

Could UK gene-editing policy divide the union?

Blog post by Associate Elly Darkin and Research Analyst Ana Mendes, 3 March 2021

After chlorinated chicken, [Gene editing](#) (GE) is quickly emerging as the next highly politicised issue for the UK agri-food sector. Following the launch of Defra's [consultation](#) on the subject last month, fault lines have emerged between those who fear a 'race to the bottom' on food standards and those who see potential for GE to drive more sustainable food production. While the trade-offs may not be as inevitable as the debate suggests, a new openness to GE threatens to complicate an already complex political landscape in England's relationship with both the devolved nations and the EU. How will the environmental and political implications of this play out?

In practice, diverging from EU rules on genetic technologies would certainly mean a lighter-touch approach to regulation. The EU currently treats genetic modification and GE in the same way, tightly regulating the technologies and limiting opportunities to grow these crops commercially in the bloc. Defra has used the UK's departure from the EU as an opportunity to review its regulation of GE in England, arguing that a distinct regulatory approach is needed for a scientifically distinct process. The review is set to enable a greater use of GE in the agri-food sector, removing the need to label GE crops as genetically modified organisms.

This shift in regulatory approach will have important implications for food security and sustainability. Proponents of the technology cite a multitude of benefits that range from helping farmers to produce disease-resistant crops to growing food that is more nutritious. The widespread adoption of agrichemicals in the last century have diminished biodiversity, but GE is an opportunity to reduce reliance on poisonous herbicides and insecticides. Conventional breeding for crop improvement - a laborious and time-consuming process - can be achieved instantly with GE without introducing foreign DNA as happens with gene modification. Farmers could attain greater crop yields on less land, and even grow a greater variety of produce as plants can be edited to survive in the UK's climate. This could be a way to strengthen food security sustainably.

What worries many is the margin of error that exists in GE. We know that GE organisms are at risk of unintended and unexpected effects at a molecular level, which is why the EU's approach has traditionally been guided by the precautionary principle. For example, some [studies](#) have already raised concerns over the long-term health impacts of GE crops on antibiotic resistance and allergenicity caused by newly expressed proteins. However, it bears noting that these risks already exist in nature and GE does not in itself create new types of risks, although these may be amplified if GE is used to speed up selective breeding processes. The implications for food standards and safety are thus by no means certain, and any divergence from the EU's precautionary approach to regulation in this area would no doubt be accompanied by mandatory safety assessment and oversight.

What is more certain, however, is that relaxing GE regulation will stoke tensions between the UK's devolved nations. As an area of devolved competence, Defra's consultation applies only to GE regulation in England. Both Scotland and Wales have indicated that they will not follow suit. Northern Ireland, for its part, fears divergence from EU regulation could create additional challenges for sanitary and phytosanitary (SPS) checks at the border. This puts the devolved nations on a potential collision course with the English regime, with the Internal Market Act at its centre. If England does ultimately relax regulation on GE, the act would force Scotland and Wales to accept the sale of English-made GE produce on their markets without the ability to produce them themselves. Politicians in London will no doubt wish to tread carefully around this issue in the run up to the Scottish elections in May, and the results of Defra's consultation may be strategically published after the event.

A final ramification worth considering is that regulatory divergence is liable to generate trade frictions between the EU and UK. The agri-food sector has borne the brunt of non-tariff barriers and border irritants on trade across both the Channel and Irish sea border in the past two months, with tensions running particularly high over SPS checks. Although the EU is separately reviewing its own approach to GE regulation, with a report due to be published by the commission in April, Defra's consultation is indicative of a different UK approach to risk compared to the EU. This will complicate efforts for the two sides to reach an agreement on border flexibilities and veterinary certificates that the agri-food industry has been calling for.

All this points to the fact that food production is an area where we will most immediately see the practical opportunities - and challenges - that come from regulatory divergence between the UK and the EU. While concerns over food standards can be addressed through sound health and safety regulatory frameworks, political rifts will be harder to patch up. Divisions between the UK government acting for England, as well as within the EU-UK relationship, have so far been treated as a risk worth taking in the UK's consideration of this novel technology. Whether that will remain so will be the question for the months ahead.