

Position Statement

Genetically Modified Organisms (GMOs)

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WOODLAND
TRUST

Genetically Modified Organisms (GMOs)



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The Trust's view

- The Woodland Trust supports the recommendation of the Convention on Biological Diversity that a precautionary approach be taken with regard to genetically modified organisms (GMOs), including GM trees. This demands proof of both a need for GMOs and their safety before they are released.
- Woodlands are a dynamic ecological system and the ramifications of introducing of GM trees into such a system are not currently known. Trees are long-lived organisms, and some tree pollen is highly mobile. This increases the possibility of modified gene escape and spread, and of gene behaviour being affected by environmental stresses.
- In relation to other GM crops, there are potential benefits to woodland habitats and wildlife, for example from lower inputs pesticides and fertilisers to the land, but there are also significant risks including increased invasiveness, hybridisation, horizontal gene transfer and impacts on ecological food webs.
- The Trust believes the potential benefits of GMOs are either unlikely to be realised or could be delivered in more effective ways and that the environmental risks associated with GMOs outweigh any benefits.
- The Woodland Trust is therefore opposed to current and future unenclosed GM crop or tree trials. We are also completely opposed to any future commercial release of GMOs unless and until there is clear evidence that the GMOs will not:
 - hybridise with other species
 - harm ecological food webs
 - spread in an uncontrolled way across the countryside
 - have adverse delayed, direct or indirect, effects on the environment

The Trust will

- Not permit any of our own woods or any farm tenancies in our control to be involved in field trials of GMOs.
- Lobby government to ensure our forests remain GMO free
- Keep up to date with developments in both GMO research, and the understanding of genetics in both UK native trees and the diseases that affect them
- Consider the use of traditional selection and tree breeding approaches for positive conservation purposes (such as tolerance/resistance to pests and disease)

Genetically Modified Organisms (GMOs)

Background

A GMO is any organism that has had its genetics altered through the use of modern biotechnology to create a novel combination of genetic material. The progress of GMOs has led to the development of plants, mainly crops, that have resistance to insect pests and herbicides, are stress tolerant, have enhanced nutritional value or can use resources e.g. phosphorus more efficiently.

GM tree technology is gathering pace with trials rapidly increasing around the world. In 1999, WWF reported that since 1988 there had been at least 116 GM tree trials involving 24 species in 17 countries. The late 1990s saw a huge increase in the number of trials and the number of species tested. Between 1995 and 1998 the number of tree trials doubled with 44 new trials in 1998 alone. In China more than 1 million GM trees have been planted.

If GMO crops led to reduced inputs of agrochemicals into the environment they could reduce detrimental impacts from the external environment on woods and create less hostile surroundings for species migration. However reports from the US are already indicating that in fact more herbicide is being used on GM crops as weeds develop resistance. Similar outcomes in the UK would further isolate semi-natural habitats from each other and increase pesticide drift into woods. If the vigour of GMOs or their hybrids enables them to colonise woodland then they may threaten to displace ancient woodland species, many of which are immobile and poorly adapted to strong competition. Insect-resistant crops may impact on the woodland ecosystem, and on the wider landscape, if the natural insecticides they produce pass into the food chain.

Trees remain in the environment for several decades rather than one growing season, which increases the possibility of both modified gene escape from transgenic trees and gene behaviour being affected by environmental stresses. As with agricultural crops, some tree pollen is highly mobile, with pine pollen for

example drifting up to 600km. In 2006, after calls for a global moratorium on release of GM trees, the Convention on Biological Diversity recommended that a precautionary approach should be taken with regard to GM trees. The Precautionary Principle, enshrined in the CBD, would demand proof of a need for GM trees and of their safety before they are released.

The natural world faces multiple pressures, from climate change, pests and diseases, and the impacts of intensive land management, that threaten to undermine its ability to continue to provide the basic conditions for human well-being. In the Trust's view, greater resilience is needed across whole landscapes to enable ecosystems to adapt. In the first instance, this means increasing the number and diversity of semi-natural habitats and native species, in our landscapes, as well as increasing permeability and connectivity. It also means increasing genetic diversity through supporting dynamic processes at the appropriate scale that will provide opportunities for adaptive responses to take place, and increasing our understanding of the genetic resource that exists within our trees, woods and forests.

Given the uncertainty around impacts of GM crops, including trees, and the potential risks involved, the Trust advocates and follows a precautionary approach in line with that set out by the Convention on Biological Diversity.

The Trust distinguishes between genetic modification using biotechnology, and selective breeding. We would support tree breeding for positive conservation purposes, for example, using trees selected for their tolerance to ash dieback, so long as precautions are taken against creating genetic bottlenecks.