

24 October 2015

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**RE: Understanding Potential Intervention Measures To Reduce the Risk of Foodborne Illness From Consumption of Cheese Manufactured From Unpasteurized Milk**

Please find attached a copy of *The Microbiology of Raw Milk*, a textbook on raw milk microbiology as it pertains to cheesemaking. Published in France in July 2011, this book was written by scientists working within both academe and the dairy industry. This English translation was published in October 2015 in order to make the information it contains available to an Anglophone audience.

The authors' approach is compelling because it is science-based and fully referenced: the studies that it synthesises were published in international peer-reviewed scientific journals. They show how with proper management it is entirely possible to make consistently safe cheeses of any age or description from raw milk. Furthermore, the scientists also make a compelling case that healthy and diverse microbial ecosystems play a key role in *ensuring* the safety of cheese (see Chapter 1, Section 2C).

This is not to say that raw milk microbial communities represent a panacea. It is possible to make cheeses that do not meet legal requirements from both unpasteurised and pasteurised milk if the raw materials or the environment in which they are processed are compromised. Pasteurisation is a valuable control point in circumstances where milk production cannot be controlled adequately to ensure the absence of pathogens. But there are other methods besides pasteurisation that are both practical and achievable which cheesemakers can use to control the quality of their raw materials. To ignore this fact does a disservice to the specialist cheese industry, to cheese consumers, to international trade partnerships, and most of all to the scientific evidence.

In keeping with the spirit of the Food Safety Modernization Act, it is time for the FDA to adjust its focus towards the implementation of holistic quality management systems as the best route to managing safety and quality. Within this context, the use of unpasteurised milk is simply one factor among many whose risk must be assessed and controlled at the level of the producer. This approach—rather than restrictions on the use of raw milk for making cheese—is the most effective way to ensure the safety of cheeses placed on the market.

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Editor, *Raw Milk Microbiology* (English ed.)