



Guidance for Childcare Workers to Prevent *E. coli* Infection

Most *E. coli* bacteria are harmless, but some types, such as *E. coli* O157 are extremely harmful and can cause severe stomach pains and bloody diarrhoea. This can progress to cause kidney failure and death in some cases. Young children and infants are particularly at risk from *E. coli* infection as their immune systems are still developing.

Under the Childcare (Pre-School Services) (No. 2) Regulations, 2006; childcare providers must take steps to prevent the spread of infection. Our recently published leaflet, *E. coli – How to Protect the Children in Your Care*, which was developed with assistance from childcare workers and public health professionals, offers practical advice and tips to protect children and childcare workers.

Provisional figures of 285 cases of human infection were recorded in 2011 by the Health Protection Surveillance Centre. Of this, nine outbreaks of *E. coli* infection were in children attending crèches or who were cared for in the home by childminders. This involved some 75 children and adults becoming ill, with 7 being hospitalised. In its mildest form, the symptoms often clear up within approximately eight days, but children may continue to shed the bacterium for much longer. However, some 9% of symptomatic Irish cases went on to develop kidney disease or kidney failure. Babies and young children are most susceptible to kidney failure.

With the increase in the prevalence of *E. coli* in Ireland, childcare providers are urged to have steps in place to prevent the spread of infection in childcare settings. Washing hands is the single most important way to stop the spread of *E. coli*. Young children should be helped to wash and dry their hands, and babies need to have their hands washed regularly.

The leaflet provides very simple and easy steps to prevent the spread of *E. coli* in childcare facilities. Childcare operators should read the leaflet, distribute it to staff and ensure that the recommendations are implemented in order to prevent the spread of *E. coli* amongst children. It can be obtained by contacting our advice-line on 1890 336677 and is available to download at www.fsai.ie.



To discuss any issues or questions raised by childcare workers, the FSAI attended the Early Years Education Show in the RDS, Dublin on 20-21 April. Pictured at the event are Katrina Baker, visitor at the FSAI stand and Vanessa Cooling, Information Assistant, FSAI.

- 1 Guidance for Childcare Workers to Prevent *E. coli* Infection
- 2 Food Labelling – Mostly Fact Not Fiction
- 3 Can Cheese be Advertised to Children as Part of a Healthy Diet?

- 4 Local Authority Veterinary Service Annual Conference
- 4 Students from DIT Pay a Visit to the FSAI
- 5 Total Diet Study
- 6 Legislation Update

- 8 FAQ
- 9 FSAI and FSA, NI Complete All Ireland Traceability Audit
- 10 Teagasc GM Potato Field Trial
- 11 Concerns over Consumer Use of Foods with Added Plant Sterols or Stanols

- 12 Hospitality Expo
- 12 Recent Publications

Food Labelling – Mostly Fact Not Fiction

Contrary to some misinformed views, food labelling in Ireland is robust and as good as any other European Member State. While we might wish it were otherwise, in modern urbanised Ireland we source more and more of our food in pre-packaged form from the shelves of our shops and supermarkets. Knowing what we eat and choosing the right diet is important. Accurate and useful labelling on food products is essential if we are to make informed and healthy choices. Food labels generally have two purposes – to meet legal obligations by providing information such as the name of the food, ingredients, use-by dates, storage conditions or nutritional information on calorie content and key components such as sugar, fat and protein. In what is dear to the hearts of all manufacturers, food labels also proclaim the joys and benefits from purchasing and eating. Labelling is not just a factsheet but also a form of advertising. As with any advertising, a certain degree of discretion and scepticism is required. The essential point is that consumers should not be misled to a material degree. There is no wine in our wine gums and no cream in our cream crackers. But we all know that, don't we?



Professor Alan Reilly, Chief Executive, FSAI.

Ireland's food labelling laws arise now almost exclusively as a result of our membership of the European Union – we have the same labelling laws here as every other EU country. The rules are complex and very detailed but based entirely on the principle that consumers have the right to know. In contrast to other parts of the world, the requirement to label GMOs in

Europe is a case in point. The rules are also continually evolving. At times it can seem like a game of cat and mouse as marketers seek to exploit loopholes, and regulators work to close them off. Europe now has very detailed requirements, and these are set to become even more demanding with the adoption just recently of the new EU Food Information Regulation.

There is no wine in our wine gums and no cream in our cream crackers. But we all know that, don't we?

That is not to say that the rules are watertight. A modern supermarket carries tens of thousands of packaged products and thousands of new products appear each year. It is not a lawless free for all and most labels comply with requirements. For sure there are some claims for which no legal definition exists, i.e. "natural", "artisan", "local" and some which are less than meaningful like "freshly squeezed" or "handmade". However, robust laws are in place to control more serious claims such as those related to reduction in risks of disease, children's health, and general claims about nutritional content such as calcium, fibre and vitamins. Regulated too are any nutritional claims such as "high in" or "reduced". All health claims have to be based on sound science and all are, or will be, scrutinised by the European Food Safety Authority, which has rejected many, but also approved many. Rejected health claims will disappear from our food labels and food advertising. This is a major consumer protection measure.

Within the EU some products have to meet compositional standards. These include fruit juices, honey, chocolate and perhaps surprisingly many alcoholic drinks. However, the number of such food types is small in comparison to the huge variety of what's available on the

market. The concept, in a multi-cultural EU with lots of diverse local traditions, is to allow the market to produce and sell many foods, and to inform consumers through accurate labelling. Some products and their "designations" or "origins," and hence their labels, are protected by EU law - such as Parma ham and champagne. Ireland has been slow to avail of such legal protections for our traditional or local products with only four foods from Ireland registered.

At times it can seem like a game of cat and mouse as marketers seek to exploit loopholes, and regulators work to close them off.

Origin or provenance of food remains a matter of continuing debate. The good news is that the new EU Food Information Regulation provides for mandatory country of origin labelling to extend from beef to meat from pigs, sheep, goats and poultry. While this might not address the issue in the case of processed foods with ingredients from many countries, it will at least be a big improvement on current requirements. Other changes we can expect are front of pack nutritional information (something already done by some of the large food companies), increased font size and declaration of salt content rather than sodium.

We are not so naïve as to expect that the new laws will address all issues, or that there will not still be some manufacturers who will try to deceive consumers. The FSAI and the various agencies who work with us to enforce food law, are striving to combat illegal labels or food fraud, intentional or otherwise. Legal actions have resulted. While some aspects of the current labelling in use need to be improved, huge improvements in food labelling have already been achieved and much of the information on food labels is correct. We would encourage consumers to report any food products that they believe are in breach of the law so we can take appropriate action. We can be contacted on 1890 336677, info@fsai.ie or by visiting our website, www.fsai.ie.

A handwritten signature in blue ink that reads "Alan Reilly".

Alan Reilly
Chief Executive

Can Cheese be Advertised to Children as Part of a Healthy Diet?

Year on year the number of children and teenagers affected by overweight and obesity has risen in Ireland. This has serious consequences for the health of Ireland's population. The 2011 report from the Broadcasting Authority of Ireland (BAI) clearly demonstrates that intervening to protect children in Ireland from the promotion of foods and drinks high in calories, fat, sugar and salt (HFSS) should not be delayed. Such action is supported by international evidence of best practice for tackling the 'obesogenic' environment in Ireland which is promoting excessive weight gain amongst our children and adolescents.

In this context, the FSAI strongly supports restricting advertisements that promote food and drinks high in calories, fat (including saturated fat), sugar and salt to children in Ireland. However, the method used to identify foods that need advertising restrictions must be precise enough to distinguish between unnecessary foods that contribute to obesity and critical foods that contribute vital nutrients for children's growth and development.

Calcium intakes are crucial for bone development in children during puberty (age 9 to 18 years). However, research shows up to a third of this age group in Ireland has inadequate calcium intakes. During puberty children need at least five servings of dairy foods (milk, yoghurt and cheese) everyday in order to meet their high calcium requirements. Through recent work on healthy eating guidelines for people living in Ireland, the FSAI found children entering the pubertal growth spurt (9 to 13 years) have the greatest difficulty achieving an adequate calcium intake. This is because, compared with older, bigger teenagers, their capacity to consume large volumes of milk and yoghurt is limited by their small body size. Cheese - the richest food source of calcium - can be invaluable in bridging the 'calcium-gap' for this vulnerable age group. Therefore, while low-fat milk and yoghurt are the 'best' dairy foods to choose because they provide calcium without excessive amounts of saturated fat; nonetheless certain types of cheese can also form part of a healthy diet.

In 2007, Ofcom, the media and communications regulator in the UK used the UK Nutrient Profile (NP) Model developed by the Food Standards Agency to introduce restrictions on advertising HFSS foods to children. At the time it was estimated that over 80% of all food advertising in children's airtime on UK channels was for HFSS foods.

In 2009, the FSAI participated in an Expert Working Group advising the BAI on the public health nutritional issues affecting children in Ireland and on the usefulness of the UK NP Model for assessing foods that should or should not be restricted in terms of advertising during children's viewing time. The Expert Working Group identified the inclusion of cheese with less healthy food products (subject to advertising restrictions) as one of the main issues resulting from the

adoption of the UK NP Model in Ireland. However, the time constraints and terms of reference the Expert Working Group were working under did not allow for exploration of possible approaches that would address this and it was concluded that the UK NP Model should be adopted without amendment. Since then, in the light of the difficulties young pubertal children experience in relation to achieving optimal calcium intakes, the FSAI has continued to explore how some lower fat/salt calcium-rich cheese could be differentiated from less healthy foods for children.

In Australia and New Zealand a modified version of the UK NP Model has been developed for determining which foods should be permitted to bear health claims. The modification facilitates the assessment of calcium rich cheeses (calcium >320mg/100g) amongst other changes. The FSAI has used the Australia and New Zealand adaptations to develop an 'Irish version' of the UK NP Model. The 'Irish version' identifies calcium-rich cheeses that are lower in fat/salt as suitable for advertising during children viewing times. However, it still doesn't allow all cheeses to be advertised to children.

Using the 'Irish version' of the UK NP Model: 100g of 'light' cheese triangles score just 13 points, which is less than half the upper limit (score 28) used to determine whether calcium-rich cheese can be advertised to children or not. Other cheeses that would also be permitted for advertising to children include 100g of low-fat cheddar (score 19), cheese strings (score 24) and brie (score 26). On the other hand, 100g of cheese slices score exactly at the cut-off point (score 28), while 100g of edam, feta and other traditional cheeses fail mainly due to their high salt content.

The 'Irish version' of the UK NP model would incentivise reformulation of cheese towards healthier nutritional profiles in order to qualify for advertising to children. A trend in reformulation of calcium-rich cheese and cheese products towards lower fat and salt content would benefit the entire population of Ireland and is consistent with the aims of the FSAI fat reduction programme for food.



Local Authority Veterinary Service Annual Conference

The Local Authority Veterinary Service held its 2012 annual conference on 29 March last at the Institute of Public Administration, Dublin. The programme was wide-ranging and focused on the risks associated with pathogenic bacteria in ready-to-eat foods and how these risks may be managed, the new Dog Breeding Establishments Act, horse control legislation and on-farm poultry slaughter and emergency slaughter.



Participating in the Local Authority Veterinary Service Annual Conference held in March were (left to right): Mr Brendan Smyth, Monaghan County Council and LAVS Conference Organisation Committee; Professor Alan Reilly, Chief Executive, FSAI; Ms Rita Gately, Galway County Council and Chair LAVS; Professor Bernd Appel, Director Biological Safety, Federal Institute for Risk Assessment, Germany.

Professor Alan Reilly, Chief Executive, FSAI opened the conference. He pointed out that while the country's financial situation requires that food safety regulation is carried out as efficiently and cost-effectively as possible, the increase in world population and the importance of food production to the Irish economy means that ensuring the safety of Irish food is now more important than ever.

The keynote speaker was Professor Bernd Appel, Director of Biological Safety from the Federal Institute for Risk Assessment in Berlin. He spoke about the investigation and identification of the enterohaemorrhagic *E.coli* outbreak that infected thousands of people and caused more than 50 deaths and in excess of 4,000 hospitalisations

in Germany and across Europe in 2011. The strain of *E. coli* that caused the outbreak was particularly virulent, but also very unusual, which made its identification and characterisation more difficult. The source was eventually identified as contaminated fenugreek seeds. Prof Appel concluded that the successful management of such crises depends on quickly assembling a multi-disciplinary outbreak investigation team, having adequate laboratory capacity and accurate and reliable diagnostic methods. Multi-disciplinary team training is essential to ensure effective risk communication to all key stakeholders, including the media.

Students from DIT Pay a Visit to the FSAI

Students from Dublin Institute of Technology MSc in Food Safety Management and MSc in Culinary Innovation and Food Product Development visited the FSAI recently to learn about how the FSAI operates.

Topics presented on the day included communication and media management; technology in food production with a focus on novel foods, food irradiation, genetically modified foods and biotechnology; food legislation and regulatory affairs and information services provided by the FSAI. The presentations were followed by a visit to our information centre where the students were able to view our food safety related publications and resources.



Total Diet Study

The FSAI has recently reported the results of a Total Diet Study (TDS) which it has carried out in order to assess the dietary exposure of the Irish population to a number of chemicals. The particular chemicals examined in the study may pose a risk to health if taken into the body in excessive amounts. In carrying out this TDS, 105 of the most commonly consumed foods in Ireland, based on food consumption data, were analysed for the chemicals of interest, including vegetables, meat, fish and dairy produce. Dietary exposure to each chemical was then estimated using the food consumption data and the level of the particular chemical found analytically in each food. The chemicals analysed are outlined in Table 1.

Table 1: Chemicals Analysed in Food in the FSAI Total Diet Study

ALUMINIUM	POLYCYCLIC AROMATIC	MERCURY
IODINE	HYDROCARBONS (PAHs)	NITRATES
ACRYLAMIDE	CHROMIUM	STRONTIUM
ARSENIC (TOTAL AND INORGANIC)	BENZOATES	SULPHITES
SELENIUM	LEAD	TIN
MYCOTOXINS	NITRITES	SORBATES
CADMIUM FLUORIDE	PESTICIDE RESIDUES	

The food consumption data used in the FSAI TDS was based on the North/South Ireland Food Consumption Survey (NSIFCS), which provides typical food and beverage consumption, lifestyle and health indicators and attitudes to food and health in a representative sample (n=1379) of the 18-64 year old adult population in the Republic of Ireland and Northern Ireland during 1997-1999. Only the information related to the 958 adults living in the Republic of Ireland was used in this study.

The exposure estimates obtained in the study were compared with exposure standards (Acceptable Daily Intakes (ADIs), Tolerable Daily Intakes (TDIs) and Tolerable Weekly Intakes (TWIs)) established by international risk assessment bodies such as the European Food Safety Authority (EFSA) and the Joint FAO/WHO Expert Committee on Food Additives (JECFA) in order to reach a conclusion regarding the risk to Irish consumers from the presence of chemicals in the food they eat. The ADI/TDI is the amount of a food additive/potentially harmful contaminant that can be consumed on a daily basis over a lifetime without appreciable risk to health.

The highest exposure estimates (in terms of the likelihood of a particular TDI/TWI or ADI being exceeded) determined in the study were for the metals aluminium and cadmium and the food additive sulphite. Mean intake of aluminium from the diet based on this TDS was 35% of the EFSA Tolerable Weekly Intake (TWI) of 1 mg/kg bw/week, while the 97.5 percentile intake was 77%. Intakes become higher when a contribution from drinking water (not assessed in this study) is taken into account. The intakes are, nonetheless, still below the TWI. The mean intake of cadmium from the diet based on this TDS was 95.2% of the recently established European Food Safety Authority (EFSA) TWI of 2.5 µg/kg bw/week, while the 97.5 percentile intake was 215.6%. Intakes of the metals arsenic, chromium, lead, mercury, strontium and tin from the Irish diet were well below any exposure standard established by EFSA and JECFA. Exposure to the contaminants acrylamide, PAHs and mycotoxins from the diet as assessed in this study was also considered not to give rise to concern for the health of the Irish population.

Of the food additives investigated in this study, the intakes of benzoates (mean intake, 5.2% of the ADI, with 25.2% for 97.5 percentile consumers), sorbates (mean intake, 1.5% of the ADI, with 3.8% for 97.5 percentile consumers) and nitrates (mean intake, 17.6% of the ADI, with 33.2% for 97.5 percentile consumers) were all well below their respective ADIs, even for high consumers, and it can be concluded that exposure to these additives in food is not a health concern for the Irish population. The intakes of sulphites was higher, at 21.4% of the of the SCF group ADI for sulphite of 3.7 mg/kg bw/day for average consumers and at 94.3% for above average consumers.

Intakes of the essential nutrient iodine estimated in this study were in line with the Recommended Daily Allowance (RDA) for iodine/iodide for Irish adults aged 18-64 of 130 µg/d, although an appreciable proportion of the population may have intakes below this during the summer months, when milk contains less iodine due to the fact that cattle are on summer grazing and do not receive iodine supplements. Average daily intake of selenium from food at the time of this study were very close to the Population Reference Intake for selenium of 55 µg/day, and the intakes were well below the Upper Level (UL) of 300 µg established by the Scientific Committee for Food (SCF) in 2000. These results indicate that the Irish population is not likely to be selenium-deficient, nor at risk from the toxic effects of excess selenium in their diet.

Overall it can be concluded from the results of this Total Diet Study that the Irish population is not at risk from intakes from food of any of the chemicals analysed in the study. The FSAI is reassured by these results, but reiterates that continued surveillance of the Irish food supply for contaminants, food additives and essential nutrients by food business operators and by other competent bodies including environmental health professionals and public analysts is essential, in order to ensure the continuing safety of Irish food. The full report of the study is available on our website at <http://bit.ly/J5qvlz>.

Legislation Update

Irish legislation

Import of Food of Non-Animal Origin for Pesticide Residues

European Communities (Official Controls on the Import of Food of Non-Animal Origin for Pesticide Residues) (Amendment) Regulations, 2012 (S.I. No. 46 of 2012).

This S.I., published by the Minister of Agriculture, Food and the Marine, revises controls on the import of certain food of non-animal origin from specific third countries with regard to pesticide residues by giving full effect to Commission Implementing Regulation (EU) No. 1277/2011 of 8 December 2011. The S.I. revokes the European Communities (Official Controls on the Import of Food of Non-Animal Origin for Pesticide Residues) (Amendment) Regulations, 2011 (S.I. No. 640 of 2011).

EU Legislation

Food Colours

Commission Regulation (EU) No 232/2012 (OJ L78, p1, 17/03/2012) of 16 March 2012 amending Annex II to Regulation (EC) No. 1333/2008 of the European Parliament and of the Council as regards the conditions of use and the use levels for Quinoline Yellow (E 104), Sunset Yellow FCF/Orange Yellow S (E 110) and Ponceau 4R, Cochineal Red A (E 124,) was published in the EU Official journal on 17 March 2012.

Quinoline Yellow (E 104), Sunset Yellow FCF/Orange Yellow S (E 110) and Ponceau 4R, Cochineal Red A (E 124) are food colours currently approved for use and listed in Annex II to Regulation (EC) No 1333/2008. The current approval takes into account the Acceptable Daily Intakes (ADI) established by the Scientific Committee for Food (SCF) in 1983. However, in September 2009, the European Food Safety Authority (EFSA) issued an Opinion related to the re-evaluation of these food additives and this Regulation amends Annex II to

Regulation (EC) No. 1333/2008 to take account of that re-evaluation by introducing new maximum levels and new conditions of use.

In order to allow the necessary time for the food industry to adjust its production to the new conditions of use and the use levels, a transitional period is permitted whereby foods containing Quinoline Yellow (E 104), Sunset Yellow FCF/ Orange Yellow S (E 110), and Ponceau 4R, Cochineal Red A (E 124) that have been lawfully placed on the market before 1 June 2013 but that do not comply with the provisions of this new Regulation, may continue to be marketed until stocks are exhausted.

Spirit Drinks

Commission Regulation (EU) No. 164/2012 (OJ L53, p1, 25/02/2012) of 24 February 2012 amending Annex III to Regulation (EC) No. 110/2008 of the European Parliament and of the Council on the definition, description, presentation, labelling and the protection of geographical indications of spirit drinks.

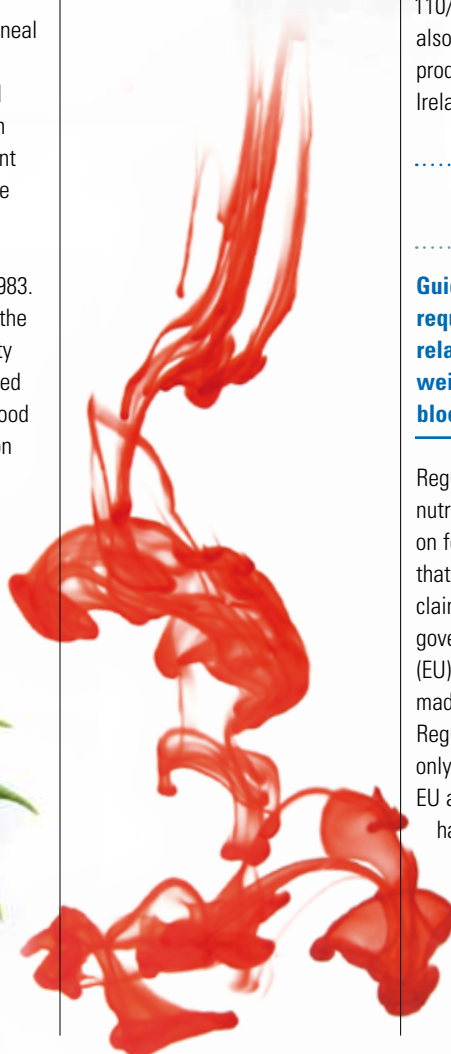
Included in the amendments made in this Regulation to Annex III to Regulation (EC) No. 110/2008 is a clarification that the geographical indication 'Irish Cream' which is registered in product category 32 of Annex III to Regulation (EC) No. 110/2008 as originating in Ireland, also covers the corresponding product manufactured in Northern Ireland.

EFSA Publication

Guidance on the scientific requirements for health claims related to appetite ratings, weight management, and blood glucose concentrations.

Regulation (EC) No. 1924/2006 on nutrition and health claims made on food harmonises the provisions that relate to nutrition and health claims and establishes rules governing the European Union's (EU) authorisation of health claims made on foods. According to the Regulation, health claims should only be authorised for use in the EU after a scientific assessment has been carried out by EFSA.

Following a request from EFSA, the Panel on Dietetic Products, Nutrition and Allergies (NDA) drafted guidance on scientific



requirements for health claims related to appetite ratings (e.g. hunger, fullness, satiety, and desire to eat), weight management, and blood glucose concentrations. The present guidance was, prior to its finalisation, endorsed by the NDA Panel on 25 March 2011 for public consultation, which was open from 26 April to 31 August 2011. All public comments received that related to the remit of EFSA were assessed, and the guidance has been revised by the Panel by taking into consideration relevant comments.

The document focuses on two key issues regarding the substantiation of health claims related to appetite ratings, weight management, and blood glucose concentrations:

- **Claimed effects which are considered to be beneficial physiological effects**
- **Studies/outcome measures which are considered to be appropriate for the substantiation of health claims**

This guidance document presents examples drawn from evaluations already carried out by the NDA panel in order to illustrate the approach of the Panel, as well as providing some examples which are currently under consideration within ongoing evaluations. Given that health claims are often technically complex and unique, additional health relationships and outcome measures for claimed effects need to be considered in the context of a specific application.

The document should be read in conjunction with the EFSA general guidance for stakeholders on the evaluation of Article 13.1, 13.5 and 14 health claims. (See the EFSA website at: <http://bit.ly/HChfMg>).

Food Information – Update

Country of Origin Indication

Under the new EU rules set out in Regulation (EU) No. 1169/2011 on the provision of food information to consumers, the indication of provenance for unprocessed meat of pigs, poultry, sheep and goats will become mandatory from December 2014.

The European Commission has to adopt implementing acts by 13 December 2013 following impact assessments which must consider the options for implementing the rules of origin labelling with respect to the place of birth, rearing and slaughter of an animal.

The EU (DG AGRI) launched a call for tender in March for a study to examine and compare different options of implementing origin labelling for fresh and frozen meat (including minced meat and cuts) of pigs, poultry, sheep and goats, with the aim of giving appropriate origin information to consumers, whilst not causing disproportionate burdens on the meat supply chain, trade, consumers and national administration. The study will also examine consumer perception and attitudes concerning origin labelling of meat products. With the closure of the tender on 16 April, contractors are required to

complete the study in nine months after which the European Commission will draft legislation detailing the rules for origin labelling for fresh and frozen meat of pigs, poultry, sheep and goats.

Similar studies are also expected to open for tender shortly in relation to voluntary origin labelling and origin labelling of meat when used as an ingredient in a food.

Further information on the tender can be found on the Europa website at: <http://bit.ly/HQou69>.



The following Regulation has been introduced over the last few months in Ireland:

S.I. No. 46 of 2012
European Communities
(Official Controls on the Import of Food of Non-Animal Origin for Pesticide Residues) (Amendment) Regulations, 2012

FAQ

Many people contact our advice-line each month to ask questions on a variety of food safety issues. Some questions get asked time and time again – so in each issue of FSAI NEWS, we will feature a Frequently Asked Question. This issue's question is ...

How Should Additives be Labelled on Foods?

Some of the labelling requirements applicable to food additives are set out below. It is important, however, that Directive 2000/13/EC concerning labelling, presentation and advertising of foodstuffs is consulted when the labelling of any foodstuff is being considered.

General Labelling Rules

Food additives must be named in the list of ingredients by the functional class of the additive and the specific name or designated E number. For example, sodium nitrite, a preservative commonly used in cured meat products, must be listed in the list of ingredients as 'Preservative: Sodium Nitrite' or 'Preservative: E250'.

The exception is food products containing sulphur dioxide and sulphites (E220-E228), at concentrations of more than 10mg/kg or 10mg/litre expressed as SO₂, since these are considered allergenic. In these cases the name of the additive must be declared along with the category, and use of the E number only is not permitted.

If the additive belongs to more than one category, the category name given shall correspond to its main function in that particular food. Additives which perform the same function in a food can be grouped together for ingredient listing purposes, e.g. Colours: E110, E120 or Colours: Sunset Yellow, Cochineal.

A full list of the functional classes of additives can be found in Annex I of Regulation 1333/2008/EC, which can be downloaded from our website at <http://bit.ly/lw9k8Z>.

Additives not Considered Ingredients

The following are not considered ingredients and as a result there is no requirement to label them as such:

- Additives whose presence in a given foodstuff is solely due to the fact that they were contained in one or more ingredients of that foodstuff, provided that they serve no technological function in the finished product (carry-over additives)

- Additives which are used as processing aids
- Substances used in the quantities strictly necessary as solvents or media for additives or flavouring

However, carry-over additives, solvents and carriers for additives or processing aids should be regarded as ingredients where they originate from the list of allergenic ingredients in Annex IIIa of Directive 2000/13/EC. These ingredients, or products derived from them, must always be indicated on the label with a clear reference to the name of the ingredient from which they originate.

Some additives may be present in a food because they were contained in one of the ingredients (carry-over additives). They need only be indicated in the list of ingredients if they perform a significant technological function in the final food.

Whether or not the additive performs a technological function in the final product will depend both on the ingredient containing the additive and the food to which it is added. For example, preservatives used in fruit purée will not necessarily be performing the same function when the fruit is added to a heat-treated yoghurt which is subsequently chilled.

There is also a provision in legislation for what is known as reverse carry-over. In this instance, an intermittent ingredient can contain an additive that it would not normally be permitted to contain, on the basis that the additive is permitted for use in the final foodstuff and that the intermittent ingredient is used solely for the final foodstuff.

The carry-over principle does not apply to infant formulae, follow-on formulae or weaning foods except where specifically provided for in legislation (Council Directive 89/398/EEC).

Processing aids are not considered as food additives and therefore are not subject to the requirements of the legislation. Processing aids are defined as "any substance which is not consumed as a food ingredient by itself, which is intentionally used in the processing of raw materials, foods or their ingredients, to fulfil a certain



technological purpose during treatment or processing and which may result in the unintentional but technically unavoidable presence of residues of the substance or its derivatives in the final product, provided that they do not present any health risk and do not have any technological effect on the finished product".

Other Labelling Requirements for Specific Additives

- Foodstuffs containing a sweetener or sweeteners must be labelled "with sweetener(s)" near the name of the food
- Foodstuffs containing both an added sugar or sugars and a sweetener or sweeteners must be labelled "with sugar(s) and sweeteners(s)" near the name of the food
- Foodstuffs containing aspartame must be labelled "contains a source of phenylalanine"
- Foodstuffs containing more than 10% added polyols must be labelled "excessive consumption may produce laxative effects"
- Food and drink containing sunset yellow (E 110), quinoline yellow (E 104), carmoisine (E 122), allura red (E 129), tartrazine (E 102) or ponceau 4R (E 124) are required to display the following warning message: "Name or E number of the colour(s) (e.g. Sunset Yellow): may have an adverse effect on activity and attention in children"

For more information on food additive legislation, see our publication 'Guidance on Food Additives, Revision 1' which is available on our website.

FSAI and FSA NI Complete All Ireland Traceability Audit

Following the dioxin incident in 2008 and subsequent parliamentary enquiries, the FSAI and the Food Standards Agency, Northern Ireland (FSA, NI) requested that a targeted audit be carried out to determine the level of compliance with legislative traceability requirements.

These requirements are set out in Article 18 of Regulation (EC) No. 178/2002 - laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety and state that:

- Food business operators shall be able to identify any person from whom they have been supplied with a food, a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food or feed
- Food business operators shall have in place systems and procedures to identify the other businesses to which their products have been supplied

The scope of the audit was to trace composite products containing food of animal origin which was sourced in one jurisdiction but produced or manufactured in the other. The primary objective of the audit was to verify compliance by food business operators (FBOs), in both jurisdictions, responsible for the manufacture, processing, or distribution of the selected products with the traceability requirements set out in Article 18 of Regulation (EC) No. 178/2002. In Northern Ireland the Assembly's Agriculture and Rural Development (ARD) Committee in its findings also requested that 'the Memorandum of Understanding between the FSAI and the FSA NI should be tested' to ensure that there was a consistent and joined up approach to cross border alerts.

A joint exercise between the FSAI and the FSA NI to verify compliance by FBOs, in the jurisdictions of the Republic of Ireland and Northern Ireland was conducted. The exercise was designed to verify the traceability of two composite products containing food of animal origin and ingredients which were sourced in one jurisdiction but produced or manufactured in the other.

Audits were carried out in the Republic of Ireland and Northern Ireland in the FBO's who had produced or supplied ingredients for incorporation into the selected products. If a product or ingredient was imported into either jurisdiction, traceability back to the supplier was established. No traceability audit was requested of the competent authority responsible for the supervision of these food businesses.

A total of 14 FBOs were visited, 8 in the Republic of Ireland and 6 in Northern Ireland. FBOs that had incorporated traceability procedures into their food safety management systems were in a better position to respond quickly and more accurately to requests for specific traceability information.

Recommendations in the report include:

- An assessment of compliance with the requirements of Article 18 of Regulation (EC) No. 178/2002 by competent authorities should form part of official controls activities
- FBOs should be encouraged by competent authorities to incorporate into their food safety management systems European Community guidance on the implementation of Articles 11, 12, 16, 17, 18, 19 and 20 of Regulation (EC) No. 178/2002
- The agreement between the FSAI and the FSA NI should be kept under continuous review in relation to food incidents
- Should the FSAI assume responsibility for feed, a similar joint exercise should be carried out to determine compliance with traceability requirements by FBOs.

One of the composite products selected for the purpose of the audit was a ham and cheese ciabatta sandwich. The product was on sale in the Republic of Ireland but had been produced in Northern Ireland. Figure 1 demonstrates the number of audits required to verify traceability of the ingredients and products used in the manufacture of the product.

This report is available on the publications section of our website, www.fsai.ie.

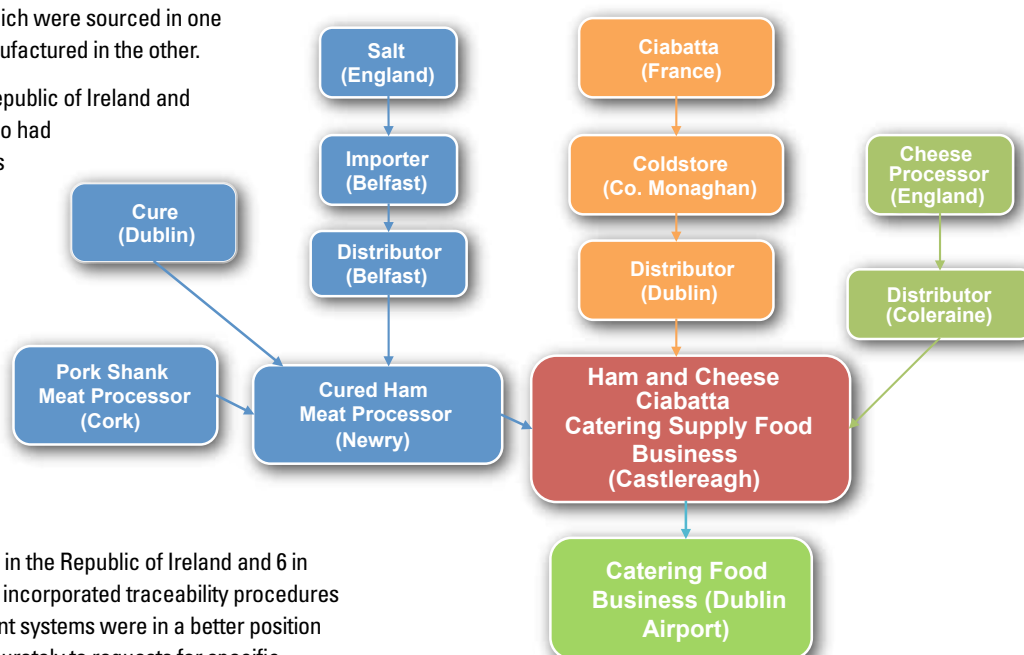


Figure 1: Audits Carried Out on the Traceability of Constituents of a Ham and Cheese Ciabatta

Teagasc GM Potato Field Trial

The Environmental Protection Agency (EPA) received an application from Teagasc Oak Park on 27 February 2012, seeking authorisation to carry out a field study on genetically modified (GM) potatoes engineered to be resistant to late blight which is caused by *Phytophthora infestans*. This study is part of a publicly funded EU research programme called 'AMIGA' (Assessing and Monitoring the Impacts of Genetically Modified plants on Agro-ecosystems). The AMIGA consortium consists of 22 partners representing 15 EU Member States. The objective of the field study is to assess the impact of the cultivation of this blight resistant potato on bacterial, fungal, nematode and earthworm diversity in the soil, compared to that of a conventional or non-GM potato. The study will also monitor how the blight-causing fungal agent and the ecosystem will react to GM potato varieties in the field over several seasons.

The resistance to late blight was achieved by the transfer of a gene from a wild potato variety (*Solanum venturii*) into a potato variety (*Solanum tuberosum* cv. *Desiree*) commonly cultivated in the EU. Gene transfer was mediated by *Agrobacterium tumefaciens*, the bacterium that causes "Crown Gall" disease in a range of dicotyledonous plants, including various types of tree. Scientists have manipulated this bacterium so that its genetic transfer mechanism can be used as a safe means of transferring desirable genes to a variety of crop plants. In a plant possessing the resistance gene, the presence of *Phytophthora infestans* is detected by each individual cell which triggers a robust response that results in the ultimate death of that cell, thereby creating a barrier to further spread of the infection.



Potatoes are generally cultivated by clonal propagation whereby tubers or portions of tubers with "eyes" or sprouts are planted. Commercial potato tubers are typically not hardy and do not survive periods of sub-zero temperatures. In addition, potatoes do not compete well with grass or other crops and are susceptible to a range of fungal, bacterial and viral infections, as well as attack by insects and nematodes. All of these characteristics taken together mean that potatoes do not survive well outside a controlled agronomic system.

The proposed field trial does not have any consequences for food safety as the plant material, including tubers, is not destined for the food or feed chain. Nevertheless, the EPA requested an opinion from the FSAI about the safety of these tubers should they inadvertently find their way into the food chain. The FSAI has examined the application dossier and, in consultation with external experts, has not identified any safety concerns that would result from the inadvertent consumption of these GM potato tubers. In addition, the FSAI is satisfied that the natural vulnerability of potatoes, along with the safeguards proposed by Teagasc, during and after the period of this field study, provides sufficient reassurance that the risk of inadvertent consumption of the tubers is negligible.

A range of information and opinions are currently circulating in the general media as well as through social media outlets. Though it has been a considerable time since the last field trial in Ireland it appears that the diversity of opinions on GMOs or GM food has not been bridged to any great extent. It does appear however, that the general public interest is not as great as it was more than a decade ago. While the reasons for this are unclear, it is likely that the current economic climate and associated hardships have resulted in a change of priorities for many people. Added to this is the fact that a new generation of young people are now educated at an early stage about genetic manipulation and biotechnology in general, and are aware of its use in the production of food (cheese and many micronutrients), medicines such as insulin and a variety of pharmaceuticals. With this knowledge, young people are now in a position to come to an educated conclusion about gene technology and not rely solely on the information provided by one side or the other.



Concerns over Consumer Use of Foods with Added Plant Sterols or Stanols

Foods with added plant sterols or stanols are targeted at people wishing to lower their blood levels of LDL (bad) cholesterol, which in turn can help reduce the risk of cardiovascular disease. Unilever's yellow fat spread with added plant sterol-esters was authorised under novel food legislation in the EU in 2000. Because foods with added plant stanols were already on the EU market prior to 1997 when the novel food legislation came into force, they are not subjected to the same safety assessment and authorisation process.

There is ample scientific evidence that foods with added plant sterols or stanols have a beneficial impact on blood cholesterol levels when used as part of a healthy diet. However, there is some evidence that prolonged consumption of plant sterols or stanols may have an effect on the absorption of certain fat soluble vitamins. There is also some concern about possible over-consumption of plant sterols or stanols and their consumption in foods by non-target groups. To alleviate these concerns measures were put in place to limit the types of food in the EU to which plant sterols could be added. These include yellow fat spreads, dairy products, rice drinks, bakery products, cereal based snacks and salad dressings. In addition, extensive advisory labelling is required on such foods as set out in Commission Regulation (EC) No. 608/2004. This stipulates that foods with added plant sterols or stanols must have labels to inform consumers that:

1. The product is intended exclusively for people who want to lower their blood cholesterol level
2. Patients on cholesterol lowering medication should only consume the product under medical supervision
3. The product may not be nutritionally appropriate for pregnant and breastfeeding women and children under the age of five years
4. The product is to be used as part of a balanced and varied diet, including regular consumption of fruit and vegetables to help maintain carotenoid levels
5. The consumption of more than 3 g/day of added plant sterols or stanols should be avoided
6. A definition of a portion of the food or food ingredient concerned (preferably in g or ml) with a statement of the plant sterol or stanol amount that each portion contains.

Nevertheless, market follow-up studies have indicated that a significant proportion of consumers do not heed or possibly even read advisory information on labels. A study carried out in Ireland and published in 2009 found that cholesterol-lowering foods were largely consumed by the appropriate target groups, but over-consumed by many long term users. In addition the study found that most of the people on cholesterol-lowering medication that consumed these foods were influenced by advertising rather than taking advice from their physician as advised on the packaging. A Belgian study published in 2011 found that non-target groups including preschool children and adults who did not have elevated blood cholesterol levels were consuming foods with added plant sterols or stanols despite advice to the contrary on the package labelling.

There is some evidence that prolonged consumption of plant sterols or stanols may have an effect on the absorption of certain fat soluble vitamins.

Safety concerns raised by Member States during the novel food authorisation process are often addressed by specific advisory labelling, but the potential effectiveness of such labelling may legitimately be questioned now in light of the experience with foods with added plant sterols and stanols.

It is extremely important that consumers read and adhere to the warning labels on foods so that they are used appropriately.



Hospitality Expo

The FSAI had an information stand at Hospitality Expo in the RDS at the end of February. The Expo is a national event designed to assist food and beverage service operators plan for profit in 2012.

The event is aimed to help food businesses identify opportunities to build their business from its current base, to find new ways to respond to market and customer demands so as to increase revenue, and to reduce costs and improve profitability.

Queries received by the FSAI at the Expo were in relation to calories on menus, business start-up, food labelling, HACCP and general food safety queries.



Recent Publications

The following publication was recently produced by the FSAI:

- **E. coli - How to Protect the Children in your Care**

Our publications are available on our website at: www.fsai.ie/resources_publications.html.



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