



Bill Gates' Lab-Grown 'Meat' 25 Times Worse for Climate than Beef, Study Finds

Description

The lab-grown “synthetic meat” being pushed by Microsoft co-founder Bill Gates is far worse for the environment than beef, a new study has found.

Bill Gates and his allies in the World Economic Forum (WEF) have been heavily pushing for the public to switch to lab-grown meat by arguing it helps fight “climate change.”

In a 2021 interview with *MIT Technology Review*, Gates argued that “all rich countries should move to 100% synthetic beef” in an effort to meet the green agenda goals of the WEF.

However, the new study suggests that lab-grown meat’s “green” credentials are not what people have been led to believe.

Researchers have revealed that lab-grown or “cultured” meat, produced by cultivating animal cells, is up to 25 times worse for the climate than real beef.

Green agenda activists argue that the production of real meat has a huge “carbon footprint” because it requires water, feed, and the clearing of trees to make way for cattle.

However, experts say the carbon footprint of lab-grown meat could be “orders of magnitude higher” once the industry grows.

Although lab-grown meat has yet to be rolled out to the public, scientists are among those growing meat products in a lab with a view to commercializing them.

The new research was led by scientists at the Department of Food Science and Technology, University of California, Davis.

It has been detailed in a new study published as a preprint paper, yet to be peer-reviewed, on the [bioRxiv](#) server.

“Currently, animal cell-based meat products are being produced at a small scale and at an economic loss, however, companies are intending to industrialize and scale-up production,” the scientists say in

their paper.

“Results indicate that the environmental impact of near-term animal cell-based meat production is likely to be orders of magnitude higher than median beef production if a highly refined growth medium is utilized.”

Good Food Institute, a non-profit organization that promotes plant- and cell-based alternatives to animal products, stresses that the study has not yet been through a full peer review process, “so its assumptions and conclusions are subject to change.”

“Several key assumptions in the UC Davis study do not align with the current or expected practices for sourcing and purification of cell culture media ingredients,” a Good Food Institute spokesperson told MailOnline.

Lab-grown meat is different from plant-based “meat,” which is not meat at all but uses vegan ingredients such as vegetable protein to replicate the look and taste of real meat.

Lab-grown or “cultured” meat is generally seen as more ethical than real meat because it requires a sample of body tissue rather than the death of the animal.

Although, many vegans and vegetarians will not touch it because it is made of animals.

The process can be done with multiple types of animal cells to create an approximation of the real thing, whether it’s chicken, pork, or beef.

Taking beef as an example, scientists use a cow’s stem cells – the building blocks of muscle and other organs – to begin the process of creating cultured meat.

The cells are placed in Petri dishes with a “growth medium” comprising nutrients such as amino acids, glucose, vitamins, and inorganic salts.

This is supplemented with growth factors and other proteins to help the muscle cells multiply and grow.

They’re allowed to proliferate just as they would inside an animal until there are trillions of cells from a small sample.

These cells later form muscle cells, which naturally merge to form primitive muscle fibers and edible tissue that can be packaged, shipped, and sold.

Experts think lab-grown meat is set to become more ubiquitous in the next 10 years, transforming from a niche concept to a common fridge staple.

But for this to happen, production methods will have to be scaled up from mere petri dishes to massive energy-intensive industrial units.

In the study, the scientists estimated the energy required for stages of lab-grown meat production, from the ingredients making up the growth medium and the energy required to power laboratories, and compared this with beef.

They largely focused on the quantity of growth medium components, including glucose, amino acids,

vitamins, growth factors, salts, and minerals.

They found the “global warming” potential of lab-grown meat ranged from 246 to 1,508 kg of CO2 equivalent per kilogram of lab-grown meat.

The figure is four to 25 times greater than the claimed average “global warming” potential of retail beef.

According to the experts, this does not change depending on which animal’s cells are being grown and the meat that’s being created, whether it’s beef, chicken, or lamb.

But the team says that the researchers did not consider the environmental impact of scaling up animal cell-based meat production facilities, which could bump the industry’s footprint up even higher.

The team concludes that the environmental impact of emerging technologies such as cultured meat is a new concept but “highly important.”

“Our results indicate that animal cell-based meat is likely to be more resource intensive than most meat production systems according to this analysis,” they say.

Lab-grown meat has its origins a decade ago but the industry is still very young, and Singapore is so far the only country in the world to have approved the meats for sale.

Lab-grown chicken, produced by the U.S. company Eat Just, was first served at a Singapore restaurant in 2020 and was described as tasting “just like its farmed counterpart.”

Earlier this year in the U.S., the Food and Drug Administration (FDA) declared synthetic meat safe for human consumption, paving the way for them to be sold stateside.

However, in other countries such as the UK, the Food Standards Agency is yet to do the same.

The industry has since grown to more than 150 companies as of late 2022, backed by \$2.6 billion in investments, according to the Good Food Institute.

Professor Mark Post at Maastricht University in the Netherlands was the first person to present a proof of concept for lab-grown meat, back in 2013.

He thinks it will be so popular with animal welfare activists and burger fans alike it will eventually displace plant-based substitutes, like soy burgers, that are increasingly common in grocery stores.

“Novel technologies such as the ones developed in cellular agriculture are part of the solution, next to reducing food waste and changing consumer behavior,” Professor Post previously told the Daily Mail.

by Frank Bergman

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Date Created

05/14/2023