

Views on Raw Milk Cheeses:

Why Raw Milk Cheeses Are Worth Saving Part 1 of 2



BY PAUL S. KINDSTEDT
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I would like to preface my remarks by stating up front that I am not a food microbiologist and have no new data to present on the safety of raw milk cheese. However, as a cheese technologist at the University of Vermont these past 19 years I have had ample opportunity to observe and work with raw milk cheese makers for almost two decades.

I have been strongly influenced by that experience, and my goal here is to offer a somewhat different perspective on raw milk cheeses that perhaps will challenge you to think a little more broadly.

This issue is not simply about safety and microbiology. Without question, safety is paramount. I believe that all sides agree on this, and I certainly hold that view.

However, there are also other, secondary, considerations that should be taken into account as we seek the best course of action to assure safety. Therefore, I will attempt to integrate some of these secondary, often non-scientific, considerations into this conversation on raw milk cheese safety.

I will focus on three major points. First, I will try to convince you that raw milk cheesemaking in the US is worth saving. In other words, in our quest to improve the safety of cheese, we should strive for a win-win solu-

tion that achieves the appropriate level of safety while preserving the option for US cheese makers to produce, and the American public to consume, raw milk cheeses.

That does not mean, however, that we should be satisfied with the status quo when it comes to safety. In my view, there are some genuine concerns that need to be addressed.

Therefore, I will also make the case that the safety of raw milk cheese needs to be enhanced. The question is...how to accomplish this?

I will conclude by proposing that mandatory pasteurization of all milk for cheesemaking is not the best approach to enhance cheese safety at this time. There are other win-win approaches that should be considered first. As I present these three points, I encourage you to be dually critical, but keep an open mind.

Let's begin by examining some of the reasons why raw milk cheeses are worth saving. I'd like to consider this from the perspective of my home state of Vermont first, because the reasons for preserving raw milk cheesemaking are especially compelling for Vermont.

Here's why. Vermont is a rural, agricultural state, and its agriculture is disproportionately dominated by dairy farming. In fact, Vermont agriculture is the most dairy-dependent

of any state in the nation.

At the same time, dairy farmers in Vermont, as in many states, face serious economic challenges for reasons that are largely beyond their control. Perpetually low commodity milk prices erode the farmer's ability to make a decent living, and the future of Vermont's dairy industry is becoming increasingly dependent on the production of value-added products.

This is certainly true with respect to cheesemaking. The future lies in the production of value-added, not commodity, cheeses.

Therefore, it is important to identify those characteristics that make cheese value-added. In Vermont, many of the value-added agricultural products share a common profile that looks something like this:

They are perceived to be hand-crafted or somehow artisan in nature. They are distinctive in quality and character in ways that set them apart from their conventional and commodity counterparts. They often embrace or symbolize in the minds of the consumer a sustainable and environmentally balanced approach to agriculture, and an approach that supports small-scale family farming. And they are products that are somehow linked to Vermont itself and the beautiful Vermont landscape.

Thus, when consumers purchase these products they often are not simply buying a distinctive food. They are buying into a place and a way of thinking.

Raw milk cheeses produced on small family farms fit seamlessly into this way of thinking. In other words, raw milk cheesemaking is a very good fit for Vermont agriculture at a time when we urgently need more "good fits".

Add to this the fact that there is considerable potential for market

growth because much of the raw milk cheese consumed in the US is imported. Only a small fraction is actually produced domestically, therefore there is plenty of room for domestic cheese makers to increase their market share.

...we should strive for a win-win solution that achieves the appropriate level of safety while preserving the option for US cheese makers to produce, and the American public to consume, raw milk cheeses.

Thus, raw milk cheesemaking has the potential to become even more important to Vermont agriculture in the future, and therefore to the state's economy as a whole. Agriculture wields a particularly powerful multiplier effect on the Vermont economy because tourism is Vermont's number one industry, and agriculture, the working landscape, dairy farms, and tourism are inseparable. Vermont needs tourism, tourism needs dairy farms to maintain the picturesque working landscape, dairy farms need value-added products to survive, and raw milk cheeses constitute a growing value-added niche of dairy products.

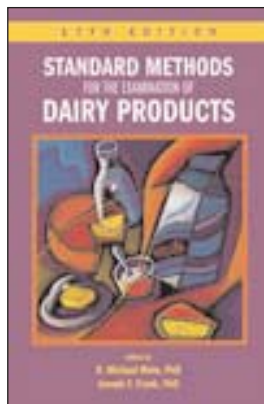
So of course raw milk cheesemaking is worth saving, at least from Vermont's perspective. Thus, it is not surprising to find strong public support in Vermont for this fledgling industry, and that Vermont's elected

• See **Raw Milk Cheese**, p. 10

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Raw Milk Cheese

Continued from p. 4

officials reflect that support. Furthermore, there are other regions of the country where local economies enjoy some of these same benefits from the presence of artisan farmstead raw milk cheese producers.

But the issue is much larger than simply the parochial needs of Vermont or a few similar regions in the US. Raw milk cheeses are worth saving because, nationwide, there is a growing public appreciation and demand for these cheeses.

Part of this is simply that the American public is traveling internationally far more now than ever before. Americans experience raw milk cheeses in Europe, return to the US, and seek to enjoy them here.

If you want to see where US attitudes about agriculture and food will likely be in or 20 years from now, look to where Europe is today. We are headed in that direction.

But there is something else going on that I think is much more important in the long run. We are witnessing a growing philosophical and cultural divide in this country over agriculture and food.

This divide is characterized by a growing sentiment among some Americans that all is not well in conventional American agriculture, in the way that we mass-produce, process and market our food, and more broadly in the way that we view food as a society.

This attitude of mistrust is being fueled by a number of concerns, among which include a lack of confidence in the wholesomeness of our food, concerns about the sustainability, environmental impact, and humanness of our agricultural practices, and a sense that our culture,

tradition and quality of life are being dragged down by a disconnected and unhealthy attitude towards food and agriculture.

All of these concerns are inter-related in a way that defines a worldview that characterizes a growing movement in this country.

If you want an example of what this movement looks like, check out the Slow Food USA website (www.slowfoodusa.org). Slow Food is a grass-roots organization that originated in Italy and is steadily gaining ground in the US. Here is how Slow Food USA describes itself:

“Recognizing that the enjoyment of wholesome food is essential to the pursuit of happiness, Slow Food USA, is an educational organization dedicated to stewardship of the land and ecologically sound food production; to the revival of the kitchen and the table as the centers of pleasure, culture, and community; to the invigoration and proliferation of regional, seasonal culinary traditions; and to living a slower and more harmonious rhythm of life.”

This statement captures the essence of what this movement is about. The raw milk cheese issue has mobilized groups like Slow Food because it embodies, or symbolizes, many of the core beliefs of this movement. Therefore, any effort by the industry or the regulatory establishment to ban raw milk cheeses is viewed as an attack on their deeply held core values.

Now, it's tempting to conclude that groups like Slow Food USA fall way outside of the mainstream and do not represent the American public. If you hold this view, be careful. Do not underestimate the extent of this cultural divide, because there is an element of truth to this movement that resonates deeply with a growing segment the American public.

Europe is way ahead of us in this way of thinking. If you want to see where US attitudes about agriculture and food will likely be in or 20 years from now, look to where Europe is today. We are headed in that direction.

When viewed from that perspective, banning raw milk cheeses at

this point in time runs the risk of becoming a backward-looking approach to an issue that deserves a forward-looking solution.

Finally, raw milk cheeses also are worth saving to avoid unnecessary friction with our European trading partners. We live in a global economy and with respect to food and agriculture, the difference between the US and Europe is more than a philosophical and cultural divide, it's a chasm.

For many EU countries, preserving raw milk cheesemaking is a high priority. Indeed, the EU has gone to great lengths for more than a decade to develop science-based win-win regulatory solutions designed to assure safety while maintaining raw milk cheese production. Clearly, the stakes are high for Europe because raw milk cheesemaking is a big industry and, frankly, America represents a lucrative export market for some of those cheeses.

But beyond simple economics, a US ban on raw milk cheeses could be viewed as another example of American unilateral decision-making. Why? Because other respected countries are approaching the issue of cheese safety differently, and arriving at different conclusions.

Take Australia, for example. Australia requires that milk for cheesemaking must either be pasteurized (holding at a temperature of at least 72°C for no less than 15 seconds) or thermized (holding at a temperature of at least 62°C for no less than 15 seconds), providing the final product is stored for at least 90 days at a temperature not below 2 °C.

However, an alternative process can be used if it can be demonstrated that this process will achieve an equivalent level of safety as cheese prepared from milk that has been heat-treated. Applying this “principle of equivalence”, the Australians have concluded that certain raw milk cheeses made to specific European standards, such as Emmentaler and Parmigiano Reggiano, achieve a level of safety comparable to that obtained through pasteurization. Consequently, Australia allows the import and sale of several hard Swiss and Italian cheese varieties.

Currently, Australia is reviewing of the safety of Roquefort cheese at the request of the French government (please see our March 19, 2004 edition, p. 11, for more details). We in the US need to consider how other countries, like Australia, are coping with cheese safety as we seek to find our own solutions.

Of course the US reserves the right to act as it deems necessary to protect the American public, but we also we need to be sensitive to concerns about regulatory unilateralism.

Next week Cheese Reporter will provide the rest of Paul Kindstedt's report on Raw Milk Cheese. If you would like to add to the conversation, e-mail your thoughts to news@cheesereporter.com

FROM OUR ARCHIVES

50 YEARS AGO

August 27, 1954: **Washington**—Secretary of Agriculture Ezra T. Benson Wednesday gave notice of intention to suspend or terminate Order No. 41, as now in effect, regulating the handling of milk in the Chicago, IL, marketing area. Such action would become effective October 1. The announcement pointed out that a public hearing was conducted last June and the subsequent recommended decision of the deputy administrator of the Agricultural Marketing Service published in the Federal Register on July 31...Less than two-thirds of the producers supplying the market who participated in the referendum favored the issuance of the said amending order.

Washington—A big question posed by the new farm bill is: Will Secretary of Agriculture Benson offer government-owned surplus butter to consumers at cut rate prices...At present, the department holds about 460 million pounds of surplus butter, 425 million pounds of cheese and 275 million pounds of dry milk. There have been reports that some farm officials want Benson to offer the butter to consumers at 41 cents a pound, or about 25 cents less than current retail prices.

25 YEARS AGO

August 31, 1979: **San Francisco, CA**—Foremost-McKesson, Inc., last week announced that it had sold the assets of its Montreal Casein Company, Ltd., to the Saputo Cheese Company, also of Montreal...Montreal Casein had been a part of Foremost-McKesson since 1964.

10 YEARS AGO

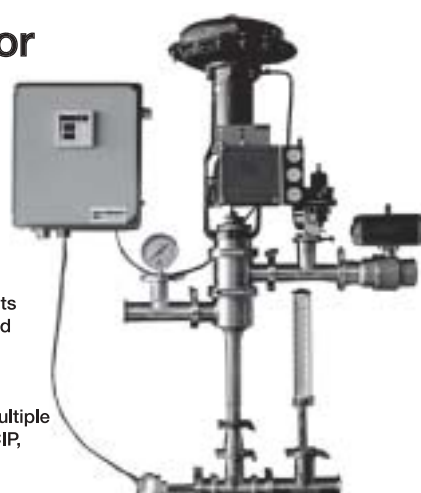
August 26, 1994: **Washington**—Richard M. McKee has been named director of the Dairy Division, Agricultural Marketing Service, US Department of Agriculture...McKee has served as acting director of the dairy division since February and as deputy director since 1989..McKee succeeds Will Blanchard, who retired January 31, 1994.

Elkhorn, ID—Alan Reed of Reed's Dairy Inc. was elected president of the Idaho Milk Processors Association at the organization's annual meeting here last week. Reed succeeds Dennis Woodruff of Swiss Village/Simplot. Others elected are: Kirk Mackert of Nelson-Ricks Creamery Company, vice president; and Dr. John Montoure, University of Idaho, secretary-treasurer.

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Views on Raw Milk Cheeses:

Pasteurization Isn't Best Approach To Enhance Cheese Safety

Part 2 of 2

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Editor's Note: Part 1 of Paul Kindstedt's report on Raw Milk Cheeses ran last week in Cheese Reporter. E-mail us at news@cheesereporter.com to receive a copy.

Let's now consider the safety issue. I believe that there are some legitimate concerns about safety, and that the safety of raw milk cheeses needs to be enhanced.

I have three major concerns with respect to safety. First, I find it troubling that small farmstead cheese-makers, who typically are the ones that produce raw milk cheeses, often lack technical training. Not always by any means, but often enough to raise red flags. Some of them have no technical training at all, and that has serious implications for food safety.

To my knowledge, Wisconsin is the only state that requires its cheese makers to complete a course of technical training in the form of a licensing requirement. I applaud Wisconsin for holding its cheese makers to a higher standard of training and knowledge.

In my opinion, inadequate technical training is a significant risk factor associated with raw milk cheese safety. It needs to be addressed.

Second, regulatory oversight is being stretched rather thinly in some regions by this growing industry of small cheese makers. By their very nature, small cheese makers are very labor intensive from the standpoint of regulatory oversight.

Increasingly, regulatory inspectors are faced with the dual challenge of having more small cheese makers to inspect, and more cheese makers who haven't had the proper technical training and who, therefore, require more time and attention

from the inspectors. And it's taxing the system in some regions.

Finally, to complicate matters, there appears to be growing interest on the part of US raw milk cheese makers to venture into producing higher risk cheeses. I'm referring to a group of washed rind and natural rind cheeses, aged for more than 60 days but not much more, that are essentially new to the US market and which carry a comparatively high degree of risk.

Their manufacture is characterized by relatively slow acidification and low cooking temperatures, which render them vulnerable to the growth of pathogens during cheesemaking. These conditions also give rise to a final cheese with relatively high moisture content.

Furthermore, the pH of these cheeses often increases during aging, sometimes quite dramatically. Consequently, these cheeses present relatively few hurdles to unwanted microbial growth, thus elevating their inherent risk.

The increased interest in producing these cheeses from raw milk, combined with inadequate technical training on the part of some cheese makers and a regulatory infrastructure stretched thinly in some regions raises some red flags concerning food safety in my view. The question is...what to do about it?

And that brings me to my final point, which is that mandatory pasteurization is not the best approach to enhance cheese safety at this time. If raw milk cheeses are indeed worth saving, we should first attempt to find a win-win solution that achieves the appropriate level of safety, is practical and can be effectively implemented, and avoids placing

unnecessary burdens and restrictions on producers and consumers of raw milk cheeses.

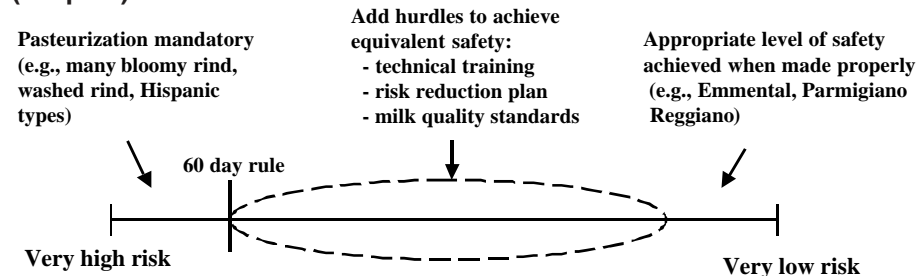
Only if that fails should we resort to mandatory pasteurization, and then only if the need for mandatory pasteurization to assure safety is supported by good science.

But even more importantly, from a food safety perspective it is difficult to justify a blanket requirement for pasteurization because some raw milk cheeses already achieve the appropriate level of safety. For example, extensive research on several of the hard Swiss and Italian raw milk cheeses has shown very convincingly that these specific cheeses, when made according to carefully defined

At one end of the spectrum are a group of cheeses such as Emmental and Parmigiano Reggiano that have been shown convincingly to achieve the appropriate level of safety because of the microbiological hurdles built into their manufacture, aging and chemical composition. At the other end of the spectrum are cheeses that lack microbiological hurdles and thus carry high associated risk.

Under current US regulations, most of the highest risk cheeses must be made from pasteurized milk by default, because they cannot withstand the minimum 60-day aging requirement for cheese made from unpasteurized milk. One can argue

(Graph 1)



standards, have extremely low levels of risk.

Thus, a strong case can be made that these specific raw milk cheeses automatically achieve an appropriate level of safety when made properly. Pasteurization isn't necessary. As noted last week, the Australians came to this conclusion after extensive reviews of these particular cheeses. The point is, it is very hard to argue on scientific grounds that ALL milk for cheesemaking must be pasteurized to assure an appropriate level of safety. It depends on the type of cheese.

On the other hand, current US regulations permit some raw milk cheeses to be produced that do pose significant risk, perhaps more risk than we are willing to accept. What do we do about them?

I believe that in most if not all cases, the appropriate level of safety can be achieved by adding new safeguards to their production. This is the approach that the European Union has taken.

Such safeguards might include a minimum requirement for technical training of cheese makers, the implementation of an approved risk reduction (HACCP-type) program and the establishment of strict microbiological standards and routine surveillance of raw milk supplies.

Also, finished product testing for specific pathogens is an option, but the preferred approach in my view is to assure safety by equipping cheese makers with essential knowledge, monitoring raw milk quality and applying effective risk reducing measures during cheesemaking and aging.

Let me illustrate what this approach might look like in the American context with the schematic representation (Graph 1) of the range of risk associated with raw milk cheeses.

that the "60 day rule" has served us well for more than half a century by acting as a "gatekeeper" to prohibit the most risky cheeses from being produced from raw milk.

Falling between the 60-day rule and the very low risk cheeses is a large group of cheeses that span a wide range of associated risks. Judging from the European experience, many if not all of these cheese can be produced safely from raw milk provided that adequate hurdles are incorporated into their manufacture.

Generally speaking, the risks associated with these cheeses recede gradually as their aging requirement increases. Thus, raw milk cheeses that are aged for only slightly more than 60 days warrant the greatest concern and stand to benefit most by implementing additional safeguards to reduce risk.

Furthermore, based on our history with the 60-day rule, another approach to enhance safety might be to adopt a more conservative "gatekeeper" by replacing the 60-day aging requirement with a longer one, such as 90 days. By default, this would effectively reduce the number of higher risk cheeses that could be produced from unpasteurized milk. I'm not advocating that the 60-day rule be changed, but it is an option that could be pursued if deemed necessary to assure safety.

In closing, I realize that these are simplistic solutions to a complex problem, and that the devil is always in the details. However, the point that I'd like to leave you with is that there are options.

In our quest to assure safety we should keep an open mind and use good science and common sense to explore the options in a constructive manner. Doing so offers the best chance for arriving at a solution that we can all consider win-win. •

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