Department	Board
Policy #	
Title	Genetic Modification
Last Reviewed	August 2020

Forest & Bird Conservation Policy

Genetic Modification

August 2020

In line with the F&B Constitution - "...to take all reasonable steps… for the preservation and protection of the indigenous flora and fauna and the natural features of New Zealand." the Society:

- supports a precautionary approach to genetic modification to avoid damage to our native species acknowledging that -
  - release may bring irreversible change to our native species, and
  - complete scientific certainty is not attainable.
- accepts rigorously contained research into genetic modification methods of pest and weed control. Such research is to address possible effects on native wildlife and ecological processes.
- accepts consideration on a case-by-case basis any proposal to use genetically modified organisms in the wild.
- opposes genetic modification of New Zealand's native flora and fauna.

Definition of Genetic Modification (GM)

Genetic modification (GM) is a form of biotechnology that alters the characteristics of living organisms by moving, altering, inserting or deleting genes within or between species.

Policy Purpose

The purpose of this GM policy is:

- To inform the public of Forest & Bird's position on GM.
- To assist F&B staff, branches and members with conversations and submissions on the issue of GM, in particular how it relates to nature in Aotearoa.

Outcomes – What we want to see

Aotearoa's unique species and their habitats are flourishing.

What is unique about Aotearoa/New Zealand?

Aotearoa has special habitats, plants and wildlife, most of which are found nowhere else in the world. They are of international and national significance – they are taonga and are a defining part of our national and cultural identity.

Unlike the rest of the world, New Zealand's habitat and fauna evolved isolated from other land masses and with bats being the only land mammals. They developed unique characteristics that have made them especially vulnerable to disturbance by introduced pests and weeds. The arrival of humans, and the invasive pests and weeds we have brought with us, has had a devastating impact on our native species. Nature in New Zealand is in serious trouble, with 4000 of our native species at risk of extinction.

With no mammalian enemies, birds like kiwi, weka, and kakapo became flightless, long lived and very slow breeders. This makes them easy targets for rats, stoats and cats, and it means they are not able to bounce back and rebuild populations. Our native plants also face threats from introduced browsing mammals, invasive pest plants (eg wilding pines), new pathogens (eg kauri dieback), and climate stresses. When we lose our native flora we lose unique plants found nowhere else, our iconic landscapes are altered, and we lose specialised habitat for our wildlife.

The key drivers of habitat loss and predation are magnified with the climate crisis and we now face an ecological emergency.

Our ecosystems are also natural infrastructure. With their loss we lose the ecosystems services they provide to people and communities.

Why have a policy on GM

Nature in New Zealand is in serious trouble. We have vulnerable ecosystems which could be further threatened by the introduction of genetically modified organisms (GMOs).

Conversely GM may have a future role in protecting our vulnerable ecosystems.
This policy confirms the precautionary approach and advocates a case by case approach whilst acknowledging that –

- technology has advanced, and different technologies carry different acceptability and risks,
- given the ecological emergency we face, all tools to respond to the biodiversity and climate crisis must be considered.

Potential uses of GM to protect our biodiversity

- control of pest plants threatening our biodiversity and landscape values
- control, and ideally eradication, of animal pests threatening our biodiversity
- respond to climate change

Potential Risks From GM Techniques

Potential risks to biodiversity from the use of GM techniques could include –

- Unintended effects – modifying a species genetic material could have unintended effects on biodiversity, for example whilst GM might successfully make a pest species more vulnerable to a specific thing it could make them less vulnerable to something else.
- Biodiversity loss could occur elsewhere from the unintended transfer of the GM property to the native population of a pest or weed species. For example the use of GM techniques to eradicate a targeted pest or weed species in Aotearoa would aim to locally remove the species because it does not belong here. There is a risk to the target species if the GM found its way to its home population eg a sterile gene in possums was transferred to the native possum population in Australia.
- There could potentially be unforeseen impacts on our native flora and fauna by GM plants and animals, for example GM grasses could compete with, and displace, native grasses.

Relevant National Policy/Legislation

Hazardous Substances and New Organisms Act 1996 (HSNO)
Conservation Act 1987
Wildlife Act 1953
Climate Change Response (Zero Carbon) Amendment Act 2019
Resource Management Act 1991

References

Environment Aotearoa 2019: An Overview of the state of Our Environment
https://www.mfe.govt.nz/environment-aotearoa-2019