English Organic Forum Response to the Defra Consultation on Genome Editing
16th March 2021

1. Introduction

This document from the English Organic Forum[1] (EOF) is the basis of our response to the public Defra consultation - "The regulation of genetic technologies", which focusses on proposed regulatory changes to agricultural applications of gene editing in England, launched by Defra in January 2021. It focuses on the core position of the EOF in relation to gene editing and is intended as a direct response to the questions posed within the consultation document. EOF has also submitted a response to the specific questions posed by Defra in the online consultation.

The regulation of genetic technologies is an evolving concept in science, law, regulation and in practice. It is contested.[2] [3] [4] [5]

In the following text the term "gene editing" is used although it should be noted that the accepted scientific term is "genome editing". We use the term Genetic Modification (GM) to refer to all methods of alteration of the plant and animal genome that are not possible by 'traditional' breeding techniques (taken to include mutagenesis).

Where this document refers to the "organic movement", the "organic sector" or the "international organic movement" it means the positions, perspectives and community of the International Federation of Organic Agriculture Movements (IFOAM and its EU and global representative body) which most members of EOF have a relationship with.

2. EOF's position to the Defra consultation on Gene Editing

1) These new techniques, and the products obtained through them, fall within the scope of Directive 2001/18/EC[6] on the basis of article 2(2), which defines a genetically modified organism (GMO) as *"an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination.*

2) The English Organic Forum is fully aligned with the international organic movement's position that gene editing is a genetic engineering technology[7] and its process and products are GMOs as defined by the EU Directive on GMOs (Directive 2001/18). Consequently, we believe that all gene editing should be regulated as GMOs, in accord with the European Court of Justice Ruling of July 2018.[8] This is consistent with scientific concepts and terminology and international treaties such as the Cartagena Protocol.[9]

3) Nonetheless, we recognise that gene editing is a developing technology which is likely to play a role in future farming and food systems. We also recognise that some farmers will wish to use the products of gene editing and some consumers will be willing to purchase gene edited products.

4) We therefore agree with the long-established UK and EU policy that different approaches to agriculture (in particular organic, non-GM conventional and GM conventional) should coexist

and thereby enable farmers to choose which approach they wish to follow and give consumers the possibility of buying products from the farming system they wish to support.

5) However, we firmly believe that such co-existence should be equitable and that the organic approach and market should not be undermined, threatened or unfavourably treated in any way; including in the areas of government financial support, R&D funding, supply chain integrity and development, market integrity, policy, public education and messaging.

6) To this end, we hold that any future revision to regulations in the UK should ensure that:
    a. all forms of gene editing are subject to robust regulation and risk assessments over and above basic health and environment regulations;
    b. all aspects and stages of gene editing processes and products in the supply chain should be transparent, monitored and clearly labelled;
    c. that the regulatory system should be broad based in goals and structures encompassing citizen involvement, transparency, ethical considerations and societal goods and services.

7) We consider that the organic sector has been successfully developed on the basis of an unusually high level of trust between organic farmers, growers and consumers and we will be robust in protecting this relationship. Therefore, we are strongly opposed to any attempt to redefine any form of gene editing as non-GMO as we believe this will constitute an existential threat to the consumer right to know, the integrity of organic farming, organic products, and the relationship between organic farmers and consumers.

3. Future Developments

8) Regardless of the future prospects for gene editing, there are clear opportunities that arise from the more effective development of organic, which does not permit genetic modification generally, or gene editing specifically. We urge Defra to give full scope to enabling a diversity of approaches including organic that are in line with fostering the provision of ecosystem services through building natural capital and enabling natural approaches in all their diversity.

9) We note that there are different approaches to gene editing. We are aware that the evidence relating to gene editing (including definitions, modes of working, risks and potential benefits) is contested and is likely to vary according type. Therefore, we believe that there should be a cautious approach to the roll out of gene editing in its application to farming and food systems. The speed of roll out should be governed by:
    a. results of further, transparent and independent research;
    b. a comprehensive public discourse and citizen engagement;
    c. the development of equitable co-existence measures encompassing the investment of public money, regulatory structures and procedures and transparency.

10) We place paramount importance on the need to maintain the integrity of the organic market and the trust of consumers/citizens. In part this has been built on the organic sector's avoidance of GMOs and all forms of genetic engineering. It is imperative therefore that the organic sector's engagement with gene editing technology is open and honest. It follows that we reject any attempts – either from within the organic sector or externally – to redefine or recast any type of gene editing as non-GMO, or "akin to nature" or similar narratives.

11) We recognise there are claims that some forms of gene editing could be beneficial in achieving a more sustainable farming and food system. However, we note that the evidence for these claims

is contested and we would like to see further research and empirical evidence together with transparent and independent evaluation over time.

12) We also note that claims have only focussed on the potential for benefits. There are however risks that also need to be discussed and analysed. These include the risks around market forces that could lead to the development of traits that are commercially favourable, but at a disadvantage in other ways, for example relating to animal welfare or intellectual property rights. There are also risks around the technology being a potential distraction from more impactful innovation. Research into these risks and how they can be addressed, is both necessary and useful to the government's aims for the technology.

13) Overall, we recognise that gene editing is a powerful technology and acknowledge it may, depending on circumstances and context, bring benefits as well as risks to the development of a more resilient and sustainable farming and food system. Organic production, on the other hand, represents a system that is proven to be more resilient and sustainable compared to the current, prevalent, non-organic (so called 'conventional') system.

4. The public consultation on the regulation of genetic technologies

14) We believe there is a need for a comprehensive and transparent public discourse about this technology, given the strengths of the claims about its benefits. If gene editing is as potentially "transformative" as it is claimed, then society's consideration of it should be appropriate to that level of scale and impact.

15) We do not believe that the current consultation is anywhere near adequate or fit for that task on the following ways:
    - It does not follow the Cabinet Office Principles for Public Consultation:
        - It is not easy to understand. Its language is opaque, tending towards encouraging specialist opinion and putting off the general public. In particular, the consultation demands a level of evidence (including references) that is inappropriate for a public consultation which should allow for values-based responses as well as technical ones.
        - The information provided in the consultation document is prejudicial rather than informative and does not include any validated cost/benefit/impact assessment.
        - It makes sweeping statements about gene editing being the same as traditional breeding or what could happen in nature without providing any definitions, descriptions, references or evidence of any kind to justify the statements.
        - Ministerial and departmental media statements have fostered an adversarial and divisive reaction rather than the nuanced discourse which is urgently needed.

16) What we would like to see is:
    - A UK wide enquiry – not just in England – as the impacts will be felt in all the devolved nations of the UK.
    - An independently assessed review of the science and safety aspects.
    - An independent review of the social and ethical as well as the economic (including trade) aspects. This would need to include a consideration of different scenarios for UK agriculture and should incorporate the approach to democratising innovation set out in the 2014 Chief Government Scientist report[10], which looked at this subject as a key case study.

- An independent review of regulatory frameworks for transparency, labelling and co-existence with other agricultural approaches.
- Public discussion events (government, stakeholder and grassroots initiated and organised) which would be recorded and reported in a transparent manner.
- Following on from the above; a Green Paper, in which the government sets out its proposals for the regulatory system, including environment and food safety aspects, market transparency and co-existence.

Notes

[1] The English Organic Forum represents organic sector organisations and businesses. In England 3,000 farmers and growers work 300,000 Ha of organically farmed land. Organic production enables nature recovery, delivers public benefits and supplies an organic market in the UK that is worth £2.79 billion per year (+12.6% year-on-year). See the EOF report: Why Organic - contributing productively to future farming and food policy.

[2] Parliamentary Briefing prepared by Beyond GM and GM Freeze covering all the issues of science, policy, trade etc: https://beyond-gm.org/wp-content/uploads/2021/02/Gene-Editing_Political-Brief_Final_Feb-2021.pdf

[3] See the debate "Continuing the dialogue on organic and GMOs: https://abiggerconversation.org/continuing-the-dialogue-on-organic-and-gmos/

[4] List of papers on unintended outcomes and risks of gene editing: https://www.gmwatch.org/en/news/latest-news/19499

[5] A report on the myths and reality of gene editing from the Greens. EFA in the European Parliament: https://www.greens-efa.eu/en/article/document/gene-editing-myths-and-reality/

[6] EU Directive on GMOs: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32001L0018

[7] IFOAM EU New plant breeding techniques – Position Paper: https://www.organicseurope.bio/content/uploads/2020/10/ifoameu_policy_npbts_position_final_20151210.pdf?dd

[8] European Court of Justice ruling on GMOs: https://curia.europa.eu/jcms/upload/docs/application/pdf/2018-07/cp180111en.pdf

[9] Restrictions on GMOs: International Protocols: https://www.loc.gov/law/help/restrictions-on-gmos/international-protocols.php

[10] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/381906/14-1190b-innovation-managing-risk-evidence.pdf