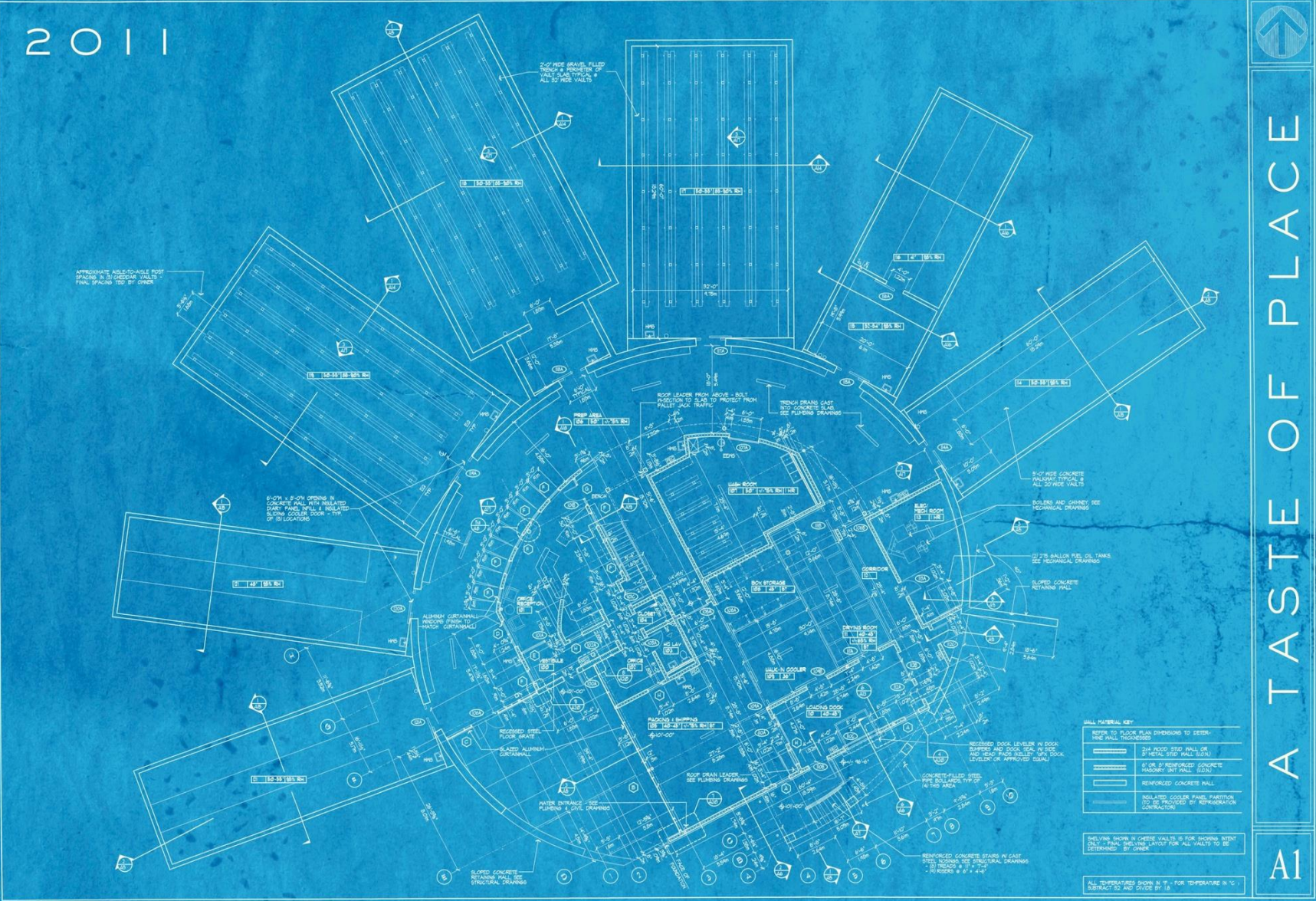
JASPER
HILL
FARM



Clothbound wins 'Best of Show' *American Cheese Society 2006*



2011



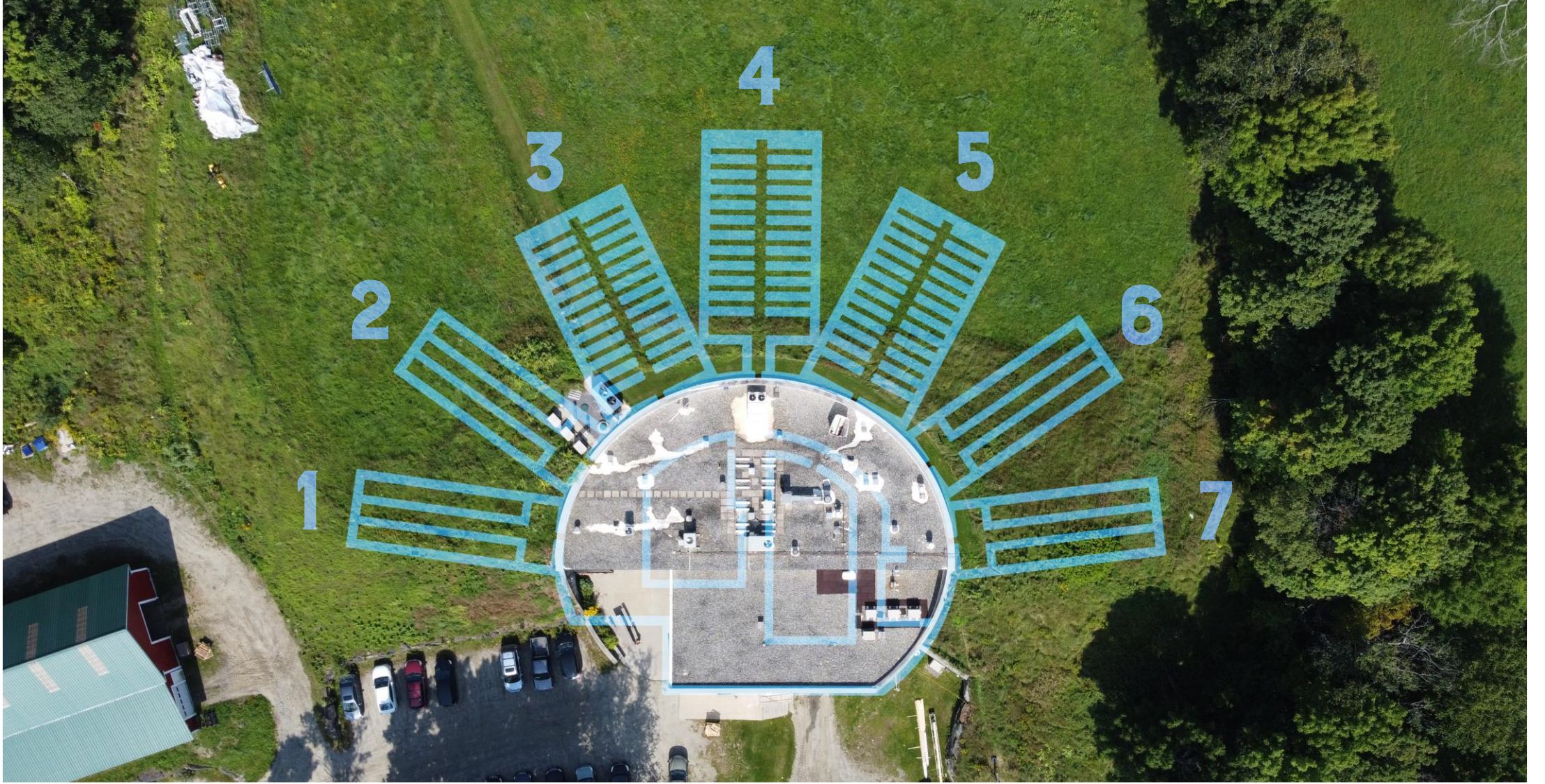
A TASTE OF PLACE

A1

CELLARS AT JASPER HILL, GREENSBORO, VT







THE CELLARS at JASPER HILL FARM





Cabot Clothbound

A MATURE BANDAGED CHEDDAR

CAVE AGED *A Taste of Place* FARMER OWNED

FAST FACTS:

- Aged 9-13 Months
- Microbial Rennet
- Bandaged Cheddar
- rBST-Free

INGREDIENTS:
PASTEURIZED COW MILK, CHEESE CULTURES, SALT, ENZYMES



BEST SERVED WITH



BROWN ALE



APPLE JELLY

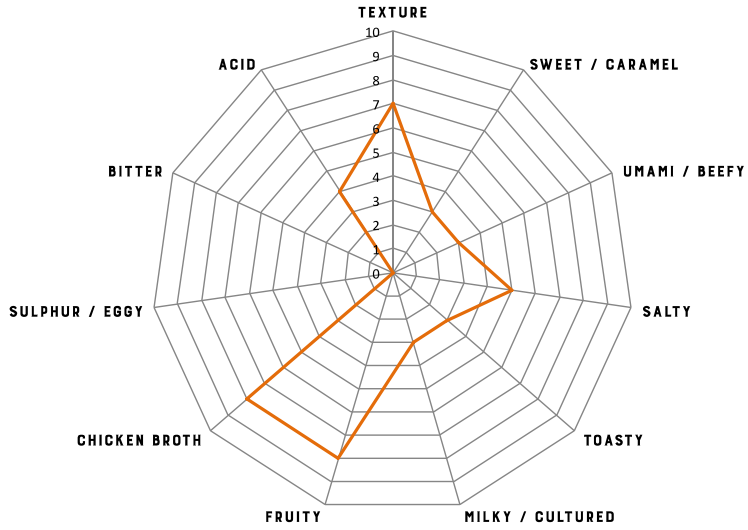


DRY CIDER

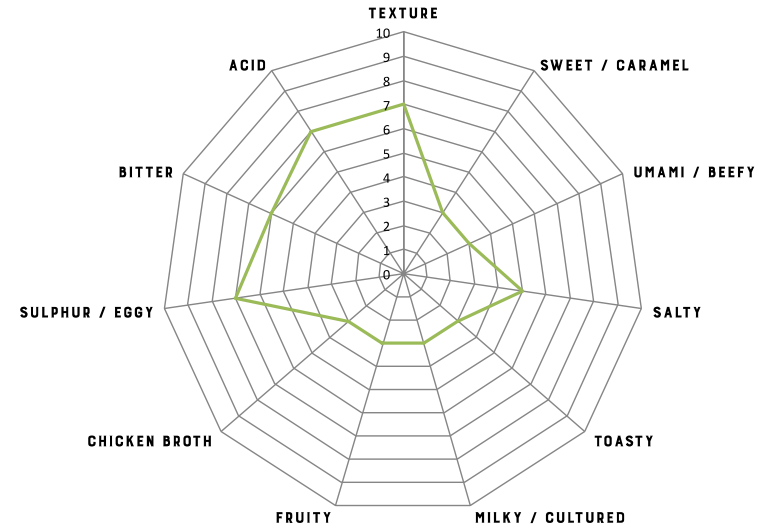


CHESTNUT HONEY

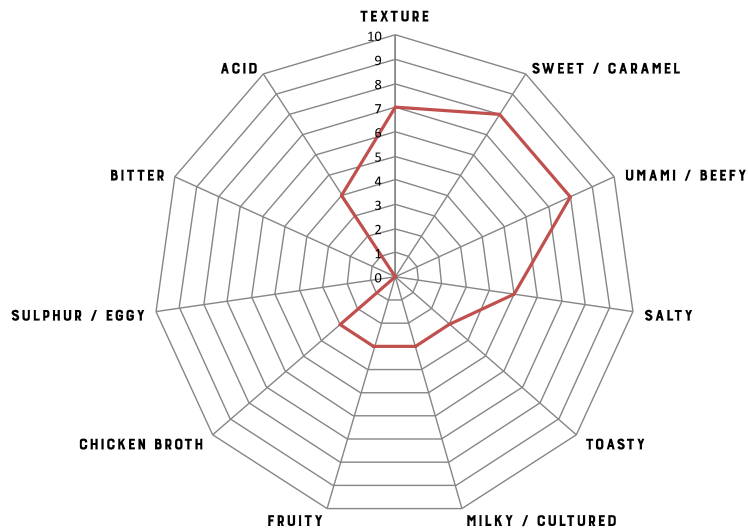




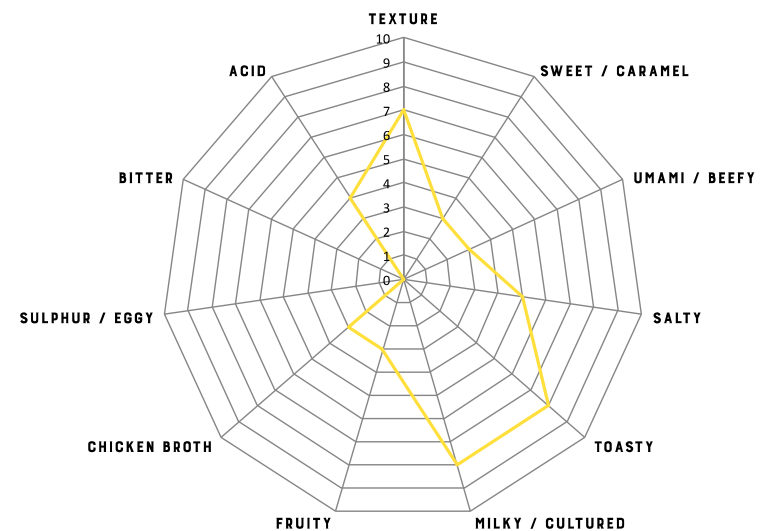
CHICKEN BROTH, JUICY



YOLKY AND BRIGHT

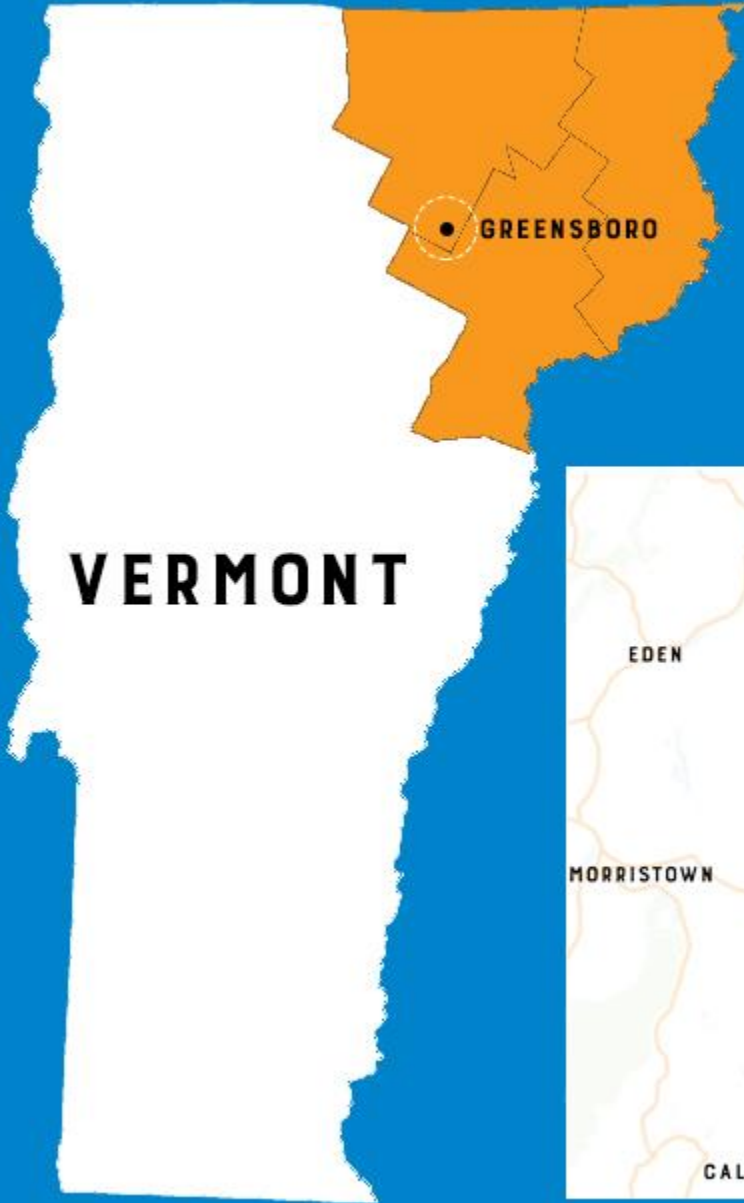


UMAMI AND CARMELIZED



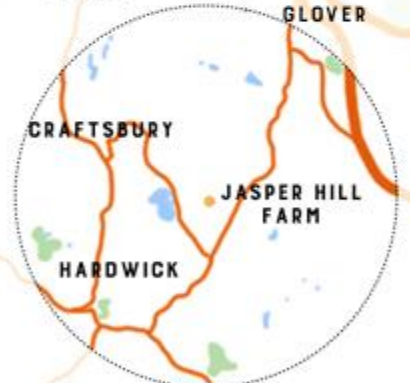
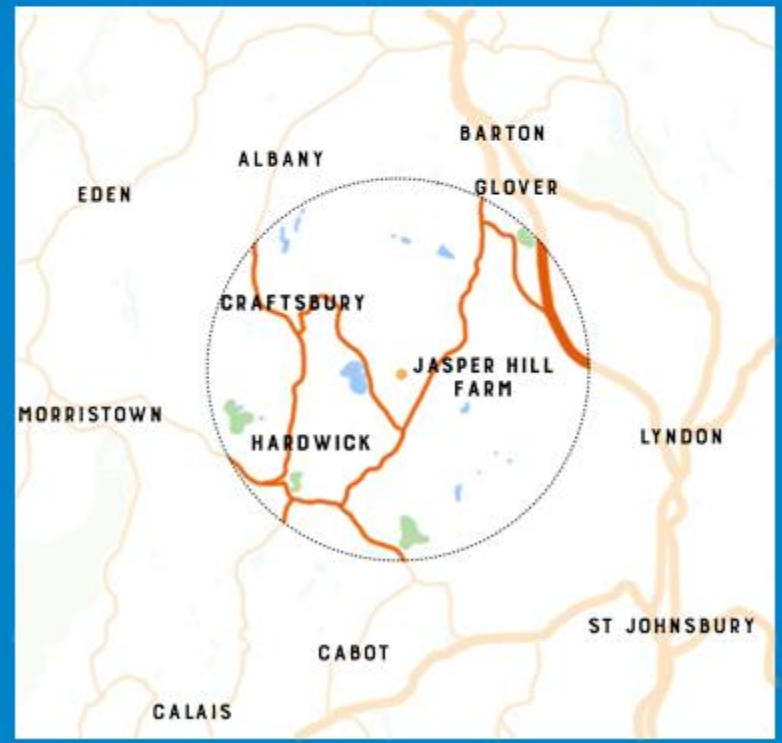
BUTTER AND TOAST

VERMONT



● GREENSBORO

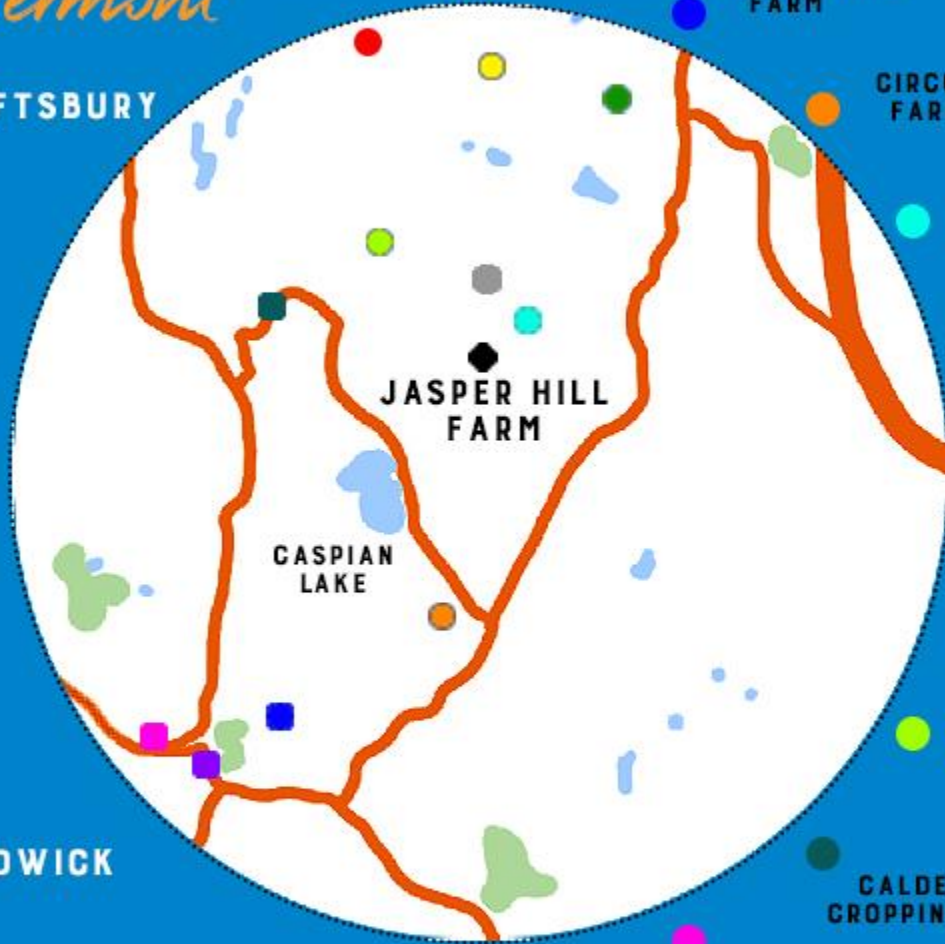
THE NORTHEAST KINGDOM



*Greensboro,
Vermont*

CRAFTSBURY

HARDWICK



HILL
FARM

BRIDGMAN HILL
FARM

GLOVER

CIRCUS
FARM

GEBBIE
FARM

MICHAUD
FARM

YOUNGVIEW
FARM

FOOD VENTURE
CENTER

ANDERSONVILLE
FARM

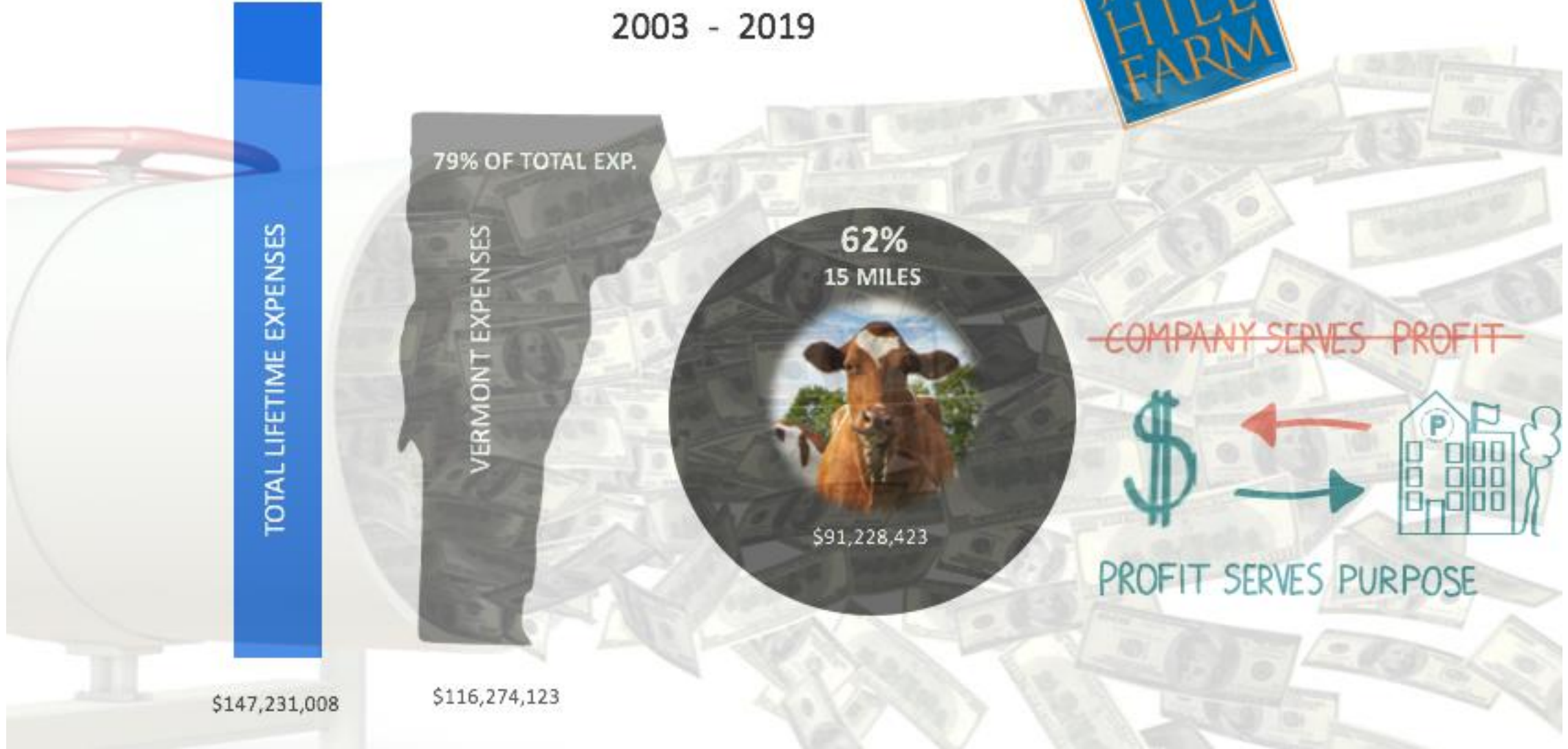
CALDERWOOD
CROPPING CENTER

PIG LLC

YELLOW BARN
ACCELERATOR

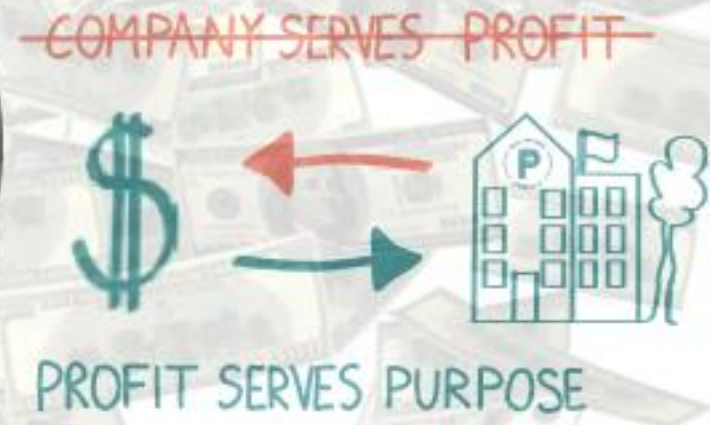
CABOT

JASPER HILL FAMILY OF BUSINESSES
GREENSBORO, VT
2003 - 2019



\$147,231,008

\$116,274,123



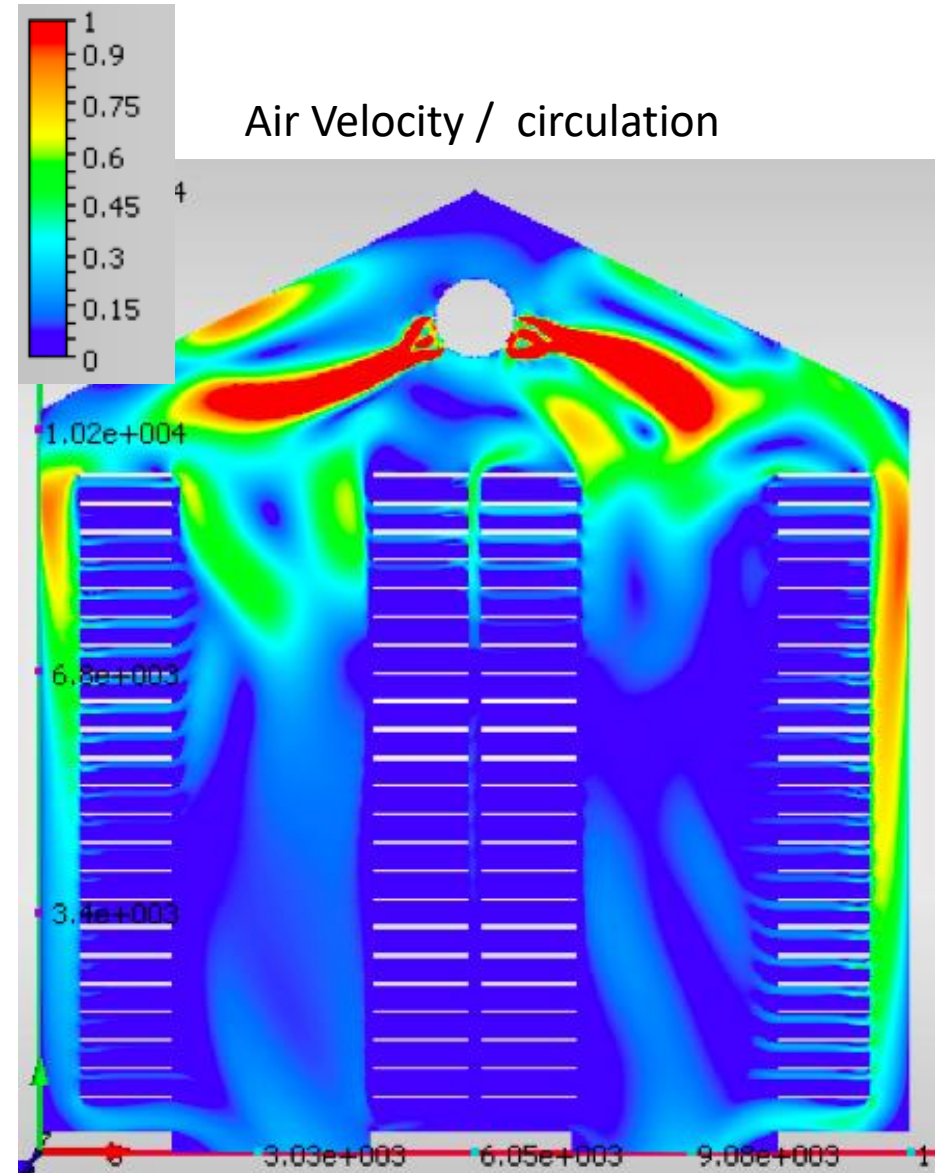
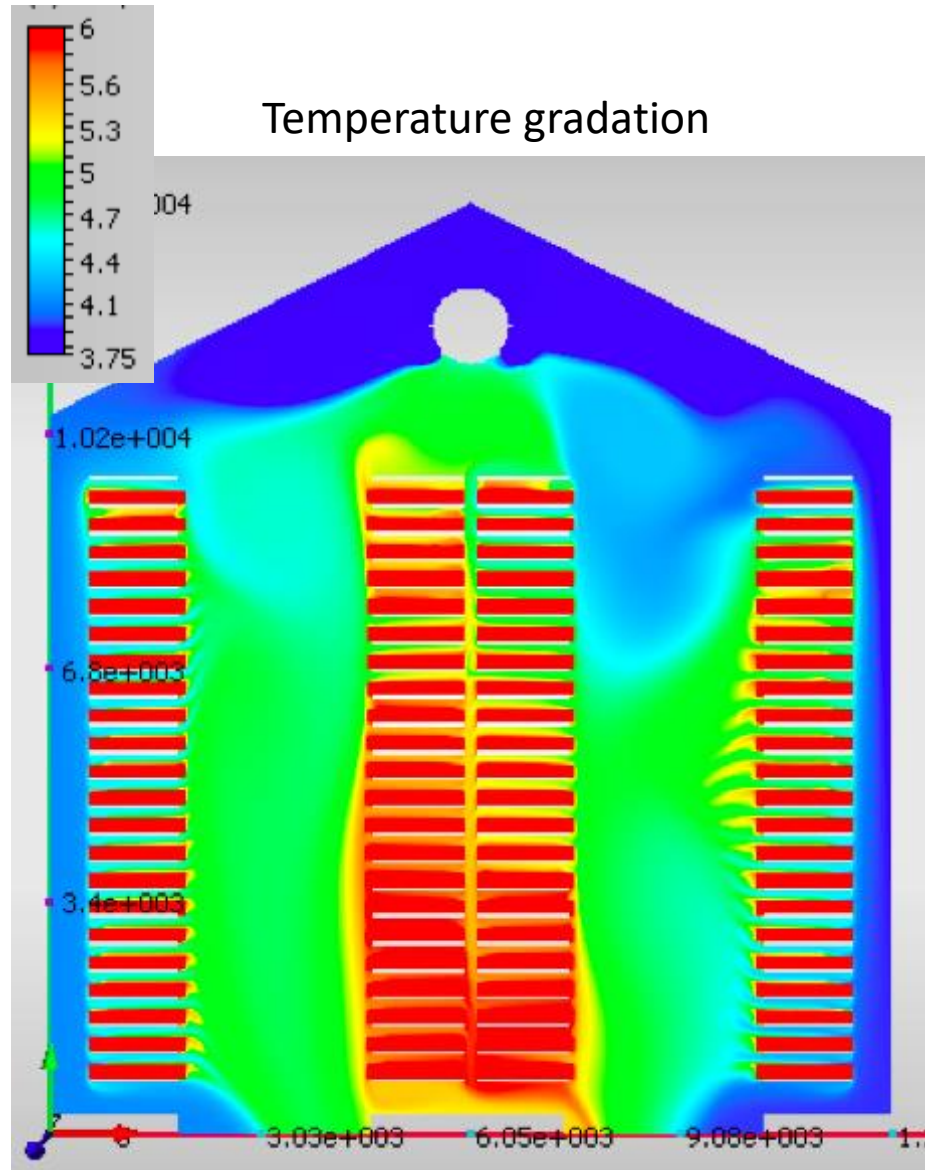
AFFINAGE – *Realizing the full potential of each cheese*



The Affineur's Juggling Act:



Thermo/Aero-dynamics:



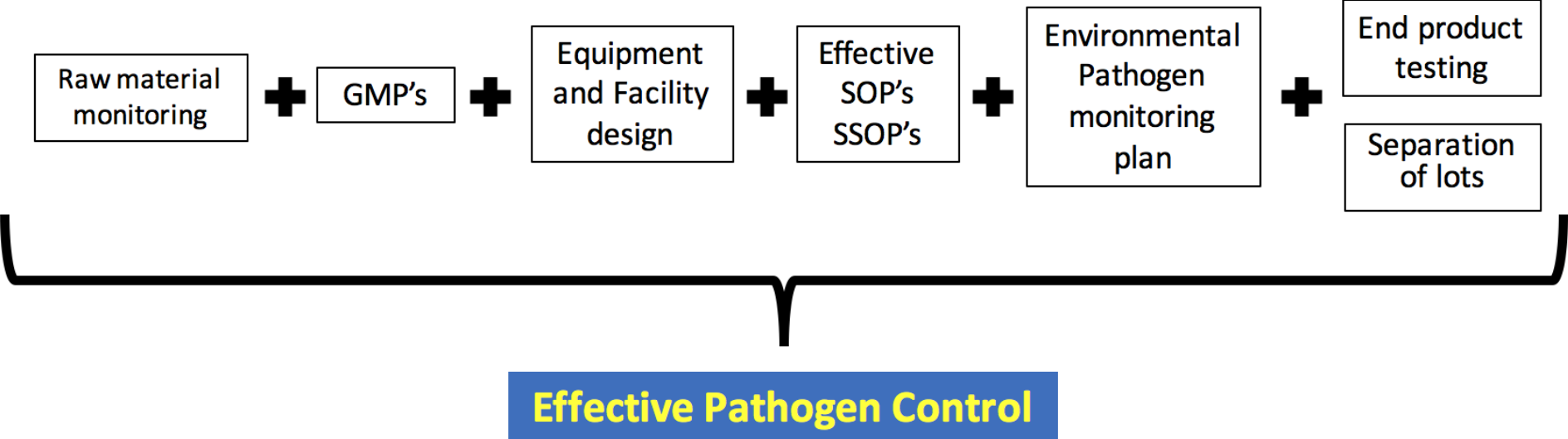
Good Manufacturing Practices (GMP's)



All employees, contractors, and visitors are required to conform to these practices.



Components of a pathogen control plan



Source: IDFA

Testing Zones and *Listeria spp.* presence in the dairy environment

ZONE 1

Any surface that comes in direct contact with the product. Examples include but not limited to : Utensils, inside of vat, trays, tables, cheese cutting equipment

ZONE 2

Exterior of food contact equipment, control panels, other areas where potential risk of contamination exists through human or equipment interaction

ZONE 3

Floors, walls, refrigeration units, drains, doors, floor scrubbers, traffic pathways into process area, overhead piping, wash stations, cleaning tools

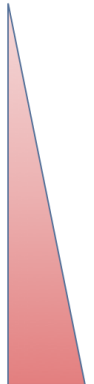
ZONE 4

Production area offices, locker rooms, restrooms, cafeteria, hallways, trash areas, maintenance shops, warehouses, corridors of production areas

Probability of having a positive environmental sample for:

Listeria spp. (%) *L. monocytogenes* (%)

ZONE 2	2.76	0.126
ZONE 3	3.52	0.996
ZONE 4	5.72	3.264

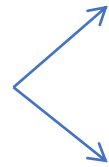


Bacteria's Exponential Growth:

E. Coli at 37°C (98°F)



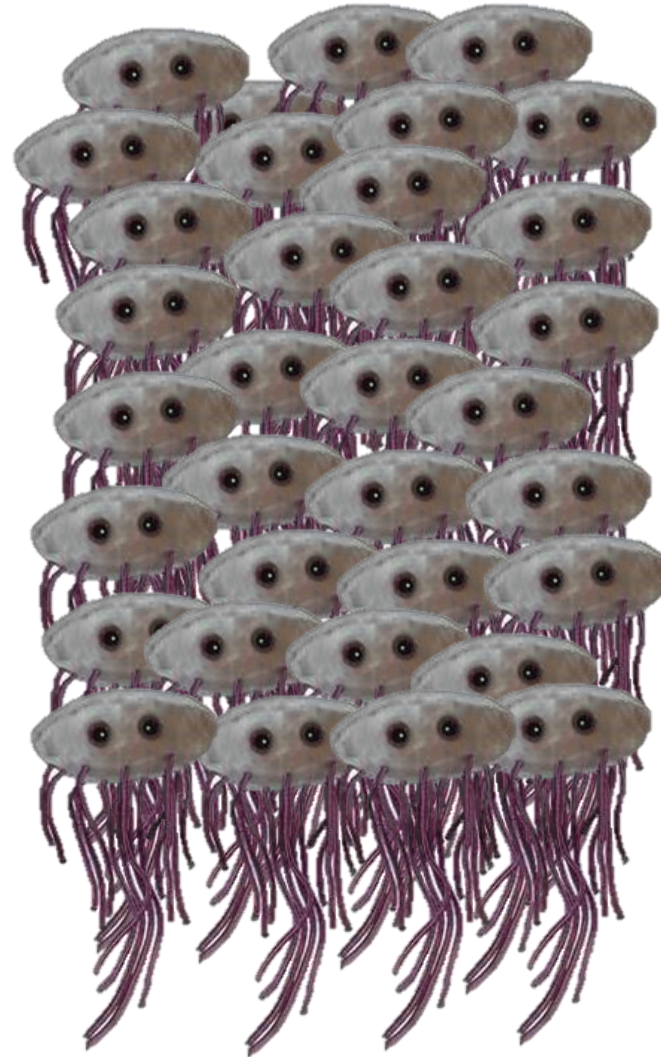
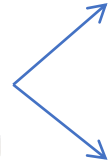
Original
single
microbe



17 minutes



34 minutes



2.4 million in 6 hours

GMP's-Proper attire when entering/working in the Cellars

- The following items must be worn at all times:
 1. Hair/beard net
 2. Uniform – chef coat/utility pants
 3. Boots

- Item to be worn as needed
 1. Aprons
 2. Eye protection
 3. Hard hat



ITEM	Area of work			
	WASHROOM	ELIPSE	VAULTS	SHIPPING
Hair/beard net	Required	Required	Required	Required
Boots	Required	Required	Required	Required
Uniform	Required	Required	Required	Required
Eye protection	Required	As needed	As needed	As needed
Aprons	Required	As needed	As needed	As needed
Hard hat	As needed	As needed	As needed	As needed
Gloves	Required	As needed	Required	Recommended



Survival of the fittest:

migration to environment

'wild' microbes
vs.
starter cultures



+

ability to tolerate environment

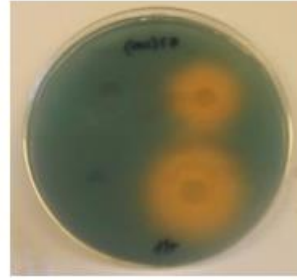
pH
salt
temperature
moisture



+

access to resources for growth

iron
free amino acids



+

interactions between species

antibiotic production
metabolic cooperation



=

rind community



Where does milk micro-flora come from?



Air and direct contact during /after milking
Feed



Manure and soil

Air, teats, hands, water - x-fer to milking machine

FLORA ORIGINATES HERE

Litter, air, clothes, floor, walls



Teat Skin



FLORA MULTIPLIES HERE

Skin and towels



Udder infections / mastitis



water

Bulk tank – biofilm, water, milking machine, hands

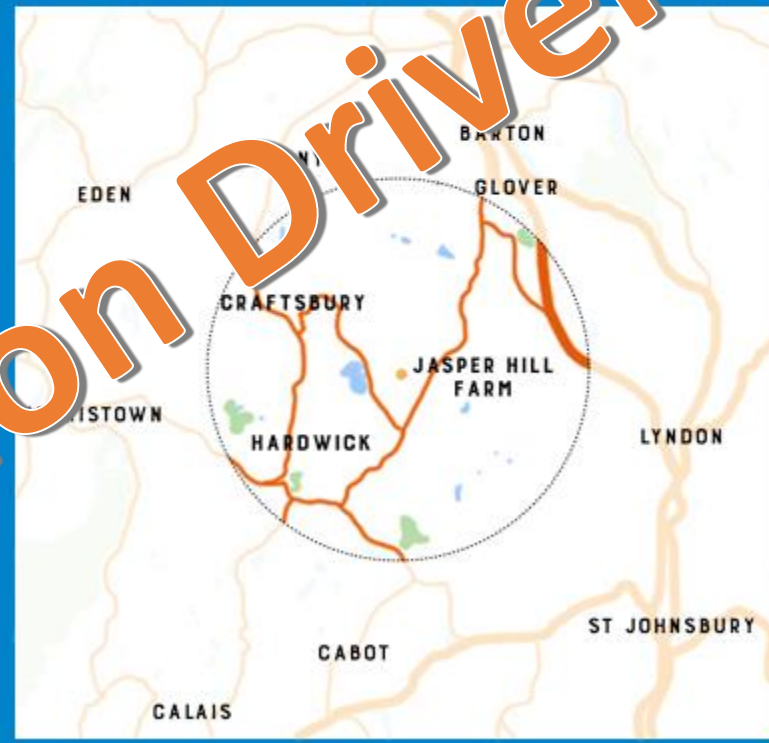


VERMONT



**THE
NORTHEAST
KINGDOM**

Mission Driven



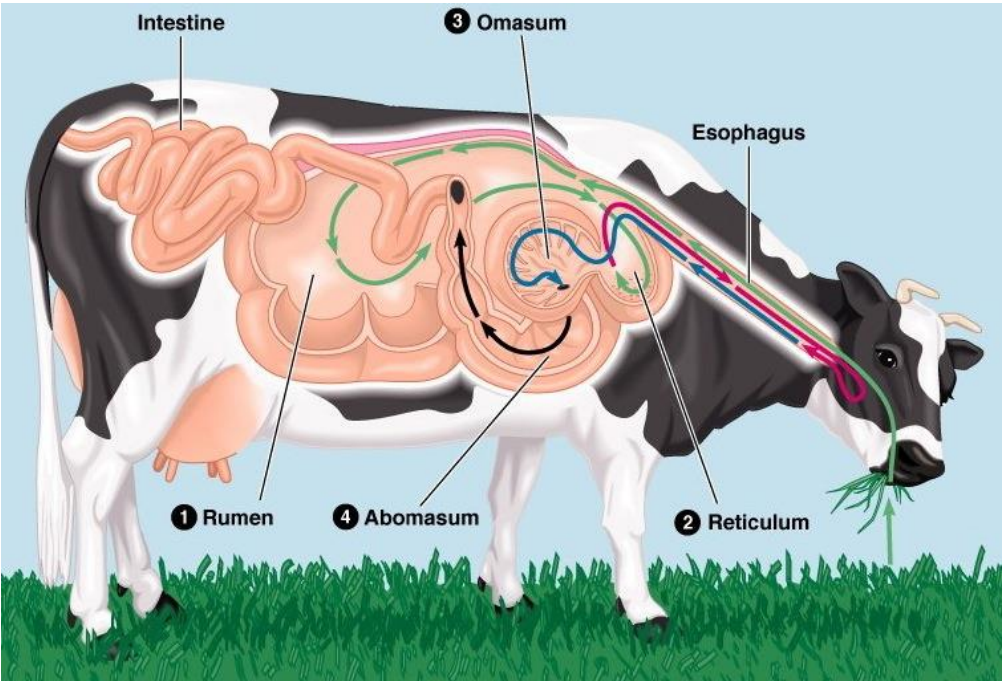


GRAINS (More energy)



FEED

GRASSES (more fiber)



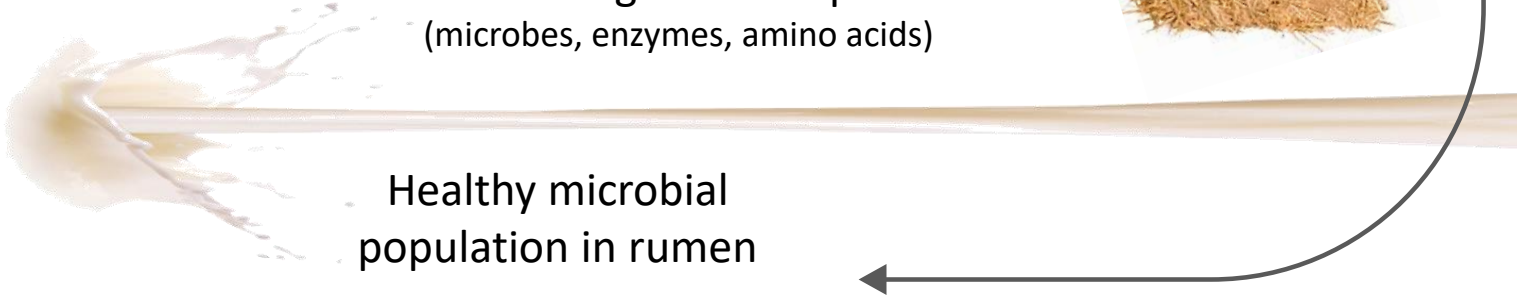
Diverse forage = flavor potential (microbes, enzymes, amino acids)

Maximum protein synthesis



YIELD

Healthy microbial population in rumen









**NON
GMO**
Project

VERIFIED

nongmoproject.org





**Jasper Hill Farm
Raw Milk Collection**

Alpha Tolman



Bayley Hazen Blue



Whitney



Bridgman Blue



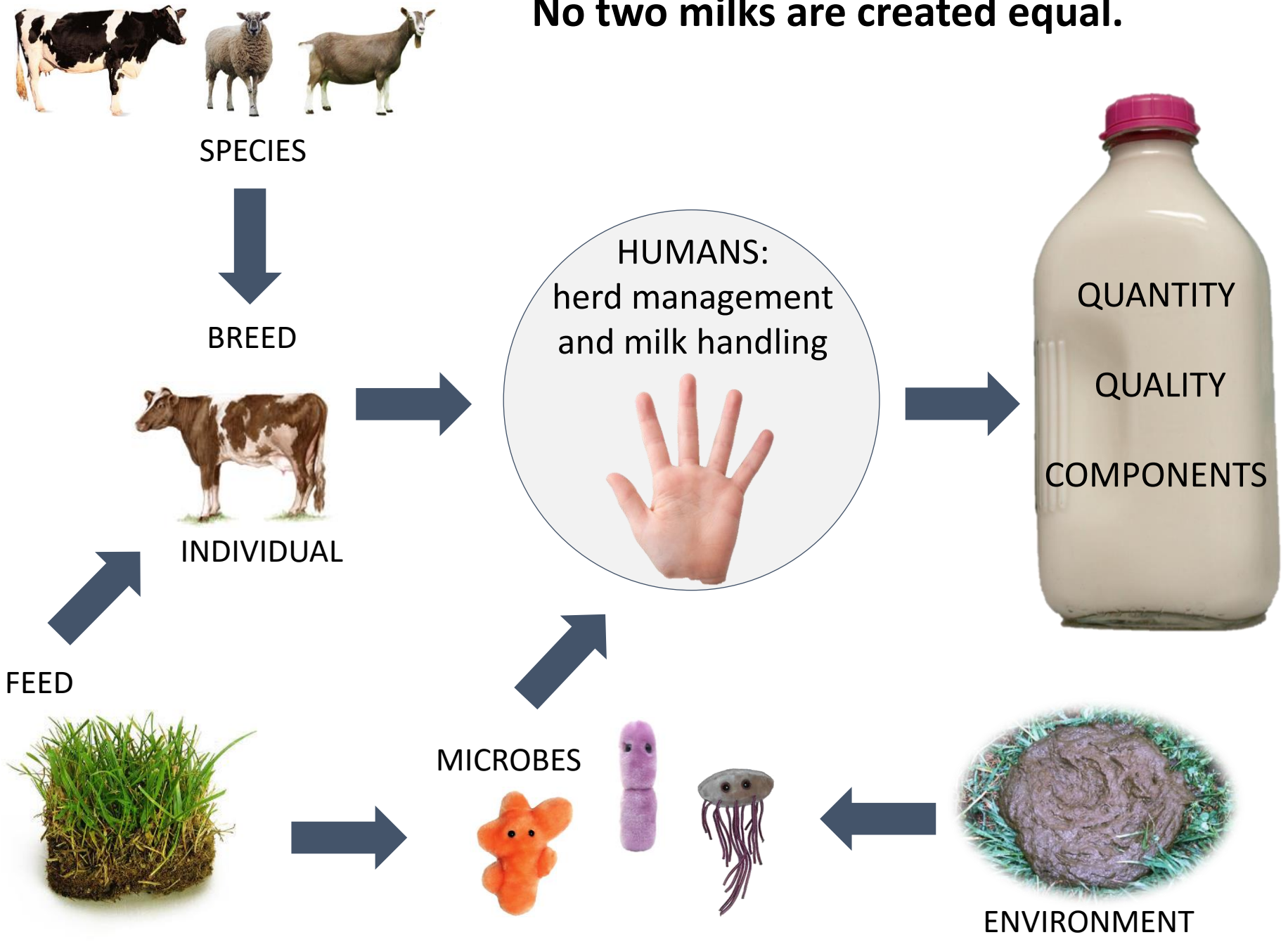
Highlander



Winnimere

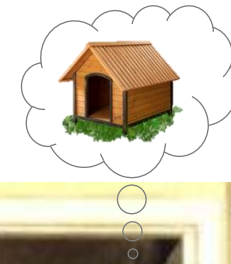
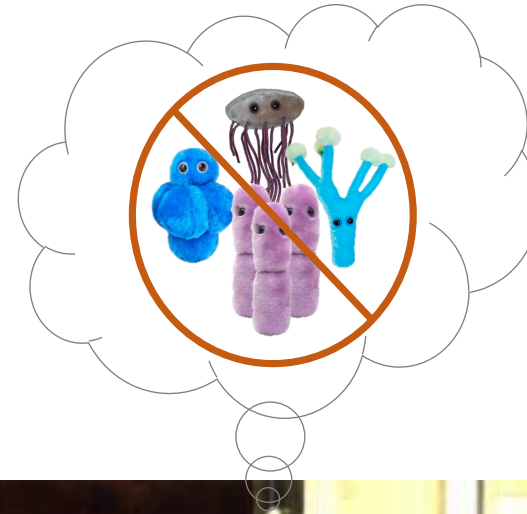


No two milks are created equal.



Pasteurization

Temperature	Time	Pasteurization Type
63°C (145°F)*	30 minutes	Vat Pasteurization
72°C (161°F)*	15 seconds	High temperature short time Pasteurization (HTST)
89°C (191°F)	1.0 second	Higher-Heat Shorter Time (HHST)
138°C (280°F)	2.0 seconds	Ultra Pasteurization (UP)

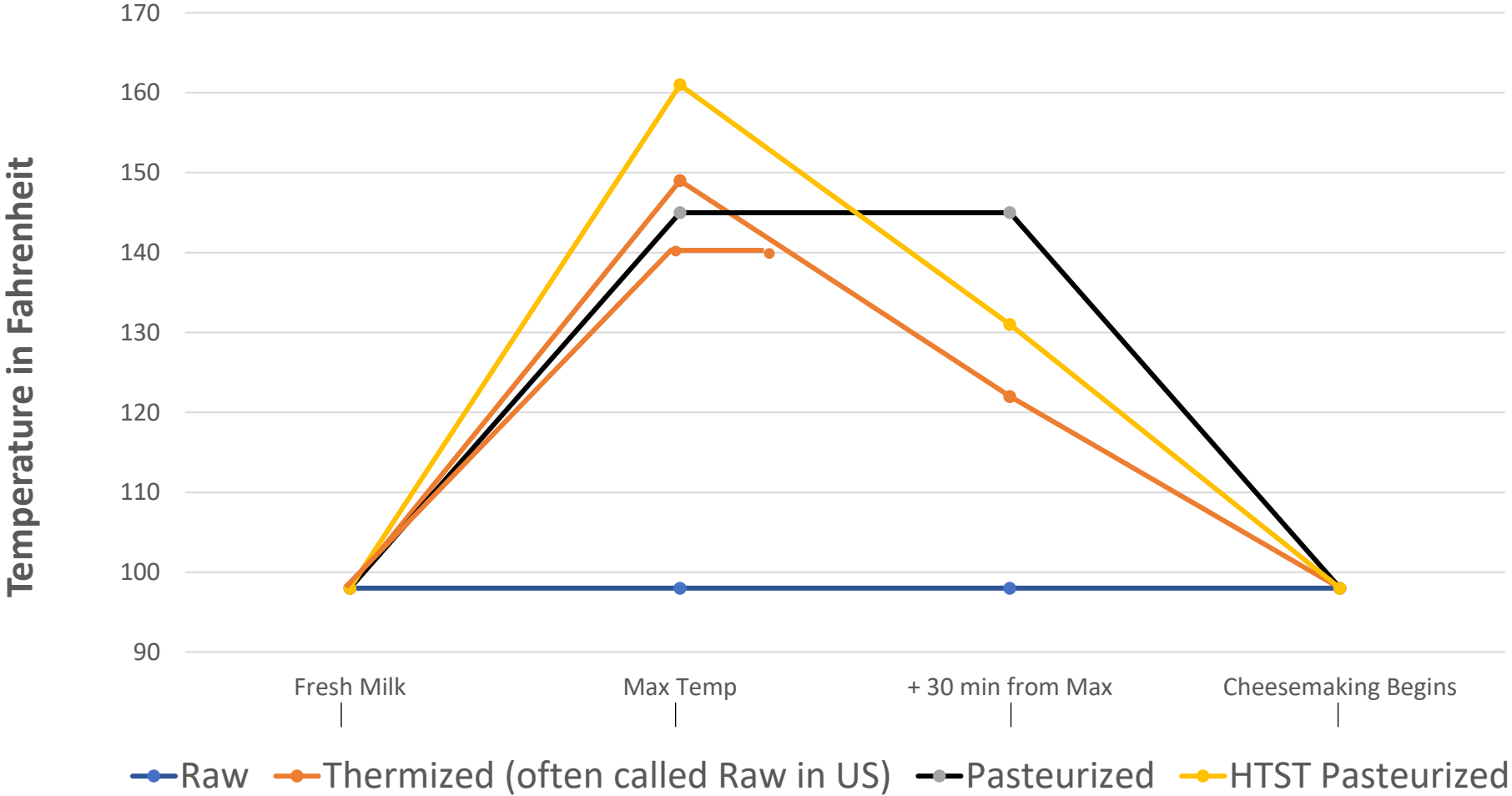


Thermized: 145-149F (63-65C) for 15 seconds (called 'unpasteurized' in the US – not exactly 'Raw')

Raw Milk: not heated above 98F before the time of renneting – according to Raw Milk Cheesemakers' Association



Milk Treatment Scenarios



PASTEURIZATION

Pasteurization is defined by the U.S. government as the heating of milk to a minimum of 145 °F for at least 30 minutes, or a minimum of 161 degrees° F for at least 15 seconds. The former is called “batch” or “vat” pasteurization while the latter method is called HTST, for high temperature short-term pasteurization. Another form of pasteurization is UHT, ultra-high temperature pasteurization which involves flash heating the milk to as high as 350° F for a fraction of a second.

When making raw milk cheese the milk retains its inherent natural defenses. If you kill all of the bacteria, including the good ones, there’s more room for the bad bacteria to thrive. A pasteurized milk cheese is stripped of its natural defenses and is a hospitable environment for bad bacteria. Some producers use pasteurization as a safety net and do not have good sanitation practices and inferior milk quality.

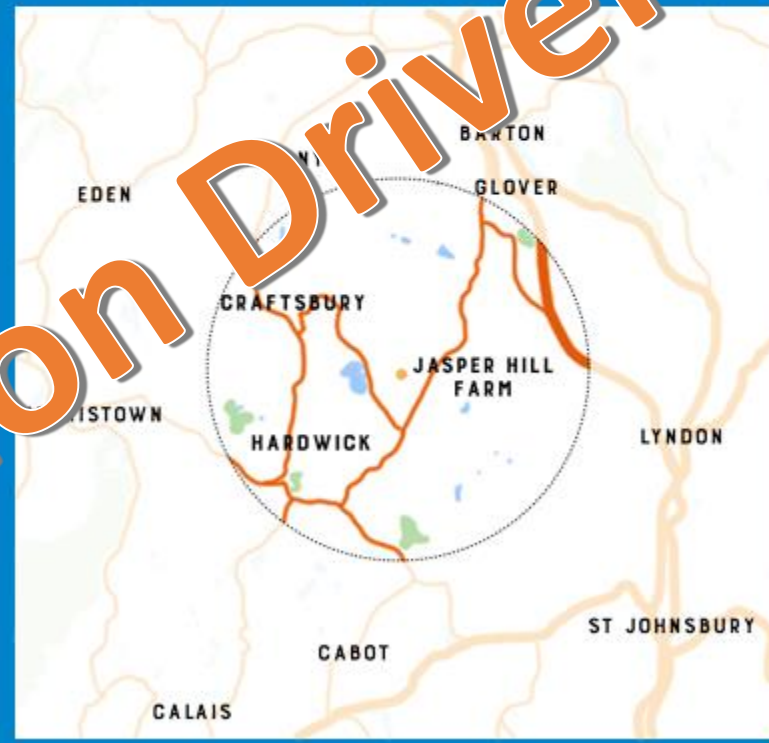
Pasteurization is likely to reduce, if not eliminate, character from cheese making milk. Cheesemakers that pasteurize their milk will have to replace the lost microflora by introducing outside cultures. (cross reference with Raw Materials for Cheesemaking section one)

VERMONT



**THE
NORTHEAST
KINGDOM**

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JASPER HILL CREAMERY

HARBISON



PASTEURIZED COW MILK
TRADITIONAL RENNET
BARK WRAPPED BLOOMY
RIPE AT 7-13 WEEKS
9 OUNCE WHEEL



[How Harbison Is Made!](#)

Thank you!



MEANINGFUL WORK IN A PLACE THAT WE LOVE