



## Support HB 57

Raw milk is, and has always been, legal to sell in Texas. Until the mid-1980s, Texans could buy raw milk anywhere food was sold. But the Department of State Health Services (DSHS) then adopted regulation that limited raw milk sales to on the farm. This marketing restriction does nothing to increase the safety of the product, but it burdens both farmers and consumers. Farmers who invest significant resources to become licensed face unfair limitations. Consumers who want unprocessed food must expend significant time, gas, and money on long weekly drives.

**HB 57 would allow licensed farmers to sell raw milk directly to consumers at farmers' markets, and allow farmers and consumers to agree to delivery arrangements. The House passed an almost-identical bill last session by a vote of 103-36.**

### The Facts about Safety

- Grade A Raw milk dairies must meet or exceed all regulatory standards for pasteurized milk.
- Texas raw milk farmers have an excellent safety record. Between 9 and 16 people have allegedly become ill from raw milk in Texas in the last 20 years.
- Over twenty thousand Texans reportedly became ill from food in that same time period, traced to such foods as mangos, cantaloupes, cake, lettuce salad, salsa, pot pie, hot dogs, and deli meats.
- Raw milk has a better safety record in Texas than many common foods consumed by both adults and children, such as strawberries (29 illnesses), chicken soup (47 illnesses), and turkey (945 illnesses).

### What HB 57 Does

- HB 57 does only one thing: allow licensed farmers to bring the milk to the customer, rather than the customer having to drive to the farm every time.
- The bill makes **no** change to the existing regulatory requirements for licensed raw milk producers that have been successful in protecting the public's health in Texas.
- Sales will continue to be limited to direct-to-consumer transactions, as they are currently.
- The bill will **not** allow sales of raw milk in grocery stores.

### Advantages of HB 57

- Improves the safety of raw dairy by allowing producers to transport it to consumers under safe conditions, rather than relying on consumers to remember to take coolers and ice.
- By allowing a farmer to make a single trip to serve multiple customers, rather than having each customer drive to the farm, the bill reduces vehicle miles, benefiting air quality, traffic congestion, and public safety.
- Benefits rural economies because direct farm-to-consumer sales of raw milk can mean the difference between a net loss on the farm and a reasonable income for the farm family.
- Improves legal access to raw milk, thereby reducing the likelihood that consumers will buy from unregulated and illegal sources, as is currently happening.

*For more information, contact Judith McGeary, Farm and Ranch Freedom Alliance, [Judith@FarmAndRanchFreedom.org](mailto:Judith@FarmAndRanchFreedom.org), 254-697-2661 (office) or 512-484-8821 (cell).*

Various groups have raised inaccurate claims in opposing HB 57. Here are the facts:

- **Raw milk is, and has always been, legal to sell in Texas.**
  - The Department of State Health Services licensed more than 45 raw milk dairies in Texas.
  - Based on a CDC survey, an estimated 3% of the population nationwide drinks raw milk.<sup>1</sup> That means that approximately **three quarters of a million Texans drink raw milk already.**
- **Grade A raw milk dairies meet or exceed all the standards for pasteurized milk.**
  - For both raw and pasteurized, the milk must be tested at least 4 times in every 6 month period.
  - The regulatory standards for bacteria counts, coliform, and pathogens are the same for Grade A raw milk as for pasteurized milk.
- **Any food can carry the bacteria that cause foodborne illnesses; they are not unique to raw milk.**
  - These bacteria are especially dangerous for pregnant women, children, the elderly, and people with weakened immune systems **regardless of the source.** For example, three people recently died from consuming Blue Bell ice cream, made with **pasteurized** milk, due to *Listeria* contamination. And in December 2014, seven people died from *Listeria* from candied apples.<sup>2</sup>
  - HB 57 requires that raw milk have a prominent, detailed warning label, including a specific warning for high-risk populations.
- The numbers of illnesses often quoted are **not** attributable to raw milk, but rather to all raw dairy products.
  - Most of the hospitalizations and **all** of the deaths cited by the opposition were due to **raw queso fresco, a soft cheese that is currently illegal to sell and which will remain illegal to sell.** Raw queso fresco is often brought in from Mexico or made in people's bathtubs.
  - HB 57 would **not** legalize the sale of soft raw cheeses such as queso fresco.
- **Raw milk is not a high risk food.**
  - Nationwide, there are an average of 130 illnesses per year attributed to raw milk, out of an estimated nine and a half million people who drink it. There were similar numbers of illnesses attributed to fruit salad (1,665 illnesses), deli meats (1,534 illnesses), and pizza (2,235 illnesses).
  - Many of these illnesses were from illegal or unregulated sources. Texas' licensing and inspection requirements for raw milk dairies provide significant food safety protections.
  - In Texas, there have been, at most, 16 illnesses reportedly linked to raw milk since 1998 and **no** deaths in that entire time period.<sup>3</sup>
- **Published, peer-reviewed scientific studies show health benefits from raw milk.** Multiple studies have found that drinking "farm" (raw) milk protects against asthma and allergies.<sup>4</sup> A 2015 study found that raw milk consumption reduced the risk of rhinitis, respiratory tract infections, ear infections, and fever by around 30% compared to the consumption of ultra-heat treated (a method of pasteurization) milk.<sup>5</sup> Pasteurization denatures proteins, inactivates enzymes, and destroys heat-sensitive vitamins.

---

<sup>1</sup> Foodborne Active Surveillance Network (FoodNet) Population Survey Atlas of Exposures. 2006-2007. [www.cdc.gov/foodnet/surveys/FoodNetExposureAtlas0607\\_508.pdf](http://www.cdc.gov/foodnet/surveys/FoodNetExposureAtlas0607_508.pdf)

<sup>2</sup> <http://foodpoisoningbulletin.com/2015/listeria-in-blue-bell-ice-cream-kills-3-sickens-2-more-at-via-christi-hospital-in-wichita>;  
<http://foodpoisoningbulletin.com/2015/caramel-apple-listeria-outbreak-timeline>

<sup>3</sup> CDC data on foodborne illnesses, drawn from <http://wwwn.cdc.gov/foodborneoutbreaks>

<sup>4</sup> See Riedler, J. et al. 2001. Exposure to farming in early life and development of asthma and allergy: a cross-sectional survey. *Lancet* 358:1129-33. Perkin, M.R. and D.P. Strachan. 2006. Which aspects of the farming lifestyle explain the inverse association with childhood allergy? *J Allergy Clin Immunol.* 117(6):1374-8. Waser, M. et al. 2006. Inverse association of farm milk consumption with asthma and allergy in rural and suburban populations across Europe. *Clinical and Experimental Allergy* 37:661-670. Perkin, M.R. 2007. Unpasteurized milk: health or hazard? *Clinical and Experimental Allergy* 37:627-630.

<sup>5</sup> G. Loss et al., Consumption of unprocessed cow's milk protects infants from common respiratory infections, *J. of Allergy and Clinical Immunology* 134: 56-62 (2015).

# **Additional Information in Support of HB 57**

## **Table of Contents**

Topic 1: The real data on foodborne illnesses.

Topic 2: Improving legal access to raw milk will not significantly increase foodborne illnesses.

Topic 3: Raw milk is held to the same or higher standards as pasteurized milk.

Topic 4: Scientific studies have documented benefits from raw milk.

HB 57 is supported by:

- ❖ Farm and Ranch Freedom Alliance
- ❖ Texas Certified Farmers Market Association
- ❖ Texas Organic Farmers and Gardeners Association
- ❖ Sustainable Food Center
- ❖ Food Policy Council of San Antonio
- ❖ Slow Food Austin
- ❖ Farm and Food Coalition (East Texas Community Food Coalition)
- ❖ Farm-to-Consumer Legal Defense Fund
- ❖ Weston A. Price Foundation.

## Topic 1: The Real Data on Foodborne Illnesses

The data show that raw milk is a **relatively low-risk food**, particularly when produced under the sanitary conditions required by Texas regulations.

Any food can cause foodborne illness. The issue isn't whether some people have become sick from raw milk on occasion – the issue is whether raw milk poses such an unusually high level of risk that it justifies unique government restrictions on the marketing and access to it.

All of the data discussed below is from the CDC for the 18-year period from January 1998 to the end of 2015, downloaded from [wwwn.cdc.gov/foodborneoutbreaks](http://wwwn.cdc.gov/foodborneoutbreaks). Note that the CDC simply accepts the state and local health departments' information on intrastate illnesses.

### How many people drink raw milk?

According to a CDC survey, between 2.3% and 3.8% of the population has drunk raw milk within the last 7 days, with a multi-state average of 3%.<sup>6</sup> This means that **between 600,000 and 1 million Texans drink raw milk.**

### Texas data on foodborne illnesses

In Texas, between 1998 and 2015, the CDC database lists 9 people who allegedly became sick from raw milk in Texas. DSHS has made claims of an additional 7 illnesses that it did not report to the CDC, bringing the total to 16 reported illnesses during that 18-year period.

**That means that approximately 0.002% of the raw milk drinkers in this state have reportedly become ill from raw milk in the last 18 years.**

The health department invariably points out that some people become sick without reporting it or without the authorities being able to identify the source. But that is true for illnesses from **all** kinds of foods – it is not somehow unique to raw milk.

In the same time period, there were between 14,000 and 23,000 foodborne illnesses reported in Texas (depending on whether you include people who became ill as part of multi-state outbreaks, such as with spinach or peanut butter). Consider the illnesses attributed to other foods in Texas:

- Ham salad: 225 illnesses
- Raw oysters: 490 illnesses
- Turkey: 945 illnesses
- Chicken: 1,059 illnesses

More illnesses have been attributed to cake, gravy, strawberries, and numerous other foods than to raw milk in Texas.

---

<sup>6</sup> Foodborne Active Surveillance Network (FoodNet) Population Survey Atlas of Exposures. 2006-2007, available at <http://www.cdc.gov/foodnet/PDFs/FNExpAtl03022011.pdf>. This is the most recent food consumption survey conducted by the CDC, and the most thorough, according to its website: “The 2006-2007 Population Survey was conducted in all 10 FoodNet sites for 12 consecutive months, from May 2006 to April 2007, in both English and Spanish. For the first time, a pre-notification letter was sent to inform the household about the purpose of the survey. In 2007, the total population residing in the FoodNet catchment was 46 million persons, representing 15% of the U.S. population.” <http://www.cdc.gov/foodnet/surveys/population.html>

## National data on foodborne illnesses

An estimated nine and a half million people drink raw milk nationally. Out of these millions of consumers, approximately 130 allegedly become sick each year from raw milk nationwide, or 0.001% per year.

Over the 18-year period from 1998 to 2015, a total of 2,345 illnesses were allegedly linked to raw milk. To put these numbers in context, there were 373,531 illnesses reported to the CDC in that time period from all foods. Consider the illnesses attributed to other foods:

- Fruit salad: 1,866 illnesses
- Pizza: 2,334 illnesses
- Tuna: 3,083 illnesses

The CDC does not indicate how many of the illnesses attributed to raw milk came from dairies that were **not** licensed to sell raw milk to consumers. Conventional dairies are not held to the same standards as Grade A Raw for Retail dairies, yet some sell milk from their bulk tanks illegally. This “pre-pasteurization milk” poses a higher risk, as shown by the significantly higher incidence of positive pathogen tests from their bulk tanks. Thus, these numbers significantly overestimate the risk posed by raw milk from licensed, regulated dairies.

## Pasteurized milk also carries some risk of foodborne illness

Nationwide between 1998 and 2015, 2,608 people became ill and 4 people died from pasteurized milk. The risk, when considered in terms of how many people drink milk, is low – but pasteurization does not eliminate all risk. In 1985, there were over 16,000 confirmed cases of Salmonella infection that were traced back to pasteurized milk from a single dairy. Researchers estimated that the actual number of people who became ill in that outbreak was over 168,000, “making this the largest outbreak of salmonellosis ever identified in the United States.”<sup>7</sup>

## Raw milk poses a lower risk than illegal raw milk products like queso fresco

Some groups have presented higher numbers of illnesses allegedly due to raw milk. But these numbers are not attributable to raw milk, but rather to all raw dairy products, such as soft fresh cheeses, which are illegal to sell. Specifically, many of the quoted illnesses are due to raw queso fresco, either imported from Mexico or made under unsanitary conditions at home and nicknamed “bathtub cheese.”<sup>8</sup>

HB 57 would not legalize the sale of these higher-risk products.

**The data, as opposed to the rhetoric, shows that raw milk does not pose an unusually high risk of foodborne illness.**

---

<sup>7</sup> Ryan, CA et al. Massive outbreak of antimicrobial-resistant salmonellosis traced to pasteurized milk. J. American Medical Assn. 258(22):3269-74 (1987), <http://www.ncbi.nlm.nih.gov/pubmed/3316720?dopt=Abstract>

<sup>8</sup> Queso Fresco: Cheese with a Reputation, <http://www.foodsafetynews.com/2010/05/queso-fresco-cheese-with-a-reputation>. See also Unpasteurized Cheese Making Record Number Sick in Dallas County, [www.dallasnews.com/business/health-care/2016/09/16/unpasteurized-cheese-making-record-number-sick-dallas-county](http://www.dallasnews.com/business/health-care/2016/09/16/unpasteurized-cheese-making-record-number-sick-dallas-county): “All of the patients reported eating the cheese brought into the U.S. from Mexico by friends or relatives, consuming the cheese while traveling in Mexico or eating unidentified cheese products from local street vendors, officials said.”

## Topic 2: Improving legal access to raw milk will not increase foodborne illness rates

One argument that has been raised against HB 57 is that if you make it easier to get raw milk legally, more people will drink raw milk, and more people will get sick. While that argument is intuitively appealing, it is contradicted by the CDC's data.

As discussed below, expanding legal access to raw milk will probably increase the number of people who buy raw milk from **legal sources**. But compared to the total number of people drinking raw milk, that is unlikely to be a significant increase. And given the stringent safety regulations placed on licensed dairies, increasing the number of people who obtain milk from these dairies is unlikely to increase the number of raw milk illnesses that occur in Texas.

The attached chart shows 10 states' rates of raw milk consumption, the legal status of raw milk, and the incidence of foodborne illnesses. These states were selected because the CDC had consumption data specific to them, making this the most accurate comparison possible.

### Key facts:

- In every state, the number of illnesses attributed to raw milk is a very small percentage of the total number of foodborne illnesses.
- There is **no** pattern indicating that making raw milk legally accessible increases consumption.
  - Maryland (where raw milk sales are illegal) had the exact same percentage of people who drink raw milk as California (where raw milk can be sold in grocery stores).
  - Georgia, where raw milk can only be sold as pet food, had the highest consumption rates of all.
- There is **no** pattern of increasing rates of consumption correlating to increasing illnesses.
  - The two states with the highest rates of consumption -- Tennessee and Georgia -- had lower rates of raw milk illnesses than the three states with the lowest rates of consumption -- Minnesota, Colorado, and Connecticut.

How can this be true? There are two probable reasons:

- 1) The risk of foodborne illness from raw milk is low enough that the outbreaks are sporadic and occasional. Because raw milk is not a high-risk food, the incidences of illness are too low to show a clear pattern.
- 2) The majority of raw milk drinkers are not buying their milk from licensed raw milk dairies. For example, based on the CDC survey, more than three quarters of a million Texans drink raw milk. With only 50 small licensed dairies in the state, it is apparent that a significant percentage of people who drink raw milk obtain it from un-licensed sources, whether it is their own milk cow/goat, the neighbor down the road, or a conventional dairy that is selling milk intended for pasteurization without meeting the regulatory standards for Raw for Retail milk.

The data shows that improving legal access to raw milk does not significantly increase the number of people who get sick.

## Raw Milk Consumption, Legal Status, and Illness Rates

The states are listed in order of increasing percentage of the population who drink raw milk. Note that the number of illnesses allegedly linked to raw milk does not show a corresponding increase. All data is from the CDC database, excluding multi-state outbreaks, for the 18-year period from 1998 to 2015.

“Retail sales legal” indicates states that allow raw milk to be sold in grocery stores and served in restaurants. “Farm sales legal” indicates states that, like Texas, allow only direct-to-consumer sales. “Herd shares legal” are those states that recognize the right of individuals to buy a “share” of an animal and receive the milk, often without regulatory requirements.

State	Percent of population consuming raw milk <sup>9</sup>	Legal state of raw milk	# illnesses allegedly traced to raw milk	Total # foodborne illnesses, excluding multi-state outbreaks <sup>10</sup>	% of foodborne illnesses allegedly traced to raw milk <sup>11</sup>
Minnesota	2.3%	Farm sales legal	50	13,533	0.37%
Colorado	2.4%	Herd shares legal	177 <sup>12</sup>	10,099	1.75%
Connecticut	2.7%	Retail sales legal	21	4,151	0.5%
Oregon	2.8%	Farm sales legal	16	8,960	0.18%
California	3.0%	Retail sales legal	96 <sup>13</sup>	39,992	0.24%
Maryland	3.0%	Legal only as pet food	0	9,474	0
New Mexico	3.4%	Retail sales legal	20	1,466	1.36%
New York	3.5%	Farm sales legal	100	17,407	0.5%
Tennessee	3.5%	Herd shares legal	18	7,475	0.24%
Georgia	3.8%	Legal only as pet food	8	10,070	0.08%

<sup>9</sup> Foodborne Active Surveillance Network (FoodNet) Population Survey Atlas of Exposures. 2006-2007 at page 14 (identifying the percentage of people who had consumed raw milk within the last 7 days). <http://www.cdc.gov/foodnet/PDFs/FNExpAt103022011.pdf>

<sup>10</sup> The total foodborne illnesses are actually higher than listed in this chart because all data attributed to multi-state outbreaks was excluded for these purposes because the CDC table does not indicate how many illnesses were attributed to each state.

<sup>11</sup> Because of the undercounting of the total number of foodborne illnesses (see note 8), the true percentage of illnesses allegedly traced to raw milk is lower than indicated.

<sup>12</sup> In the same time period in Colorado, there were two outbreaks linked to pasteurized milk that sickened 204 people

<sup>13</sup> In the same time period in California, there were three outbreaks linked to pasteurized milk that sickened 1,750 people.

### **Topic 3: Raw milk is held to the same or higher standards as pasteurized milk**

Grade A licensed raw milk meets or exceeds all regulatory standards for pasteurized milk. Below are some highlights of the existing regulations for raw milk, currently found in Title 25 of the Texas Administrative Code, that would remain unchanged under HB 57.

- Dairy farms, both facilities and records, are inspected twice every 6 months (217.26a)
- If a condition is found that poses an imminent health hazard, the department is required to suspend the dairy's permit immediately (217.26d)
- Samples of the milk are collected at least every six weeks and tested for: bacterial counts, coliform counts, somatic cell counts, water adulteration, and cooling temperatures. (217.27)
  - At least twice every six months, the samples are also tested for pathogenic bacteria
  - At least four times every six months, the samples are also tested for antibiotics
- Grade A raw milk must meet the following standards (217.28)
  - Cooled to 45 degrees or less within 2 hours (also regulated in 217.29s).
  - Somatic cell counts not to exceed 750,000 per milliliter (ml) for cow's milk or 1,000,000/ml for goat's milk.
  - Bacteria limits of 20,000 per ml (not applicable to cultured products).
  - Coliform not to exceed 10 per ml.
  - Pathogen limit of zero.
- Section 217.29, Sanitation Requirements for Grade A Raw Milk, has 20 subparts, which have in turn multiple sub-subparts, of rules (217.29). Some highlights include:
  - Abnormal milk shall be discarded, and animals which show evidence of abnormal secretion must be isolated from the non-abnormal milk and equipment cleaned (a)
  - Milk barn must meet detailed construction and cleanliness requirements (b,c, e-g)
  - Animal yard shall be properly graded to prevent standing pools of water or waste, housing areas maintained to prevent soiling of animals udders and flanks (d)
  - Clean water in sufficient quantity for the dairy operations (h)
  - Containers, utensils and equipment must meet standards for construction (type of materials), cleaning, sanitization, storage and handling (i-m)
  - The animal and the milking equipment must be free from contamination (n-p)
  - People doing the milking must have clean hands, wear clean outer garments, and be free of infection (q, r)
  - Effective insect and rodent control is required (t)
- Animal Health: All herds shall be tested and found free of tuberculosis and brucellosis before any milk is sold; herds shall be retested at least every 12 months; cattle herds participate in brucellosis ring testing by Texas Animal Health Commission. For other diseases, the department may require physical, chemical, or bacteriological tests. (217.20)
- Plans for Grade A Raw for Retail Milk Dairy Farms shall be submitted to the department for approval before work is begun (217.30).

We have prepared a side-by-side comparison of the raw milk and pasteurized milk regulations, and can provide it upon request.

#### **Regulatory testing of raw milk dairies versus private testing at co-ops**

In past legislative sessions, opponents have claimed that raw milk is not held to the same standards because the conventional dairy co-ops have made a marketing decision to test the milk from their



producer farms more frequently. **But there is no regulatory oversight of the co-ops' independent testing.** The co-ops can choose to use milk that does not meet the regulatory standards for fluid milk for cheese, other processed uses, or even to dilute it with higher-quality milk in order to meet the standards.

Moreover, the conventional dairy industry has significant risk factors that are not present in the raw milk industry. The conventional industry handles very large quantities of milk that are commingled from multiple different farms and transported for centralized processing. In contrast, the Raw for Retail dairies are small farms that bottle their own milk on-site with no commingling.

**In one day**, a co-op will commingle tens of thousands of gallons of milk, more than many raw milk producers will sell in **an entire year**.

For example, on March 11, 2015, a processor in Waco recalled 64,000 units of milk that had already been distributed to stores and schools because it had been improperly pasteurized.<sup>14</sup> The 64,000 units were a combination of half gallon and half pint containers, so the total quantity of milk recalled was between 4,000 and 32,000 gallons of milk. The problem was traced to a failure in pasteurization that was only two hours long, during which time the processor produced more milk than most of the licensed raw dairies produce in an entire year.

---

<sup>14</sup> <http://www.fda.gov/Safety/Recalls/ucm246920.htm>

## **Topic 4: Scientific studies have documented benefits from raw milk**

The claim that raw milk has no benefits over pasteurized milk is false. Does anyone contend that cooked strawberries or spinach are no different than raw strawberries or spinach? It's well-accepted that heating foods not only changes the taste, but destroys enzymes and certain nutrients.

Published, peer-reviewed scientific studies show health benefits from raw milk. **Several studies in Europe have found that drinking “farm” (raw) milk protects against asthma and allergies.** See Riedler, J. et al. 2001. Exposure to farming in early life and development of asthma and allergy: a cross-sectional survey. Lancet 358:1129-33. Perkin, M.R. and D.P. Strachan. 2006. Which aspects of the farming lifestyle explain the inverse association with childhood allergy? J Allergy Clin Immunol. 117(6):1374-8. Waser, M. et al. 2006. Inverse association of farm milk consumption with asthma and allergy in rural and suburban populations across Europe. Clinical and Experimental Allergy 37:661-670. Perkin, M.R. 2007. Unpasteurized milk: health of hazard? Clinical and Experimental Allergy 37:627-630.

**Most recently, a 2015 study found that raw milk consumption reduced the risk of rhinitis, respiratory tract infections, ear infections, and fever by around 30%** compared to the consumption of ultra-heat treated (a method of pasteurization) milk. G. Loss et al., Consumption of unprocessed cow's milk protects infants from common respiratory infections, J. of Allergy and Clinical Immunology 134: 56-62 (2015).

**Raw milk retains higher levels of various vitamins and intact proteins than pasteurized.** See Haug, A., A.T. Hostmark, and O.M. Harstad. 2007. Bovine milk in human nutrition—a review. Lipids Health Disease 6:25 (“Proteins and peptides are heat sensitive, and their bioactivity may be reduced by pasteurization of milk. Heating of milk may also result in the formation of potentially harmful new products, i.e. when carbohydrates in milk react with proteins.”). Wong, D.W.S. and W.M. Camirand. 1996. Structures and functionalities of milk proteins. Critical Rev Food Science Nutr. 36(8): 807-844. Runge, F.E. and R. Heger. 2000. Effects of heat treatment of cow's milk and whey on the nutritional quality and antigenic properties. Arch Disease Childhood 57: 842-847 (heat treatment destroyed all of the Vitamin B12, about 60% of the thiamin and Vitamin B6, 70% of the ascorbic acid, and about 30% of the folate). Gregory, J.F. 1982. Denaturation of the folacin-binding protein in pasteurized milk products. J Nutr. 112: 1329-1338. Effect of several heat treatments and frozen storage on thiamine, riboflavin, and ascorbic acid content of milk. J Dairy Sci. 66: 1601-6. Rajakumar, K. 2001. Infantile scurvy: a historical perspective. Pediatrics 108(4):E76. Hollis, B.W. et al. 1981. Vitamin D and its metabolites in human and bovine milk. J Nutr. 111:1240-1248. See also Levieux, D. 1980. Heat denaturation of whey proteins: comparative studies with physical and immunological methods. Ann Rech Vet. 11(1): 89-97 (“Nutritionists believe that high losses of nutritive value occur in heated proteins following cross-linking since high cross-linked proteins cannot be degraded by digestive enzymes.”).

Moreover, there are numerous testimonials about the benefits of drinking raw milk. While these do not provide scientific evidence of benefits, it is clear that individuals choose to expend significant time and money to drink raw milk because they see a benefit.

**Ultimately, the question is not whether you think the benefits of raw milk outweigh the risks. If that were the test, all fast food, sodas, candy, and many more foods should be immediately banned or restricted in this state. The question is whether the risk of raw milk is so high that it justifies that government continuing to impose a restriction that it imposes on no other legal product.**