

# Plant Breeding

# Matters

Information from the British Society of Plant Breeders

WINTER 2023

**A**t the time of writing, the Genetic Technology (Precision Breeding) Bill has successfully completed its passage through the House of Lords and will return shortly to the House of Commons before Royal Assent, expected in the coming weeks.

This is a hugely significant piece of legislation for Britain's plant breeders, the first time in more than two decades that regulations have been brought forward which seek to enable, rather than restrict, progress in genetic innovation.

Taking advantage of the UK's new regulatory freedoms outside the EU, the Bill provides a more light-touch regulatory regime for products developed using new precision breeding techniques, such as genome editing, where those products could have occurred naturally or through conventional breeding methods.

In doing so, it will remove those gene edited products from the scope of restrictive genetically modified organism (GMO) regulations inherited from the EU, reversing the effect of a July 2018 European Court ruling which unexpectedly classified products of these new breeding techniques as GMOs. A decision at odds with the prevailing regulatory approach in most other parts of the world.

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 **Andrew Newby / BSPB Chair**



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## ANDREW NEWBY / BSPB CHAIR

At this stage, the rule-changes will apply to England only, with other devolved administrations indicating that they prefer to remain in step with EU regulations. Significantly, however, the European Commission is also expected to publish its own regulatory proposals for a similar deregulatory approach in the summer.

Since the Precision Breeding Bill was first introduced in May 2022, BSPB has been active in briefing MPs and Peers both directly, and through the All-Party Parliamentary Group on Science and Technology in Agriculture.

Above all, we have sought to highlight the potential opportunities of technologies such as gene editing in helping plant breeders keep pace with demands for increased agricultural productivity, resource-use efficiency, more durable pest and disease resistance, improved nutrition and resilience to climate change.

We have also emphasised the need to uphold the underlying rationale for the Bill, that the risk

profile of precision bred varieties is no different from conventionally bred, and that the resulting regulations do not single out these techniques for disproportionate or unnecessary requirements. This is vital to ensure these technologies are equally accessible to all breeders, regardless of size, and can be applied across as broad a range of crops and traits as possible.

While Royal Assent represents a significant milestone, however, it is not the end of the process. The Bill itself provides a framework for subsequent implementing rules to be introduced through secondary legislation over the coming 18-24 months. For plant breeders, the most significant of these will be the Food Standard Agency's plans for a separate food and feed marketing approval process.

BSPB will continue to argue strongly that this approval process must be proportionate to the scientific evidence of risk, and that it supports the Bill's objectives to enable investment, research and innovation.

## SEED CERTIFICATION PRICE INCREASES IN ENGLAND AND WALES

**A**PHA introduced new seed certification fees on 9th January to provide 'full cost recovery' in line with UK government policy.

BSPB proposed a phased approach to enable a period of adjustment. However, this was rejected on the grounds that it would lead to an 'under recovery of costs' which was also 'not in line with UK government policy'.

APHA has further commented on the review of the fees stating that,

"A full review of seed certification fees in England and Wales is planned in the next two years, through which businesses and stakeholders will have the opportunity to further engage and provide feedback on changes to this service.

Following this full fees review, we plan to regularly examine seed certification fees (currently reviewed every two years in similar

policy areas) to ensure fees remain reflective of service delivery costs."

There will be some support offered and the government has put in place a number of operational measures to provide support to seed businesses during this time. These include:

- The Movement Assistance Scheme (MAS), which provides dedicated helpdesk support to those wishing to move plants and plant products (and other agri-food goods) from Great Britain to Northern Ireland and covers the associated inspection and certification costs.
- No charge for OECD certification.
- In England and Wales, PHSI carry out an audit at seed firms of licenced seed samplers to ensure they are conducting their work correctly. This system is comparatively cheaper than other countries, where official samplers are required.

## DEFRA PUBLISHES PLANT BIOSECURITY STRATEGY FOR GREAT BRITAIN

On January 9th, Defra published its strategy relating to plant biosecurity. It aims to raise awareness of the importance of healthy plants and trees and encourages the adoption of responsible behaviours across society. The cross border strategy cites there being no borders for pests

and diseases and that the strategy has been developed to benefit England, Scotland and Wales combined.

To read the full report go to [www.shorturl.at/jlQV5](http://www.shorturl.at/jlQV5)

## PRECISION BREEDING DEFINITION AND EXPLANATION

John Innes Centre, senior scientist, Dr Penny Hundleby attended the BSPB AGM to offer explanation and insight into how gene editing should be classified and how it differs from genetic modification. She explained that genome editing was not a new technique and that removing or editing plants DNA was a natural process that science was simply speeding up for human benefit.

Historical mutations in plants have been forced by human intervention and that process has never been regulated. The practice of exposing seeds to chemicals and radiation to promote random mutations in DNA was, if anything, a less controlled way of forcing genetic change. Therefore, Dr Hundleby suggested that gene editing should not be treated as any less normal, saying that manipulating genomes was, in fact, a more controlled process that should not require regulation like genetic modification.

Dr Hundleby also made reference to the need for gene editing to help growers reduce the use of chemicals. By strengthening and improving disease or pest resistance in seeds by using gene editing techniques, she highlighted how growers could improve yields and reduce costs.

She concluded that access to affordable genome sequence and gene editing technologies would help plant breeders and farmers to speed up what nature is capable of and help make food production more sustainable. However, she also advised that for gene editing to be fully accepted by farmers and consumers, that government policy must support the technology to enable it to thrive.



■ Dr Penny Hundleby

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## LOUISE BALL – DEFRA – PRECISION BREEDING BILL

Dr Louise Ball, team leader for GMO regulatory policy at Defra, addressed members at the BSPB to set out the expectations of the Precision Breeding Bill and its importance to plant breeding and agricultural sustainability.

She advocated that treating precision bred organisms (PBOs) differently to genetically modified organisms (GMOs) was crucial to help deliver on key agricultural and environmental objectives including food security challenges and climate change. She cited UK researchers and breeding companies as being at the forefront of genetic technologies and suggested Brexit gave England, specifically, an opportunity to regulate PBO's differently to Europe by supporting the technology and enabling the Precision Breeding Bill to be passed.

She explained the Bill would remove PBO's from the regulatory requirement of GMOs and create powers to establish a regulatory system that farmers and consumers could confide in. It was, however, made clear that this approach was currently only being considered in England and that Scottish and Welsh governments were yet to consider a change to the policy upheld by the EU that classifies PBOs in the same way as GMOs.

Dr Ball explained that public understanding of PBOs was low and that in an FSA poll conducted in 2022, 54% of people believed it acceptable to use precision bred plants in food production. She also noted that in a 2021 FSA poll that informed respondents of the scientific difference between PBOs and GMOs, there was a 29% increase in those who said they were 'not at all' or 'not very' concerned about the use of PBO's in food.



■ Louise Ball

The FSA study in 2022 also found that precision breeding is likely to positively affect the affordability of food and have a positive impact on the environment. 39% compared to 19% believed food would be more affordable as a result of precision breeding and 36% compared to 18% believed it would have a positive impact on the environment.

Dr Ball welcomes the passing of the Precision Breeding Bill and will work with Defra to help support breeders and inform farmers and consumers of the benefits it will bring.

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