



# DAIRY VETERINARY NEWSLETTER

May 2010

## **Will the US Legal Limit for SCC in Bulk Tank Milk Effectively Become 400,000/ml? What Happens Beginning October 1, 2010?**

I have been hearing discussions and reading print articles regarding the US legal limit for somatic cell count (SCC) in bulk tank milk becoming markedly reduced this fall. What is really happening, and what will change beginning October 1, 2010?

### **Brief history of SCC regulation in the US milk supply**

The National Conference on Interstate Milk Shipments (NCIMS), formerly known as the National Conference of Interstate Milk Shippers, has regulated many aspects of producing and shipping milk since 1950. The conference is made up of dairy producers and many other members of the dairy industry, not just those who regulate, inspect, and buy milk. However, proposed changes in regulation of production and shipping of milk across state lines are voted upon every 2 years, in odd-numbered years, by the NCIMS delegate body with one vote from each state or US territory. Every voting member that I have known or been told about has been a regulatory person, for example someone from the New York State Department of Agriculture and Markets in their dairy division. The delegates receive considerable input from other members of the dairy industry, including scientific and academic experts and milk buying companies. The next NCIMS conference is scheduled for April 28 - May 4, 2011. Since the last vote to reduce the legal limit of SCC in bulk tank milk from 1,000,000/ml to 750,000/ml in 1991 (it went into effect in 1993), the NCIMS has considered proposals to reduce the SCC limit in the US in 1997, 1999, 2001, 2003 and 2005 and has rejected them all. There were no proposals to reduce SCC at the 2007 or 2009 conferences. A major reason for this is that the argument to reduce SCC was couched in terms of public health benefit, and there is no evidence that the concentration of SCC, primarily neutrophils, in milk is associated with public health.

If the NCIMS has not voted to reduce the SCC limit, and does not even meet for another year, what is the reason for the current discussion about the US SCC limit “effectively” becoming 400,000/ml? What will change beginning October 1, 2010?

### **Shipping milk to the European Union**

Only a few years ago the US shipped very little milk to the European Union (EU). Ken Vorgert of the USDA Agricultural Marketing Service (AMS), cited in an article in Dairy Star by Jennifer Burggraff, produced figures showing that the US shipped 126 million pounds of dairy products to the EU in 2009. [US total milk production](#)

was 190 billion pounds in 2009; therefore this means that 0.7% of US milk production was shipped to the EU last year. Describing dairy shipments to the EU, Vorgert was quoted in the above article as saying, "[These products] range from ice cream, lactose, cheese, butter, milk powders - the whole gamut. Some of the products are 100 percent dairy products, some have dairy ingredients."

All food products exported to the EU whether dairy products or containing dairy ingredients have to meet requirements set by the EU Health Certification Program. These requirements are monitored by the World Trade Organization (WTO). The EU has had a standard that bulk milk SCC cannot exceed 400,000/ml in order for the milk to be sold since 1997. However, until 2004 the milk samples to be tested for SCC for product shipped to the EU were taken from truckloads or from milk plant silos, co-mingled from multiple source farms. As long as the blended milk supply was not above 400,000/ml SCC that satisfied the requirements.

In 2004 the EU standard was changed. Each individual farm from which milk for sale in the EU is produced must be sampled at the point of production; the geometric mean of a rolling 3-month SCC must be no more than 400,000/ml. (More on the geometric mean and the implications of that will follow below.) However, it seems that this was not communicated effectively and the rule was not enforced in the US. The EU conducted an audit in 2009 and discovered that the new standard was not really implemented. They then communicated with the USDA AMS, which directed the US dairy industry to comply immediately with the new rules in January 2010. Organizations including the U.S. Dairy Export Council, American Dairy Products Institute, and the National Milk Producers Federation objected to the sudden change. USDA-AMS issued a revision notice in mid-February that allowed the US dairy industry until Oct. 1, 2010 to comply with the 2004 EU directive. "It is only a minor change in the regulation, but it has a major impact on U.S. dairy farmers." Vorgert said.

### **Who is affected in the US when 99.3% of our milk is not shipped to the EU?**

Because such a small percentage of US milk production is shipped to the EU, it would seem that this new directive might not affect many farms. According to an anonymous source from the International Dairy Foods Association (IDFA), quoted in the Dairy Star article, "There is an uncertainty factor when milk is shipped to a plant. The uncertainty of that plant is that while they know the product their milk is going into, they don't know if that product will be ... marketed in the U.S., shipped somewhere other than the EU as an export or shipped to the EU. Those decisions are not made until near the time of export." Therefore it is logical that any producer shipping any milk to a plant with an EU export certificate needs to meet the new SCC limit of 400,000/ml SCC or the buyer would be at risk of having product intended for the EU rejected on short notice.

In an article in Dairy Talk by Jim Dickrell entitled "EU Pushes U.S. to 400,000 SCC Limit", John Umhoefer, Executive Director of the Wisconsin Cheese Makers Association, said, "Most concerning for a dairy processor is the ability to trace back farm SCC data for products using multiple dairy ingredients."

"If a [milk buyer] is picking up milk and has a producer producing legal milk with SCC below 750,000 but cannot maintain a geometric mean below 400,000, one option the [milk] buyer will have is to segregate that milk and ship it to plants they are certain won't have any products or ingredients being exported to the EU," the IDFA source said. "The other option is not an acceptable one, but if segregating the milk is not economical or practical, those farms might switch markets or face losing their market."

I have made numerous inquiries and searched literature to try to find out what fraction of US milk plants have EU export certificates with little success. Dairy publications are commonly implying that EU export influence will be widespread, but information regarding just how widespread is hard to find. I did discover that the Dairy Farmers of America plant in Salt Lake City, UT, a major processing plant for milk in Utah and surrounding states, has an EU certificate. That means that at least a substantial fraction of milk in Utah would be affected.

Some milk plant quality people are downplaying this, citing that average bulk tank milk SCC is not far above 200,000/ml. I wonder if they realize the impact this new rule could have – it states that every tank when contributing to the mixed milk in the product must no higher than 400,000/ml in the geometric mean over the previous 3 months, the average does not matter. If product destination is indeed determined on short notice, the possibility of rejection if even one farm's bulk tank were above 400,000/ml SCC could cause milk processors great difficulty it seems to me.

### **What percentage of US bulk tank milk has SCC below 400,000/ml at a given time?**

This is actually a difficult question to answer in the US. Much of this data is not shared, and what is is often based once again on truckloads, or other co-mingled milk. An anonymous source quoted in the article by Jim Dickrell states that 15% to 25% of milk volume will not meet the 400,000/ml standard at certain times of the year in the Northeast and Midwest. Another data set I have seen recently suggests that 18% to 25% of bulk tanks at any given time are above 400,000/ml. Some experts in the dairy industry like to quote data from the National Animal Health Monitoring System (NAHMS), sometimes also released as USDA reports. However, it should be kept in mind that this SCC data monitors only 4 of the 10 Federal Marketing Orders in the US, the Central, Mideast, Southwest, and Upper Midwest. The orders not included in this monitoring include several from the southeastern quadrant of the US, which has historically had somewhat higher SCC than other regions of the country. In 2007, 29% of shipments in the NAHMS data (it is not clear whether these are individual farm bulk tanks but it is implied) were greater than 400,000/ml. In addition, only 44% of dairy producers had all of their milk shipments less than 400,000/ml at every test throughout the year. Considering that statistic, I do not think I would like to be putting together milk for possible shipment to the EU knowing that after product destination was determined, I would have to trace back every source farm's milk and ensure that the SCC was less than 400,000/ml.

### **What is a 3-month rolling geometric mean SCC and what is its impact?**

Geometric mean calculation is different than arithmetic mean calculation, the latter being just an average. Many milk buyers now provide multiple SCC tests per month on each bulk tank, including multiple tanks per farm if they have them. However, there is often only one official SCC test per month, which apparently would be used in the geometric mean calculation. Each month the SCC from 3 months ago would be dropped, and the SCC from 2 months ago, last month and the present would be used for geometric mean. Geometric mean is always slightly lower than arithmetic mean. For example if 3 consecutive monthly SCC were 400,000, 500,000, 600,000 the arithmetic mean would be 500,000, but the geometric mean would be 467,000.

Another impact of the new rule is that in order to have the 3-month geometric mean SCC available by October 1, all US producers shipping milk to milk plants with EU export certificates will be producing milk that is monitored for the new regulations beginning in July, 2010. Finally, there is another issue that is not clear. In the EU, producers whose 3-month geometric mean SCC is over 400,000/ml are allowed the next 3 months, essentially starting over, to produce a new mean below 400,000/ml before they have their license suspended. Whether a load of dairy product with milk from one US producer who's mean SCC is greater than 400,000/ml would result in some kind of grace period to correct it, or immediate rejection of the product is not clear. What I read suggests no kind of grace period, just product rejection.

### **What will all of this mean?**

For your dairy clients shipping milk to a milk buyer with an EU export certificate, it could well be that processors find that the only way to make their life much easier is to begin insisting on a 3-month geometric

mean SCC less than 400,000/ml on every farm. The thought that only poor producers are ever in any problem with this is not suggested by the data available. This is a great time to discuss with your dairy producer clients to either reemphasize or newly emphasize the goal of keeping all bulk tank milk SCC less than 400,000/ml, beginning right away.

It is always nice to hear from our readers, including suggestions for future topics of interest. I can be reached at (435) 797-1899 M-W, (435) 797-7120 Th-F or [David.Wilson@usu.edu](mailto:David.Wilson@usu.edu).

A handwritten signature in blue ink that reads "David J. Wilson".

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