



HISTORY OF CHEESE

PRESENTATION BY MARCI RICHARDS

FEBRUARY 2019



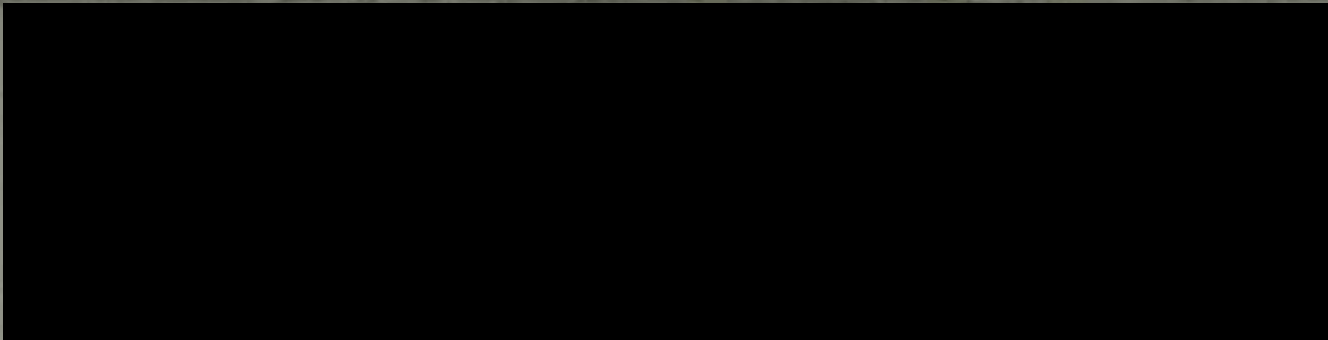
DID **CHEESE** EXIST BEFORE HUMANS STARTED MAKING IT?

Yes, the infant mammal is a ready-made cheese factory,
with everything, needed to make cheese



- derived from Latin word "caseus" = to ferment
- ancient English word "chese" = product derived from sour milk

West-Germanic	* <i>kāsi</i> - an early borrowing from Latin
Italian	<i>cacio</i>
Spanish	<i>queso</i>
Irish	<i>caise</i>
Welsh	<i>caws</i>
Portuguese	<i>queijo</i>
Romanian	<i>caș</i>
Tuscan	<i>caso</i>



A six letter word

A noun – “the big cheese”

A verb – “to be cheesed off”

An adjective – “cheesy joke”

Milk, Culture and Rennet (+)



All cultures do the same basic work:

- rapidly raise the acidity of **milk** by consuming the **lactose** (**milk sugar**) and converting it into **lactic acid**.
- helps the rennet to set the cheese

Is usually bacteria but can be yeasts and molds



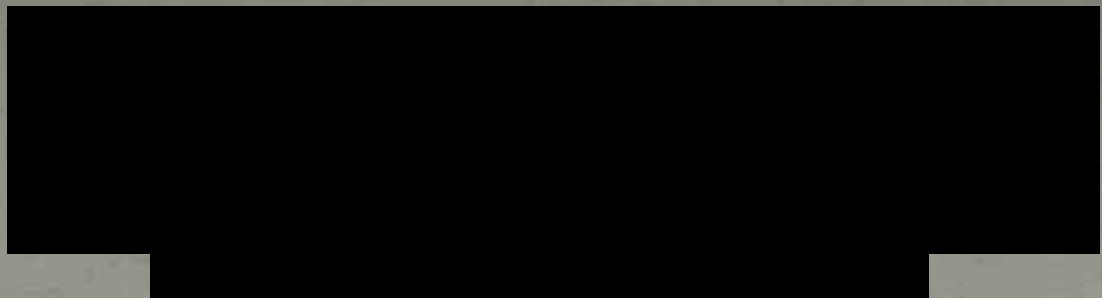
A complex set of enzymes from the stomach lining of ruminant mammals, usually calves or lambs

- **Chymosin** – curdles the casein in the milk
 - **pepsin** – breaks down the protein (helps digestion)
 - **lipase** – breaks down the fats

Rennin helps the baby digest the mother's milk & thickens/coagulates the milk

- - important for nutrient retention

Rennin is produced in large amounts, immediately after the birth. Its production gradually decreases, and it is replaced by a digestive enzyme called pepsin.



~5500 BC	Kuyavia, Poland	Evidence of cheese on pottery
~2900 BC	Egypt	In funeral meal in Egyptian tomb
~2000 BC	Southern Iraq	Cuneiform text
~2000 BC	Egypt	Tomb murals
~1615 BC	Xinjiang, China	Oldest cheese from China
~1200 BC	Egypt	Oldest cheese from Egypt
~2000 BC	Greece	Tablets with record inventory of cheese

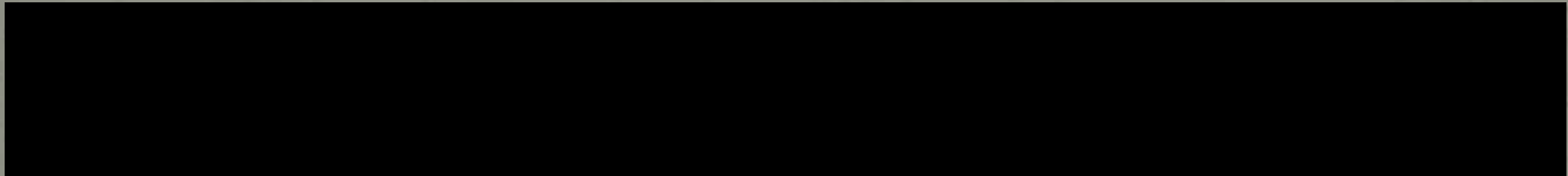
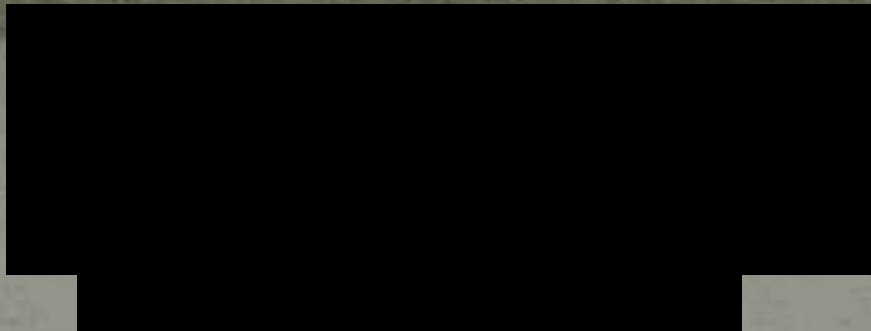
~800 BC to ~500 AD

Ancient Roman Empire Greek Mythology References

-Aristaeus, rustic god of **cheese making**

-Homer's Oddyssey (**feta**)





- 1500 Cheddar
- 1597 Parmesan
- 1697 Gouda
- 1791 Camembert

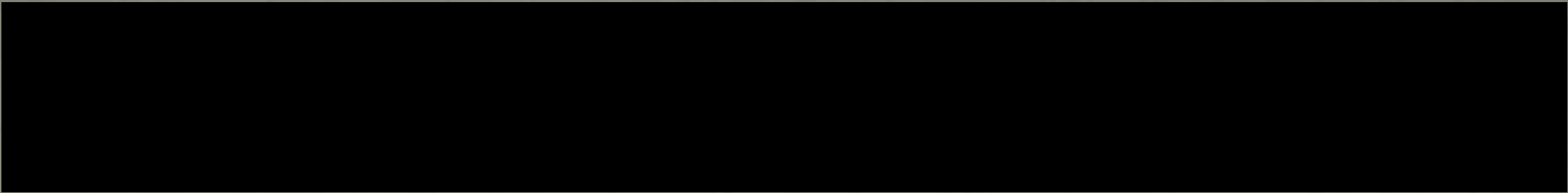


HOW DID **CHEESE** MAKING START?

Magically?

Accidentally?

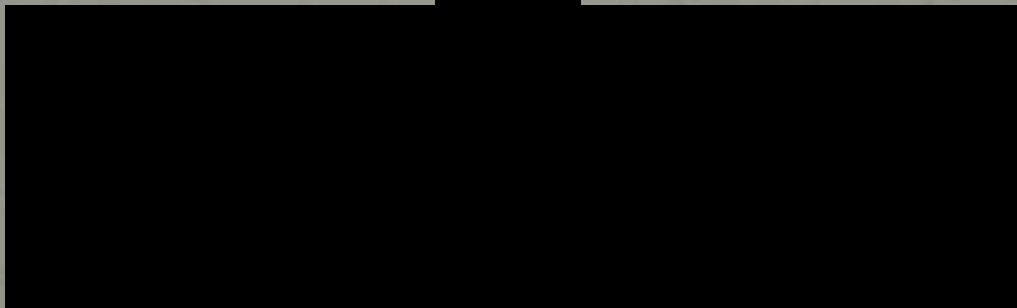
Naturally?



ACCIDENTLY..... Origin is assumed to lie in the practice of transporting milk in bladders and stomachs made of ruminant animals, **warm summer heat** + residual rennet in the stomach lining = curdled the milk (i.e., earliest forms of **cheese**)

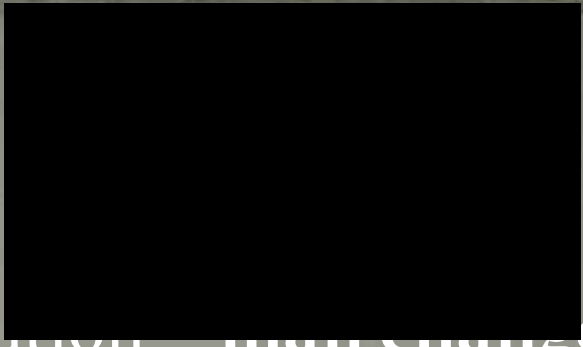
NATURALLY..... humans learned the art of cheesemaking from other mammals particularly suckling calves.

First cheeses likely sour, curdled, cottage cheese





Milk was never meant to be exposed to air



~10,000 BC , Neolithic Revolution — man changed from a hunter/gather culture to agriculture and settlement.....

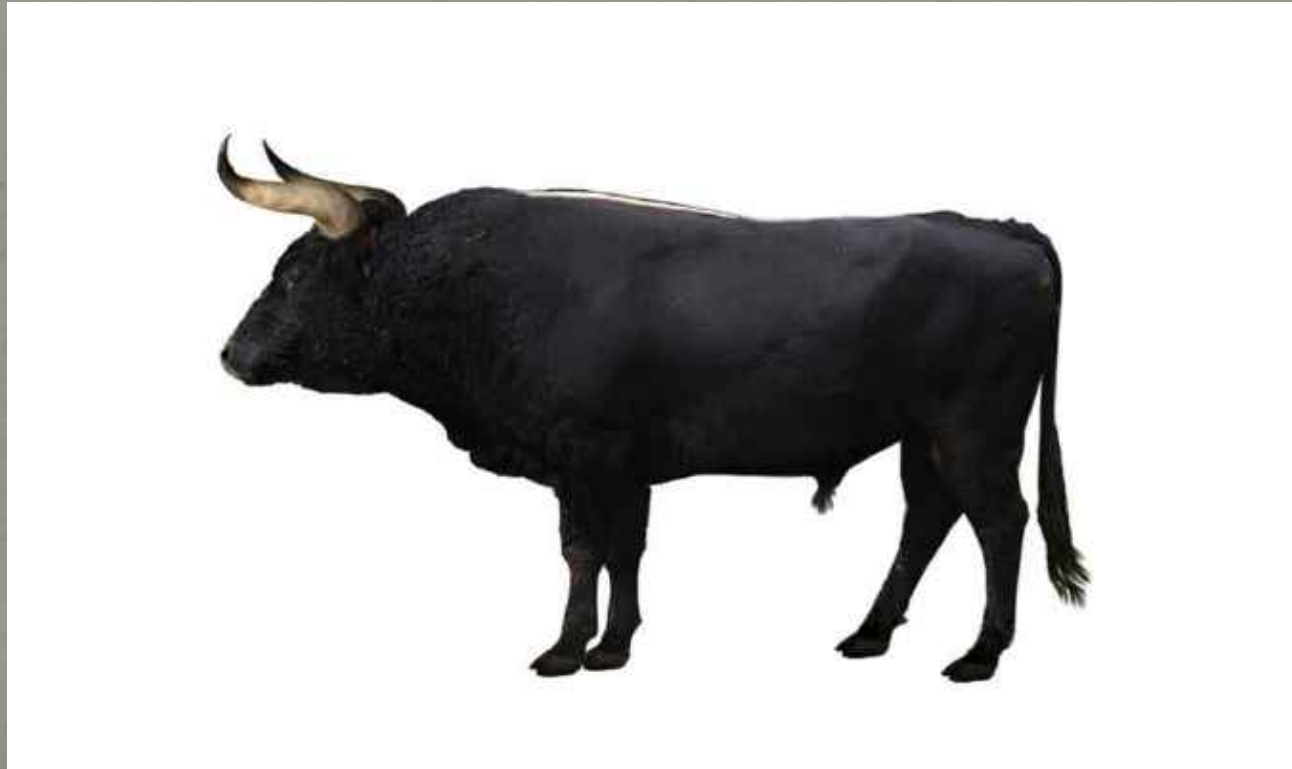
(9000–7000 BC Southwest Asia to 3500–3000 BC in the Americas)

Humans learned/started to consume Milk with domestication of animals

Why domesticate animals?.....transportation, work purposes and eventually food

Let's look at the cow.....

Ranged throughout Asia, Europe and North Africa









Lactase – the enzyme necessary for the digestion of lactose, the main carbohydrate in milk

- Babies naturally have the enzyme
- Lactase production decreases after weaning

~10,000 years ago most adults were lactose intolerant

milk consumption = bloating, flatulence, cramps and/or nausea



Likely, desperation and starvation drove early farmers to cow's milk

- realized that animals produced milk just like human women
- a large animal like a cow or goat might produce milk that could be drunk by humans as well

Protein, micronutrients, calcium and carbohydrates - A superfood for the ancient Neolithic farmer

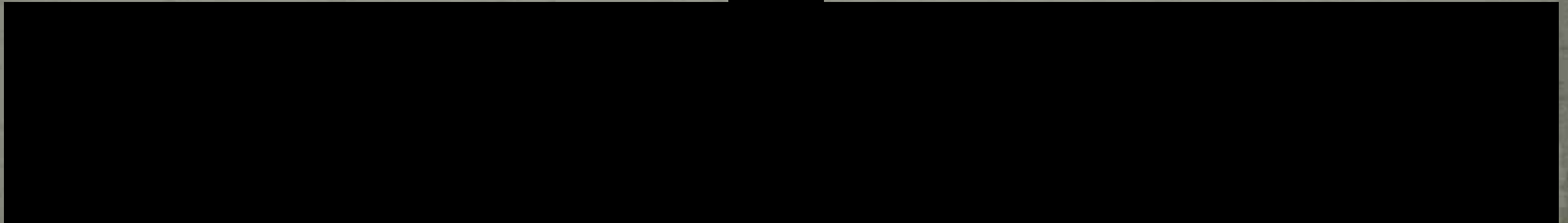
RESULT: ~7,500 years ago..... the process for humans to digest milk began, leading to **genetic mutation**

Ethnicity / Geographic Region	% With Lactose Intolerance
1. East Asian	90-100%
2. Indigenous (North America)	80-100%
3. Central Asian	80%
4. African American (North America)	75%
5. African (Africa)	70-90%
6. Indian (Southern India)	70%
7. French (Southern France)	65%
8. Ashkenazi Jew (North America)	60-80%
9. Balkans Region	55%

Ethnicity / Geographic Region	% With Lactose Intolerance
10. Latino/Hispanic (North America)	51%
11. Indian (Northern India)	30%
12. Anglo (North America)	21%
13. Italian (Italy)	20-70%
14. French (Northern France)	17%
15. Finnish (Finland)	17%
16. Austrian (Austria)	15-20%
17. German (Germany)	15%
18. British (U.K.)	5-15%



- Good way of preserving milk
 - strain milk curds and salt ="cheese"
- Removes some of the lactose
 - = easier to digest for our adult ancestors than milk
- Easier to store and transport than milk
- High in protein
- Cheese allowed humans to avoid slaughtering precious livestock for food





Middle East?
Central Asia?
Sahara?
Europe?



Warm/hot climates (Middle East) required **more salt** to preserve cheese

Hard salted cheeses - only form in which milk could be kept in a hot climate

Examples: Feta, Ackawi, Halloumi

Cooler climates (Northern Europe) required **less salt** for preservation

less salt and acidity = suitable environment for useful microbes and molds

- = aged, ripened and blue cheeses
- *Examples: cheddar, gouda, parmesan, camembert (first produced in Europe during the Middle-Ages)*



16th to 18th century - cheeses diversified in Europe with locales developing their own traditions and products

1815, Switzerland - first factory for the industrial production of cheese

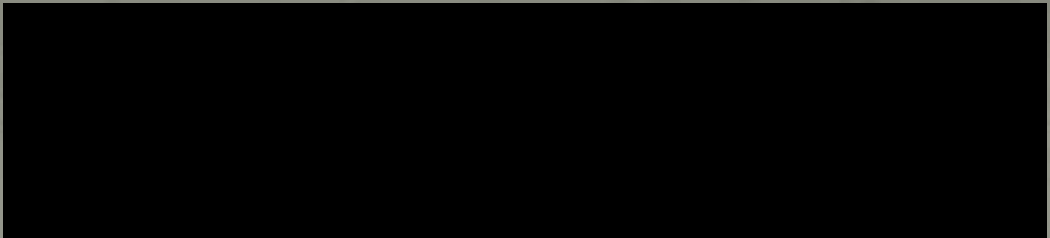
1851, United States – first large-scale, assembly-line production of cheese

1860's – mass produced rennet

Early 1900's - produced pure microbial cultures

World War II era - factory-made cheese overtook traditional cheese-making

Today - artisan cheese is making a comeback

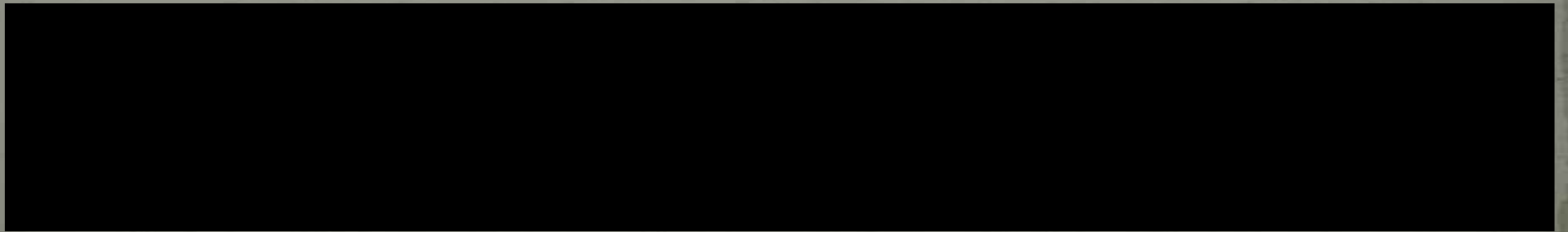


Cheese was nearly unheard of in Asian cultures and in the pre-Columbian Americas until its modern spread, along with European culture

Cheese had limited use in sub-Mediterranean Africa

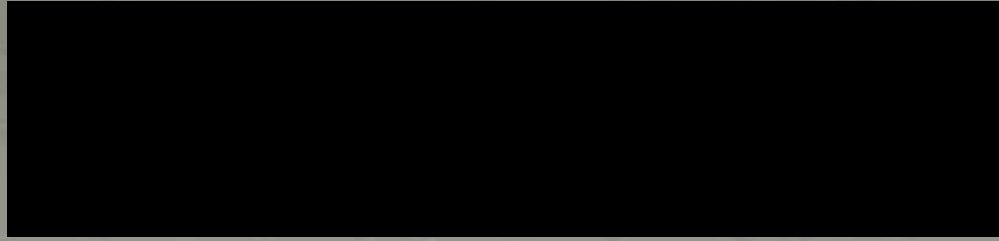
Cheese is rarely considered a part of ethnic cuisines outside Europe, the Middle East, and the Americas

Cheese has become popular worldwide through the spread of European Imperialism and Euro-American culture



MODERN **CHEESE** FACTS/TRIVIA





France ~50 protected cheeses and ~1,800 raw milk cheese products (2,000 with pasteurized)

Italy ~46 protected

Spain ~26 protected

Britain ~15 protected and ~ 700 different products



<u>Country</u>	<u>Kg/person/year</u>	<u>Country</u>	<u>Kg/person/year</u>
Denmark	28.1	Austria	21.1
Iceland	27.7	Sweden	20.5
Finland	27.3	Estonia	20.0
France	27.2	Norway	19.8
Cyprus	26.7	Israel	18.9
Germany	24.7	USA	16.8
Switzerland	22.2	1. Wisconsin	
Netherlands	21.6	2. California	
Italy	21.5	3. Idaho	
		
	China	0.1



1. Pule: **\$600**/pound (Serbia)
2. White Stilton Gold: **\$420**/pound (Britain)
3. Wyke Farms Cheddar: **\$200**/pound (Great Britain since 1861)
4. Extra Old Bitto: **\$150**/pound (China)
5. Old Ford: **\$50**/pound (England, goat)



Roquefort – French commune of Roquefort-sur-Soulzon (lots of caves)

Cheddar – English village of Cheddar (lots of caves)

Pecorino – Italian word for sheep

Mozzarella – Neapolitan dialect = to cut off (refers to how produced, cutting the curds)

Monterey Jack -

- “Monterey” – Franciscan friars around Monterey, California (19th century)
- “Jack” – Scottish immigrant David Jack

Colby – Colby, Wisconsin:

- 1885 production process varied by washing the cheddar curds with cold water thereby cutting down the acidity and giving it a milder flavor





You might have a **cheese** addiction (?)

Recent study - mentions **cheese** can be an addiction similar to hard drugs



DAIRY CRACK

Cheese is addictive

.....because of an ingredient called casein

During digestion, casein releases opiates called casomorphins

.....casomorphins attach to the brain's opiate receptors to cause a calming effect in much the same way heroin and morphine do

DESSERT

Dessert Cheese Platters

Desserts with Cheese (e.g., Cheesecake, Blintz)



Dessert Cheese = Gjetost



"THE MOON IS MADE OF GREEN CHEESE"

- Original formulation as a proverb and metaphor for credulity with roots in fable, this refers to the perception of a simpleton who sees a reflection of the Moon in water and mistakes it for a round cheese wheel.
- It was typically used as an example of extreme credulity, a meaning that was clear and commonly understood as early as 1638.