

# Gene-edited food is 5 years away in England, says government scientist

The UK parliament passed a law to help researchers do trials of gene-edited crops in England, and the chief scientist at the UK's Department for Environment, Food and Rural Affairs says it would take at least five years for a product to go from research trials to market

New crops that have been gene-edited to be more nutritious and less environmentally harmful are at least five years away from being sold in England, according to one of the UK government's leading scientists.

Gideon Henderson, the chief scientific officer of the UK's Department for Environment, Food and Rural Affairs (Defra), says there is no scientific basis for such food being blocked for sale. The UK parliament passed new legislation today that is designed to aid trials of gene-edited crops in England.

The UK government plans to change current laws so that gene-edited plants are treated differently to [genetically modified organisms](#) (GMOs). GMOs can involve genes inserted from one species into another, while gene-editing usually involves using CRISPR technology to edit the DNA of one organism in an accelerated version of natural breeding techniques. Wheat edited to be less likely to cause cancer [is one example being trialled](#). Crops resistant to pests so that they require less pesticide are another.

“One of the really big wins are the environmental benefits, things that use less pesticides, are more tolerant of climate change,” says Henderson.

Under today's law change, which is about [three weeks later than expected](#), researchers trialling gene-edited crops should save around £10,000 per trial and cut two months off the wait for approval. However, with only two trials typically taking place a year, the step is more symbolic than material. “It's a signifier of intent to move further because the practical change is relatively slight. It's part of a careful move, we're not leaping in with two feet,” says Henderson.

What comes next, at an unspecified date, is a law change so gene-edited food can be commercially grown and sold. Crops will be first, with livestock later, according to Henderson. Two key matters to be worked out first are a definition of what counts as gene-edited and how food is judged as fitting into the category.

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For animals, the main issue is whether gene editing could be used to make them more productive at the expense of their welfare, akin to breeding chickens so heavy

they break their legs. [Ethicists have warned](#) that the UK government's gene-editing drive should guard against such risks.

The slow approach the UK government is taking may partly also be to allay risks of a backlash akin to the UK's "Frankenfoods" protests against GMOs in the late 1990s and early 2000s. "I think we have to be mindful there might be something like that, but so far in the last year we've not seen anything like that at all," says Henderson.

He says government [surveys suggest](#) public support for gene-edited food, and notes the roughly 6000 submissions to a government consultation was relatively low. However, the majority of those were opposed to the idea. Henderson says there is a need for public engagement, but stopped short of calling for a government communications campaign to win support.

Asked whether there is any good reason the law won't change to allow gene-edited crops, he says: "There are political reasons why it might not happen, it might not be popular as it passes through parliament. But scientifically I don't think there are reasons why it shouldn't happen." Argentina and Japan are good case studies of gene-edited food being done safely and beneficially, he adds.

When the law change may come is impossible to say, says Henderson. However, he says it would take at least five years for a product to go from research trials to market. "That sets you a timeline of the impact for the changes we're making now," he says. He adds that moves in other countries might speed up approval for existing products, such as a [gene-edited tomato sold in Japan since last September](#), which could take years to go on sale in the UK under current legislation.