

Key role for Agency in food challenges of 21st century

Food safety and healthier eating are to be set firmly at the heart of the Government's policy on food, according to a Cabinet Office framework document setting out challenges for the 21st century.

The report, *Food Matters – Towards a Strategy for the 21st Century*, published on 7 July, acknowledges the key role played by the Food Standards Agency in working in an integrated way with other Government departments.

It also acknowledges the value consumers attach to the FSA as a trusted source of advice on food.

The report recommends that the Agency's websites should be used to provide more comprehensive advice on matters relating to food, and the Agency will now be looking to expand the range of advice offered on its websites. Where this relates to policy areas outside its remit, it will reflect

the advice from other relevant Government departments, enabling people to make healthier and more sustainable eating choices.

Scale of the report

The Cabinet Office report looks at how different elements of the food system can be better integrated and its impact economically, socially and environmentally.

It recognises that central Government needs to work with the public, businesses from all parts of the food chain, other stakeholders, and other tiers of government, to put a new food policy framework in place.

To achieve this, the Cabinet Office is to set up a Food Strategy Task Force, which will include the FSA. The Agency will lead on a number of key



initiatives, including:

- developing a 'whole food chain approach' strategy to prevent food safety incidents
- helping people to make healthier choices when eating out
- developing a web-based one-stop-shop for consumer information and advice on nutrition, food and sustainability, and food safety

The report also envisages the Agency, with the Department of Health, leading on improving the nutritional standards and sustainability of food served in the public sector in England. This

will be delivered through a 'Healthier Food Mark'. The scheme will initially be voluntary.

FSA Chief Executive Tim Smith said: 'The Agency welcomes the Cabinet Office report, especially as its key objectives reflect the Agency's commitment to food safety and helping people choose a healthier diet.'

FURTHER INFORMATION

The Cabinet Office report is at: www.cabinetoffice.gov.uk/newsroom/news_releases/2008/080707_food_report.aspx



New Director for FSA Northern Ireland

Gerry McCurdy (left) has been appointed Director at FSA Northern Ireland, as successor to Morris McAllister who is due to retire in September. Mr McCurdy is currently Deputy Director.

Prior to joining the FSA in 2002 as Head of Professional Services, he had a successful career in environmental health, which included several senior

roles in district councils, the Department of Environment and Department of Health, Social Services and Public Safety.

He also previously played football semi-professionally for Shrewsbury Town, and played senior league table tennis for over 30 years.

He said: 'I am really looking forward to pursuing the

challenges this role will bring, drawing on the support network of committed staff.'

Agency Chief Executive Tim Smith said: 'I am delighted Gerry is going to be the new FSA Northern Ireland Director. He brings passion, verve and determination to the role and I am looking forward to working with him in the years ahead.'

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Issue 80, out in September

This FSA News is a double issue. Issue 80 will come out in September. To suggest items you would like us to cover, email: fsanews@foodstandards.gsi.gov.uk



Consumers want extra helpings of information when eating out

More than four out of five people (85%) feel that restaurants, pubs and cafes have a responsibility to make it clear what is in the food they serve, according to a Food Standards Agency survey.

When asked where nutritional information could be shown most usefully, 81% of respondents said they would like to see it at the point when they order food, such as on the menu in a restaurant, or visible when they are buying a sandwich or a muffin in a coffee shop or cafe. In contrast, only 2% of respondents said they would find it useful on company websites.

The Agency surveyed more than 2,000 people across the UK to provide a snapshot of what consumers want when they eat out. The questions, which were posed as part of an omnibus survey, will help the Agency develop more in-depth research to inform activity in this area.

Responses were, however, more varied when it came to people answering questions about whether they want the food they consume when eating out to be changed and whether they simply want information about what is in it the food.

Overall, 63% of respondents

said they would like information about what is in their food when they eat out – 41% wanted information and food to be made healthier by catering establishments – while 22% wanted food to remain the same but wanted nutrition information about it.

FSA Chief Executive Tim Smith said: ‘When we buy food from a retail outlet, it’s very clear from the packet what’s in the food and we then have control how much salt and fat we add at home. When we eat out, we are asked to suspend any interest in nutritional content of food as the information isn’t universally available.

Working with industry

‘We know that some companies are already doing a really good job and they are getting behind us with this work. Some of this work isn’t as visible, and we know companies are starting from different points and we’re actively working with different parts of the industry to achieve more progress. There is no reason why I shouldn’t see the same information, perhaps presented in a different way, when I eat out of home than when I shop for food in a supermarket.’

The Agency is working to encourage as many catering companies as possible to provide healthier meals. The Agency is in discussion with a range of quick service and family dining restaurants, cafes, sandwich shops and pub chains so that this part of the industry participates in its salt and saturated fat activity. It recognises the diversity in the catering sector means that a one-size-fits-all approach is not appropriate and is developing a practical approach that is suitable for a variety of businesses.

The Agency is encouraging companies to commit to improvements in the areas of:

- procurement
- kitchen practice
- menu planning
- consumer information

It also plans to work with businesses in the sector, and other stakeholders, to develop recommendations on provision of nutrition information. These recommendations will be based on consumer research and may be different to multiple traffic light and guideline

daily amount approaches that have worked well in the retail environment.

FURTHER INFORMATION

More on the Agency’s work with catering businesses is at:

food.gov.uk/healthicreating/healthycatering/cateringbusiness/
More on healthy catering is at:

food.gov.uk/healthicreating/healthycatering/
The Omnibus survey results are at: food.gov.uk/multimedia/pdfs/cateringresults.pdf



Room for work on portion sizes in our diet



The sizes of some fast foods and ready meals have increased in the UK during the past 15 years. However, there is also a wider choice of portion sizes available, according to a report published by the Food Standards Agency.

The information has been published as part of the findings of a workshop and a report that considered how changes in portion sizes of everyday foods have affected people’s energy intake, weight gain and diet.

The expert workshop, chaired by Dr Susan Jebb, head of nutrition and health research at the Medical Research Council, explored the relationship between portion size, energy intake and weight gain. An independent report reviewing the research and

information available on portion size had been commissioned to support the workshop.

Food Standards Agency Deputy Head of Nutrition Corinne Vaughan said: ‘The evidence relating to portion size, energy intake and weight gain is complex and evolving.

‘We welcome the recommendations of the academic workshop which lend further support to the Agency’s programme of work. We will be discussing our next steps and what further actions are needed in this area more fully in the autumn with industry, public health and consumer groups.

‘Work in this area will need to be practical, and make a positive contribution to help

people eat a more balanced diet.’

The key areas identified for further advice and action were the portion sizes of foods that contribute most to people’s saturated fat intakes and the sizes of single servings of sweet and savoury snacks and sugary drinks. An industry and consumer forum will be held in the autumn to agree future steps to help people reduce their calorie intakes.

FURTHER INFORMATION

A longer story and links to the report ‘A review of trends in portion sizes in the UK’, plus other relevant information, can be found at: food.gov.uk/news/newsarchive/2008/jun/portionizes

Awards all round at TSI conference

After a thrilling and tense seven-round quiz, Simon Langton Grammar School for Boys, in Kent, won the final of this year's Young Consumer of the Year competition, which was held at the Trading Standards Institute Annual Conference in Bournemouth.

The competition was organised by the regional coordinators of the Trading Standards Institute and was part-sponsored by the Food Standards Agency.

Each member of the winning school team received a gold medal and £100 of Argos vouchers, and their school received the College of Fellows Trophy, a cheque for £1,000 and a multi-media package.

Boroughmuir High School, Edinburgh, took second place, and third and fourth places went to Ackworth School, in Wakefield, and Stockport Grammar School, in Stockport.

Twelve teams of four students, representing England, Scotland and Wales, took part in the final rounds, testing their knowledge

on issues such as consumer rights and responsibilities, safety and health and the environment. Local and regional competitions had been held earlier to determine who would take part in the national finals.

The Agency, which has been a sponsor of the competition for seven years, supplies a pack for the schools winning through to the regional finals and provides some questions for the food and drink rounds at the finals.

Top food award

The Agency also sponsored an award at the TSI graduation and awards ceremony, held at the TSI conference at Bournemouth, in recognition of achievements in the Service Delivery Module on Food Standards.

The ceremony, held for only the second year, celebrated the achievements of all those who have been awarded qualifications within the TSI qualifications framework and recognised the achievements of those who have excelled in their given subjects.

Neil Lawrence, from Hampshire County Council, achieved the highest mark for the Food Standards Module, and was presented by Agency Chair Deirdre Hutton with an award certificate, a cheque and an engraved rose bowl.

The Agency considers the provision of such an award a suitable way to encourage

Reaseheath College, Nantwich.

Details about how to apply can be found below.

FURTHER INFORMATION

More on the training and an application form can be found at: food.gov.uk/multimedia/pdfs/enforcement/onfarmpasteurisation.pdf



Winning consumers: Simon Langton School for Boys, in Kent

students and recognise their achievements.

Deirdre Hutton appointed Vice President

FSA Chair Deirdre Hutton was also made a Vice President of the Trading Standards Institute at the TSI conference in Bournemouth.

The appointment was made in recognition of her extensive work in consumer affairs, enforcement and food safety.

The Agency Chair is a member of the European Food Safety Authority Management Board. For five years, she was Chair of the National Consumer Council, having formerly chaired the Scottish Consumer Council. She stood down as Deputy Chair of the Financial Services Authority in November 2007 and prior to her appointment at the Food Standards Agency, she was a member of the Better Regulation Task Force

TSI Chair Bryan Lewin said: 'We are very pleased to welcome Dame Deirdre as a Vice President of TSI.

'She has been a long-term supporter of the Institute and a regular contributor to our annual conference and other TSI events.'

Multi-language version of SFBB available online

Information designed to help small caterers and retailers implement 'Safer food, better business' (SFBB) into their food businesses can now be accessed at the click of a mouse.

SFBB packs explaining the Agency's food hygiene management programme are already being used by thousands of small businesses in the UK to help them improve food safety, through the safe preparation, handling and storage of food, and to comply with food legislation.

A DVD, with voiceovers in 16 different languages and video scenes of realistic situations in small catering and retail businesses, has now complemented the packs, providing additional support to businesses that are implementing and training staff in SFBB.

All of this information is available on the Agency's website at the links below.

Online tool

Another online tool is also about to be launched that will help small food businesses comply with legislation about getting rid of waste.

The NetRegs learning tool, to be launched in September, will provide guidance through a question-and-answer approach and simplify the process for companies researching how they deal with specific waste issues.

NetRegs is a joint initiative involving the Environment Agency in England and Wales, the Scottish Environment Protection Agency, and the Environment and Heritage Service, Northern Ireland.

Recently research among the food and drink industry, commissioned by NetRegs, indicated that businesses would welcome an easy-to-use tool to help them comply with waste regulations.

FURTHER INFORMATION

More on the Agency's Safer food, better business hygiene management tool can be found at: food.gov.uk/sfbb/ Find out more on SFBB training in different languages at: www.sfbtraining.co.uk/ The NetRegs website can be found at: www.netregs.gov.uk



Neil Lawrence receives his award from Agency Chair Deirdre Hutton

Training for enforcement officers in England

The Food Standards Agency is providing an update training course for local authority food law enforcement officers responsible for the inspection of premises with on-farm pasteurisation equipment.

The course, which is not available to students, contractors or the general public, will take place on 28-31 October 2008 at

Anyone with further queries about this course should contact Bob Pilling, tel: 020 7276 8436 or Julian Ciepluch, tel: 020 7276 8449, or email: robert.pilling@foodstandards.gsi.gov.uk

A list of other training courses held by the Agency can be found at: food.gov.uk/enforcement/laresource/lowcost/

Food becomes target of identity theft

The Food Standards Agency and police are warning food companies to be on the alert to a fraud that may have affected a number of food businesses across the country. The fraud, which involves identity theft, could result in unsafe food being offered for sale.

The fraudsters are alleged to have targeted small legitimate wholesale food businesses that supply meat, seafood, fruit and vegetables.

The alleged offenders work by acquiring authentic letter heads of the legitimate company and changing the telephone, email and fax details. They then contact a genuine wholesaler/importer and place a food order with them. This business, after completing credit checks, agrees to supply the food; however, before the delivery is made, the driver is contacted and the location switched – usually to the roadside or a car park. The fraudsters then make off with the goods and attempt to sell them on elsewhere.

West Yorkshire Police's Economic Crime Unit is leading

the investigation into the fraud, which has affected a number of businesses in West Yorkshire as well as other firms across the country.

Detective Sergeant Peter McBay, of West Yorkshire Police's Economic Crime Unit, said: 'This fraudulent activity has cost a number of legitimate food companies many thousands of pounds and has also raised questions about the safety of the food that is stolen from the delivery vehicles. Some of the food has cropped up for sale in locations around the country but we do not know how it has been stored in the meantime.'

'We would urge all food businesses to be on the lookout for this sort of fraud and urge them to:

- always check who you are doing business with
- as well as doing credit checks, make a call to the business too
- get your delivery drivers to ring if they are asked to make changes to their schedule
- if you are suspicious at any stage call your local police.'



Officers have arrested seven men, aged between 19 and 44, from Dewsbury, Bradford, Wakefield and Brighton, on suspicion of conspiracy to defraud and money laundering. They have all been released on police bail pending further enquiries.

Colin Houston, Deputy Head of Enforcement Support Division at the FSA, said: 'This alleged scam could be a matter of concern for consumers. If food is not stored or handled correctly it

can become a breeding ground for germs and eating it could cause food poisoning.

'We would urge people to be on the lookout for food that might not appear to be fresh and/or is being sold very cheap. Remember, if the offer looks too good to be true, it probably has a hidden catch. In this case it could be the safety of the produce. If you see anything that makes you concerned you should contact your local authority.'

Salt partners take their wares to market

The lessons learnt from eight pilot projects on salt reduction have now been made available for others to access – and most are practical, realistic and easy to do, according to food experts.

The summaries of the projects were launched at an FSA dissemination event held in June and attended by eighty stakeholders, including nutritionists, dietitians and

delegates from industry and academia. The event, held in London, was part of phase three of the Agency's salt programme, and was co-hosted with the Interim Professional Body for Nutrition.

The eight projects included initiatives targeted at peer educators and young parents, projects working with cooks in Hindu and Sikh temples and

schemes with housing association staff and residents.

They were set up in partnership with the Bristol Primary Care Trust, British Heart Foundation, Diabetes UK, the Food Commission, Haringey Teaching Primary Care Trust, Kent County Council Trading Standards, Manchester Food Futures Partnership and the National Children's Bureau.

Maureen Strong, Nutrition Manager at AHDB Meat Services, described some of the interventions highlighted as 'practical, realistic and easy to do'.

She said: 'It's been great to hear about these local targeted projects, which have been running in parallel with industry-wide activity to reduce the salt in the food chain. I think we can all learn a lot from them.'

Hanneke Veldhuis, Business Manager Maxarite, DSM Food Specialities, came from Rotterdam to attend the event. He said it was 'extremely interesting' to see how a big organisation like the FSA was able to engage action with local organisations to bring salt reduction policies into practice.

'It's especially interesting to see, from an international perspective, different ways of working,' he said.

FURTHER INFORMATION

Details of the various schemes are available as PDFs at: food.gov.uk/news/newsarchive/2008/jun/saltpart Check out Agency Chief Scientist Andrew Wadge's blog on salt at food.gov.uk/scienceblog

Eatwell plate – on a tray

Schools and other catering settings, such as prisons, hospitals and leisure centres, keen to promote the importance of eating a healthy balanced diet can now serve up the idea visually on a tray – thanks to the South West of England Regional Unit of the Food Standards Agency.

The tray, which is imprinted with the Agency's eatwell plate, makes healthy eating easier to understand by showing the types and proportions of foods each of us should be eating if we aim to eat healthily.

The idea for the tray arose in conversations between FSA South West Region and catering equipment provider 3663.

'We wanted to give the eatwell message a new twist and communicate with food consumers directly,' explained South West of England Regional Co-ordinator Toni Smith, at the Agency's Bristol office. 'At meetings with the food and health professionals in the region we considered lots of ideas, but this one has definitely proved to be the most popular and practical.'

Schools are one of the key targets for the trays and – with the National Healthy Schools Programme in mind – the South



Samantha Arnold, from the Agency, with the South West Region's eatwell tray

West Unit will now be developing a toolkit on nutrition and healthy eating to tie in with the national curriculum.

The Unit will be contacting schools across the UK over the next 12 months and aims to speak to local universities, colleges, hospitals and prisons.

'We thought the tray design would be popular, but the response has actually been quite overwhelming,' Toni Smith added. 'Without marketing them in any way, we're already getting orders from venues as far away

as the north east of England.'

The eatwell trays are available to all catering providers and 3663 is retailing them at about £3 each. Trays are scratch resistant, dishwasher safe and available in 15 different sizes.

FURTHER INFORMATION

To purchase the trays, contact Mike Allen at 3663, tel: 0870 3663 960; email: MikeAllen@3663.co.uk More on the eatwell plate is at: food.gov.uk/eatwellplate

Contractors wanted for infant and children diet survey

The Food Standards Agency is holding a meeting at its London headquarters on 31 July, to offer potential contractors a chance to discuss in more detail the opportunity to carry out a survey of infants' and young children's diets from the ages of 4 months to 18 months.

The FSA would like to invite representatives from all organisations capable and interested in undertaking part, if not all, of this type of survey, to attend this meeting.

The aim is to provide robust detailed information on the food and nutrients consumed by infants and young children post weaning, in order to support existing data on the dietary intake of the UK population.

It is envisaged that the sample

size is likely to be in the region of 1,500-2,000 subjects. Contract duration will be a maximum of two years, aiming to commence in April 2009 with a report delivered in 2011.

The meeting will provide an opportunity to find out more about the requirements for the survey and will include a question and answer session.

Attendance at the meeting will not be considered as a commitment to submit a proposal, nor will non-attendance present a barrier to potential bidders. The final full specification for the survey is expected to be issued in Autumn 2008. Applications from collaborative partnerships will be accepted.

Anyone interested in attending

the meeting should contact the FSA by 21 July (see below).

FURTHER INFORMATION

For more on the survey, contact Rachel White, tel: 020 7276 8918; email: rachel.white@foodstandards.gsi.gov.uk



Post-Chernobyl monitoring reports published

The Agency has published three reports on the monitoring of sheep at farms remaining under post-Chernobyl restrictions.

As a result of the surveys:

- two farms in Scotland have been de-restricted – leaving five under restriction
- no farms were recommended for de-restriction in Cumbria – with nine farms remaining under restriction

It was impossible to conduct any surveys in North Wales last year, due to the outbreak of foot and mouth disease.

While the Agency continues to protect the consumer where appropriate, it is also committed to lifting restrictions where appropriate. Further surveys are planned in 2009.

Background

In 1986, an accident at the Chernobyl nuclear power plant in the former USSR (now Ukraine) released large quantities of radioactivity into the atmosphere. Some of this was deposited on certain upland areas of the UK where sheep are farmed.

In order to protect the health of consumers, restrictions were placed on the movement and sale of sheep from areas of the UK where contamination levels in sheep meat were over 1,000 Becquerels (a measure of radioactivity) per kilogramme – the safety limit set in 1986.

A live monitoring technique is used, where an external monitor is held against the sheep, giving a count rate that is then converted to a concentration (Bq/kg). To allow for inherent variability in live monitoring results, a working action level of 645Bq/kg is applied (rather than 1000 Bq/kg).

This has been set so there is only a 1 in 40 chance of a sheep above the limit giving a monitor reading below this level.

In 1986, almost 9000 farms were under these restrictions in the UK.

Since then, the levels of radioactivity have fallen in some of the affected areas. The number of farms still under restriction in Cumbria, Scotland and Wales – the areas covered by the three reports – is now 369.

Infant formula regulations ruling

A ruling issued by the Court of Session in Edinburgh means that manufacturers of infant formula and follow-on formula in Scotland have until 1 January 2010 to introduce new labelling requirements.

The ruling follows a legal challenge by the Infant and Dietetic Foods Association against the Scottish Government, in relation to the Infant Formula and Follow-on Formula Scotland Regulations 2007.

The regulations are designed to help parents and carers by introducing stricter controls on labelling and advertising of all types of formulae, ensuring that breastfeeding is not undermined by the marketing and promotion of such products.

Earlier this year, a High Court Judge also ruled that the labelling aspects of the regulations should not apply in England and Wales until 1 January 2010.

The case in Northern Ireland has been adjourned until the completion of the proceedings in the rest of the UK.

FURTHER INFORMATION

More on the Judicial review of infant formula regulations is at: food.gov.uk/news/newsarchive/2008/feb/infantjr

Steps towards a national food and drink policy

The Food Standards Agency Scotland welcomed an announcement from the Scottish Government in June, on the next steps towards a National Food and Drink Policy for Scotland.

The new measures announced include:

- A focus on food education through Scotland's first Cooking Bus, teaching healthy, practical cooking skills to pupils, parents and community groups across the country
- An investigation into Scottish labelling of food and drink to help make it easier for consumers to identify and trust labels
- Support for a world-class health and nutrition centre through the future merger of the Rowett Research Institute and University of Aberdeen.

Cooking Bus takes the high road

Scotland's first Cooking Bus – a kitchen on wheels designed to help children, teachers, parents and community groups find out more about cooking and healthy-eating – was launched in Edinburgh last month.

The initiative represents a joint commitment from the Scottish Government, FSA Scotland, the Focus on Food campaign, local authorities and community groups.

On-board lessons will teach visitors how to cook simple healthy meals as well as essential food-handling and preparation skills.

Schools and community groups across Scotland will be able to take advantage of specially tailored classes taken by qualified teachers in the well-equipped mobile kitchen.

FSA Scotland Assistant Director Lydia Wilkie said: 'The Food Standards Agency Scotland welcomes the opportunity to work in partnership with the Scottish Government on the Cooking Bus initiative.

'The project will generate real enthusiasm about food in

schools and communities.

'FSA Scotland is totally committed to engaging children as early as possible in understanding the link between food and health and preparing them to make informed choices about what they eat in the future.'

Education Secretary Fiona Hyslop, Public Health Minister Shona Robison and Lydia Wilkie attended the launch, which took place at Royal High Primary in

Edinburgh.

Fiona Hyslop said: 'The cooking bus is a fun way to get children involved in preparing their own healthy meals and hopefully take what they have learned back home to their parents.'

Shona Robison added: 'The Cooking Bus is a fantastic way to teach children some of the basics about where our food comes from and how to cook healthy, tasty meals.'



Healthy options: from left, Shona Robison, Fiona Hyslop and Lydia Wilkie

Royal Highland Show packs them in

The Food Standards Agency Scotland's stand at the Royal Highland Show, held at Ingliston near Edinburgh in June, attracted about 12,000 visitors.

The show, one of the country's main agricultural events, draws about 150,000 visitors a year from across the UK.

Attractions at the stand included the interactive kitchen where visitors could walk around, test how well they wash their hands, try the interactive quizzes and find out more about food safety, hygiene and healthy eating.

People could also watch one of the four daily healthy cooking demonstrations.

Jill Buchan, Communications Officer from FSA Scotland, said: 'The Royal Highland Show is one of the highlights of our events calendar. It's an excellent opportunity for us to catch up with the agricultural industry and speak to them face to face. The show also attracts a wider audience, including schoolchildren and the general public, who we also want to engage with and answer any

questions they may have.

'For youngsters in particular, the interactive kitchen stand has a number of fun quizzes and attractions and no-one who participates goes away without a goody bag!'



FSA Scotland's daily cooking demonstration and, above, learning to wash hands properly

Farmers 'take note' at shows



Taking note: FSA Northern Ireland Principal Veterinary Officer Kirsten Dunbar and Senior Policy Officer Gerard Smyth

The Agency will be attending agricultural shows across Northern Ireland this summer, urging farmers to keep records that will help them comply with food and feed hygiene legislation.

At the Ballymoney, Castlewellan and Clogher Valley shows, for example, farmers coming to the FSA Northern Ireland stand will be introduced to the Agency's 'Take Note' campaign, have the chance to speak to about record keeping and pick up a copy of Farm Notes free of charge.

'Farm Notes' is a notebook, produced by FSA Northern Ireland that will help farmers to keep appropriate records. The

pocket sized notebook has been designed for farmers to keep with them on the farm and record activities as they happen.

Gerard Smyth, Senior Policy Officer at FSANI said: 'While the focus is on producers who do not currently keep records, this notebook will be of use to everyone. It will be useful for recording all types of information relevant to good management practice, and can be used out and around the farm by all farmers and growers.'

As well as promoting messages to farmers at the events, FSA staff were also on hand to publicise the Agency's recommended front-of-pack traffic light labelling scheme.

FSA Northern Ireland stands tall at Balmoral

The Food Standards Agency Northern Ireland has won an award for having the best trade stand at this year's Balmoral Show.

The Agency won the award for its production of 'Strictly Yum Dancing' – the energetic and fun initiative that highlights healthy eating and food hygiene messages.

The show, hosted by 'Johnny and his co-host Genie Jean the

Queen of Clean' – Northern Ireland's answer to Brucie and Tess – had visitors, literally, dancing in the aisles.

Having first taken to the stage at the Balmoral Show last year, Strictly Yum Dancing – a lively, comic show that draws the audience into the action – gets healthy eating and food hygiene messages across to children and adults in an exciting and unusual way.

Interactivity was another key feature of the stand, and members of the public were able to take part in an interactive quiz called 'Grill the Audience'.

This enabled the audience to really get involved and compete with each other over their knowledge of food safety and nutrition.

FSA Northern Ireland attended the show for three days in partnership with safe food.



Elaine Donaghy, left, from FSANI, and David McCleery, from Safe food, receive the award from a stand judge

Northern Ireland coldstore conviction upheld

The Food Standards Agency Northern Ireland has welcomed a decision at the County Court division of Fermanagh to uphold the conviction of a meat coldstore in County Fermanagh for offences under food hygiene legislation.

The company has been fined a total of £6,500 for breaches of these regulations.

Eurofreeze (Ireland) Ltd pleaded guilty after launching an appeal against a previous conviction at the Magistrates Court earlier this year for these offences.

The company was prosecuted by FSA Northern Ireland for offences under the hygiene regulations that applied to the licensed meat coldstore.

These included use of the premises for a purpose for which it was not licensed and breaches of health marking requirements

as laid down by EC and national law.

FSANI Deputy Director Gerry McCurdy said: 'We are very pleased with the outcome of today's hearing. The Agency is determined to protect the public's interests in relation to food at all costs and this result demonstrates that we will pursue food businesses where unlawful activity is detected.'

'The conclusion of this case represents the hard work carried out by staff from the Agency, the Department of Agriculture and Rural Development (DARD) and district councils.

'This extensive multi-agency investigation has required significant resources including the gathering and review of considerable amounts of evidence and we thank our colleagues in DARD, the Meat Hygiene Service, district council

environmental health officers, and the Public Prosecution Service for their efforts in bringing about today's successful outcome.'

The investigation began in November 2005 when DARD officers made FSANI aware of possible unlawful activity at a meat and poultry coldstore operated by Eurofreeze (Ireland) Ltd, in Lisnaskea, Co Fermanagh. The investigation related to almost 406 tonnes of foodstuffs found in the coldstore, and the focus of the enquiry was on illegal repackaging. The coldstore licence was suspended and product removed and condemned as appropriate.

The Food Standards Agency had previously pursued a prosecution against Eurofreeze (Ireland) Ltd on 9 May 2007 in this matter but, on 1 June 2007,

the Agency was advised by letter from the Court Service that the conviction had been voided by Enniskillen Magistrates Court following a declaration by the Company Secretary of the company that she was unaware of the summons or proceedings relating to the case.

Eurofreeze (Ireland) was successfully prosecuted on 7 January 2008 on 13 counts of breaching the regulations and fined £5,000 on each count. The Agency received notification of appeal on 21 January 2008.

A total of 405.97 tonnes of foodstuffs were condemned and disposed of during this investigation.

FURTHER INFORMATION

A previous news story is at: food.gov.uk/news/newsarchive/2008/jan/coldstore



Widow Manky – one of the characters in the food safety pantomime.

Learning about food safety can be fun

An initiative organised jointly by Cardiff Council's Food Safety Team and the Food Standards Agency Wales to mark the 15th National Food Safety Week was a great success.

The two organisations hosted five days of fun educational activities at Whitchurch High School from 2–6 June 2008.

The event was designed to raise children's awareness of food hygiene and the importance of hand washing.

Pupils participated in

educational workshops held by Cardiff's Food Safety Officers and FSA Wales staff and were treated to a fun educational pantomime held within the FSA Wales Interactive Resource Trailer.

More than 1,300 pupils participated in the workshops held by the two organisations, which included the use of an ultra-violet light box to show how easily germs are spread and the importance of hand washing.

The initiative supported the

National Food Safety Week theme of raising awareness of the 4 Cs for Food Safety:

- Cleanliness: keep your kitchen, equipment and work surfaces clean
- Cooking: make sure food is properly cooked before eating
- Chilling: keep perishable foods cold until you cook or eat them
- Cross-contamination: don't let harmful germs spread around your kitchen

Welsh partners launch Healthy Options Award

FSA Wales has worked in partnership with local authorities, the Chartered Institute of Environmental Health and the National Public Health Service (NPHS) to develop an all-Wales Healthy Options Award.

The award is based on a scheme that was developed by Caerphilly County Borough Council and was launched on 1 April, following a pilot.

Eating out is increasingly part of everyday life in Wales, and food eaten outside of the home tends to be higher in added sugar and fat than food prepared at home. It can also be higher in salt.

Currently, more than half the

adult population in Wales is classified as being overweight or obese, as is almost one in five 13-year-olds.

The National Statistics *Family Food Survey* in 2006 found that just over a third of all money spent on food and drink (excluding alcohol) in Wales was on that consumed outside the home. People in Wales also eat more meat products, fish and fish products and potatoes than England, Scotland or Northern Ireland. Caterers can therefore make a significant contribution to improving diet in Wales.

How the award works

Catering premises in possession of a food hygiene award are

eligible to be assessed for a Healthy Options Award.

The award, which has three tiers – bronze, silver and gold – recognises and encourages catering premises to provide healthier options to customers. This is achieved through employment of healthier catering practices and by providing meals more in balance with the eatwell plate model (see also page 5). This increases fruit and vegetable and complex carbohydrates, and decreases fat, especially saturated fat, sugar and salt.

The award also recognises provision of healthy options for children, and rewards staff training and promotion and marketing of these healthier

options. There is a commitment to evaluate the scheme after the first year.

Within a month of its the launch, nearly 30 catering premises were presented with a Healthy Options award by local authorities across Wales.

Materials for delivery of the award can be accessed from the Chartered Institute for Environmental Health Wales (see below).

FURTHER INFORMATION

The Chartered Institute for Environmental Health Wales website can be found at: <http://www.cieh-cymruwales.org/>

New members for Welsh Food Advisory Committee

Four new members have been appointed to the Welsh Food Advisory Committee (WFAC), the independent advisory committee of the Food Standards Agency Wales.

The four new members, Steve Bolchover, Dr Hugh Jones, Sue Jones and Derek Morgan, took post on 1 July.

WFAC is made up of a Board member of the Food Standards Agency, and independent experts who are selected for their experience and practical knowledge of areas such as nutrition, agriculture, food-related science and consumer interests. All are appointed by the Welsh Assembly Government.

FSA Wales Director Steve Wearne said: 'These appointments will ensure that WFAC continues to comprise individuals with a wide range of food-related backgrounds and in depth knowledge. Drawing on this extensive expertise and experience, the committee is able to offer the FSA thorough and well-considered advice on every aspect of its work.'

Welcoming the appointment of the new members and acknowledging the valuable work of former committee members, WFAC Chair John Spence said: 'The committee is mapping out a challenging programme and I look forward to pursuing this in

the coming months.'

Full details of the new members can be found on the Agency's website (see below).

The committee held an open meeting in Llandudno on Thursday 3 July 2008, at which it discussed food safety, including research into skin on sheep meat (smokies), food safety week activities and food fraud.

FURTHER INFORMATION

More on the committee members can be found at: food.gov.uk/wales/aboutus_wales/advisorycommitteewales/acwmembers/



WFAC Chair
John Spence

Agency seeks out public views on animal cloning



The Food Standards Agency has published research into the views of the UK public about cloning animals, and cloned animals, their offspring and their products (such as milk and eggs) entering the food chain.

The Agency carried out the UK-wide research in advance of being asked by any company wanting authorisation to market food produced using cloned animals. The FSA is the UK body responsible for the assessment of these and other novel foods (these are foods that do not have a history of being eaten within the European Union before May 1997).

Key findings

The key areas of concern that workshop participants expressed were whether food derived from clones would be safe to eat, standards of animal welfare, the lack of tangible consumer benefits, and a mistrust in the motives of the key players involved.

The findings are summarised here. A full report can be found on the Agency's website (see details below).

When considered in the context of current breeding practices, animal cloning was seen by participants to be very different from other assisted reproductive technologies; it was felt to represent a leap from 'giving mother nature a helping hand' to 'interfering with nature'.

Existing levels of knowledge

and understanding of the cloning process varied widely among participants at the beginning of the research. However, it was clear that their focus was less on 'how does it work?' and mainly on 'why is it being used?' and 'what are the consequences?'

'They feared that the process of cloning might somehow create new diseases or affect the food in some way that will be harmful to humans'

Participants struggled to identify any tangible consumer benefits and were concerned that the main motive would be a financial one for biotech companies, livestock breeders, farmers or food retailers.

As participants learned about the current low efficiency rates of Somatic Cell Nuclear Transfer (SCNT), they became increasingly concerned about the impact the technique has on animal welfare. This became a significant factor behind their reluctance to accept food derived from cloned animals. Other ethical concerns raised were

about where the technology is going and whether we, humanity, have the moral right to pursue such a course.

Participants were concerned that cloning could result in food that was unsafe for human consumption; this was partly a function of the perceived high incidence of miscarriages, deformed offspring and their shorter lives.

They feared that the process of cloning might somehow create new diseases or affect the food in a way that would be harmful to humans, and that the impact on human health and wellbeing may only become apparent at some unforeseen point in the future.

There was a major mismatch between the methods used by regulatory authorities to assess food safety and the public's perception of what is needed. Participants wanted to see methods for assessing food safety that were similar to the approach used in clinical drugs trials.

If food derived from clones and their offspring were to go on sale in the UK, the research provides a clear steer in terms of what would provide consumer confidence. Regulations should be in place that address the entire process, these should be monitored and enforced and should be fully transparent to the consumer. Clones and their offspring should be fully traceable throughout the food chain and food should be labelled to enable consumers to

make an informed choice.

There was a call for a programme of continuing independent research to improve the efficiency of the cloning process and to prove that food derived from clones is safe to eat.

The Agency (possibly in partnership with other bodies) was seen by most as having a key role to play, both in terms of setting and policing the rules and in informing and educating the public, and therefore allowing them to make informed choices. Whatever the Agency's role, it is crucial that it is perceived to be independent and trustworthy.

Background

Animal cloning is an emerging technology in the EU and is more developed in the United States. If its use becomes economically possible, there is the potential for food produced from cloned animals to enter the food chain.

Although there has been some research among US public, to date there has been very little within the EU or the UK. The Agency commissioned the company Creative Research to explore initial public perceptions



of animal cloning.

The Agency recognises that animal cloning is likely to trigger consumer concerns about food safety, animal welfare and ethics and the findings from this research will enable the views of the UK public to be reflected in any EU discussions about the use of the technology.

Concerns about animal welfare and agricultural practices are not dealt with by the Agency. These are the responsibility of the Department of Environment, Food and Rural Affairs.

FURTHER INFORMATION

The report can be read in full at: food.gov.uk/multimedia/pdfs/clonereport.pdf
More on cloned animals can be found at: food.gov.uk/gmfoods/novel/

Guidance on safety of 'vac pac' foods

The Agency has produced new guidance and a factsheet on the safe production of vacuum and modified atmosphere packed foods. The guidance has been developed for small businesses and environmental health officers to tackle the problem of *Clostridium botulinum*.

C.botulinum is a bacterium that can produce a very harmful toxin that can cause a fatal form of food poisoning – foodborne botulism.

Although vacuum packing techniques increase the shelf-life of chilled foods by removing air, certain bacteria, including *C. botulinum*, are still able to grow.

It is therefore important that food businesses are aware of these risks and have appropriate controls in place to keep food safe.

The guidance pack consists of a detailed technical guide and a factsheet – designed to be used as a quick guide on the shop floor for butchers and meat processors, to assess and limit the risk of *C. botulinum*.

The voluntary guidance includes the recommendations of the expert Advisory Committee on the Microbiological Safety of Food and consolidates existing industry guidance.

The technical guidance and the factsheet will be available to download from the Agency's website by August 2008, at the link below. The factsheet will also be available to order from Food Standards Agency Publications.

FURTHER INFORMATION

Technical guidance and a factsheet on vacuum and modified atmosphere packed chilled foods will be available soon at:

food.gov.uk/foodindustry/guidancenotes

The factsheet, 'Vacuum and modified atmosphere packed chilled foods: Reducing the risk of *Clostridium botulinum*', can be ordered from Food Standards Agency Publications at: foodstandards@ecgroup.co.uk or tel: 0845 606 0667.

Results on iodine levels in UK foods

The Agency has today published the results of a survey measuring the levels of iodine in dairy and seaweed-based foods produced in the UK. The survey concluded that concentrations in these foods do not pose a health concern for consumers, including young children.

Iodine is a trace element found in seawater, rocks and some types of soil. It is naturally present in milk. But concentrations in other foods can be influenced by its presence in animal feed and hygiene products used in the dairy industry.

A total of 350 samples were taken from a range of dairy foods for sale in the UK, including milk (cow, goat and sheep), eggs (duck, goose, hen and quail), cheese, yoghurt and commercial seaweeds. The survey was used to estimate how much iodine people take in when consuming these food groups, and the choice of samples aimed to reflect the range of products available across the UK and their market share.

The results

All samples of cow milk contained low concentrations of iodine (ranging from 0.30 to 1.00mg/kg). A small number of goat and sheep milk samples gave slightly elevated levels of iodine. The highest levels were 1.3mg/kg in goat milk and 4.6mg/kg in sheep milk – though relatively few samples were tested, and the results cannot therefore be regarded as statistically significant.

One sample of seaweed from a supplier in Northern Ireland contained a very elevated level of iodine (2,400mg/kg above the level of detection). FSA Northern Ireland has informed the relevant local authority, which has arranged to carry out further analysis.

The science behind the story

Iodine is vital for good thyroid function, which in turn is essential for health. High iodine intake may cause the thyroid gland to become overactive and produce excess thyroid hormones (a disorder called hyperthyroidism). As a result, the thyroid gland enlarges to form a goitre. However, levels found in this survey are not likely to cause hyperthyroidism.

The iodine content of milk typically varies from season to season. The raw data of the survey suggests that iodine levels

are consistently lower in summer than winter. Similar trends are not seen for eggs.

The Expert Group on Vitamins and Minerals gave guidance on the upper level for total iodine exposure, equivalent to 0.9mg per day for a 60kg adult. Some consumers – particularly children – may exceed the guidance level from normal dietary sources.

However, the independent Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) concluded in 2000 that the concentrations of iodine in cow milk are unlikely to pose a risk to health, even in those children who drink a lot.

FURTHER INFORMATION

More on the survey is at: food.gov.uk/science/surveillance/fsisbranch2008/fsis0208



Irradiated yeast imported into UK

The FSA has been made aware that dried irradiated yeast has been imported into the UK from China, in breach of regulations.

This yeast has been mixed with other ingredients and is present in very small quantities in a few food products.

Although this irradiated yeast is not permitted for sale, it does not pose a food safety risk.

The Agency has taken action to ensure that any of the yeast remaining in the UK, and products containing the yeast, that have not gone on sale in shops are removed from the food chain. The small number of

products that are already on sale or have been sold are not being recalled or withdrawn.

Andrew Wadge, Chief Scientist of the FSA, said: 'This is not a food safety issue. But it is a breach of regulations and the sensible and proportionate approach is to prevent any more getting into the food chain. The Agency is ensuring manufacturers dispose of this product.'

'This incident highlights issues surrounding global and multiple sourcing of ingredients in an increasingly complex food chain. We have a meeting planned with food industry representatives to

explore ways of addressing this.'

Products affected

The products on sale that contain the potentially affected yeast can be found listed on the Agency's website (see below).

If any more information on this yeast distribution comes to light, the Agency will issue more information.

FURTHER INFORMATION

A full news story, including the list of products can be found at: food.gov.uk/news/newsarchive/2008/jun/yeast

Manual of Nutrition gets a 'makeover'

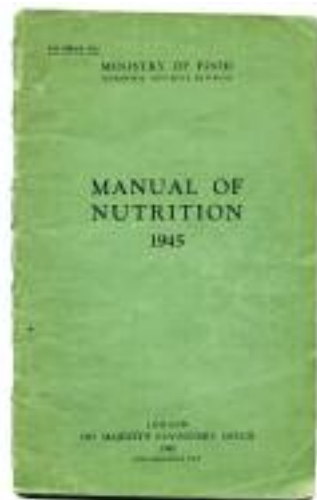
The Food Standards Agency recently penned the finishing touches to the 11th edition of the *Manual of Nutrition*, published in May by The Stationery Office (TSO).

This is the latest in the series of manuals that began 63 years ago, in 1945, when the Ministry of Food published the first edition of the *Manual of Nutrition*.

Published in different centuries the first and the eleventh editions are quite contemporaneous. At first glance, as individual publications, they look worlds apart.

However, the driving principle behind both manuals is essentially the same. That is, to provide wider access to authoritative information on nutrition principles. This driver is what links the series together, no matter the intervening years.

The 1945 manual (above left), priced at a shilling, demonstrated the continued importance that the Government placed throughout the Second World War of improving the nutritional value of the population's meals. It guided the reader through what was essentially a short syllabus of nutrition principles. Chapters similar to those in today's manual included food consumption and physical work, nutritional requirements and information on meals and diets for particular people.



The *Manual of Nutrition*, 1945 and 2008

Unlike today's manual the first edition included 100 questions to keep the reader on his or her toes!

Nowadays, the *Manual of Nutrition* is published alongside a multitude of other books and web articles about food and diet-and-health – all there to meet the demands of an information hungry population. The manual, though, retains its role as a comprehensive and authoritative guide to the basic nutrition principles.

It explains, in an easy-to-read fashion, the roles of nutrients in the body, food sources of nutrients and the effects of cooking and processing. It reflects updated information on the composition of foods and dietary intakes. The manual



includes information, unavailable in its erstwhile editions, on the safety aspects of vitamins and mineral intakes from supplements. In terms of dietary advice the manual features the 'eatwell plate' (see page 5 of this issue) and contains relevant dietary advice relating to specific population groups.

The *Manual of Nutrition* has a varied readership and is used as a source of reference by college and university students, teachers, health professionals and members of the public.

FURTHER INFORMATION

The *Manual of Nutrition*, ISBN 9780112431169, costs £15 and is available from the TSO website and TSO shops.

FSA'S Nutrient Profile Model

The Agency held briefing meetings for stakeholders and journalists on 7 July to launch a 12 week public consultation on the outcomes of the independent review of its nutrient profiling (NP) model.

At these launch events, the panel of scientists asked to assess whether the NP model is effective gave its verdict: that the model is scientifically robust and fit for its intended purpose.

The model was developed as part of a Government strategy to improve the health and dietary habits of children. Its scoring system allows the advertising watchdog Ofcom to distinguish foods that are high in fat, saturated fat, salt and sugar from those that are not, and so improve the balance of food advertised to children on television. The model has been in use as part of Ofcom's broadcast advertising restrictions since 1 April 2007.

The only amendment the Panel is recommending is the removal of the protein cap from the model, to make it easier to use.

Review panel Chair Professor Mike Kelly said: 'Throughout the course of our review we have consulted widely and listened to all the issues raised by stakeholders. Our recommendations follow careful consideration and rigorous, scientific testing.

'The model is innovative, fit for purpose and has a real public health benefit.'

Following the consultation, the review panel will consider all comments received before the Scientific Advisory Committee on Nutrition considers the Panel's recommendations later in the year. The panel's final recommendations will be considered by the Agency's Board in early 2009.

FURTHER INFORMATION

Details of the consultation, which invites views and comments on the Panel's draft recommendations, can be found on the Agency website at: food.gov.uk/consultations More on the review can be found at: food.gov.uk/healthierating/advertisingtochildren/nutlab/nutprofilereview

Seminar held on Euro funding opportunities

Individuals with an interest in food research were invited to find out more about funding opportunities and on-going European research projects at a seminar held in Birmingham on Friday 4 July.

The event was organised jointly by the Department for Environment, Food and Rural Affairs (DEFRA), the Biotechnology and Biological Sciences Research Council and the Food Standards Agency to explore the funding opportunities available under the European Union's Seventh Framework Programme (FP7), its main funding for scientific research.

The funding programme has a budget of more than £50 billion between 2007 and 2013, the largest funding allocation yet for such programmes.

The seminar, which was free to delegates, focused on developments to date, as well as priorities for two particular funding streams under the programme – Food, Agriculture and Fisheries and Biotechnology, and Environment, including Climate Change.

It also looked at the European Cooperation in the field of Science and Technology (COST), Marie Curie and current ERANET call opportunities.

Among the speakers were: Tim Hall from the European Commission's Directorate-General for Research; David Coates and Mike Collins from DEFRA; and Jessica Mitchell, European Advisor at the Brussels-based UK Research Office, which offers advice on European Union funding opportunities.

FURTHER INFORMATION

More on European funding of research can be found on the Agency website at: food.gov.uk/science/researchpolicy/europeanresearch/

ACAF holds open meeting in Belfast



A member of the fish farm catching mature fish for inspection prior to sale

The Advisory Committee on Animal Feedingstuffs (ACAF) held its 42nd meeting in Belfast on 3 June 2008.

The committee was chaired for the first time by Dr Ian Brown, who was appointed as ACAF Chair on 9 May 2008.

As part of the committee's commitment to develop links with other bodies, members received a presentation from Dr Galobart i Cots on the work of the European Food Safety Authority (EFSA) and its Panel on Additives and Products or Substances used in Animal Feed

(FEEDAP). Dr Galobart is a senior scientist on the FEEDAP secretariat.

The Committee also continued discussions, initially held at its March 2008 meeting, on the Lipgene Project (an EU-funded project being conducted by a consortium of 25 research centres across Europe, encompassing 14 countries). ACAF member Professor Ian Givens outlined the beneficial effects of long chain omega 3 polyunsaturated fatty acids, including reduced risk of coronary heart disease. Further

updates on this project will be provided at future meetings.

The committee also had an initial discussion on the European Commission's proposal on Marketing and Use of Feed. Members noted that the proposal, in the form of a draft Council and European Parliament Regulation, aimed to amalgamate four existing EC directives and simplify the legislation. Negotiations will continue at Council Working Group level throughout the year and the committee will be updated on the developments at regular intervals.

As part of its 2007/2008 work plan, the committee visited Movanager Fish Farm, Ballymoney, Antrim, the day before its formal meeting to observe feeding practices and learn about different types of feed.

During the tour, Committee Members were shown the hatchery and ponds, and the various stages in the development of the fish. The Committee learnt that ova are produced annually from brood fish, which are specially selected for the purpose. When the young are suitably developed – usually one or two years old – they are transported live in oxygenated tanks and stocked into various fisheries that make up part of the public angling waters around Northern Ireland.

Animal feed regulations proposal

Negotiations have begun in Brussels on a Commission proposal for a regulation on the marketing and use of animal feed.

This regulation is part of the Commission's modernisation and simplification agenda and is intended to replace four existing directives with one measure that will apply directly in all Member States, bringing most of their provisions together into a single comprehensive document. It will thereby eliminate inconsistencies between Member States in the transposition of the four directives and so contribute to the better functioning of the Single Market.

The proposed regulation will cover feed materials, compound feeds (manufactured feed containing two or more ingredients), and dietetic products (feeds for the dietary management of certain short-term or chronic conditions). It

will contribute to reducing administrative burdens on the feed industry by removing unnecessary labelling requirements. In particular, it will remove the current requirement for the ingredients of compound feeds to be declared according to their percentage weight of inclusion, which the UK has always opposed and which the feed industry considers a breach of its intellectual property.

Like the four directives it will replace, the proposed regulation will apply mostly to feed for farmed livestock, as part of the Agency's remit for the protection of consumer health from farm to fork.

As the directives do now, it will also cover feed for horses, pets, zoo and circus animals and (in certain circumstances) creatures living freely in the wild.

Full details of the proposed

regulation, which was subject to one period of public consultation prior to the negotiations commencing in Brussels, are available on the Agency's website (see below).

There will be further periods of public consultation as the negotiations progress.

The French Presidency of the EU has indicated that it regards the proposal as a priority and is hoping to reach political agreement with the European Parliament on a first reading, with a view to the measure being formally adopted in the first half of 2009.

FURTHER INFORMATION

For more details go to: food.gov.uk/consultations/#comp and see the separate documents, in Completed Consultations 2008, for England, Scotland, Wales and Northern Ireland.

Food Law Code of Practice England

The Agency has published a revised Food Law Code of Practice for England. The code provides instructions and criteria to which local authorities should have regard when carrying out their food law regulatory and enforcement duties.

The main purpose of revising the code was to replace the inspection-focused approach to food law enforcement with a more flexible one enabling local authorities to use a wider range of interventions (activities designed to monitor, support and increase business compliance with food law requirements). The aim is to ensure that local authority resources are directed at those food businesses that present the greatest risk to public health and consumer protection.

The Agency is also publishing training material on the new approach. This formed the basis of the Agency-funded programme of courses delivered earlier this year by ABC Food Safety Ltd.

Parallel Food Law Codes of Practice for Scotland, Wales and Northern Ireland will be published in due course.

FURTHER INFORMATION

The Food Law Code of Practice for England can be found at: food.gov.uk/enforcement/foodlaw/foodlawcop/copengland

A training presentation about the interventions provided for in the Food Law Code of Practice can be found at: food.gov.uk/multimedia/presentations/fsinterventions.ppt

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Agency gears up to review its nutrition research

Later this year the Agency will start a review of its nutrition research portfolio.

Diet related chronic disease is a major public health concern for the UK and improving dietary wellbeing, and reducing diet related chronic disease by helping the consumer make healthier food choices is part of the Agency's strategy.

The Agency uses an evidence based approach, with the evidence provided by pure and applied research in the nutritional and social sciences to fill gaps in existing knowledge, and on the basis of expert scientific opinion.

Scientific research provides evidence to:

- underpin new and refine existing dietary recommendations
- monitor the nutritional wellbeing of the population
- inform how to best influence people's behaviour in order to help deliver dietary improvements

The main objectives of the review of the nutrition research portfolio are to determine whether the

current research programmes meet the Agency's policy needs and to make recommendations on future directions. The research programmes are:

- Diet and cardiovascular health (N02)
- Optimal nutrition (N05)
- Dietary surveys and nutrients in food – research (N08)
- Food acceptability and choice (N09)

- Dietary surveys and nutrients in food – surveillance (N10)

- Diet and colonic health (N12)

- Food choice inequalities (N14)

The protocol for the review is currently being developed, but it is likely that it will involve an external panel of experts, a short consultation period, followed by recommendations to the Agency in the spring 2009.



Would you like to be an EFSA expert?

The Food Standards Agency is to have access to a new, online database of food safety experts, launched by the European Food Safety Authority



The European Food Safety Authority (EFSA) is the European Union's scientific risk assessment body on food and feed safety. It has set up an online database to create a pool of experts who can advise it and provide details of food scientists on whom it can draw when selecting working group members.

The database will also help to support the activities carried out by EFSA's scientific committee, scientific panels and its various networks. EFSA hopes the new arrangement will also make the selection process for its advisors more transparent.

The database is being launched ahead of a call in the autumn for new members for its committee and panels. It is part of an attempt to strengthen EFSA's selection of scientific experts.

The expert database will also be available to the FSA and all EU Member States, which

will be able to use it to select experts for their own scientific activities.

EFSA experts work with other leading scientists in providing the agency with risk assessment advice, which helps inform

The database is being launched ahead of a call in the autumn for new members for its committee and panels

Europe's decision-makers.

It is inviting applications from experts from Europe and beyond with high specialisation in a wide range of scientific

and expert fields, such as food safety, nutrition, toxicology, chemistry and animal welfare. Expert members of the FSA's advisory committees and other food safety experts can sign up to the new expert database via the EFSA website (see below).

EFSA's contract research

The Agency has been informed that EFSA will be inviting contract research organisations to tender to become part of the list established under Article 36 of EFSA's Founding Regulation.

As the UK focal point, the Agency will be working as a conduit between EFSA and potential applicants. The Agency will need to receive information from competent organisations by the end of 21 September 2008.

Information about competent organisations that currently help EFSA in relation to data collection, preparatory work in the development of scientific opinions and other scientific and technical support can be found by going to EFSA's website (see below).

A link to further information on EFSA's website will be put on to the focal point's web-page (below) when available.

Further information

More on EFSA focal points can be found at: food.gov.uk/aboutus/agencyandeurope/efsafp/ More on the new database is at: http://www.efsa.europa.eu/EFSA/1178620777517/efsa_locale-1178620753812_article_36_cooperation.htm

Review of safety assessment of novel and GM foods

In order to evaluate the projects commissioned under the safety assessment of novel and GM foods (the G03 research programme) and to consider future plans, the Agency is planning to hold a mid-programme review. This will involve a review of all the projects funded by the programme by an independent panel of experts.

It will also include a forward look in which the Agency will consider the future direction of the G03 research programme.

The G03 programme builds on and continues to support the mandatory safety assessment of GM and novel foods in order that the most up to date scientific knowledge is used. The programme fulfils the agency's policy objectives to ensure food safety through the rigorous assessment of GM and novel foods. It also forms part of the agency's strategic plan to ensure consumer choice, and that the evidence base is

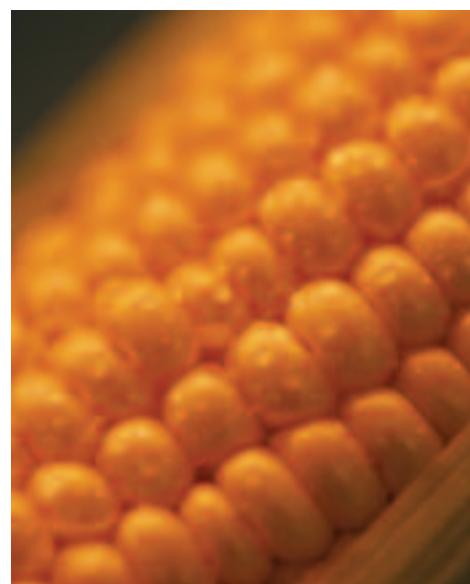
strengthened by taking account of the best available science.

More on the G03 programme can be found on the Agency's website (see below).

The Food Standards Agency would like to seek the views of stakeholders and the public on possible areas of future research funded by the Novel Foods Additives and Supplements Division of the Food Standards Agency.

Further information

If you would like to submit any views or would like any further information contact Kate May, tel: 020 7276 8504; email Kate.May@foodstandards.gsi.gov.uk More on the Agency's G03 research programme can be found at: food.gov.uk/science/research/researchinfo/foodcomponentsresearch/novelfoodsresearch/g03researchprog/



Agency's inaugural Chief Scientist's Lecture is a resounding success

The first Chief Scientist's Lecture, presented by Professor Colin Blakemore, chair of the new General Advisory Committee on Science, took place on 18 June at the Agency's headquarters in London. It was a resounding success and attracted a packed audience of more than 90 people, *writes Agency Chief Scientist Andrew Wadge in his monthly column.*

Professor Blakemore spoke on the subject 'Whose science is it anyway?' and made some interesting points about trust – in particular that scientists are more trusted than ever before, with journalists and politicians featuring much lower in the rankings.

Citing examples such as the BSE crisis, GM foods and animal testing, Professor Blakemore argued for the importance of trusted spokespeople and consideration of the benefits as well as the risks.

The latter had been influential in turning the tide of public opinion on the acceptability of using animals to develop medical advances. The lecture initiated some lively discussion in relation to the place of peer review and communication through the mainstream media.

I have introduced this lecture series mainly for the FSA team, but should there be sufficient interest from others I may be able

to make the lectures accessible through podcasts.

Drawing on the success of the first lecture, a second lecture is planned for the autumn.

The first meeting of the new Social Science Research Committee (SSRC) chaired by Sir Roger Jowell, will be held on Wednesday 23 July.

I am sure that the social sciences will play an increasingly important role in delivering the Agency's vision of 'Safe Food and Healthy Eating for All'.

The SSRC will provide an independent critique on how the Agency gathers and uses social science evidence and help ensure that where we need to commission research with a social science component that we do so from a position of robust independent and expert advice. If you would like to attend the meeting you will need to register in advance, by contacting the SSRC Secretariat to register your interest (see below).

Twenty scientists, including myself, have joined the Agency's Continuing Professional Development (CPD) pilot group, which is coordinated by the Institute

of Food Science and Technology (IFST).

IFST is the professional body representing food scientists and it brings experience of working on CPD schemes with other organisations. After the pilot scheme is completed in April 2009, I hope to make this available to all scientists in the Agency.

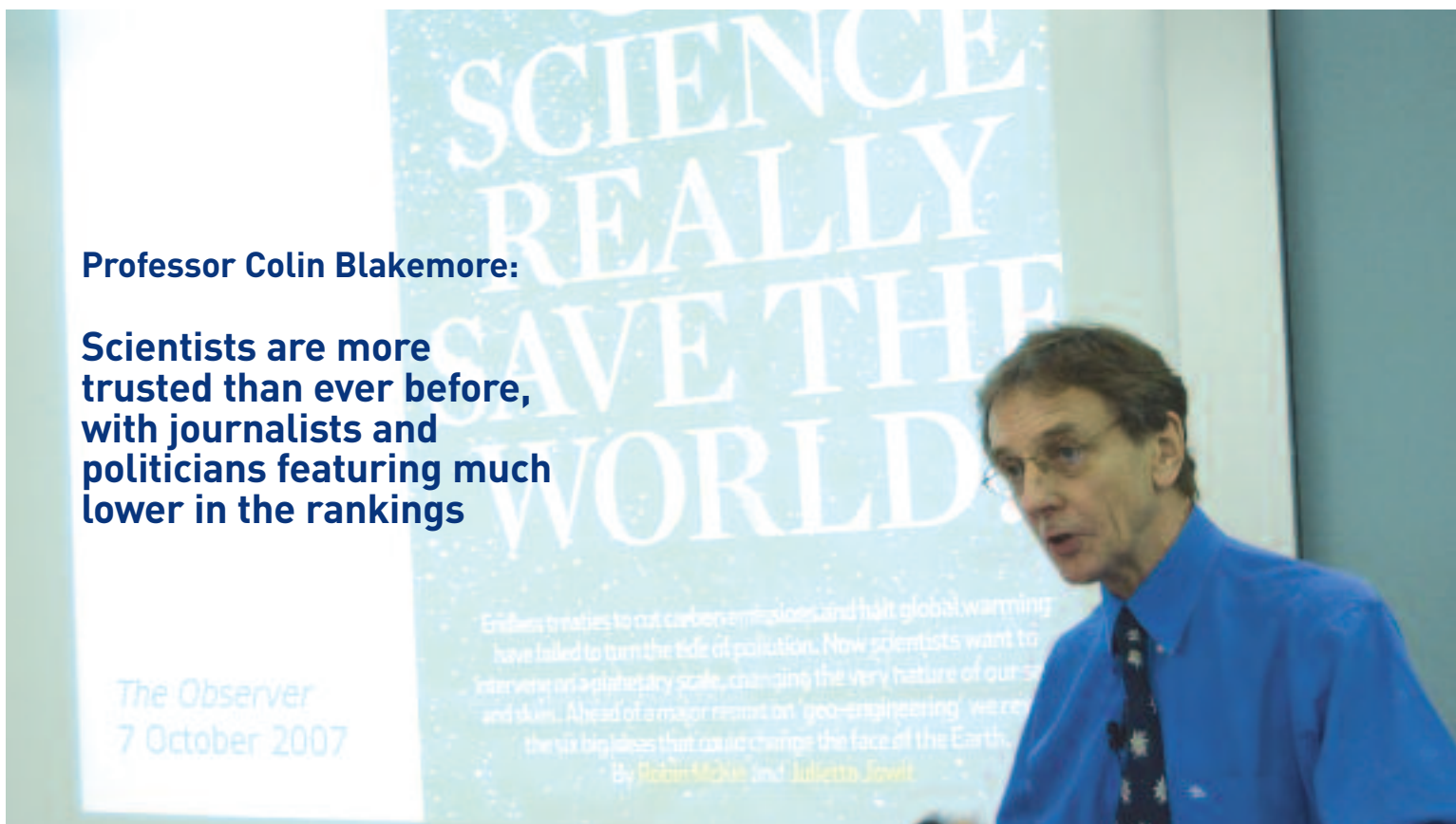
I encourage all scientists in the Agency to develop their scientific skills and expertise and I believe this is a good opportunity for them as well as for the organisation.

Further information

The SSRC Secretariat can be contacted at: ssrc@foodstandards.gsi.gov.uk



Standing room only: the first Chief Scientist's Lecture attracted more than 90 people. A second lecture is now planned for the autumn



Professor Colin Blakemore:

Scientists are more trusted than ever before, with journalists and politicians featuring much lower in the rankings

Earlier treaties to cut carbon emissions and halt global warming have failed to turn the tide of pollution. Now scientists want to intervene on a planetary scale, changing the very nature of our sky and skies. Ahead of a major summit on geo-engineering we reveal the six big ideas that could change the face of the Earth.
By Robin McKie and Juliette Jowell

The Observer
7 October 2007

Final reports of research published and available in the FSA Information Centre

The following research reports have been published by the Food Standards Agency and placed in the Agency's Information Centre. They may be viewed at the Agency's headquarters, 125 Kingsway, London WC2B 6NH, or a copy (CD-ROM) or email attachment if available, otherwise hard copy, can be requested from the Information Centre.

Further information

Contact Dr John Dixon, Assistant Librarian, Food Standards Agency, 125 Kingsway, London WC2B 6NH, tel: 020 7276 8060; email: john.dixon@foodstandards.gsi.gov.uk

For technical information on any of the research summarised here, please get in touch with the contact shown below the relevant report.

Programme A01 Food Additives

Review of Extraction Methods for Additives from Complex Food Matrices (A01058)

The Food Standards Agency requires methods for the accurate measurement of additives in foods, but this is often hindered by difficulties in quantitative extraction of additives.

The aim of this project was to review current knowledge of the extraction of additives and to suggest possible future approaches.

Results from the survey of public analysts and other laboratories suggested that the project should focus on the following additives: synthetic colours, acids, antioxidants, emulsifiers and additives where the composition of the additive is not uniform, for example caramels and carrageenan.

The survey discovered useful information relating to the equipment and analytical techniques available in public analyst laboratories.

This is important as public analyst laboratories are responsible for the enforcement of additive legislation, in particular analysing foods to ensure additives are not used at levels above those set in legislation.

The report discussed in detail methods of extraction published for each group of additives and also the different methods employed to extract additives from different types of food matrices, for example high fat.

The next step will be to investigate how many of the additives legislated for (and particularly those with maximum limits) are regularly used by manufacturers, to provide a list in priority order of the additives where methods need to be further developed and validated.

Further information

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Programme A03 Chemical Contaminants from Food Contact Materials and Articles

Validation of enzyme linked immunosorbant assay (ELISA) for the determination of latex allergens in food contact materials and associated foods (A03056)

The profile of allergens in different contact materials was investigated and various methods used to improve the recovery of allergens from foods. An inter-laboratory validation was carried out and the validated method applied to wrappers and foods collected from manufacturing sites.

The profile of allergens was different between the two types of contact material tested and there was a wide variation in the concentration of allergen between different batches of the same material.

The method was successfully validated for the analysis of the latex allergens Hev b5 and Hev b6.02 from foods spiked with cold seal adhesive. However it was not possible to sufficiently improve the recovery of either Hev b1 or Hev b3 to develop a validated, quantitative method.

Significant cross-reactivity was noted to gram flour (chickpea), wheat flour and rice flour, which affected the testing of food types such as biscuits and pastries, so analysis should be limited to foods that do not contain these ingredients. Hev b5 and Hev b6.02 was measured on some of the wrappers tested, but none of the foods, which were sampled from the areas most likely to be in contact with the cold seal adhesive tested positive, suggesting that the allergens had not transferred at levels above the detection limit of the method.

Using the methods established in this project, it should be possible to measure latex allergen concentrations in food contact materials and Hev b5 and Hev b6.02 allergens in some types of food samples.

However, the clinical relevance of the concentrations of allergen measured and the current limits of detection need to be assessed in relation to clinical data

determining the amount of allergen required to cause allergic reactions in susceptible individuals.

Further information

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Programme B11 – Verocytotoxin-producing *E.coli* 0157 (VTEC)

Review of past and current research on Verocytotoxin-producing *Escherichia coli* (VTEC) in relation to public health protection (B11010)

E. coli is a common bacterium found in the intestines of many animals including man. One group of pathogenic *E. coli* is VTEC, which comprises a large group of *E. coli* serotypes capable of producing Verocytotoxins (VT). The most notable VTEC serotype is O157:H7, which was first recognised as a foodborne pathogen in 1982.

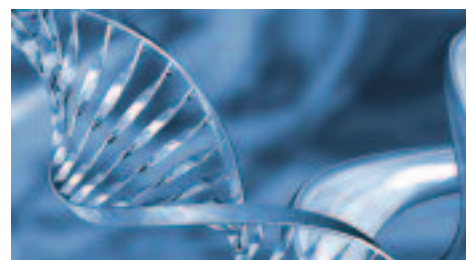
Given the clinical importance of VTEC this review has a deliberately wide scope and brings together scientific evidence and expert opinion from around the world. It covers every aspect of VTEC research from studies with these bacteria, the characteristics, including known virulence associated genes, methodology, clinical aspects of VTEC infection, epidemiology in humans, reservoirs for VTEC in the food chain and prevention and control of contamination.

This review has achieved two important goals. It brings together a wealth of information on VTEC research and related topics and provides information on gaps in knowledge identified in each of the different areas of VTEC research covered within this review.

The up-to-date information provided will assist with the development of appropriate intervention strategies at all stages in the food chain and the implementation of better preventative measures and controls necessary to ensure public health protection in the future.

Further information

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Programme N02 Diet and Cardiovascular Health

Biochemical and physiological responsiveness to low dose fish oil intakes: impact of genotype, gender and geography (N02028)

This double-blind placebo-controlled crossover trial investigated the impact of achievable dietary levels of the fish oil fatty acids eicosapentaenoic acid and docosahexaenoic acid on a host of risk factors for coronary heart disease in men and women.

In addition, the study also examined the impact of the ApoE genotype on LDL (low density lipoprotein) cholesterol response to eicosapentaenoic acid and docosahexaenoic acid intake.

A total of 312 participants (163 females and 149 males) aged 20-70 years were recruited at four study centres in Glasgow, Newcastle, Reading and Southampton and were randomised to three interventions. Overall, there were 87 participants with ApoE2 genotype, 111 with ApoE3 genotype and 114 with ApoE4 genotype.

During the intervention period each participant consumed in random order either 0.7g eicosapentaenoic acid and docosahexaenoic acid (equivalent to 2 portions of oily fish per week), 1.8g eicosapentaenoic acid and docosahexaenoic acid (equivalent to 4 portions of oily fish per week) or a placebo for 8 weeks, separated by a 12 week washout period.

Blood samples were collected at 6 pre- and post-intervention time points and were analysed for 33 coronary heart disease risk outcomes, which included plasma lipid concentrations, LDL and HDL (high density lipoprotein) cholesterol subclass profiles, inflammatory markers, markers of endothelial function, glucose and insulin concentration, red cell folate, homocysteine, thrombotic factors and plasma phospholipid fatty acids.

The findings of the study indicate that moderate intakes of fish oil (<2g/day eicosapentaenoic acid and docosahexaenoic acid) have an impact on blood lipid concentrations and lipoprotein composition, which may contribute to the cardioprotective benefits of fish oil. Overall significantly greater responsiveness in lipids was observed in the male participants.

Also a greater hypertriglyceridaemic effect (concentrations of blood triglycerides higher than normal values) was evident in ApoE4 carriers relative to non-carriers.

Further information

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Programme Q01 – Food Authenticity

Adaption of DNA analysis techniques for the identification of illegally imported bushmeat for use on the Agilent 2100 bioanalyser (Q01109)

This project is one of a number of projects commissioned by the Agency to transfer existing DNA polymerase chain reaction (PCR) based methods to a simple yet robust lab-on-a-chip capillary electrophoresis system.

Eleven species of bushmeat were identified as being those most likely to be traded. These included chimpanzee, gorilla, bushbuck, African sheep, dwarf zebu, zebu, duiker (four sub-species), bush pig, cane rat (two sub-species), and porcupine. PCR was used to amplify a common section of the cytochrome B gene. Two separate restriction enzymes were used to cut the amplified section to create different DNA fragments in each species, which can be sized by the lab-on-a-chip system. A unique Restriction Fragment Length Polymorphism (RFLP) fragment profile was established for each species and a database was created.

The method permitted all 11 species of bushmeat to be identified successfully using the lab-on-a-chip technology. The method was validated to ensure that it is suitable for use by trialling it in a public analyst laboratory. A standard operating procedure has been produced.

Further information

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Programme R01 – Radioactivity in Food

Tritium concentrations in crops fertilised with contaminated sewage sludge (R01061)

Authorised discharges of radionuclides into sewers can result in contamination of sewage sludge, which can be used as a soil conditioner. A review of published information, carried out by the Health Protection Agency indicated that specific data on the uptake of radionuclides from treated land into crops was scarce. Discharges from a radiopharmaceutical plant in Wales were routed to a waste water treatment works, and have resulted in elevated concentration in sewage sludge pellets. This provided the opportunity to generate specific data on crop uptake.

The project made use of the contractor's existing lysimeter facility (which measures

measures inputs and outputs from growing plants in controlled conditions) to generate realistic uptake data for selected crops grown in three soil types. This was augmented by smaller scale studies on a wider range of crops that generated relative values for uptake parameter values applicable to the Agency's predictive models.

Losses via transpiration are an important area of uncertainty, and experiments to measure the extent of these losses were also undertaken.

Concentrations of tritium in treated soil decreased throughout the period of the experiment, and measured values in the soil itself displayed considerable variability, although this variability decreased with time. On the basis of the results obtained, for risk assessment purposes it would be reasonable to assume that the proportion of tritium transferred into crops from soil treated with sewage sludge is small.

Further information

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Programme S14 – FSA Scotland: Research, Surveillance & Monitoring

Prevalence and concentration of *Escherichia coli* serotype O157:H7 and other verocytotoxin-producing *Escherichia coli* (VTEC) in sheep presented for slaughter in Scotland (S14005)

Rates of infection of *E. coli* O157 in certain regions of Scotland are higher than those seen in England and Wales. In Europe, *E. coli* isolates of serogroups other than O157 also make a significant contribution to human diarrhoeal disease. Domestic ruminants, especially cattle and sheep, are major reservoirs of VTEC. Most epidemiological work on VTEC has focused on cattle, despite sheep being identified on a number of occasions as the source of outbreaks of human VTEC infection in Scotland.

This study was undertaken to determine the prevalence of *E. coli* O157 and the major non-O157 VTEC in sheep at slaughter, and to see if there were seasonal or regional differences. The project sampled 1,082 sheep at slaughter at four different slaughterhouses in Scotland from July 2005 to June 2006.

Age of animal and season had a greater impact on prevalence of *E. coli* O157 carriage than the regional origin of the flock, with the highest risk seen during July to September in sheep that were adults or

one year old. The prevalence of *E. coli* O26 carriage was similar to *E. coli* O157. However only 17% of *E. coli* O26 isolates possessed the verocytotoxin genes. Other subgroups investigated were of low prevalence or absent.

Further information

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A survey of anisakis and pseudoterranova in Scottish fisheries and the efficacy of current detection methods (S14008)

This project was concerned with surveying the prevalence and intensity of infection of *Anisakiasis* and *Pseudoterranova* spp. in targeted Scottish white fish populations and investigating the efficacy of current processing and detection methods.

A programme of sampling was conducted for monkfish, cod, mackerel and herring fish species. Nematodes were removed, quantified and identified with various host and parasite data recorded. The efficacy of the detection methods (visual inspection, candling, slicing, acid-digestion and pressing) was examined. Data was assessed using univariate and multivariate statistical methods, in order to examine factors affecting infection variability.

Monkfish, cod, herring and mackerel were caught from waters surrounding Scotland and examined for the presence of *Anisakis simplex* and *Pseudoterranova decipiens* in the flesh by a variety of methods. Both species were found in the flesh of monkfish and cod, but only *A. simplex* occurred in the flesh of herring and mackerel.

The prevalence of *A. simplex* was greatest in cod and lowest in mackerel. For monkfish, candling was only effective in fillets of up to a certain thickness and slicing was the most effective method for both monkfish and cod.

Further information

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Programme T01 Risk Assessment

Evaluation of the potential existence of thresholds of genotoxic activity with respect to substances identified in food (T01029)

This project investigated, whether the concept of non-linear, threshold dose-response relationships can be applied to any of potentially mutagenic chemicals.

Databases of potential genotoxins and aneugens occurring in food were developed. A number of potential aneugenic chemicals (substances that, by interacting with components of the cell division apparatus, may lead to a deviation from the normal diploid number of chromosomes) that may act via threshold mechanisms were identified.

To confirm the existence of thresholds of genotoxic action for these chemicals detailed dose-response analysis was performed.

The induction of aneuploidy by bisphenol A was further investigated in mouse oocytes exposed both *in vitro* and *in vivo*.

Bisphenol A did not interfere with spindle formation in maturing mouse oocytes up to levels of 100 µg/kg bw/day.

Further information

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Signal transduction pathways involved in cell proliferation and motility induced by the food-derived carcinogen PhIP (T01035)

This project investigated, the mechanisms of toxicity that give PhIP (2-amino-1-methyl-6-phenylimidazo[4,5-β]pyridine) the ability to induce tissue-specific cancer at the cellular level.

Particular emphasis was focused on effects on cells of the breast.

This study follows up the results of short study carried out by the Department of Health Toxicology Unit to which the FSA contributed.

The project devised a cell-based co-culture model to evaluate the effect of metabolically activated PhIP on breast cells.

- Exposure to high concentrations of PhIP led to inhibition of breast cell growth and DNA damage that resulted in changes in the levels of key survival proteins.
- Exposure to low concentrations of PhIP induced cell proliferation in oestrogen receptor positive and negative breast cells.
- PhIP also induced malignant cell-like migration, although this effect was only seen in cells expressing the oestrogen receptor.

These powerful biological effects appear to be controlled by specific signalling pathways and are likely determinants of PhIP's highly selective tissue-specific cancer causing ability.

In order to establish the importance of these effects in the aetiology of diet-associated cancer, these findings need to be confirmed in animal studies and ultimately in humans.

Further information

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Programme S14 – Research, Surveillance and Monitoring: Scotland

Survey of sugar intake among children in Scotland (S14029)

In 1996, in the Scottish Diet Action Plan, the Scottish Executive committed to a Scottish Dietary Target for children to reduce the consumption of non-milk extrinsic sugars (NMES) to less than 10% of energy intake. The increase in childhood obesity and the high levels of dental decay in Scotland mean that this is a continuing priority to help achieve a healthy balanced diet. The present survey was commissioned to address the recommendation of the working group on Monitoring Scottish Dietary Targets that 'where data is currently lacking, as for non-milk extrinsic sugars in children, interim studies may need to be set up'.

A nationally representative survey of children aged 3-16 was carried out which aimed to provide robust information on the diet of children living in Scotland using a calibrated food frequency questionnaire with particular focus on sugar containing foods. NMES are those sugars present in fruit juices, table sugar and sugars added to food.

This study provides clear evidence that the intake of NMES is considerably higher than the Scottish Dietary Target in the study population and in all sub-groups. The foods contributing to NMES vary significantly with socio-economic status but are mainly due to high consumption of soft drinks, confectionary, biscuits and cakes

Further information

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Programme N09 Food Acceptability and Choice

Investigation of the contribution made by Food Portion size to Food and Energy Intake (N09021)

The purpose of this study was to explore the relationship between food portion size and energy intake in a UK setting.

The study included examining existing dietary data to explore the association between portion size of food groups and risk of obesity. The main aspect was a fully residential study to evaluate the extent to which portion sizes influenced food and energy intake over 2 periods of 4 days, within 3 weeks of each other.

Subjects were randomly assigned to receive either a 'standard' food portion size followed by a 'large' food portion size of the same food in the second 4 day period, or vice versa.

Analyses of NDNS dietary data indicated that under-reporting may have masked any true associations between food portion sizes with measures of obesity. The portion size study showed that energy intake over four days was significantly higher when participants were offered large portions compared to standard, and that there was little evidence of down regulation of food intake overall.

This study emphasises the complexities of exploring food portion size and obesity risk. The study indicates that the availability and consumption of larger portions of food may be a major contributing factor in inciting excess energy intake.

Further information

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Programme T07 – Food Intolerance

Perinatal egg and milk allergen exposure in relation to tolerance or allergic sensitisation to food in infancy (T07044)

This project proposed to build upon the results obtained from previous FSA-funded projects, to investigate the role of exposure (dose and route) of offspring at genetic risk of atopy to food allergens (egg and milk) during fetal development and/or breast-feeding, in the development of food allergy.

Furthermore, by using a combination of exposure data and measurement of immunological responsiveness at birth, this project hoped to determine if it is possible to predict

- (i) children who will not develop food allergy,
- (ii) children who will develop transient food allergy and,
- (ii) children who will develop persistent allergy.

As such, it may be possible to design therapeutic (including dietary) intervention in order to modify the allergy outcome.

At the close of the study, an initial analysis of the small number of infants that had reached the 6 month assessment point provided a suggestion that high dose antenatal exposure to egg (but not milk) might be associated with a lower risk of eczema, but this finding is not definitive since it is based on an incomplete sample. Interestingly, the study also found that there was no correlation between the levels of antibodies to milk or egg in mothers plasma and her dietary intake, which suggests that allergen specific IgG may not be a reliable quantitative marker of dietary exposure

Further information

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Programme N05 – Optimal Nutrition

The analysis of 25-hydroxy vitamin D to compare four different methods (N05076)

This project compared four different analytical methods used to measure 25-hydroxy vitamin D concentrations (25OHD) in blood plasma. The aim was to find the most appropriate method for use in the FSA projects N05062, 63 & 64. The four methods compared were:

- A radio-immuno assay (RIA) (by Diasorin)
- An enzyme-linked immuno assay (EIA) (by Immunodiagnostic Systems)
- Liquid-chromatography with mass spectrometry (LC/MS)
- High pressure liquid chromatography (HPLC)

Pooled plasma samples from the National Diet and Nutrition Survey population (n=20) were prepared and aliquots of these samples were sent to each of the four participating laboratories. In addition each laboratory also received four quality control samples. Each laboratory employed one of the four methods. The obtained results were statistically analysed using the Bland Altman procedure.

This project found reasonable agreement between the RIA, EIA and HPLC methods. The 25OHD concentrations for the EIA were found to be around 4.6 nmol/L higher than those obtained by RIA. HPLC was found to give results around 3.7nmol/L lower than those obtained by RIA and around 8nmol/L lower than the EIA results. The agreement between LC/MS and the other three methods was relatively weak.

On the basis of this project's result and taking into account practical considerations it was decided that the enzyme-linked immuno assay (EIA) would be the method most appropriate for use in projects N05062, 63 & 64.

Further information

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Programme N12 – Diet and colonic health

Markers of systemic and mucosal inflammation as biomarkers of vulnerability to colorectal cancer (N12016)

Obesity causes a prolonged state of mild inflammation in which molecules related to inflammation and hormones are secreted into the bloodstream. The hypothesis that vulnerability to sporadic colorectal cancer is associated with chronic systemic inflammation was tested, and that faecal and

blood-borne inflammatory markers may be used as biomarkers in nutritional intervention trials on bowel health.

100 healthy controls and 100 patients with a history of bowel polyps were recruited into the study, with each volunteer providing anthropometric data (height, body mass index, waist to hip ratio) and samples of blood and faeces. C-reactive protein (CRP), a marker of systemic inflammation, and faecal calprotectin, lactoferrin and interleukin-6, markers of colorectal inflammation, were measured in these samples. Results were then analysed to search for evidence of an association between inflammatory markers and colonic health.

There was clear evidence that body-mass is a risk factor for systemic inflammation as measured by CRP, and CRP levels were significantly higher in patients with polyps, some of which are precancerous lesions, compared with controls.

Across the whole study population, plasma CRP was correlated with faecal calprotectin. Levels of both faecal markers were slightly higher in polyp patients compared with controls but this difference was attributable largely to the very high levels seen in patients with more advanced polyps, which show evidence of malignancy. Using multivariate statistical methods the strongest predictors of plasma CRP proved to be age and body mass index.

There was also some evidence of an association with faecal inflammatory markers and the presence of bowel lesions.

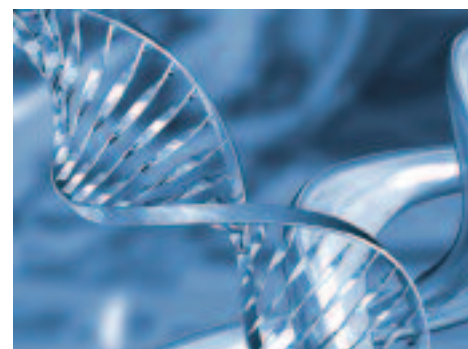
Following further analysis, it was confirmed that subjects with polyps tended to have higher inflammation markers in general, than volunteers with healthy intestines.

This study provides further evidence for the conjecture that systemic inflammation associated with high BMI is causally linked to a heightened risk of bowel cancer and that both are associated with increased bowel inflammation, as measured by faecal calprotectin.

Although plasma CRP and faecal inflammation markers are not strongly enough associated with bowel cancer to be used as diagnostic tests, they seem to be suitable targets for dietary intervention studies aimed at reducing the risk of colorectal cancer in the UK.

Further information

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Programme C03 – Mycotoxins and process contaminants (including nitrate) - Research

Mechanism of the formation of acrylamide in cooked foods and factors affecting its formation during thermal processing (C03031, C03047, C03048).

It has been shown that the genotoxic chemical acrylamide is present in foods rich in carbohydrates when cooked at temperatures above 120°C. The EC Scientific Committee on Food (SCF) stated that levels of acrylamide in food should be as low as reasonably achievable. In June 2002, a WHO/FAO consultation recommended that an understanding of the formation of acrylamide in heated foods was needed so that formulation, processing and cooking conditions can be optimised to minimise acrylamide levels.

Various mechanisms of formation of acrylamide have been proposed, with possible sources including the amino acid asparagine, and acrolein.

The aim of this project was to define the precise mechanism and kinetics of acrylamide formation in plant-based food, in particular potato and cereal the main food groups which are prone to acrylamide formation during processing/and high temperature cooking. The project also aimed to produce a kinetic model, which would provide a generic framework for predicting the effects of processing conditions, composition and the food matrix on acrylamide levels.

The mechanism of acrylamide formation was investigated by:

- Determining the effect of reactants and reaction conditions on acrylamide formation in model systems, using competition studies with amino acids, and carbonyl compounds.
- Investigating the kinetics of the formation of acrylamide in relation to chemical composition and reaction conditions

(temperature and pH) of simple model systems.

■ Formulating a kinetic model from the results obtained in 2 and 3 above which can be applied to acrylamide levels in real foods, allowing predictive modeling of acrylamide formation in foods of given composition and under specific processing conditions.

Initial investigations involved the evaluation of various matrices as a platform to study the kinetic parameters affecting acrylamide formation. Partly gelatinised and freeze dried Waxy Maize Starch (WMS) was found to be the most appropriate platform for analysing acrylamide formation due to its reduced reactivity, homogeneity and low initial moisture.

Kinetic studies on the model system conducted in parallel at three sites provided data that correlated well with work that has been published previously on food systems.

Kinetic study investigations on acrylamide formation were affected by sugar type, the presence of amino acids, initial moisture and temperature.

Studies, looking at different sugars, carbonyls and amino acids were conducted and the outcomes were combined to provide an improved version of the initial kinetic model.

Investigations into the effect of different food additives on acrylamide formation were mainly targeted on the use of pH modifiers. Other routes of acrylamide formation i.e. through acrolein and or acrylic acid do not seem to be as important as the established Maillard reaction of asparagine with carbonyls.

The outcomes from the study gave rise to the initial production of the acrylamide toolkit, which attempts to give the manufacturing industry the basis to predict the final level of acrylamide in any given product. The final toolkit produced does have limitations that may affect the efficacy of the result obtained.

Further information

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Other reports published and available in the Information Centre

Correction to previously published text on Programme A03 – Chemical Contaminants from Food Contact Materials:

Project A03053 was misnamed in last month's issue. The title of the A03053 project is Monomer and other chemical migrant levels in food grade plastic.

Programme C02 – Chemical contaminants from food production – Surveys

Iodine analysis in foodstuffs (C02079)

Programme M01 – Meat Hygiene: Microbiological Safety (non – TSE Research)

Combined methods for the detection of *Mycobacterium bovis* within carcass tissues from TB-suspect cattle: implications for meat salvage (M01022)

Programme M03 – Transmissible Spongiform Encephalopathies (TSEs)

Risk of exposure to BSE infectivity in UK sheep (M03018)

Assessment of risk from under thirty month beef-on-the-bone (M03037)

Programme T01 – Risk Assessment

Biomarkers, toxicokinetics and default uncertainty factors (T01017)

FSA funded research published in peer reviewed journals

N02 – Diet and Cardiovascular Health

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N09 – Food Acceptability and Choice

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T07 – Food Intolerance

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