

Eating less meat could cut climate costs

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Cutting back on our huge intake of beef and pork would be a huge step towards halting climate change (Image: Rex)

Cutting back on beefburgers and bacon could wipe \$20 trillion off the cost of fighting climate change. That's the dramatic conclusion of a study that totted up the economic costs of modern meat-heavy diets.

The researchers involved say that reducing our intake of beef and pork would lead to the creation of a huge new carbon sink, as vegetation would thrive on unused farmland.

The model takes into account farmland that is used to grow extra food to make up for the lost meat, but that requires less area, so some will be abandoned. Millions of tonnes of methane, a potent greenhouse gas, would also be saved every year due to reduced emissions from farms.

These impacts would lessen the need for expensive carbon-saving technologies, such as "clean coal" power plants, and so save huge sums, say Elke Stehfest of the [Netherlands Environmental Assessment Agency](#) and colleagues.

Flatulent feeders

Climate-change experts have warned of the high [carbon cost of meat for several years](#).

Beef is particularly damaging. Methane, a potent greenhouse gas, is released from flatulent cows and by manure as it decays. Furthermore, to produce a kilogram of beef (2.2 pounds), farmers also have to feed a cow 15 kg of grain and 30 kg of forage. Grain requires fertiliser, which is energy intensive to produce.

Stehfest has now weighed the economic impact of beef and other meats against the cost of stabilising carbon dioxide levels at 450 parts per million – a level that some scientists say is needed to help prevent dangerous droughts and sea level rises.

If eating habits do not change, Stehfest estimates that emissions would have to be cut by two-thirds by 2050, which is likely to cost around \$40 trillion.

If, however, the global population shifted to a low-meat diet – defined as 70 grams of beef and 325 grams of chicken and eggs per week – around 15 million square kilometres of farmland would be freed up. Vegetation growing on this land would mop up carbon dioxide. It could alternatively be used to grow bioenergy crops, which would displace fossil fuels.

Supermarket labels

Greenhouse gas emissions would also fall by 10% due to the drop in livestock numbers, she calculates. Together, these impacts would halve the costs of dealing with climate change by 2050.

To help consumers, the [environmental cost of meat](#), in terms of carbon emissions per portion, could also be included in the purchase price, says Stehfest.

The costs sound about right, says [Raymond Desjardins](#) of Agriculture and Agri-Food Canada. However, it may be unfair to compare future farms to current ones, he adds.

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