

The importance of implementation of carbon tax to reduce emissions from cattle in...

[Science](#), [Chemistry](#)



If there was one simple solution for humans to decrease their personal carbon footprint, it's a no-brainer that everyone would follow it. Eating a plant-based diet is fifty percent more effective in fighting climate change than switching to hybrid cars. A reasonable, straightforward suggestion would be a carbon tax on meat, this could dramatically decrease the cattle industries carbon footprint and help save the planet. Carbon tax is essentially a pollution tax. By adding a fee on the " production, distribution, or use of" greenhouse gases, it encourages industries and individuals to reduce their consumption and increase efficiency. The money accumulated by the tax can be used as incentives to start environmental programs and " life-saving" strategies to protect Earth. However, one could argue that the cattle industry be exempt from the carbon tax as it unfairly punishes consumers and small business farmers. Rather, increased taxes should be applied to those providing production, processing and transportation, as their contribution to carbon emissions is greater. Still, with the cattle industry emitting eighteen percent of the world's greenhouse gases (which is more than the whole transportation sector), the carbon tax must be expanded to include it, thereby making some compensation for the detrimental impact on the health of our planet.

The cattle industry is known as " one of the largest industries in the agriculture sector", but it is also known as one of the largest contributors to greenhouse gas emissions. Methane (CH₄), nitrous oxide (N₂O), and carbon dioxide (CO₂) are the three greenhouse gases released from beef production, with CH₄ " accounting for fifty-five to ninety-two percent" of the emissions. A significant amount of CH₄ is produced and released from an internal process

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called enteric fermentation, which is the microbial decomposition of feed in the forestomach, or the rumen, of the animal. The horrible truth about CH₄ is that its impact on the environment is twenty-three times more than CO₂. With a single cow releasing an average of one hundred kilograms of CH₄ per year, that amounts to roughly twenty-three-hundred kilograms of CO₂. Many other sources of greenhouse gases include manufacturing and operation of all machinery and supplies used to feed the cattle, manage the land, buildings and energy generation and change in land use, such as degradation and deforestation. A carbon tax on the industry would help disperse the environmental burdens that the beef production industry has caused.

On the other hand, a carbon tax “ could compromise the security of many families when it comes to food”, stated Professor Charlebois from Dalhousie University. Beef has been a part of the human diet for years and years, to all of a sudden place a meat tax on it could put people worse off. Humans should get to choose what they want to consume, not be forced due to lack of finances. Not to mention, beef is a high source of protein and iron, making it less attainable could cause unnecessary health problems. But this is all a misconception.

One and a half pounds of cooked spinach has the same amount of iron in it as a two-and-a-half ounce steak. Although iron-rich plant-based foods are not as easily absorbed into the bloodstream as red meat, there are ways to increase absorption, such as Vitamin C. Marion Nestle, chair of the Department of Nutrition, Food Studies, and Public Health at New York

University, argues that a significant percentage of saturated fat in the western diet is due to meat consumption. The American Dietetic Association found “ scientific data that suggests a positive relationships between a vegetarian diet and reduced risk for...obesity, coronary artery disease, hypertension, diabetes mellitus, and some types of cancer”. The health benefits of cutting down on personal meat consumption are attractive. Now add in the environmental benefits as well, who could say no to making a change. As the great Albert Einstein once said, “ Nothing will benefit human health and increase chances of survival of life on Earth as much as the evolution to a vegetarian diet”.

Another compelling argument is that it is unfair to punish the responsible farmers with costs they cannot afford; especially when they are already doing the best they can to reduce their carbon footprint. An added carbon tax would just harm them when they are already working hard to be a part of the solution. Farmers are experimenting with different ways to manage their land and better diets for the cattle. For example, they have found that grass-feeding their animals produces less gaseous wastes. Another example has to do with land management, farmers have been able to promote carbon sequestration, which is the removal of CO₂ from air, and storage in the soil (BCCA). Farmers have already decreased the industries cattle industry by fifteen percent between 1981 and 2011, so they must be doing something right. Kevin Boon, the general manager for BC Cattlemen’s Association, claims that the ranchers and farmers are the “ stewards of the land and are able to create and maintain thriving ecosystems, where animals and plants

flourish,” why would we scold them and add on extra fees. But the ecosystem that was previously there was flourishing on its own long before the deforestation to create grazing land.

“ The biggest driver of deforestation is agriculture,” in fact, the agriculture sector accounts for over half of the deforestation happening in Canada, and eighty percent worldwide. At our current depletion rate, the world’s rainforests could diminish and virtually vanish within the next 100 years. On top of the added greenhouse gas emissions from the cattle alone, clear-cutting a forest for grazing land amounts to over two billion metric tons of CO₂ per year due to the loss of carbon sequestration from the trees.

If we cannot tax consumers or the farmers, we are left to tax the ‘ middle men’. The industrialization side of the beef industry, including the production, transportation and processing of livestock and feed, amount to “ nearly half of all greenhouse gas emissions”. These are all “ fossil-fuel-dependent” and actually use and release greenhouse gases in order to reach a specific outcome, unlike the natural digestion and release from the animals.

But, you cannot have one without the other. Without production, refrigeration, transportation, manufacturing, etc. we would not have beef to consume. Therefore, you cannot tax one, and not tax the other. The environmental impacts of beef production is not solely due to the industrialization of the product, as mentioned above, the animals themselves produce a significant amount of greenhouse gases as well. A tax on the meat

would equal less demand, which means less production, which ultimately means less greenhouse gas emissions from the industrialization.

Though climate change may not seem to be a big problem in your lifetime, it is something we can no longer ignore. Destroying our forests and polluting our air in exchange for beef is not sustainable. The farmers are already making headway with decreasing the carbon footprint of the industry, but why stop there. A tax on the consumption, production, management, and every aspect of the cattle industry that emits greenhouse gases is the only fair and economic way to make up compensation for the harm we have already done to the planet. How you want to leave this world for the generations to come is in your hands. We need to be advocates for our planet, it cannot fight for itself.