

# Pig welfare outweighs climate concerns for consumers, study finds

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Pork production is a societal concern on several fronts: antibiotics use, infectious disease, poor animal welfare and climate and environmental pressures. Even though the beef, coffee and chocolate industries are

each major climate culprits, the world's total consumption of pork emits hundreds of millions of tons of CO<sub>2</sub> every year.

But are you willing to fork over extra cash for a more climate-friendly [pork](#) roast? Or, are there other considerations that would increase your willingness to pay more? And if so, how much of a premium would you be willing to pay? Researchers from the University of Copenhagen's Department of Food and Resource Economics investigated this in a new study with respondents from Denmark, Germany, the UK and Shanghai, China.

A [study](#), "Willingness-to-pay for reduced [carbon footprint](#) and other sustainability concerns relating to pork production—A comparison of consumers in China, Denmark, Germany and the UK," has been published in the journal *Livestock Science*.

## Happy pigs are paramount

The survey demonstrates that three out of four respondents in Denmark, Germany and China, and around 60% of the British respondents would be willing to pay more for pork that is 'improved' in terms of better [animal welfare](#), lower climate impact, decreased use of antibiotics use, guaranteed freedom from harmful bacteria, and animals that are not fed soy, which leads to the clearing of rainforest.

However, some issues are more important than others for European consumers. Further, there is one clear priority when they are asked to choose where they would prefer their added expense going to: Improved animal welfare.

"The answers clearly demonstrate that focusing solely on climate improvements in pork production is not what consumers care most about when buying pork. They see it as important that pigs have had a good

life, and that this is more important than climate-friendly production. This applies to many consumers in Denmark, Germany and the UK," says Professor Peter Sandøe, the study's senior author.

Among German consumers, climate considerations scored lowest out of the five different types of improvements prioritized by the respondents. Danish, British and Chinese respondents placed climate impact at second lowest.

"In light of how much climate has occupied public debate in recent years, we were surprised that bringing down the climate footprint was given such a relatively low priority among consumers," says Associate Professor and co-author Thomas Bøker Lund.

## **Difficult to make a difference for the climate**

When consumers had to choose directly between animal welfare and climate, the majority of the consumers in all four countries found improved pig welfare more important than a lower climate footprint.

One argument in particular is repeated among participants in relation to this priority:

"If one is out there as a consumer and buying a piece of meat for dinner, you feel that you have the ability to do something for the individual pig and its welfare. But when it comes to the piece of meat's climate impact, the connection is less clear. Many consumers do not think that they can make a real difference for the climate through their pork purchase behavior, and many prefer to do something for the climate in other ways," says Thomas Bøker Lund.

Peter Sandøe thinks that the results provide a clear message for both politicians and pork producers:

"The study shows that the climate problem probably won't be solved by labeling climate-friendly pork. This is not what consumers are asking for. And there is a very real dilemma here, because focusing entirely on climate-friendly [pork production](#) will mean compromising on animal welfare, for example, in relation to sows birthing more pigs and the animals being tightly packed into their living spaces," says Peter Sandøe, who continues:

"Furthermore, relatively speaking, the vast majority of CO<sub>2</sub> emissions from animal production stems from beef—which is why cattle must first and foremost bear the brunt when it comes to the climate problem. So, it's a good idea to swap the beef in your Bolognese sauce out for pork or chicken. But at the same time, we need to eat less meat in general and more plant-based foods."

## **Higher minimum requirements needed**

Of the consumers who are open to spending more on pork, the majority are willing to pay up to 20% extra for the meat. But one doesn't get much animal welfare for an additional 20% according to the researchers:

"Calculations reveal that it costs around 25% more just to produce a chicken that is not a so-called turbo-growing chicken. And there, only one parameter has been changed. As for pigs, an indoor pig, where only slight improvements to the barn have been made, easily costs 20% extra. So there isn't much that can be improved for so little money," says Peter Sandøe.

Therefore, new thinking is needed from pork producers and politicians if the living conditions of pigs are to be improved. The researchers point out that savings could be achieved at the retail level if there were not as many types of the same product beside one another in the cool counter.

"You could consider making a national compromise, similar to the Danish one reached on a ban on caged eggs, and the Dutch one not selling meat from fast growing chickens in supermarkets. That is, where it is decided that there should only be pork in shops that meet certain animal welfare requirements. This may be the only way to go within the current framework," says Peter Sandøe.

Peter Sandøe concludes, "In many counties mortality among piglets is sky-high and there are far too many sows that cannot withstand the production pressure as a consequence of their already being pushed so hard. So, instead of increasing production pressure yet further in the name of climate protection, we should, on the contrary, set higher minimum requirements for pig welfare and hopefully get them through at the EU level as well. I Denmark and at EU level no regulations have been added since the late '90s, so it is time for something to be done about animal welfare."

## **Increased kindness with animals adds to climate strain**

The dilemma between animal welfare and climate is not just that of consumers. The researchers point out that there is a practical contradiction between producing more climate-friendly pork and improved animal welfare too. Indeed, a more climate-friendly pig, all other things being equal, is a more "efficient" pig.

"It's a real dilemma that maximizing climate friendliness may require pushing animals on a number of other fronts. For example, the breeding of sows that give birth to more and more piglets per litter or to keep animals indoors so as to sequester more direct emissions than if they were to roam outdoors. Or to feed pigs finely ground feed, so that nothing goes to waste, but which gives them stomach ulcers. Conversely,

the kinder one is with the animals, the greater the climate impact per kilo of meat," says Peter Sandøe.

## China stands out

While the participants in the three European countries who were willing to pay more for pork all prioritized animal welfare most highly, Chinese participants prioritized food safety above all else. That the meat is guaranteed to be free of potentially harmful bacteria scored highest, whereas the meat's climate footprint was the next to last priority. Participants from all four countries agreed that animal welfare is more important than the meat's climate footprint.

### About the study

- Survey respondents prioritized from among five dimensions of sustainability: animal [welfare](#); [climate](#) footprint; use of antibiotics; food security and rainforest protection.
- Study respondents were from Denmark, Germany, the UK and China (Shanghai). Roughly 1500 people from each country participated.
- The researchers behind the study are Sigrid Denver, Tove Christensen, Thomas Bøker Lund, Jakob Vesterlund Olsen and Peter Sandøe from the University of Copenhagen's Department of Food and Resource Economics.

**More information:** Sigrid Denver et al, Willingness-to-pay for reduced carbon footprint and other sustainability concerns relating to pork production—A comparison of consumers in China, Denmark, Germany and the UK, *Livestock Science* (2023). [DOI: 10.1016/j.livsci.2023.105337](https://doi.org/10.1016/j.livsci.2023.105337)

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