

Maryland's Dairy Industry: 2009

**A Report
To
Governor Martin O'Malley**

From

The Maryland Dairy Industry Oversight and Advisory Council



October 1, 2009

Maryland's dairy industry suffered in 2008-09

The Maryland Dairy Industry Oversight and Advisory Council is charged with reporting annually to the Governor on strategies to support Maryland's dairy industry. This is the Council's third report since being established in July 2006.

Maryland's dairy farmers faced perhaps their most challenging year in the last half of 2008 and 2009. Nationally, the entire industry has been wracked by a horrible combination of low milk prices to farmers and higher input costs. According to an August 2009 report from Cornell University, "if one adds January and February 2009 to the end of 2008, this is a period of 8 months of declines (in milk prices to farmers) that were, in total, the longest ever recorded and among the deepest."

In April 2009, Maryland's 547 dairy farmers were receiving approximately \$1.36 a gallon for their milk, or \$11.77 a hundredweight, the industry measurement. That was approximately what they received for their milk in the late 1970s and is not adjusted for inflation. Each farming operation is different, but on average, it takes about \$18.45 a hundredweight to produce milk in Maryland (Dale Johnson, U. of Md.). The price of milk paid to producers in May 2009, the most recent figure available, is approximately \$12.18 a hundredweight.

As this report is being written, there are several national initiatives attempting to develop federal policy to maintain a viable dairy industry in the nation. Maryland is a relatively small player on the national scene. The State is challenged to maintain local supplies of milk and to support the farmers who manage more than 250,000 acres of farmland which is in jeopardy of being lost to agriculture in this current crisis. With the State's fiscal crisis limiting the potential for funding of the Maryland Dairy Emergency Trust Fund, created at the request of this committee by the General Assembly and the Governor in 2008, Maryland Department of Agriculture has been proactive in working with

Maryland's federal representatives to gain every advantage for Maryland dairy farmers. Governor Martin O'Malley has joined with other Governors in the Northeast and New England to encourage the Obama Administration and Congress to adapt U.S. Department of Agriculture loan practices to help dairy farmers in crisis. MDA also made it a priority to meet with Maryland's Congressional delegation to explain the economic crisis facing the industry and pushing for increased payments from the USDA's Milk Income Loss Contract (MILC) program.

These positive actions to support Maryland's dairy industry by the Governor, the State's Congressional delegation and the Maryland General Assembly are essential for the survival of this critical part of the State's agriculture. The Advisory Council believes that the State's political leadership must be positively engaged with dairy farmers, milk processors and the industry's infrastructure. The Council encourages the State's leadership and MDA to stay engaged with the dairy industry's national efforts to address shortcomings in the milk pricing system currently used by the USDA. This Council will continue to advise MDA and the Department of Health and Mental Hygiene on these issues.

2009 recommendations

In 2009, the Council has three recommendations to Governor Martin O'Malley that would be beneficial to the goal of retaining and encouraging a healthy dairy industry:

Recommendation 1:

As soon as it is fiscally possible, this Council recommends full funding for the Maryland Dairy Farmer Emergency Trust Fund (Subtitle 14. Agriculture Article, Annotated Code of Maryland).

While the federal government, dairy cooperatives and Congress work to sustain the U.S. dairy industry for a safe food supply, this program would help maintain a local dairy industry and help protect the 250,000 acres of land associated with dairy farming. As proposed originally, this fund would be maintained at \$15 million and distributed by the Secretary of Agriculture in the time of economic crisis, as is happening now. This program would be triggered by the current federal MILC program.

Recommendation 2:

Maryland state and federal leaders should work with their counterparts in the Mid-Atlantic and Northeast region to establish uniform gross weight limit rules for raw milk haulers on state and federal highways. Gross weight limits in excess of 80,000 pounds should be allowed where reasonable precautions can be taken to address safety concerns. Allowing haulers to transport more milk will reduce truck traffic, fuel consumption, and transportation costs that are ultimately borne by dairy farmers and consumers.

As discussed in the 2008 report to Governor O'Malley, Maryland's dairy farmers, milk processors and consumers rely on the ability of milk haulers in the State to transport milk from farms to milk processing plant. The efficiency of this process is hampered by laws which prevent trucks from carrying more than 80,000 pounds. This problem has become more acute as diesel fuel prices have soared. There is a checkerboard pattern of varying

milk truck hauling weight limitations on highways state and federal roads throughout the Northeast. In New York and Maine, for example, gross weight limits are up to 99,000 pounds on some Interstate highways. Elsewhere in the region, milk haulers are limited to 80,000 pound gross weight limits on interstate highways. A number of Northeastern states allow milk haulers to run up to 95,000 pounds on designated state roads. In Maryland, haulers may run up to 85,000 but only in certain areas of the state. When traveling to Maryland milk processing plants on routes to the state's 547 dairy farms, these trucks must carry lighter loads in Maryland. Further complicating this issue is the seasonality of milk production, with large sways in production coming depending upon feed quality, heat and other factors. All these factors combined increase the cost of transporting milk from the farm to the processors. Because of the regional nature of the milk market, the discrepancy in gross weight limits between states reduces the efficiency of moving the milk from the farm to where it is needed.

Recommendation 3: The Governor and the General Assembly should not allow the sale of raw milk in the State of Maryland. This is currently the law in our State and this Council believes that it should remain the law.

The Council strongly believes that the health concerns associated with raw milk sales are well documented. Milk processed and pasteurized is a healthy, wholesome food product. However, in its raw form, there are potential health risks. Attachment 2 to this report prepared by the Maryland Department of Health and Mental Hygiene is provided in support of this recommendation.

State of the dairy industry in 2009

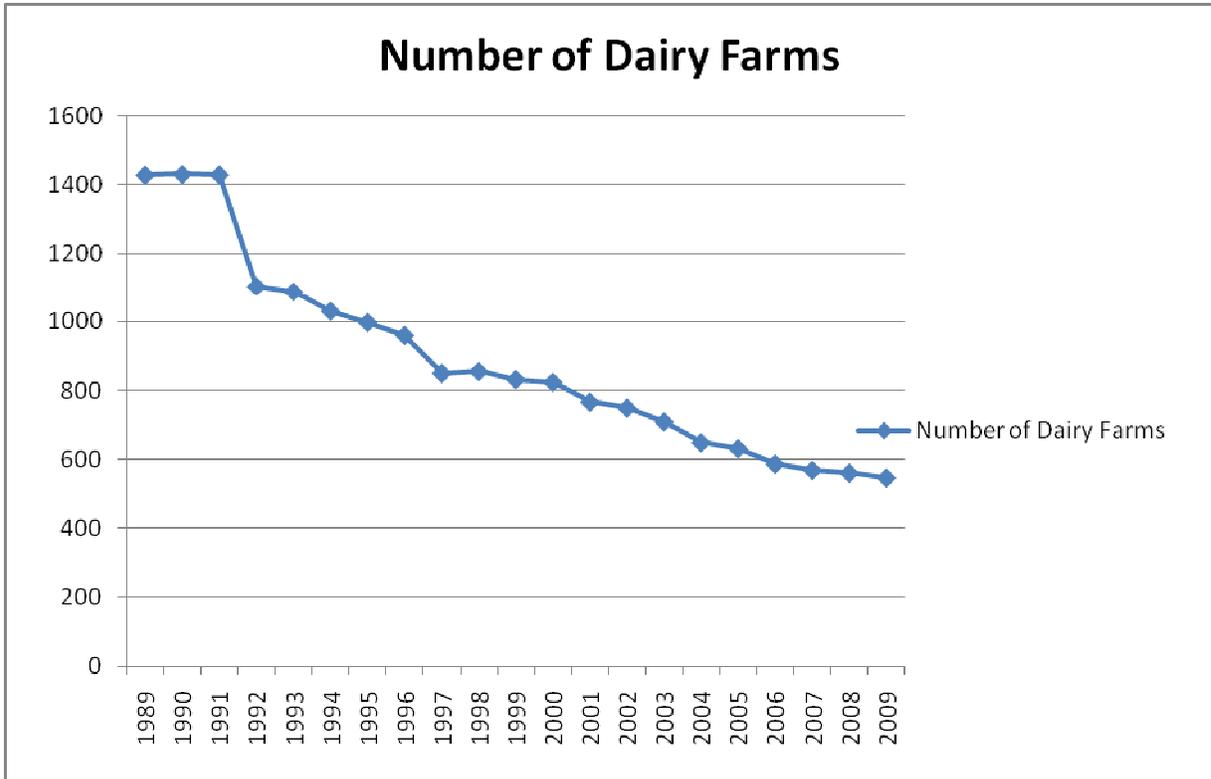
As discussed in the introduction to this report, 2008-09 has been a period of economic crisis for Maryland and America's dairy farmers. The decline in the number of dairy farmers in the State continues. As of this writing, the State has 547 functioning dairy farms, down from 561 when this report was written last year. The number of farms licensed to produce milk declined by more than 35 percent from 1,009 in 1995 to 632 in 2005. From December 2005 to August of 2007, another period of low farm milk prices, the State lost 63 dairy farms.

However, Maryland's dairy industry remains a vital part of agriculture in the state. Ranked third in farm income behind the poultry and nursery sectors, dairy farmers maintain approximately 250,000 acres of farmland. Dairy is particularly important to the farm economies of Maryland's central and northern counties where farmers have the option of selling their land to developers at ever increasing prices. The economic impact of these farms in their communities is significant – an estimated \$879 million in Maryland. Their social impact is vital as well, with dairy farmers and their families taking active roles in the fiber that sustains many rural Maryland communities. With very few exceptions dairy farms are full-time family farms; a rarity in the rapidly changing Maryland landscape.

Because dairy farmers nationwide are caught in a pinch between low prices for milk and increased cost of production, there is significant national attention to this issue. Testifying before the U.S. Senate Agriculture Committee in August 2009, New York dairy farmer Robert Church explained it this way: "Fundamentally, the current problem facing farms is that revenues are not large enough to cover the expenses necessary to produce milk. This is resulting in producers using the equity in their businesses that would have been saved for retirement to finance daily operations. The only way to stay afloat at this time is to leverage more of our assets to support cash flow. This strategy will only work for a very short period of time."

The National Milk Producers Federation, which represents many of the nation's dairy farmer cooperatives, is currently studying potential national initiatives to better sustain the industry.

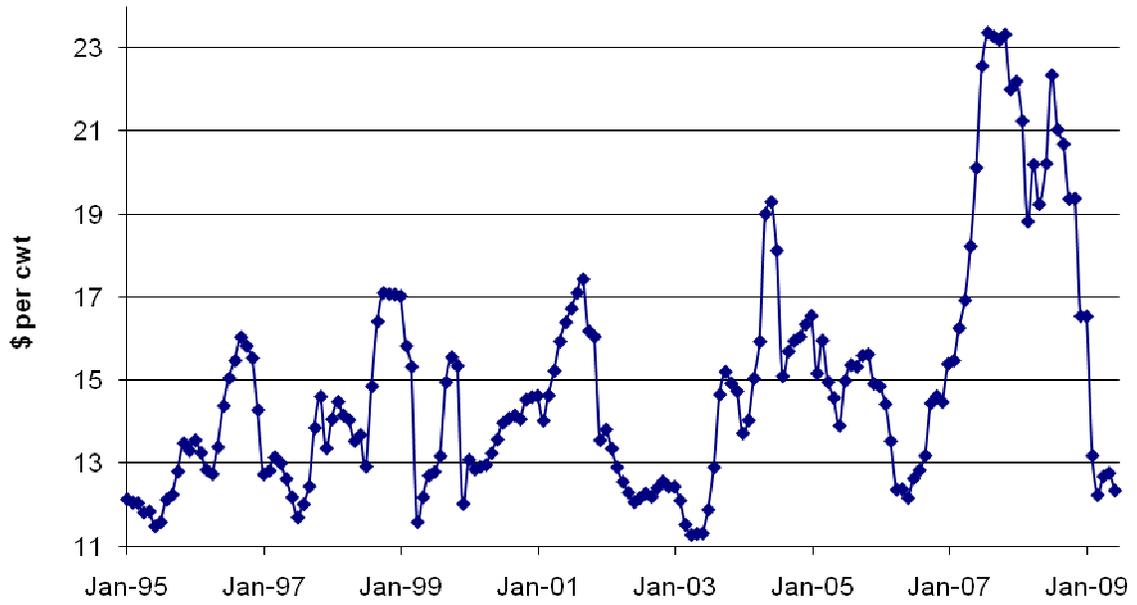
In 2009, the Dairy Advisory Council will monitor these national initiatives as well as local and state issues affecting Maryland's dairy industry and look for solutions to the industry's many challenges.



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- Source, Department of Health and Mental Hygiene

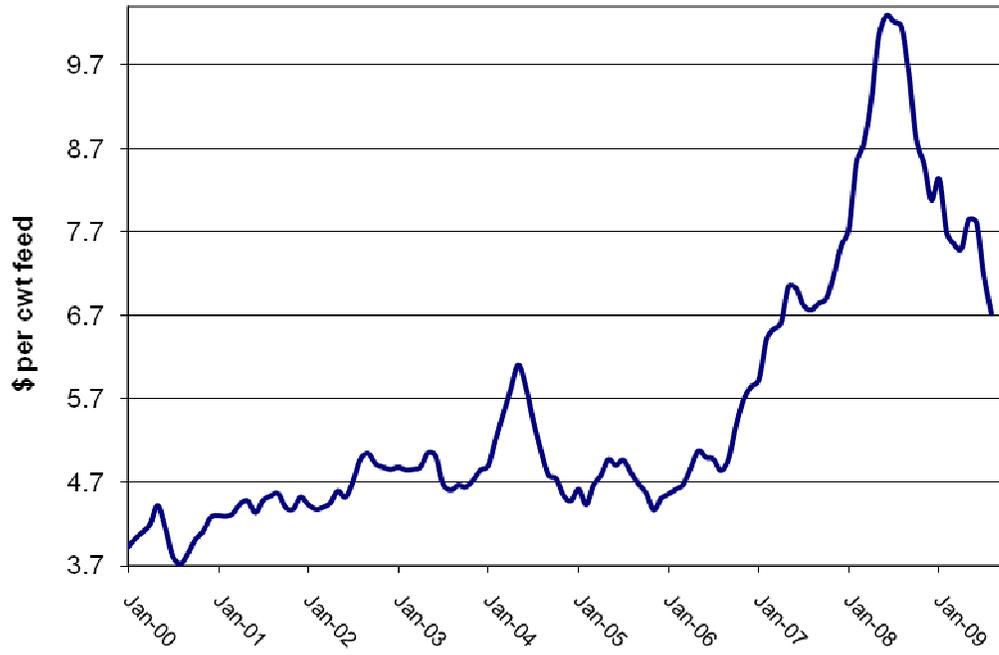
Maryland Mailbox prices January 1995 to May 2009



Source – Dr. Howard Leathers, University of Maryland

(Note: cwt refers to hundredweight, the industry standard measurement for milk. A hundredweight is 11.6 gallons of milk.)

U.S. Milk Ration Cost January 2000 - August 2009



Source: University of Maryland, Dr. Howard Leathers

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Don Breiner – Land ‘O Lakes Dairy Cooperative
Bob Cooksey - Maryland & Virginia Milk Producers Cooperative
Jim Cella – Cloverland-Greenspring Dairy, Baltimore
James A. Vona – Dairy Maid Dairy, Frederick
Fred Calvert – Marva Maid Dairy, Landover
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Attachments

1. Current State of Maryland Dairy Industry, Dr. Howard Leathers, University of Maryland
2. Raw milk issues, Maryland Department of Health and Mental Hygiene

Attachment 1

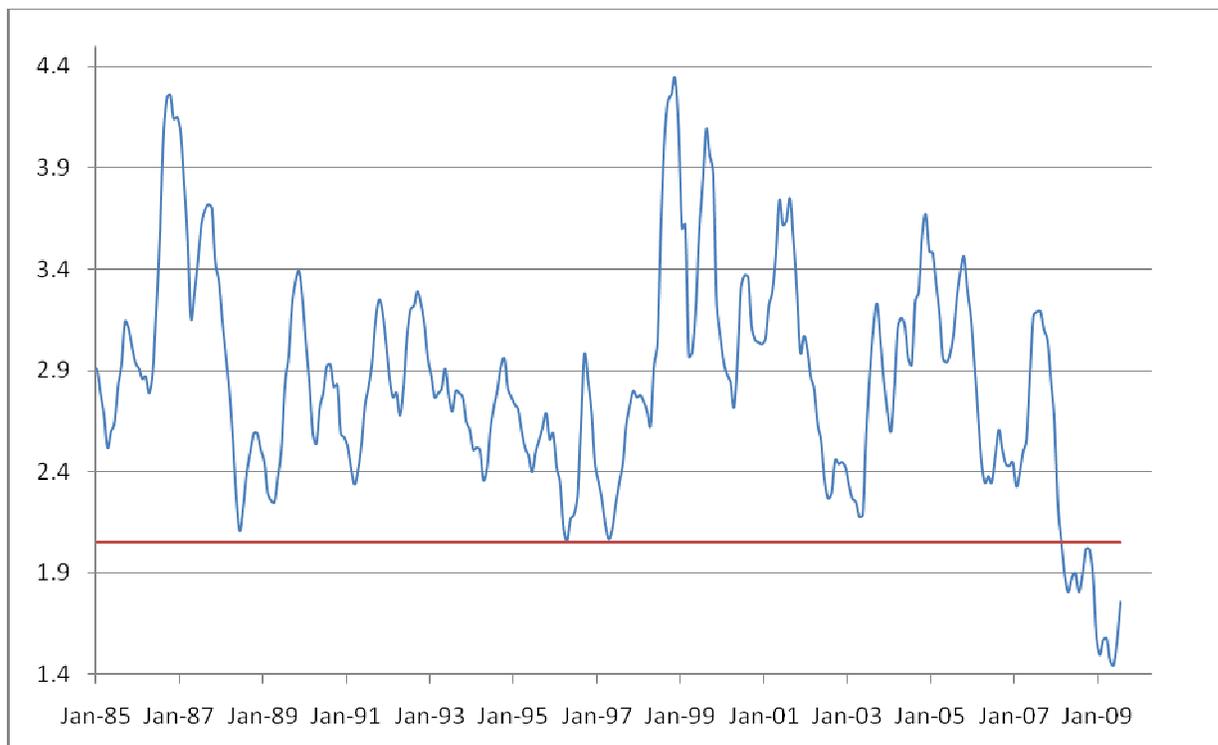
Dairy Situation and Outlook, September 2009

Howard Leathers
University of Maryland, College Park, MD.

A dairy farmer's short run financial condition depends on two primary factors: milk price and feed costs. Farmers have been pounded on both of these during the last year and a half: the spring of 2008 was a period of skyrocketing feed costs; the early months of 2009 had plummeting milk prices. The result has been one of the most difficult periods on record for America's dairy farmers.

One commonly used measure of economic health of the dairy industry is the milk-feed price ratio which shows the ratio of milk price to the price of a feed cost ration. A high ratio means that milk prices are high relative to feed prices, and therefore times are good for dairy farmers. A low ratio means times are bad. In the 22 years from January 1985 to March 2008, the milk-feed price ratio had never fallen below 2.06. But in the 17 months from April 2008 to August 2009, the milk feed price ratio has never been above 2.02.

Milk Feed Price Ratio by month 1985-2009



To emphasize what the chart shows: when the milk price- feed cost ratio fell to 1.89 in April 2008, it reached a point lower than it have ever been; going back more than 20 years, the lowest previous month had a figure of 2.06. And in the 17 months since, the measure has never rebounded back above 2.06. In other words, this measure of financial health of the dairy industry fell to unprecedented low levels and stayed there for the next 17 months.

The current period is remarkable not only for the depth of the problem, but for its duration.

For example at the previous low point, the ratio fell from 2.59 in January 1996 to 2.06 in May 1996, but rebounded to 2.64 by September 1996. As noted in the main text of the 2009 Governor's report, a farmer can "tough it out" in face of low milk prices or high feed costs for a period, drawing down on other assets, and postponing new purchases. But after some period of losses month after month, a farmer will decide that leaving the dairy industry is the best option. Economists do not know exactly when that point comes, and therefore cannot predict how many farmers are at or close to the point of quitting the dairy business. However, the possibility exists of a "tipping point": as individual farmers recognize that there is an advantage to being one of the first "out the door," before the exit of large numbers of farmers has driven down prices for land, cattle, and used equipment, we may see a sudden surge of exiters.

The 2007 Governor's report contained a prediction that 100-220 Maryland dairy farmers would exit the industry between 2006 and 2015. The numbers in this year's report show a decline of about 85 farms since 2006. So the range predicted in 2007 still appears to be reasonable, though it is now unlikely that the number of exiters will be as low as 100.

There are some faint glimmers of hope on the horizon. USDA projects that milk prices will increase from the low reached during the 2nd quarter of 2009: up 10-15% by the 4th quarter 2009; up 16-25% by the 1st quarter 2010, and up 20-30% by the 2nd quarter 2010. For all of 2010, USDA projects that milk prices will be about 25% higher than the average price for 2009. USDA projections are consistent with the dairy futures markets which show price increases by 10-15% by January 2010, 23-25% by July 2010, and 28-34% by January 2011. Current futures markets in corn and soybeans are predicting that dairy feed prices will not increase substantially over this period.

Attachment 2



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers,

Secretary

Infectious Disease and Environmental Health Administration

Heather L. Hauck, LICSW, MSW, Director

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David Blythe, MD, MPH, Acting Assistant Director/State Epidemiologist

DHMH RAW MILK POSITION PAPER

POSITION AND RATIONALE:

The Department of Health and Mental Hygiene (DHMH) opposes the sale of raw milk for human consumption for the following reasons:

First, raw milk is a potentially high-risk food for all persons, particularly for pregnant women and young, elderly or infirmed persons.

Raw milk may contain human pathogens, the consumption of raw milk and raw milk products increases the risk of gastrointestinal illness caused by those pathogens. The only reliable method to reduce the level of human pathogens in milk and milk products is for milk and its products to be produced and processed under sanitary conditions and subsequently pasteurized. The FDA, using science-based epidemiological evidence, has determined that pasteurization is the only means to ensure the destruction of pathogenic microorganisms that might be present in milk.

The State of Maryland and other federal and state health agencies have documented a long history of the risks to human health associated with the consumption of raw milk. Raw milk contains bacteria that are present on the cow's udder and teats and can be infectious to humans. Further, the intrinsic properties of milk, including its pH and nutrient content, make it an excellent vehicle for the survival and growth of bacteria.

In the court case *Public Citizen v. Heckler*, 653f. Supp. 1229 (D.D.C. 1986), the federal district court concluded that the record presents "overwhelming evidence of the risks associated with the consumption of raw milk, both certified and otherwise". The court stated that the evidence FDA has accumulated concerning raw milk "Conclusively shows that raw and certified raw milk are unsafe" and "There is no longer any question of fact as to whether raw milk is unsafe".

Illnesses related to raw milk range from minor gastrointestinal upset to kidney failure and death. Raw milk has been implicated in illness outbreaks in many states. In December 2002, a raw milk dairy in Ohio sickened 62 people due to *Salmonella* in the raw milk. An outbreak attributed to drinking raw milk in December 2005 in Washington State sickened 17 individuals because of *Escherichia coli* in the raw milk, and in March 2005, raw milk cheese sold in New York was linked to dozens who became ill with tuberculosis in the raw milk—a 14-month-old child died as a result. In California, where raw milk can be purchased in retail outlets, an outbreak of *E. coli* O157:H7 resulted in 6 cases of illness in children in 2006; one of the children was exposed to the contaminated milk only once, when he was served it as a snack while visiting a friend.

Consumption of raw milk has been found to account for less than 1% of total milk sold in those states that permit the sale of raw milk. Although consumption is relatively low, raw milk continues to cause outbreaks of illness disproportionate to its presence in the market. Legalizing raw milk sales will increase the amount of raw milk available in the marketplace, and thus, the incidents of illnesses will also increase.

Second, no process can guarantee that raw milk is safe for consumption.

It is not feasible to perform routine bacteriological tests on the raw milk itself to determine the presence or absence of all pathogens and thereby ensure that it is free of infectious organisms. The pathogens of concern to human beings that exist in cows and are found in raw milk do not necessarily affect the health of cows. In Pennsylvania, where the sale of raw milk is legal and regulated, the number of outbreaks associated with raw milk has increased as the number of certified raw milk dairies has increased. In 2008, three of the seven campylobacter outbreaks investigated by the Pennsylvania Department of Health were associated with raw milk consumption. In 2007 in Pennsylvania, individuals were sickened by *Salmonella* after consuming raw milk purchased directly from a dairy. Additional cases occurred after eating queso fresco made from the same contaminated milk that was given "free to anyone" by the dairyman after the implicated dairy was shut down.

The Department discussed non regulation of raw milk with legislators earlier and promised to study the matter. Our study confirms that there are a number of "second-hand" issues that come about if you allow raw milk to be sold. Examples include: milk rejected for commerce for presence of drugs or high bacterial counts could be sold as raw milk, milk that has been diluted with water to increase profits could be offered for sale, milk that was out of temperature, and/or otherwise adulterated through mishandling, lack of cleaning, or poor animal health could be sold to an unsuspecting consumer. There are

no requirements to assure that containers which are provided are food grade, clean and non toxic and of suitable materials to hold milk.

Finally, the Department analyzed a number of regulatory applications such as warning labels, waivers, disclosures and registration to see if they might assure public health concerns. The Department concluded that no warning or consumer right to know strategy can guarantee that raw milk is safe for consumption.

In summary, since raw milk may contain human pathogens, the consumption of raw milk products increases the risk of gastrointestinal illness due to the likelihood that it may contain infective doses of human pathogens. The only method proven to be reliable in reducing the level of human pathogens in milk and milk products is by those milk products being produced and processed under sanitary conditions and subsequently being properly pasteurized. The Department therefore, strongly advises against the consumption of raw milk.

Epidemiologic Evidence Supporting the Ban on the Sale of Raw Milk

Prepared by Katherine A. Feldman, DVM, MPH
State Public Health Veterinarian
Maryland Department of Health and Mental Hygiene

How Does Milk Become Contaminated And Why Is Pasteurization Important?

Contamination

- Milk can become contaminated both preharvest and postharvest.
- Milk in the mammary gland typically does not contain bacteria.
- As milk is excreted it can become contaminated with commensal microflora on the teat skin or on the lining of the teat canal.
- Animals with subclinical mastitis produce milk that is not noticeably different from the milk produced by uninfected animals and may be added to the bulk tank.
- Animals with clinical mastitis or systemic disease may shed organisms into milk, but typically milk from these animals will have a changed appearance and is withheld from human consumption.
- The dairy farm environment is an important reservoir for many foodborne pathogens and contamination of milk by this route has been documented.
- Milk may also become contaminated during processing, distribution and storage from environmental or human sources.

Controls to minimize contamination

- To minimize the risk of contamination, controls must be applied at all stages along the continuum.
- Enhanced animal health (such as eradication of certain zoonotic diseases from the US dairy herd) will reduce the opportunity for shedding of pathogens in milk.
- Improved milking hygiene and cow cleanliness may not be able to completely eliminate the risk of contamination but can reduce contamination of milk.

- Enhanced animal health and improved milking hygiene **cannot** fully eliminate the risk of contamination of milk, hence the need for pasteurization.
- Controls can also be applied during processing, distribution and storage (post-pasteurization) to ensure reduced opportunity for milk contamination from the environment or from those handling the product.

Pasteurization

- Pasteurization is the process of heating milk for a predetermined time and temperature combination to destroy pathogens.
- Pasteurization is the *cornerstone of milk safety*
 - It improves the safety and lengthens the shelf life of milk by destroying pathogenic and spoilage organisms.
 - It is not the same as sterilization of milk.
- **The incidence of milkborne illness in the United States has been sharply reduced as a result of pasteurization.**
 - In 1938, milkborne outbreaks constituted twenty-five percent (25%) of all disease outbreaks due to infected foods and contaminated water.
 - The most recent information reveals that milk and fluid milk products continue to be associated with less than one percent (<1%) of such reported outbreaks.

Reference

LeJeune JT and PJ Rajala-Schultz. Unpasteurized milk: A continued public health threat. *Clinical Infectious Diseases* 2009;48:93-100.

Policy Analysis conducted by the CDC: Do restrictions on raw milk sales reduce outbreaks associated with raw milk?

Approach: All reported outbreaks associated with dairy products (raw or pasteurized) during 1973-1992 included in analysis.

- Outbreaks associated with raw milk were compared to the outbreaks associated with pasteurized dairy products.
- The number of outbreaks and the number of cases associated with unpasteurized products were compared between states that permit the sale of raw milk and states that do not permit the sale of raw milk.

Findings:

- From 1993-2006, 122 outbreaks associated with dairy products

	Outbreaks	Number of patients	Number of Hospitalizations	Hospitalization Rate	Deaths
Pasteurized	48	1223	30	2.45%	1
Unpasteurized (raw)	73	1571	202	12.86%	2

Conclusion: Disease associated with raw milk outbreaks is more severe than disease associated with milk products contaminated post-pasteurization.

- The incidence of outbreaks and cases associated with raw milk in states where raw milk sales are allowed is 2.85 times and 1.91 times greater (respectively) than in states where raw milk sales are not allowed.

For all reported outbreaks associated with dairy products, 1993-2006	Incidence Density in States where Sale Permitted	Incidence Density in States where Sale Prohibited	Incidence Density Ratio (95% Confidence Interval)
Outbreaks	55/2.2B = 2.5*	15/1.7B = 0.88*	THIS IS A MEASURE OF RISK 2.85 (1.67-5.2)
Cases	1016/2.2B = 46.14*	414/1.7B = 24.18*	1.91 (1.7-2.14)

* per 100 million person-years

Conclusion: Outbreaks associated with raw milk are more likely to occur in states where raw milk sales are legalized.

Reference

Adam Langer, DVM, MPH, DACVPM

Centers for Disease Control and Prevention

Presented at the International Association of Food Protection Timely Topics Symposium:
Raw Milk Consumption: An Emerging Public Health Threat? February 17, 2009

Available at: <http://www.foodprotection.org/meetingsEducation/TimelyTopics09.asp>