

Plant-based meat 'healthier and more sustainable than animal products,' according to new study

29 July 2022



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Plant-based dietary alternatives to animal products are better for the environment and for human health when compared with the animal products they are designed to replace, say the authors of a new study.

A new paper published in *Future Foods* argues that because these foods are "specifically formulated to replicate the taste, texture, and overall eating experience of [animal products](#)," they are a much more effective way of reducing demand for meat and dairy than simply encouraging people to cook vegetarian whole foods.

The study, conducted by psychologists at the University of Bath, concludes that plant-based meat and dairy alternatives "offer a healthier and more environmentally sustainable solution which takes into account consumer preferences and behavior."

The review examined 43 studies into the health and environmental impacts of plant-based foods, as well as consumer attitudes. One study found that almost 90% of consumers who ate plant-based meat and dairy were in fact meat-eaters or flexitarians; another found that plant-based products with a similar taste, texture, and price to processed meat had the best chance of replacing meat.

The paper also found that these plant-based products caused lower levels of greenhouse gas emissions than the animal products they were replacing. One paper found replacing 5% of German beef consumption with pea protein could reduce CO₂ emissions by up to eight million tons a year. Another found that compared to beef burgers, plant-based burgers were associated with up to 98% less greenhouse gas emissions.

The report authors suggest that plant-based products generally require much less [agricultural land](#), need less water and cause less pollution than animal products.

Studies focusing on the healthiness of plant-based products also found they tend to have better nutritional profiles compared to animal products, with one paper finding that 40% of conventional meat products were classified as 'less healthy' compared to just 14% of plant-based alternatives based on the UK's Nutrient Profiling Model.

Others found plant-based meat and dairy were good for [weight loss](#) and building muscle mass, and could be used to help people with specific health conditions. Food producers may be able to add ingredients such as edible fungi, microalgae or spirulina to plant-based foods, boosting properties such as amino acids, vitamins B and E and antioxidants. Future innovations in processing and

ingredients are likely to lead to further nutritional improvements.

Report author, Dr. Chris Bryant from the University of Bath, says that "increasingly we're seeing how plant-based products are able to shift demand away from animal products by appealing to three essential elements consumers want: taste, price and convenience."

"This [review](#) demonstrates overwhelming evidence that, as well as being far more sustainable compared to animal products in terms of greenhouse gas emissions, [water use](#) and land use, plant-based animal product alternatives also have a wide range of health benefits."

"Despite the incredible advances that plant-based producers have made over recent years, there is still huge potential to improve their taste, texture and how they cook. There's also [enormous potential](#) to innovate with ingredients and processes to improve their nutritional properties—for example by boosting vitamin content."

The authors stress that, whilst there are health benefits of these products compared to meat, multiple personal factors will impact on health including overall calorie consumption and exercise/activity levels.

Dr. Bryant suggests that more research will now be needed to make these improvements a reality, ensuring manufacturers can make products that taste better, are healthier and provide consumers with sustainable options that are more likely to reduce demand for [meat](#).

More information: Christopher J. Bryant, Plant-Based Animal Product Alternatives Are Healthier and More Environmentally Sustainable than Animal Products, *Future Foods* (2022). [DOI: 10.1016/j.fufo.2022.100174](#)

Provided by University of Bath

APA citation: Plant-based meat 'healthier and more sustainable than animal products,' according to new study (2022, July 29) retrieved 23 August 2022 from <https://medicalxpress.com/news/2022-07-plant-based-meat-healthier-sustainable-animal.html>

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