California's "Cheddar" Yields (13.7 lb./cwt): Huge Scandal

by John Bunting

A record-high 10.105 billion pounds of U.S. cheese were produced during 2009, up 1.7%, or 170.3 million pounds from 2008. U. S. cheese production has set records for the last 19 years.

In 2009, the U.S. produced 3.17 billion pounds of Cheddar cheese. Cheddar is dairy's second-leading cheese, measured by volume. Front-runner Mozzarella beat out Cheddar production last year by a scant 115 million pounds.

Cheddar - dairy's pricing standard

Cheddar, however, is dairy's price-setter. Cheddar is cash-traded at the Chicago Mercantile Exchange, with those price levels used both directly and indirectly by state/federal farm milk pricing programs. Cheddar sales prices and volumes are reported weekly to USDA – for use in montlhly milk pricing formulae. Why? Cheddar has, or at least used to have, a pristine standard of identity. Cheddar was, or is supposed to be, Cheddar, in complete conformation with standards of identity defined by the federal Food and Drug Administration.

"Good old Cheddar," right? Not any more. Dirty games have come to the Cheddar vat. (Hint: Milk Protein Concentrates, or MPCs.) And we need look only at California's dairy data to see what's really going on, despite lower U.S. farm milk production, to cause so much so-called surplus American cheese (which includes Cheddar) in USDA's monthly "Cold Storage" report.

CDFA data: block Cheddar yields = 13.7 lbs./cwt.

The latest annual information from California Department of Food and Agriculture (CDFA) on "Manufacturing Costs of Production" is from 2008 (see accompanying chart).

For both 2007 and 2008, CDFA data shows that 40-lb. block Cheddar yields were 13.7 pounds per hundredweight of farm milk. That's impossible using legal cheese processing methods.

Stated simply, there's no way that block Cheddar production could average 13.7 pounds of Cheddar per cwt. of farm milk, if California's cheese plants were operating honestly, producing block Cheddar according to standards of identity defined by the federal Food and Drug Administration (FDA).

Left strictly to farm milk, such yields would require a statewide, annual farm milk supply that averaged components testing roughly 4.4% protein and 5.2% milk fat.

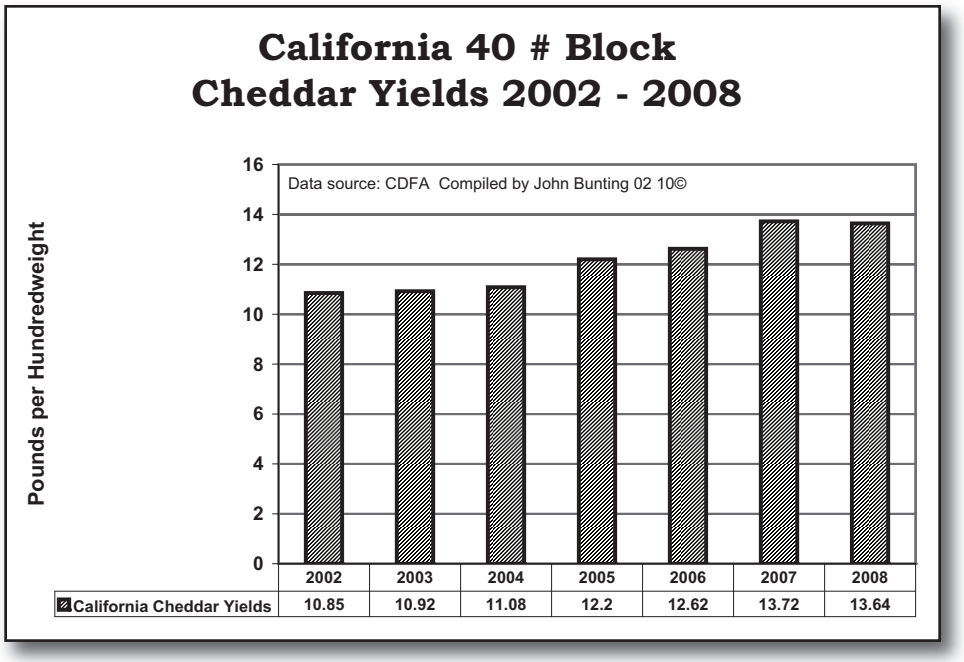
Conclusion: California's block Cheddar is "Phony Cheddar" – produced by means other than those prescribed by FDA's standards of identity.

From appearances, one might think 2008 saw a reduction in artificially bumping up cheese yields. The difference between 2007 and 2008 can be explained by the moisture content of the cheeses sampled.

According to CDFA data, 40-lb. block Cheddar yields have increased of 43% over non-fortified milk yields. **That means you can make the same amount of Cheddar using 30% less milk.** Or, "witchcraft" in the cheese plant means that excessive price-busting quantities of Cheddar are being made! In 2009, California produced 365 million pounds of Cheddar. If all California Cheddar enjoys the same yields as 40-lb. blocks, then "fortifying" Cheddar vats in the "Gold State" yielded an extra 120 million pounds of Cheddar last year. Take away 12 million pounds of Cheddar each month during 2009 and cheese supply-demand would be a lot tighter.

Increased yields have not come from California dairy cows increasing protein content of milk. For instance in 2004 the average protein content was 3.15%. In 2007 the percent protein was the same – 3.15%. Clearly, California's spectacular bock Cheddar yields are not inspired by higher protein content of farm milk!

Fortifying cheese vats at one time was accomplished by utilization of American-produced nonfat dry milk (NFDM). According to well-respected data from the American Dairy Products Institute (ADPI), 318.3 million pounds of



NFDM were used to fortify hard cheese in 2003. In 2005, according to ADPI, 253.8 million pounds were used to fortify cheese vats making hard cheese, such as Cheddar.

The imports of milk protein concentrate (MPC), primarily by the New Zealand mega-cooperative, Fonterra was promoted as a real moneymaker. Additionally, the use of domestic ultra-filtered milk was used in place of domestically-produced NFDM.

MPCs are commonly a dry form of ultra-filtered (UF) milk. Ultra-filtering milk creates a new product. The new product, technically retentate, retains whey proteins – and thus boosts cheese yields.. Most of the increase in cheese yield can be attributed to the retention of whey in the finished cheese. Conventionally, whey is drained from the cheese. Whey at one time was considered waste. Whey now has value but, not the same value as cheese.

FDA has refused to consider ultra-filtered milk and MPCs as new products requiring testing for Generally Recognized As Safe (GRAS) status. University dairy experts insist MPCs are great since they are made from milk. Don't ask too many questions about country of origin.

Perhaps, although we don't know, MPCs are perfectly safe, but we know from repeated testing that cheese produced using MPCs and ultra-filtered milk is inferior.

Problems with aging and a bitter aftertaste are well known. Researchers wrote on taste testing cheese made with ultra-filtered milk in the *Journal of Dairy Science* Vol. 73, No. 6, 1990, "The conventional cheeses were always preferred over the UF cheeses. At 6 wk, the conventional cheeses had an average preference score of 11.2 f 1.5. By contrast the UF cheeses had average preferences of 6.3 f 2.0 at 6 wk and 7.4 f 2.5 at 12 wk."

What's the possible full, net impact of California's "Phony Cheddar?"

Let's assume that California's production of 500-lb. Cheddar barrels enjoys the same "efficiencies" as does 40-lb. block Cheddar production. The net effect would be an overall 43% increase in total California Cheddar production.

In 2009, California produced a total of 363 million pounds of Cheddar, according to USDA's preliminary estimates. Take away 43% of that total and you'd have 166 million pounds LESS Cheddar from California in 2009. Yes, supplementing Cheddar vats with nonfat dry milk is perfectly legal.

If the truth were told – take away the gimmicks and tricks which foul cheese making, and Americans would probably eat more cheese. Certainly, no one would say there was too much milk produced on American dairy farms.