



**Fluid Milk Carbon Footprint Study**  
**Frequently Asked Questions**  
9/21/2010

- 1. Q: Why is sustainability important to the dairy industry?**  
A: Research shows that consumers are increasingly interested in their personal impact on the environment, and they are making purchasing decisions based on those values. Through the Innovation Center for U.S. Dairy, the entire dairy industry is working together to continue to provide products that are nutritious, produced responsibly and economically viable for all. Therefore, sustainable products are important for our planet, but also for the health and vitality of our industry.
  - 2. Q: How does the dairy industry define sustainability?**  
A: The Innovation Center for U.S. Dairy defines sustainability as “providing consumers with the nutritious dairy products they want in a way that makes the industry, people and the earth economically, environmentally and socially better – now and for future generations.”
  - 3. Q. How is being sustainable good for business?**  
A: Sustainability means making decisions that are good for the planet, for our communities, and for the economy. As the world’s population growth puts pressure on our finite resources, making the most efficient use of natural resources not only mitigates environmental impact, but also increases profitability.
  - 4. Q: Which consumers are interested in sustainability?**  
A: Frequent milk users (people who consume milk once per day or more) are not immune to environmental concerns. In fact, frequent milk users are more engaged in environmental issues than less frequent milk consumers. In one recent study, 62 percent said they were concerned about environmental issues, and 34 percent said they were interested in environmentally friendly milk products.<sup>i</sup>
  - 5. Q: What is the benefit to working together across the whole dairy industry?**  
A: It is important to address sustainability systemically — the only way to make a real difference is by working together pre-competitively. That’s why the Innovation Center has brought together experts from across the dairy industry to share best and future practices. We are also partnering with the best and the brightest minds in science, academia, government and nongovernmental organizations to leverage the latest data, current and emerging technologies and innovative thinking and practices.
  - 6. Q: Haven’t dairy farmers always taken care of their land? What is new about today’s dairy sustainability commitment?**  
A: Taking good care of the land helps ensure healthy cows...and a healthy business. There are many examples of how dairy businesses are becoming more efficient and reducing their impact on the environment. In fact, research shows that over the past 60 years, the carbon footprint of dairy farms has reduced by 63 percent.<sup>ii</sup> The Fluid Milk Carbon Footprint Study is helping to identify even more ways to reduce environmental
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impact across the entire supply chain — from farm to retail — and allows dairy farmers and businesses to tell their story of continued stewardship.

7. **Q: Why did the dairy industry decide to measure its carbon footprint?**

A: Consumers, retailers, financial institutions and even the government are interested in products and industries that are sustainable. The Fluid Milk Carbon Footprint Study (also known as a greenhouse gas life cycle assessment, or LCA) is a significant, first step in a comprehensive, science-based approach to measure and improve the environmental footprint of U.S. dairy across the entire value chain — from farm to table. The carbon footprint study will serve as the baseline for future improvements in dairy industry.

8. **Q: Why is the dairy industry only measuring carbon?**

A: Carbon footprint reduction is not where our commitment to sustainability ends. Additional studies on nutritional value, economic impact, and other environmental measures such as water quality and conservation are under way as we seek ways to do more with less and to work together for a healthy planet.

9. **Q: What is the carbon footprint of dairy products?**

A: The Fluid Milk Carbon Footprint Study measures the greenhouse gases associated with the consumption of 1 gallon of milk, and other studies are under way to measure the carbon footprint of fluid milk packaging and other dairy products, such as cheese. The study findings, in conjunction with other secondary research, confirm that the U.S. dairy industry accounts for approximately 2 percent of total U.S. greenhouse gas emissions.

10. **Q: What is the carbon footprint of 1 gallon of milk?**

A: According to the study conducted by the University of Arkansas Applied Sustainability Center, the carbon footprint of a gallon of milk, from farm to table, is 17.6 pounds of carbon dioxide equivalents (CO<sub>2</sub>e) per gallon of milk consumed. Detailed findings will be published in peer-reviewed journals in 2011.

11. **Q: How does this study differ from other studies that measure dairy's carbon footprint?**

A: This study measures the carbon footprint of milk at every stage, from production of feed for the cow to the disposal of the milk container by the consumer. The amount of data analyzed in this study is unprecedented, and it will be submitted to the Life Cycle Inventory library as the first U.S. national-level fluid milk carbon footprint study. The findings closely compare with that of other fluid milk environmental studies available.

12. **Q: How was the data for the Fluid Milk Carbon Footprint Study collected?**

A: The Innovation Center for U.S. Dairy commissioned the Applied Sustainability Center at the University of Arkansas to gather the data. Data was collected from confidential surveys of more than 500 dairy producers across the nation and 50 processing plants, and analysis of more than 210,000 round trips of trucks delivering milk from the farm to the processing plant.

13. **Q: How do we know this research study is credible?**

A: The carbon footprint study of fluid milk, as with all research studies funded by the Innovation Center, went through a critical review process to ensure credibility and global acceptance. The peer review group for this study consists of globally recognized environmental researchers and universities. Furthermore, it is compliant with the leading framework for conducting and reporting LCA studies, the ISO 14044. Of course, as with any study, there is an acceptable level of uncertainty that is identified in the report.

14. **Q: How does the Fluid Milk Carbon Footprint Study help the dairy industry?**  
A: The Fluid Milk Carbon Footprint Study establishes a baseline for the entire dairy industry and it shows continued progress in reducing dairy industry carbon footprint. This research also is helping identify the greatest opportunities for efficiencies and innovation leading to further improvement.
15. **Q: How will reducing dairy's carbon footprint benefit dairy farms and businesses?**  
A: Reducing greenhouse gas emissions increases efficiency through increased productivity and reduced input costs. For example, becoming more energy efficient can reduce electricity bills both on the farm and in the processing plant. Improving feed efficiency will not only reduce enteric emissions, but also increase profitability. And new innovations and technology could increase sales by creating new markets and new products to meet consumer needs.
16. **Q: What is the most environmentally friendly way to produce milk?**  
A: There is not a one-size-fits-all approach to dairy production. The study showed that there is great variability across farms and businesses, and that increasing efficiency reduces carbon footprint. Dairy businesses need to evaluate their individual operations to identify the best management practices for their business model. No matter what methods dairy businesses might already be using, there are always areas for continued improvement.
17. **Q: What are the greatest opportunities for reducing dairy's carbon footprint?**  
A: The Fluid Milk Carbon Footprint Study helped the dairy industry identify opportunities across the entire supply chain for continued reduction of the industry's carbon footprint. The greatest opportunities include feed conversion efficiency, manure management, increased energy efficiency, materials reduction and fuel efficiency.
18. **Q: When will the detailed findings from the study be announced?**  
A: The findings will be presented Sept. 23 by Dr. Greg Thoma of the Chemical Engineering Department, University of Arkansas, at the International Food LCA Conference. The results also will be submitted to peer-reviewed journals, including *International Journal of LCA*, *Journal of Cleaner Production*, and *Journal of Dairy Science*, for publication in 2011.

For more information, go to [www.usdairy.com/sustainability](http://www.usdairy.com/sustainability) or [www.youtube.com/usdairyvideo](http://www.youtube.com/usdairyvideo).

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<sup>i</sup> Natural Marketing Institute. 2009 LOHAS Consumer Trends Database.

<sup>ii</sup> Capper JL, Cady RA and Bauman DE. *Journal of Animal Science*. Published online first on March 13, 2009.