QMS Briefing

Purpose: *To provide advice on the impact of introducing Gene Editing in England.*
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Quality Meat Scotland is a Non-Departmental Public Body. This advice is provided under the Quality Meat Scotland Order 2008 Schedule 1 point 18' Advising on any matters relating to the red meat sector (other than remuneration or conditions of employment) as to which the Scottish Ministers may request Quality Meat Scotland to advise and undertaking inquiry for the purpose of enabling Quality Meat Scotland to advise on such matters '. This advice is freely available and further information can be provided by the designated contact above.

Overview

- Quality Meat Scotland's overall strategy is to support the development of a sustainable, professional, resilient, and profitable Scottish red meat industry which makes an important contribution to Scotland Food & Drink's target of £30bn by 2030.
- Our vision, as an organisation, is to be valued by our farmer and processor levy payers and key stakeholders, as a business support organisation which delivers strongly for the Scottish red meat industry as it continues to build a global reputation for animal welfare, quality assurance and integrity.
- We have responded to this consultation by way of highlighting the grave concerns we have around our ability to continue to uphold high standards of animal welfare within our Scottish red meat industry, which we have built a world leading reputation around the application of high welfare standards and the integrity of those standards being linked to auditable whole of life, whole of supply chain quality assurance schemes.

Section 1 – About you

1. Would you like your response to remain confidential?

No

2. What is your name?

Sarah Millar

3. What is your email address?

smillar@qmscotland.co.uk

4. Please tell us who you are responding as?

b. Non-governmental organisation – In an official capacity as the representative of a non-governmental organisation

d. Public sector body – In an official capacity as a representative of a local government organisation / public service provider / other public sector body in the UK or elsewhere.

5. Where do you live?

c. Scotland

If responding as an organisation, business, public body or academic Institution

6. What is the name of your business/ organisation?

Quality Meat Scotland

7. Which of the following areas are you interested in? Please select all that apply.

- *Cultivation of crop plants*
- *Breeding farmed animals*
- *Human food*
- *Animal feed*

8. Where does your business/organisation operate?

c. Scotland

Section 2 – Part 1: the regulation of GMOs which could have been developed using traditional breeding methods

1. Currently, organisms developed using genetic technologies such as GE are regulated as genetically modified organisms (GMOs) even if their genetic change(s) could have been produced through traditional breeding.
Do you agree with this?

a) No – They should not continue to be regulated as GMO.

b) QMS believes that where plants or animals, bred using Gene Editing technology that mimics naturally occurring genetic variation, a different regulatory regime should be developed.

c) However, we do not believe that the underlying stance on regulation should be changed, and that based on the current level of consumer and public demand evidence base, that an effective ban on Gene Editing for commercial use should be upheld until further evidence demonstrating sufficient public support and acceptability can be generated. This decision should be regularly reviewed, to ensure that science and public opinion can be taken into consideration.

d) This is based on the evidence base that Gene Editing, and Genetic Modification, are two very different technologies aiming for different outcomes, and therefore, Gene Editing could benefit from a different regulatory regime being applied that is more proportionate for the scale of genetic change that is being applied. There is clear, well evidenced research of the potential benefits of gene editing as a technology to help improve the health, welfare, and environmental impact of livestock and crop production, that could help us reach our net zero targets as set out in climate change legislation across the UK.

e) However, as yet there are a large number of practical considerations surrounding the regulatory system of such technologies, and what consumers and industry need to utilise them in a safe and effective manner.

f) Whether this new regulatory regime should involve high level changes for how the technology can be licenced for use within the UK however is not such a clear answer.

g) Following the UK's exit from the EU, and the rebasing of decision making to devolved nations, we believe that DEFRA implementing such changes to Gene Editing regulation without bilateral agreement with each of the devolved nations to follow a pan UK approach, fundamentally changing the regulatory regime that allows Gene Editing technology to be used commercially within the UK, could be detrimental to the success of the Scottish livestock and red meat industry.

h) The Scottish Livestock and Red Meat industry is incredibly integrated with the English, Welsh and Northern Irish livestock and red meat industries. Scottish farmers and feed merchants buy grains and oilseeds for animal feed produced from English cereal growers, and breeding stock is traded across borders freely. Any divergence in regulatory approach between the devolved nations and the UK government would present significant challenges in how this intra UK trade could be continued. Particularly in the face of the UK Internal Market Bill, which would suggest that any product that is produced to the standards that enables it to be placed on the market in one part of the UK, is suitable to be placed on the market in another part of the UK, regardless of whether regulation within that part of the UK would allow it to be produced there.

i) Therefore, we would advise that before any decision is made around diverging regulatory regimes, a UK decision is made based on a cross UK approach. This would be within the interests of livestock producers and the red meat industries across the UK.

2. Do organisms produced by GE or other genetic technologies pose a similar, lesser or greater risk of harm to human health or the environment compared with their traditionally bred counterparts as a result of how they were produced?

a) We believe this is not a question for Quality Meat Scotland to answer, but that the evidence base should be informed by peer reviewed independent research undertaken in the UK to ensure that our high standards of integrity when it comes to food safety and trust that UK producers have with consumers can be maintained. No decision or regulation should be implemented without this solid evidence base.

3. Are there any non-safety issues to consider (e.g. impacts on trade, consumer choice, intellectual property, regulatory, animal welfare or others), if organisms produced by GE or other genetic technologies, which could have been produced naturally or through traditional breeding methods, were not regulated as GMOs?

a) Yes

b) Non – safety issues are important in how a technology's impact and investment return can be valued. At a high level, given that crops or livestock produced using Gene Editing could have been produced at a different speed using conventional crossing and selection techniques.
c) Legally, because DNA is a product of nature and no new genomes are created from Gene Editing Technology, there is no protectable intellectual property. Plant breeders would retain their rights to provide protection over new plant varieties.
d) Specifically, for livestock, investment in activities that create specific brands using gene editing technologies may result in protection using other means, such as branding or specific trade legislation.
e) The consumer support for Gene Editing technology is not well understood. We do not have a well enough developed evidence and consumer insight base to give us confidence that consumers will accept products produced using Gene Edited technology. While we accept that there is a developed scientific evidence base to show clear differences between GMO and Gene Editing, we do not believe consumers fully understand these differences.
f) The Scotch Brands that QMS represent trade as a premium product within the domestic UK market and on the international export market. The Scotch brands trade on the basis of a green, natural, clean production base, building on other similar products such as Scotch Whisky and Scottish salmon. We would have a concern that no impact assessment has been undertaken to understand how this fundamental change to how primary producers can produce crops and livestock products would impact upon the Scotch Brands ability to command a premium price, and therefore how this would impact the economic fortunes of the Scottish livestock and red meat industry.
g) As mentioned earlier, the impact of a change in regulation in Gene Editing technology on intra UK trade is unknown. The UK Internal Market Bill presents complexities when combined with divergence in regulatory regimes that make the implementation and management of Gene Editing technology challenging, and could put Scottish producers at a disadvantage both economically, if Gene Editing is proven to reduce the cost of production, and with consumers if there is not a well enough developed understanding at consumer level of the differences between country specific products that use Gene Editing and products that do not.

h) Should Gene Editing technology be introduced to England, then it should be within the regulatory regime a strict requirement to have a well-developed labelling system on food products to differentiate products produced using the technology and products not produced using the technology.

4. What criteria should be used to determine whether an organism produced by gene editing, or another genetic technology, could have been produced by traditional breeding or not? Please provide evidence to support your response.

QMS do not feel they can respond to this question.

Section 3 – Part 2: Questions on broad reform of legislation governing organisms produced using genetic technologies.

1. **There are a number of existing, non-GM regulations that control the use of organisms and/or products derived from them. The GMO legislation applies additional controls when the organism or product has been developed using particular technologies. Do you think existing, non-GM legislation is sufficient to deal with all organisms irrespective of the way that they were produced or is additional legislation needed?**

   Please indicate in the table whether, yes, the existing non-GMO legislation is sufficient, or no, existing non-GMO legislation is insufficient and additional governance measures (regulatory or nonregulatory) are needed.

Please answer Y/N for each of the following sectors/activities:

a) cultivation of crop plants N
b) breeding farmed animals N
c) human food N
d) animal feed N
e) human and veterinary medicines N/A
f) other sectors/activities N/A

i) No, we do not believe that there is sufficient safeguards within non-GM legislation is sufficient to deal with organisms produced using GM technology.
j) We consider combining genomes of organisms that cannot be combined naturally (i.e. through normal sexual reproduction) to be classed as GMO, and therefore require additional legislation to the existing non-GMO legislation.
k) Additionally, we feel that it would be imperative to have a stricter labelling and traceability controls to give transparency to consumers of where GMO products are currently used.

2. Where you have answered no (existing, non-GMO legislation is insufficient to deal with organisms produced by genetic technologies), please describe what additional regulatory or non-regulatory measures you think are required to address this insufficiency, including any changes you think need to be made to existing non-GMO legislation. Please explain how any additional measures you identify should be triggered (for example: novelty, risk, other factors).

a) When any new technology is introduced to food production, a robust assessment of the potential benefits and risks should be well evidenced in impact assessments covering environmental, consumer, social and economic factors. This should be the case for conventional, Gene Editing and GMO technologies alike.
b) The introduction of new technology into the food production sector can involve a lot of unknowns and create unforeseen issues. As part of any major change in regulatory regime to how Gene Editing technology can be used, there should in the first instance be a period of verification and impact assessments undertaken in controlled conditions, to allow for wider modelling to take place. This would enable any negative issues to be tracked and monitored, to build a case for or against whether specific technologies should be accepted or not.
a) We feel that it would be within the interests of the Scottish Red Meat industry for DEFRA to defer making a decision on this issue until the EU review on Gene Editing (due April 2021) is published.