Our Food 2022: Safe and sound

Food incidents, food crime and surveillance sampling.

Food incidents, food crime and surveillance sampling

At a glance

In this chapter, we look at:

- the volume and nature of food and feed incidents reported in 2022
- the latest findings from national food sampling and surveillance programmes
- the activity and focus of the national food crime units

Introduction

How do we know if the food on sale across the UK is safe or what it claims to be? How do authorities check that food is not likely to cause us harm, and what do they do when it is? How do we understand and respond to incidents of fraud, food tampering or counterfeit goods entering the market? And what conclusions can we draw, from all of this, about whether food standards are being maintained?

FSA and FSS use a range of evidence from national and international agencies, local enforcement authorities, the food manufacturing industry, food retailers and the general public, to help us understand and respond rapidly to problems in our food supply.

There are well-established incident notification systems that help the FSA and FSS to alert consumers when food becomes contaminated, unsafe, or likely to cause ill-health, now supported by the increasing use of advanced DNA-based technology to track foodborne illness outbreaks and target action at source.

Dedicated food crime units at both FSA and FSS work with local authorities, food businesses and other agencies to investigate and disrupt criminal activity in the food supply chain, either bringing to justice or disrupting the activities of individuals or organisations involved in fraud or malpractice.

Underpinning this, the FSA, FSS and Defra coordinate targeted sampling activities that test the authenticity and safety of selected products on sale in the UK, complementing the routine checks that local authorities and food businesses do to ensure the food we buy is safe and what it claims to be.

Deep dive 1: Food and feed incidents

Introduction

A food or feed incident is defined as any event where there are concerns about the safety, quality or integrity of products that could require action to protect consumers Notifications come from local authorities, port health authorities, government bodies, industry, other countries, and consumers themselves.

The FSA, FSS and our partners look closely at any significant changes in the data to help us detect emerging issues in our food chain. However, the rate of incidents reported to us can be affected by other factors including new regulations coming into force or improvements in detection and reporting, as well as material changes in food safety and quality.

In all, there were 2,221 reported food or feed incidents during 2022, which represents a slight decrease compared to the previous year. Although we cannot determine how much of this change is due to year-on-year differences in reporting practices rather than actual changes in food safety, the fact that the overall figures remain consistent with long-term trends suggests that there have not been any major shifts in the overall number of incidents reported (figure 36).

Figure 36: Number of reported incidents in the UK

N/A	2019	2020	2021	2022
UK-wide	2,598	2,261	2,363	2,221

Food categories most associated with incidents

As in previous years, meat and meat products (other than poultry) contributed the highest number of food incidents in 2022, accounting for 13% of all incidents. They have consistently ranked as the product most associated with food incidents since 2019 and are one of the most frequently and rigorously tested food groups. Most incidents involved cases of residues being detected in veterinary medicine, microbiological contamination, and labelling or packaging errors.

Another significant category in 2022 was dietetic foods, food supplements and fortified foods, which made up 9% of incidents, largely driven by cases of unauthorised ingredients in these products. Cereals and bakery products contributed a similar proportion of cases (9%), with many of these incidents relating to the presence of unauthorised ingredients, as well as issues with production, labelling and packaging.

Poultry meat and poultry meat products have featured in the top six since 2020 because of ongoing issues with the level of non-compliance of Polish chicken and chicken products with Salmonella serovar Enteritidis (also known as Salmonella Enteritidis) which has resulted in more surveillance and sampling of these products.

Many of these categories feature prominently in FSA and FSS sampling activity, reflecting their vulnerabilities and the need for ongoing surveillance and monitoring.

Since 2019 (figure 37), only eight of 35 different product categories (Appendix 5) have featured in the top six food categories for food incidents, suggesting a generally consistent pattern in the nature of incidents.

Figure 37: Top six food categories involved in reported incidents from 2019 to 2022

Contamination by harmful microorganisms

The most common type of hazard involved in food incidents reported during 2022 were pathogenic microorganisms, accounting for 29% of all cases. Salmonella continues to account for the majority of these microbiological incidents. While headline figures for contamination by microorganisms show a substantial year-on-year rise, this is largely explained by a significant

increase in the number of avian influenza incidents recorded in England during 2022 compared to the previous year (footnote 1). If we deduct these cases, the figures for pathogenic microorganism incidents in food and feed remained broadly stable between 2021 and 2022, although this still represents a significant rise in cases compared to 2019 (figure 38).

Avian influenza and food safety

Although avian influenza does not pose a food safety concern, the FSA and FSS have a role to coordinate the response to notifiable disease in food-producing animals. In the case of avian influenza, this involves tracking and tracing poultry sent for slaughter in the lead up to confirmation of disease, for animal disease control purposes. A total of 228 cases of avian influenza were reported in 2022, compared to 56 in 2021.

Figure 38: Number of incidents of contamination by microorganisms in the UK

N/A	2019	2020	2021	2022
Pathogenic Microorganisms	360 (14%)	431 (19%)	584 (25%)	647 (29%)

(Text in brackets: Percentage of total number of food and feed incidents for that year)

Food incidents involving allergens

The number of reported incidents relating to undeclared or incorrectly declared allergens returned to pre-pandemic levels in 2022, following a decline in cases during 2020 and 2021. Incident reporting is now broadly on par with higher figures seen in previous pre-pandemic years, following reductions in 2020 and 2021.

Although we do not know for sure, the reduction seen in 2020 and 2021 may have been due to a combination of changes to consumer behaviours during the pandemic, the streamlining of food production lines, a reduction in the number of businesses operating at the time, and changes to food audits that were undertaken face to face on food premises. It appears that as things have returned to normal after the pandemic, the number of allergen-related incidents has also reverted to pre-pandemic trends.

The FSA and FSS will continue to support food businesses to implement effective allergen controls, including accurate labelling and consumer information and good allergen management in food production and supply.

Figure 39: Number of food incidents involving allergens

N/A	2019	2020	2021	2022
Allergens	355	240	272	322

The prevalence of foodborne disease

Although reported incidents of contamination by harmful microorganisms remained high, our analysis does not suggest any particularly marked changes in the rates of foodborne disease detected during 2022 - with one notable exception.

Data from the UK public health agencies (figure 40) shows that reported cases of Salmonella spp. infections in the UK increased during 2022 but remain below pre-pandemic levels. Reported cases of Campylobacter spp. infections and Listeria monocytogenes are comparable to pre-

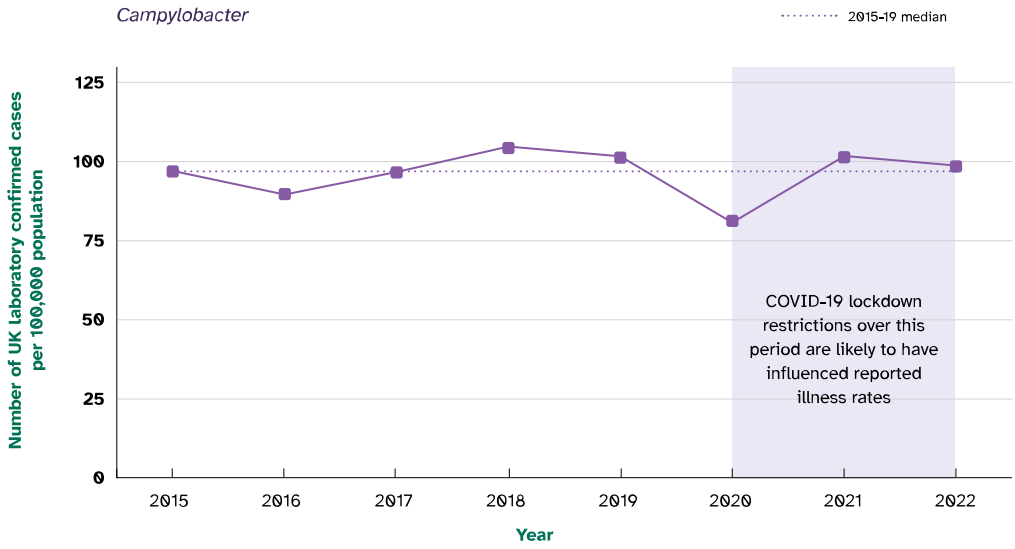
COVID-19 pandemic levels. Reports of STEC O157, however, rose to their highest level since 2015, largely due to a major national outbreak investigated in the summer of 2022.

It is important to note that not all cases of infection by these pathogens are due to foodborne transmission – for instance, infections can be acquired through person-to-person spread – and therefore changing levels may not necessarily provide a judgement on UK food standards.

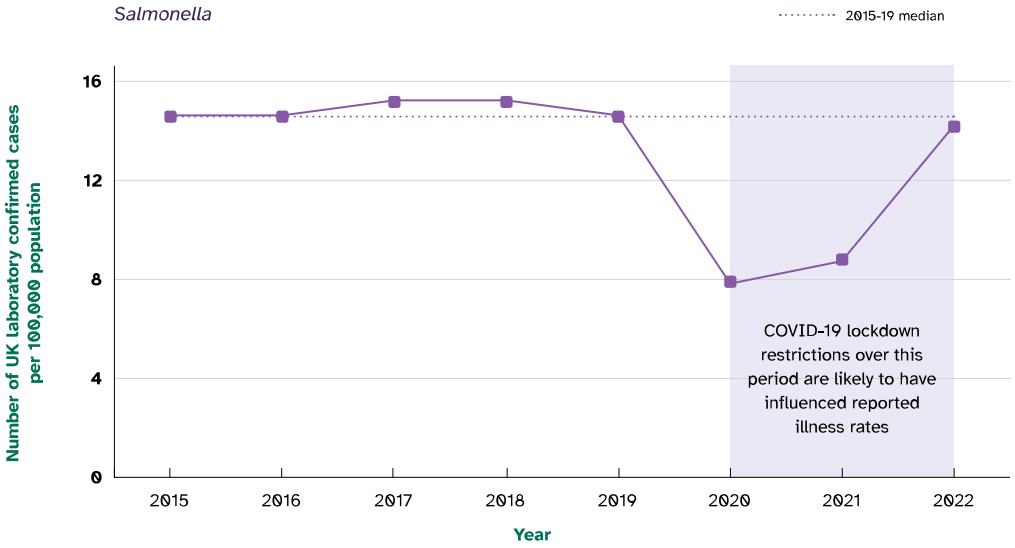
Figure 40: Trends in the UK Laboratory confirmed cases per 100,000 population of the four major GI pathogens

Campylobacter

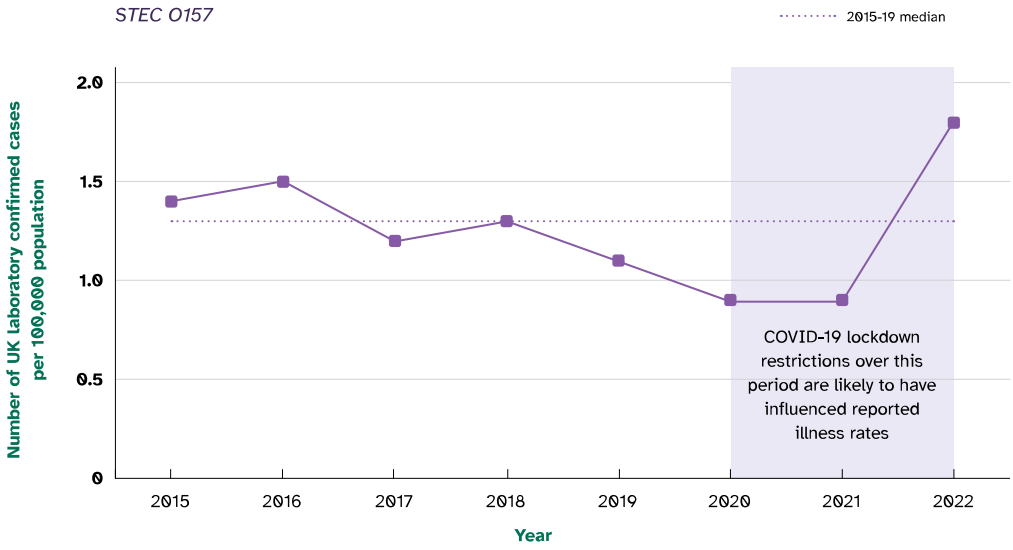
Figure 40: Trends in UK laboratory confirmed cases per 100,000 population of the four major gastrointestinal (GI) pathogens



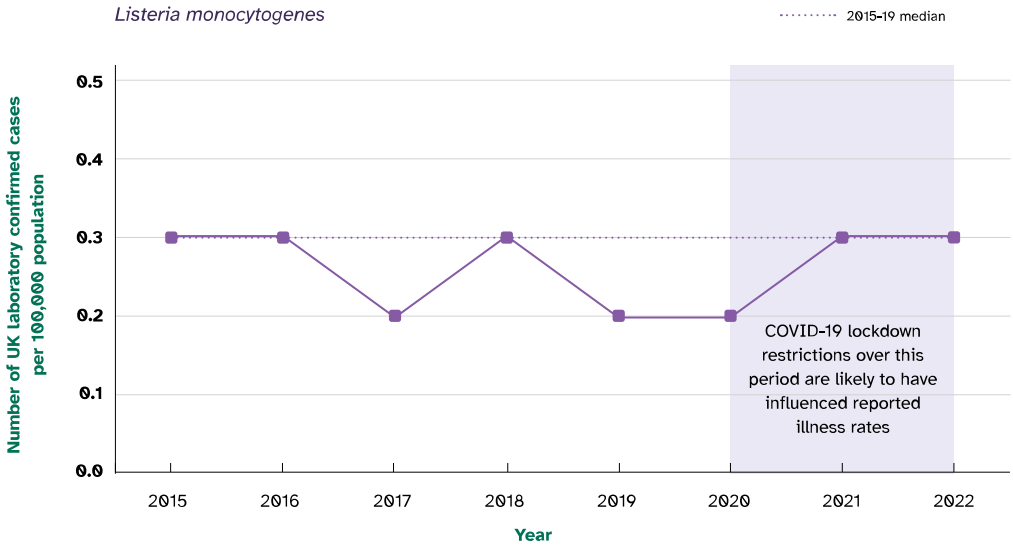
Salmonella



STEC O157



Listeria monocytogenes



Source: The data is derived from multiple live reporting systems managed by the UK public health agencies (UK Health Security Agency, Public Health Wales, Public Health Scotland and the Public Health Agency of Northern Ireland). Data is provisional and may change.

The data in figure 40 is derived from multiple live reporting systems. The rates per 100,000 population stated (y axis) are calculated using ONS mid-year population estimates (2021 estimates used for 2022 as 2022 estimates not yet available). Trends over time should be interpreted with caution, particularly over the COVID-19 pandemic period (2020 to early 2022) due to many factors which impacted pathogen reporting.

The role of whole genome sequencing

Since 2015, UK National Reference Laboratories at the UK Health Security Agency (UKHSA) have used routine WGS to detect, understand and track major gastrointestinal pathogens such as Salmonella spp, STEC, Shigella spp., and Listeria monocytogenes.

WGS is a laboratory-based method whereby the entire genetic makeup of a specific organism or cell type is rapidly determined in a single process. It provides a very precise DNA fingerprint that can help link cases to one another, thereby allowing an outbreak to be detected quickly.

Between January 2022 and December 2022, 40 foodborne outbreaks were identified and investigated (figure 41) that were attributed to specific pathogens, resulting in a number of successful outbreak investigations identifying the vehicle and/or source of contamination after which effective control measures were implemented including:

Case study: *Salmonella* spp. in Ferrero chocolate

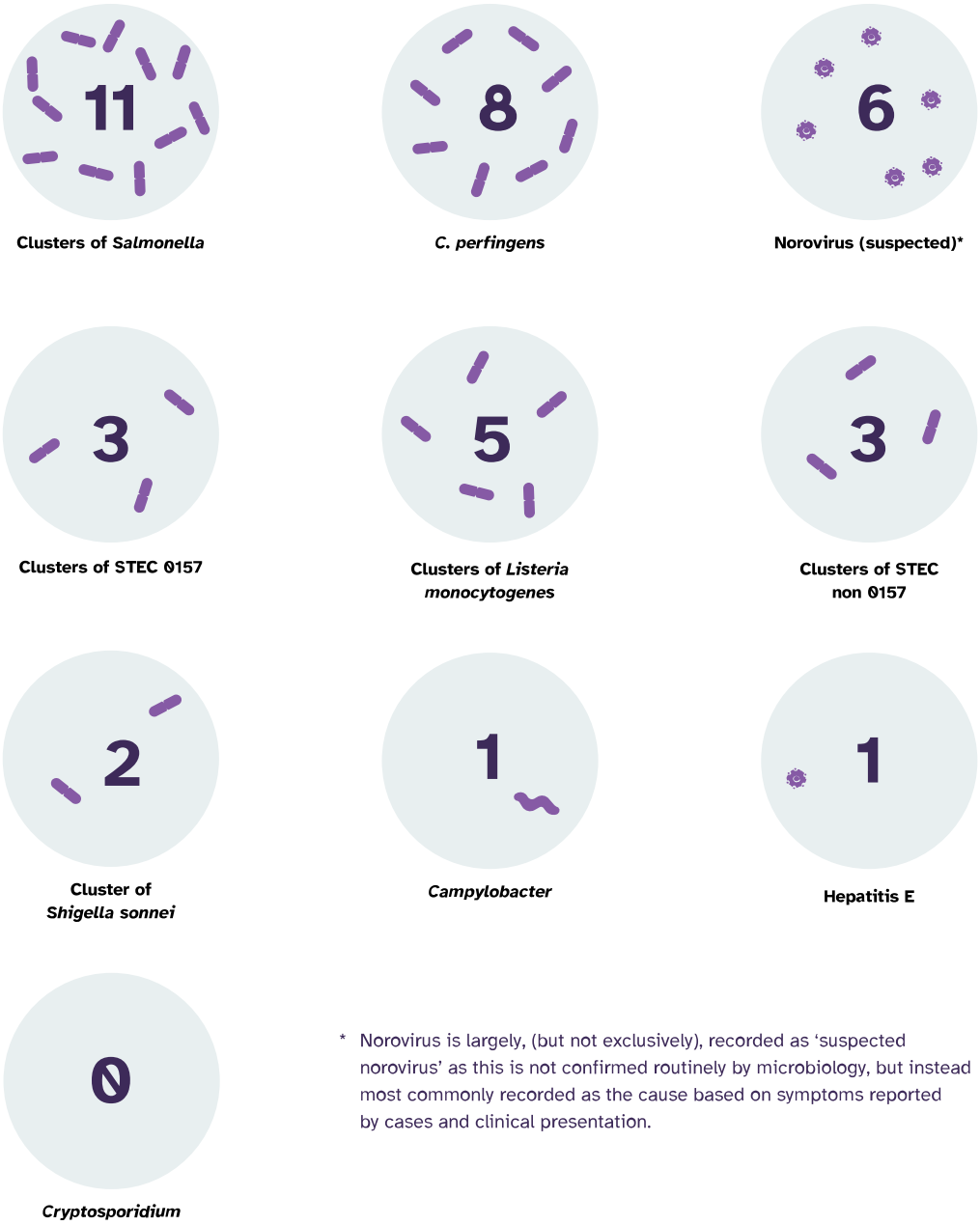
The management of an outbreak of monophasic Salmonella Typhimurium in chocolate products made by the Ferrero group illustrates how whole genome sequencing is enhancing our ability to track, identify and respond to food safety issues across international boundaries.

The public health agencies analysed food exposure information collected from cases of illness in March 2022, and found that a common link across all cases was the reported consumption of Kinder eggs and other products manufactured by Ferrero. This was confirmed a fortnight before Easter 2022, when consumption of chocolate eggs by children was expected to increase dramatically.

WGS confirmed that cases of salmonellosis were linked and food chain investigations traced the issue to one manufacturing site in Belgium. This food chain link led to a major recall of affected products. As the UK was the first country to identify the outbreak and the source, the UK investigation findings were also shared internationally, leading to further product recalls in 98 other countries and the suspension of manufacturing at the Belgian Ferrero site during the summer of 2022.

Figure 41: Number of outbreaks attributed to specific pathogens reported in the UK, 2022

Figure 41: Number of outbreaks attributed to specific pathogens reported in the UK, 2022



* Norovirus is largely, (but not exclusively), recorded as 'suspected norovirus' as this is not confirmed routinely by microbiology, but instead most commonly recorded as the cause based on symptoms reported by cases and clinical presentation.

Food alerts and recall notices

Once a food incident has been identified, the affected product may have to be withdrawn or recalled – as was the case in the Ferrero example described above. FSA and FSS publish various alerts to let consumers and other food businesses know about the issue and what action is needed to minimise the risk.

An Allergy Alert is published when the product has been, or is being, recalled from consumers because allergen information on food labels is either undeclared (including not in English) or incorrect.

A PRIN is published when there are concerns about the safety of a product, most often due to the contamination, mis-packing or mis-labelling of products.

A FAFA is issued to local authorities and consumers when the distribution of products is less well-defined or when a food business is not taking the required steps to remove products from sale and remedial action from local authorities is required.

There was no overall change in the combined number of Allergy Alerts published by the UK's food agencies in 2022 compared to the previous year (figure 42) despite the number of allergen incidents increasing. This is largely because food safety actions were taken before the affected products reached consumers.

Products containing undeclared milk remain the most common food category for which an allergy alert was published, followed by undeclared nuts, eggs and cereals containing gluten (figure 43).

Meanwhile, a total of 80 PRINs were published in 2022 (figure 44), due to issues such as microbiological contamination, physical contamination, production faults or incorrect date codes applied to products.

Figure 42: Total number of Allergy Alerts published by the FSA and FSS

N/A	2019	2020	2021	2022
UK	115	77	83	83

Source: FSA/FSS Incident Management Systems

The year-on-year change in the number of PRINs issued between 2021 and 2022 (a 23% rise) is largely due to changes in the way we capture this data: all updated alerts that are published when there is a change to the original product recall are now recorded in the total. The trend therefore does not indicate any substantial increase in serious food incidents.

There have been no FAFAs published in the past two years, which indicates that where there is a safety issue, food businesses are working alongside local authorities and the two national food agencies to ensure safety requirements are followed.

Figure 43: Allergy alerts by type of allergen

Figure 43: Allergy Alerts by type of allergen

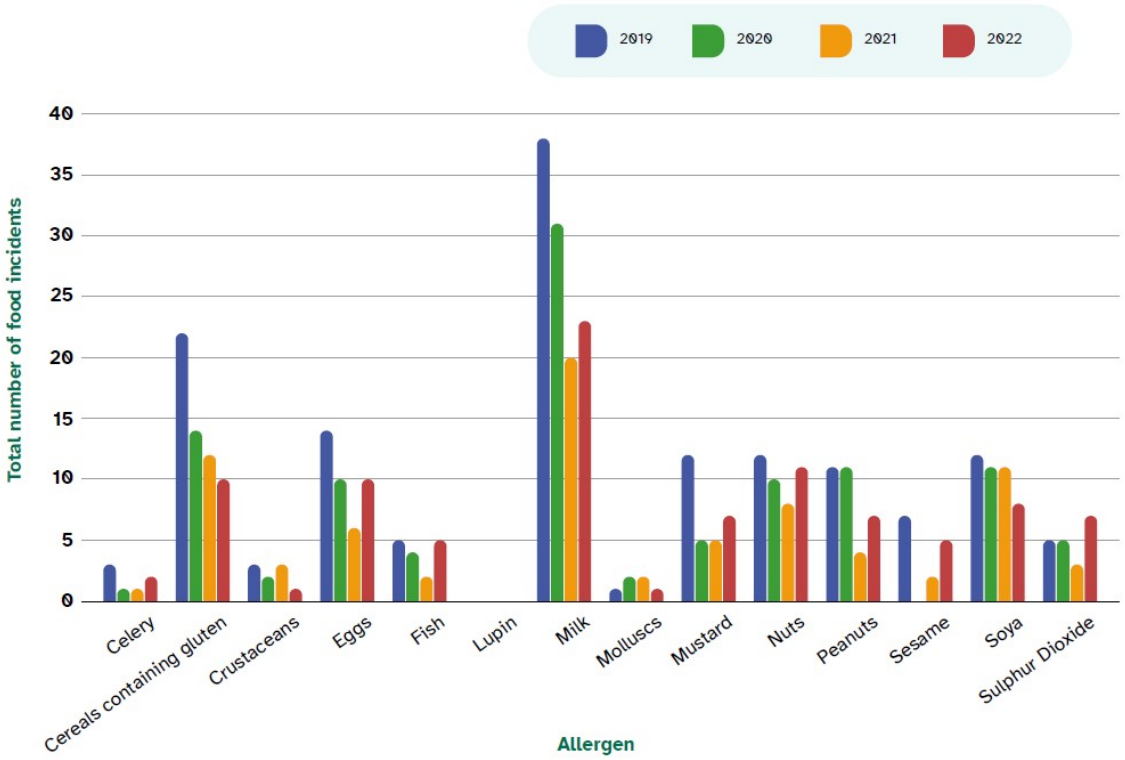


Figure 44: Total number of PRINs issued in the UK

Country	2019	2020	2021	2022
UK	56	66	65	80

Source: FSA/FSS Incident Management Systems

Deep dive 2: Food Surveillance sampling

Introduction

Targeted food sampling is another important way of monitoring the safety and authenticity of our food While local authorities and food businesses routinely test products to ensure they meet legal requirements, scientists commissioned by the FSA, FSS and Defra periodically sample selected products to track emerging risks to ensure standards are being maintained and inform policy development The samples referred to in this section are unofficial samples, meaning samples were not directly taken by authorised sampling officers and the results could not be used in an enforcement case or prosecution.

The role of Official Laboratories

The UK is required by law to have designated Official Laboratories (OLs) that analyse the safety and composition of food and feed samples sent by local authorities or Port Health Authorities (PHAs) for enforcement or surveillance purposes.

Local authority sampling activity has reduced substantially in recent years – for instance, in England, Wales and Northern Ireland, the number of non-microbiological samples taken between 2016 and 2021 dropped by 79.1% while in Scotland, there was a 70.9% decrease in microbiology and chemistry samples between 2016/17 and 2020/21. As a result, many OLs have closed – for instance, England had nine in 2013 compared with four since 2019. With less access to European laboratories since our departure from the EU, FSA and FSS need to maximise UK testing capacity so that this important analysis can continue.

While the availability of laboratory resource has stabilised during 2022, we continue to invest in UK capacity, capability and expertise. In Scotland, there are four publicly funded food testing laboratories (public analyst laboratories). These four laboratories are responsible for microbiological examination and chemical analysis, including contaminants, standards, authenticity, and allergen testing of all food samples collected in Scotland.

In this section, we summarise the findings from the three surveys carried out in 2022: the FSA's targeted sampling survey 2022, FSS's compositional and chemical sampling programme and Defra's meat and fish speciation survey These programmes and activities are carefully coordinated across government to ensure join-up, maximise efficiency and that FSA and FSS programmes are driven by regional needs and intelligence.

However, the results need to be understood in context. Since FSA and FSS surveys are highly targeted at where we know risks to be, they carry a greater likelihood of identifying unsatisfactory results and are therefore not representative of overall UK food standards. The findings do, however, offer crucial insights that help the national food safety authorities, industry and enforcement authorities respond to potential issues within the food chain and better target limited resources.

For example, local authorities have already taken direct action on the back of last year's results, providing advice and support to individual businesses on issues ranging from undeclared milk in bread products, to oregano found to contain olive leaves. Both FSA and FSS also work closely with industry to share intelligence and tackle areas of concern, particularly through the FIIN.

The FSA targeted survey 2022

What was tested

Around 600 samples were tested for authenticity issues and the presence of allergens and contaminants. Labels were also checked for accuracy and compliance with food information standards. The items tested in the survey included those previously known to be at high-risk of failures in compositional standards or authenticity – for example, oregano was included due to international challenges regarding authenticity.

Some of the food items are the same as in previous years, so that we can see how failures change over time and identify emerging issues. Others were included to check that standards are being maintained despite the economic pressures on food producers (for example, compositional standards of sausages and minced beef). These were supplemented with other commonly consumed foods such as bread and milk.

Headline results

- 86% of samples passed all the checks, compared to 89% last year. For large food businesses (such as supermarkets or wholesalers) 96% of samples tested were fully compliant.

- around a third of all reported failures (28 out of 82) were related to labelling issues While most were relatively minor, there were some more serious breaches where ingredients labelling, including allergen information, was missing, or incorrectly presented on the packaging.
- a fifth of the bread samples analysed for milk and sesame (seven out of 35) were found to have undeclared allergens, all of them relating to products that were prepacked for direct sale. Five out of 106 samples of vegan products (which were tested for milk, egg, and peanut), and free-from products (tested for milk, gluten, and nuts) were also deemed unsatisfactory due to undeclared allergens or labelling. Of the four failures, one related to undeclared gluten in a free-from product and three were for vegan products containing undeclared milk and peanut.
- sausages and minced meat were checked to determine the exact species present in the food sample. The meat content of the sausages was also assessed and the fat, protein and collagen content of mince to make sure these matched the declared value on the packets. While only one sample out of 80 was unsatisfactory for authenticity (sheep DNA detected in pork sausage), 11 samples did not meet levels declared on the label: six out of 40 sausage samples, for example, contained less pork meat than declared.
- yoghurt, tested for the first time for composition issues (milk protein content, benzoic acid and sorbic acid), had three non-compliances. Butter and margarine spread (milk fat content), yielded results that were marginally better than the previous year. Oregano (authenticity, mycotoxins and heavy metals), basmati rice (authenticity), and milk (fat content), showed similar failure rates to the 2021/22 survey, indicating continued challenges with these products. The number of cheese (speciation and fat content) non-compliances increased, and there was also a notable increase in the failure rates of olive oil against the standards tested – from just 7% in 2021 to 25% in 2022. However, the majority of these were related to minor labelling inconsistencies, rather than the composition of the product (for example, mandatory storage instructions not being given).

Figure 45: Summary of unsatisfactory sampling results by category

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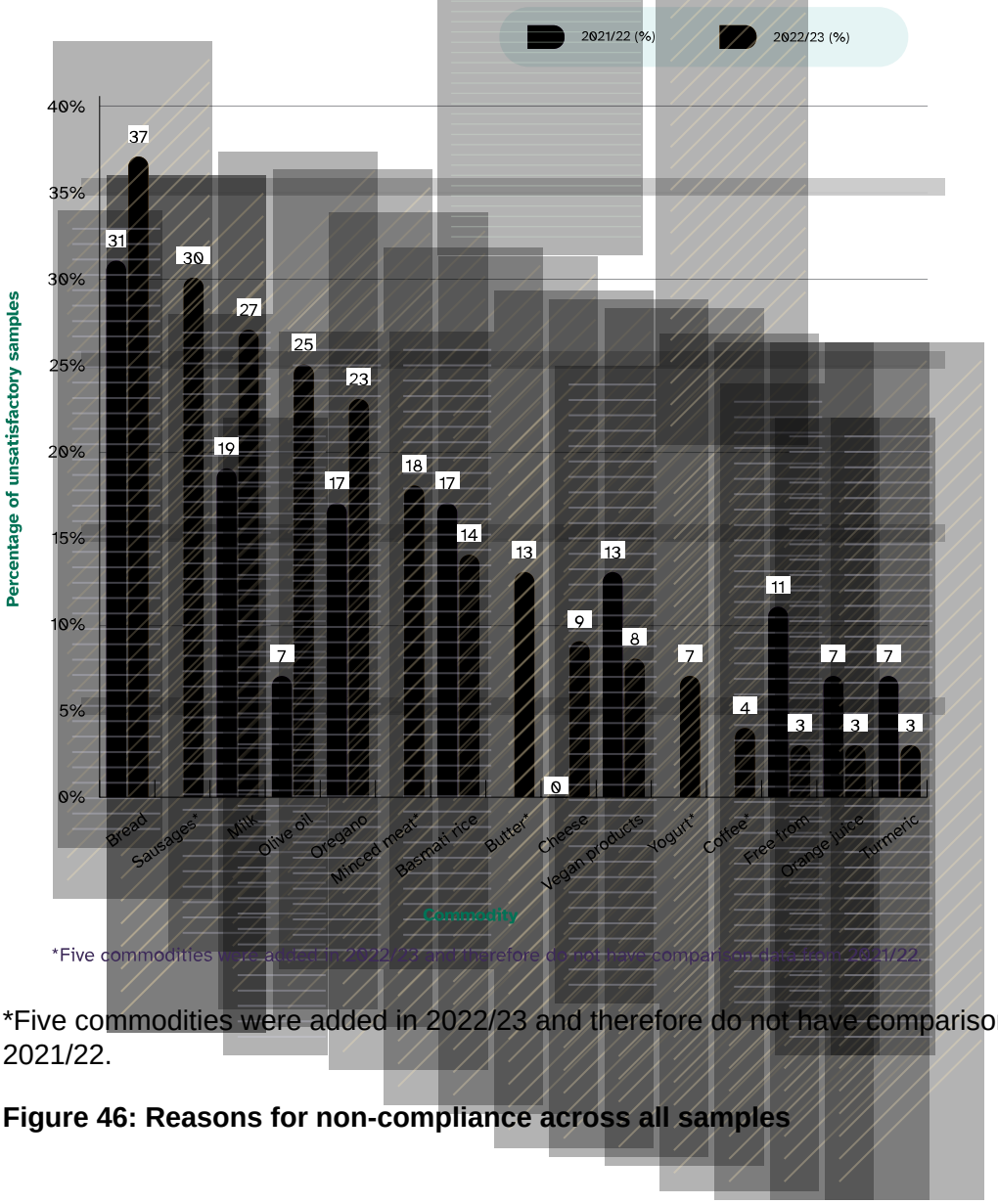

*Five commodities were added in 2022/23 and therefore do not have comparison data from 2021/22.

Figure 46: Reasons for non-compliance across all samples

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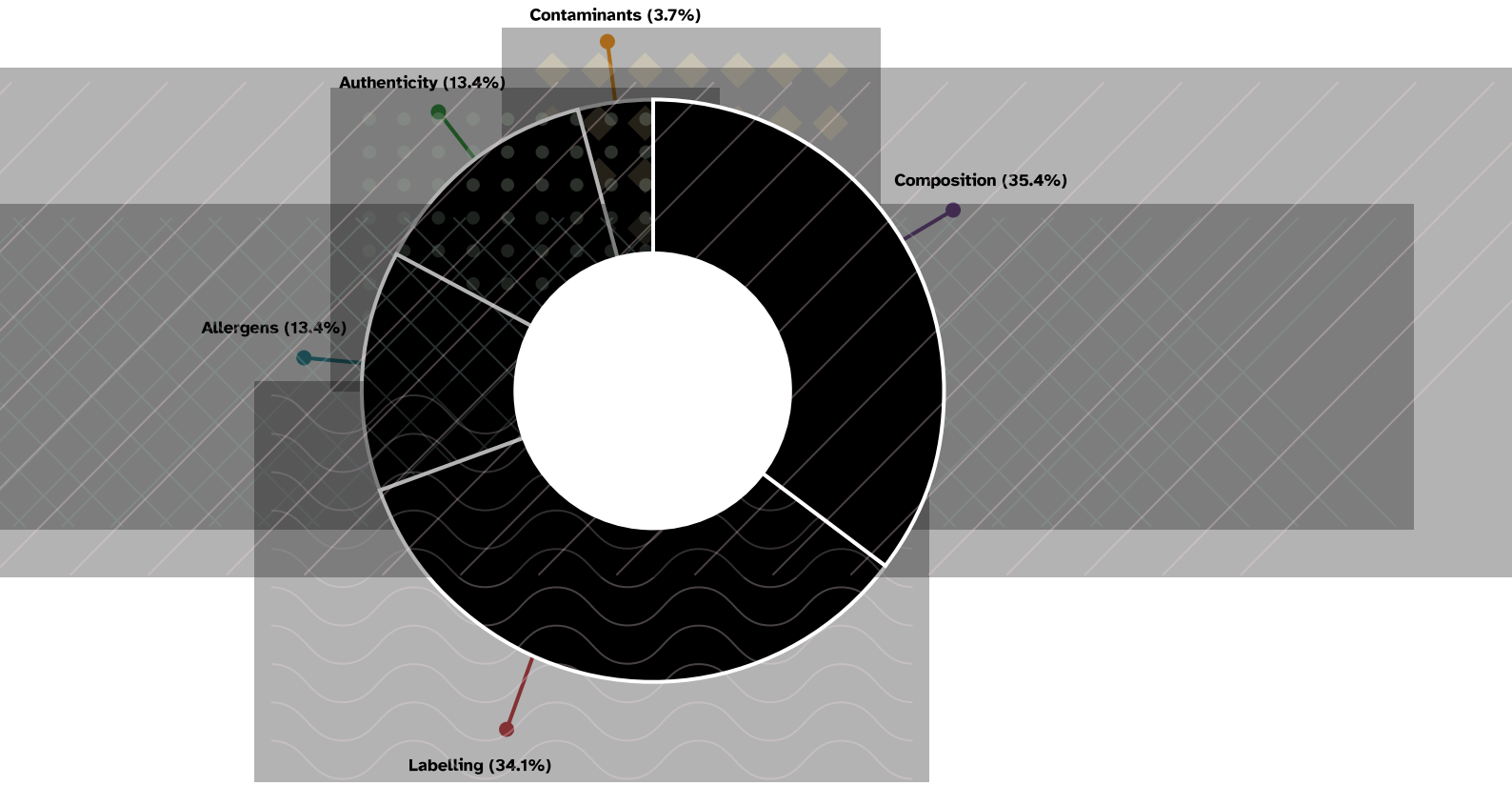

FSS compositional and chemical contaminants sampling programme 2021/22

What was tested

The programme tested prepacked beef mince, oats and oat-based foods and drinks, almond-based and coconut-based drinks for various compositional and chemical contaminants issues. In addition, a range of vegan and free-from food products were also checked for the presence of undeclared allergens.

Headline results

- Eight out of 45 samples (18%) of prepacked beef mince products were deemed unsatisfactory in compositional analysis.
- Mycotoxins were found in several samples of oats and oat-based products, but not at levels that would present any risk to public health. None of the samples failed due to unsafe levels of heavy metals.
- out of 80 samples of vegan and free-from products, three were found to contain undeclared allergens.
- none of the samples of almond-based drinks were found to contain unsafe levels of mycotoxins or heavy metals, and all coconut drinks sampled had less than 10 µg/kg of 3-monochloropropane diol (3-MCPD), a chemical contaminant, a level considerably below that considered to be a risk to health.

Defra's meat and fish speciation survey 2022

What was tested

In 2022, Defra funded an informal food authenticity sampling exercise as part of broader FSA-coordinated sampling activity to help inform future sampling programmes. The exercise examined the possible presence of undeclared species in 354 retail and wholesale processed meat and white fish products and was delivered by a commercial private laboratory.

The samples originated from one of three areas: UK, EU and outside the EU, and were purchased at different outlets spread over nine geographical locations within England. Any non-compliant Defra survey samples were flagged to the FSA and NFCU for follow-up action.

Results

The overall results showed the level of compliance with labelling rules covering the identification of species in meat and fish as 96%.

The four key elements of the FSS sampling programme

1. **Prepacked beef mince and steak** products were tested for levels of fat and connective tissue (which indicated presence of material other than the muscle meat). This testing helps to assess compliance with legislative labelling requirements and progress made towards the Scottish Food Enforcement Liaison Committee's (SFELC's) guidelines on quality standards for beef mince and steak mince.

2. Samples of **oats and oat-based food and drink products** were collected and tested for a range of mycotoxins and heavy metals. These contaminants can occur naturally in oats and if they are present in excessive levels, they can have negative effects on health.

3. **Almond-based drink products** were collected and tested for mycotoxins and heavy metals while coconut drinks were tested for 3-MCPD and other glycidal esters. Mycotoxins are naturally occurring toxins produced by moulds and can be found in almonds, while 3-MCPD is a contaminant which can occur in certain foods during processing. Both can be harmful if consumed in excessive amounts.

4. **Samples from five food groups** – vegan and dairy-free products, dairy-free meals, gluten-free cereal, cereal bars and cakes, and nut-free meals – were collected and tested for the presence of undeclared allergens to test compliance with labelling legislation.

Conclusions

Overall, in the areas targeted, there is no statistical difference in the level of non-compliant results from previous years for the sampling surveys, with large businesses having a higher level of satisfactory results than smaller food businesses. This provides a degree of confidence that food standards are being maintained, especially given that sampling was informed by intelligence and targeted at high-risk areas.

The findings also reveal some potentially serious public safety issues relating to allergen declarations, reinforcing the continued need for regular checks by local authorities and businesses as part of routine testing and enforcement. FSS funded sampling of mince and sausages, undertaken to assess the quality of products purchased by consumers, also showed a significant number of non-satisfactory results.

While providing useful insight, our sampling programmes focus limited resource to target specific risks and commodities in the UK food system and are not complete, comprehensive sampling programmes. Investment in wider surveillance would be required to give better coverage of the

UK food system.

Country of origin testing

No Country of Origin (COO) testing was undertaken in these surveys. While this testing is offered commercially and can provide qualified insight into authenticity concerns in this area, there are challenges in terms of achieving a definitive result, with any anomalous results likely to require verification through other routes. Consumer interest remains high in this area of surveillance and sampling, and the FSA is working in partnership with Defra to review COO testing and to assess the feasibility of methods for use in enforcement.

Case study: Understanding authenticity challenges: honey

Honey is a natural, complex mixture of different sugars produced entirely by bees. While there is no evidence that any honey on sale in the UK is unsafe, it is a product that could be illegally substituted or adulterated by adding undeclared sugar. There is no single testing method that can confirm the authenticity of honey.

This has led to claims of honey fraud, and a recent report from the EU has highlighted concerns linked to adulteration with sugar syrups, based on the reported 'suspicious' results of coordinated sampling of imported honey conducted by member states. This report also highlighted the limitations of laboratory methods, if used alone, to prove adulteration and the need for improved, harmonised, widely accepted testing methods to validate the authenticity of the samples. Further investigations by the importing countries to follow-up on the results flagged as 'suspicious' are underway. An independent UK expert honey group has been set up by Defra to advise on the conclusions of the EU report based on the scientific analysis carried out and the interpretation of the approach used to determine the sample results.

The FSA, FSS and Defra have a significant programme of work devoted to honey. Its aim is to engage and work with the honey community including researchers, enforcers, industry, and international bodies to protect this important commodity. The work programme is taking steps to improve current authenticity testing methods, working with UK experts to solve this challenging problem. Through these advances – which include the development of better technology, standardising and validating testing approaches, improved understanding of weight of evidence application and good enforcement practices – we will have an improved suite of tools to ensure the authenticity of honey on sale in the UK.

Deep dive 3: Food crime

Introduction

As we have already seen, sampling can help the national food standards agencies work with local authorities and other partners to respond to recognised problems with safety and authenticity which can then be worked through with the businesses concerned However, surveillance sampling is one of the ways we can pick up more sinister examples of malpractice and plays an important role in enabling us to detect and respond to signs of criminality within our food system

Food crime is defined as serious fraud and related criminality in food supply chains, including drink and animals. It ranges from the theft, adulteration or misrepresentation of food and feed products to the unlawful processing and disposal of food, drink and feed during and after

production. There is often a deliberate intention by criminals to keep this activity hidden, which is one of the reasons why so many instances of food crime go unseen and unreported. However, as a recent academic report commissioned by the FSA has found, food crime could cost the UK economy and society as much as £2 billion per year and affects consumers, businesses and regulators alike.

The NFCU and SFCIU work with the food and drink manufacturing industry, food retailers and local authorities to identify, investigate, disrupt and prevent food crime. Both units protect consumers and legitimate businesses by conducting intelligence-led investigations, bringing about criminal prosecutions, assessing and communicating threats, and working with other regulators, government, law enforcement and industry to prevent food crime.

What did the food crime units focus on in 2022?

Both food crime units set priorities that are described in their respective Control Strategies. These are based on their analysis of the opportunities for criminal behaviour or on known vulnerabilities within the food chain. While these priorities are balanced against a wider need to remain alert to other emerging food crime threats, they set the direction for the intelligence that the food crime units gather from a range of sources including the food industry, local authorities and the public. In fact, of the 1,814 food crime intelligence reports received during 2022 – defined as pieces of information relating to a new or already identified food crime – approximately two-thirds (65%) related to these strategic priorities.

Live investigations

Once intelligence is received and assessed, if there is reasonable suspicion that a crime has been committed, an investigation may be opened by the units or referred to other law enforcement agencies.

A total of 35 live investigations were led by the two UK food crime units during 2022. As figure 47 shows, they tackled a wide range of threats, including those involving:

- the red meat sector – such as falsifying where the meat comes from.
- the re-entry of products not intended for human consumption like Animal By-Products (ABP) into the food chain.
- the pursuit of suppliers of dangerous non-foods sold as food.

Serious fraud investigations undertaken in 2022 resulted in complex criminal cases progressing through the justice system. Currently, two cases relating to ABP diversion and conspiracy to steal high-value food items through the impersonation of legitimate businesses and an associated charge under the Proceeds of Crime Act 2002 are awaiting trial.

In Scotland, SFCIU investigations focused on suspected fraud in relation to counterfeit alcohol, traceability and adulteration issues in the meat supply chain, and illegal slaughter in non-approved premises, with several investigations similarly progressing through the criminal justice system.

As figure 47 shows, the focus of the investigative work carried out in 2022 shows a notable proportion of food crime investigations involved meat and meat products, although our enquiries continue to span a range of commodities.

While we should not necessarily draw any conclusions from this about the susceptibility to food crime across these food types, this does indicate where our investigators are focusing time and resource.

Figure 47: The key areas of focus for food crime investigations in 2022

Key areas of focus	Number of live investigations
Meat and meat products	10
Other	8
Alcohol	6
Dangerous non-foods	4
Diversion of animal-by-products	3
Confectionary	2
Fish and seafood	2

Disrupting food crime

Both the NFCU and SFCIU work with industry, local authorities and other enforcement agencies to disrupt or deter criminal behaviours. ‘Disruptions’ are recorded when an intervention has a direct impact on food crime like a criminal group being stopped from operating in the usual way, for example by seizing criminal assets or taking down websites illegally marketing dangerous non-foods.

A total of 102 disruptions were achieved across the units during 2022. In England, Wales and Northern Ireland, the majority (64%) of the NFCU’s disruptions involved actions taken against dangerous non-foods marketed for human consumption. This included the removal or suspension of websites offering the sale of the toxic chemical DNP marketed illegally as a fat burner.

New responsibilities for tackling illegal sales of DNP

From 1 October 2023, the police will hold responsibility for offences relating to DNP, including unlawful sales, through enforcement of the Poisons Act 1972. This will be part of a holistic approach across Government towards tackling the sale and use of the substance and the NFCU will be working to ensure a smooth transition of responsibility and continuity of focus.

Both food crime units also actively disrupted criminal activity in the red meat sector and the diversion of animal by-products into the food chain through operational activities, such as coordinated enforcement visits to processors and producers.

In Scotland, more than a third (35%) of SFCIU-led disruptions similarly centred on malpractice and criminality involving meat and meat products. The SFCIU took action against fraudulent activity involving tea, confectionary and honey and made a series of unannounced visits to various licensed venues to check for counterfeit products, support responsible businesses and deter any potential future criminal activity.

Both units also undertook targeted work with businesses to design out the opportunity for food fraud through better policies, procedures and controls.

Figure 48: The key areas of focus for disruptions carried out by food crime units in 2022

Key areas of focus	Number of live investigations
Dangerous non-foods	48
Meat and meat products	25
Other	19
Diversion of animal-by-products	5
Fish and seafood	3
Alcohol	2

A snapshot of major food crime investigations in 2022

Operation HAWK

Operation HAWK is an ongoing criminal investigation into suspected meat fraud. The NFCU began an investigation into food fraud allegations linked to the country of origin of cooked meat products supplied by a food business in August 2021 and began seizing evidence shortly afterwards. Affected products were removed from shelves immediately. Misrepresentation is the primary focus of Operation HAWK. Live food safety issues are not part of the investigation, but historical food safety concerns were investigated and addressed.

Operation PEARL

The NFCU supported Chichester District Council in tackling the harvesting of shellfish from beds that were classified as unsafe for human consumption. Shellfish beds are classified in accordance with the levels of E. coli detected in shellfish flesh. In this instance, the harvesters were picking from prohibited areas where high E. coli levels made the beds unsafe for human consumption. This operation seized and destroyed illegally harvested products and took enforcement action against both the harvesters and the business receiving the product. This has helped to deter offending in this area, with reduced reports of illegal harvesters.

Operation MOONRAKER

Led by Wiltshire County Council with NFCU support, Operation MOONRAKER investigated several illegal meat cutting plants operating out of car washes. The meat was being cut in unapproved premises, posing significant health risks to consumers. In 2021, the NFCU successfully supported Wiltshire County Council in criminal proceedings that resulted in a 10-month prison sentence for the offender.

During 2022, the NFCU was granted a confiscation order against the offender to the value of £154,000 – this included the seizure of realisable assets worth £3,500. Confiscation orders add an extra layer of consequence over and above standard criminal justice outcomes for offenders, increasing the deterrent effect.

Operation OPSON

Both NFCU and SFCIU participated in Operation OPSON, an international initiative co-ordinated by Europol and INTERPOL to tackle the sale of counterfeit and substandard food and drink products. The NFCU and SFCIU supported and coordinated partners, particularly local authorities, in completing over 400 checks throughout the UK during 2022. This included 300 checks of fish and seafood supply chains, which identified a number of minor breaches, and over 100 checks on alcohol products, which found that some small-batch gins and vodka did not meet advertised alcohol content levels.

Operation SLAINS

In the first case of its kind to be prosecuted in Scotland, a man pleaded guilty to culpably and recklessly supplying the public with the toxic chemical DNP for human consumption. It is often marketed as a fat burner and since 2007, 33 people have died in the UK through DNP ingestion. The SFCIU led joint investigation involving Falkirk Council and Police Scotland, completed in 2022, proved that between May 2017 and October 2021 the individual had supplied substantial amounts of DNP to customers in the UK and globally to USA, Asia and Australia for significant financial gain. He was subsequently sentenced to 37 months in prison. The circumstances of this case helped inform a Home Office review on DNP, leading to it being classified under the Poisons Act 1972 (see p.106).

Licensed premises visits in Scotland

In October 2022, as part of tackling fraud in the alcohol supply chain, the SFCIU and partners coordinated 43 unannounced visits to licensed premises in Glasgow. These were carried out over a two-day period to check the authenticity of specific brands being sold, support responsible businesses and deliver a prevention message to those knowingly selling counterfeit brands. No issues were identified, and businesses responded positively to the visits.

Did food crime increase in 2022?

Criminals will always seek opportunities to profit, and those opportunities can often arise from broader economic conditions. Particularly favourable conditions arose in 2022: price inflation, the disruption caused by the COVID-19 pandemic, extreme climate events, and the impact of the Ukraine conflict on supply chains opened new avenues for criminal behaviour and increased the incentives to commit food crime.

However, while there are some indications of some regulatory non-compliance driven by cost pressures, we have not detected any evidence from our intelligence, surveillance and sampling programmes that there has been a major shift in either the volume or pattern of serious food fraud during 2022.

This finding is backed up by data on authenticity shared by the food industry itself via the FIIN. However, this data is skewed towards larger businesses that are likely to be better protected against criminal influences within their supply chain.

That said, both FSA and FSS remain acutely aware of the heightened risks presented by the economic and geopolitical environment and continue to factor this into the food crime units' work.

In summary

Available data on food and feed incidents paints a relatively stable picture for 2022. There have not been any meaningful shifts in the overall volume of food and feed incidents reported, or in the number of alerts issued by FSA and FSS. While cases of STEC O157 rose to their highest levels since 2015 due to a major outbreak in summer 2022, rates of other foodborne disease have returned to pre-pandemic levels.

The national food sampling programmes conducted last year show that products from large food businesses are achieving very high rates of compliance across a range of authenticity and safety checks. However, it is clear that more work is needed to help smaller food businesses improve their compliance levels, and further action is needed to tackle specific failures across certain product types, particularly with regards to breaches in allergen controls. Both FSS and Defra studies also show the importance of continued surveillance of meat products to ensure authenticity and composition standards are being met. Information gathered from the 2022 surveys will help inform future sampling in 2023/24 surveillance activities.

Our national food crime units carried out major investigations across the UK during 2022, resulting in high-profile prosecutions. They also delivered a range of targeted actions to disrupt criminal activity. However, our food system remains a target for criminals, particularly in light of the challenging economic environment and the disruption to food chains caused by global events. Although we have not found any evidence to suggest that this translated into more criminal activity during 2022, our food crime units continue to work closely with local police, trading standards and others to protect consumers and businesses and take effective action against perpetrators.

1. Avian influenza notifications are recorded as microbiological contamination incidents since FSA coordination is required to ensure meat in the supply chain that becomes restricted after slaughter on confirmation of notifiable disease is traced and withdrawn.