A BIGGER CONVERSATION

Opening up the dialogue on food, farming & genetic engineering

Survey

Genome Editing in UK Food and Farming – the Campaigning Landscape

October 2020

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INTRODUCTION

Many civil society groups working with what could be termed “food issues” in the UK are, rightly, concerned about the impact of Brexit on British food and farming. These concerns range from financial support for farmers to the impact of new trade deals on food standards.

These and other food quality issues and standards are the focus of a great deal of campaigning and public outreach. But the introduction and regulation of genome edited/GMOs crops and foods seems to be absent from the webpages, social media and policy briefings of most food and farming NGOs.

Genetic engineering (now called genome editing) in agriculture and food is also a “food issue”. It has impacts on what we grow and eat, how we farm, how we regulate, what we trade and what choices consumers have. It has a more wide-ranging and potentially greater transformative potential than earlier manifestations of genetic engineering, yet it is receiving far less attention from civil society.

For example, during the early 2000s, the Sustain Alliance, which today represents around 100 national public interest organisations working in food and farming, directly supported the Five Year Freeze campaign on genetic engineering and patenting in food and farming, following a member consultation. This support reflected a broad consensus position across the food, farming and environmental NGO and civil society sector.

We wanted to explore the extent to which this consensus survives and how robust it is today. In the context of the government’s overarching policy of co-existence in farming and food technologies (e.g. that organic/agroecological farming, conventional and GM approaches can co-exist and find their own market and producer niches), we were also keen to discover more about what groups campaigning on “food issues” in the UK know about genome editing and what policies they have in place around it, especially regarding regulation and citizen involvement.

METHODOLOGY

The survey was circulated to all members of the food and farming NGO umbrella group Sustain – the Alliance for Better Food and Farming, during May/June 2020. Sustain, has its own employees working on a number of discrete projects, as well as representing 105 national public interest organisations working at a local, national, regional and international level. Its members are diverse, ranging from trade unions to social marketing companies to food and farming campaigns and health education charities.

In total, 27 members from this group responded to the survey, including many of those with a direct interest in the issue. Two provided extra information on their positions in an accompanying email.

We also sent the survey out more widely to a further 28 NGOs working in food and farming who were not members of the Sustain Alliance. Ten of these responded by filling in the form, two who did not fill in the survey responded by email – one to explain why they would not fill in the form and one to supply some information on their position.

Thus, out of a potential pool of 133 a total of 37 organisations responded by filling in the survey.

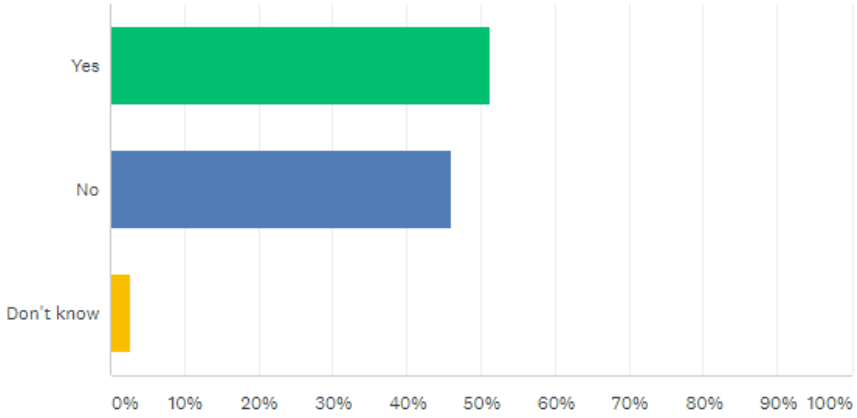
These organisations included single issue groups, umbrella organisations/alliances, animal welfare groups, healthy eating groups, farming and land management groups as well as those representing organic/biodynamic/regenerative agriculture, community supported agriculture and smallholders.

Some organisations were sent two or more reminder emails before responding. In spite of repeated follow-ups, many who were sent the survey did not respond.

Respondents were required to answer all the questions and given multiple opportunities to expand on their answers. To allow organisations to respond fully we agreed anonymise those who did respond.

RESULTS

Q1 Does your organisation have an official position on genome editing? If so, what is it?



Just over half respondents said they had an official position on genome editing (51%). The remaining organisations did not have a position. One responded, “Don’t know”.

The organisations that did have an official position tended to be involved in farming in some way either through animal welfare or in promoting specific types of farming systems. Some were also concerned with health and one was a specialist GMO/genome editing campaign group.

Those which did not have a position on genome editing tended to be groups representing trade or businesses, urban and community farming groups, land management groups and alliances and those involved in more general food and environment work.

One large organisation stated that it did not to have an “official position” on issues like genome editing, except where such an issue had developed into a collaborative campaign which required a published statement of specific policy.

Two organisations stated that their position was under review and one responded that, as a membership organisation, it had never been asked to create an official position by members. Similarly, some smaller organisations affiliated with larger food and farming organisations explained that their positions were contingent on those of other bodies.

Many, but not all, organisations stated categorically that they opposed genome editing.

Organisations that did not totally reject genome editing included some animal welfare/animal conservation organisations. The position of one was that it would allow gene-editing in animals where an impact assessment had shown that there would be a) no detrimental impact on animal health and welfare; b) no other method was available; and c) it was in no way engaged with facilitating industrial livestock production.

Another stated that it did not completely rule out genome editing in the future with more research and under different political conditions.

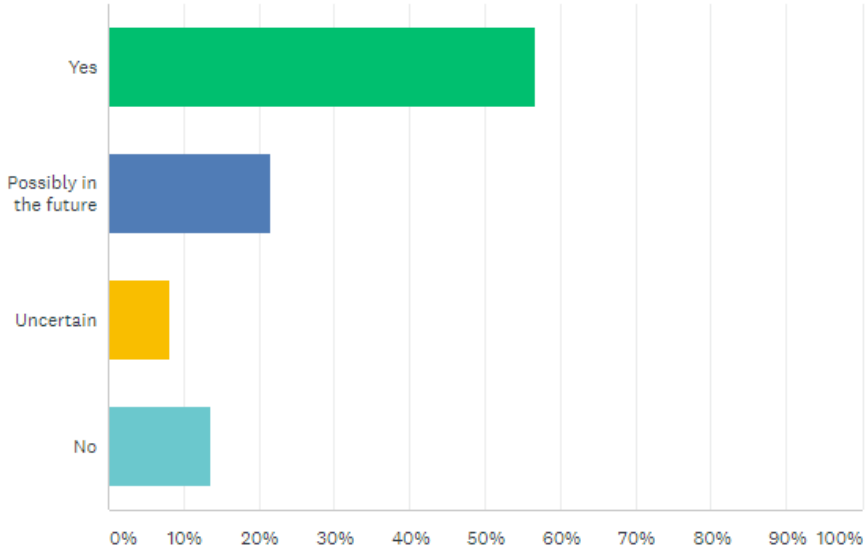
"[We take] the view that the science develops, and as such and in principle, that over time technological capability will not be the limiting factor in the use of genome editing. Rather it will be demand, public acceptability, animal health and welfare, environmental factors and regulation that determine its use"

Other positions related to specific organisational focus. For example, animal welfare and health groups tended to focus mostly on genome editing impact on welfare or health, while those concerned with pesticides tended to focus on whether genome editing would or would not reduce pesticide use.

"Our position is that genome editing tends not to reduce pesticide use"

Additional key points made by organisations which had an official position included: the need for the precautionary principle, unpredictable risks and consequences and corporate control over food system to be considered, i.e.: *"we do not have sufficient understanding to make changes at genome level"*; "*genome editing is the same as GMOs and should regulated as such*; *it entrenches industrialised agriculture*"; and that genome editing had *"Unintended side impacts"*.

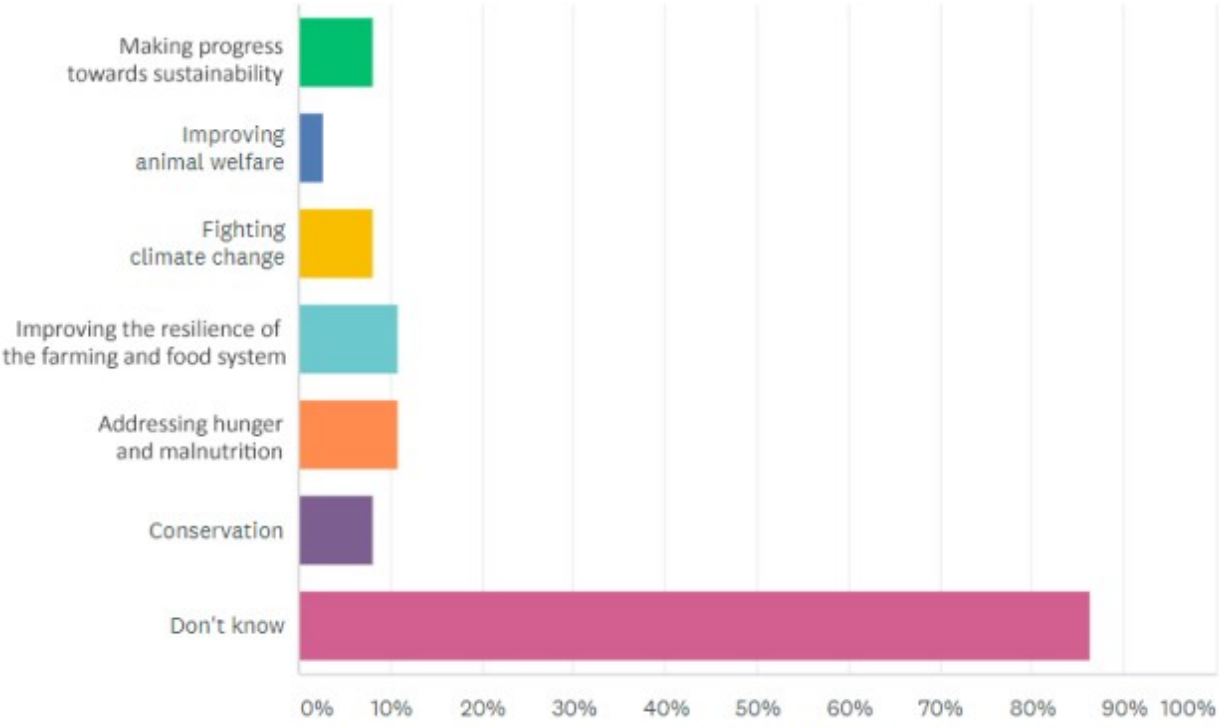
Q2 Does your organisation see the issue of genome editing in food and farming as relevant to its area of work?



A majority (79%) of the organisations saw the issue of genome editing as relevant to their work now (57%) or possibly in the future (22%), while eight percent were uncertain.

Fourteen percent feel that genome editing was not relevant to their work. This figure included two organisations that had an official position, but nevertheless did not feel that the issue was important to them. In contrast, several organisations that felt it was relevant for their work, also indicated they did not have an official position.

Q3 Does your organisation think that genome editing has a role, or potential role, in any of the following? (you can tick more than one):



Thirty-two organisations (86%) responded "Don't know". The remaining five indicated they believed genome editing had a potential role, or roles, in food and farming.

Four of these chose: Improving resilience of the farming and food system and Addressing hunger. Three chose: Making progress towards sustainability and Fighting climate change; and two, both of whom had an interest in conservation, chose: Conservation with one explaining its view this way

"…BUT: we must always get the morality (what is it good to do?), the economics, and the politics (i.e. the strategy) right first. At present (in all contexts) technologies are developed and introduced NOT to solve the real and properly defined problems of humanity and the biosphere but to further the aims of particular power groups (notably big governments and the transnational corporates) and to maximize and concentrate material wealth. Thus all science and technology is corrupted"

Several organisations noted that there was no option for 'None of these', which would have been their preferred answer. Several others stated that they were not closed to the idea that genome editing may have a role to play in the future, but it would depend on future developments including who controls and owns the technology.

"This is such a complicated and divisive issue. Some feel there are real opportunities as listed above and others real threats. I would need to do further research to know what I felt – but as a rule it seems to be going against nature"

One, a coalition, stated that although they don't have a position *per se*: *"We're probably more open than other environmental groups to new technologies generally if there is a clear potential benefit."*

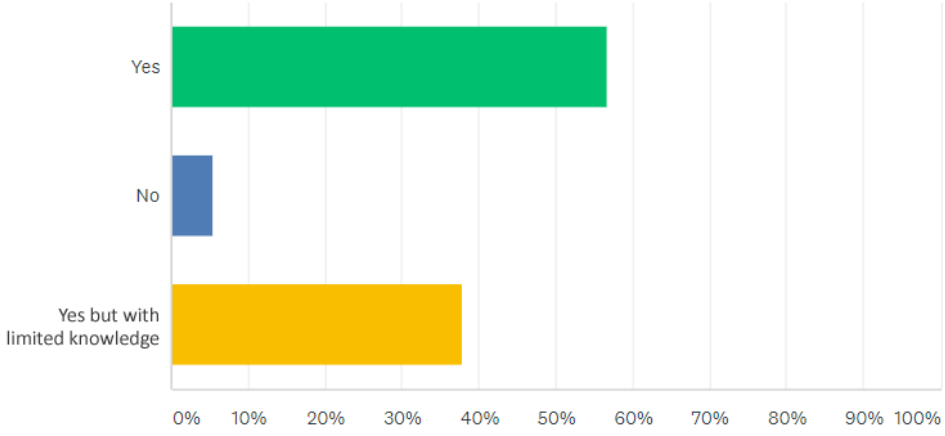
Another group stated that there should be a more systemic approach to addressing these issues:

> *"The alluring potential of the technology can unhelpfully reframe debates on the future of agriculture to being less about system change, but more about techno quick fixes. Even if safety/social concerns were met and there was a technical potential role for some of these things, issues around patenting etc may persist"*

Other organisations emphasised that gene editing in food and farming just perpetuates what is wrong with the industrial approach to agribusiness as well as food.

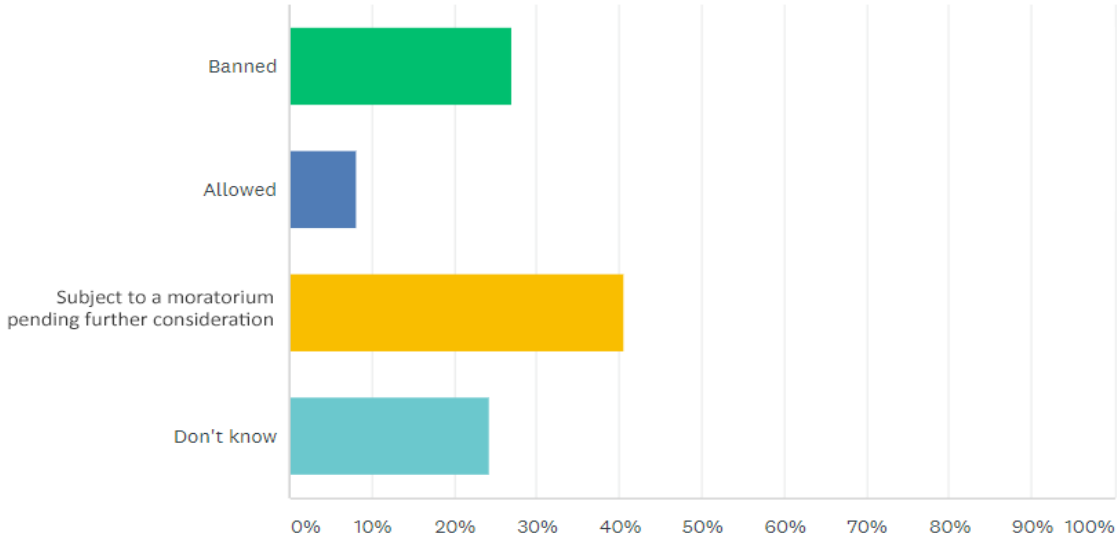
One group expressed an animal welfare critique: *"Whilst there may be a role in all of the above our concern is that GMO foods would routinely be tested on animals, which we oppose. We also oppose the splicing of genes originating from animals."*

Q4 Is your organisation aware that there are different methods of genome editing that claim different characteristics and different levels of benefit and risk?



Ninety four percent of organisations (35) were aware that there were different methods of genome editing, although 38% (14) of these stated that they had only limited knowledge of the differences. Only two organisations responded 'no'.

Q5 Does your organisation believe that genome editing in food and farming should be:



The largest number of organisations (15) wanted to see gene-editing subject to a moratorium, pending further consideration. Ten organisations wanted to see a ban, and only three felt gene editing should be allowed. Nine organisations stated “Don’t know”.

“I don't feel GM is necessary. But I'm hesitant to support complete ban in this fast changing field with implications far beyond the food systems”

“The focus of farming and food policy should be re-localisation and the widespread roll-out of agroecology, and research into organic and agroecological methods of agriculture, not further investment into GMO R&D”

“We don't have an official position on genome editing as yet, but we would advocate the precautionary approach”

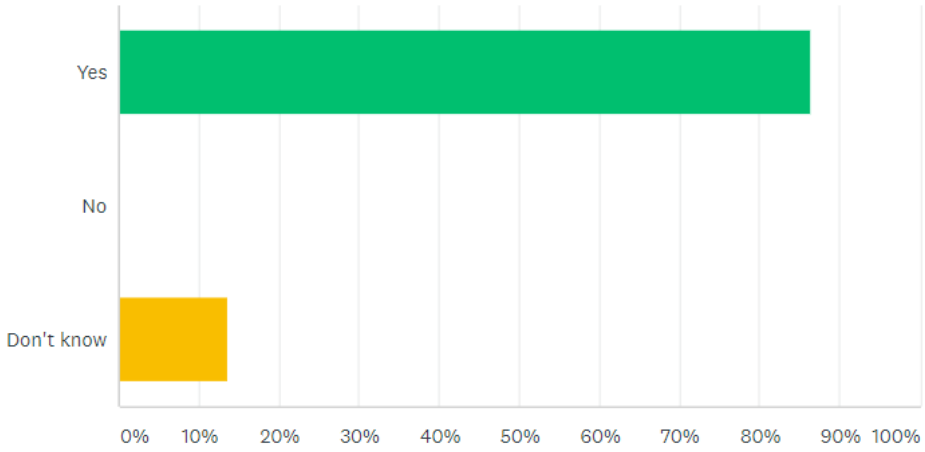
Broadly speaking, those that felt genome editing should be banned tended to focus on farming and environmental issues in a more “hands on” way. Those who felt it should be allowed tended to focus more on research and academia while the “don’t knows” tended to be alliances and umbrella groups.

“Some of our Council members would support 'no, unless' approach, some may want it banned and others a 'yes, if' approach. Personally, I don't believe it should be allowed without any restriction, but neither should it be necessarily banned/ rejected out of hand”

“As an organisation we haven't taken a stance. However, most of our members are organic or operate to organic principles so would probably want them banned”

From the 15 organisations expressing that gene editing should be subject to a moratorium, there were several comments along the lines of *“we need to make sure that the right people are doing the considering.”* Despite expressing support for a moratorium, one focussing on nutrition also noted: *“It may need to be banned to withstand the US pressure.”*

Q6 If your organisation believes genome editing should be allowed, do you believe it should be regulated?



All organisations, bar five, agreed that genome editing should be regulated. Five organisations stated "Don't know". There was no obvious linking factor between these organisations; they all had very different focuses and specialities.

Views were not solicited on this specific question, although previous comments suggest a range of reasons why organisations would not want regulation, ranging from allowing it for those conducting their own research to a more militant "it should be banned – end of discussion". There was no option here not to answer or to state N/A.

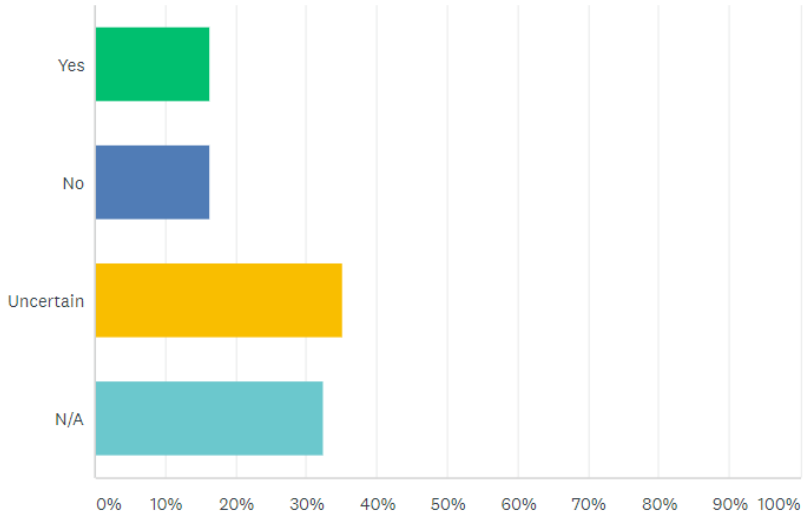
"We would want to see one transparent regulatory system which would license some practices and products, and not others"

"Any genome editing should be regulated and have an ethics committee as part of the regulation decision making"

"Regulation should be appropriate to the risk and method. There may not be one rule that addresses all contexts. Genome editing is not a substitute for good management practices and should be used within a whole farm management system such as Integrated Farm Management"

"I suspect we would recommend some form of regulation whatever our eventual position on genome editing. If genome editing is introduced, we would almost certainly want nuanced regulation to deal with the range of technologies and applications available"

Q7 If you answered yes to Q6, would your organisation support different types of regulation for different methods of genome editing, e.g. some banned and some allowed?



Twenty five organisations responded to this question with the remaining twelve considering this non-applicable. The number of respondents was less than those responding 'yes' to Q6 and some reasons for this are explained in the comments i.e. *"we don't work on genetic engineering in this detail*"; or *"N/A because I shouldn't need to answer Q6 as we think it shouldn't be allowed".*

Five other respondents expressed a similar problem with this question, although some responded N/A and others responded "Yes" explaining: *"We don't think it should be lawful but if it is lawful, it should be highly regulate*d."

The purpose of the question was to understand how much respondents knew about the current regulatory debate, which includes calls for different levels of regulation for different methods of genome editing, and what they thought of this as an option. For those that supported different levels of regulation, there were a range of responses:

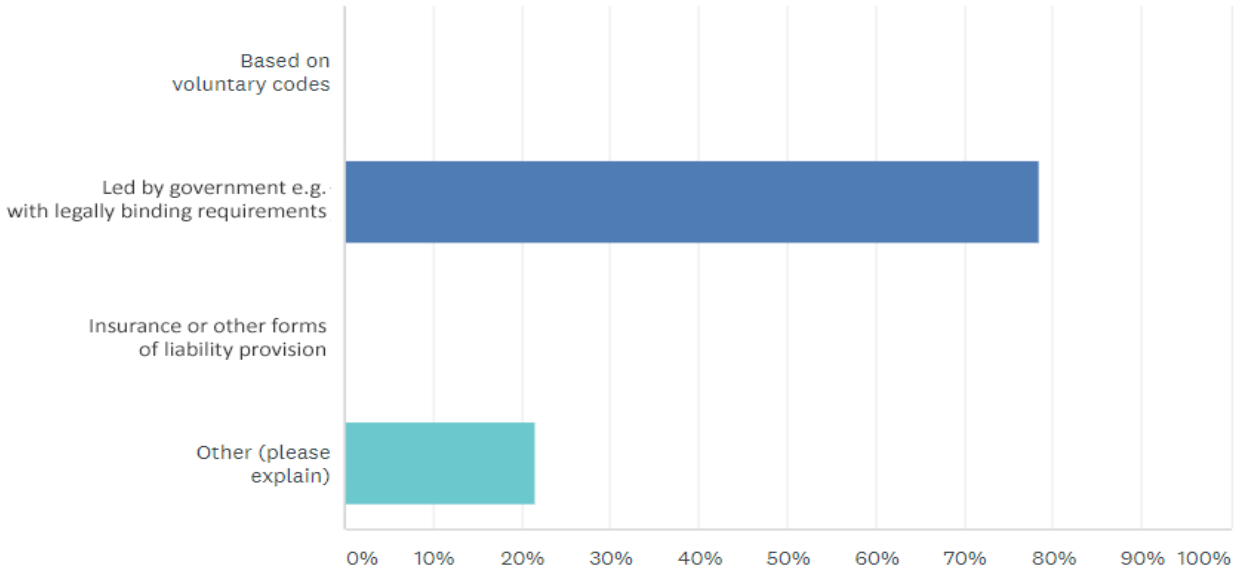
"That would very much depend on what clear & unbiased & thorough research would show"

"Any genome editing should be regulated and have an ethics committee as part of the regulation decision-making"

"Regulation should be appropriate to the risk and method"

"If genome editing is introduced, we would almost certainly want nuanced regulation to deal with the range of technologies and applications available"

Q8 If genome editing is to be regulated, would your organisation prefer this to be:



Twenty-nine organisations stated that if genome editing is to be regulated, it should be led by government e.g. with legally binding requirements. Eight respondents stated "other". The main drift of the additional comments was distrust in government and corporate lobbying. This response was given both by those respondents which had chosen 'Other' as well as those who chose 'Led by government'.

"It has to be a statutory process but the science and ethics committees must have independence from government and their members must be confident that they and their institutions are not going to be treated less favourably if they disagree with government."

"None of the existing control mechanisms is up to the task. The whole process of governance needs re-thinking"

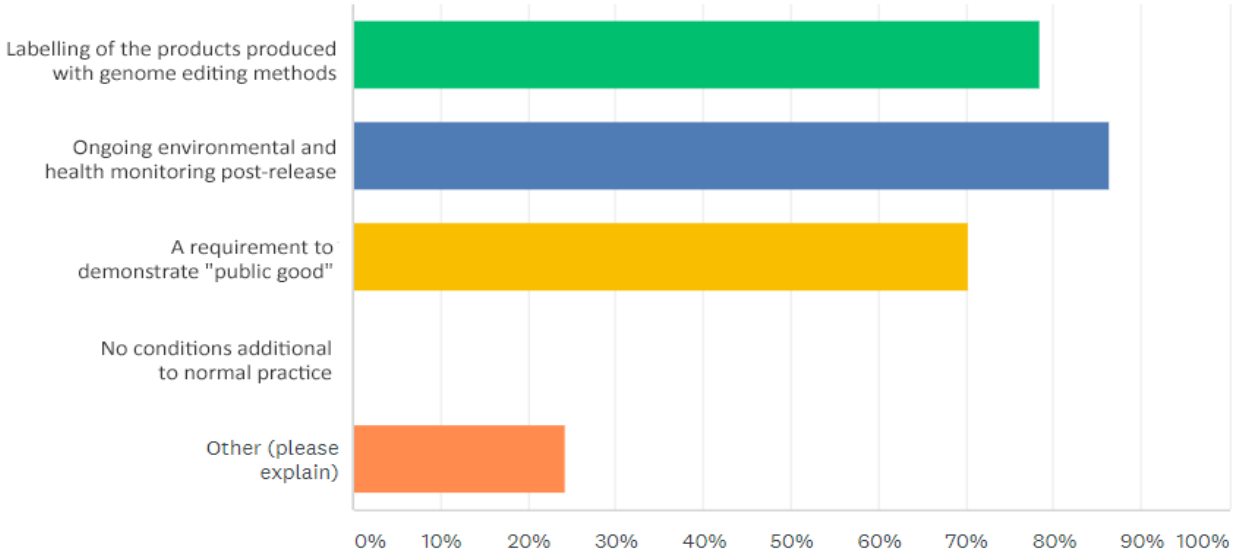
"The role of regulation is to be outside of any market influence"

"Voluntary codes and Government have not proved strong enough against corporate greed, another system is needed. It might be that an insurance based system with ethics involved and a long period of obligatory trials could hold it?"

"Although we don't have a position yet, I think it's likely that if we were to support some forms of gene editing, we would want it regulated by government to ensure a high degree of monitoring and transparency"

None of the respondents proposed alternative methods of oversight e.g. voluntary codes.

Q9 If genome editing techniques are to be used more widely in food and farming would your organisation like to see (you may tick more than one box):



There was strong support for additional measures among the organisations.

"We do not believe that GM modified seeds/plants/organisms should be used more widely until it has been shown how they contribute to a more sustainable agriculture – adapted to local conditions and practises"

"Robust and transparent processes to keep practices under review. Hard to know at what levels oversight should operate, in a sensible world we would align to EU processes but if UK wants to have its own regulatory system the key is some genuinely independent oversight of that which draws on citizens perspectives"

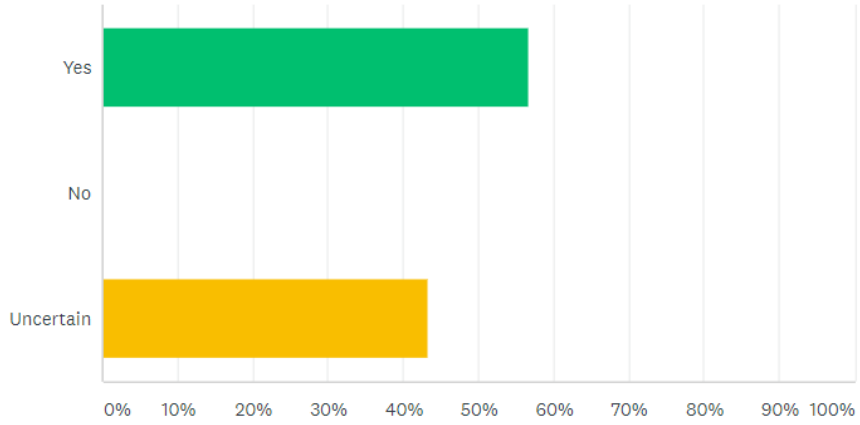
"Transparency in the supply chain, so the public can make a well informed choice about whether or not to buy/support products that are produced in this way"

The nine organisations that chose the 'Other' option had reasons, such as *"we don't work on genetic engineering in this detail";* or *"there should be ongoing animal welfare monitoring"* and the one included *"Pre-release extensive trials and public information".*

One organisation argued that it *"depends on how it is done. I think that if it is done in closed environments and for beneficial purposes (for example, cultured meat, so that we reduce pressure on ecosystems), it makes more sense to be less strict about market access, because benefits might outweigh the costs."*

One umbrella group supported some of the proposed measures (monitoring and public good) but noted they did not have an official position as yet. Another group supported the same measures while two others supported monitoring only. None of the organisations indicating 'Other' supported labelling.

Q10 Do you believe citizens should have more of a role in the monitoring and regulation of genome edited crops and foods? Please use the space below to suggest what that role might be.



Twenty-one (56%) of the organisations were supportive of citizen involvement in both the monitoring and regulation of genome edited crops and foods. Sixteen organisations stated that there were uncertain about this.

"There should be a moratorium until further research can be done and a wider analysis of the potential risks to bio-diversity, food chains and who will benefit from greater use of GM in agriculture can be done over a period of years. We believe that we already have solutions to feed the world which do not create the same levels of risk or ignore the precautionary principle. The priority must be to eliminate food waste and reduce meat production to mitigate the impacts of our food production on the climate crisis – once we have done those things it's not clear what need there will be for a greater use of GM in agriculture. The issue of need for this technology needs to be examined before we rush to bring it to market"

Supportive comments included the need for more openness and discussion on the issue of gene editing so that people are aware of the risks and can reconnect with how their food is produced.

"Citizen views must be considered, even when they are not expressed in scientifically accurate terms. Work should be done to understand what people actually mean, which hazards concern them and what their appetite for risk is when it comes to the production of their food and the protection of the environment"

Several organisations proposed options such as citizen's juries and an independent adjudicator to seek citizen guidance and/or a citizen's assembly or noted that expert committees should always include independent "people at large".

"The regulatory process could build some form of citizen's jury to advise an independent regulator/adjudicator, perhaps meeting every 2-3 years to consider live issues. So essentially government regulates: there's an expert committee which meets in public, publishes affiliations etc; then there's an independent adjudicator who's a lawyer/ethicist rather than a scientist who seeks guidance from citizens at intervals through some form of dialogue"

"Not sure what you mean by citizen involvement. The whole area of how all food, farming, environmental and health standards will be regulated is a massive and multi-faceted issue, especially as we leave the EU and as we enter new trade deals. As an alliance, we're all trying to work out how to relate to these issues at the moment; what capacity, power or opportunities we all have to track, respond and champion appropriate regulation; and who is best placed to lead on the very large number of issues that are arising"

"People's assemblies may be useful to do this, however better still is that people can concentrate on community centred and agroecological farming, not regulating GMOs"

Those who stated 'Uncertain" raised issues such as this should be the role and responsibility of NGOs rather than individuals. Others made no comment to support their choice.

CONCLUSION

Members of the Sustain Alliance are actively involved in food and farming campaigning in the UK at many different levels. We therefore directed this survey at them, as well as other food, farming, environmental and animal welfare organisations of the type which had participated or, in some way, supported past alliances that challenged the introduction of GMOs into UK food and farming.

Today the introduction, and push by governments and the research establishment, of new genome editing technologies – along with emerging threats to food, farming and environment caused by climate change – has created new conditions in which civil society organisations have to operate.

We wanted to explore how, and if, the past 'coalition of caution' has survived and whether that narrative is still informing campaigning around food and farming today. We were also keen to understand whether organisations had begun to address the notion of technological and market co-existence between different approaches to farming and food production.

The results indicate that amongst the UK's food and farming organisations, a new dynamic is at play which is less cohesive, less engaged, more cautious or hesitant than was expressed by many of these same groups in the early days of genetic engineering in agriculture.

- Nearly half of the responding organisations have no official position on genome editing technologies.
- The largest number of respondents favour a moratorium rather than an outright ban. A significant number expressed uncertainty but some think it should be allowed and has potential role in tackling global challenges.
- There is support for government-based regulation, labelling and ongoing monitoring, but some uncertainly about the role of citizens.

We acknowledge that, in some instances, the actual survey questions did not allow the degree of flexibility some respondents wanted in order to express qualifications and caveats (or simply not to respond at all). On the other hand, there were multiple opportunities throughout the survey to expand on and make comments.

From these, we tend to the view that there is a fairly low level of detailed knowledge on the issue of genome editing. For example, although just over half (21 organisations) claimed awareness of different methods of genome editing, none mentioned any specific method or scientific research to suggest they were following the issue closely.

Similarly, there were few comments expressed about how the implementation of genome editing technology as a policy can interact or co-exist with non-GMO approaches.

The language used in the comments often reflected familiar soundbites and suggested that views were predicated on wider values-based concerns or concern about corporate control of agriculture and lack of trust in government, rather than technical or scientific assessment.

This is important. If NGOs and civil society are going to demand regulation and greater democratic control over genome editing or any future 'high tech' technology, then there needs to be clarity on what that regulation looks like, how citizens will be engaged and how genuine transparency can be assured. The same points apply to the demand for a moratorium – how will it look, be structured, decided and – importantly – concluded?

At the moment the indications are that UK NGOs and civil society are, in general, unprepared to make a meaningful contribution to policy and regulatory development in these areas. There appears to be a very low level of engagement with deeper issues, either internally or as part of their outreach to policymakers or the public. This work is left largely to specialist organisations that work daily on the issue of genome editing.

This is a real concern given that the genome editing 'genie is out of the bottle' and a large majority of organisations said that they believe genome editing is relevant to their work now or will be in the future.

To strike a note of optimism, however, it is promising that we had a reasonable number of respondents and that many of the accompanying comments were thoughtful and nuanced.

There is a need to build a viable and effective new 'coalition of caution' over genome editing technologies in agriculture and food – one that does not separate genome editing specialist organisations from the mainstream of food and farming 'issues'. Given focus and resources, and a greater willingness to draw from the pools of expertise which exist, there are indications that this can be done.