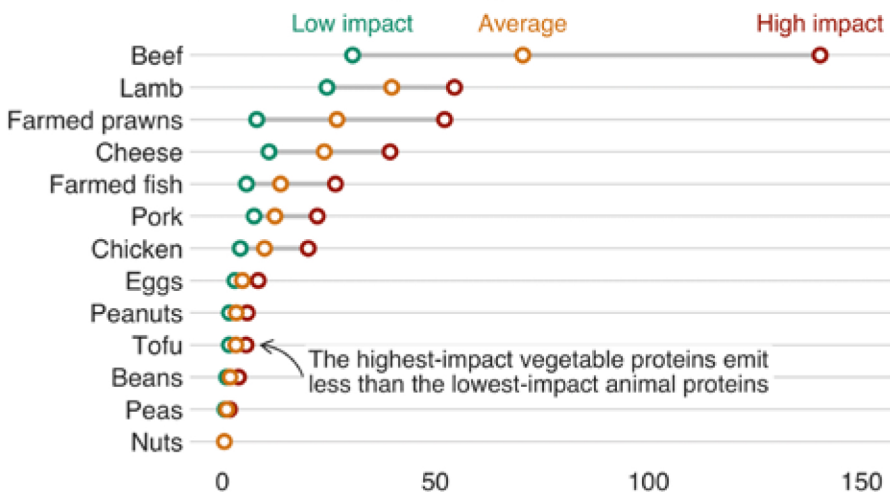


Beef has the biggest climate impact

Greenhouse gas emissions per kilogram



Source: Poore & Nemecek (2018), Science

BBC

Agriculture activities generate over 60 million tonnes of greenhouse gases every year says Dr. Josef Cihlar. Graphic-BBC.

Why I gave up beef

Methane produces 40% of greenhouse gases

Josef Cihlar

I like beef, and always have. In any form—steak, roast beef, stew, hamburger. I have enjoyed these at home skillfully prepared by my wife, and in restaurants in Canada and abroad. So why would I consider doing without?

I am worried and scared by climate change. I was exposed to this topic during my research career, but then the magnitude and timing were not well understood and moreover, governments adopted the Kyoto Protocol and seemed serious about taking steps to mitigate its impacts. Regretfully, these had very limited effect, and vested interests have succeeded in clouding the issue for the public—claiming first that climate is not changing, then that it is not due to human activities. Eventually, governments have realized that something has to be done, and in 2015 adopted the Paris Climate Accord that aims to limit global temperature rise to 2 degrees C with an ambition to not exceed 1.5oC. Yet, the world is still on track for a temperature rise of 4-5oC by 2100, and the signs of early impacts through fires, floods, tornadoes and other extreme events are in the news almost daily. The world has recently been warned that we have 12 years left to keep the temperature rise to 1.5oC, and only 2 years to “risk missing the point where we can avoid runaway climate change”.

There is only one way to avoid runaway climate change, and that is by sharply reducing the production of greenhouse gases. Ultimately, this means stopping extraction and use of fossil fuels on which much of our economic activities depend and is also the reason why electing governments that will act aggressively and fast is decisive. However, there are other human activities besides energy production that generate greenhouse gases and where each person's action can make a difference. In Canada, agriculture generates about 60 million tonnes of greenhouse gases every year; 40% of that

is caused by livestock, mainly through methane production in their gut. Beef cattle play a major role in this respect, both through grazing and in ‘finishing’ feedlots where they are fed corn and other grains to produce the marbled beef desired by consumers. Beef is thus considerably more ‘dangerous’ to climate than other meats consumed by humans; this is evident from the attached graph recently published in a prestigious scientific journal.

Reduced meat consumption has other benefits. For example, in 2018 the World Health Organization recommended a healthy “nutritious diet based on a variety of foods originating mainly from plants, rather than animals...replace fatty meat and meat products with beans, legumes, lentils, fish, poultry or lean meat”. Similarly, Canada's 2019 Dietary Guidelines recommend eating more plant-based foods and less meat containing saturated fat.

Was it hard to make this dietary change? It took some adjustment, but I have continued eating other kinds of meat (chicken, pork, fish, see graph) and a variety of plant foods as well. It did require some changes in our family's eating habits. On reflection, the necessity to respond to climate change demands that we as individuals and society do things differently. Some changes are bound to be uncomfortable, even difficult. However, not taking that route is not an option if we are to continue—through our children and grandchildren—to prosper as a species. For us Christians, ‘Love Your Neighbour as Yourself’ is an additional motivation and a source of strength as runaway climate change would cause widespread human hardships. And, ‘no one can do everything but everyone can do something’ (D. Saxe); there is great power in numbers.

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