



## Beyond the Farm: How the Genetic Technology Act Puts Wild Species and Ecosystems at Risk

The Government promoted the Genetic Technology (Precision Breeding) Act 2023 as a tool to improve agricultural sustainability. But the Act does not mention farming or agriculture at all and the permissions granted in it are not specific to agriculture. Instead, it quietly allows for the release of genetically modified precision-bred plants and animals into wider nature – far beyond the farm gate.

### Lower Standards for Environmental Releases

The statutory instrument linked to the Act (the Genetic Technology (Precision Breeding) Regulations 2025), due to be signed into law in May 2025, sets a **lower burden of proof for safety and environmental monitoring** for releases into the wild than it does for commercial agricultural use. This means:

- Precision-bred organisms intended for conservation or species management could be released experimentally without robust pre-release environmental risk assessments.
- Environmental impacts may only be assessed *after* release, when damage to ecosystems may already have occurred and could be irreversible.
- There is no mandate for public consultation, nor any clear route for the public to object to such releases.

### Broad Definitions, Big Risks

The Act defines plants and animals extremely broadly:

**Plants** include any terrestrial or aquatic plant in the groups *Archaeplastida* or *Phaeophyceae*. These groups include almost all major terrestrial plants and some aquatic plants and algae.

- ***Archaeplastida*** includes:
  - Flowering plants (e.g., wheat, rice, potatoes, roses)
  - Trees (e.g., oak, chestnut, ash, birch, fruit trees)
  - Grasses (e.g., wild grasses, bamboo)
  - Mosses
  - Liverworts
  - Green algae (e.g., freshwater algae found in ponds)

- ***Phaeophyceae*** (a subgroup of brown algae) includes:
  - Kelp forests (large seaweeds important to marine ecosystems)
  - Other brown seaweeds (e.g., bladderwrack)

In short, everything from food crops to garden plants, trees in forests and marine kelp beds is captured under this definition.

**Animals** include any vertebrate (excluding humans) in the *Metazoa* group. This covers almost all multicellular animals.

***Metazoa*** under this definition includes

- **Mammals:**
  - Deer
  - Badgers
  - Rabbits
  - Squirrels
  - Cattle, sheep, pigs (livestock)
- **Fish:**
  - Salmon
  - Trout
  - Carp
  - River and coastal fish species
- **Birds:**
  - Songbirds like robins and sparrows
  - Game birds like pheasants
  - Domesticated birds like chickens and ducks
- **Reptiles:**
  - Native snakes (e.g., grass snakes)
  - Lizards (e.g., slow-worms)
- **Amphibians:**
  - Frogs
  - Toads
  - Newts

For now, the Act only allows precision breeding of vertebrate animals (e.g., mammals, birds, reptiles, amphibians, fish) – but in theory, the broader *Metazoa* category includes invertebrates too (like insects), and the Act **gives Ministers wide powers to expand or**

**amend what is allowed.** Moreover, as with agricultural plants and animals, these genetically modified precision-bred wild plants and animals can be recklessly released into the environment with almost no oversight or monitoring. Like agricultural plants and animals they are simply presumed to be safe.

In short, this legislation currently applies to a vast range of wild plants and animals critical to ecosystems across woodlands, wetlands, rivers, farms, and coastal waters – and its scope can be expanded even further.

## **A Live and Growing Global Concern**

The use of gene editing – what the UK chooses to call “precision breeding” – in conservation is not hypothetical. Trials involving genetically modified organisms – for example, designed to eradicate invasive species – are already underway in parts of the world, often with minimal oversight.

- International bodies like the IUCN are actively debating the risks, highlighting concerns about unforeseen impacts on biodiversity and ecosystem stability.
- There is growing international recognition that releasing genetically modified organisms into natural environments demands caution, transparency, and strong safeguards – all of which are currently lacking under the UK’s new regulatory regime.

The UK risks racing ahead without proper public debate, scientific caution, or meaningful environmental protections – putting our natural ecosystems at unnecessary and serious risk.

### **Further information:**

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