

# Not Skimming On The Science: New Milk Has Lower Fat, Reduces Emissions



By Hank Campbell — July 5, 2015



With low-fat milk, lactose-free substitutes and a firm place in

culture and nutrition, it wouldn't seem like dairy products need a new science approach, but there are still things to optimize.

Skim milk, for example, uses the excess fat for cakes, biscuits and creams and with obesity on the rise, dairy gets a lot of the blame - [saturated fats were demonized as a food fad for the last 30 years](#) [1], which led to trans fats as substitutes, and now groups like Natural Resources Defense Council that preyed on that fear and doubt [have turned on those also](#) [2], after demanding them as substitutes for normal food.

Given the desire for more alternatives, it was only a matter of time before scientists created milk that naturally has less fat - and results in less greenhouse gas emissions, like methane. The researchers recruited 24 dairy groups for an on-farm experiment. The farms were divided into four groups and each group used a different supplement for their herds - a common palm oil supplement was the control diet while the other three used extruded linseed, a rumen-protected linseed and palm oil, or ground rapeseed. The fatty acid profile of milk samples was measured by National Milk Laboratories, using mid-infrared laser technology.

The results showed value across the science 'food' chain: National Milk wanted to validate its laser method, while farmers and feed companies wanted to validate milk fatty acid response to dietary changes. Studies had shown that [oilseeds in diet leads to reduced methane in cows](#) [3], so greenhouse gas emissions are also lower. Homegrown feed supplements such as rapeseed and linseed meant dairies being able to switch from using a palm oil.

To sum up, the new product meant:

- (1) Lower fat content
- (2) Lower greenhouse gas emissions
- (3) Less palm oil, which means less rainforest decline in places like Indonesia

The new milk, lower in saturated fats and with a lower carbon footprint than regular milk, [has won the Biotechnology and Biological Sciences Research Council \(BBSRC\) Overall Innovator of the Year award for 2015](#)

[4].

Will this take off? Modern food activists distrust science even more than they distrust normal food, so it could be a difficult sell, especially if groups that promote fear and doubt about technology declare it Frankenmilk.

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**Links**

[1] <http://acsh.org/1991/01/the-fat-wars/>

[2] <http://acsh.org/2006/12/trans-fats-anatomy-of-a-scare-plus-whelankava-testimony-to-nyc/>

[3] <http://dx.doi.org/10.2527/jas.2007-0774>

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