



Sources	FT, Royal Society		
Date	June 2021		
Potential scale of impact	Certainty of outcome	Impact horizon	
★★★★☆	★★☆☆☆	H1	H2 H3

New gene-editing techniques could transform farming, and play a vital role in combating climate change - but are still widely shunned as creating “Frankenfoods”. In February 2021, the Co-op supermarket [reaffirmed its ban on genetically engineered ingredients](#) from its product range, in response to concerns that the [UK government wants to make gene editing easier post-Brexit](#). Under EU law, no commercialised genetically modified or gene-edited crop can be planted without a lengthy risk assessment and member state approval.

These concerns arguably do not take account of the difference between genetic engineering and gene editing.

Traditional genetic engineering endows organisms with new traits by inserting “transgenes” from other species. In contrast, gene editing alters a species’ own genes without permanently adding any new genetic material. Proponents argue gene editing is merely an acceleration of classical breeding techniques, which select for traits enhanced by mutations. “We have no reason to believe that they will be any more risky than crops made with traditional breeding,” says Angela Karp, director of the UK’s [Rothamsted Research](#) centre.

Under the proposed UK policy change, gene-edited plants and animals might not need detailed applications and reviews before field trials and commercial approval. This would make it easier to get commercial approval for gene-edited plants and animals.

Should the UK go further? With climate change the next big threat, the huge carbon footprint of farming needs to be addressed. Genetic engineering can still do things which gene editing can’t, offering the possibility of ending dependence on fertilisers which use fossil fuels, and of making crops more resilient.

Regulation is vital, for there are many legitimate worries - but regulation must also be intelligent. The Royal Society has urged the UK government to [regulate all new plant and animal varieties](#) according to the safety and characteristics of the new products created, not by what technique is used to make the change. This seems sensible - but explaining the real trade-offs to the public will be a big job.

LOOSENING RESTRICTIONS?
 Will climate change cause GB to loosen its restrictions on genetically edited crops?