

**FOOD STANDARDS SCOTLAND
FORWARDS EVIDENCE PLAN 2018-19
NOTIFICATION OF POTENTIAL AREAS REQUIRING SCIENCE & EVIDENCE
AND INVITATION FOR FEEDBACK**

Food Standards Scotland (FSS) bases policy decisions on the best available science and evidence. This document outlines our science and evidence activities that are under consideration for the financial year 2018-19 to support the strategic outcomes of the [Corporate Plan 2016-2019](#).

1. Food is safe
2. Food is authentic
3. Consumers have healthier diets
4. Responsible food businesses flourish
5. FSS is a trusted organisation
6. FSS is efficient and effective

This forward plan is dependent on budget, priorities and that evidence covering some of these areas may become available from other sources throughout the year. The forward plan's publication does not commit FSS to funding particular projects any of these areas.

We commission Science, Evidence and Information on a contract basis, to help us develop our policies. Then we publish the results, and the data, on this website.

We will advertise all opportunities to apply for our contracts on the [Public Contracts Scotland website](#). If you wish to see the opportunities, it is recommended that you sign-up to Public Contracts Scotland, for free.

This plan has been published:

- To make stakeholders aware of the future areas of research and evidence gathering that will be of importance for FSS in the near future and provide the opportunity for feedback;
- To stimulate interest from other research providers and potential contractors and to provide early warning of potential tender areas for the forthcoming year;
- To make other research funders aware of our science and evidence needs in order to facilitate collaboration, as appropriate, and ensure that duplication of funding does not occur; and
- To obtain comments on our strategic direction of science and evidence needs.

Attached is a summary of our current science and evidence projects and a forward look at our potential science and evidence requirements.

Invitation for feedback – by 31 May 2018.

We welcome your comments and feedback on our potential future science and evidence requirements by 31 May 2018. All feedback and comments should be sent to Susan Pryde at susan.pryde@fss.scot.

Future science and evidence requirements

Diet and Nutrition

Work will contribute to delivery within outcome 3: Consumers have healthier diets and outcome 5 FSS is a trusted organisation. [Setting the direction for the Scottish Diet](#) agreed by the FSS Board in January 2016 [and updated in March 2017](#) sets out the key principles and proposed broad measures for FSS action to reduce calorie intake and rebalance the diet. Our Communications Strategy aims to influence consumer behaviours using tailored messaging targeted to the intended population groups based on their particular risk, behavioural and demographic profiles.

- An assessment of the current out of home landscape in Scotland; and
- Acquisition of retail purchase data for 2018

Food Protection Science and Surveillance

Work will contribute to delivery within outcome 1: Food is safe, Outcome 2: Food is authentic, outcome 4: responsible food businesses Flourish, outcome 5: FSS is a trusted organisation and outcome 6: FSS is efficient and effective. Through a [Strategy for Reducing Foodborne Illness](#) which aims to target the key pathways that are responsible for the transmission of microbiological, chemical and radiological risks throughout the food chain. Our [Food Surveillance Strategy](#) will generating the intelligence required to identify risks to the health of consumers in Scotland and the reputation of Scottish produce and so consumers need to have confidence that the food they buy and eat is what they expect it to be. Our [Regulatory Strategy](#) outlines how FSS will fulfil its role as a national regulator in Scotland, with a high level framework which will be used to inform the targeting of regulatory interventions in a proportionate and risk based manner, with the clear message that compliance with food safety requirements is good for consumers and good for business. Our Communications Strategy aims to influence consumer behaviours using tailored messaging which is targeted to the intended population groups based on their particular risk, behavioural and demographic.

- A survey of the microbiological quality of minced beef on retail sale in Scotland;
- Provision of services for identifying beef origin using Stable Isotope Ratio Analysis (SIRA);
- Attribution of Shiga-toxin producing *E. coli* infection in Scotland using whole genome sequencing;
- Targeted surveillance of the Scottish food supply chain for antimicrobial resistant bacteria; and
- Research to inform future risk assessment and guidance on microbiological risks in the production of unpasteurised cheeses.

Current Projects 2018-19: Nutrition, Science and Policy

Project Title	Brief Description	Start Date	End Date	Corporate Outcome
Trial of Intake 24 in the Scottish Health Survey	INTAKE24 is a fully automated online 24 hour recall system that has been developed for the purpose of monitoring the dietary intake of the Scottish population (of ages 11+). This project pilots the use of INTAKE24 within the Scottish Health Survey to obtain dietary intake data from a representative sample of around 1500 participants aged 11 years or older. On completion of the field work phase of the project, the dietary data will be analysed and compared against the Scottish Dietary Goals and dietary data from the existing eating habits module. Response rates obtained during the INTAKE24 pilot will also be monitored to highlight any potential bias in the sampling and weight the data accordingly.	March 2018	December 2019	Outcome 3 Consumers choose healthier diets
Development of dietary guidelines for Scotland (phase 1)	<p>This project explores the need for dietary guidelines in Scotland, which go beyond the existing Eatwell Guide and consider the wider cultural and environmental influences on food choice and consumption. The first stage of this work (i.e. phase 1) , gathers views from a wide range of stakeholders on the need for dietary guidelines, including what should be included and how they could be disseminated. Responses from stakeholders will be collated into a final report with recommendations for a) whether there is a consensus to develop dietary guidelines and b) if so, what the scope and content should be.</p> <p>The next phases of this work will involve drafting the content for guidelines (assuming there is agreement) and their design and publication. Further business case (s) will be submitted to take forward these next areas of work.</p>	March 2018	July 2018 for phase 1. 2018/19 for phases 2 and 3 (timelines to be developed)	Outcome 3 Consumers choose healthier diets

Current Projects 2018-19: Food Protection Science and Surveillance Projects

Project Title	Brief Description	Start Date	End Date	Corporate Outcome
Factors affecting variations in Campylobacter disease rates in Scotland	A previous FSA funded research project identified a lower incidence of reporting of campylobacter infection in deprived populations, but this was not observed with hospitalised cases. This project investigates the origin of these differences between deprived and prosperous populations in four ways. First, investigating potential biases at three different levels of the reporting pyramid: the community level, the GP level and the reported case level. Second analysing retrospective and prospective case and hospitalisation discharge data to determine whether the reported variation in disease still occurs. Third, carrying out a case control study to identify the sources of human campylobacteriosis and fourth performing a case-case analysis to determine differences in risk factors for deprived and less deprived (affluent) populations.	March 2015	June 2018	Outcome 1 – Food is safe
Stirling University PhD on Behaviour Change	<p>The basis of this project is to investigate the effectiveness of risk communication strategies such as public awareness campaigns that aim to motivate behaviour change towards food handling practices which prevent foodborne illness. The research aims to improve understanding of the attitudes, perceptions and preferences of different population groups in Scotland and will draw from FSS's segmentation work by exploring the following questions:</p> <ul style="list-style-type: none"> • how can approaches from consumer and behavioural economics be used to improve risk communication strategies in Scotland? • how can we tailor communication strategies for different groups within the Scottish population? • how can we measure the effectiveness of risk communication strategies? Does this show variation for different groups in the population? • What type of risk communication strategies would consumers prefer and value the most? 	October 2016	October 2019	Outcome 1 – Food is safe
Co-ordinated Food Sampling Grants	Food Standards Scotland (FSS) is making funding available to Scottish local authorities (co-ordinated through liaison groups) for sampling and surveillance of food. This programme aims to provide a co-ordinated, risk-based approach for sampling, and covers both imported and UK-produced food, where relevant.	July 2018	March 2019	Outcome 1 – Food is safe Outcome 2 – food is authentic
Contribution to UK wide retail survey of antimicrobial resistant bacteria in chicken and pork.	The project will undertake a pilot surveillance study covering England, Wales, Northern Ireland and Scotland on AMR in Campylobacter spp. on fresh/frozen chicken sold at retail/wholesale and AMR in Salmonella spp. on fresh/frozen minced pork sold at retail / wholesale. In addition, selected commensal organisms (e.g. Escherichia coli, Enterococcus spp. and Klebsiella spp.) will also be included. The study will be representative of all four countries using market share data, and will provide a separate data set for Scotland.	June 2017	May 2018	Outcome 1 – Food is Safe

<p>Review of controls for pathogen risks in cheeses made from unpasteurised milk</p>	<p>This literature review project was commissioned in response to the growing consumer demand for artisan cheeses, particularly those made from raw or unpasteurised milk. Historically, there have been several outbreaks across the world of foodborne illness that have been linked to the consumption of cheeses made from unpasteurised milk, raising concerns about its microbiological safety. This project is collating evidence on effective controlling factors that can be utilised during the cheesemaking process, particularly with respect to competing microflora, to support predictive modelling and validation of the food business operators processes. The project encompasses three key areas:</p> <p>Categorisation of cheese types commonly produced in the UK and an analysis of which critical control points (CCPs) might be used at various stages of the production of such cheese types;</p> <p>An analysis of currently available predictive modelling and challenge testing methods that are applicable to cheesemakers to enable future recommendations to be made regarding the most suitable methods for individual cheesemakers;</p> <p>An analysis of historical microbiological and physicochemical results obtained from cheesemakers undertaking sampling in their products to examine trends of microorganisms throughout the cheesemaking process and inform standardisation of trends.</p>			<p>Outcome 1 – Food is Safe</p>
<p>EU baseline survey of Norovirus in oysters</p>	<p>Noroviruses (NoV) are known to be a primary cause of ‘winter vomiting disease’ due to rapid spread in human population, particularly in the winter months. They are primarily spread through the faecal-oral route, either by the consumption of contaminated food or water, or by spreading directly from person to person. Many different foods have been associated with NoV outbreaks. Raspberries and oysters have been implicated in national and international outbreaks. Bivalve molluscs are known to concentrate NoV particles while filter feeding, with oysters posing a particular risk due to being routinely eaten raw.</p> <p>This current survey is part of a 2 year project to establish the prevalence of Norovirus in EU oysters. This data was requested by the European Commission and covers 171 production areas and 197 dispatch centres across Europe, including 14 harvesting areas and 1 dispatch centre from Scotland. The aims are to assess the proportion of EU classified production areas with NoV contamination, and assess the proportion of batches of final product at approved EU dispatch centres with NoV contamination. The project is due for completion in November 2018.</p>	<p>November 2016</p>	<p>October 2018</p>	<p>Outcome 1 – Food is Safe</p>

<p>Research programme to improve our understanding of the factors which lead to <i>E. coli</i> O157 shedding by cattle and intervention strategies for on-farm control</p>	<p>This project was commissioned to address key gaps in our understanding of the factors which lead to super-shedding in cattle and the contribution made by supershedders to transmission in animals, contamination of the food chain and human illness. The proposed research also aims to assist the FSA/FSS in determining how effective on-farm interventions would need to be to impact on the levels of STEC entering the food chain, and which approaches would have the most potential for on-farm control of STEC shedding in the UK. This project started in January 2014, and will be completed by the summer of 2018. The project will aim to determine shedding and transmission dynamics by colonisation trials under controlled conditions, look at the comparison of human and bovine EHEC O157 strains (this will involve a survey of farms in England, Wales and Scotland) and to model on-farm interventions to determine strategies with potential of reducing human illness.</p>	<p>January 2014</p>	<p>June 2018</p>	<p>Outcome 1 – Food is Safe</p>
<p>Expert review of chemical contaminant risks associated with the Scottish diet and food production chain</p>	<p>One of the aims of our strategy for reducing the risks of foodborne illness is to apply a structured, risk based approach to prioritise the contaminants and food production systems which present the greatest risk to the health of the Scottish population. There are a wide range of naturally occurring and man-made chemicals with the potential to contaminate the food chain, and it is important that FSS is able to quantify the extent to which these can affect food production and public health in Scotland. In order to support our work in developing and targeting intervention approaches aimed at controlling these risks (including guidance for businesses and consumer advice) we have commissioned an independent, expert review of the available evidence which will help us to prioritise the chemicals which have the greatest potential to contaminate food commodities produced Scotland, as well as current and emerging contaminant risks which are most likely to be associated with the dietary preferences of Scottish consumers.</p>	<p>January 2018</p>	<p>May 2018</p>	<p>Outcome 1 – Food is Safe</p>
<p>Investigation of the risks of Shiga-toxin producing <i>E. coli</i> (STEC) in the production of wild venison in Scotland</p>	<p>This is a jointly funded project with the Scottish Government's Strategic Research Programme. It was commissioned following a serious outbreak of <i>E. coli</i> O157 in 2015 which was linked to the consumption of venison products (sausages and burgers). The project aims to The aim of the project is to undertake a comprehensive survey of STEC in deer faeces across a range of geographic locations in Scotland (focussing on those animals which are likely to be highest risk – those co-grazing in vicinity of livestock farming). Whole genome sequencing of STEC samples will allow comparison of the types of STEC isolated from deer and cattle and the relationship between deer STEC strains and those which have been implicated in human disease.</p>			<p>Outcome 1 – Food is Safe</p>