

FSA Update: Science Evidence and Research Division Update

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1. Summary

1.1 This paper is primarily for information only and provides an update on recent developments within the Science Evidence and Research Division on the FSA that may be of interest to the Science Council. However, Science Council members are encouraged to offer their input on any item, specifically how they might want to be involved.

1.2 The developments are associated with:

- Areas of Research Interest
- Strategic Evidence Fund
- Sampling and Laboratories
- Staffing
- Other Items

2. Areas of Research Interest

- 2.1 There is a cross-government initiative to increase collaboration both within government and beyond. By increasing our external collaborations, and making them more targeted, we will deliver better value for money and help ensure academic research has a pathway to impact.
- 2.2 In order to better prioritise our R&D and have assurance we are investing in the right science we need to be clear on the research questions that the FSA needs to address to ensure we are not perceived as self-tasking. This ensures our science has impact and its value can be realised.
- 2.3 By publishing a revised set of FSA Areas of Research Interest (ARIs) and taking a programme approach to the delivery of R&D we are addressing external and internal requirements.
- 2.4 The Areas of Research interest were presented to Science Council at the December meeting (SC Ref. SC 6-4i). In the intervening period, there has been further validation of the questions and a revision of the structure to combine a top-down and bottom-up approach to ensure the needs of all stakeholders within

the FSA were considered. The top-down approach ensured that the key research themes are aligned with organisational strategic priorities to enable strategic and targeted external engagement. The bottom-up approach ensured that all the research questions that needed to be addressed to enable the FSA to deliver its remit were identified (over 160 discrete research questions were collated) to ensure all science activity is driven by organisational needs. These two approaches allowed us to identify 11 research programmes that sit under the research priorities to enable a coordinated approach to the delivery of research. The 4 priorities are:

- (a) Food hypersensitivity & allergy
- (b) Evidence-based food safety risk management
- (c) Innovation in food regulation
- (d) The future of food systems

2.5 The 11 programmes are the FSA ARIs, and a graphical representation of how the top-down and bottom-up approach are combined are listed in the annex to this note.

2.6 The approach, and themes and research questions have now been endorsed and publication is imminent. Once the ARIs are published there will be an internal review on how best to deliver the science undertaken by the FSA as R&D programmes rather than discrete pieces of research and the Science Council will be updated on this at a future meeting.

3. Strategic Evidence Fund

3.1 The Science Council were provided with an introduction to the FSA Strategic Evidence Fund (SEF) at the December meeting (SC Ref. SC 6-7i). Since December the FSA has committed to continued funding to the SEF until 2023 with year on year increases to ensure the fund can continue to deliver the value it has to date.

3.2 In the update we presented an aspiration to have £500k of new SEF projects initiated in FY 20/21. Despite the impact of Covid-19, we have already reached this figure.

4. Sampling and Laboratories

4.1 Sampling is critical to informing the work of the FSA and other key stakeholders, including local authorities (LAs); acting as a mechanism to maintain the safety and authenticity of the food supply chain, and supporting the FSA's statutory obligations as a regulator. While sampling is essential to the FSA's work, it needs to be done in an effective and targeted way, to ensure the right areas are targeted and effective action is taken to deliver positive outcomes.

4.2 In June 2019, the Board was presented with a proposed future high-level strategy for sampling. This outlined the need for sampling data as a core component of the FSA's wider surveillance programme, creating a system where sampling data are collected, integrated with data collected through other methods (e.g. open data sets), and that was effectively used to inform decision making and targeted action.

4.3 In the last 12 months good progress has been made in recruiting staff to the team, developing the strategy in more detail and making progress on better coordination through the establishment of a cross-government sampling coordination group involving FSA, FSS and Defra.

4.4 In addition to the wider components of the sampling and laboratory programmes, work is underway to ensure the FSA sampling programme and laboratory system is ready for the end of the EU Transition Period including ensuring that the requirements of the Northern Ireland Protocol (NIP) for OCL and National Reference Laboratories (NRLs) are met and that functions currently delivered by the EU Reference Laboratories (EURLs) are replaced.

4.5 To compound the implications of EU Exit, Covid-19 has also had impact on the laboratory system and therefore a short term work programme has been initiated as part of the wider sampling and laboratory strategy to provide reassurance that our food is safe, inform post-Covid-19 priorities and maintain a level of sampling in the food system. This workstream will support the longer capability of the OCLs through providing funding for surveillance sampling, method validation and knowledge exchange programs focussing on priority areas for the FSA and Defra.

5. Staffing

- 5.1 In the preceding 6 months, despite limitations imposed by Covid-19, an additional 10 members of staff have been recruited to SERD to fill vacancies or further enhance our science capabilities. In addition, recruitment for another 12 members of staff is currently underway to bring new expertise into SERD.
- 5.2 One of the roles currently in the process of being filled is for a new post to specifically provide additional support to the Science Council as the Science Council Project Officer. This role will take over responsibility for delivering Working Group 5 and will be a dedicated resource to deliver the SERD input into future working groups.

6. Other items

- 6.1 In addition to the main items mentioned above, there are a series of other developments that the Science Council may be interested in. They are:

- SAC and Science Council recruitment. Following a successful campaign, we have recruited 8 members to the SACs and 3 to the Science Council strengthening our science assurance.
- CODEX allergen labelling review. The International Social Science Liaison group's review of literature on allergen labelling, led by SERD and FSANZ has been circulated in draft to the Codex e-Working Group on Labelling. If it is supported as a conference paper for the next meeting (as they have proposed), it will be the first time that social science evidence has been officially taken at Codex.
- Strategic Priorities Fund (SPF). An expression of interest for a Wave 3 SPF bid is being submitted with the Biotechnology and Biological Sciences Research Council (BBSRC) & Economic and Social Research Council (ESRC). Focused on foodborne disease, if successful, it will create a circa £20M research pot to help develop new national capabilities in this area, aligned to the FSA's priorities as identified in our ARIs. This comes off the back of the ongoing partnership we have been building with BBSRC over the last year.

7. Discussion

- 7.1 The Science Council are asked to consider the information in this paper and provide any comment on how they might want to engage in any item identified.

ANNEX – research priorities and questions

N.B only some research questions are shown (over 160 identified to date)

FSA Priority (Top-Level Strategic Science Priority)

Food hypersensitivity & allergy

Research Theme (Programmes) and input from experts across the FSA (Research questions – Projects)

Theme: How can the FSA protect the UK consumer from the health risks posed by food hypersensitivity?

- Expert input: How can advanced approaches for food labelling be used to protect UK consumers with hypersensitivity?
- Expert input: What are the mechanisms that affect the development of and tolerance to food hypersensitivity?

FSA Priority (Top-Level Strategic Science Priority)

Assuring food safety and standards

Research Theme (Programmes) and input from experts across the FSA (Research questions – Projects)

Theme: How can the impact of chemical contaminants in food be assessed and minimised?

- Expert input: What are health effects caused by the consumption of food contaminated by chemical(s)?
- Expert input: What are the sources of microplastics in the food chain and how do they affect human health?

Theme: How can the FSA better understand and reduce the impact of foodborne pathogens?

- Expert input: What pathogens are present in food?
- Expert input: What is the burden of foodborne disease?

Theme: How can the FSA improve the evidence base concerning AMR and food?

- Expert input: What is the role of food including its production and storage in the transition of AMR?
- Expert input: What is the impact of food processing on the presence of AMR bacteria?

Theme: What is the role of food safety in nutrition and health?

- Expert input: How do interactions between food nutritional content and human health need to be considered to facilitate production and consumption of safe, healthy diets?
- Expert input: How do changing trends in food consumption and diets effect consumer health?

FSA Priority (Top-Level Strategic Science Priority)

Innovation in food regulation

Research Theme (Programmes) and input from experts across the FSA (Research questions – Projects)

Theme: What role does behaviour and perception play in ensuring food safety?

- Expert input: How can the FSA build understanding of trust/worthiness in the food system?
- Expert input: What is our understanding of the interests, values and preferences of a rising generation of consumers who are 'digital natives'?

Theme: How can data and digital innovations be used to create a safer food system?

- Expert input: What is the role of big data and data science to better understand risks, uncertainties and complexities for food safety?
- Expert input: How can the FSA respond to, encourage interaction with, and responsibly exploit third party data and innovations in digital technologies?

Theme: How can the FSA remain at the cutting-edge when developing and implementing food regulations?

- Expert input: Which problem-solving techniques and analytical methods could the FSA apply in the pursuit of improved decision-making and efficiency?
- Expert input: How can the FSA improve risk assessment models to account for modern farming techniques and technologies?

FSA Priority (Top-Level Strategic Science Priority)

The future of food systems

Research Theme (Programmes) and input from experts across the FSA (Research questions – Projects)

Theme: How can the FSA remain responsive to emerging challenges and opportunities?

- Expert input: How can the FSA identify and respond to events which could have unforeseen rapid changes to food quality and safety?
- Expert input: How could changing trade patterns impact food safety?

Theme: What is the impact of novel and non-traditional foods, additives and processes?

- Expert input: How can advances in alternative proteins impact the UK food supply chain?
- Expert input: What are the impediments for the uptake of bio-based food contact materials and other alternatives to plastics?

Theme: What is the impact of food crime, and how can it be better detected and monitored?

- Expert input: What are the longer-term future food crime risks from changes to global food systems?
- Expert input: How can we most accurately map the purchase, usage and harm resulting from high harm commodities?