



## Food System Horizon Scanning Expert Panel

### Background

As part of our new approach to foresight, we undertook a horizon scanning exercise in March 2021 to look at some of the key changes that might emerge in the UK food system over the next 15 years. The central part of this was an expert elicitation exercise consisting of academics, food industry representatives, representatives from other government departments, and third sector representatives.

### Purpose of the panel

The expert elicitation panel was intended to inform the development of a roadmap of likely developments in the UK food system as they apply to the mission of the FSA. These will be used to support our ongoing strategic assessment of the environment for the FSA.

It should be noted the panel was not intended to produce a consensus. It was intended to understand the range of opinion and some of the areas where there might be increased uncertainty. As such, membership of the panel does not entail agreement with any of the outputs.

### Approach

There were two stages to the panel. The first was an initial survey issued to a broad range of participants asking what they thought the five key emerging trends in the UK food system would be in the next 5 years, the next 6-15 years, and how they would impact on the UK food system. We then also asked them specifically about any emerging technologies in those timeframes that would have an impact. These were open ended questions to allow respondents as much latitude as possible in their responses.

The second stage was an online discussion forum open for two weeks to all those invited to take part in the survey. Outputs from the initial survey were included on the forum and a number of discussion threads were created, with users having the option to request additional threads. This was intended to allow interaction between expert panel members to develop a richer picture of some of the survey outputs and allow the panel members to explore each others views. The panel was administered by the Strategic Insights team in the FSA, but interaction from the team was minimal with the emphasis on the panel members. The panel was undertaken under Chatham House rules to support open discussion.

## The panel participants

Over 300 individuals were invited to take part, including several from the FSA Science Advisory Councils.

		Responded to Survey	Members of the forum (able to view the discussions)	Actively participated in the forum (either commented or voted)
<b>Sector</b>	<b>Academia</b>	55%	52%	55%
	<b>Government</b>	12%	13%	8%
	<b>Industry</b>	25%	25%	20%
	<b>Professional Body</b>	2%	4%	4%
	<b>Third Sector</b>	6%	6%	14%
	<b>Overall numbers</b>	89	109	51

Table 1: number of participants at various stages of the elicitation process and their background.

## Initial outputs

The overall outputs of the panel are still being analysed and integrated with the other horizon scanning activity that has been undertaken within the FSA. However, some of the initial outputs from the survey and the discussion forum are available below. While this is broadly representative of the views of panel members, membership of the panel does not signify agreement with the overall findings.

## In the next five years... a quick overview

Your responses have been segmented into broad topic areas, with the four main areas here, the size of the circles showing their relative prevalence in your responses. Health was by far the biggest segment, although a lot of the trends had substantial cross overs with sustainability. Bullets in bold are those that were particularly common, irrespective of the segment they were in.

As we go through the week we will release more information on the responses that came in and add additional topics in the forum to discuss them.

- **Increase in consumption of plant based foods.**
- **Introduction of new protein sources, some lab created, other sourced naturally (e.g. algae, insect).**
- Increased consumer desire for food perceived to be healthy.
- Diets based on personalised nutritional requirements.
- **Consumers seek food that they perceive to be more environmentally friendly and sustainable.**
- **Packaging shifting from single use plastics to new more sustainable alternatives.**
- Reduction of waste material across the food system.
- Better understanding of the environmental impact of the food system and our choices.

Health

- **Following the exit from the EU, uncertainty over the longer term import/export situation in terms of trade partners, and what will be available, will persist.**
- **Import partners will change.**
- **Food insecurity will increase as some groups in society continue to struggle financially.**

Sustainability

Economics

Evolving operating models

**The shift to the use of online and digital buying will continue.** This will be cedepondant with an increased availability and use of data for consumers, and suppliers. If leveraged correctly this will help consumers to make informed choices, and businesses to better manage their production and supply.

More general themes:

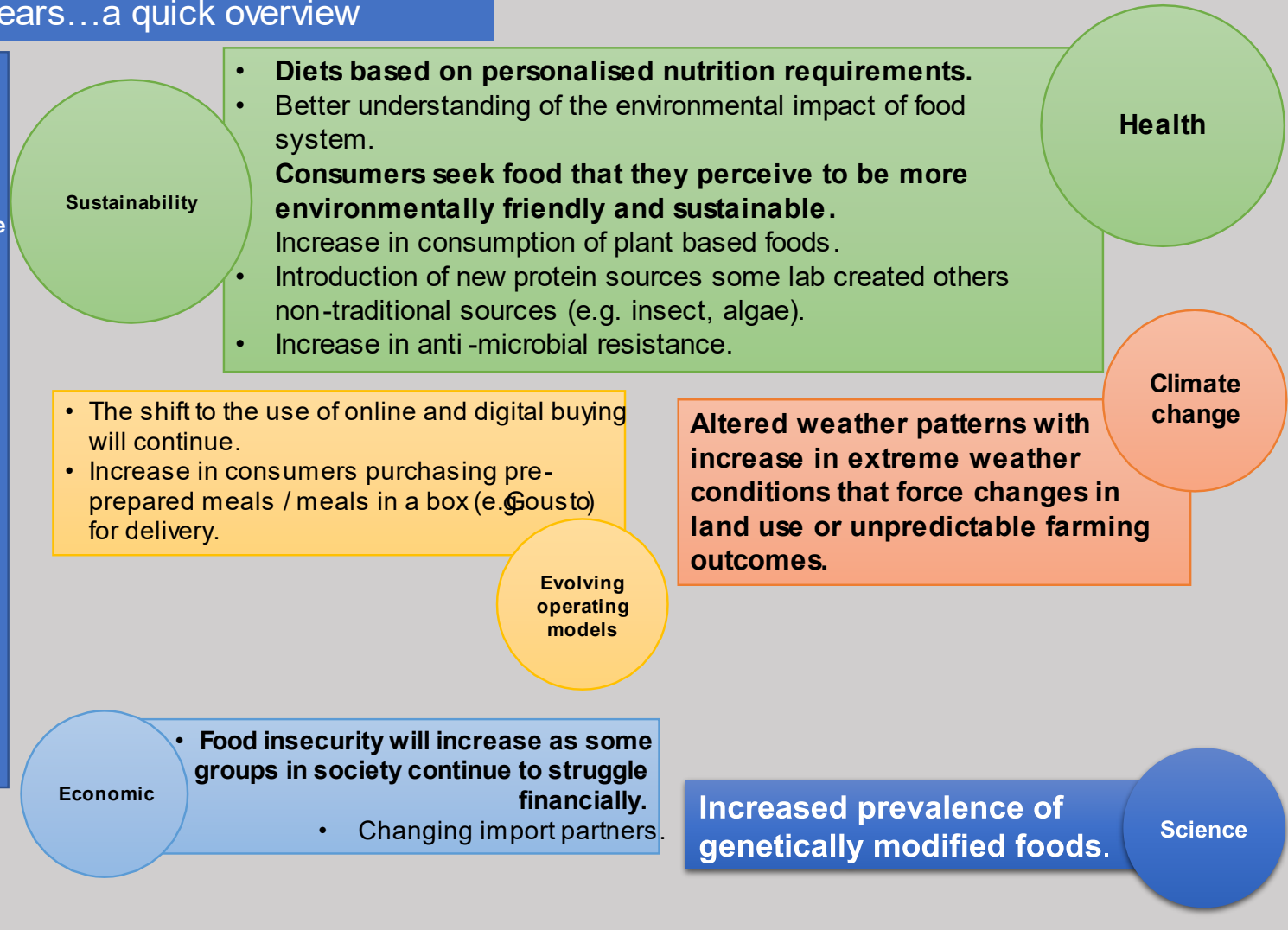
- **Climate change will continue to alter weather patterns and start to impact on land use and farming outcomes, although this is more prominent in the 6-15 year timeframe.**
- Consumers will be better educated about their food choices.
- Genetically modified foods will become more common.
- UK farming shifts towards more sustainable practices. This will be partly process based, and partly around improved technology. There is a risk that economic barriers to this will leave some farmers behind though.

In the next six to fifteen years...a quick overview

Your responses have been segmented into broad topic areas. The size of the circles showing their relative prevalence in your responses. Bullets in bold are those that were particularly common, irrespective of the segment they were in.

There is broad continuity with the 0-5 year timescale with some minor differences. There were a slightly broader range of issues raised. Climate change was much more prominent, the most frequently mentioned single factor. Linked to this, sustainability was slightly more prominent alongside health. Genetically modified foods were identified as a more prominent trend in this period as well. Although bracketed under Science, this had links to consumer attitudes towards GM foods.

Personalised nutrition was also a much more prominent trend in this period.



The panel were also asked questions specifically about emerging technologies and where they might impact.



The next five years

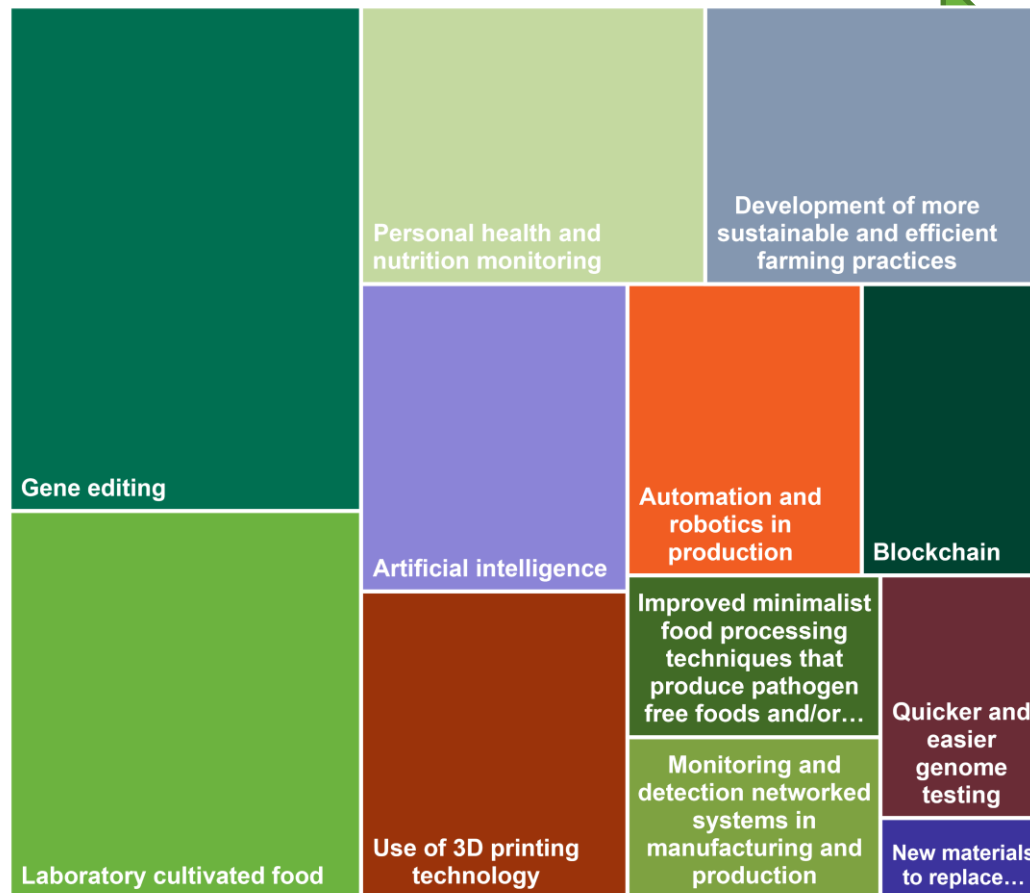


Chart 2: the prevalence of different technologies in the survey responses.

Gene editing	New materials to replace plastics	Personal health and nutrition monitoring	Development of more sustainable and efficient farming practices
	Artificial intelligence	Monitoring and detection networked systems in manufacturing and production	Quicker and easier genome testing
Laboratory cultivated food	Blockchain	Automation and robotics in production	Improved minimalist food processing techniques that produce pathogen free foods and/or extend shelf life

## Forum Discussion

The forum discussion built on some of these issues, with discussion based around topic threads. There were 25 threads, with over 200 comments. The most discussed threads were:

- Priorities for the FSA in the next two years.
- Necessity vs preference for consumer buyer decisions.
- Challenges for food regulation.
- Most likely trends in the next five years.
- Food as medicine.
- Key publications when thinking about the future of the food system.
- Opportunities for a more sustainable food system.
- Laboratory cultivated food vs ‘natural’ food.

Panellists were also asked to vote on two areas. The first was a series of forecasts of changes in the food system. These were intended to support an understanding of not just how likely certain changes might be, but also the range of uncertainty around these changes. These are being integrated into our wider horizon scanning research and analysis program. The second was where they believed FSA priorities should be over the next two years (see below). Panellists were given two initial suggestions but were then able to suggest their own options. These have also fed into our horizon scanning programme, and internal planning discussions.

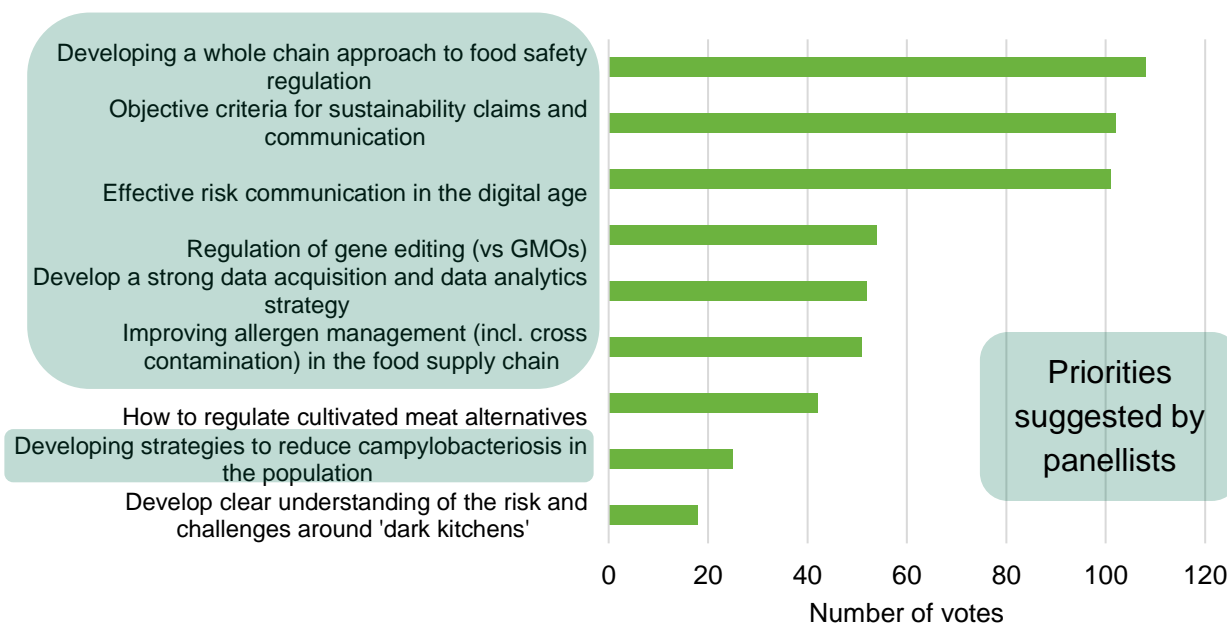


Chart 3: panellists suggested priorities for the FSA over the next two years. A ‘dot voting’ system was used so each panellist could assign multiple votes to topics to indicate relative priority.

## Next steps

The panel proved a valuable way of gathering expert opinion in a timely manner and helping to build a richer picture of what the future might look like for the UK food system.

The findings have already been fed into strategy discussions with the FSA Executive Management Team and Business Delivery Group to identify priorities for actions. The Strategy Unit will continue to lead these discussions.

The next steps will be to:

1. Continue to integrate the findings into our foresight activities as outlined in the board paper.
2. Build on these mechanisms for expert elicitation and explore how this might be used to broaden participation and incorporate wider citizen views.
3. Panel participants were asked if they wished the forum to continue and 94% who responded wished for the discussion forum to continue. We will use the insights from the horizon scanning program to conduct more focused analysis with the panel on priority areas.