

Theme 1
 “From planet to plate”
 interview with **Pete Smith**



TAKE A **BITE** OUT OF
CLIMATE CHANGE

#TakeABiteAtHome

AT HOME



INTRODUCING...

Hi, I'm Pete, and I do research working out how much climate change is caused by food production, and how we can help reduce climate change by changing the way we use the land.

INTERVIEW

How easy is it to work out the climate impact of something I bought from the supermarket?

We have to collect information from farmers and growers on what they buy, for example fertilizer, and what they do, for example how much land they are using and how animal poo is used to fertilise the land. We also have to know about transport, packaging and whether trees had to be chopped down to make way for the farm. We combine these numbers with measurements of emissions of greenhouse gases from scientific experiments to calculate the amount of greenhouse gases emitted in producing the food.

At school we learnt that plants take in carbon dioxide, so aren't they helping with climate change, not causing it?

Yes, you're right that growing plants for food is taking carbon dioxide out of the atmosphere. We eat the plants and respire some of that plant material back to the atmosphere as carbon dioxide, and we poo the rest out which then breaks down and emits the rest of the carbon dioxide to the atmosphere. So all of the carbon dioxide taken up by the plant it released back into the air soon after we eat it. At the same time, we put fertilizers onto the plants to help them grow, which causes emissions of a very strong greenhouse gas called nitrous oxide.

Are we really chopping down trees to make way for farms?

In the UK we already chopped down trees to make way for farms hundreds or even thousands of years ago. But half of the food we eat in the UK comes from other countries, where forests are being cut down right now to grow food. Currently forests suck a quarter of the carbon dioxide produced by humans out of the air, but across the world, about 27 football pitches' worth of forests are lost every minute.

But we have to eat food, so where are we going to get it from, if we want to stop cutting down forests?

Different foods use very different amounts of land. For example, meat needs much more land than plants. By eating less meat we use less land, as well as emitting less greenhouse gases. By changing what we eat, we could easily grow enough food to feed everyone on the planet and we could actually free up land and plant more trees!

SO, WHAT SHOULD WE DO?

Find out more about the land and greenhouse gases caused by different food choices, and tell the leaders of your country that you want them to use the land better, for example by stopping cutting down forests and by planting more trees.

PROFILE

Pete Smith FRS is a Professor at the University of Aberdeen. He is Science Director of Climate Change Centre of Expertise and has been Convening Lead Author of multiple Intergovernmental Panel on Climate Change (IPCC) reports, including the Special Report on Climate Change and Land (2019).

