

SUPPORT HB 574 - SMALL HERD EXEMPTION FOR RAW MILK

EXHIBIT 5

DATE 3-7-13

HB 574

HB 574 would establish a small herd exemption permit for safe access to raw milk for consumers.

It allows a small farmer to have up to 15 cows and 30 goats or sheep and sell raw milk. The farmer must have a permit and undergo random quarterly testing, but he does not have to adhere to the Grade A dairy regulations such as stainless steel machinery and concrete floors. Milk can only be sold to people coming to the farm to buy it. The bill also allows Grade A dairies to sell raw milk directly to consumers on-the-farm; since most co-ops forbid the sale of raw milk, this would apply, in practice, only to independent dairies like Lifeline Farms and Kalispell Creamery.

HB 574 also offers a herd share provision that recognizes that part-owners of an animal can consume milk from that animal. No milk is being sold, and the part-owners are responsible for deciding what health and safety measures they want to take for themselves.

Many consumers have discovered that pasteurized milk is highly allergenic and more and more people have a hard time digesting pasteurized milk, yet, at the same time, they are reporting that when they drink raw milk they do not suffer milk allergies and raw milk is easily digested. Montana farmers have a constitutional right to provide processed and unprocessed farm foods directly to consumers, and likewise, consumers also have a right to procure foods of their choice.

We would like to address some potential concerns and provide real data in support of HB 574.

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CHART OF RAW MILK CONSUMPTION, LEGAL STATUS, AND ILLNESS RATES

State	Percentage of population consuming raw milk ¹	Legal state of raw milk	# outbreaks allegedly traced to raw milk, 1998-2010 ²	# illnesses allegedly traced to raw milk, 1998-2010	Total # foodborne illnesses, 1998-2010, excluding multi-state outbreaks ³	% of foodborne illnesses allegedly traced to raw milk ⁴
Minnesota	2.3%	Farm sales legal	4	16	10,021	0.16%
Colorado	2.4%	Herd shares legal	5	143 ⁵	8,330	1.71%
Connecticut	2.7%	Retail sales legal	1	14	3,023	10.46%
Oregon	2.8%	Farm sales legal	1	0-18 ⁶	7,514	0 – 0.23%
California	3.0%	Retail sales legal	4	45 ⁷	35,313	0.12%
Maryland	3.0%	No legal sales ⁸	0	0	7,883	0
New Mexico	3.4%	Retail sales legal	1	20 ⁹	1,017	1.96%
New York	3.5%	Farm sales legal	5	66 ¹⁰	14,802	0.44%
Tennessee	3.5%	Herd shares legal	2	7	6,464	0.1%
Georgia	3.8%	Legal only as pet food	1	8	8,515	0.09%
10 State total	3%		24	299-337	102,882	0.29 – 0.32%

¹ Foodborne Active Surveillance Network (FoodNet) Population Survey Atlas of Exposures. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), 2006-2007 (identifying the percentage of people who had consumed raw milk within the last 7 days).. www.cdc.gov/foodnet/surveys/FoodNetExposureAtlas0607_508.pdf

² Note: an "outbreak" according to the CDC can involve as few as 2 people. www.cdc.gov/foodborneoutbreaks/Default.aspx

³ 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.

⁴ Because of the undercounting of the total number of foodborne illnesses (see note 2), the true % of illnesses allegedly traced to raw milk is lower than indicated.

⁵ In the same time period in Colorado, there was an outbreak linked to pasteurized milk that sickened 200 people

⁶ Oregon was part of a multistate outbreak allegedly traced to raw milk in Nov. 2005. The total number of illnesses in that outbreak were 18, but we cannot determine how many occurred in Oregon.

⁷ In the same time period in California, there were two outbreaks linked to pasteurized milk that sickened 1,744 people.

⁸ Note that even though raw milk sales are illegal in Maryland, 3% of the Maryland residents surveyed stated that they drank raw milk. Prohibition doesn't work.

⁹ The New Mexico illnesses are from a single outbreak listed as being from "1% milk, unpasteurized; sauces, unspecified" in a restaurant.

¹⁰ In the same time period in New York, there were two outbreaks involving pasteurized milk that sickened 18 people.

{ISSUE 1: Improving legal access to raw milk will not increase the incidences of foodborne illnesses}

Truth: You might think: “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. The attached chart shows the consumption of raw milk in 10 states, the raw milk laws in each state, and the incidence of foodborne illnesses.

First, note that in every state, the number of illnesses attributed to raw milk is a very small percentage of the total number of foodborne illnesses.

Second, 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 had drunk raw milk within the last 7 days as California (where raw milk can be sold in grocery stores). And Georgia, where raw milk can only be sold as pet food, had the highest consumption rates of all.

Third, there is also 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?

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 pattern.

The data directly contradicts the regulatory agencies' and industry's assertion that increasing legal access to raw milk will increase the number of people who get sick.

The CDC does not have one recorded death from consumption of raw milk since beginning its recording of illness data in 1973. At least 80 deaths have been recorded from pasteurized milk (if the Jalisco pasteurized cheese incident is included). More than 422,000 illnesses are listed under pasteurized milk at the CDC since 1973, but only 1100 are recorded under raw milk.

References:

- CDC food consumption survey: http://www.cdc.gov/foodnet/surveys/FoodNetExposureAtlas0607_508.pdf
- CDC data on foodborne illnesses between 1998 and 2008: <http://www.cdc.gov/foodborneoutbreaks/Default.aspx>
- Research on the laws governing raw milk in each state

{ISSUE 2: Raw milk is less risky than many common foods}

Truth: Industry and medical groups have claimed that raw milk is dangerous, but the data contradicts their claims.

Any food can be the source of foodborne illness under the wrong conditions. 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 the government forcing it to the black market.

National data on foodborne illnesses:

Nationwide, there were 1,414 illnesses, 80 hospitalizations, and zero deaths attributed to raw milk between 1998 and 2010.

To put these numbers in perspective, there were 301,076 illnesses, 10,317 hospitalizations, and 223 deaths reported to the CDC in that time period from all foods.

Consider the illnesses attributed to other foods:

Fruit Salad: 1,323 illnesses, 29 hospitalizations, and 1 death

Tuna: 1,415 illnesses, 41 hospitalizations, and 3 deaths (not including raw tuna or sushi)

Deli Meats: 1,345 illnesses, 104 hospitalizations, and 19 deaths

Pizza: 1,614 illnesses, 20 hospitalizations, and 3 deaths

The numbers of illnesses attributed to fruit salad, tuna, pizza, and deli meat are similar to those attributed to raw milk during this time period – with the exception that, unlike these foods, raw milk has not caused any deaths. (Note: the numbers for deli meats do not include sandwiches, which have caused many more illnesses). While more people may consume these foods occasionally, few people consume these foods day-in and day-out, in contrast to raw milk.

How many people drink raw milk? According to a CDC survey, an average of 3% of the population has drunk raw milk within the last 7 days. (Tab 2 – chart of raw milk consumption.) That translates to more than 9 million raw milk consumers. So, out of 9+ million consumers, approximately 112 become sick each year allegedly from raw milk nationwide, or 0.001%.

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

References:

- CDC data on foodborne illnesses, drawn from <http://www.cdc.gov/foodborneoutbreaks>

{ISSUE 3: Pasteurized milk also carries some risk of foodborne illness}

Truth: Pasteurized milk also carries some risk of foodborne illness.

In the same time period, according to the CDC data, nationwide 2,227 people became ill, 27 people were hospitalized, and 3 died from pasteurized milk. A large number of people drink pasteurized milk, so the relative risk is not high, but pasteurization does not eliminate all risk.

In fact, a massive foodborne illness outbreak was linked to pasteurized milk in the 1980s. In 1985, there were over 16,000 confirmed cases of Salmonella infection that were traced back to pasteurized milk from a single dairy. Two surveys estimated that the actual number of people who became ill in that outbreak were over 168,000, “making this the largest outbreak of salmonellosis ever identified in the United States.” 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>

{ISSUE 4: Raw milk will not harm conventional dairy sales or retailers}

Truth: Another unsupported claim by the industry is that, if there were an outbreak of foodborne illness linked to raw milk, consumers might avoid buying pasteurized milk, hurting conventional milk sales and retailers. The example provided is the drop in spinach sales when a nationwide outbreak of *E. coli* was linked to spinach in 2006.

The claim is wrong because it fails to recognize the difference between mass-distributed goods and direct-to-consumer transactions. The spinach that caused the 2006 outbreak was being sold in the grocery stores around the country under 34 different brand labels. See *Safe at any scale?*, *Agric. Hum. Values* 25:301-317 (2008). There was no realistic way for consumers to know which spinach was contaminated and which was not. Similar confusion was present in the outbreaks linked to tomatoes/ jalapenos and peanut butter. In contrast, if there were to be illnesses linked to raw milk, the source of the milk would be identified immediately. The transparent, accountable nature of direct-to-consumer sales empowers both the State and consumers to know exactly who has caused the problem and how to avoid it, without any repercussions for other products.

In addition, when there have been illnesses attributed to raw milk in other states, the health departments have been very explicit (even repetitive) about the fact that the problem lay with raw milk and not with pasteurized milk. As a result, even in states where raw milk is sold side-by-side with pasteurized milk in the grocery stores, there has been no evidence that alleged raw milk illnesses have had **any impact at all** on pasteurized milk sales.

Ten states allow the sale of raw milk in grocery stores, so that raw milk is sold side-by-side with pasteurized and the potential for negative repercussions is greatest. We were able to find data on milk sales and prices for four of these states: California, New Mexico, Pennsylvania, and Washington.

There is no pattern of reduced sales/production or reduced prices in conventional milk at the time of, or after, the alleged outbreaks. Consumers do not avoid pasteurized milk in reaction to reports of outbreaks linked to raw milk.

References:

- University of Wisconsin Dairy Marketing and Risk Management Program

Prices: http://future.aae.wisc.edu/data/monthly_values/by_area/6?tab=prices

California sales:

future.aae.wisc.edu/data/monthly_values/by_area/2115?area=California&tab=sales&grid=true

- USDA National Agricultural Statistics Services, Milk Cows and Production Final Estimates 1998-2002, http://future.aae.wisc.edu/collection/MilkProduction/milk_cow_fin/milk_cow_final_estimates_1998_2002.pdf
- USDA National Agricultural Statistics Services, Milk Cows and Production Final Estimates 2003-2007, <http://usda.mannlib.cornell.edu/usda/nass/SB988/sb1022.pdf>

{ISSUE 5: Raw milk has nutritional benefits that consumers want access to}

Truth: The claim that raw milk has no benefits over pasteurized milk is, on its face, 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.

In addition, there are published, peer-reviewed scientific studies showing health benefits from raw milk. **Several recent 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.)

Raw milk retains higher levels of Vitamins A, B, C, and D 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. Use of microcalorimetry in monitoring stability studies. Example: Vitamin A Esters. J Agric Food Chem 48(1):47-55. Kilshaw, P.J., L.M. Heppell, and J.E. Ford. 1982. 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 Leveux, 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.

When you hear a processor say that raw milk is dangerous, please consider the source of the information. That processor is protecting his market and using data that is more than 100 years old. We agree that certain dairy practices widely used in the 1880's were very dangerous. But, this is now 2013 and we understand proper conditions, cleanliness, and bacteria testing. We understand food safety plans. The best measure of human consumption raw milk safety is a review of data from those states that allow raw milk retail sale. The track records are excellent.