How food choices can help the planet

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The authors advocate for a flexitarian or plant-based diet. Credit: Pixabay

A new book published by researchers at the University of Sydney and Curtin University explores how global food production and consumption are impacting the environment and contributing to emissions, offering a positive, sustainable way forward.

The food choices we make, the way we eat, and the world's food production systems have an enormous impact on the climate and environment, with food production contributing over 37 percent of the world's greenhouse gas emissions.

Researchers from the University of Sydney and Curtin University have this week published their new book, Food in a Planetary Emergency (Springer) which analyzes problems in food production and consumption at global, industry and individual levels, exploring new ways that we can eat to help curb emissions and protect critical habitats from being cleared. The authors argue that going "flexitarian"—a diet that is comprised predominantly of plant-based foods but does not cut out any food group entirely—would drastically reduce greenhouse emissions.

"Greenhouse gas emissions are growing, with the global population set to reach 8.5 billion by 2030," said the book's co-author Dr. Diana Bogueva, Center Manager of the University of Sydney's Center for Advanced Food Engineering. "This means the production and farming of food and agriculture systems is putting enormous strain on the environment through loss of biodiversity, deforestation, loss of savannahs, plastics pollution, exhaustion of the planet's soils, freshwater overuse, and species' exploitation."

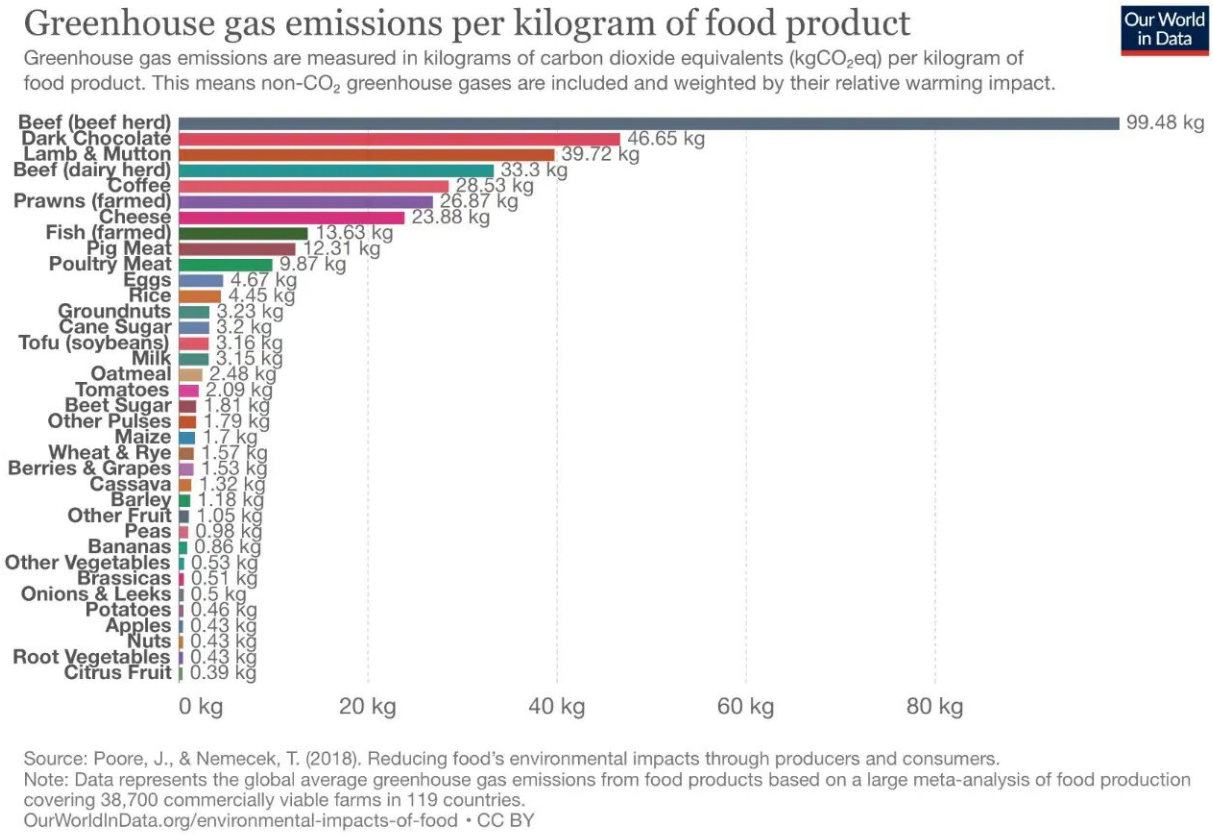
"Climate change is being supercharged by humankind. Whether we are prepared to admit it or not, our food choices are a major contributor to the current environmental emergency, but we can make significant changes today that can lessen our impact," she said.

The book, which builds upon hundreds of peer-reviewed studies and meta-analyses on the link between food and environmental impact, sets an agenda of change needed in areas ranging from food waste and packaging pollution through to meat consumption, circular agriculture and flexitarianism.

The authors have conducted research on meat consumption and its impact on biodiversity and human health. Dr. Bogueva said: "There is no doubt that the increase in meat consumption globally in particular is leading to huge biodiversity loss and land clearing. However, its impacts are far-reaching, including on human health, causing both obesity in the developed world and malnutrition in the developing world."

In 2020, WWF found that agriculture practices led to a reduction in global wildlife of 68 percent between 1970 and 2016. Emissions from fishing are also on the rise with commercial trawling being particularly detrimental to marine environments.

The researchers have also analyzed the cost of increased meat consumption on human health. Dr. Bogueva said: "There is no doubt that the increase in meat consumption globally in particular is leading to huge biodiversity loss and land clearing. However, its impacts are far-reaching, including on human health, causing both obesity in the developed world and malnutrition in the developing world."



Greenhouse gasses per kilogram of food product. Credit: Our World in Data

Will Generation Z transform the world's food choices?

The changing food attitudes of Generation Z—individuals born between 1995 and 2010—have also formed a significant part of the authors' research. Inspired by global activists like Greta Thunberg, Generation Z has led a wave of action through climate strikes, demanding urgent action from governments and making conscious food choices.

"They are very environmentally and socially motivated. Our previous research found that a large number of Gen Z opt for vegetarianism and veganism on the basis of ethical reasons, to preserve the dignity of

animals. Other studies have found they are actively reducing their consumption in places like the U.S. and U.K."

Going plant-based a simple but powerful choice for consumers

The authors believe significant action can be taken to curb emissions and decrease food's impact on the environment. They urge consumers to include more traditional plant-based choices in their diets, such as vegetables, legumes, wholegrains, nuts and fruits.

"Not only is this the best response in the current environment and climate emergency but also much better for our own health. It will diminish the current exploitative ways of food production and give a chance for the planet to regenerate," said Professor Marinova.

"Better diets are those that are healthy and come from food systems which allow the natural environment to continue to produce food and regenerate," she said.

"A transformational approach is needed to the way we eat—but it's as not as daunting as it may seem. There are small choices we can make as individuals—as well as industry and governments—that we can make to lessen the negative impacts of modern food production on the environment."

Food choices that can help the planet

- Switching to flexitarianism—according to the researchers, flexitarian habits—a reduction in meat, livestock, and animal-derived products—are gradually being adopted by Western societies in response to the climate emergency. They found there

is overwhelming evidence that a Western style of meat-rich diet is the worst choice in a planetary emergency.

- Consuming beans, pulses and alternative proteins—while animal-based proteins are a good and easy source of essential amino acids—so are complete proteins like soya, tempeh, tofu, buckwheat, chia, quinoa, industrial hemp and chickpeas. Insects, too, which have played a large role in Chinese cuisine for 3,000 years, provide a nutritious source of protein.
- Reducing food waste—World Resources Institute estimates that almost a quarter of all food produced is wasted, with food waste particularly high in North America and Oceania. According to other sources, if food waste were a country, it would be the third largest greenhouse gas emitter.
- Reducing food packaging and single use plastics—according to PlasticsEurope, 368 million metric tons of plastic were produced in 2019, largely represented in food packaging. Despite a move to recycling, the majority of these plastics end up in landfill.
- Returning to circular agriculture practices—circular agriculture was widespread before the introduction of fertilizers, involving the return of nutrients derived from organic waste to the soil. Modern practices have led to reduced soil fertility, ultimately impacting the quality of food we eat.
- Supporting future generations through considered food choices—in a recent study by Professor Marinova and Dr. Bogueva, Gen Z participants were interviewed on their attitudes to meat and protein alternatives. 60 percent expressed concern about the impacts of traditional livestock farming on the natural environment.

More information: Food in a Planetary Emergency is available to order on the Book Depository and is available as an e-copy through Springer Nature.