

Evidence Check: GM and Gene Editing

Government statement

Diagnosis

1. The Government is following a science-based policy in relation to genetic modification (GM) and other advanced crop breeding techniques. It sees them as one of the options for making agriculture more efficient and sustainable, and which could therefore help to address future challenges on food production. The Government also wants our farmers and businesses to have access to the best technology available to remain competitive and encourage economic growth. It is therefore supportive of the opportunities that advanced breeding techniques could bring in that respect.

2. The Government's policy is in line with the evidence in this area. It broadly supports the view that GM and other advanced breeding techniques can be used safely and deliver both economic and environmental benefits. Authoritative evidence that supports this view includes the advice provided to the Prime Minister on GM technologies by the Council for Science and Technology¹, and a report in 2013 by the European Academies Science Advisory Council². In its report last year on *Advanced genetic techniques for crop improvement*³, the House of Commons Science and Technology Committee itself stated that:

“We are convinced by the evidence provided to us that this suite of technologies is a potentially important tool, particularly in the developing world, which should not be rejected unless there is solid scientific evidence those technologies may cause harm”.

3. In the same report the Committee also noted that, based on the weight of peer-reviewed scientific evidence, *“genetically modified crops pose no greater inherent risk than their conventional counterparts”.*

4. GM crops have yet to be grown commercially in the UK but in recent years there have been a number of field trials of GM plants in England as part of Government-funded research projects. Worldwide, in 2014 GM crops were grown by 18 million farmers in 28 countries, on 181 million hectares of land (over 13% of the global arable area). The UK is using a significant amount of imported GM crop material, in particular soya for animal protein feed.

Action/Plans

¹ Available at <https://www.gov.uk/government/publications/genetic-modification-gm-technologies>.

² Available at

http://www.easac.eu/fileadmin/Reports/Planting_the_Future/EASAC_Planting_the_Future_FULL_REPORT.pdf.

³ Available at <http://www.publications.parliament.uk/pa/cm201415/cmselect/cmsctech/328/328.pdf>.

5. Both the release of GM organisms into the environment and the marketing of GM food and feed products are subject to EU regulatory controls⁴ to ensure human and environmental safety. To that end they require a science-based risk assessment to be undertaken before formal approval can be granted for a GMO field trial or the sale of a GM product.

6. The Government's main policy activity in this area has been focused on the operation of the EU process for authorising the marketing of GM products. This issue was explored in detail in the report noted above by the House of Commons Science and Technology Committee, and the Government's response to that report⁵.

Current or emerging EU-related issues:

New breeding techniques including gene editing

7. A range of new genetic breeding techniques have been developed, with those referred to as gene editing gaining particular attention. The use of such techniques is increasing in a number of areas including plant, animal and medical research, both in the public and private sectors. The European Academies Science Advisory Council has published a statement giving an overview of this issue⁶.

8. The European Commission is due to publish a paper giving its view on whether organisms produced by new breeding techniques are subject to the existing GM controls. This question arises because interpretation of the EU definition of what constitutes a regulated GM organism is not straightforward. The Commission's paper is expected to prompt further discussions as to the appropriate approach to be followed at EU level. The Government will be seeking an outcome on this issue that is science-based and proportionate, and which gives appropriate consideration to the implications for human and environmental safety.

⁴ The main EU legislation is Directive 2001/18/EC (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02001L0018-20150402&from=EN>) and Regulation (EC) 1829/2003 (http://ec.europa.eu/food/food/animalnutrition/labelling/Reg_1829_2003_en.pdf).

⁵ Available at <http://www.publications.parliament.uk/pa/cm201516/cmselect/cmsctech/519/519.pdf>.

⁶ Available at http://www.easac.eu/fileadmin/PDF_s/reports_statements/Easac_14_NBT.pdf.