

U.S. Dairy Provides Significant Nutrient Supply With Little Environmental Impact



Liebe DL, Hall MB, White RR. Contributions of Dairy Products to Environmental Impacts and Nutritional Supplies from United States Agriculture. *J Dairy Sci.* 2020;103(11):10867-10881.

Dairy cows provide important nutrients with little impact on the environment. Now more than ever, consumers want to understand how their food choices impact their health and the environment.¹ In this modeling study, scientists used several U.S. data sources to examine the environmental and nutrient supply impact of removing dairy cattle from the U.S. food system and repurposing the land used to grow crops for dairy cattle.*

Compared to the current system, the study found that when dairy cows were removed or retired to pasture, there was **minimal to no reduction in greenhouse gas emissions** and in most of the studied scenarios, the supply of essential nutrient was reduced. Scenarios where nutrient supply was unchanged also did not reduce greenhouse gas emissions. The minimal change in GHG is likely due to the nutrient density of dairy foods compared to other foods as well as the amounts of each food type needed to supply the necessary nutrients for the population.

*Data were from the US Department of Agriculture, Economic Research Service, Food Composition databases, US Environmental Protection Agency, United Nations Food and Agriculture Organizations and other peer-reviewed published sources.²

KEY TAKEAWAYS

- Removing dairy cows from the U.S. food system would have little impact on greenhouse gas emissions, but significant consequences on nutrient supply.
- U.S. dairy accounts for 1.58% of greenhouse gas emissions.

What's the Trade-off?

Replacing milk production with fruits & vegetables or nuts & legume

Minimal reduction in GHGE

Drastically reduces the supply of calcium, vitamin D, B12, B2 and alpha-linolenic acid



National Dairy Council's (NDC) mission is to bring to life the dairy community's shared vision of a healthy, happy, sustainable world with science as our foundation.

On behalf of America's dairy farmers and importers, NDC strives to help people thrive at every age through science-based information on dairy's contributions to nutrition, health and sustainable food systems.

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Greenhouse Gas Emissions are One Way to Measure Environmental Impact

Greenhouse gas emission (GHGE) is one of several ways to measure environmental impact. Water use, land use and soil composition are others.

According to the Environmental Protection Agency (EPA), the largest source of GHGE in the U.S. (28 percent) is from burning fossil fuels for electricity, heat and transportation. Agriculture accounts for just 10% of GHGE⁴, and dairy accounts for 1.58%.

Plants + Dairy = Better Together

Plants and dairy are a power couple!

Dairy foods can make plant-packed plates better by adding nutrients, flavor, texture and satisfaction. Dairy's nutrients – like high quality protein, calcium and vitamin B12 – can help enhance those leafy greens. Try these winning combos for a nutritious and delicious meal or snack.

Dairy Foods	Fruits, Vegetables, Nuts and Beans
Ricotta Cheese	Strawberries, Almonds and Honey
Icelandic Yogurt	Chia Seeds and Pears
French Onion Greek Yogurt Dip	Carrots
Kefir	Frozen Mango
Grilled Haloumi Cheese	Leafy Green Salad and Olive Oil
Tzatziki Sauce	Quinoa, Olives and Tomatoes
Warm Milk	Cocoa and cinnamon
Fresh Mozzarella	Peaches and Basil

Tools To Get You Started on Sustainable Living

- **Calculate your carbon footprint**
<https://www3.epa.gov/carbon-footprint-calculator/>
- **Reduce food waste by planning your meals ahead** <https://choosemyplate.gov/budget-weekly-meals>
- **Learn about the Food Recovery Challenge (FRC)**
<https://epa.gov/reducefoodwaste/food-recovery-challenge-frc>
- **Educate others to Be a Food Waste Warrior**
<https://www.worldwildlife.org/teaching-resources/toolkits/food-waste-warrior-toolkit>



References:

1. Partnership for a Healthier America White Paper COVID Shifts in Consumer Food Trends: Opportunities for Retailers. December 2020. Accessed December 16, 2020 at <https://www.ahealthieramerica.org/articles/covid-19-shifts-in-consumer-food-trends-opportunities-for-retailers-719>
2. White RR, Hall MB. Nutritional and Greenhouse Gas impacts of removing animals from US agriculture. Proc Natl Acad Sci U S A. 2017;114(48):E10301-E10308. doi:10.1073/pnas.1707322114.
3. US Environmental Protection Agency. 2020. Inventory of US Green-house Gas Emissions and Sinks. US EPA, Washington, DC. <https://www.epa.gov/sites/production/files/2020-04/documents/fastfacts-1990-2018.pdf>
4. US Environmental Protection Agency. Overview of Greenhouse Gases. Accessed November 3, 2020, from <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>