

Is Reducing Caloric Intake the Most Sustainable Diet?

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What we eat impacts the environment. Our diet has an ecological footprint; from transportation to fertilizers to organic waste from livestock, food is part of a complex system of interactions between people and the world around us. There are many changes we could make to their diets to make them more sustainable. To be sustainable means to meet our needs without compromising the ability of future generations to meet their own needs. Does eating fewer calories make for a more sustainable diet?

Eating fewer calories seems like it could be a more sustainable diet. Theoretically, it would cut down on CO₂ emissions released during transportation and farming, waste produced by livestock, fertilizers, pesticides, and many other harmful chemicals. Indeed, one study found that when people decreased the amount of calories consumed, greenhouse gas emissions related to food decreased up to 10.7% (Vieux et al. 2012).

If the World's 2 Billion High Consumers Cut Their Meat and Dairy Consumption by 40%...



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Figure 2 - Demonstrates the impact of reducing meat and dairy consumption on land use.

Livestock, such as cattle and chicken, require a significant amount of land to graze upon and live on. Cattle is especially harmful because, as seen in figure 1 they are the third largest producer of greenhouse gases (absorb infrared radiation and radiates heat and warms up the earth). Also cutting down on beef and dairy could decrease land clearing by up to 70% (Westhoek H et al. 2014). This is because of the greater amount of resources used up when producing meat compared to producing fruits and veggies.

Conclusion:

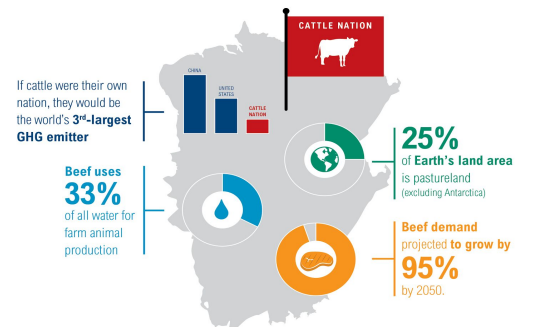
No, reducing caloric intake is not the most sustainable diet. To create a more sustainable diet people should focus on changing what they eat, not necessarily how much. Meat serves as a huge problem toward caloric diets, because there is a decrease in both agricultural land and amount of resources that could be grown.

Donati M, Menozzi D, Zighetti C, Rossi A, Zinetti A, Scuzzina F. Towards a sustainable diet combining economic, environmental and nutritional objectives. *Appetite*. 2016;106:48-57.

Vieux F, Darmon N, Toussaint D, Soler L. Greenhouse gas emissions of self-selected individual diets in France: Changing the diet structure or consuming less? *Ecological Economics*. 2012;75:91-101.

Westhoek H, Leschen JP, Raaij T, Wagner S, Marco AD, Murphy-Bekem D, Leip A, Grunewald HV, Sutton MA, Oenema O. Food choices, health and environment: Effects of cutting European meat and dairy intake. *Global Environmental Change*. 2014;26:196-205.

Beef Creates a Huge Environmental Footprint



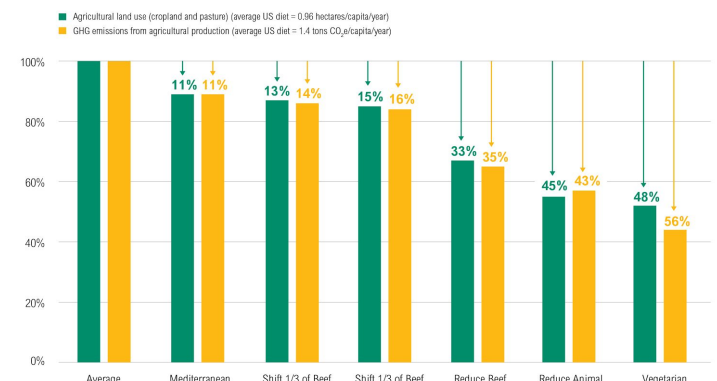
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Figure 1 - Shows how cattle alone based on demands and cattle resources can create a large ecological footprint

However, it is much more likely that eating more (or at least the same amount) may actually be more sustainable. Many believe that it is not how much you eat, but what you eat. For example increasing fruit and veggie intake while cutting down on meat and fish is believed to be more sustainable diet than many currently have (Donati et al. 2016).

Shifting High Consumers' Diets Can Greatly Reduce Per Person Land Use and GHG Emissions



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Figure 3 shows how diets that are high in meats require more land and produce more greenhouse gas emissions per person.

- Donati M, Menozzi D, Zighetti C, Rosi A, Zinetti A, Scazzina F. Towards a sustainable diet combining economic, environmental and nutritional objectives. *Appetite*. 2016;106:48–57.
- Vieux F, Darmon N, Touazi D, Soler L. Greenhouse gas emissions of self-selected individual diets in France: Changing the diet structure or consuming less? *Ecological Economics*. 2012;75:91–101.
- Westhoek H, Lesschen JP, Rood T, Wagner S, Marco AD, Murphy-Bokern D, Leip A, Grinsven HV, Sutton MA, Oenema O. Food choices, health and environment: Effects of cutting Europe's meat and dairy intake. *Global Environmental Change*. 2014;26:196–205.