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**Testimony by Joseph Klopfenstein, DVM, DABVP
House Agriculture Committee
H. 426, Raw Milk Sales
March 19, 2015**

Introduction:

I would like to thank the Vermont House Agriculture Committee for the opportunity to testify regarding House Bill 426, the sale of unpasteurized milk. I appreciate the time the Committee has dedicated to learning about this issue.

I would like to introduce myself. My name is Dr. Joe Klopfenstein and I reside in Vergennes. I own a large animal veterinary practice that specializes in the care and welfare of dairy animals. I graduated from the Purdue University College of Veterinary Medicine and have been in practice in Vermont since 1984, first in Newport then for the past 31 years in Vergennes. My clients range from single backyard family cows to artisan cheese producers to organic farms and commercial dairies of up to 1000 animals. I am board certified in dairy practice by the American Board of Veterinary Practitioners, the only ABVP dairy board certified veterinarian in private practice in New England. In 2010 I was named the practitioner of the year by the American Association of Bovine Practitioners, the largest professional organization of cattle veterinarians in the world. I currently am the Large Animal Committee chair of the Vermont Veterinary Medical Association and serve on its executive board.

Testimony:

I am here today to express my opposition to bill H. 426 as presented. I would be happy to discuss the adverse food safety record of unpasteurized milk but I know the Committee has heard about it extensively. I will say, however, that I agree with the opinion of the FDA, the CDC, the American College of Pediatrics, the American Medical Association, the American Veterinary Medical Association and the Vermont Veterinary Medical Association. I also have grave concerns about the ability to quickly and effectively cool unpasteurized milk without adequate equipment and the ability of raw milk producers to effectively keep fresh milk cool during delivery or at farmer's markets without proper safeguards.

Instead, I would like to highlight three points in my testimony today. First, the issue of raw milk testing and raising the somatic cell count to 400,000. Second, the issue of animal testing for brucellosis and tuberculosis and third, the changes in the warning labels raw milk producers are required to display on the milk bottles and at their farms. Please allow me to discuss these issues in order.

Somatic Cell Count:

H. 426 would like to raise the upper limit for somatic cell count in raw milk from 225,000 to 400,000. Bulk Tank Somatic Cell Count (BTSCC) is used as a measure of milk quality and as an indicator of overall udder health. It refers to the number of white blood cells, milk secretory cells, and squamous cells (cells

that line the skin and other body surfaces) per milliliter of raw milk and is normally determined in a lab.ⁱ We now know that milk somatic cells are primarily leukocytes or white blood cells, cells normally found in the bloodstream that respond to infection and inflammation and include a variety of cell types.ⁱⁱ In other words, an increase in the somatic cell count in milk indicates the presence in the mammary gland of inflammation, most commonly caused by the presence of bacterial organisms. The upper legal limit for somatic cell count in the US for saleable milk is 750,000 cells/ml, which most animal health and industry officials agree is too high. The upper limit in the EC is 400,000 and most US processors will not accept milk above this limit so the effective upper limit in the US is 400,000 cells/ml as well. In 2013, the last year for which data is available, the national average somatic cell count was 199,000 and the average SCC in Vermont was 157,000.ⁱⁱⁱ

The National Mastitis Council has stated that an uninfected mammary gland would presumably have a somatic cell count of approximately 200,000 (100,000 in first lactation animals)^{iv}. An average somatic cell count of 400,000 most definitely indicates udder infection, or mastitis, on a herd level. Without further testing the bacterial pathogens that are causing the elevated somatic cell count would not be known. Such testing, already minimal, would be done once monthly rather than twice as in the current regulation. In my opinion raising the somatic cell limit from 225,000 to 400,000 would allow milk from cows that have mastitis to enter the market. Allowing such milk to be offered to the public without the benefit of pasteurization would send the wrong message to consumers expecting a healthy and wholesome product.

Testing for Brucellosis and Tuberculosis:

H. 426 seeks to eliminate the yearly requirement for TB testing and extend the testing interval to three years. Although rationale for this change is not outlined in the bill, previous testimony indicates that the testing provision is burdensome. This is not the case. TB testing involves injection of cattle in the skin of the tailhead with tuberculin protein and checking for a swelling in 72 hours. The test is quick and inexpensive and requires minimal restraint of the animal. Yearly testing also ensures regular visits by a veterinarian who is uniquely qualified to identify possible adverse health or welfare conditions on the farm. H. 426 eliminates the public farm visit requirement which I agree with, primarily because a farm visit by patrons may give a false sense of security when uninformed people have access to animals on the farm and do not have the knowledge to properly ascertain the health or welfare of the animals.

Appendix S of the *Indiana Board of Animal Health Report* that has been provided to you contains a nice summary of animal health testing requirements in other states where raw milk sales are permitted. In this summary at least ten other states where raw milk sales are permitted require annual TB testing and many also require annual brucellosis testing. By this measure, Vermont's current testing requirement is neither unduly burdensome nor does it inhibit the growth of raw milk sales in the state.

Diluting the language in the warning:

H. 426 seeks to remove the statement "This product has not been pasteurized and therefore may contain harmful bacteria that can cause illness particularly in children, elders, and persons with weakened immune systems and in pregnant women can cause illness, miscarriage, or fetal death, or death of a newborn" from the written warning which must be posted in the producer's barn and on the container. This change would be undesirable and potentially quite harmful. The statement is true; I personally know of a Shelburne dairy farmer's elderly parent who died after contracting Listeriosis from drinking the farm's raw bulk tank milk. My wife, head nurse in a midwifery practice, has knowledge of an Addison County farmer who consumed unpasteurized bulk tank milk and whose fetus tested positive for listeria after a miscarriage. I am also aware of two separate outbreaks in Shelburne of

Campylobacter, a bacteria that causes diarrhea and vomiting, connected to raw milk consumption. Fortunately these outbreaks, one in a group of schoolchildren who were given samples of raw milk to taste on a small farm, did not result in severe or long lasting illness but if one of the children's parents had been undergoing chemotherapy the results could have been much worse.

The statement also is effective. Dr. Kent Henderson of St. Albans was originally scheduled to provide testimony today and relates this story: his sister-in-law was undergoing chemotherapy for stage 3 breast cancer and had a severely compromised immune system. While at a function where a cheese sampler plate was offered she noticed the warning regarding the raw milk cheese. She chose not to consume the cheese and was able to avoid taking an unnecessary and potentially harmful risk. The statement is also not unique. I would refer you once again to the Indiana Board of Animal Health report that indicates many other states require such a warning label.

Summary:

I hope that the testimony I have offered today will give each of you pause as you consider greater availability of raw milk while relaxing testing standards and warning language. I must say that I am perplexed by the statement on the Rural Vermont website that the new law provides more "scale appropriate" regulations. Dairy farming is a unique and wonderful profession where, despite the size or scale of a farm, we still must deal with individual animals. Cows are living beings and no matter the production system are subject to illness, and can transmit illness to humans without showing symptoms themselves. The law of dilution we all learned in elementary school would tell us that a smaller pool of milk would mean that one cow's contribution on a small scale farm means a much greater contribution to the whole. By this logic, greater, not less, regulation would be in order.

Scale means little on dairy farms in terms of animal health. In the report referenced earlier^v, average somatic cell count in herds of less than 50 cows was 242,000 while herds of 1000 cows and greater was around 185,000.

Thank you once again for the opportunity to provide comments for your consideration. As a fellow public servant (I am a Vergennes alderman) I appreciate and respect the work you all do. If you have further questions I would welcome you to contact me at my email joeklop@comcast.net or cell phone 802-777-1535.

ⁱ http://www.aphis.usda.gov/animal_health/nahms/dairy/downloads/dairy_monitoring/BTSCC_2012infosheet.pdf

ⁱⁱ <http://www.nmconline.org/articles/sccprimer.pdf>

ⁱⁱⁱ <https://www.cdc.gov/publish/dhi/dhi14/sccrpt.htm>

^{iv} <http://www.nmconline.org/articles/sccprimer.pdf>

^v <https://www.cdc.gov/publish/dhi/current/sccx.html>