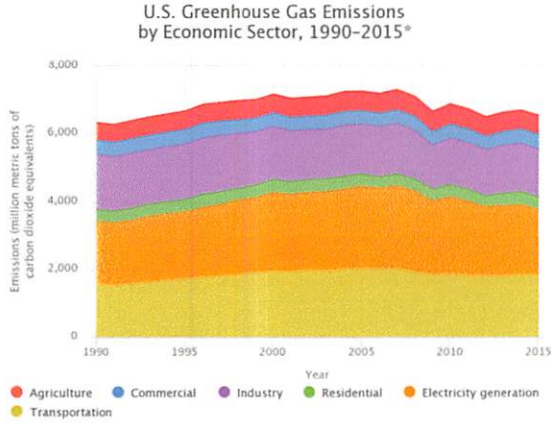
FARM: Impact of farm animals on greenhouse gas emissions is often misunderstood

By Brooke Latack, Special to this Newspaper | Posted: Thursday, March 22, 2018 12:10 am

A recently released study evaluated the consequences of eliminating meat from the American diet. The study is extremely relevant at a time when pressure to combat greenhouse gas emissions is focusing much of its attention on the animal agriculture sector.

There are many documentaries featured on popular media-streaming sites speaking on the environmental benefits of veganism, but often the data used do not accurately represent what we are experiencing in the United States.

Values as high as 51 percent of total greenhouse gas emissions have been used in describing the animal agriculture industry, when the true value is closer to 3.8 percent of total U.S. emissions. Compared to the manufacturing industry, electricity generation and transportation, agriculture as a whole plays a much smaller part than it is often portrayed (see figure 1).



FARM: Impact of farm animals on greenhouse gas emissions is often misunderstood

(Figure 1) Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015. https://www.epa.gov/ghgemissions/inventor us-greenhouse-gas-emissions-and-sinks

In the study, researchers addressed the scenario of completely eliminating animal production. This would help to understand what the overall impacts on greenhouse gas emissions and food security would look like without the consumption of animal products.

The study revealed that eliminating animal production would increase total agriculture food production by 23 percent. While the amount of food produced would increase, people would need to consume a diet with a much greater caloric content to meet nutritional needs.

This increase in consumption would render the scenario of mitigating U.S. animal products ineffective as the increased amount of food available would not be great enough to overcome the increased energy consumption per person.

When assessing greenhouse gases, researchers found that eliminating animal agriculture decreased total U.S. emissions by 2.6 percent. This decrease, while beneficial, would not make up for the emissions from transportation, electricity generation and manufacturing industries.

With the great strides made in animal agriculture, including improvements in genetics, nutrition, and other critical management techniques, the United States can produce more high-quality products with fewer animals.

By continuing to increase efficiency of production and focus on the management points within the livestock system that will make an impact on decreasing greenhouse gas emissions, the livestock industry can continue to provide high-quality foods while addressing the global need to reduce emissions.

As a person whose background is based on the sustainability of animal protein production, I plan to provide knowledge to the industry on how to navigate new laws and regulations on greenhouse gas emissions, environmental impacts, and how to remain economically and productively robust in the coming years.

From my experiences, there is not always an obvious answer that has the greatest effect. By understanding the entire system, vast improvements can be made.

For more information on this study and the greenhouse gas inventory, please see:

- White, R. R. and Hall, M. B. (2017). Nutritional and greenhouse gas impacts of removing animals from US agriculture. PNAS, 114(48)

- https://www3.epa.gov/climatechange/ghgemissions/inventoryexplorer/

- Frank Mitloehner, professor and air quality extension specialist at UC Davis; Farm to Table Talk podcast titled "Environmental Hoofprint Matters" at http://farmtotabletalk.com/environmental-hoofprint-matters-frank-mitloehner-uc-davis

Brooke Latack is a livestock advisor, University of California Cooperative Extension Service for Imperial, Riverside, and San Bernardino counties.