

Dairy cows and global warming: a lot of warm air.

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Recently, a letter to the editor of my local newspaper used data from a U.N. Food and Agriculture Organization (FAO) report to argue that eating meat and dairy products contributes significantly to global warming. This claim is based on the estimate that animal agriculture accounts for 18% of the world's total greenhouse gas emissions which supposedly are the root causes to global warming. The author suggests that each one of us could do our part to reduce global warming by going vegan and enjoying soy-based hotdogs and veggie burgers. We live in a free country: you can certainly choose whether you want to eat real steaks, hamburgers, cheese and ice cream, or whether you prefer to eat synthetic ones made from plants, but stopping your consumption of bovine-based food will do very little to global warming.

The FAO report

If we accept the FAO assumptions and calculations, something that requires a significant level of scientific tolerance, then the conclusion that animal agriculture contributes 18% of the world's total greenhouse gas emission is rational. Immediately, some people like to point out that this number is greater than the total emissions due to transportation, forgetting that in many parts of the world livestock is a source of renewable energy for draft and transportation. Thus, attributing all livestock gas emissions to food production from livestock greatly mischaracterizes the situation. More importantly, the FAO report is not as much critical to livestock production as it is critical to low animal productivity. The report states that “the environmental cost *per unit* of livestock *production* must be cut by one half” and recommends increasing the efficiency of livestock production. This recommendation does not imply reduction of livestock production or consumption of livestock-derived food; it is a call to improved animal productivity.

The United States vs. the world

The state of greenhouse gas emission is vastly different in the U.S. A recent study by the U.S. Environmental Protection Agency (EPA) shows that only 6% of U.S. greenhouse gas emission comes from agriculture – *all* agriculture, not just *animal* agriculture – of which only 11% are from dairy cattle and 22% from other cattle. Thus dairy cows contribute only 0.66% of total U.S. greenhouse gas emission, while all other cattle contribute 1.32% of the total. Clearly, the situation in the U.S. is entirely different than that of the rest of the world.

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The difference

A main reason for the difference is the high efficiency of the U.S. food production system. For example, in 1950 U.S. farmers had to feed 22 million dairy cows to produce 116 billion pounds of milk. In 2008, U.S. dairy farms will be producing over 190 billion pounds of milk with less than 9.2 million cows. During this period, the carbon footprint per gallon of milk has been reduced by roughly 67% through improved efficiency. What the FAO report is actually indicating is that much of the rest of the world needs to follow the U.S. path to high efficiency animal production systems.

Carbon footprint and human diet

A recent study at Cornell University showed that eliminating meat and dairy products from one's diet does not reduce an individual's carbon footprint because of the need to eat more vegetable-based protein to fulfill dietary requirements. Modern, science-based, high-efficiency agriculture is our only hope to feed the 6.6 billion people inhabiting planet earth while preserving the environment and setting aside sufficient land for non-agricultural use. A healthy, balanced diet is still based on the moderate consumption of a great many food groups, including grains, fruits and vegetables, but also meat and dairy products.