

# Cell count improvement opportunity: Those darn Europeans!

*\*Ynte Schukken, DVM, Director QMPS*

**The “darn Europeans” will impact our industry. It is better to be ahead of the game and resolve your cell count issues now. However, the unintended consequence of the action of our (darn) European partners is that we ultimately all win.**

*\* In the interest of full disclosure, it's important to note the author of this article has European roots.*

Those darn Europeans – they are stirring up the pot again.

The European Union (EU) is demanding that all milk and milk products imported into the EU are produced under the same quality standards as the ones that are in place for their own producers. The key difference with the United States is that milk has to come from farms that have a somatic cell count below 400,000 cells/ml. In the U.S., the maximum allowable cell count is 750,000 cells/ml.

Up until now, the U.S. had interpreted that as commingled milk with a cell count below 400,000 cells/ml. This is not the same as all individual farms having a cell count below 400,000 cells/ml. For example, commingled milk from nine farms at 200,000 cells/ml and one farm at 410,000 cells/ml would be acceptable under the U.S. interpretation of less than 400,000 cells/ml in the commingled milk, but not acceptable under the EU interpretation of all farms under 400,000 cells/ml.

Under the EU interpretation, the one farm with 410,000 cells/ml would need to reduce its cell count to at least 399,000 cells/ml or better. This is not a really new issue. The EU has had the rule in place for probably a decade or so. The change is in the enforcement of the “every farm under 400,000” interpretation. The exact date of implementation of this new rule is uncertain at this point; however, it is quite clear that it will happen at some point.

Is it a big deal? We are not exporting a lot of fluid milk to the EU. However, the rule also applies to milk products (such as milk powder, cheese and yogurt) and also to all products made with milk products. The use of milk and milk components in all sorts of foods, medicines and even electrical applications is enormous, so yes, it is a big deal!

In 2008, the U.S. exported 268 million pounds of dairy products and products containing dairy ingredients. In 2009, those numbers were down to 126 million pounds of products, but 2010 exports have picked up again. As milk powder is an easily moved and traded commodity, it

is very difficult to pinpoint the precise farms where the milk comes from and the consequence may well be that almost all farms in the U.S. are affected by the changes in the rules: hence “darn Europeans.”

## **A win-win situation**

Well, the good news is that improving our cell counts is a win-win situation anyway. Many farms already have consistent cell counts below 400,000 cells/ml, and have the benefits of higher milk production, lower disease and, potentially, more premiums in their pocket.

For the farms that have been hesitant in taking those last steps to improve their cell count from a value over 400,000 cells/ml to below 400,000 cells/ml, the time has now come to think about it very seriously. As with all threats to our industry, this one can be easily translated into an opportunity. Lowering somatic cells has a proven benefit for you as a producer, for your cows and for the products made from the milk. To be clear on the latter, cell counts are not a real big issue in terms of food safety, but milk with lower cell counts provides a better cheese yield, and products made from it have an increased quality resulting in a longer shelf life.

In the Northeast, we probably have the very best infrastructure to provide support to producers that are ready to take the jump and get their cell counts below 400,000 cells/ml. Dairy veterinarians providing support to the dairy producers are among the best in the nation. Cooperative Extension is a great resource that is available in the Northeast to most dairy producers. Dairy One has a top-notch DHIA service and Quality Milk Production Services (QMPS) is available to support producers with equipment testing, management support and culture of milk samples.

Even better, DairyOne and QMPS closely collaborate in providing the best possible service at a very attractive price. All DairyOne technicians will be able to help you select high cell count cows for culture and will transport the milk samples for culture to the laboratories of QMPS. The cost of these services is the lowest available in the industry. QMPS staff is available to test your milking

equipment, evaluate your management and help you in interpreting your DHIA data on your farm. A milk quality management plan can be developed specifically for your farm. All this will make it relatively easy to take the final step to "SuperMilk."

## Take a look at an example dairy

**Let's take a look at an example farm.** Kellie and Josh Jones are milking 180 Holsteins. Their bulk milk cell counts have been around 500,000 cells/ml for the last 6 months or so. They are looking to meet the standard set by the "darn Europeans" and are asking for input from the QMPS/DairyOne team.

The Jones' currently do not subscribe to somatic cell count testing through DairyOne, but they decide to make use of a three-month special cell count program to obtain cell count data from all of their cows. These three months worth of data provide a great look into the distribution of cell counts in the herd, the percentage of long-term high cell count cows, and the number of cows that increase and decrease in cell counts between tests.

It turns out that the Jones' had two cows with very high cell counts contributing about 30% of all cells. Both cows were long-term, high cell count cows. One was an older cow who was not pregnant, and the decision was made to cull her. The other cow was a second-lactation cow about 200 days in milk. The decision was made to dump the milk from her one high cell count quarter and to dry her off relatively early. Without these animals in the bulk tank, the cell count dropped immediately.

However, analysis of the cell count data and the results of the milk cultures of the high cell count cows revealed the new infection



**Most farms can reduce bulk tank somatic cell counts by using a step-wise approach to analyzing the farm-specific issues and devising solutions.**

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risk was too high, and about 18 cows were infected with *S. aureus*, a nasty contagious pathogen. The milking equipment needed some maintenance, and milking procedures required some fine-tuning as well. A long-term plan was devised that included a separate pen for the known *S. aureus* infected cows; replacement of some of the older pulsators; and training for the milkers, emphasizing the use of gloves, careful cleaning of the teat ends before attaching the unit, and teat dipping instead of spraying.

The Jones' decided to sign up for QMPS' Bulk Milk Monitoring program and to continue to test their cows on a monthly DHIA program to evaluate the long-term success of reducing *S. aureus* infections in the herd.

The lessons learned from the Jones' farm are that it is fairly straightforward on most farms to reduce the bulk tank somatic cell count, and that a step-wise approach to analyzing the farm-specific issues and devising a solution is possible. The logical steps of this program are shown in the following list.

### Steps toward resolving high cell count problems

- Find short-term resolution for udder health problems
- Submit a bulk tank sample for mastitis panel and somatic cell count
- Identify high SCC cows and remove milk from bulk tank
- Develop realistic milk quality goals
- Analyze the underlying problems and perform risk assessment, including: milking routine analysis; equipment evaluation; Dairy One DHIA data analysis; on-farm assessment by QMPS staff; and individual cow cultures
- Summarize problems and prioritize solutions
- Implement strategies to resolve udder health problems to reduce new infections, and shorten infection duration
- Continue monitoring and surveillance using QMPS Bulk Tank Surveillance Program and Dairy One milk quality monitoring.

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How to reach us...

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**QMPS is a program** within the Animal Health Diagnostic Center, a partnership between the New York State Department of Agriculture and Markets and the College of Veterinary Medicine at Cornell. The QMPS staff of veterinarians, technicians and researchers works with New York dairies to improve milk quality by addressing high somatic cell counts, milking equipment and procedures, and milker training in English and Spanish. QMPS also conducts research and teaching programs.

**Reach the four regional QMPS laboratories at:**

**Central Lab, Ithaca.**

877-MILKLAB (877-645-5522)

**Eastern Lab, Cobleskill.**

877-645-5524

**Northern Lab, Canton.**

877-645-5523

**Western Lab, Geneseo.**

877-645-5525

**QMPS website:**

<http://qmps.vet.cornell.edu>

**Dairy One** is an information technology cooperative, providing DHI records services and herd management software to dairies throughout the Northeast and Mid-Atlantic region. A comprehensive laboratory network provides milk quality testing as well as forage, soil, manure and water testing.

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