

Dairy industry completes fluid milk carbon footprint study

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Opportunities for improvement lie in best management practices

Rosemont, Ill. – The U.S. dairy industry has completed a carbon footprint study that measured the greenhouse gas (GHG) emissions associated with a gallon of milk in the United States. Researchers followed the journey of a gallon of milk from the beginning of the life cycle when crops are grown to feed cows; milk is produced and delivered to processors; through processing, packaging and distribution; all the way to the purchase and disposal of the gallon of milk by the consumer. The completion of the study is a significant first step for the dairy industry in a comprehensive, science-based approach to measure and improve its environmental footprint.

The Innovation Center for U.S. Dairy commissioned the Applied Sustainability Center at the University of Arkansas to conduct the GHG LCA of fluid milk, also called the carbon footprint study. Dr. Greg Thoma, professor of chemical engineering at the University of Arkansas and lead investigator of the study, will present the findings tomorrow at the International Food LCA Conference.

The carbon footprint study, together with data from additional studies measuring GHG emissions, helps validate that total U.S. dairy GHG emissions are approximately 2% of total U.S. emissions. This is far less than earlier figures reported about the global livestock industry that were incorrectly attributed to U.S. dairy.

"The entire dairy industry — dairy producers, processors, manufacturers and brands — is working together to build on its long history of sustainability. We are committed to providing the nutritious dairy products consumers want in a way that makes the industry, people and the earth economically, environmentally, and socially better — now and for future generations," said Thomas P. Gallagher, CEO of the Innovation Center for U.S. Dairy and Dairy Management Inc.™, which manages the dairy checkoff on behalf of the nation's farmers.

The carbon footprint study identifies opportunities for efficiency and innovation across the fluid milk supply chain, including feed efficiency, manure management, energy management and fuel efficiency. A key finding indicates that management practices are an important driver of the carbon footprint for farms, plants and transportation fleets, rather than the geographic region, business model, or size of the farm or organization.

“Generation after generation, dairy farmers have made many improvements in the care of the land, air and water,” said Jerry Kozak, president and CEO of the National Milk Producers Federation. “I am pleased that hundreds of America’s dairy farmers completed detailed surveys about their farming practices, in order for us to create the most comprehensive, accurate assessment of our industry’s collective carbon footprint. Being proactive in this effort is another way to make improvements in the next generation.”

Dairy businesses across the country are already making changes that are environmentally and economically beneficial. The Innovation Center has collected a variety of success stories, case studies and best practices, providing a platform for industry partners to learn from one another and make informed decisions that suit their unique needs.

One example is Prairieland Dairy, Firth, Neb., which practices a zero-waste philosophy. Byproducts from local food processors contribute to cow diets, including distiller’s grain, leftover cereal mix and spent brewers grain from a nearby microbrewery. Prairieland’s compost operation makes fertilizer from cow manure and local organic material, which is used on the farm and by local gardeners.

HP Hood LLC, Lynnfield, Mass., a processor, established energy management plans in its 22 processing plants, which include energy use, recycling and water use initiatives; and has decreased diesel fuel consumption through safe driver practices, electronic onboard recorders, temperature controls and automatic idle shutdown, among other practices.

There are many more examples of dairy businesses that have implemented sustainable practices in their operations, which can be found on USDairy.com/Sustainability.

A commitment to GHG reduction

In 2008, the Innovation Center worked with industry stakeholders to develop a roadmap of opportunities to reduce GHG emissions and build business value across the entire value chain. Ten projects, all of which align with the opportunities for improvement identified by the carbon footprint study, are currently under way. These projects explore best and next practices for feed efficiency, manure management, energy management, improved packaging formats, processing technologies and fuel efficiency.

More than 500 active volunteers from more than 300 organizations are committing time, knowledge and resources to the projects. Volunteers include representatives from the dairy industry, as well as experts from academic, government and nongovernmental organizations such as University of Michigan, the U.S. Department of Agriculture, and World Wildlife Fund.

“Sustainability has become a new way of living and a new standard for managing how we do business,” said Connie Tipton, president and CEO of the International Dairy Foods Association. “The study is helping dairy businesses to see that reducing GHG emissions not only meets consumers’ expectations for more earth-friendly products, but also reduces plant operation costs.”

The carbon footprint study will be published in a peer-reviewed scientific journal in 2011. In addition, studies on nutritional value, economic impact and other environmental measures such as water quality and conservation are under way as the industry seeks more ways to work together for a healthy planet.

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***Innovation Center for U.S. Dairy** provides a forum for the dairy industry to work together pre-competitively to address barriers and opportunities to foster innovation and increase sales. The Innovation Center aligns the collective resources of the industry to offer consumers nutritious dairy products and ingredients, and promote the health of people, communities, the planet and the industry. The Board of Directors for the Innovation Center includes 31 leaders representing 30 key U.S. producer organizations, dairy cooperatives, processors, manufacturers and brands. The Innovation Center is staffed by Dairy Management Inc.™ Visit USDairy.com for more information about the Innovation Center for U.S. Dairy.*