

# Carbon footprint of the modern dairy compared

By **JOHN T. TYSON**

With all the talk these days of what your “carbon footprint” is for your lifestyle, many folks are also looking at the footprint of all aspects of modern life.

So, what about the modern dairy farm? How does its carbon footprint compare to that of the dairy farm of years ago?

There is misleading speculation that current emissions from the U.S. dairy industry are far worse than the past.

However, a recent Journal of Animal Science article concluded that the U.S. dairy industry produced 185.6 billion pounds of milk in 2007, with a total carbon footprint 42 percent smaller than that in 1944 when the industry produced only 117 billion pounds of milk. (Note: 2007 was the most recent set of complete data available at the time of the study.)

You might ask “how is that possible?”

Well the answer is simple: efficiency.

While the total U.S. dairy herd size in 2007 was only 36 percent of that in 1944, the average yearly production of milk per cow had increased over four fold.

This huge improvement in milk yield has been achieved through a combination of better genetics, improved feeding, and the use of better herd health and management programs to improve animal care.

Some other interesting efficiency facts are that to produce the same unit of milk the modern dairy uses 23 percent of the feed, 35 percent of the water, 10 percent of the land, and produces only 24 percent the manure,

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— John Tyson  
Agricultural engineer

compared to 1944.

The efficiency of U.S. agriculture goes well beyond the dairy barn. In the same time frame, from 1944 to 2007, U.S. crop yields saw similar increases. U.S. corn yields increased 458 percent from 33 to 151 bushels per acre, and soybean yields increased 221 percent, from 19 to 42 bushels per acre.

As I’ve heard it put, “Had the big three of Detroit increased efficiency to match the U.S. farmer, the whole world would all be driving Chevys, Fords and Chryslers.”

How does dairy’s footprint fit in with the rest of the U.S. greenhouse gas emissions?

In 2008, the Environmental Protection Agency estimated that all agriculture practices (crops, animal, horticulture, etc.) contributed only 6 percent of the national greenhouse gas emissions, and dairy production comprises only 11 percent of the animal agriculture portion.

So, dairy production in the U.S. accounts for only 0.7 percent of the U.S. annual greenhouse gas emissions.

The U.S. dairy industry is a shining example of how modern technology and management can be used to increase production, while at the same time lower the impact on the environment.

With the U.S. population

expected to increase to 377 million by 2040, how will we continue to feed ourselves?

Given the finite resources available, the food supply required to sustain this population increase can only be achieved through the use of efficient, high yielding systems.

This projected increase in population would require an extra 52.3 million pounds of milk per year to meet the USDA “Dietary Guidelines for Americans.”

I believe the U.S. dairy industry stands ready and willing to meet that challenge.

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*John Tyson is an agricultural engineer with the Mifflin County Extension office in Lewistown.*

# U.S. farm exports break records

WASHINGTON, D.C. - Agriculture Secretary Tom Vilsack made the following statement regarding recent data showing U.S. farm exports reached a record \$136.3 billion in calendar year 2011:

“The data released by USDA represents a record-breaking calendar year for farm exports, demonstrating – once again – that American agriculture remains a bright spot in our nation’s economy. We saw a rise in both the value and volume of U.S. agricultural exports worldwide in 2011, as international sales rose \$20.5 billion over the previous record set in calendar year 2010. Total agricultural exports for calendar year 2011 were a robust \$136.3 billion.

“These figures indicate how demand for the American brand of agriculture continues to soar worldwide, supporting good jobs for Americans across a variety of industries such as transportation, renewable energy, manufacturing, food services, and on-farm employment. During the past three years, the U.S. farm sector has continued to support and create jobs on a consistent basis, strengthening an American economy that’s built to last. Every \$1 billion in agricultural exports supports 8,400 American jobs, meaning that U.S. farm

exports helped support more than 1 million U.S. jobs in 2011.

“And that gets to the innovation of our American farmers, ranchers and growers. American agriculture continues to apply the latest in technology and achieve a nearly unparalleled level of productivity. In fact, U.S. agriculture is the second-most productive sector of our economy in the past few decades outside of information technology.

“Exports of almost all major U.S. commodities rose in calendar year 2011, helping us to reach President Obama’s goal of doubling all U.S. exports by the end of 2014. Grains were the biggest contributor to the overall record, reaching an all-time high of \$37.7 billion, a \$9.2 billion increase over 2010. Cotton experienced the biggest year-to-year increase, up 44 percent from 2010, reaching a record \$8.5 billion. Dairy and pork exports also set records in 2011, reaching \$4.8 billion and \$6 billion respectively.

“Another success story is U.S. beef exports. Last year, the United States exported an

all-time high of \$5.4 billion worth of beef and beef products, surpassing the previous record by more than \$1.6 billion. The volume of shipments also surpassed the 2003 levels, the last year before a detection of bovine spongiform encephalopathy in Washington State disrupted U.S. trade. The return to pre-2003 levels marks an important milestone in USDA’s steadfast efforts to open and expand international markets. Despite this progress, restrictions continue to constrain exports to many of our key markets and we remain fully committed to breaking down those trade barriers.

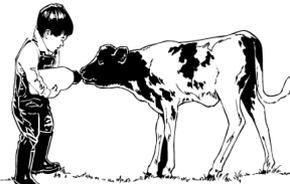
“There was more good news for U.S. beef exporters when United Arab Emirates officials issued a decree on Jan. 24, 2012 liberalizing imports of U.S. beef by eliminating age restrictions. The expansion of U.S. beef access to UAE – one of the largest markets for U.S. beef in the Middle East – underscores the tenacity of the Obama Administration to improve our trade relationships, expand export opportunities and strengthen an American economy that’s built to last.”



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