

Policy



GENETICALLY MODIFIED ORGANISMS

Policy Summary No 18

The rich diversity of wildlife and landscapes in Scotland is the result of millions of years of evolution. Significant problems have been caused in the past by introducing species which were not part of Scotland's native flora and fauna. There are, therefore, potential risks involved in the release to the countryside of genetically modified organisms (GMOs). These could affect the diversity of Scotland's flora and fauna directly by impacting the foodwebs of native species or indirectly by changes in the husbandry of crops. However, looking further into the future, the use of certain types of genetically modified crops could bring benefits for farmland wildlife, for example through better-targeted or lower usage of agri-chemicals.

SNH's view is that there should be careful assessment of the risks to, and implications for, biodiversity and the environment generally before decisions are made on the commercial use of GMOs.

Background

Genetic modification allows the transfer, through controlled insertion, of genes from one species to another and can effectively create new life forms. The impact of this technology is of major concern to the general public in relation to food safety, environmental conservation and ethics. The use of GMOs has the potential to reduce or disrupt native biodiversity which the UK has international obligations to safeguard through the EU Birds and Habitats Directives and the Convention on Biological Diversity.

Laboratory experimentation, field trials, and commercial approval of GMOs are subject to European and UK legislation and are regulated at all stages of development. The Advisory Committee on Releases to the Environment (ACRE) is the statutory body set up to advise Government on risks to the environment from the release of GMOs. At a UK level, the matter is largely devolved and for issues relating to Scotland, the Scottish Executive Rural Affairs Department is the competent authority.

SNH's position

SNH is a statutory consultee in the process by which applications for release of GMOs into the environment are considered. However, SNH is, by statute, solely concerned with the potential effects of GMO releases on the natural heritage, and particularly on biodiversity, and has no locus on matters of public health and safety.

SNH's aim is to maintain and enhance the rich variety and diversity of the landscape and wildlife of Scotland through understanding what is happening in the natural heritage and instigating the necessary action to conserve and enhance it.

SNH considers that any continued research and development of GMOs necessary to explore both possible environmental and human benefits must ensure (i) effective containment of experimental organisms; and (ii) adequate regulation of commercially orientated and experimental releases into the environment.

SNH advocates the adoption of the precautionary principle where commercial releases of GMOs are proposed. It considers that the release and use of GMOs is appropriate only when all of the following conditions have been met:-

- rigorous risk analysis and public consultation has been undertaken for potential releases of GMOs;
- risks to the conservation of native biodiversity has been shown, by comprehensive analysis of evidence, to be acceptably low;
- the use of GMOs in agriculture, forestry or fisheries can be demonstrated not to lead to changes in land and water use and management which are detrimental to wildlife;
- the development of crops resistant to insect, bacterial and fungal attack can be demonstrated not to jeopardise the survival of native species;
- there are adequate safeguards against gene flow between GMOs and native organisms;
- GMOs are constructed using genes found only in natural organisms;
- GMOs are only used in environmental clean-up work where there is a demonstrated advantage over conventional methods; and
- there will be adequate monitoring of the use and spread of GMOs in the environment following their commercial or experimental release.

In seeking the application of these principles, SNH will:-

- press for changes in the regulatory system to take account of, and minimise potential ecological/environmental effects when assessing the risks of releasing GMOs;
- seek the direct representation of the statutory nature conservation agencies on the Advisory Committee for Releases to the Environment (ACRE);
- continue to provide objective advice both to the Government and to the industry on concerns over potential effects of the release of GMOs on terrestrial and aquatic wildlife;
- continue to press for more research both on potential gene flow from GMO species to native terrestrial and aquatic species and on the ecological effects of crop management changes resulting from the use of GMOs;
- continue to recommend that commercial releases of genetically modified herbicide-tolerant and insect-resistant crops are not undertaken until the Government is satisfied that sufficient research has been completed and evaluated, and appropriate risk assessments have been carried out, to provide public assurance that risks are acceptably small; and
- urge the Government and the industry to ensure that there is effective monitoring of possible ecological effects from GMO releases.

References:

SNH Position Statement on GMOs, 1999

Contact: Peter Pitkin
Address: SNH (National Strategy), 12 Hope Terrace, Edinburgh, EH9 2AS
Phone: 0131 446 2215
E-mail: peter.pitkin@snh.gov.uk

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