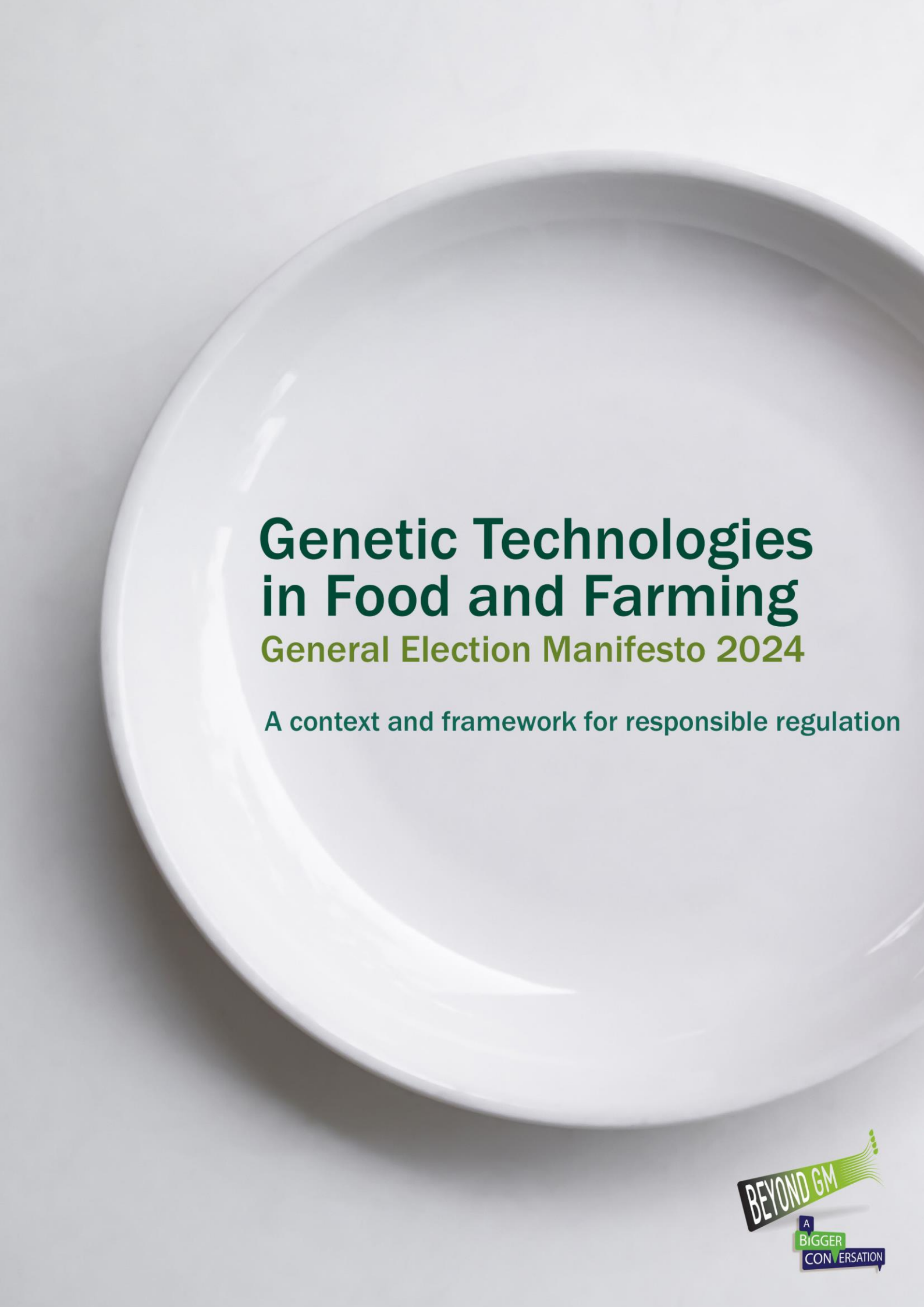

Genetic Technologies in Food and Farming

General Election Manifesto 2024

A context and framework for responsible regulation

BEYOND GM
A BIGGER CONVERSATION

Introduction

Genetically engineered organisms in food and farming are regulated, first and foremost, under the Environmental Protection Act 1990. Whatever subsequent legislation has appeared over the years, this is their appropriate context.

In recent years, the UK government has sought to recontextualise genetic technologies in the narrowest possible terms, as a science and innovation issue. The result was the 2023 Genetic Technology (Precision Breeding) Act – a highly contested piece of legislation which removes all regulatory control from genetically modified gene-edited organisms in England and imposes them on the whole of the UK market, unlabelled, unmonitored and untraceable.

The Act also facilitates the import of gene-edited seeds and animal feed as well as foods and ingredients intended for the human food chain – which may be produced to standards well below those of the UK – into the domestic market. The Government has, in addition, indicated that this Act is the first step in eventually deregulating all types of genetic technologies in the food system.

Environmental protection and precaution (which encompasses both the natural and agricultural environment) is the gold standard context that allows a full and robust assessment of genetic technologies in food, farming and the environment.

To remove these technologies from their proper context constitutes a major change in the way we envisage our current and future farming and food system and the way this interacts with wider nature. It also ignores broad agreement across a diverse spectrum of stakeholders on the need for foresight, transparency, greater public engagement, support for equitable co-existence of different farming and food systems (and businesses) and the farmers' and consumers' 'right to choose'.

Regulation and innovation need not be at odds. Genetic engineering technology might have a role in responding to challenges such as feeding a growing population, adapting to climate change and protecting natural resources. This, however, has yet to be proven and in the absence of this proof it is hard to divine how the current skeletal legislation currently will lead to either effective regulation or the kind of food-, farmer-, citizen- and environment-focused, socially-responsible innovation that we need in the 21st century.

There is a way forward. The Genetic Technology Act requires a significant amount of secondary legislation to come fully into force. It's not too late for all parties to ensure that the Act is amended and augmented in a way that supports robust and rational regulation of genetic technologies. This can only be achieved by ensuring that future amendments to the Act:

- Place genetic technologies in their appropriate context as a food system and environmental issue;
- Acknowledge the reality of genetic technologies – what they are, how they work, what is known and unknown and who and what will be affected by their deployment;
- Require the labelling, traceability and ongoing monitoring that consumers and businesses want and need;
- Involve a wider group of stakeholders in the discussion on how genetic technologies are used and regulated.

This manifesto clarifies the context and elements necessary for clear thinking and a robust regulatory framework that delivers on these requirements.

Applying context

Genetic engineering is an umbrella term that encompasses a range of technologies such as genetic modification, gene editing, gene drives, precision breeding, synthetic biology and RNA interference (RNAi). Because it is technological in nature there is a tendency to see it as a science and technology issue, viewed and debated through the lens of science, innovation and market creation and disconnected from the Earth sciences and biology and from the practical real-world application of these in agriculture and the environment.

This framing avoids significant, difficult and legitimate questions about the potential hazards of technological intervention in complex natural systems. A science and innovation only approach can result in regulatory gaps, which, given the speed of development in this area, can quickly become regulatory failures. A comprehensive regulatory framework that encompasses both the technology and its applications in agriculture and the environment is necessary to close these gaps. Placing gene editing in its proper context – as a food system and environmental issue – promotes a more honest and constructive discussion and decision-making process.

1 | Gene editing is a food system and environmental issue

Our ask: Genetic engineering, as used in farming and food production, is a food system and environmental issue; considerations for if and how it is used should be integral to all strategy and policy discussions in these spheres.

The Genetic Technology Act was drafted, debated and signed into law from a public platform that promised that genetic 'innovations' could increase yields, enhance biodiversity, strengthen food security and fight climate change. There is no credible evidence that gene editing (referred to as precision bred organisms, or PBOs, in the Act) does any of these things.

In addition, the Act as written can apply to a whole range of genetic technologies and not just gene editing. Its scope also extends beyond agricultural plants to the re-engineering of wild plants and animals and domestic pets with no assessment of environmental impact, little to no assessment of welfare – human or animal – and no environmental or health monitoring. It also leaves the door open to the re-engineering of microbes and fungi used in open environments. This level of proposed intervention in agricultural and ecological systems is unprecedented and is undeniably uncharted territory.

There are many food security and sustainability challenges facing our food system. As the global population grows there will be an increased demand for food placing further pressure on finite resources, including land, energy and water. Climate change, which brings increased frequency of storms, droughts and other extreme weather events, will change global agricultural and urban landscapes and, some predict, the global balance of power.

This confluence of environmental, ecological, ethical and social issues is a 'wicked problem'; one with no single cause and no single answer. It must be debated, understood and addressed through whole systems thinking.

Genetic engineering is not a whole systems solution. It does not fit easily into the nature-friendly, agroecological vision of the future of farming that, many believe, holds the key to sustainability. Instead, it is a techno-industrial intervention that opens the door to further intensification and industrialisation of agriculture, even as we understand that intensification and industrialisation are what has damaged our soil, our biodiversity, the welfare of our animals and the healthfulness of our food over the last half century.

Failure to assess and regulate gene editing in the whole system context of agriculture and the environment can lead to insufficient assessment of its ecological consequences, such as unintended effects on non-target organisms or ecosystems. It may result in biosafety and biosecurity measures that are inadequate to prevent accidental releases of genetically engineered organisms and/or deficient co-existence measures that will impact non-GMO, organic, artisanal and natural farmers and food producers.

The exclusion of gene editing from its agricultural and environmental context also may hinder transparency, public awareness and engagement in decision-making processes, diminishing trust in the UK food system.

2 | Gene editing is genetic engineering

Our ask: Government must stop misleading its members, the media and the public about the nature of gene editing. Gene editing is genetic engineering and genetic engineering is a man-made, laboratory-created intervention in the farming and food system and the natural world.

There is no question that gene-edited 'precision bred organisms' (PBOs) are the product of genetic engineering. The first part of the Genetic Technology Act acknowledges this and yet the narrative used to 'sell' the Genetic Technology Act failed to acknowledge this and, therefore, misled parliamentarians, the media and the public.

All forms of genetic engineering are laboratory-based and man-made technological interventions in the DNA of living organisms. All forms of genetic engineering (including PBOs) can and do involve the insertion – either deliberate or inadvertent – of genetic material from 'foreign' (non-sexually compatible) organisms. This DNA can be – but isn't necessarily – removed at a later stage.

It is also common for what works in the laboratory to fail under real world conditions.

The recent reporting of a study in the journal *Nature* of chickens genetically modified to be immune to avian influenza, for example, failed to acknowledge the authors' caveats that: a) with exposure to higher levels of the virus (as might be expected in over-crowded industrial chicken farms) the gene-edited birds succumbed to infection; b) during the relatively short time span of the study (a single breeding cycle) there was evidence of the virus evolving to evade the engineered immunity; and c) there is concern that genome-edited livestock could drive pathogen evolution.

The current fervour for techno innovations in agriculture and the promise of a simple solution to complex problems ignores such consequences and risks, taking us down unproductive roads and wasting scarce research and development money which could be better spent on scaling up solutions that are already working. As long as we allow the narrative of agricultural genetic engineering to remain divorced from its actual context – food, farming and environment – we remain vulnerable to fragile promises of a future that these technologies may not be able to deliver.

3 | Genetic engineering is not the same as breeding

Our ask: Government, its advisors and regulators must stop equating gene editing with conventional ('traditional') breeding.

The distinction between genetic engineering and conventional breeding is not a minor detail. It is fundamental to how we talk about – and regulate – the products of genetic technologies.

Genetic engineering technologies like gene editing are relatively new and represent a departure from traditional or conventional breeding methods that have been practiced for centuries.

These techniques have emerged too recently and are too novel to be called 'traditional' or 'conventional' – and they are not 'natural' nor even an extension of 'natural'. Indeed, in order to gain the valuable patents that protect genetically engineered processes and products, developers must first prove to the patent office that what they have created and how they have created it, is unnatural, man-made and industrial in nature.

Gene editing can introduce traits or changes that would be difficult or impossible to achieve through conventional breeding. It allows developers to access and change the whole of an organism's genome. In contrast, in conventional breeding, some regions of the genome are protected against mutations. This access-all-areas approach raises the risk of creating unintended and serious errors in the genome that can lead to harmful interactions with the natural environment or the production of novel toxins and allergens.

Genetic technologies are also evolving rapidly. Each new iteration introduces novel processes that may require new regulatory approaches to account for the unique characteristics and risks associated with these technologies.

In order to field test or market a precision bred organism, the Genetic Technology Act allows developers to self-certify that their precision bred organism is the same as could be created using traditional breeding. No proof of the veracity of this statement is required.

The process, as it currently stands, is open to widespread abuse which can only increase as the number of PBO notifications and the scale of proposed uses for gene editing – as well as new genetic engineering technologies such as gene drives, RNAI sprays and 'precision fermentation' – expands.

There is nothing inherently wrong with technology. Many parts of our lives have been enhanced by it. But let's call it what it is so we can question, debate and regulate it honestly.

Legitimising stakeholders

The natural and farming environments have multiple stakeholders. Some of these, such as citizens and farmers, have the agency to speak for themselves. Others such as plants, animals, pollinators, rivers and soil microorganisms depend on human advocacy – from academia, civil society and science – to speak for them.

Including the views of all stakeholders is essential for making well-informed and equitable choices that address the complex challenges of agriculture, environmental protection and

sustainability. It holds decision-makers accountable for their choices, encourages transparency and can help prevent policies, actions and regulations that benefit one specific group at the expense of others.

Given the urgency of a radical change in agriculture from short-term unsustainable, industrial thinking to long-term sustainable systems thinking, it is of primary importance that all stakeholders have a say. All stakeholders and their considerations must be legitimised and given equal weight to so-called experts – and greater weight than vested interest lobbyists.

4 | Environmental assessment is essential

Our ask: Genetically engineered organisms in agriculture, whether for field trials or for marketing and sale through the food system, should undergo a full environmental assessment prior to release.

The Environment Act 2021 provides that Ministers must, when making policy, have due regard to the environmental principles contained in that Act. These principles are:

- the principle that environmental protection should be integrated into the making of policies
- the principle of preventative action to avert environmental damage
- the precautionary principle, so far as relating to the environment
- the principle that environmental damage should as a priority be rectified at source
- the polluter pays principle

The Genetic Technology Act, which includes no provision for environmental assessment, ignores this instruction.

Agricultural nature is part of wider nature. Assessing the environmental impact of genetic engineering used in open nature is critical for safeguarding the health and integrity of ecosystems. Genetic technologies can introduce novel genes into ecosystems or change the characteristics of organisms in ways that could disrupt local biodiversity, harm native species, or introduce invasive traits that may destabilise ecosystems.

Altered crops or organisms could impact the populations of herbivores, predators and other living organisms which, in turn, may have cascading effects throughout the environment. These impacts can ultimately affect human food sources and livelihoods. Environmental assessment, in addition, provides the basis for long-term monitoring of the impacts of genetically engineered organisms in the natural environment.

Through environmental assessments, regulators can identify potential risks and develop risk mitigation measures. These measures can include assessments of appropriateness and need, containment strategies, monitoring protocols and, in some cases, restrictions on the use of specific genetic technologies in certain environments. Regulators will need to track the effects of these organisms over time to detect any emerging issues and adapt regulations accordingly.

5 | Non-GMO, organic, artisanal and natural farming and food sectors must be protected

Our ask: Mandatory co-existence measures must be brought in to protect the non-GMO, organic, artisanal and natural farming and food sectors.

A fundamental basis of UK farming and food policies is that different approaches to production and processing should be encouraged and accommodated. This ensures that conventional, organic and biotechnological approaches can be developed to allow participants in the food chain – from producers through to consumers – the freedom to choose different production methods and products.

In the past, embryonic systems of co-existence have been proposed and discussed but were never properly implemented in relation to 'old style' GMOs. The introduction of new genetic engineering technologies has brought this issue back to the farming and food policy agenda.

Many farmers and producers in the organic and non-GMO sectors have invested in specific production methods and certifications to meet consumer demand. Contamination from genetically engineered products can lead to the loss of organic certification and consequent economic losses for these businesses, potentially undermining the economic viability of these sectors. This also can discourage farmers from developing, adopting or continuing with these farming practices.

Organic and natural farming and food production often prioritise the preservation of heirloom and indigenous crop varieties. Genetic contamination can jeopardise efforts to protect and preserve these varieties, which are important for biodiversity and resilience in agriculture.

In light of these considerations, effective policies and regulations are needed to establish clear guidelines and measures to protect these sectors from contamination by genetically engineered and gene-edited products. This may include mandatory buffer zones, labelling requirements and strict liability frameworks to hold responsible parties accountable for contamination incidents. Such protections help ensure that consumer choice is preserved, economic opportunities are not compromised and environmental and sustainability goals are met within these specialised sectors.

Within this context, the need for equitable investment in non-GMO alternatives must also be acknowledged. We cannot afford to invest so heavily in a technological intervention so unproven and with so many unknowns attached to it, while letting proven sustainable approaches languish on the sidelines due to lack of support and vital funding. Indeed in a recent story in the *New York Times* entitled *Meet the Climate-Defying Fruits and Vegetables in Your Future*, only two were produced using gene editing technology. The rest – including those produced by companies traditionally associated with genetic engineering – were the products of conventional breeding.

By increasing funding into conventional breeding programmes, as well as agroecological farming methods which put environmental and social considerations front and centre, we can increase the number of options available to tackle the challenges of our times without relying on an unproven, unpredictable technology.

6 | Commitment to meaningful public engagement

Our ask: New and more meaningful public engagement protocols must be designed and implemented as early as possible in the policymaking and legislative process.

Public engagement ensures that policy decisions are made in a democratic and accountable manner. In democratic societies, it is essential that citizens have a say in shaping the regulations that affect them.

A great deal of lip service is paid to the idea of public engagement, but citizens – the end users – who generally have different ideas about what is 'necessary' and what constitutes a 'benefit' or a 'risk' are rarely given the opportunity to have any meaningful say.

The vast majority of citizens in the UK do not want to buy or eat GMOs and they want to see them labelled. This was apparent in the results of the government's 2021 public consultation, which showed 85% opposed deregulation. It has also been demonstrated by Food Standards Agency 2022 research and also by the latest 2022 YouGov poll – all of which show that 8 in 10 in the UK want to see precision bred, gene-edited GMOs clearly labelled so that they may have a choice of whether or not to purchase and consume them.

Other recent public polls by Ipsos Mori, the Economic and Social Research Council and UK Research and Innovation, the Lloyd's Register, the National Centre for Social Research, Food Standards Scotland and the Pew Research Center have all shown little public appetite for genetically engineered crops and foods.

A second survey by the Food Standards Agency in 2023 found that *"consumers wanted thorough regulation and transparent labelling if GE foods reach the UK market*".

The Nuffield Council on Bioethics' public dialogue on gene-edited farm animals found, amongst other things, that participants had a strong interest and desire to influence the way in which the food they consume is grown and reared. They also expressed significant concerns over the commercial drivers of gene-edited livestock, as well as the ability of governance and regulatory systems to control the technology in a way that meets public aspirations for the UK's future food system.

These views are completely at odds with processes around the Genetic Technology Act, which failed to act on public views.

Given that genetic technologies can have wide-ranging social, ethical and cultural implications, a commitment to listening to and acting upon public views, ensures that a broad spectrum of perspectives and concerns – including those of marginalised or vulnerable communities that may be disproportionately affected by such technologies – are considered.

Public engagement helps ensure that policies are based on real-world considerations and not solely on the perspectives of lobbyists, issue-advocate scientists and/or industry stakeholders. It allows for the exploration of ethical boundaries and helps policymakers make more informed, ethically sound decisions.

We do not underestimate how challenging the task of designing citizen engagement that is representative, useful for policymakers and manageable for the members of the public is. Nevertheless, it is essential and the time has come to make it happen.

7 | Establish a multistakeholder advisory and review board

Our ask: An agricultural genetic technologies advisory and review board should be established to oversee, review and advise on the development and release of genetic technologies into food and farming and the wider environment.

Legitimising the views and concerns of all stakeholders means bringing them to the table. We propose the establishment of an "agricultural genetic technologies advisory and review board" consisting of research bodies, public interest bodies, civil society representatives and other relevant stakeholders to oversee, review and advise on the development and release of genetic technologies into food and farming.

The Board should ensure that ethical and social utility issues are considered alongside narrow science-based risk assessments. To ensure broad-based societal engagement and assessment of risk and benefit in agricultural genetic technologies now and in the future, the composition of this board should ensure public interest representation balances the interests of commercial and development stakeholders.

The work of the advisory committees currently responsible for approving the deliberate release of genetically engineered organisms into nature and the food system should be overseen by this board which will have the power to veto or overturn recommendations in prescribed circumstances, e.g. on the grounds that it serves no public good function, that basic evidence or proof is lacking, that the economics don't stack up, or simply that it isn't needed because there are alternatives.

Improving processes

The process of bringing the Genetic Technology Act into law was fraught with procedural issues and political failures. Complaints and concerns about the way the public consultation was conducted, the draft bill and the misleading narrative used to promote it were raised from all quarters including government agencies such as the Regulatory Policy Committee, the Secondary Legislation Scrutiny Committee, the Delegated Powers and Regulatory Reform Committee and the Constitution Committee – as well as by civil society – only to be rejected by government.

Government agencies such as the Food Standards Agency (FSA) have also behaved recklessly. The FSA, for instance, has rejected the results of its own public surveys and the results of its own literature review into the detectability of gene-edited organisms, which concluded that detection was both possible and desirable in order to avoid food fraud. As we consider how best to put flesh on the skeletal Act we have an opportunity to undo some of this damage.

8 | Labelling is required

Our ask: All genetically engineered organisms and the food and feed products that contain them should be labelled on the package and/or at point-of-sale.

For decades genetically engineered foods on sale in the UK have required a label. This label informs consumers about the presence of genetically engineered organisms, allowing them to choose whether they wish to buy and eat such foods.

Labelling of human food allows producers and processors to decide if they want to produce foods containing GMOs, while labelling of feed and seed products allows farmers to decide if they wish to purchase these products for use on their farms or as feed for their animals.

Lack of provision for point-of-sale labelling (in favour of a vague online 'register' of PBO foods and ingredients) ignores the requirements of the majority of stakeholders and allows the uses of biotechnology in the food system to be shaped solely by industry. In this context, not labelling amounts to deliberate withholding of information relevant to consumer preferences. The consequence of this is that relevant feedback, as expressed through decisions to purchase or not purchase particular products, is removed from the food system.

Citizens are major stakeholders in the food and farming discussion. A failure to address their needs and concerns will result in a lack of trust and the collapse of both citizen and market "buy-in" to any new regulatory regime.

It is important to recognise that labelling also serves a function beyond the simple provision of information. Mandatory labelling of the products of genetic technologies, including gene editing, is a fundamental regulatory tool that supports consumer choice, transparency and trust in the food supply chain. It allows consumers to make informed choices, helps enforce regulatory compliance and contributes to market differentiation while addressing ethical, health and environmental concerns related to genetic technologies.

9 | Traceability is essential for enforcement

Our ask: Traceability throughout the supply chain is non-negotiable and the terms and concepts of traceability should be clearly defined in law and understood by all the stakeholders in the food supply chain.

At the September 2023 Food Standards Agency Board meeting, Board member Mark Rolfe, a Chartered Trading Standards Practitioner, expressed deep concern that the proposals, which depend on civil law enforcement, don't provide certainty and said: "*If I were designing a system where I wanted to ensure there would be no enforcement, this is what I would design*". He likened the lack of penalties to parking in London, noting that many would reason it is cheaper to pay the penalty than to park in the car park.

This is not good enough under any circumstances but is especially cavalier where food is concerned.

Traceability is not just a tick box exercise. It is essential to identify contamination and fraud, to inform manufacturers and allow consumer choice.

When a food product is recalled due to a safety concern, it can result in significant economic losses for everyone involved in the supply chain, including farmers, processors, distributors and retailers.

The FSA's own research has noted that recalls can have a profound effect on the UK economy. Food hypersensitivity-related hospitalisations, for example, cost the UK around £80 million a year. For major retailers the cost of a recall due to cross-contamination or the presence of unwanted allergens can be on average £1 million per recall.

Without traceability, it can be difficult to ensure legal and regulatory compliance for genetically modified products. In 2000, America's corn farmers faced a sudden collapse of international and domestic demand for all varieties of US corn. Prices fell considerably when analysis by a private laboratory found genetically modified StarLink corn in taco shells. StarLink had been approved for commercial use by the US government, though that use was limited to animal feed. It was estimated that the short-term cost to farmers was $500 million. A class action suit was settled for $110 million against the manufacturer of StarLink.

Tracing products through the production and distribution chains should be part of the regulatory framework with the objective of a) facilitating control and verification of labelling claims; b) targeted monitoring of potential effects on health and the environment, where appropriate; and c) withdrawal of products that contain or consist of genetically engineered (including gene-edited) organisms where an unforeseen risk to human health or the environment is established.

The more genetically engineered and gene-edited products that are put on the market, the more complex traceability will become. Developers and manufacturers must accept that the right to release these organisms into the environment and food system is not a gift. It has to be earned through scientific rigour, the acceptance of limits and boundaries, transparent processes and investment in the infrastructure of traceability (e.g. detection and tracking through the food chain) so that citizens are protected and different types of producers are not negatively impacted.

10 | Scientific evaluation is not enough on its own

Our ask: Government and regulators must broaden assessment of agricultural GMOs, taking it beyond the narrow confines of laboratory science to include ethical, environmental, social, economic, legal and cultural considerations.

Navigating the intricate landscape of genetic engineering demands that we address not simply what is technically feasible but also the values, interests and concerns of different stakeholders. Creating regulation – or indeed deregulation – without giving equal weight to these concerns and the diverse risks they represent is a procedural, policy and political failure.

A post-normal science (PNS) approach can help avoid these failures. PNS is a legitimate framework for decision-making. It recognises that in situations where the stakes are high, the facts are uncertain, values are in dispute and decisions are urgent, scientific evaluation on its own is inadequate to provide clarity.

Key aspects of the PNS approach include:

- **The Precautionary Principle** requires that, in situations of scientific uncertainty, decision-makers should err on the side of caution and take actions to avoid harm. In the context of agricultural genetic engineering, this could mean a requirement for rigorous safety testing of genetically engineered organisms and processes before they are allowed to be released into

the environment or the food supply. This principle can also inform the need for ongoing monitoring of these organisms to detect any unforeseen or slow to develop adverse effects.

- **An extended peer community** fosters a more inclusive and participatory decision-making process that involves diverse stakeholders, including scientists, policymakers, industry representatives, farmers and consumer groups. This ensures multiple perspectives and values are taken into account.

- **Institutional Reflexivity** allows for the fact that scientific knowledge is always provisional and subject to revision and decision-making, in contexts of high scientific uncertainty requires ongoing reflection and adaptation. In the context of agricultural genetic engineering, regulatory agencies should be open to revising their policies and regulations as new scientific information becomes available.

- **Transparency** is essential in the decision-making process, including the disclosure of scientific data, assumptions and uncertainties. In the context of genetically engineered food and ingredients, regulatory agencies should require transparency in the safety testing and regulatory review process. This approach can also involve the labelling of genetically engineered foods to allow consumers to make informed decisions about the food they eat.

11 | Uncertainty must be acknowledged

Our ask: Regulation should be based on fact, not supposition or promises. Where there are unknowns or where the science is contested, precaution and foresight should underpin regulatory decisions.

A recent paper in the prestigious journal *Nature*, called for biotech developers to stop "overselling" claims about increased yields which rarely materialise under real world conditions. The authors said:

"Especially in the context of climate change and a growing human population, the growth of misleading claims around yields has become a cause of concern to us."

They also noted that no single gene affects yield and those that do work in conjunction with soil, fertiliser use and geography and that claims of yield increases of 10% to 68%, when tested in the field are more likely to be in the region of 1% to 5%.

Exaggeration in order to grab headlines – or encourage investment – is not in the public interest. We do not have the time or resources to waste on disappointing or failed ventures.

Acknowledging uncertainty is an integral component of foresight – a rational method for anticipating, rather than predicting, plausible future developments and avoiding negative outcomes. Foresight, in turn, is integral to coherent legislation and regulation. It helps regulators consider the potential long-term consequences and unforeseen impacts of genetically engineered and gene-edited products, fostering a more comprehensive regulatory approach.

Acknowledging what we don't know can drive investment in research to better understand the technology and its impacts. Over time it can also future-proof regulation helping it to evolve as scientific understanding grows. Policymakers, therefore, should embrace uncertainty as an opportunity to adapt regulations over time, ensuring they reflect the most up-to-date knowledge and technology.

12 | A mandatory 5-year review

Our ask: A legally mandated review of progress and problems in the deregulation of genetic technologies in food, feed and the environment should be conducted at regular 5-year intervals.

By acknowledging and addressing uncertainty in a proactive, inclusive, transparent and evidence-based manner, regulatory agencies can strike a balance between fostering innovation and ensuring the safety and integrity of the food and feed system.

Implementing post-market surveillance and monitoring to track the performance and safety of products once they are in use helps identify and address any emerging issues or uncertainties.

To this end, regulatory frameworks should be designed to be reviewed and adapted as new information becomes available. This means reviewing regulations periodically – we suggest on a 5-yearly basis – and making necessary updates and amendments to reflect the latest relevant information and evidence.

This approach allows for the responsible advancement of genetically engineered and gene-edited products while safeguarding public health, the environment and consumer trust.

About Beyond GM and A Bigger Conversation

Beyond GM is a leading UK advocacy group in the field of agricultural genetic technologies. A Bigger Conversation (a Beyond GM initiative) works to contextualise and broaden the discussion around these technologies. Through both initiatives we strive to work constructively with diverse groups, including environmentalists, ethicists, social scientists, farmers, plant breeders, academics, civil society and citizen-focussed networks with the goal of ensuring that a) ethical, environmental and social utility issues are given equal weight to scientific considerations, and b) societal engagement and public interest balance commercial ambitions in the assessment/utilisation of genetic technologies in food, farming and nature.