



FSA

Rick Mumford
FSA

Food Standards Agency: problem statement

Prof. Rick Mumford

Deputy Chief Scientific Advisor & Deputy Director for Science &
Research, Food Standards Agency, UK

The FSA Strategy 2022-27



Our mission is **food you can trust**. We want to ensure that:



Food is safe: we all have the right to expect that the food we eat will not make us ill.



Food is what it says it is: when people buy food, they should be confident that it is authentic and described properly.



Food is healthier and more sustainable: we want to play our role in helping to ensure that food is healthier for people and more sustainable for the environment.



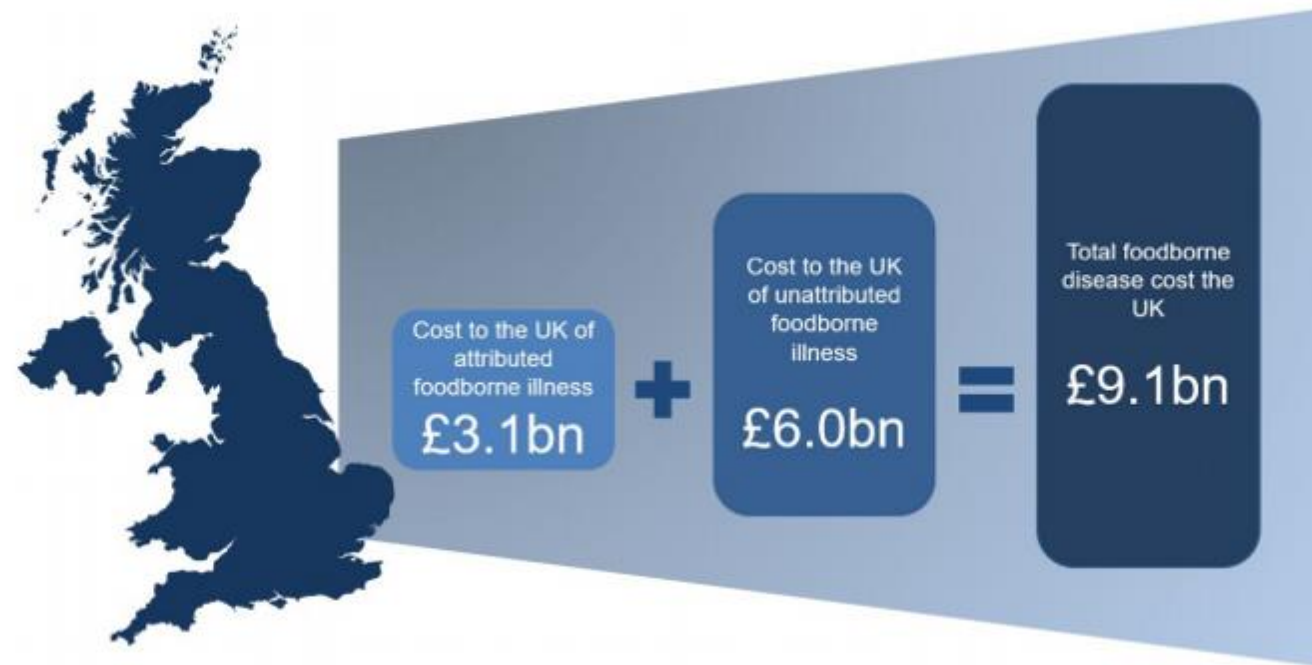
Challenges for food safety & standards

An Overview

Foodborne disease: cost of illness

The Burden of Foodborne Disease in the UK 2018

Figure 8: Total cost to UK society of foodborne disease in 2018



Foodborne disease threshold breaches

Fig.1: Campylobacter

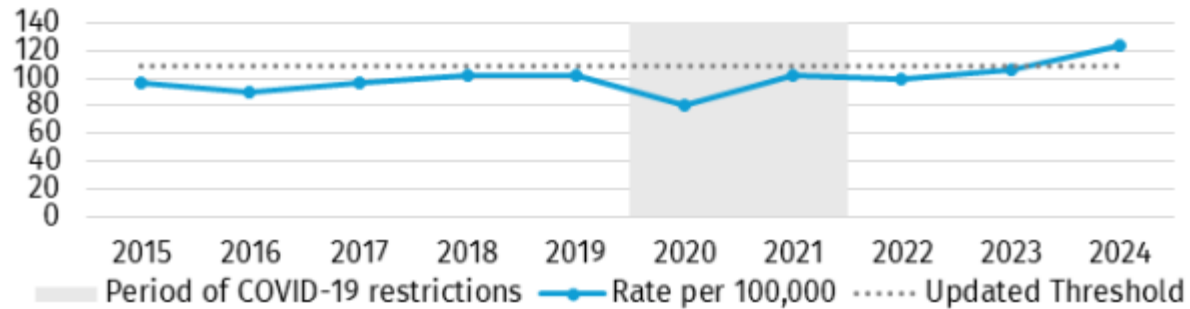
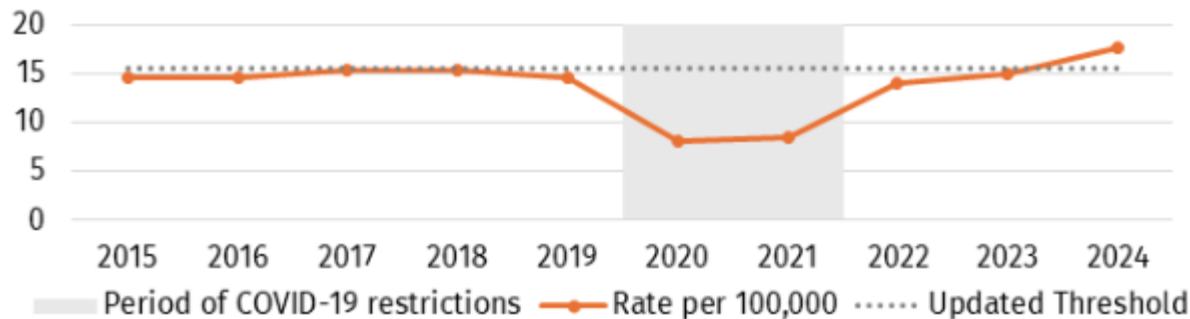


Fig.2: Non-typhoidal Salmonella



In June 2025, official data published by UK Health Security Agency (UKHSA)/Public Health Bodies for 2024 confirmed FSA threshold levels for Campylobacter and Salmonella had been exceeded.

Annual Report of Incidents, Resilience and Prevention 2024-25

FSA TOTAL NUMBER OF INCIDENTS



Fig A1 Total number of incident notifications received by the FSA, by the reporting year

Fig A4 Top nine incident notifications, by the reporting year



Food authenticity & crime

NEWS

FSA issues a precautionary warning to people with allergies not to eat Dubai-style chocolate

The FSA has found several Dubai-style chocolate products that do not meet the required food safety and labelling standards.

Food Alert For Action: Consumers who have purchased and Food Businesses who have purchased and sold Jolly Rancher products manufactured by The Hershey Company

News story

Understanding honey fraud and the role of authenticity testing

Article explores concerns over honey adulteration and the work of jointly funded Framework for interrogation of honey authenticity databases.

Rise in illegal meat trade a danger to UK – report



EFRA's report highlighted "enforcement weaknesses at the border"

National Food Crime Unit – Annual Update

[National Food Crime Unit – Annual Update | Food Standards Agency](#)

Rapid diagnostics to maintain food standards and regulatory compliance

Problem Statement

Targeting different food risks

Microbial (inc.
pathogens)

Chemical
contaminants

Allergens

Authenticity



Production &
processing



Trade



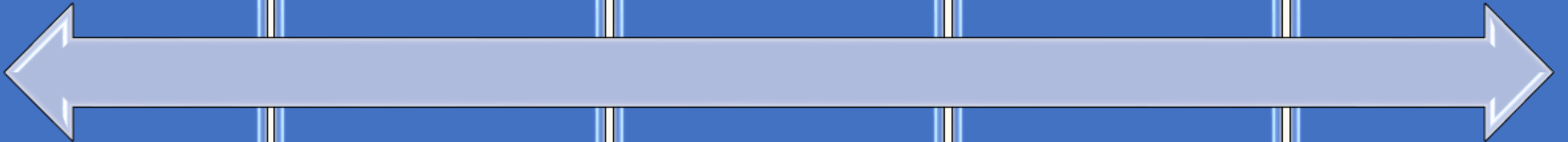
Food
manufacturing



Catering,
hospitality &
retail



Consumers



Potential applications within the food system



- Low-cost assessment of hygiene or contamination in food businesses
- Evaluation of food quality to prevent spoilage and food waste
- Improved risk prediction for foodborne pathogens spread through water and the environment e.g. irrigation or aquaculture.
- Rapid inspection tools for goods moving in trade
- Testing within food manufacturing or processing plants to support regulatory compliance.
- New tools to predict food safety risks associated with food produced using engineering biology e.g. precision fermentation.
- Solutions for verifying food authenticity or detecting food fraud.

Alignment to engineering biology



In scope

- Using engineering biology approaches to develop novel reagents to create new tests that could be deployed using existing platforms
- e.g. creation of new/modified binding proteins for use within a biosensor/lateral flow platform, or as part of a novel capture/enrichment system

Out of scope

- Taking an established DNA-based detection technology and designing additional tests or assays
- e.g. designing a suite of new real-time PCR assays



Thank you

