



FDA and USDA: Cheese is Serious!

by Steve Bemis, Esq. – November 22, 2010

I've been wondering, why does one part of the **USDA promote cheese consumption** while another says it's an unhealthy source of too much fat? As I ponder, I assume USDA has thought about the conflict at a policy level (maybe too generous, but safer than assuming they don't think), and I imagine the decision: "Hell, promoting more cheese on pizzas means megabucks to big dairy, so go for it. Never mind the health impacts which we also warn about, since anyone eating this kind of cheese-thick food won't change their behavior anyway. Sure, foodies will jump on us for the conflict, but that noise will blow over and the megabucks will still roll in for the industry."

And, what may this focus on cheese have to do with raw milk? Is there any connection between this exuberant USDA cheese marketing and recent **FDA crackdowns** on artisanal cheese makers?

Cheese is made from milk; milk's fractioning, in turn, is the foundation of this country's dairy industry. Milk, milkfat and other fractions of milk are processed into cheese, butter, ice cream, yoghurt, kefir and other industrial components which are ubiquitous in processed and ultra-processed foods. "Skimming the cream" from milk is extremely important economically. Since different cows produce milk with different portions of milkfat, standardized portions of the removed cream are dialed back in (or not, in the case of the aptly named skim milk), and 1/2%, 1%, 2% and "whole" milk products are created. The rest of the cream goes into premium milk products.

At this point a bit of history may help: Michigan was the first state to require milk pasteurization in 1948. The story of pasteurization is typically told as a rush during the 40's and 50's to adopt a pathogen-destroying, health-preserving technology; it was not, however, that new. Pasteur had discovered the process (initially for wine) more than 80 years earlier, and it had been feasible for milk for more than 60 years. Was there some other compelling reason for this sudden rush to pasteurize, which overwhelmed the Medical Milk Commissioners' certified raw milk? I submit there was more to the story than the campaign waged by the wealthy Nathan Straus and others, to adopt the technology.

There are, as we've seen, powerful economic incentives to industrialize milk and its constituent fractions. Those old enough, will remember the years prior to and after WWII with retail milk competition based on the "cream line"—the more cream your milk had, the better. The cream line permitted customers to see how "rich" your milk was in comparison to the competition. Marketing had intensified - even the narrow-neck shape of old milk bottles forced the cream up and made it look like there was more cream. This kind of competition wasn't good: producers were being forced to supply more of the most economically valuable portion which was being wasted, compared to what the cream could bring in premium products.

Homogenization, which effectively removes the cream line, solved this problem. First the cream is removed, and some is dialed back in to create the familiar milkfat "grades" (1/2%, 1%, etc.). Then, the milk is homogenized, so that even these adjusted grades have no cream line to show the consumer how little remains. Technically, what happens during homogenization: the milk is forced through tiny orifices at thousands of PSI, which knocks down the size of milk's fat globules; when these globules are broken down so small that they cannot re-coalesce, the cream no longer rises and the cream line disappears. An additional benefit of homogenizing was to extend shelf life by preventing the cream from congealing and clumping after several days on the shelf. Thus, marketing appealed to consumers' distaste for clumpy milk, to their wish for longer shelf life, and of course it emphasized the supposedly healthy aspects of these new "low fat" products.

The catch is that homogenized milk with no further processing will go rancid within a matter of hours. The much smaller fat globules have many times the surface area of the larger globules. If left



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untreated, the enzymes in the liquid phase of homogenized milk will immediately start breaking down the now-very-tiny fat globules because the protective elements which were sufficient to cover the large globules, are spread too thin to adequately protect the vastly increased surface area with the many small globules created by homogenizing.

How to fix this and save the economic benefit realized by "skimming the cream" and then homogenizing? The answer is to pasteurize the milk, since pasteurizing kills off the milk's liquid phase enzymes so the milk won't go rancid.

Hence, once the dairy industry took the homogenizing step to follow the dollars, it HAD to pasteurize. And the industry will have to stick with the gospel of pasteurizing, since their current economic structure requires it.

(It is important to note that the opposite is not true: once pasteurized, milk does not then need to be homogenized. Pasteurized milk is obviously no longer raw, but the few dairies which are not afraid to compete on cream line should also be supported whenever possible - it's where I go if I can't get raw milk. There is some argument that homogenization—which subjects the milk to extreme pressure and heat—is itself very damaging to milk; thus non-homogenized milk is more nutritious and less damaged, even if it has been pasteurized).

Although all this is not news to some, nevertheless I think it fleshes out how economics undergirds the gospel of pasteurization. Does raw milk have risk if contaminated? Sure, as does any contaminated food. Is contamination of raw milk a huge red herring keeping our eyes off a far more important reason for pasteurizing milk? I'm beginning to think so.

It is now clear that FDA's current campaign against artisanal cheese makers, together with USDA's considerable interest in supporting cheese (a keystone product in the industrialized dairy pantheon), signal an important new emphasis in the government's anti-raw-milk dogma. During recent years FDA has beat the drums of fear about pathogen contamination in raw milk. Essentially a campaign of fear, FDA's focus on fluid raw milk can only be viewed as a failure: Raw milk consumption continues to surge; FDA's interstate ban is under **legal attack**; and FDA's dogma is regularly being shown to be inconsistent, illogical and unscientific—an embarrassing and ever-deepening quandary in which the agency finds itself due to its steadfast refusal even to dialogue on the subject.

Block cheddar cheese is a principal USDA baseline for pricing and dairy support in a byzantine system riddled by lack of transparency, scandals and even litigation among market players. FDA tactics now emphasizing cheese can mean only one thing: The ante is upped; we're talking many millions of dollars simply for more cheese on pizza, in a total milk market measured in multiple billions. For an industry built on the altar of fractionalizing and homogenization, requiring pasteurization, the bottom line is simple: cheese is serious, and must be protected at all costs from the ravages of raw products that thumb their noses not just at homogenization, but at the economic lynchpin, pasteurization.

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HYPERLINKS for PDF version:

USDA promote cheese consumption – Michael Moss, "While Warning About Fat, U.S. Pushes Cheese Sales", 7 November 2010 = <http://www.farmtoconsumer.org/news/news-8november2010.htm#10>

FDA crackdowns – action alert = <http://www.farmtoconsumer.org/aa/aa-9november2010.htm>

legal attack = <http://www.ftcdf.org/litigation-FDA-status.htm>