



**Science** *for*  
**Sustainable**  
**Agriculture**

29 July 2024

## **Call for early implementation of precision breeding rules in England**

Scientific and industry leaders are urging Ministers in the new Labour Government to act quickly and decisively in bringing forward the secondary legislation needed to implement the Genetic Technology (Precision Breeding) Act 2023 in England.

In an open letter addressed to Ministers in Defra and the Department for Science, Innovation and Technology, more than 50 leading organisations and individuals across the scientific, food processing, farming, breeding, veterinary and input supply sectors have welcomed the signing into law of the Precision Breeding Act in March 2023 as a significant milestone for sustainable innovation in food and agriculture, but note that until detailed implementing rules are introduced at Westminster, the Act itself serves no functional purpose.

The letter signals that the objectives of the Precision Breeding Act directly complement the new Government's strategic commitments to scientific rigour, economic growth and better regulation, and emphasises that researchers, innovators and prospective investors, as well as the farmers who need access to such innovation, are seeking a clear, early signal from Ministers that the new UK Government will implement the legislation without delay.

*“The scientific evidence is overwhelming that the products of these technologies pose no greater risks than their conventionally bred counterparts, and yet they can greatly accelerate the development of more climate resilient, higher-yielding crops requiring fewer pesticide and fertiliser inputs, and with improved quality and nutrition.*

*“This is evident from the increase in precision breeding research stimulated by the introduction in March 2022 of new Qualifying Higher Plant (QHP) arrangements for experimental crop trials in England. This research activity covers both public and private sector applications which, without exception, are focused on using precision breeding techniques to make our farming and food production systems healthier, safer, and more sustainable. Without the prospect of a clear route to market, however, investment in such research activity is unlikely to be sustained.”*

The letter also notes that although the UK tops the world rankings in terms of high-citation academic publications in the agricultural sciences, this academic leadership is not translating into domestic agricultural productivity growth, in which Britain continues to lag behind most other developed agricultural economies. Nor has it positioned the UK as a major destination for private sector investment in agricultural innovation compared, for example, to our healthcare or medical life science sectors.

*“Unduly restrictive and over-precautionary regulation has undoubtedly been a factor in deterring such investment. Early implementation of the Precision Breeding Act is an opportunity to change that dynamic and to follow the science, building on the capabilities of our world-class agricultural research base and sending a clear signal that the UK is open for innovation,”* the letter states.

Alongside the application of precision breeding in crops, the letter notes that these techniques can also accelerate the delivery of health, welfare and productivity benefits in farmed animals, for example through the development of genetic resistance to previously intractable disease problems, such as porcine reproductive and respiratory syndrome (PRRS) in pigs, avian influenza in poultry and bovine viral diarrhoea (BVD) in cattle.

*“While recognising that the timetable for implementation of the Precision Breeding Act in relation to farmed animals will inevitably be behind that for plants, as requirements for an animal welfare declaration and the creation of a new welfare advisory body are established, recent global developments in relation to the spread of livestock disease highlight the need to act sooner rather than later. With a virulent strain of PRRS wiping out pig herds in Spain, African Swine Fever on the march north through Europe, and bird flu virus detected in both dairy cattle and their milk in the US, the importance of enabling all possible solutions, including precision breeding, cannot be over-stated,”* the letter states.

The letter emphasises that ensuring our scientists have access to the best available technologies and can conduct their research in a proportionate and enabling regulatory environment is absolutely critical to building greater food system resilience, and to boosting prospects for economic growth, inward investment and technology-based exports. It concludes:

*“Around the world, investment decisions for agricultural gene editing are being made every month. The sooner the UK declares its interest in competing for this research and development, the sooner British science can begin to fulfil its promise of fighting climate change, contributing to food security and delivering nature recovery. Early implementation of the Precision Breeding Act is a critical next step.”*

## **Notes**

A copy of the letter sent to Environment Secretary Rt Hon Steve Reed MP is reproduced below. Similar letters were addressed to farming minister, Daniel Zeichner MP, Secretary of State for Science, Innovation and Technology, Rt Hon Peter Kyle MP, and science minister Lord Vallance. These are also available to download as a single file via the SSA website [here](#).

**To: The Rt Hon Steve Reed, Secretary of State, Defra**

By e-mail

26 July 2024

Dear Secretary of State

On behalf of the many organisations and individuals across the scientific, food processing, farming, breeding, veterinary and input supply sectors listed in support of

this letter, we would like to congratulate you on your appointment as Minister of State at Defra in the new UK Government.

We are also writing to urge you to act quickly and decisively in bringing forward the secondary legislation needed to implement the Genetic Technology (Precision Breeding) Act 2023, which, as you know, has been scrutinised and approved by both Houses of Parliament, and whose objectives directly complement your Government's strategic commitments to scientific rigour, economic growth and better regulation.

The Precision Breeding Act represents a significant milestone for sustainable innovation in food and agriculture, the first time in more than three decades that new regulations have sought to enable, rather than restrict, the safe use of modern biotechnology in plant and animal breeding, and which will bring our rules more into line with other countries such as Canada, Brazil, USA, Japan and Australia.

The secondary legislation required to implement the Act has been drafted, and was notified to the World Trade Organisation in April this year. However, it has not yet been introduced at Westminster. Until that happens, the Act itself serves no functional purpose.

Researchers, innovators and prospective investors, as well as the farmers who need access to such innovation, are seeking a clear, early signal from Ministers that the new UK Government will implement the Precision Breeding Act without delay.

The scientific evidence is overwhelming that the products of these technologies pose no greater risks than their conventionally bred counterparts, and yet they can greatly accelerate the development of more climate resilient, higher-yielding crops requiring fewer pesticide and fertiliser inputs, and with improved quality and nutrition.

This is evident from the increase in precision breeding research stimulated by the introduction in March 2022 of new Qualifying Higher Plant (QHP) arrangements for experimental crop trials in England. This research activity covers both public and private sector applications which, without exception, are focused on using precision breeding techniques to make our farming and food production systems healthier, safer, and more sustainable.

Without the prospect of a clear route to market, however, investment in such research activity is unlikely to be sustained.

It is worth noting that a recent study listed the UK as third only behind China and the United States in terms of high-citation academic publications in the agricultural sciences. Expressed per head of population, or in relation to GDP, that means the UK leads the world in the agriculture-related research most likely to support innovation and deliver impact. But UK leadership in academic science is not translating into domestic agricultural productivity growth, in which Britain continues to lag behind most other developed agricultural economies. Nor has it positioned the UK as a major destination for private sector investment in agricultural innovation compared, for example, to our healthcare or medical life science sectors.

Unduly restrictive and over-precautionary regulation has undoubtedly been a factor in deterring such investment. Early implementation of the Precision Breeding Act is an opportunity to change that dynamic and to follow the science, building on the capabilities of our world-class agricultural research base and sending a clear signal that the UK is open for innovation.

Alongside the application of precision breeding techniques such as gene editing in crops, these techniques can also accelerate the delivery of health, welfare and productivity benefits in farmed animals, for example through the development of genetic resistance to previously intractable disease problems, such as porcine reproductive and respiratory syndrome (PRRS) in pigs, avian influenza in poultry and bovine viral diarrhoea (BVD) in cattle.

While recognising that the timetable for implementation of the Precision Breeding Act in relation to farmed animals will inevitably be behind that for plants, as requirements for an animal welfare declaration and the creation of a new welfare advisory body are established, recent global developments in relation to the spread of livestock disease highlight the need to act sooner rather than later. With a virulent strain of PRRS wiping out pig herds in Spain, African Swine Fever on the march north through Europe, and bird flu virus detected in both dairy cattle and their milk in the US, the importance of enabling all possible solutions, including precision breeding, cannot be over-stated.

Ensuring our scientists have access to the best available technologies and can conduct their research in a proportionate and enabling regulatory environment is absolutely critical to building greater food system resilience, and to boosting prospects for economic growth, inward investment and technology-based exports.

Around the world, investment decisions for agricultural gene editing are being made every month. The sooner the UK declares its interest in competing for this research and development, the sooner British science can begin to fulfil its promise of fighting climate change, contributing to food security and delivering nature recovery.

Early implementation of the Precision Breeding Act is a critical next step.

Yours sincerely

Professor Tina Barsby OBE  
Plant scientist

Professor Helen Sang OBE  
Livestock scientist



### **Signatories**

Professor the Lord Trees, FRCVS, FMedSci, HonFRSE, House of Lords

The Rt Hon. The Baroness Hayman GBE, House of Lords

The Rt Hon. the Lord Taylor of Holbeach CBE, House of Lords

Lord Curry of Kirkharle, House of Lords

Lord Cameron of Dillington, House of Lords

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Richard Griffiths, Chief Executive, British Poultry Council

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