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Can Buying Meatless Products Decrease Climate Change?

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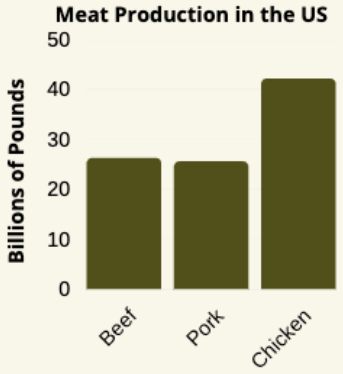
How can Buying Meatless Products Decrease Climate Change?

Abstract

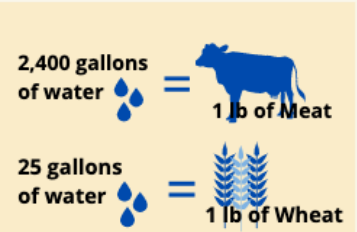
In this study, we researched the power that consumers have in reducing climate change through meat consumption. Using literature and studies already conducted, we compared the inputs of meat production to that of crops. We also studied the role that raising livestock has on climate change. We found that livestock raising has a more significant impact on climate change than transportation in terms of greenhouse gas emissions. Livestock also utilizes far more land and water resources than plant production. We also analyze in this study, the type of realistic changes that consumers could make in their diet and the potential reversal impact that it could have on climate change. These changes include avoiding red meat, going meatless one day per week or even avoiding eating meat all together by using meat substitutions. Our objective in this study is to show how buying and consuming more meatless products can make small changes to lessen the impacts of climate change.

Background

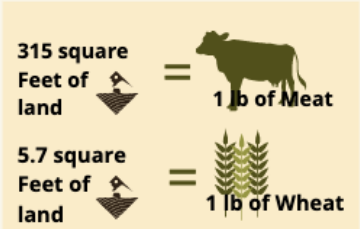
In the United States, the meat industry makes up the largest segment of all agriculture in the country. In 2017 alone we produced over 50 billion pounds of meat(4). In addition almost half of all the water used in the US goes toward the raising of animals for food(5).
Globally, almost 80% of the land used for agriculture, is used in the raising of livestock. Enormous amounts of resources go into meat production, even though less half of the global protein intake comes from animal products(1). Plants on the other hand, on average, require much less resources to produce and produce fewer harmful byproducts.

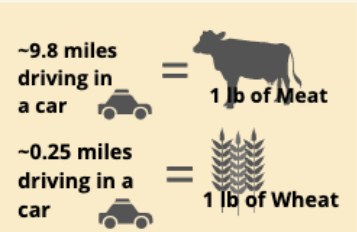


To produce just one pound of meat it takes approximately 2,400 gallons of water. While production of wheat only takes about 25 gallons of water per pound of food(5).



To produce just one pound of meat it takes approximately 315 square feet of land. With the largest contributer to this total being cattle. Production of plants for food only takes about 5.7 square feet per pound of food(1).





To produce just one pound of meat the greenhouse gasses released is equivalent to driving approximately 9.8 mile in a car. While production of wheat per pound of food is equivalent to only about .25 miles in a car(3).

Literature Review

Most environmental scientists agree that the raising of livestock for food has a major impact on the environment and it is only growing. Global consumption of meat has quintupled in the last 50 years and is on track to continue to grow. It is believed that if this course continues, the environmental impacts of meat production could end up destroying the industry itself when resources run low and the Earth becomes too hot for cattle.

In a 2019 study it was found that 18 per cent of the greenhouse gasses worldwide is from livestock this is more than the combined emissions from all other forms of transportation(7). Beef is the largest producer of these greenhouse gasses from burps and stools high in methane gas. Cows can produce as much as 30 kg of CO2 per kg of beef. Using fertilizers for grazing and deforestation to create more pastures further increases the amount of greenhouse gasses in the atmosphere. And if that is not enough, livestock is also believed to be the leading cause of water pollution due to runoffs from fertilizers and waste(6).

Just as meat production is a huge contributor to climate change, changing how much we consume meat has the potential to make giant steps in healing our atmosphere. Scientists believe that if the whole world were to swear off meat, the impact would be the same as shutting down 2,000 coal-fired power plants(6). Emissions would be cut by 8 gigatons per year. Getting rid of meat in your diet is the best thing that a person could do for the environment. It is better than owning a hybrid car or eating locally grown food(7). However going completely vegetarian is not realistic for everyone. One researcher calculated that replacing meat with vegetables in your diet just one day a week would save as much as 70 fewer miles of driving per week(6). If a whole region comprising of about 6.5 million people were to take one meatless day per week, it would be the same as removing about half a million cars off the road(7).

Conclusion

From our study we can conclude that very significant impacts can be made in reversing climate change by reducing the consumption of meat. Replacing meat with meat substitutes and other plant based foods can reduce greenhouse gas emissions, deforestation, and water usage/pollution. While going full vegetarian or vegan is not realistic for everyone, a good strategy for consumers is to just eat less meat. Practices such as eating only plant based foods one day per week or only eating meat a few times per week can still make a huge difference in climate change.

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