

# Areas of research interest

Areas of research interest (ARIs) give details about our research priorities.

A strong, scientific, evidence-based approach has been, and will always be, integral to our mission to ensure food is safe, is what it says it is, and to empower consumers to make informed choices in relation to food. We use science and evidence to tackle the challenges of today, to identify and address emerging risks, and to ensure the UK food and feed safety regulation framework is modern, agile and represents consumer interests.

[The FSA strategy 2022-2027](#) states that we base our decisions on science and evidence, and we produce insights and analysis that inform our own work and the policy and practice of other organisations in the food system. This includes expert advice provided by our independent [Scientific Advisory Committees](#) and [Science Council](#), and making all of our [research outputs publicly available](#), as part of our commitment to being open and transparent.

The issues influencing food and feed safety and standards, and consumers' possible exposure to them, are wide ranging, meaning our Areas of Research Interest (ARI) are broad. Our ARI are research questions we want to address to promote and protect public health by ensuring that UK consumers are well informed and have sustainable access to foods which are safe, traceable, and properly labelled.

The FSA first published its ARI in 2017 and a revised set were released in 2020. Our 2022 ARI have been updated to align with the FSA Strategy 2022-2027, which will now have a new focus on 'food that is healthier and more sustainable,' alongside the established pillars of 'food is safe' and 'food is what it says it is'.

Our presented themes form the backbone of our future research ambitions, providing evidence for our policy, advice and operations, highlighting current strategic priorities.

By disseminating, communicating and regularly reviewing our ARI, we aim to be better prepared for the future by growing our evidence base and creating opportunities to:

- Build and extend collaborations with other Government departments, the devolved administrations, local authorities, industry, consumers (and groups that represent them) to enable a full understanding of the food system and the impact of interventions
- develop joint initiatives with [UK Research and Innovation \(UKRI\)](#) and other funders
- Engage with universities, research institutes and other research providers working at the cutting-edge of innovation, by commissioning research, co-designing new projects and supporting fellowships and scholarships to enable them to demonstrate significant impact on the food system and consumer protection
- Undertake research and development to assure high standards for food safety sampling, including within the Official Control Laboratory system, supported by the [UK's Food and Feed National Reference Laboratories](#)
- Contribute to prioritisation activities of partners including those within the [UK Food Safety Research Network](#)

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Our Chief Scientific Adviser, Professor Robin May

Our ARI are not a direct invitation to tender. The department's research calls are published and procured through [a tender portal](#) and details of new UK Governmental research tenders are also available on [the contract finder website](#).

We encourage researchers to contact us with summaries of recent findings or plans for research that they feel is relevant to the FSA's remit. We may also provide expressions of support for applications to other funders describing research that will deliver evidence relevant to FSA priorities.

To discuss any of the information above on science engagement with the FSA and our ARI, [please contact us via email](#).

## Research priorities

We have identified four research priorities. Within each of these priorities, there are ARI which are the basis of our co-ordinated research and evidence programmes. Under each of these we have more detailed questions, giving a closer overview of the areas where we seek to advance and/or improve our scientific capabilities.

### Research priority one: Assuring food and feed safety and standards

At the heart of our role is the need to ensure food is safe and what it says it is, and in doing so protect consumers from risks within the food system and ensure high food standards. Core to this is a risk analysis process which relies on independent, science-led risk assessment and socio-economic analytical evidence, to support effective risk management decisions.

To assure food safety and standards, we must also recognise that the UK is part of an international food supply chain, where we only produce around 50% of all the food we eat in the UK. Our exit from the EU and push for wider international trade has further highlighted how we need to understand the role of trade and international differences in production systems and food standards.

Our ARI for this priority:?

- [What is the impact of chemical hazards](#) (including nanomaterials and microplastics) in food and how can we reduce it?
- [What are the impacts of foodborne pathogens](#) and how can we reduce them?
- [What is the impact of food hypersensitivity](#) (including allergies and intolerance) and how can we reduce it?
- [What is the impact of crime](#), including food fraud, on the UK food supply chain, and how can we reduce it?
- [What are the differences in food production systems and food standards globally](#) and how does this impact on trade and the food available to UK consumers??
- [What is the impact and risk of novel and non-traditional foods](#), additives, and processes on the food system, including on consumer confidence?

### Research priority two: Understanding consumers and our wider society

The FSA's mission is focused on protecting consumers and acting in the consumer's interest. It is therefore essential to understand what influences and drives behaviours across the food system. To act in the consumer interest within food policy and the food system, we must understand and monitor behaviours, changing attitudes and consumer-driven trends, and play our part in supporting safe, healthy, sustainable diet choices for all.

To implement effective policies, we need to understand what consumers think, feel, and do, and how these are changing, as well the differences between consumers, and how these impact on food security, food safety and public health.

Understanding the role of new and emerging markets and business models, and through these, the role food businesses play in driving behaviour and influencing consumer demand, is essential. This includes the development and introduction of novel foods (such as alternative protein sources or genetically engineered foods).?

Our ARI for this priority:?

- [How do consumers view and understand the food system](#), and balance their choices against multiple competing factors (including safety and standards, nutrition and health, choice, availability, affordability, sustainability, and welfare)??
- [What role does consumer and Food Business Operator behaviour and perception](#) play in ensuring food safety and standards??
- [What impact do food insecurity and other disparities](#) have on the consumer and the food system??

### **Research priority three: Adapting to the food and feed system of the future**

The 21st Century food system is characterised by its complexity and innovation. The emergence of Covid-19 and the subsequent pandemic put immense strain on the global food system and tested its resilience. It highlighted that, in this interconnected and fast-moving world, we need access to the best data, intelligence and horizon scanning to understand changes in the system, the impact of these, and how they create vulnerabilities.?

Global events, new consumer trends, changing business practices, and food innovation can all create new risks and opportunities. In this area, we need research and evidence to understand the potential for disruption in our food system and the impact of change. We need to be able to identify new and emerging food technologies and be prepared for the possible safety and other challenges arising from these novel foods and processes. This includes having an innovative, science-driven risk analysis process in place for regulated products.?

Our ARI for this priority:??

- [What are the risks and opportunities presented by shifts and disruptions in the food system](#), including new and emerging technologies, and how should we regulate food in the future?
- [How can the FSA continue to be an innovative and effective regulator](#) when developing and implementing food regulations?

### **Research priority four: Addressing global grand challenges**

The food system does not stand in isolation from global challenges such as climate change, plastic pollution and antimicrobial resistance (AMR). We are also facing major health challenges, including an obesity crisis, due to poor diet and nutrition.

We need to understand how these impact on the food system, either directly or as the result of mitigations/solutions being introduced and the role our science can play to help address these major threats. As an evidence provider, we will support cross-government initiatives, such as the UK AMR National Action Plan and Net Zero Strategy.?

Our ARI for this priority:

- [How can the FSA improve the evidence base concerning Antimicrobial Resistance \(AMR\) and food??](#)

- [What are the impacts of climate change](#), including society's efforts to mitigate it and adapt to it, on the food system?
- [How can we support the necessary transition to more healthy and sustainable diets](#), and what will be the impact on the UK food system, including food security, safety and standards?