

WHY HEALTHY MILK COMES FROM LESS-GASSY, LONGER-LIVED COWS¹

Leah Zerbe[©]

In 2006, a United Nations report raised some eyebrows when it found that cow flatulence accounts for more greenhouse-gas emissions than all the tailpipe emissions from the transportation sector combined. The report blamed issues associated with industrialized operations—things like cutting down rain forests for grazing land; feeding cows an unnatural diet of corn and soy that creates excess, methane-laced cow flatulence; and massive pools of liquid manure that accumulate in huge, factorylike production systems. A 2009 study out of the University of California–Davis put the number closer to 3 percent, but no matter which way you look at it, your cup of milk could be a significant source of pollution. To figure out which farming systems are more sustainable than others, a new report looking at four scenarios finds that grass-based, organic dairy farmers operate much more lightly on the planet, while often producing milk that's healthier for people. It's better for cows, too: They live significantly longer and under better conditions than chemical-based dairy operations.

Your body will thank you, too. Harvard researchers found that grass-fed dairy cows produce milk that's much higher in conjugated linoleic acid, or CLA. In the study, people with the highest levels of CLA in their tissue touted a 36 percent lower risk for heart attacks when compared with people with the lowest levels. Plus, you're drinking milk free of growth hormone and antibiotics.

THE DETAILS: Charles Benbrook, PhD, chief scientist of The Organic Center and former executive director of the board on agriculture of the National Academy of Sciences, led the study that investigated four scenarios looking at milk and meat production and money earned, feed intake, land and chemicals needed to produce feed, as well as the amount of waste generated.

Here are the four different types of farm models they analyzed:

- (1) **Industrial production**—Holstein cows (the black and white ones) are given genetically engineered growth hormone and other hormones when artificially inseminated (they're not bred naturally). These cows don't live as long as others in the study and are pushed to produce milk beyond their genetic ability. Their diet consists of corn and soy, two things cows were not meant to eat—they make cows gassy.
- (2) **Conventional farm**—Holstein cows in this scenario are less intensely managed than in the above factory-farm model, and although conventional, still do feed some grains to the cows, though they also eat more forage-based feeds.
- (3) **Intensely managed organic**—Holstein cows are fed grains, but are also required under organic-certification standards to eat natural grass-based foods, too, and to have access to pasture. They are under less stress because they are allowed a somewhat natural diet, and they live longer than cows in the previous two scenarios.

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(4) **Jersey dairy** (smaller and light brown) cows raised in an organic, pasture-based system that produce up to 30 pounds less of milk per cow per day, compared to the factory-farm scenario. But the cows live longer in dramatically healthier conditions, making farming more profitable in the long run. And the milk boasts significantly higher levels of beneficial omega-3 fatty acids. No hormones are given, and the cows' main diet is natural, not corn and soy.

Here are some main points from the study:

- Organic dairy-farming systems promote cow health and longevity by placing less stress on cows and feeding them healthier forage-based diets, while also improving the nutritional quality of the milk produced.
- Because cows live and produce milk longer on organic farms, milk cow replacement rates are 30 to 46 percent lower, reducing the feed required and wastes generated by heifers being raised as replacement animals.
- The average organic dairy cow lives several years longer than conventional and industrial cows.
- Organic cows reproduce more easily.
- The manure-management systems common on most organic farms reduce manure methane emissions by 60 to 80 percent; enteric methane emissions (animal belching and farting) are significantly reduced.

WHAT IT MEANS: Organic dairy can cost a bit more because small and midsize pasture-based organic farmers cannot raise the sheer quantity of cows industrial operations do. But there are hidden costs to cheaper milk. "When we go to the store, we're not paying the true cost of the [conventional] milk," says Theresa Marquez, chief marketing executive of Organic Valley, a co-op owned by more than 1,600 farming families. "We're paying in taxes and environmental cleanup."

This fact is highlighted in the Midwest, where pesticides are doused liberally to grow corn and soy for industrial dairy. Syngenta, the chemical company that produces the harmful pesticide atrazine for cow feed crops, is facing a class-action lawsuit because Midwestern cities are sick of taxpayers' having to foot the annual multimillion dollar tab to clean up the atrazine-tainted drinking water.

By supporting local and regional organic dairy farmers, you'll also be protecting your family from pesticides and chemical fertilizers in the water, and air and water pollution from manure lagoon pits (many family organic farms compost the cow waste to build soil fertility without polluting drinking-water supplies). Organic dairy farmers also make more livable wages for their efforts. Gross milk and meat sales revenues are about 50 higher per year of a cow's life on organic dairy farms, Benbrook's report found. "You can't push your cow and have a healthy cow. That's the beautiful thing about organic. As a result, cows live longer, you have higher profitability," Marquez adds. Marquez notes there are 12- and 13-year-old dairy cows in the Organic Valley system. By contrast, she says, industrial cows last about 3 to 4 years. "They wear them out," she says.

Here's how to support organic dairies that are keeping your water and air cleaner and producing a healthier product:

- **Look online.** Search LocalHarvest.org for organic dairy farmers in your neck of the woods.

- **Check organic dairy rankings.** Check out the Cornucopia Institute's Organic Dairy Report for help in choosing the organic milk that's right for your needs.