

The European stance on genetically modified crops may be changing

Published 22 June 2022

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At WisdomTree, we believe that one of the biggest megatrends over the coming decades could be biotechnology. Part of this relates to human health, we have already seen how innovations within messenger ribonucleic acid (mRNA) have provided incredibly novel vaccine applications with respect to Covid-19.

However, with an expanding global population and greater attention being paid to sustainability, novel approaches to agriculture may be at least as important in the long run.

Different countries, different views

In recent years, there has been no shortage of ‘polarising’ issues. The questions around the safety and desirability of ‘genetically modified crops’ has had the possibility of generating strong responses, particularly in Europe. In certain respects, the legal environment has made it very challenging to picture a reality where any of these potential innovations could widely proliferate across Europe.

However, it would not be appropriate to paint every country across Europe with the same brush. Even if there is a common regulatory structure and common market, that doesn’t always mean all countries and people share the same views.

It is in these different views that change can emerge.

The United Kingdom presents: The genetic technology (precision breeding) bill¹

After Brexit, it’s true that the UK has struck out on its own outside of the European Union (EU), thereby creating flexibility. Environment Secretary George Eustice said “Outside the EU, we are free to follow the science. These precision technologies allow us to speed up the breeding of plants that have natural resistance to diseases and better use of soil nutrients so we can have higher yields with fewer pesticides and fertilisers. The UK has some incredible academic centres of excellence and they are poised to lead the way.”

Precision breeding technologies could have a range of benefits, such as:

1. Potentially giving UK scientists the power to help farmers and producers develop plant varieties and animals with beneficial traits that could also occur through traditional breeding and natural processes.
2. It could create safer food by removing allergens and preventing the formation of harmful compounds in food

Sustainability at the forefront

It's possible that precision breeding techniques can produce crops with fewer inputs, including pesticides and fertilisers. Globally, between 20% and 40% of all crops grown are lost to pests and disease, but it's possible that precision breeding can increase both pest and disease resistance. National Farmers' Union of England and Wales (NFU) Vice President David Exwood said "This science-based legislative change has the potential to offer a number of benefits to UK food production and to the environment and will provide farmers and growers with another tool in the toolbox as we look to overcome the challenges of feeding an ever-growing population while tackling the climate crisis."

Making it concrete: Tomatoes

Scientists at the John Innes Centre in Norwich have created tomatoes that are a source of Vitamin D. They made small deletions in the plant's genome which prompted the plants to accumulate provitamin D3, which can be converted to Vitamin D in sunlight. A single upgraded tomato could provide around 20% of the recommended daily allowance of the vitamin.

If the aforementioned proposal becomes law in the UK, this represents one example of something that could find its way to supermarket shelves.

Will the European Union follow?

According to an announcement from the European Commission, published on 29 April 2021, a study on new genomic techniques (NGTs) showed that they have the potential to contribute to a more sustainable food system as part of the objectives of the European Green Deal and the Farm to Fork Strategy.

The study also found that the current genetically modified organism (GMO) legislation, adopted in 2001, is not fit for purpose for these innovative technologies. The Commission announced a wide and open consultation process to discuss the design of a new legal framework for these biotechnologies. Commissioner for health and food safety, Stella Kyriakides said "The study we published today concludes that New Genomic Techniques can promote the sustainability of agricultural production, in line with the objectives of our Farm to Fork Strategy. With the safety of consumers and the environment as the guiding principle, now is the moment to have an open dialogue with citizens, Member States and the European Parliament to jointly decide the way forward for the use of these biotechnologies in the EU."

We cannot guarantee any outcomes, but what's clear is that the legal framework and views are evolving, possibly with the focus on sustainability as a catalyst. There is no question that in 2022, as we type these words, the agricultural system is facing stress due to the Russia/Ukraine crisis. It's important to give all possible solutions and mitigating factors due consideration.

Conclusion: Look for agricultural applications of the Bio Revolution to grow

WisdomTree has been following the Bio Revolution for some time, and it's clear that the focus on human health came first. Over time, we expect the focus on agriculture and food to grow, and if the legal

frameworks in certain regions of the world tend towards more permissive rather than less, it will only help things along in that regard.

1 Press Release: Genetic Technology Bill: enabling innovation to boost food security. GOV.UK. 25 May 2022.

2 Source: "Gene-edited food is coming to Britain." Economist. 24 May 2022.

3 Source: European Commission Press Release: Biotechnologies: Commission seeks open debate on New Genomic Techniques as study shows potential for sustainable agriculture and need for new policy. European Commission. 29 April 2021.

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