



FERA COLLABORATIVE INSIGHTS

WHAT'S IN A NAME?

A response to Defra's
**Implications of Emerging
Novel Protein Sources
for Food Authenticity
and Labelling** report.

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Original thinking... applied



THE REPORT'S CORE FINDINGS

Defra has recently published a report, commissioned to Fera Science Ltd, focussing on potential emerging risks regarding authenticity and labelling of alternative protein food products. Discussed in this report are aspects such as how these products may fit under the current regulatory labelling framework, how current testing capability can support product authentication and detection of emerging fraud risks and future research needs in this sector.

Following this publication, and to continue the debate into the current challenges and future opportunities within the industry, Fera is producing a series of articles culminating in a webinar, bringing together key industry stakeholders, researchers, and representatives from regulatory bodies.

Authored by Rosario Romero, Science Lead from Fera Science with input from several subject matter experts in this field, Defra's report has the potential to shape our understanding of and inform future authenticity method development needs to ensure testing capability for alternative proteins and future research needs are considered.



In this brief article the co-authors delve into the key findings and the broader implications.



THE REPORT'S CORE FINDINGS

The report, titled **Implications of emerging novel protein sources for food authenticity and labelling** provides an expert review of the information available in relation to potential food labelling and authenticity risks associated with alternative proteins (AP).

Its findings can be distilled into several key themes:

KEY FINDING 1

Currently, not much consideration has been given to potential food fraud in the alternative protein sector, as most of the effort has been focused on developing products and associated technologies.

KEY FINDING 2

The use of new production and processing techniques as well as novel sources of protein may present challenges for current analytical methods for food authentication.

KEY FINDING 3

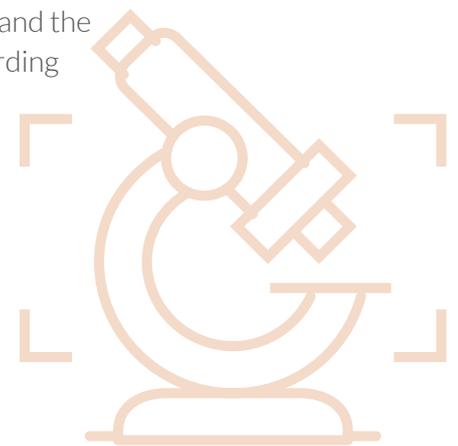
In addition to analytical methods, the wider food supply chain control systems must evolve to accommodate increasing complexities.

KEY FINDING 4

Labelling of AP faces two important challenges concerning the use of descriptors and imagery traditionally used for animal-derived foods and the question of transparency regarding methods of production.

A Synergy of Findings & Expertise:

In this article Rosario and Chris Bryant, Bryant Research, talk about Food labelling challenges for alternative proteins (UK & Internationally).



INTRODUCTION

from **Dr Rosario Romero**



Rosario Romero
Science Lead, Novel Foods

As with traditional food, the labelling of foods produced from alternative proteins must be regulated.

The Defra report identified two main points of debate around labelling of alternative proteins globally:

- (i) the concern about the use of descriptors traditionally used for animal-derived products to label and market substitutes made of non-animal protein, and
- (ii) the question of transparency about the methods of production.

Regarding names, as well as imagery used on labels, the regulations vary across countries and, with the fast development of novel products, the issue is a current topic of debate.

In the UK, food information and labelling are governed by the Food Information to Consumers Regulation 1169/2011.

This regulation outlines the general requirement for labelling to be clear, easy to understand, visible and not misleading as to the characteristics and nature of the food.

Additionally, the Common Market Organisation (CMO) regulations, retained from EU legislation dealing with sales descriptions for dairy, reserves the term milk, and various milk product terms exclusively for dairy.

However, meat terms do not have the same degree of protection, and descriptors such as 'burger' or 'sausage', as well as related imagery are used in the alternative protein sector.

Regarding methods of production, in some cases, there may be a conflict between providing transparency and the technical complexities of the methods.

Using terminology that is clear for consumers may be difficult, for example, there is debate about the most appropriate name for meat produced in vitro, as terms like 'cultured', 'cultivated', 'synthetic', 'lab-grown', etc, may be viewed by consumers as unclear or negative.

The evidence found during this research (stakeholder interviews, early consumer research found in literature, comments from a conference) mostly supports the use of traditional terms that refer to the format of the product (burger, sausage, etc) as long as the label clearly states the non-animal source.

Further research into consumer perceptions of alternative proteins will continue to shed light on consumer's understanding and preferences with respect to labelling.



OVERVIEW & OPINION

from **Dr Chris Bryant**



Dr Chris Bryant
Bryant Research

From France to Finland, and Switzerland to South Africa, calls to restrict the use of animal-derived terms for alternative proteins have become common.

These restrictions are typically proposed by lobbying groups representing the meat and dairy industries – ostensibly, to prevent such labels from misleading consumers.

However, there is no evidence that consumers are confused or misled by terms like ‘vegetarian burgers’ or ‘oat milk’. In a recent UK survey, consumers were able to correctly identify dairy and dairy alternative products in 73–93% of cases. A survey in Australia found that 96% of people had never accidentally bought a plant-based product under the misapprehension that it was an animal product.

Moreover, experimental evidence from the US suggests that consumers are able to accurately identify plant-based products using such labels, and that failing to use these labels actually increased confusion about what the product was.

Indeed, looking at the packaging for such products makes it abundantly clear that consumers are not being misled.

The actors who are seeking to restrict such labelling claim that consumers are being deceived by product names including ‘vegetarian sausages’ and ‘THIS ISN’T CHICKEN’. In the UK, regulators are considering banning the product name ‘THIS IS NOT MILK’ in case people think that it is milk. It is no wonder that a plurality of consumers say food companies should be allowed to use these terms, while only a small minority disagree.

In the case of novel foods like cultivated meat and seafood, a failure to accurately label products as ‘cultivated seafood’ could be dangerous for consumers with allergies.

This may also be the case for precision-fermentation-derived eggs and dairy products; in each case, labelling these products with their animal terms will avoid any confusion with respect to allergies. Some products, like precision-fermentation dairy, may not include lactose, in which case further clarifications can be made in the ingredients.

There could be cases where product labels mislead consumers – but there is no sense in banning labels like ‘milk’ when they are clearly accompanied by qualifiers like ‘plant-based’. Restricting such labels would increase consumer confusion, impose undue costs on alternative protein companies, and put up unnecessary barriers to the growth of the alternative protein industry.

Happily, regulators appear to be endorsing this common-sense view to a large extent. In 2020, the European Union declared that plant-based meats were permitted to use terms such as ‘burger’ and ‘sausage’, while the US decided in 2023 that plant-based milk products could continue to use the word ‘milk’. In both cases, regulators decided that these terms were clear and informative, if used with appropriate qualifiers. Choosing to restrict these terms in the UK would mean that our regulations are incompatible with those of other nations and would put further roadblocks in development of the UK’s growing alternative proteins sector.



CORE FINDINGS

Implications and Future Directions

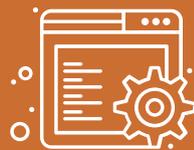
The implications of this report are far-reaching. Its findings have the potential to catalyse innovative developments, offering fresh avenues for research, industry practices, and policy-making.

As we move forward, it is essential to consider the following:

1 It is important that labelling of novel food products provides clarity and helps consumers to make informed choices. Collaboration between industry and regulators is essential to achieve this.



2 R&D is required to develop analytical tools to support food authenticity of alternative proteins and novel foods.



3 Research is needed to identify and address points of vulnerability in the supply chain and analyse fraud in the alternative protein sector.



This will inform improvements to control and development of testing tools to support risk mitigation. Engagement with big data, artificial intelligence, block chain initiatives and their application to food authenticity are regarded as a promising avenue.

Conclusion

Alternative proteins are an emerging and very dynamic sector, and much of the efforts so far have been focused on identifying suitable sources and advancing the technologies. Therefore, there are still important research gaps, certainly regarding the topics of alternative proteins authenticity and related methodologies. This report provides an initial assessment of these issues, however, further research will be needed as the sector progresses, some of the emerging products become established and further data becomes available.



Click here to access the full report and delve deeper into its findings.