

Developing a smart legal framework for emerging food technologies and future innovation

Executive summary

- The UK has an opportunity to develop an agile legal framework that supports both emerging food technologies (food tech) and innovation more broadly.
- There are challenges ahead around language and labelling – with the capacity to accommodate or hinder innovation in food tech.
- Businesses need clarity, and they will require skilled support to navigate changes in the legislative and regulatory architecture. A centralised scheme may help with this.
- Responsive laws and regulations for emerging technologies demand multi-level stakeholder inclusion. The creation and implementation of a cross-departmental unit (a committee or APPG) will support with this.

Introduction

The pace of change for innovation in food systems alongside uncertainties post-Brexit, and the challenges posed by novel biotechnologies like cell-cultivation and precision breeding in particular, has brought the UK to something of a legislative crossroads.

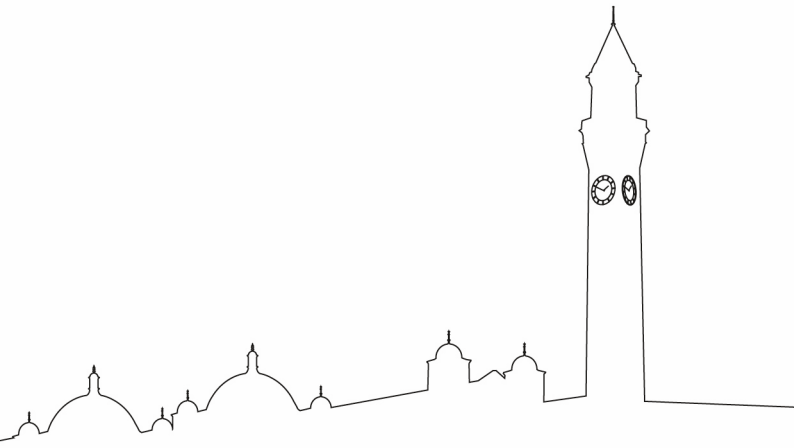
More precisely, regulatory frameworks to accommodate (or hinder) the placing on the market of novel food tech products like cell-cultured meat are in the process of being adopted in other countries, presenting different regulatory pathways for dealing with new biotechnologies.

In the UK, the Genetic Technology (Precision Breeding) Act [PBA] received royal assent earlier this year, establishing a novel framework for the release and marketing of, and risk assessments relating to, precision bred plants and animals, including derived food and feed. It provides a legal basis for novel products that were previously caught in regulatory ambiguity, primarily because regulations in force predated the new biotechnologies.

The PBA represents an important step in de-coupling the UK's legislative direction on highly regulated sectors from the EU and towards a US-style model. But in doing so it also poses important questions about how the UK can deploy future-proof, agile laws that help agri-food innovation sectors to catapult effective climate change mitigation strategies, ensure resilient food systems and conserve public trust, as well as public health.



Background Briefing



How we approach such questions is vital, because they cover a host of crucial legislative, regulatory and policy considerations including (but not limited to) competition and anti-trust, foreign direct investment (investor capital flows), subsidies and procurement (incentives to industry), trade law (international standards), intellectual property, product liability, consumer protection, domestic and international dispute settlement - particularly those related to country of origin rules.

This wide array of potential pathways presents an opportunity for the UK to pioneer smart, responsive and agile regulatory frameworks that both protects consumers and enables innovation, while setting a benchmark for future decisions about emerging disruptive technologies more generally.

Key Considerations

The importance of language and labelling

The importance of language is particularly pronounced in global food legislation, where the legal meaning of selected foodstuffs is embedded in standards of identity and contingent upon the terminology used to conceptualise them.

In the case of cell-cultivated meat, this primarily centres on fundamental questions around what is 'meat' and what is 'meat substitute', for example, presenting specific challenges for global food supply chains and the resulting impact on free movement of novel products internationally.

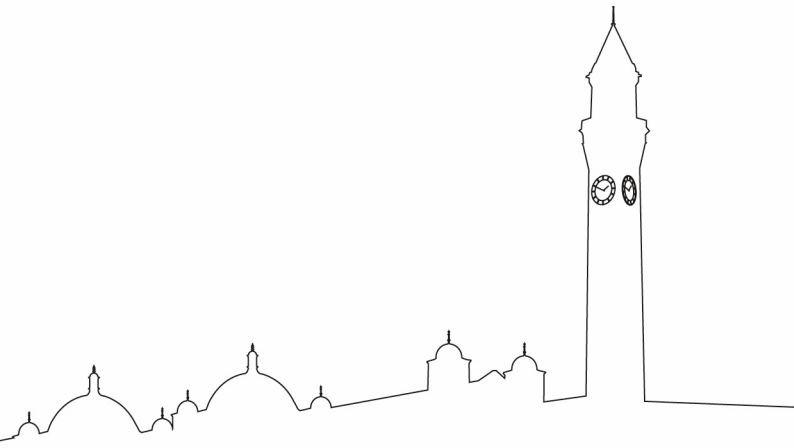
If recent regulatory activity about cell-cultivated meats as well as strategic trademark litigation are any indication - most pronouncedly in the United States (US) and the European Union (EU) - the labelling of foods produced using cell cultivation technology is likely to become increasingly contentious within established billion-dollar food industries.

The success of any new legislative framework therefore, and indeed the ability to have UK-based cell-cultured foods succeed in gaining global market access, will largely depend on our ability to remove, or at least mitigate, the linguistic ambiguity in our regulations and, where possible, in international standards, with a specific focus on food labelling.

Because labelling through trademarks is key to product differentiation, names have significant impact on market access and thus, consumer acceptance - another key consideration when introducing cell-cultivated foods to the market. At this point in the UK's legislative journey and in the cell cultivation technological maturity stage, the discussion should focus on whether the existing regulatory architecture is well-equipped to address these terminological challenges.



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Exploring smart, responsive and agile regulatory alternatives

One of the core benefits of developing a new legislative framework is the opportunity to reap the benefits of diverging from established ways of thinking to enrich the regulatory and policy environment with fit-for-purpose structures.

For example, recent case law on Article 20 of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) with its latest *de novo* interpretation reconciles the negative, exclusive rights conferred to trademark owners to extract economic value with the right of sovereign States to pursue and attain public policy objectives. This is significant, as it paves the way for further exploration of compliance with international obligations to address regulatory vulnerabilities. It also provides an opportunity to examine the fitness of domestic measures adopted with the objective to address exceptionally grave global problems, like climate change mitigation and food security - as these are at a higher risk of being legally challenged. Implications for recently and yet-to-be adopted free trade agreements are also worth examining further.

Taking account of public perception

In addition, we also need to contemplate the importance of public perception, how it is formed, and which elements thereof are ultimately codified in law, if the PBA and other legislative choices are not to suffer a similar public relations fate - as seen in the early days of the transatlantic genetically-modified organisms (GMO) wars that led to protracted legal battles.

In this regard, it is telling that early press coverage of the PBA has been largely limited to misleading headlines about gene-editing of pets, although the international scientific community has yet to reach consensus as to whether genetic editing is equivalent to genetic modification (the qualification between the two is important, as the predominant scientific majority at present considers that gene-editing does not involve transgenics, that is genes movement between species.)

Recommendations

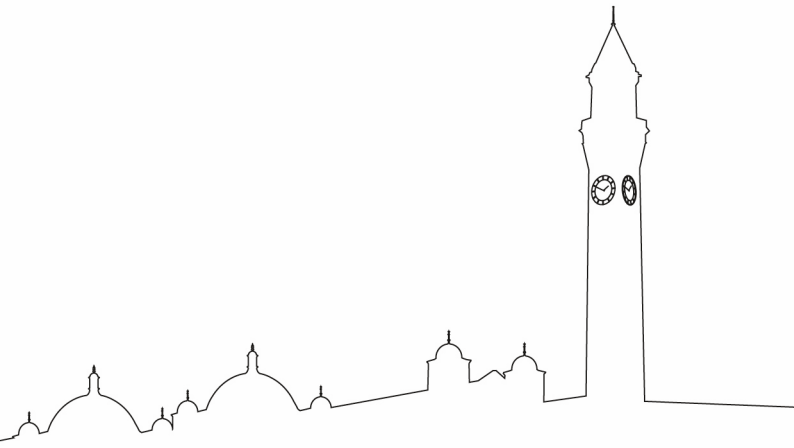
Clarity and support systems for businesses

The sustainable proteins sector, and food tech business in general, are anticipated to experience seismic growth in the coming decades.

Businesses in this industry need certainty about the UK's planned legislative and regulatory direction in order to plan for their own sustained growth. Moreover, it is likely that this need will be amplified by the emergence of a specialized innovation ecosystem, enabled by large tranches of public funding for scientific research and commercialization thereof, including startups across all elements in the food supply chain.



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These businesses will have pressing questions about applicable laws and regulations, which in turn will require dedicated expertise to properly guide them in an expedient and accurate manner. This will necessitate a ramp up of skilled professionals in a wide range of areas - law, management, logistics, engineering - both in national government and in the private sector, that can navigate the new legislative and regulatory landscape.

Singapore represents a successful model with FRESH – a UK equivalent would be welcomed.

Cross-departmental bodies to catalyse rapid action

The complexity of overlapping legal, regulatory and policy considerations requires the swift embedding of recommendations from the Advisory Committee for Social Science (ACSS) and the Food Standards Agency (FSA) more broadly. This needs to inform the long-term UK policy direction and is not only important for the smooth entrenching of legislation around cell-cultured foods, but also for developing legal frameworks as they apply to other emerging disruptive technologies, like quantum technology.

The conditions appear to be optimal to form a committee, or an APPG, to oversee and advise on how the UK develops legislation and regulation for emerging technologies more broadly. The remit of this group would go beyond cell-cultured foods, one that can support future-proofed smart, responsive and agile frameworks that enable innovation *and* act as a forum for the many government departments that will be interested in these new frontiers for law-making.

As such, they can provide consistency about how such frameworks are developed and ensure that institutional knowledge from other fields is shared accordingly. Doing so will allow the UK to be better placed to address other emerging needs and opportunities.

About the author

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Declarations

Dr Mariela de Amstalden is on part-time academic secondment with the UK Food Standards Agency (FSA). Any opinions expressed here remain her own.

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