



new food law to enhance consumer protection

fsai news

On 1st January this year, new EU food hygiene Regulations came into force. The new food law takes into account a high level of consumer protection, simplifies the previous legislation and separates aspects of food hygiene from animal health and official control issues. It is applicable to over 40,000 food businesses in Ireland and the farming community.

The legislation introduces a 'farm to fork' approach to food safety. Primary production (farming) is now an integral part of food hygiene legislation for the first time. It also puts the legal obligation on the food businesses to bear the full responsibility for the safety of food produced.

The new legislation requires all food business operators, except primary producers, to implement and maintain procedures based on the principles of HACCP which will ensure the production of safe food and help to protect consumer

health. The legislation is structured so that it can be applied flexibly in all food businesses regardless of their type or size. The new more risk-based and flexible procedures will better match the needs both of individual businesses and enforcement authorities.

To assist food businesses comply with the requirements of the new food law, the FSAI has published an information pack containing a range of leaflets and has also added a new section to its website. The leaflets outline in simple terms the legal obligations on food businesses and the website provides further advice and will be continually updated as more information becomes available from the EU and Irish Government departments.

The information packs are available by calling our advice-line on 1890 33 66 77 or visiting our website at www.fsai.ie/legislation/eu_hygiene_regs.

The new EU food hygiene legislation introduces a 'farm to fork' approach to food safety. Pictured are Una Gibney, consumer, Joe Kendrick, waiter, Paula Murray, bread distributor, Karen Simpson, chef, Pat King, butcher and Tim Camon, farmer.



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one of the oldest professions?

The Irish writer Flann O'Brien memorably opined that "*Banking is the second oldest profession, but more profitable than the oldest profession*". Food fraud is also a contender for the title 'second oldest profession'. It is undoubtedly profitable. Food fraud entails everything from mislabelling, re-labelling, adulteration with cheap ingredients, illegal food irradiation of some ingredients etc. The incentive is to make money at the expense of the customer.

While some of the above were practiced in Roman times, we have reminders in the recent past of the need for vigilance: the addition of transformer oil to animal feed in Belgium in 1999 leading to dioxin contamination of food for human consumption, and instances of illegal use of meat and bone meal in animal feed after the ban in 1998. Not surprisingly, such practices could put the health of the consumer in danger and, of course, whenever it happens, it undermines consumer confidence.

Fortunately, food adulteration is rare now, thanks to the tools at the disposal of the authorities and a rigorous food inspection system. Many of the tens of thousands of chemical tests performed on food products and ingredients each year in Ireland are designed to detect fraudulent practices. Reassuringly, analytical science is now complemented by the European General Food Law (EC178/2002) which require food businesses to keep traceability records that may be inspected at any time. However, fraudulent practices are far from eliminated and there will undoubtedly always be those who play fast and loose with the rules in order to make a quick euro. As trade becomes ever more complex, we will need renewed vigilance to ensure we detect and punish food fraud.

The FSAI's programme for 2006 will encompass, *inter alia*, the detection of food adulteration. There will also be a strong focus on the veracity of meat labelling in the light of recent investigations in several European countries into the use of illicit health marks on meat. However, the authorities also depend on the eyes and ears of the public to detect possible fraud.

Of particular importance is the commitment of food businesses to only buy from reputable sources and to ensure that supporting paperwork is in order. If the asking price for goods looks too good to be true, it probably is! Business people who are tempted risk prosecution, publicity and business failure.

Here is a short list of food adulterations practiced over the past 2,000 years

- Pepper adulterated with mustard husks and pea flour
- Copper sulphate in canned green peas
- Gloucester cheese adulterated with red lead (lead oxide)
- Sugar confectionery coloured with red lead or copper salts
- Cayenne pepper adulterated with red lead
- Coffee powder adulterated with ground roasted peas and beans
- Mustard paste or powder adulterated with radish seed or pea flour
- Bread adulterated with lime, chalk, alum, burnt bones or potato paste
- Beer adulterated with green vitriol (ferrous sulphate) or Indian cockle (*Anamirta paniculata*; a poisonous plant native to India)
- Substitution of tartaric acid for lemon juice
- Substitution of wormwood for hops in beermaking
- Cider adulterated with alabaster powder and marble dust
- Anchovy paste adulterated with red lead
- Lozenges adulterated with pipe-clay instead of sugar
- Custard adulterated with the leaves of poisonous cherry laurel to improve the taste
- Pickles illegally coloured by adding verdigris (different types containing copper acetates and copper hydroxide) or blue vitriol (copper sulphate or bluestone)
- Sloe, elder and ash leaves and verdigris in tea leaves
- Oil of vitriol (sulphuric acid) in vinegar
- Illegal addition of sugar during wine fermentation (chaptalisation)
- Wines adulterated with sugar of lead (lead acetate)
- Substitution of quassia (bitter bark of a tree native to Jamaica) for hops in beer making
- Porter beer adulterated with light beers, molasses and gentian root
- Water in milk
- Sudan Red I in chilli powder

new service contracts



The FSAI and the official food control agencies have signed new service contracts for the period 1st January 2006 to 31st December 2008. In addition, a new service contract was signed recently between the FSAI and the National Standards Authority of Ireland to cover work on natural mineral waters.

We are grateful for the good partnership that these contracts represent among the agencies and the FSAI. This is the third round of service contracts since the

establishment of the FSAI and a smooth work flow has been established which includes regular review meetings, inter-agency meetings and training provision where necessary. None of this would be possible without the good will and team work of all the personnel involved.

Dr John O'Brien, CEO

Photographed signing the new service contract between the FSAI and the National Standards Authority of Ireland (NSAI) are Mr Simon Kelly, CEO, NSAI and Dr John O'Brien, CEO, FSAI.

sampling plan: national microbiological surveillance programme, 2006

The sampling plan for the 2006 national microbiological surveillance programme is outlined in Table 1 below. The topics were agreed following consultation with environmental health officers (EHOs) and the Official Food Microbiology Laboratories (OFMLs) of the Health Service Executive. Sampling for each survey will be undertaken by EHOs predominantly in retail premises and all samples will be analysed in the Official Food Microbiology Laboratories.

Table 1: Sampling plan for the 2006 national microbiological surveillance programme

Topic	Period	Microbiological parameters
Microbiological safety of raw mushrooms	January - March 2006	<i>Salmonella</i> spp. <i>Staphylococcus aureus</i>
Microbiological safety of infant formula	April - June 2006	<i>Enterobacteriaceae</i> <i>Enterobacter sakazakii</i> <i>Salmonella</i> spp.
Environmental monitoring in food premises	July - December 2006	Aerobic Colony Count (ACC) <i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Listeria monocytogenes</i> <i>Salmonella</i> spp. <i>Campylobacter</i> spp. <i>Escherichia coli</i> O157

Microbiological safety of raw mushrooms

Mushrooms are the edible fleshy fruiting bodies of certain fungi. The most commonly cultivated mushroom species is *Agaricus bisporus*, although many other species are now gaining importance.

Mushrooms for commercial markets are cultivated in dark, climate controlled polythene tunnels. The initial step involves colonisation of the mushroom compost (a pasteurised mixture of wheat straw, poultry/horse manure, gypsum and water) with the mushroom fungus. The colonised compost is then covered with a layer of casing soil (mixture of peat and limestone) and once this layer has been colonised, the environmental conditions within the tunnel are manipulated to initiate mushroom growth. The mushroom crop grows in repeating cycles called 'flushes'. Mushrooms are generally harvested by hand from three to four flushes.

Like other vegetables, mushrooms carry a natural non-pathogenic microflora. However, contamination with pathogens from human and/or animal sources can occur at various stages during growth, harvest, processing, handling, storage and transportation. In 2001, *Salmonella* Kedougou (an uncommon serovar of *Salmonella* spp.) was detected in raw mushrooms cultivated and sold in Ireland. At the time, the FSAI issued advice to commercial caterers and consumers that until further notice all mushrooms should be cooked before eating/serving. This advice has not been withdrawn.

The aim of the study is to determine the current status of raw mushrooms on retail sale in Ireland with respect to microbiological safety and quality.

Microbiological safety of infant formula

Powdered infant formula, contaminated with pathogens such as *Enterobacter sakazakii* and *Salmonella* spp., has been implicated as the source of infection in a number of foodborne cases and outbreaks. Although the incidence of infection is low, both the vulnerability of infants to infection and the severity of the illness, raises concern.

During the processing of powdered infant formula, pathogens such as *E. sakazakii* and *Salmonella* spp. are eliminated by the pasteurisation step; however, contamination may occur post processing (e.g. during additions of heat sensitive nutrients, spray drying and filling). Although *E. sakazakii* and *Salmonella* spp. cannot grow in dry substrates, they can survive for a long period of time and constitute a considerable risk if conditions permit multiplication after reconstitution with water (e.g. if the rehydrated powder is temperature abused).

Strategies for controlling these pathogens include:

- Monitoring the microbiological quality of the raw materials (in particular heat sensitive ingredients which are added after pasteurisation).
- Reducing the level of *Enterobacteriaceae* in the production environment through good manufacturing practices (GMP), good hygiene practices (GHP) and the implementation of an environmental monitoring programme (*Enterobacteriaceae* are used as an indicator for the possible presence of pathogens). These strategies should be incorporated into the food businesses HACCP plan.

The aim of this study is to assess the microbiological safety of infant formula on sale in Ireland.

Environmental monitoring in food premises

A good cleaning programme is an integral part of a food safety management system based on the principles of HACCP and forms part of the prerequisite programme. It is essential to prevent cross-contamination of food from equipment, work surfaces, the environment etc. A good cleaning programme should outline the items to be cleaned, the frequency of cleaning, the person responsible for cleaning, the cleaning agent, etc.

Environmental sampling is an effective tool for assessing the efficacy of the cleaning programme. Under Commission Regulation 2073 (Regulation on Microbiological Criteria for Foodstuffs) environmental sampling is a legal requirement in:

1. premises producing ready-to-eat food which may pose a risk of *L. monocytogenes* and
2. premises producing dried infant formula or dried food for special medical purposes intended for infants below six months which pose a risk of *Enterobacter sakazakii*.

In all other food premises, environmental sampling should be undertaken when necessary to ensure that the foodstuffs comply with the microbiological criteria which are outlined in the Regulation.

The aim of this study is to assess the microbiological status of environments (e.g. equipment, work surfaces, cleaning cloths etc) in food premises in Ireland. The study will focus on high risk food premises which handle both raw and ready-to-eat food.

verocytotoxigenic escherichia coli

Ireland recently experienced its largest ever outbreak of verocytotoxigenic *Escherichia coli* (VTEC). This outbreak, which occurred in the Midwest, affected 18 people, nine of which were preschool children attending one of two local crèches.

So what exactly is VTEC, how is VTEC infection spread, and what preventative measures can childcare facilities take?

What is VTEC?

VTEC are strains of *E. coli*, so called because they produce one or two verocytotoxins (VT1 and VT2). VTEC are an important cause of gastroenteritis resulting in illness that ranges from mild diarrhoea to life threatening conditions such as haemolytic uraemic syndrome (HUS).

Over 150 VTEC serotypes have been associated with human infection, including *E. coli* O157, O26, O111, O103 and O145. However *E. coli* O157 (often referred to as VTEC O157) is the most common cause of human VTEC infection in Ireland, with up to 88 cases of human VTEC O157 infection reported each year between 1999 and 2004.



Recently published figures (published by the Health Protection Surveillance Centre) show that there were 61 confirmed human VTEC infections in Ireland in 2004. The highest incidence occurred in young children, representing an incidence rate of 1.6 per 100,000 population (Figure 1). A slightly lower incidence rate of 1.3 per 100,000 was reported across the European Community. In Ireland, 52 of the 61 VTEC cases reported (85%) were caused by VTEC O157 (Figure 2).

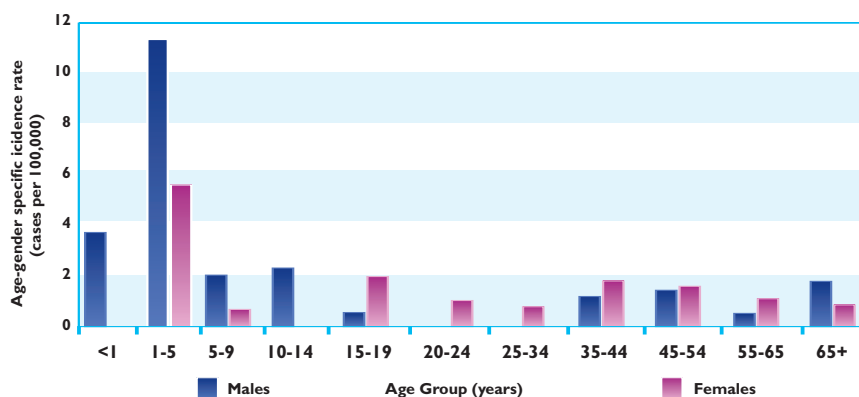


Figure 1: Age-specific incidence rate (per 100,000 population) of confirmed cases of VTEC, Ireland 2004 (Source: HPSC Annual Report 2004)

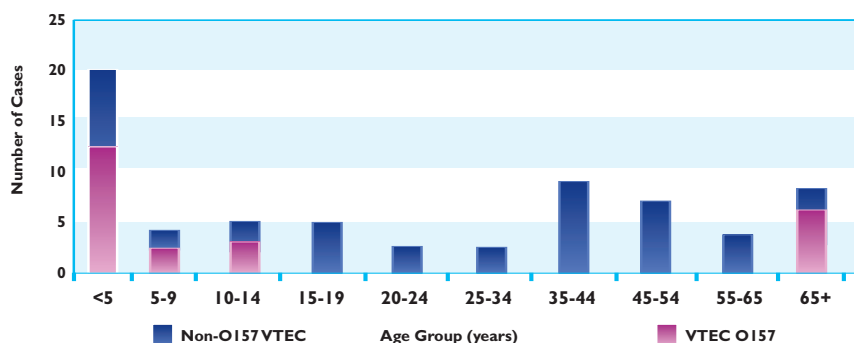


Figure 2: Confirmed cases of VTEC infection stratified by age group, Ireland 2004 (Source: HPSC Annual Report 2004)

How is VTEC transmitted?

VTEC can be transmitted through eating contaminated food. Although labelled 'the burger bug', other foods have been associated with VTEC illness including apple juice, fruit and vegetables, unpasteurised milk and cheese. Last December the FSAI issued advice not to consume French camembert cheese manufactured by Laiterie Fromagerie du Val D'Ay Etablissement REAUX, because of possible contamination with VTEC O26.

In addition to food; water, animal contact and person-to-person spread are now recognised as being important modes of transmission for VTEC infection. Water is especially seen as an important mode of transmission, with the potential for a substantial number of people to be exposed. Person-to-person spread is a significant mode of transmission in childcare facilities, schools and other institutions where poor hygiene can cause the illness to spread to many people. Preliminary results from the recent VTEC outbreak point to crèche attendance and drinking water from a local group water scheme as risk factors. Significant person-to-person transmission was also reported within three family clusters.



What are the risks?

VTEC poses a serious risk to human health because only a small number of bacteria are required to cause illness, and because of the severity of the illness. The highest incidence is in young children who are also most likely to suffer the severe manifestations of infection. In the Midwest outbreak, two children were hospitalised with HUS, but thankfully there were no fatalities. This was not the case in a Welsh outbreak of VTEC O157 in September 2005, which affected 158 people, mostly children; tragically one five year old boy died.

Controlling VTEC in childcare facilities

Crèche attendance and drinking water from a group water scheme were risk factors reported in the Midwest outbreak. The young age of attendees at childcare facilities and the potential for person-to-person spread mean that childcare facility owners and staff need to take extra care in guarding against VTEC infection. But what measures should they take?

Ensuring a high standard of hygiene in childcare facilities and preventing the further spread of illness is essential. Both crèches

involved in the Midwest outbreak were unregistered. Registered childcare facilities are subject to basic minimum hygiene requirements and are inspected by the local environmental health service who will give hygiene advice. Control measures implemented during this outbreak included: voluntary closure of the two crèches; exclusion of 'at risk' groups; hygiene advice to close contacts of cases; and placement of a boil water notice on the group water scheme.

Further advice to childcare facilities is summarised in Table 1.



Table 1: Preventing the spread of VTEC in childcare facilities

Preparing food	You are legally obliged to register as a food business with the local environmental health service. Your childcare facility will be inspected and hygiene advice will be given. Staff preparing food must be trained in basic food hygiene. Your kitchen must also have procedures based on the HACCP principles so you can identify and control any hazards that may result in unsafe food.
Hand hygiene	Always wash your hands in warm soapy water after using the toilet, after changing nappies and before and after preparing food. Teach children to wash hands after using the toilet and before eating. Supervise hand-washing.
Children with sickness or diarrhoea	You must try and prevent the spread of infection to other children. Exclude those who are ill until they are well and show no symptoms of the illness. If a child is sick, or has diarrhoea at the childcare facility, immediately clean and disinfect the area, washing hands thoroughly after cleaning. Contact the child's parents to collect the child immediately.
Drinking water supply	If the childcare facility is on a private supply or group water scheme you should ensure that the water is safe and complies with European drinking water standards. If there are any doubts about the safety of the water, it should be boiled and cooled before being used to drink or prepare food.

A leaflet has been prepared for childcare facility owners and staff, entitled 'E. coli O157: Protecting the Children in Your Care'. The leaflet is available on our website: www.fsai.ie or by calling our advice-line on 1890 33 66 77.

For further information, see:

Large *E. coli* O157 outbreak in Ireland, October-November 2005. Online: www.eurosurveillance.org/ew/2005/051222.asp#3

HPSC, 2005. Health Protection Surveillance Centre Annual Report 2004.

Online: www.hpsc.ie/AboutHPSC/AnnualReports/File,1438,en.pdf

EFSA, 2005. The Community Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Antimicrobial Resistance in the European Union in 2004. Online: www.efsa.eu.int/science/monitoring_zoonoses/reports/1277_en.html

Food Safety Authority Warns of Possible Contamination of Camembert Cheese. Press Release 28th December 2005.

Online: www.fsai.ie/news/press/pr_05/pr20051228.asp

'The Prevention of *E. coli* O157:H7 Infection - A Shared Responsibility'. FSai, 1999. Online: www.fsai.ie/publications/reports/ecoli_report.PDF (This report will now be reviewed, taking into account scientific developments in this area.)



fsai information resources:

looking back on 2005

One of the functions of the FSAI is to act as a resource for interested parties to source information on all aspects of food safety and hygiene and to allow consumers to communicate their views to the Authority. This exchange of information is facilitated through our advice-line, website and Information Centre.

Advice-line

Our advice-line, operated by trained advisors and food scientists, deals with a large number of queries on a daily basis. In 2005, the number of queries to the FSAI advice-line totalled 9,913, an increase of almost 4% from the previous year. Queries originate from a wide range of sources (see Figure 1). Consumers made up 34% of total calls during the year, while the food industry also represented a large number of calls (32%), which is appropriate as the FSAI strives to assist industry to achieve good hygiene standards and comply with the law. Other callers included service contract personnel, students/researchers, consultants, state sponsored bodies, health professionals and trainers, to name but a few.

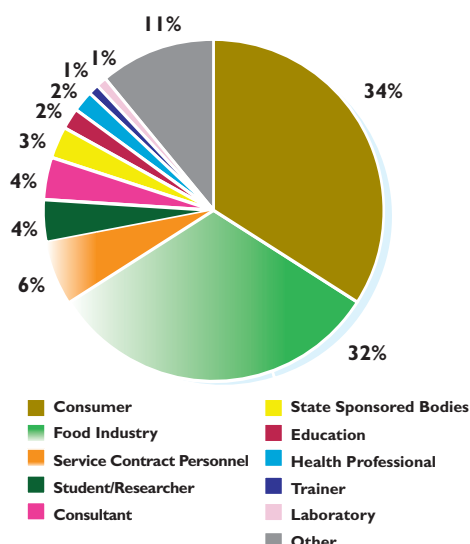


Fig 1. Category of caller to the advice-line, 2005

'Information requests' remained the largest category of calls to the advice-line during 2005 (21%), the requests being largely for

FSAI publications (Figure 2). The second largest category of calls to the advice-line was 'complaints' (15%) covering areas such as unfit food, unacceptable hygiene standards and suspect food poisoning. Many callers are unaware of their rights as consumers and our staff advise them on the best course of action to take. This may cover the procedure they should follow when making a complaint and what they should do if they suspect they have food poisoning. A large number of these complaints were subsequently referred to the appropriate agency for action. Of the Health Service Executive areas to which complaints are referred, the Dublin/Mid-Leinster Region was the recipient of most, with 44% of all complaints referred to its offices.

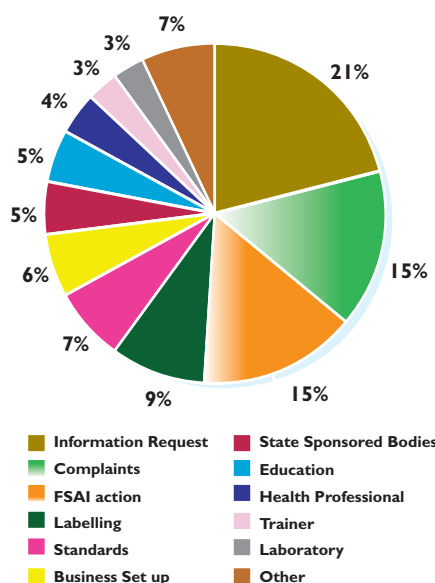


Fig 2. Category of requests to the advice-line, 2005

During the latter half of 2005, the FSAI conducted an evaluation of the advice-line in order to gather feedback from those who used the service. Following a telephone survey which addressed a number of key areas, the advice-line was rated highly with 90% of respondents extremely satisfied with the service provided. The helpfulness and professionalism of the advice-line staff was also rated highly (95% and 96% respectively). 97% of respondents said that they received a response within five working days.

The advice-line, on 1890 33 66 77 is open weekdays from 9am to 5pm. Alternatively, we can be contacted by email at info@fsai.ie and complaints can be made by using a 'complaint form' on our website, www.fsai.ie.

Website

The website is another main access point for food safety information. It allows the FSAI to promptly disseminate information and address issues of concern in real time. Visitors to the site come from around the globe and include researchers, scientists, staff in the food industry, consumers, media and service contract personnel. During 2005, over 230,000 unique visitors accessed the website, logging on to over two million web pages on the site.

Information Centre

The Food Safety Information Centre, located at our offices on Lower Abbey Street, is another valuable information resource. The Centre contains a wide range of books, journals, videos and online databases related to food safety. Other facilities available in the Centre include photocopying and printing facilities; there are also a number of public access PCs available, providing access to the electronic resources and the internet.

There were 375 new titles added to the library stock in 2005 bringing the total collection of individual items to 5,271.

The Information Centre is open to staff from Government agencies, the food industry, researchers and the general public from 9am - 5pm, weekdays, preferably by appointment to ensure that appropriate assistance is provided and the information available on visiting. A time can be arranged by calling our librarian, on 01 8171354 or by email on info@fsai.ie.

We'd like to hear your views on our advice-line, website and Information Centre - for comments or suggestions, please phone 1890 33 66 77 or email info@fsai.ie.

fvo programme of inspections, 2006

The EU Food and Veterinary Office (FVO) has published its programme of inspections for 2006. A total of 270 inspections are planned for the year, of which 59% will be in Member States, 11% in acceding and candidate countries and 30% in third countries. The majority of inspections (64%) will relate to food safety with the remainder focusing on animal health, animal welfare, plant health and general reviews.

The 2006 programme introduces a new series of audits and on-the-spot inspections which includes official controls on products of animal origin to incorporate aspects of the new EU Hygiene Regulations that came into effect on 1st January this year. Ireland is scheduled for four inspections, covering official controls on products of animal origin, TSEs (BSE), intra-community trade of live animals and animal welfare: farms

(pigs, calves and laying hens). As in previous years, adjustments to the plan may occur as the year progresses.

The programme of inspections is available on the European Commission website at: http://europa.eu.int/comm/food/fvo/inspect_prog/index_en.htm.

enforcement orders 2005

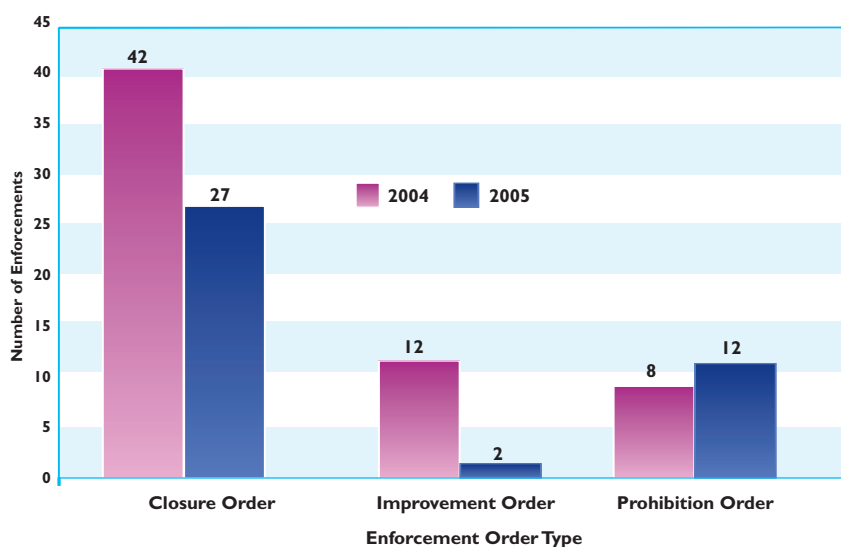


Figure 1: Enforcement Orders, 2004 Vs 2005

In 2005, a total of 41 Enforcement Orders were served under the Food Safety Authority of Ireland Act, 1998, a welcome decrease from the 62 served the previous year. Closure Orders accounted for 66% of the total number of Orders served, while 29% were Prohibition Orders and the remaining 5% Improvement Orders. While the number of Closure and Improvement Orders decreased from 2004, an increase was recorded in Prohibition Orders (Figure 1). Of the total number of Orders served during 2005, 55% were served on the 'service sector' business category, 20% on 'retailers' and 10% each on 'distributors/transporters' and 'manufacturers/packers'. Enforcement Orders are served by authorised officers appointed by the FSAI or its official agents under Section 49 of the Act.

For further information, see: www.fsai.ie/enforcement/index.asp

fsai participates at external events

The FSAI had information stands at two exhibitions during February: VINTRA and 'Campycheck'.

VINTRA is a national exhibition for restaurants, hotels, pubs and clubs and took place from 7-9th February in the RDS. Over 220 exhibitors showcased at the exhibition, mainly in relation to the latest innovations for the hospitality industry. It is the only time that the hospitality industry will come together this year to share new ideas, review new products and discuss issues in the food industry. In light of the new food hygiene legislation which came into force on

1st January this year, the theme of the FSAI stand was appropriately 'New Food Law - Are You Ready?'. The event provided the FSAI with an opportunity to meet with those working in the hospitality sector, to answer their queries and discuss any issues they may have.

Campycheck: Emerging Campylobacteraceae in the food chain, organised by Teagasc, the Ashtown Food Research Centre, took place on February 8th at Croke Park. The conference reviewed results which were generated through a three year (2003-2006) European programme on

Campylobacteraceae and key national and international experts in the field presented their latest research findings on emergent *Campylobacteraceae* in the food chain. Attending the conference were researchers, public health and animal health specialists, environmental health officers, food manufacturers, retailers, food safety regulatory authorities and agencies.

Both information stands were manned by trained advisors and scientists, and were visited by many interested parties.

national food surveillance programme 2004 -

Introduction

Under the annual official food control programme, food samples taken by environmental health officers (EHOs) at Health Service Executive supervised premises are submitted for analyses to one of seven official food microbiology laboratories. There are approximately 40,000 such premises in Ireland, the majority of which can be described as either retail or food service. Food samples are analysed for a range of foodborne bacteria and remedial action for samples with an unsatisfactory outcome is taken by EHOs. These actions can range from follow-up investigations to taking of further samples, or an inspection of the premises to identify potential hygiene deficiencies.

Sample and analysis details

In 2004, 13,819 food samples were taken and analysed for a total of 84,757 tests. This represented a 7% decrease in sampling since 2003 which has been attributed to sampling resource issues.

73% of samples were taken during routine sampling as part of official controls, 21% as part of pre-planned targeted surveys and 5% were complaint samples which included suspect food poisoning and outbreak samples (Figure 1). By comparison with 2003 this represented a 3% decrease in the percentage of complaint samples offset by a 3% increase in routine samples. The number of survey samples remained static. Survey samples included local surveys conducted within individual health boards (now known as the Health Service Executive) and three topics conducted under the National Microbiology Surveillance Programme, results of which have previously been reported (*fsainews* volume 7, issue 4).

Using a European Commission (EC) classification system, food samples taken under the official food control programme are classified using 21 different food categories. Overall, as with previous years, 'meat and meat products, game and poultry' and 'prepared dishes' are the most highly sampled food categories. Comparing routine and complaint samples, this same pattern was repeated in both groups (Table 1).

The majority of samples (98%) analysed in 2004 were classified as ready-to-eat. The small number of non-ready-to-eat foods represents an 8% decrease from the number sampled in 2003 and 14% decrease from 2002. This trend may be attributed to the fact that aside from temperature control during storage, the majority of controls required to ensure the safety of raw food (e.g. raw meat) take place in premises not under the supervision of the health boards.

In the case of routine samples the most commonly performed tests were, in order of frequency: *Listeria* spp. (including *Listeria monocytogenes*) (23%), Aerobic Colony Count (ACC) (13%), *E. coli* (12%), *Staphylococcus aureus* (12%), *Salmonella* (12%) and *Clostridium*

(10%) (Figure 2). The testing rate for *Listeria* spp. was almost double that of the other common pathogens because testing for *Listeria* spp. generally involves both a qualitative and a quantitative test which does not apply to the other pathogens.

Table 1: Comparison of EU Categories for Routine and Complaint Samples Analysed in Official Food Microbiology Laboratories, 2004

EU Category Code	EU Category	Percentage of Samples	
		Routine	Complaint
1	Dairy products	9.4	6.4
2	Eggs and egg products	4.7	3
3	Meat and meat products, game and poultry	37.9	40
4	Fish, shellfish and molluscs	4.8	11.3
5	Fats and oils	0	0.1
6	Soups, broths and sauces	3.4	8.7
7	Cereals and bakery products	5	5.6
8	Fruit and vegetables	3.3	5.7
9	Herbs and spices	0.3	0.5
10	Non-alcoholic beverages	1.6	2.1
13	Ices and desserts	2.4	3.2
15	Confectionery	0.1	0
16	Nuts and nut products, snacks	0	0
17	Prepared dishes	26	12.3
18	Foodstuffs intended for special nutritional uses	0.4	0.5
21	Others	0.7	0.5

Routine and Complaint Sample Results

General

Test results of ready-to-eat food samples were classified as 'satisfactory', 'acceptable', 'unsatisfactory' and 'unacceptable/potentially hazardous' based on criteria specified in *FSAI Guidance Note No. 3: Guidelines for the interpretation of results of microbiological analysis of some ready-to-eat foods sampled at point of sale*. In 2004, 56,488 test results for routine samples and 3,637 tests results for complaint samples were classified. The percentage results classified as unsatisfactory and unacceptable/potentially hazardous for complaint samples, 1.7% and 0.4% (Figure 3) respectively, was as expected slightly higher than for routine samples, 1.3% and 0.1 % respectively (Figure 4). More details on these results by organism are given in Table 2 and further discussed below.

Indicator organisms

Analysis of ready-to-eat foods for indicator organisms (*Enterobacteriaceae*, *E. coli* and *Listeria* spp.) was undertaken to highlight/indicate potential problems with the foodstuffs such as the potential presence of pathogens, poor hygiene practices and poor process control (Table 2). While only 1.7% and 0.02% of samples tested for *E. coli* and *Listeria* spp. respectively, were classified as unsatisfactory, 9.6% of samples tested for *Enterobacteriaceae* were classified as unsatisfactory. This finding suggests that there is still room for improvement in general hygiene standards.

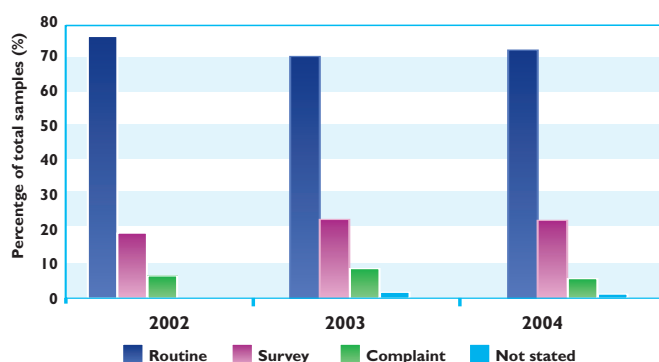


Figure 1: Sampling Programme for Samples Analysed in Official Food Microbiology Laboratories, 2002-2004

microbiological sampling

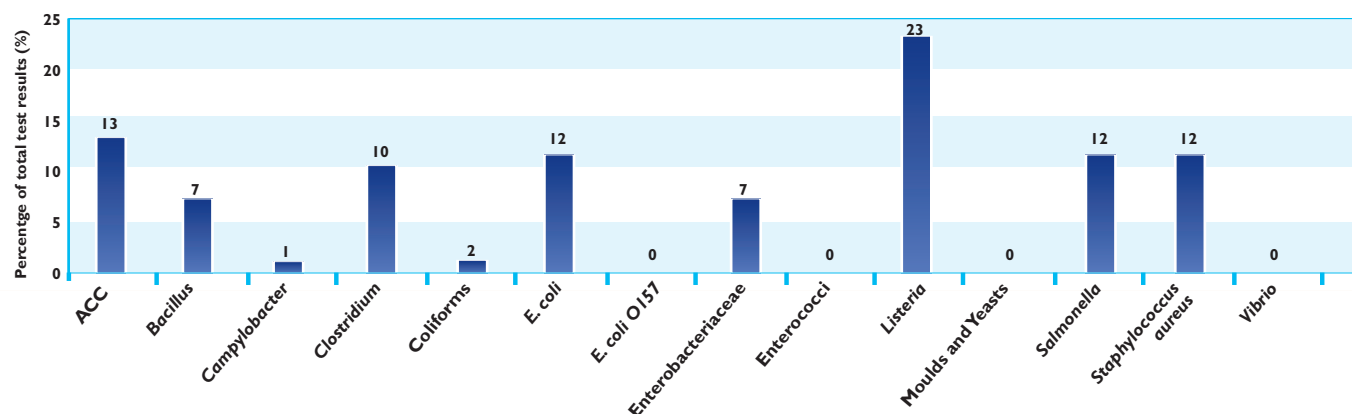


Figure 2: Percentage* of Test Results for Routine Samples Analysed in Official Food Microbiology Laboratories, 2004

*The actual percentages for the four tests that appear as '0' were as follows: *E. coli* O157 (0.02%); *Enterococci* (0.05%); *Moulds and Yeasts* (0.005%); and *Vibrio* spp.(0.001%).

Pathogens

All ready-to-eat food samples tested for *Campylobacter* spp. (1,282), *E. coli* O157 (76) and *V. parahaemolyticus* (20) were found to be satisfactory (i.e. no pathogen was detected). This finding is particularly interesting in relation to *Campylobacter* spp., as this pathogen is the most common cause of bacterial gastroenteritis in Ireland. A similar finding was observed during routine analysis in 2003 and 2002 and in targeted microbiological surveillance work on refrigerated cooked chicken pieces in 2001. These results suggest that ready-to-eat foods are not a primary source of *Campylobacter* spp.

Salmonella spp. is another relatively common cause of foodborne illness both in Ireland and worldwide. There are over 2,500 known salmonella serovars however, two serovars *S. Enteritidis* and *S. Typhimurium* account for the majority of cases of human salmonellosis. These serovars were not isolated from ready-to-eat foods in 2004. In fact only one sample was found to be positive. *S. Senftenberg* was isolated from a curry powder sample. Other pathogens less commonly associated with human illness in Ireland such as *L. monocytogenes*, *S. aureus*, *C. perfringens* and *B. cereus* were detected in a small number of samples at unacceptable/potentially hazardous levels.

Overall the 2004 surveillance results indicate a high microbial quality in ready-to-eat foods on sale in Ireland, implying effective general hygiene and HACCP control measures by the food industry.

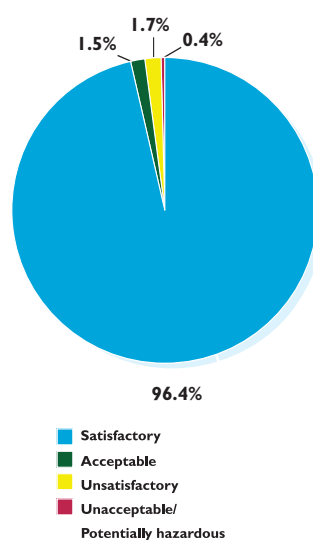


Figure 3: Classification of Microbiological Test Results of Ready-To-Eat Complaint Samples, 2004

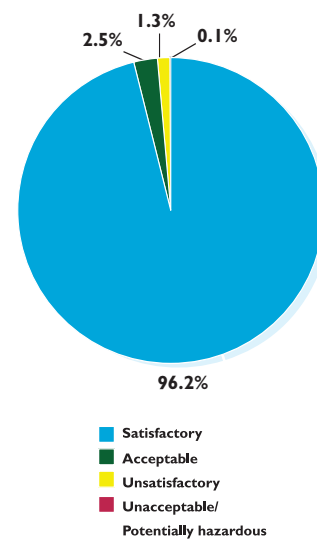


Figure 4: Classification of Microbiological Test Results of Ready-To-Eat Routine Samples, 2004

Table 2: Breakdown of Microbiological Classification (2004) by Organism for Ready-To-Eat Routine and Complaint Samples

Organism	Indicator/Pathogen	No. of tests	Microbiological Status*			
			Satisfactory (%)	Acceptable (%)	Unsatisfactory (%)	Unacceptable/Potentially hazardous (%)
<i>Enterobacteriaceae</i>	Indicator	5670	69.47	20.97	9.56	N/A
<i>E. coli</i> (total)	Indicator	10255	97.22	1.12	1.66	N/A
<i>Listeria</i> spp. (total)	Indicator	5073	99.92	0.06	0.02	N/A
<i>Salmonella</i> spp.	Pathogen	10115	99.99	N/A	N/A	0.01
<i>Campylobacter</i> spp.	Pathogen	1282	100.00	N/A	N/A	0.00
<i>E. coli</i> O157 & other VTEC	Pathogen	76	100.00	N/A	N/A	0.00
<i>V. parahaemolyticus</i>	Pathogen	20	100.00	0.00	0.00	0.00
<i>L. monocytogenes</i>	Pathogen	5165	99.52	0.12	N/A	0.37
<i>S. aureus</i>	Pathogen	10335	97.52	1.57	0.77	0.14
<i>C. perfringens</i>	Pathogen	8363	99.61	0.20	0.12	0.07
<i>B. cereus</i> & other pathogenic <i>Bacillus</i> spp.	Pathogen	5693	101.50	0.93	0.23	0.32
Total		62046	96.10	2.49	1.32	0.09

* Microbiological status based on FSAI Guidance Note No. 3

N/A: Not applicable

irish attitudes to food safety



The European Food Safety Authority (EFSA) and DG SANCO, in the European Commission, recently announced the results of a survey, commissioned jointly by the organisations, which comprised face-to-face interviews with approximately 1,000 people from each of the 25 EU Member States during September and October 2005. Four areas were studied: general risk perceptions; perceptions of food safety risks; perceptions of the public authorities' role; and the influence of media coverage on food safety perceptions.

The survey reveals that food is ranked fourth behind environmental pollution, car accidents and serious illness amongst consumers across the EU as a factor that would most likely affect health. However, 67% of Irish people believe food safety has improved in the past 10 years. Six in ten Irish people believe the public authorities in Europe take health seriously, with 54% saying the authorities are quick to act if health dangers are identified.

The survey reveals that attitudes to food safety in Ireland are generally more positive than the European average. This hopefully reflects the strong system of food law enforcement in place here, and the importance we place on adherence to food safety best practice in order to protect our consumers. It is interesting that 65% of Irish people think that European food is safer than imported food. In addition, while 74% of Irish people think that food safety laws are strict, only 31% of them think that there are too many food safety rules, the third lowest figure in the 25 Member States. The Irish are also the second highest group of people in Europe to think that food safety had improved over the last 10 years (67%), compared to only 47% in the UK and 38% in France.

The top three risks concerning food that spontaneously came to the minds of Europeans were food poisoning (16%), chemicals/pesticides/toxic substances (14%) and obesity (13%). Only 8% mentioned

GMOs as a concern to health, with only 7% mentioning additives in the same context and 7% thought that food presented no risks at all.

Other key findings regarding concerns about food safety included:

- Irish people are one of the least likely in Europe to worry about food allergies (28%) compared to the European average (41%);
- Regarding contaminants, 65% of Irish people are concerned about pesticides, slightly less than the European average of 71%;
- Interestingly, only 38% of Irish people are concerned about BSE compared to around 70% in Italy and Poland.

In relation to BSE, some influencing factors could be the confidence people have in the national controls that have been in place since 1996, and perhaps a familiarity with the risk has been felt longer in Ireland than some countries. Worryingly, 34% of Irish people believe that the public authorities in Europe view profits of producers as more important than the health of consumers. While this figure is lower than the European average of 47%, consumers in Ireland should be reassured that the Food Safety Authority of Ireland will always place consumers' health and consumers' interest first.

The full report is available on the EFSA website www.efsa.eu.int

open tender: analysis of the fatty acid profile in food

The FSAI is inviting interested laboratories to tender for the following: *Analysis of the Fatty Acid Profile Including Trans Fatty Acids and Total Fat Content in Food*. Specific requirements of this survey include determining the fatty acid profile including trans fatty acids (TFAs) and the total fat content of samples. Results will be required for the total fat content, the proportion of each fatty acid type including TFAs as a percentage of the total fatty acid content and as a proportion of the total fat content as sold to the final consumer (i.e. per 100g).

As part of the tender, information should be provided on the following:

- Details of scope of accreditation relevant to the survey
- Proof of participation in external proficiency tests and inter-laboratory comparison schemes (e.g. FAPAS)
- Methodology applied (including information on LODs and LOQs, use of internal standards and certified reference materials, method performance details)
- Quality assurance and quality control measures in place
- Any other information you may consider useful, in particular experience in analysing samples of relevance for these parameters

- Information and details above for any subcontract laboratories that are proposed for any of the listed tests.

Tenders from interested laboratories will be accepted up to 5pm on Friday 10th March 2006 and should be submitted to:

Karl McDonald, FSAI, Abbey Court, Lower Abbey Street, Dublin 1, or by email: kmcdonald@fsai.ie, or fax: 01 8171279

Samples will be forwarded to the successful laboratory in April 2006.

For further information, see: www.fsai.ie/about/tenders/about_tenders.asp

changes to srm regulations

There has been an alteration to the Regulations which define the material which is removed from the food chain because of its specified risk regarding potential transmission of spongiform encephalopathies. The minimum age of bovine animals, over which vertebral column is to be removed from the food chain, has been raised from 12 months to 24 months. The revised definition of specified risk material (SRM) is contained in Commission Regulation (EC) No. 1974/2005 which amends Annexes X and XI to Regulation (EC) No. 999/2001.

Cuts of beef incorporating the vertebral column of bovine animals, such as T-bone steak, may now be obtained, and sold to the consumer, from animals up to 24 months of age. The vertebral column of bovine animals over 24 months of age continues to be regarded as SRM, and should continue to be removed from the food chain.

Food business operators must have systems in place to ensure and verify that any cuts of beef with components of the vertebral column left in are sourced from animals under 24 months, and that all SRM is removed from the food chain.

The traditional T-bone steak may only be supplied from animals up to 24 months. Butchers engaged in this trade should be able to demonstrate the age of the animal from which these cuts were

obtained. Meat may be cut from animals over 24 months but the vertebral column has to be removed as SRM. Retail butchers who handle products containing SRM, such as sides of beef from animals over 24 months, should be registered for this activity and have systems in place to ensure complete removal and appropriate disposal of SRM.

Bovine Specified Risk Material

- All tissues from animals with suspected or confirmed BSE
- Tonsils, intestines and mesentery of all bovine animals
- Skull including brain and eyes, and spinal cord of bovine animals over 12 months
- Vertebral column including dorsal root ganglia of bovine animals over 24 months.

Ovine and Caprine Specified Risk Material

- All tissues from all ovine and caprine animals with confirmed or suspected TSE
- Spleen and ileum of all ovine and caprine animals
- Skull including brain and eyes, spinal cord and tonsils of all ovine and caprine animals over 12 months.

pesticide control laboratory moves to backweston

The Pesticide Control Laboratory (PCL) of the Department of Agriculture and Food (DAF) was established in 1980 to provide the analytical capacity necessary to support the pesticide legislation in Ireland. It was initially based in Harcourt Terrace where it began with a staff of three before moving in 1991 to the University College Dublin Veterinary Department field station at Abbotstown, with five staff and an annual monitoring programme of approximately 500 samples for up to 72 pesticide residues.

Residue Instrument Room in the Pesticide Control Laboratory



Front of PCL building at Backweston

The requirement to update and modernise the laboratory facilities on the Abbotstown campus, combined with Government plans to establish a centre of excellence for the development of sport at Abbotstown, resulted in a decision to build new laboratory facilities at Backweston. The new laboratories were planned and developed to take account of the current and future needs of DAF and are serviced to the highest possible level. The transfer of the PCL from Abbotstown to Backweston Campus, Young's Cross, Celbridge, was finalised in November 2005.

The structure and complexity of the operations of the PCL has increased dramatically since its initial days in Harcourt Terrace. There are now 17 members of staff and analytical techniques almost exclusively use mass spectrometry as the method of choice for the identification and quantification of pesticide levels present in the samples analysed. New analytical equipment, purchased in 2005, will enable the laboratory to significantly increase the range of pesticides being determined in samples analysed as part of the food monitoring programmes.

The laboratory will implement two work programmes in 2006; one for the analysis of pesticide residues in food and the second to confirm plant protection products authorised for use in Ireland.

food safety training receives fetac certification

Food Safety Training Skills is a two day workshop, hosted by the FSAI, which enables in-company trainers to deliver the *Food Safety and You* induction training programme in their food business. The *Food Safety and You* training programme was launched in 2004, and to date, over 200 industry representatives have attended the *Food Safety Training Skills* workshop.

The FSAI has recently received FETAC (Further Education and Training Awards Council) certification for the *Food Safety Training Skills* workshop. FETAC is the awarding body for the further education and training sector in Ireland. FETAC awards are quality assured, nationally and internationally recognised, offer progression to employment and/or further education and training, and are included in the National Framework of Qualifications.

Practical applications

Food Safety and You is designed for all food workers, including those with language or literacy difficulties. As part of their 2005 health education campaign, environmental health officers in the HSE Southern Region have delivered the programme to specific groups, including:

- voluntary workers
- childcare workers in low risk premises
- non-English speaking Chinese food handlers.

• Voluntary workers

The programme was run in two, two-hour sessions, and the food safety messages were given orally with less emphasis on the workbook. The interactive nature of the course allowed the tutor to adjust it to suit the study skills of the participants.

• Childcare workers in low risk premises

The induction programme was delivered to low risk sessional crèches. (Such crèches look after children for up to three and a half hours and do not serve meals, just low risk snacks.) Two potential in-company trainers attended the course; they have since applied to attend the *Food Safety Training Skills* workshop. The aim is that one will train personnel in 130 crèches through the Childcare Network while the second will train childminders through the County Wexford Childcare Committee.

• Non-English speaking Chinese food handlers

A modified version of the *Food Safety and You* induction programme was used to deliver training to nine Chinese food premises in the Wexford area. A representative from each premises, who could speak and read English, acted as a translator relaying instructions to the rest of their group.

Among the modifications made to the programme were:

- short questions which were translated for discussion by the group
- a section on specific Chinese foods, methods of cooking and bacteria associated with outbreaks from Chinese food establishments
- a section on egg fried rice and the handling of nearly cooked/part cooked food
- simplified question sheets
- the inclusion of labelling in the delivery module.

While some of the course materials such as anagrams and crosswords were not suitable for use, the main asset was the Mandarin language DVD. The games and posters were very conducive to creating a relaxed and positive atmosphere and while the workbook was in English it was still in great demand, as owners requested it for the English-speaking workers.

Workshop schedule, 2006

The two day *Food Safety Training Skills* workshop is available to trainers/managers/supervisors in the food industry who want to train their staff at induction level using the *Food Safety and You* induction training programme.

The spring 2006 schedule is as follows:

Date	Location
21st and 22nd February	Clarion Hotel (IFSC), Dublin
27th and 28th February	Clarion Hotel (IFSC), Dublin
6th and 7th March	Maryborough Hotel, Cork
21st and 22nd March	Crowne Plaza, Santry, Dublin
27th and 28th March	Crowne Plaza, Santry, Dublin

The fee to attend the FETAC certified workshop is €300 per applicant and includes the training materials required to deliver the *Food Safety and You* induction training programme.

For further information, or to obtain an application form for the workshop, please email: training@fsai.ie, or call Mary or Muriel on 01 8171348.

national meeting of pehos and fsai

A two day meeting of Principal Environmental Health Officers (PEHOs) and the FSAI took place on 23rd and 24th November in Tullamore. The first day of the meeting was dedicated to the new EU food hygiene Regulations and the implications of this new legislation for the Environmental Health Service. The second day consisted of discussions on various EHO activities including food surveillance and food safety training for the Chinese food sector. PEHOs were also introduced to and given access to *Safety Net* (the official agency/FSAI extranet).

commission regulation on microbiological criteria for foodstuffs

Commission Regulation (EC) No. 2073/2005 on Microbiological Criteria for Foodstuffs came into force on the 1st January 2006 with the EU food hygiene Regulations. This Regulation modernises and harmonises microbiological criteria which were previously contained in a number of commodity-based EC Directives (these Directives were repealed on 31st December 2005). Most of those criteria remain unchanged in the new Regulation; however, some no longer exist. In addition, new criteria have been introduced for a number of food commodities, e.g. infant formula, pre-cut fruit and vegetables, sprouted seeds and ready-to-eat food. The criteria outlined in the Regulation are based on scientific risk assessment and are necessary to protect public health.

The Regulation applies to food business operators (FBOs) at each stage of food production, processing, distribution and retail (including caterers). Most primary producers are not directly affected by this Regulation as criteria are only established for a small number of primary products, i.e. sprouted seeds, live bivalve molluscs, echinoderms, tunicates and gastropods. However, primary producers may be indirectly affected if their customers require products meeting higher microbiological specifications.

The Regulation establishes two types of microbiological criteria and requires FBOs to take corrective actions when these criteria are not met:

1. **Process hygiene criteria:** These criteria indicate if the production process is operating in a hygienic manner. They are applicable to foodstuffs at various stages throughout their production processes. If a sample is unsatisfactory for a process hygiene criterion, improvements in production hygiene should be undertaken (the improvements vary for each foodstuff).
2. **Food safety criteria:** These criteria define the acceptability of a foodstuff in terms of its microbiological safety. They are applicable to foodstuffs placed on the market and throughout their shelf life. If a sample is unsatisfactory for a food safety criterion, the product or batch of foodstuff should be withdrawn or recalled from the market in accordance with Article 19 of Regulation (EC) No. 178/2002.

Testing against the criteria should be undertaken by FBOs when validating and verifying the correct functioning of their HACCP based procedures. (Regulation 852/2004 requires all FBOs except primary producers to implement a food safety management system based on the principles of HACCP). For most food commodities (with the exception of carcasses, minced meat, meat preparations and mechanically separated meat) the FBO should determine the appropriate sampling and testing frequency. This should be proportionate to the risk associated with the foodstuff and the nature and size of the business.

The Regulation also allows flexibility in relation to the analytical reference method (i.e. laboratory testing method) and the sampling plan (these are specified for each criterion). Alternative analytical reference methods are acceptable once they have been validated, certified or authorised as outlined in the Regulation. The number of sample units in the sampling plan can be reduced if the FBO can demonstrate that effective HACCP based procedures are in place (however when the aim of testing is to assess the acceptability of a batch of foodstuffs or a process, the sampling plan outlined in the Regulation must be respected as a minimum).

Additional requirements of this Regulation include environmental testing, shelf life studies and analyses of trends in test results.

As part of the official control of foodstuffs, competent authorities must ensure that food businesses comply with the Regulation. Compliance may be assessed using techniques such as sampling and analysis, monitoring, surveillance, audits and inspections. The European Commission is currently preparing a guidance document to assist competent authorities with this role.

Please note that this article provides a very general overview of the Regulation. Full details of the Regulation can be found at the following website:

http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/l_338/l_33820051222en00010026.pdf



The following Regulations have been introduced over the last few months in Ireland:

S.I. No. 698 of 2005

European Communities (Pesticides Residues) (Foodstuffs of Animal Origin) (Amendment) Regulations, 2005

S.I. No. 733 of 2005

Animal Remedies Act, 1993 (Section 2) (Order), 2005

S.I. No. 734 of 2005

Animal Remedies Regulations, 2005

S.I. No. 798 of 2005

Health Act, 2004 (Dealings with Members of either House of the Oireachtas) (Regulations), 2005

S.I. No. 827 of 2005

Food Safety Authority of Ireland Act, 1998 (Amendment of First Schedule) Order, 2005

S.I. No. 843 of 2005

Marine (Delegation of Ministerial Functions) (No. 5) Order, 2005

S.I. No. 908 of 2005

European Communities (Avian Influenza) (Control of Imports of Avian Products from Ukraine) Regulations, 2005

S.I. No. 910 of 2005

European Communities (Food and Feed Hygiene) Regulations, 2005

an update on bse and vcjd in ireland

What is BSE?

Bovine Spongiform Encephalopathy (BSE) is a disease that affects the brain of cattle, altering their behaviour and causing them to stagger - hence the common term 'mad cow disease'. BSE is associated with a transmissible protein (prion) which occurs in the nervous tissue of the animal. There is no cure for BSE and the disease can only be confirmed post-mortem.

What are the implications for human health?

BSE belongs to a group of diseases, known as transmissible spongiform encephalopathies (TSEs), that also includes scrapie in sheep and Creutzfeldt-Jakob Disease (CJD) in humans. Sporadic CJD is a rare genetic disorder of the brain in humans that causes rapidly progressive dementia leading to death. It usually occurs in older people. In 1996, a new form of CJD, variant CJD (vCJD), was first diagnosed. vCJD is a disease affecting the nervous system for which there is no cure. In contrast to sporadic CJD, vCJD affects relatively young people. In March 1996, the UK announced indications of a link between BSE in cattle and vCJD in humans. Evidence suggests that BSE is related to vCJD and that vCJD may be transmitted to humans through the consumption of BSE-contaminated beef products.

vCJD cases in Ireland

vCJD is extremely rare in Ireland - to date, three cases have been reported, two of which have unfortunately died. In 2003, researchers estimated that there would be between two and sixteen clinical cases of vCJD in Ireland, as a consequence of primary exposure to BSE contaminated material. So far, there have been 158 deaths due to vCJD in the UK, 15 in France and one each in Italy, the Netherlands, Portugal and Spain.

What controls are in place to protect human health?

Measures to control the spread of BSE in animals have been in place in Ireland since 1990 with the ban on feeding meat and bone meal to ruminants (Table 1). However, when BSE became recognised as a threat to human health in March 1996, the BSE control measures were revised. The first BSE control measure specifically designed to protect human health was implemented in Ireland in April 1996 with the introduction of the Abattoirs (Control of Designated Bovine Offal) Regulations, 1996 (S.I. No. 106 of 1996). These measures were designed to ensure removal of any tissues carrying a risk of transmitting this disease from cattle to humans. The control measures were re-enforced in February 1997 with the introduction of the SRM Regulations, and in 2001 with the introduction of BSE testing for bovine animals over 30 months of age intended for human consumption.

As vCJD is believed to be transmitted by the consumption of contaminated beef products, primary controls focus on prohibiting 'at-risk' animals from entering the food chain and removing the specific parts of animals that may transmit the disease. BSE transmissibility amongst animals is restricted to specific parts of the body, such as the brain and spinal cord. These high-risk parts are called specified risk material (SRM) and are removed from the food chain.

Other non-food related risks for the transmission of vCJD include contaminated pharmaceutical products, medical instruments, blood donations and organ transplants. As with food, appropriate public health controls are in place to reduce the risk of transmission.

Are these controls working?

BSE is a notifiable disease in Ireland and the first Irish case was diagnosed in 1989. In 2000, the European Commission approved rapid tests for BSE, which made widespread testing possible. Active targeted surveillance for BSE has only been fully implemented across the EU since 2001. Under this scheme, animals tested include:

- **Over Thirty Months (OTM):** healthy animals greater than 30 months of age which are slaughtered at a meat plant
- **Fallen:** animals greater than 24 months of age, which die on the farm
- **Casualty:** animals greater than 24 months of age, with minor injuries etc. which are slaughtered at meat plants
- **BSE eradication:** cattle greater than 30 months of age which are slaughtered for BSE reasons because they are either in a herd which is positive for BSE or are a birth cohort or the progeny of a positive animal
- **BSE suspect:** notified to the Department of Agriculture and Food as a BSE suspect.

As BSE has a relatively long incubation period, it takes time to see the effect of any control measures implemented. Evidence is accumulating to indicate that the control measures introduced in Ireland to date have been effective. Examples of this evidence include:

1. Decrease in the number of cases

Bearing in mind that the introduction of active surveillance was only fully introduced in 2001, and that this did lead to an increase in the number of BSE cases identified in 2002, there has been a constant decline in the number of cases identified in recent years (Figure 1).

2. Age-profile of BSE-positive animals is increasing

Current evidence shows that BSE is most likely to be present in older animals, i.e. those born before 1996 and 1997 when stringent controls were put in place. Over the period 1989 to 2005, the most common age on diagnosis has increased from five to 11 years of age. During the same time period, the percentage of animals diagnosed with BSE aged five years or older has increased from 67% to 97%. As the number of older animals in the population continues to decline, it is expected that the incidence of BSE will continue to fall.

3. Percentage of BSE-positive tests is decreasing

Widespread testing of animals became possible in 2000, with the European Commission approval of rapid post-mortem tests. From 2000 to 2005, even though the percentage of positive tests has been consistently low, it has decreased from 2.759% to 0.009% positive during this period.

Conclusions

Any risk to public health arising from BSE has been managed under the broad strategies of measures to reduce the incidence of BSE in bovine animals, and measures to prevent entry of risk materials to the food chain. These have been underpinned by a comprehensive programme of active surveillance for the disease. Available evidence to date would indicate that these strategies have had a dramatic effect on the incidence of this disease in cattle, with commensurate assurance for public health. The FSAI will continue to monitor the waning epidemic of BSE in the Irish herd, and ensure optimal consumer protection.



Table 1: BSE and vCJD control measures

Control measure	Policy	
The feed ban	A ban on the feeding of meat-and-bone meal (MBM) to ruminants has been in place in Ireland since 1990. The ban was extended in 1996 and 2001 to include the feeding of MBM to all farm animals intended for human consumption.	
Designated Bovine Offal Regulations	April 1996 - introduction of the Abattoirs (Control of Designated Bovine Offal) Regulations, 1996. Conditions were laid down for granting licenses for the sale, use or preparation of designated bovine offal.	
Removal of infected animals from food and feed chain	Inspection before slaughter	All animals are visually inspected before slaughter, and suspected animals are excluded. It is a legal requirement to notify suspect cases.
	Reporting suspect BSE cases	Vets and farmers have been alerted to the symptoms of the disease. Suspect BSE cases must be reported and will be visited by a veterinary inspector from the local District Veterinary Office, and a veterinary research officer from the Veterinary Research Laboratory.
	Detection of a BSE-positive case	If an animal slaughtered for human consumption is identified as BSE-positive, the carcass and those slaughtered immediately before and after it must be destroyed. In addition, all the birth and rearing cohorts of the BSE case must be destroyed.
	Surveillance	Since 2001, a comprehensive surveillance system has been in place across the EU.
Animals over 30 months	Since 2001, all cattle over 30 months must be tested for BSE before they can enter the food chain. In the UK, animals over 30 months were not permitted to enter the food chain (OTM scheme). However, the OTM rule was replaced on 7th November 2005 with a new BSE testing system for older cattle - meaning that UK cattle aged over 30 months are now able to enter the food chain, but only if they have tested negative for BSE.	
Removal of SRM	Since 1997 in Ireland (and 2000 throughout the EU), SRM has had to be removed and destroyed, thus preventing it entering the food chain. SRM includes the skull, brain, eyes, vertebral column and spinal cord of bovines over 12 months, and the tonsils, intestines and mesentery of bovine animals of all ages. SRM is stained and destroyed to ensure it does not enter the food chain.	
Ban on mechanically recovered meat (MRM)	MRM is meat that is removed from the animal carcass skeleton, after deboning, using high pressure machines. As MRM is likely to contain SRM, its use has been banned in Ireland since 1996, and throughout the EU since 2001.	

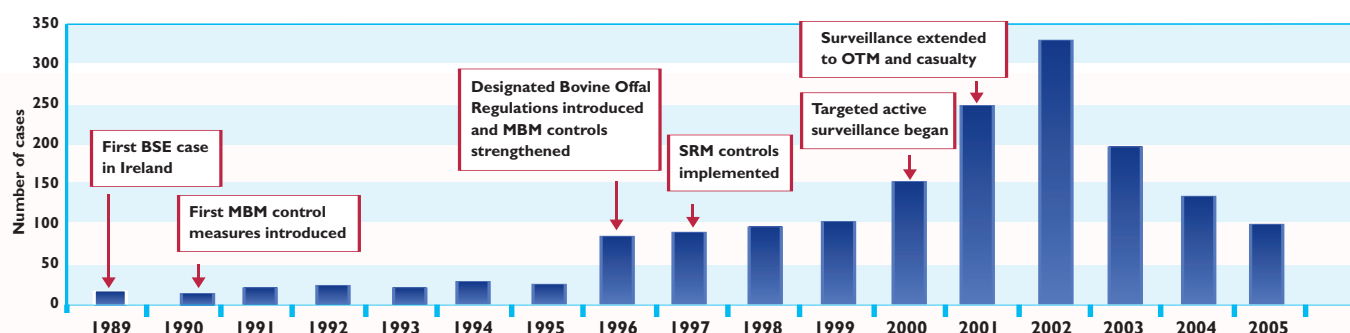


Figure 1: Number of confirmed BSE cases in Ireland, 1989-2005





mailing list

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ucc alumni achievement award

Dr John O'Brien, CEO, FSAI has been honoured with an Alumni Achievement Award as an international leader in the field of food safety by the Faculty of Food Science and Technology, University College, Cork. The annual awards programme honour graduates who have obtained extraordinary distinction and success in their chosen fields. The programme aims to foster a spirit of loyalty, involvement and commitment to University College, Cork amongst alumni.



Pictured (l-r) are Professor Gerard Wrixon, President, University College, Cork and Dr John O'Brien, CEO, FSAI.

recent publications

The following publications have recently been produced by the FSAI:

- Information Pack: *New Food Law - Are You Ready?*

The leaflets included in the pack are entitled *Key Principles and Obligations for Food Businesses; General Food Law; Regulation on Microbiological Criteria; Regulation for Restaurants, Caterers, Retail and Wholesale Operators; and Regulation for Premises Handling Products of Animal Origin.*

- Leaflet: *E. coli O157- Protecting the Children in Your Care*
- Leaflet: *Functional Food*
- *An Overview of the Food Laboratories in the Food Safety Authority of Ireland's Official Agencies*
- *Guidance Note No. 19 - The Notification of Dietary Foods for Special Medical Purposes under the European Communities (Foods for Special Medical Purposes) 1999, S.I. No. 64 of 2001*

Editor:
Edel Conway

Contributors:

**Gail Carroll
Mary Friel
Judith Kells
Karl McDonald
Lisa O'Connor
Micheál O'Mahony
Sharon Williams**

External Contributors:

John Acton
Laboratory Manager, Pesticide Control Laboratory

Anne Deacon
Senior Environmental Health Officer, Health Service Executive - Southern Region

Kay O'Connor
Environmental Health Officer, Health Service Executive - Southern Region

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Abbey Court, Lower Abbey Street, Dublin 1

Tel: (01) 8171300

Fax: (01) 8171301

E-mail: newsletter@fsai.ie

Website: www.fsai.ie

