

# Food Act Report

Year ending 30 June 2008



Government  
of South Australia

SA Health



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## South Australian food legislation

### The *Food Act 2001*

The objectives of the *Food Act 2001* (the Act) are defined in Section 3 of the Act as:

- > Ensuring that food for sale is safe and suitable for human consumption
- > Preventing misleading conduct in connection with the sale of food
- > Providing for the application of the Food Standards Code.

The *Food Act 2001* closely follows the content and structure of national model food provisions, which provides for the consistent administration and enforcement of food legislation in Australia. This uniform approach to national food legislation was formalised by the Inter-Governmental Food Regulation Agreement 2002. Under the Agreement all states and territories have adopted the Australia New Zealand Food Standards Code (the Food Standards Code, 'the Code') through their food acts. While the Act contains important legal and administrative issues, such as defining offences and penalties, the Code details the specific requirements with which food businesses must comply.

### The Food Standards Code (the 'Code')

The Code is a bi-national document that details labelling, composition and food safety laws that apply to foods and food handling business. It is set out in four chapters:

- > **Chapter 1 — General Food Standards:** General labelling and composition standards applying to all foods
- > **Chapter 2 — Food Product Standards:** Standards applying to specific foods or categories of foods
- > **Chapter 3 — Food Safety Standards (Australia only):** The Food Safety Standards include specific requirements for food businesses and food handlers that, if complied with, will ensure food does not become unsafe or unsuitable
- > **Chapter 4 — Primary Production Standards (Australia only):** Primary Production and Processing Standards for seafood, meat, dairy and wine.

### Primary Industries Legislation

*The Primary Produce (Food Safety Schemes) Act 2004* is administered by Primary Industries and Resources South Australia (PIRSA) and the Dairy Authority of SA. The Act implements food safety requirements in the meat, dairy, seafood and citrus industries. This Act and the Food Safety Scheme regulations under this Act are recognised by (regulation under) the Food Act as they implement equivalent food safety requirements to those required by the Food Act.

South Australian food legislation forms part of a bi-national food regulatory system which is described on page 5.

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## The bi-national food regulation system

The food regulatory system is established by the Inter-Governmental Food Regulation Agreement 2002 between the State, Territory and the Australian Governments. New Zealand's role and participation in the system is established by the Australia New Zealand Joint Food Standards Agreement between Australia and New Zealand, creating a joint food standards system. The system consists of three major components.

### Policy development

**The Australia New Zealand Food Regulation Ministerial Council** (the Ministerial Council) is primarily responsible for the development of domestic food regulatory policy and the development of policy guidelines for setting domestic food standards. It has the capacity to adopt, amend or reject standards recommended by Food Standards Australia New Zealand (FSANZ) and to request that these be reviewed.

The council comprises Health Ministers from most Australian states and territories and the Australian Government as well as other Ministers from related portfolios (Primary Industries, Consumer Affairs etc) where these have been nominated by their jurisdictions. Currently all jurisdictions, except New South Wales and New Zealand, have nominated a Health Minister as Lead Minister for voting purposes. NSW has nominated the Minister for Primary Industries and New Zealand has nominated the Minister for Food Safety as Lead Minister for voting purposes. Under the Food Regulation Agreement the Australian Government Health Minister chairs the council. South Australia is represented by the Minister for Health and Minister for Agriculture, Food and Fisheries. The Minister for Health is the Lead Minister.

**The Food Regulation Standing Committee** (FRSC) is responsible for coordinating policy advice to the Ministerial Council and ensuring a nationally consistent approach to the implementation and enforcement of food standards. It also advises the Ministerial Council on the initiation, review and development of Standing Committee activities.

Membership of FRSC reflects the membership of the Ministerial Council and comprises the heads of departments for which the ministers represented on the council have portfolio responsibility, as well as the President of the Australian Local Government Association and FSANZ as observers. The Director of Public Health represents the Department of Health at FRSC.

### FRSC Working Groups

The Standing Committee has a number of working groups, and this financial year, the Department of Health was represented at the following groups:

#### **FRSC sub group on addition to food of substances other than vitamins and minerals**

The FRSC sub group recommended a final draft of the Ministerial Policy Guideline for the Addition to Food of Substances other than Vitamins and Minerals to the Australia New Zealand Food Regulation Ministerial Council at its May 2008 meeting. At this meeting ministers signed the policy guideline and agreed that it should apply to new applications or proposals and should not trigger a review of existing permissions in the Australia New Zealand Food Standards Code.

This sub group has now disbanded and the Ministerial Policy Guideline for the Addition to Food of Substances other than Vitamins and Minerals is available on the Department of Health and Ageing web site:

[www.health.gov.au/internet/main/publishing.nsf/Content/foodsecretariat-policydocs.htm](http://www.health.gov.au/internet/main/publishing.nsf/Content/foodsecretariat-policydocs.htm)

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### FRSC strategic planning working group

The sub group developed a strategic statement to clarify the role of food regulation in achieving the full range of outcomes related to food including; food safety, nutrition and healthy eating, consumer protection, facilitation of trade and commerce, and boundaries with other regulatory systems. The draft Overarching Strategic Statement for the Food Regulatory System was recommended to the Australia New Zealand Food Regulation Ministerial Council at its May 2008 meeting. Ministers endorsed the Overarching Strategic Statement at this meeting, and it is available on the Department of Health and Ageing web site:

[www.health.gov.au/internet/main/publishing.nsf/Content/foodsecretariat-system.htm](http://www.health.gov.au/internet/main/publishing.nsf/Content/foodsecretariat-system.htm)

The sub group drafted amendments to the Food Regulation Agreement (FRA), which were intended to better reflect the current status of the food regulation system, and to give effect to amendments to the *Food Standards Australia New Zealand Amendment Act 2007*. At its meeting in October 2007 the Australia New Zealand Food Regulation Ministerial Council endorsed the changes to the FRA and referred it to the Council of Australian Governments (COAG). It is expected that the revised FRA will be considered by COAG at its meeting in July 2008. The working group has now commenced work on a comprehensive strategic plan for consideration by FRSC.

### FRSC risk profiling working group

At its August 2007 meeting FRSC agreed to the *Principles for the use of the Risk Profiling Framework*. Further work has been undertaken to develop a list of key food business sectors and consultants have been engaged to assign risk priority classifications to these sectors.

### FRSC front-of-pack labelling (FOP) working group

The working group was established to explore and report on whether a uniform front-of-pack labelling system would be an effective health strategy for Australia and advise the Ministerial Council on the efficacy of a range of options for such a labelling system.

## Standards development

Food Standards Australia New Zealand (FSANZ) is the statutory authority responsible for developing all domestic food standards consistent with Ministerial Council policy, and for developing labelling and compositional standards for both Australia and New Zealand.

FSANZ also has a national coordination role in food surveillance and food recalls; conducts research, and supports the Australian Quarantine and Inspection Service (AQIS) in the control of imported foods.

The trigger for the development of, or amendment to, a food standard can be:

- > An application submitted by an outside body (usually a food business)
- > A proposal raised by FSANZ itself
- > Policy advice issued by the Ministerial Council.

The standard development and amendment process involves an evaluation of the risk to public health of the proposed change to the Australia New Zealand Food Standards Code (the Code) and the impact of the regulatory measures on the food industry and Australia's international trading obligations. FSANZ drafts a legal standard for public comment. There may be one or more periods of public consultation for each standard.

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Finally, the draft standard is considered for approval by the FSANZ Board and if the Ministerial Council does not request a review of the decision within 60 days, FSANZ gazettes (publishes) the standard and it becomes law as part of the Code.

Food standards developed by FSANZ are adopted automatically by reference, without scrutiny by Parliaments and without amendment into the food law of state and territory governments in Australia, and the New Zealand Government.

#### **Department of Health advice to FSANZ regarding proposed amendments to the Australian New Zealand Food Standards Code Report 2007–08.**

A total of 34 applications and proposals to amend the Australia New Zealand Food Standards Code were provided to SA Department of Health, Food Policy and Programs Branch, by Food Standards Australia New Zealand (FSANZ) during the 2007–08 financial year.

Some of the issues raised in these applications/proposals include:

- > Consideration of mandatory fortification with iodine
- > Review of cyclamate permissions
- > Cadmium in peanuts
- > Food derived from genetically modified crops
- > Nutrition, health and related claims
- > Maximum residue limits in food
- > Addition of lutein as a nutritive substance in infant formula.

A summary of three of the major issues covered by applications/proposals is set out below. More details on all applications and proposals can be found at the FSANZ web site: [www.foodstandards.gov.au](http://www.foodstandards.gov.au)

#### **Mandatory iodine fortification**

Iodine deficiency has significant effects on intellectual development of children and in severe cases can result in brain damage and mental retardation. Concerns have recently emerged that Australia and New Zealand's iodine status had decreased and that intervention was required to counter its effects on the population.

In May 2004, the Australian and New Zealand Food Regulation Ministerial Council adopted a Policy Guideline on the Fortification of Food with Vitamins and Minerals and requested that FSANZ give priority consideration to mandatory fortification of the food supply with iodine and folic acid. Proposal P230 *Consideration of Mandatory Iodine Fortification (Australia and New Zealand)*; was subsequently developed.

In July 2007, the Australian Health Ministers agreed that the prevalence and severity of iodine deficiency in New Zealand was significant enough to warrant intervention via mandatory fortification, but sought further advice on the prevalence and severity of iodine in Australia. A Standard requiring mandatory fortification of bread via iodised salt in New Zealand was gazetted in March 2008.

Advice was subsequently provided to the Australian Health Ministers supporting the need for iodine fortification in Australia. A new proposal has been raised to consider amendment of the New Zealand only Standard to include Australia.

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### **Addition of lutein to infant formula**

This application from an infant formula manufacturer requested permission for the voluntary addition of lutein to infant formula. Currently the Food Standards Code only permits specific nutritive substances to be added to formula and requires pre-market approval of these substances.

Lutein is a non-vitamin A carotenoid that cannot be synthesised by humans and therefore needs to be obtained through food. It is present in a range of foods such as green leafy vegetables, citrus fruits, avocado, egg yolks and human breast milk. Lutein is present in breast milk at variable levels and is considerably more bio-available than lutein added to formula. The intention of this application was to provide lutein in infant formula in amounts that would provide comparable levels to breast fed infants.

This proposal is at the final stage of assessment.

### **Nutrition, health and related claims**

Work continues on the development of a new standard for nutrition, health and related claims on packaged foods to replace the current transitional standard which prohibits the use of prophylactic or therapeutic claims.

In May 2008, FSANZ submitted the final drafting for the proposed Nutrition, Health and Related Claims Standard to the Ministerial Council. This draft standard classifies claims into three groups; nutrition content claims, general level health claims or high level health claims. Nutrition content claims are statements regarding the amount of nutrient, energy or biologically active substance a food contains, for example: *This food is high in fibre.*

General level claims refer to the presence of a nutrient or substance in a food and its effect on health, for example: *Calcium is good for strong bones and teeth when consumed as part of a healthy diet containing a variety of foods.* High level claims refer to the presence of a nutrient in a food and its relationship to a serious disease, condition or indicator of a serious disease, for example: *This food is low in sodium. A healthy varied diet including foods low in sodium may assist in reducing blood pressure.*

All claims will need to be scientifically substantiated and meet certain conditions as set out in the standard. To be permitted to make a general level or high level claim, the food must meet specified nutrition profiling criteria intended to prevent claims on foods that are nutritionally inappropriate, for example, those foods high in processed sugars and saturated fat. No claims will be permitted on infant formula products or alcohol.

A substantiation framework outlining alternative acceptable methodologies that may be used to support the use of a specific claim on a food is included in the draft standard.

The only high level claims that will be permitted are those specified in the standard. To-date the only claims that have been proposed for inclusion in the standard are those where there is substantial evidence supporting them, such as the relationship between calcium intake and bone mineral density.

The Ministerial Council has requested a first review of this draft standard on various grounds including its impact on consumers and difficulties of enforcement. FSANZ has three months to review the draft standard and reaffirm, reaffirm with amendments, or withdraw its approval of the draft standard.

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## The Department of Health Representation at Standards Development Advisory Committees

The department has participated in the following FSANZ advisory committees in 2007–08:

### **Egg and Egg Products — Standards Development Committee**

SA Health along with the Department of Primary Industries and Resources SA (PIRSA) participates in the Egg and Egg Products, Primary Production and Processing Standard Development Committee.

The committee comprises members from national and state jurisdictions, in addition to representatives from industry groups. The committee is charged with advising FSANZ in its development of an 'outcomes based' Primary Production Standard and is based on risk assessment conducted by the Egg Scientific Advice Panel.

The desired outcome is to develop a standard that enables food safety control measures to be identified and adopted by industry throughout the food chain, with the primary objective of reducing pathogens such as *Salmonella* — resulting in fewer public health incidents related to the handling or consumption of eggs or egg products.

The standard will be supported by an interpretive guide. An existing Code of Practice will also require updating to reflect and support the standard through the process of implementation and enforcement. The third meeting of the committee will be in August 2008.

### **Poultry Meat Standard Development Committee**

In June 2008, the eighth meeting of the Poultry Meat Standard Development Committee (SDC) considered activities conducted since their last meeting.

SA Health membership had lapsed but was recently renewed. Significant progress has been made in terms of development of a revised Draft Standard for Poultry Meat supported by regulatory members of the SDC. In keeping with all other Primary Produce and Production Standards, the Poultry Meat Standard is intended to be 'outcomes based' and in a similar vein will require legislative reference to supporting materials such as Interpretative Guides and Codes of Practice.

The aim of the standard is to identify and implement food safety control measures throughout the food chain with the primary objective of reducing pathogens such as *Campylobacter* and *Salmonella* — resulting in fewer public health incidents related to the handling or consumption of poultry meat products. Discussion continues on the approach, process and establishment of timelines to complete and implement the new standard.

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### **Health Claims Standard Development Advisory Committee**

This committee was formed in 2004 to assist in the development of a new Standard for Nutrition, Health and Related Claims. The committee includes representatives from Australian and New Zealand governments, states and territory health agencies, nutritionist associations, consumer and fair trading organisations, therapeutic goods, quarantine and industry bodies. Members assist Food Standards Australia New Zealand (FSANZ) to develop a new standard to create an equitable and enforceable law surrounding the use of health claims on food. The committee met once in 2007 to inform the development of the final assessment report for the draft standard.

Currently, health claims on food labels are covered by a transitional Standard 1.1A.2 in the Food Standards Code which prohibits statements linking consumption of a food with a therapeutic or prophylactic use. It also prohibits references to physiological conditions or diseases on a food label or advertisement.

The new Standard for Nutrition, Health and Related Claims will permit specific claims on appropriate foods provided the claim is specific and substantiated. Content claims are limited to noting the presence or absence of a nutrient/substance (for example, 'no fat', 'contains Vitamin C'). General level claims are those that make a statement connecting consumption of a food with a specific health benefit, but do not reference a disease or serious condition. High level claims (those that reference a disease or a serious condition) will require pre-approval before use on a specific food product.

A first review of the draft standard has been requested by the Australia New Zealand Food Regulation Ministerial Council. If no further reviews are sought, a new standard may be gazetted by end-2008/early-2009.

### **Food safety programs for catering to the general public — FSANZ Standards Development Advisory Committee**

This committee provides advice on the development of a standard to mandate food safety programs for businesses that cater for the general public. The development of this standard has been difficult due to complexities in defining to whom the standards will apply. Food Standard Australia New Zealand conducted the second round of stakeholder consultation (Draft Assessment Report) in November 2007. The standard is nearing completion and is expected to be considered for inclusion in the Food Standards Code by the Australian New Zealand Food Regulation Ministerial Council during the next 12 months.

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## Administration of legislation

States and territories have enacted Food Acts based on model food provisions as agreed under the Food Regulation Agreement 2002. Also under the Agreement, states and territories have adopted the Code through their Food Acts. The model for administration of Food Acts differs between jurisdictions with either state and territory governments taking sole responsibility or responsibility being shared between State Government and Local Government.

The Australian Quarantine Inspection Service (AQIS) is responsible for the control of imported food which must also comply with the Code.

States and territories have also traditionally regulated food safety in the domestic meat, dairy and shellfish industries under primary industry Acts, administered by primary industry departments. In recent times there have been moves in some jurisdictions to integrate this legislation into single primary industry Acts or modified Food Acts, with corresponding changes in administration. AQIS has responsibility for food safety regulation of the export meat, dairy and shellfish industries. Some jurisdictions, in some industries, share enforcement responsibilities between AQIS and states/territories.

Developing and overseeing a consistent approach across jurisdictions to the implementation and enforcement of food regulations and standards (regardless of whether food is sourced from domestic producers, export-registered establishments or from imports) is the role of the Implementation Sub Committee (ISC). ISC is a sub committee of the Food Regulation Standing Committee (FRSC).

ISC members are either heads of their agencies or operational experts at senior level with the capacity to make and implement decisions about enforcement issues in their jurisdictions. The membership comprises up to two representatives from each state and territory; one representative from each of the Australian Government Departments of Health and Ageing, Agriculture, Fisheries and Forestry — Australia and AQIS; FSANZ; one representative from New Zealand; and one representative from the Australian Local Government Association. The department is represented by the Director of Food Policy and Programs Branch.

An ISC strategy for consistent implementation and enforcement of food regulation in Australia was endorsed by the Ministerial Council in October 2005. It is available at:

[www.health.gov.au/internet/wcms/publishing.nsf/Content/Food+Regulation+Secretariat-1](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/Food+Regulation+Secretariat-1)

The strategy incorporates an agreed three-year work plan containing eight components, each of which is sponsored by an ISC member. The department is sponsor of Component 3 — *Food Safety Incident Response and Management Systems*, with the aim of maintaining an effective system for the management of national food safety incidents.

### ISC Working Groups

ISC has a number of working groups. In 2007–08 the department was represented at the following groups:

#### **ISC Health Claims Watchdog Working Group**

This working group, chaired by SA Health, has the role of developing an implementation framework for proposed amendments to the Food Standards Code. Additionally, the working group also clarifies issues and reporting to ISC in relation to proposed health claims and nutrition standards. The group also monitors complaints regarding health claims. A draft framework for the implementation and enforcement of proposed Standard 1.2.7, has been developed as a result of Working Group meetings held in 2007–08.

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### **ISC National Food Safety Audit Policy Implementation Working Group**

Following completion of the National Food Safety Audit Policy, ISC convened a national working group to oversee consistent implementation of the policy, which is required by October 2011.

The framework for the National Food Safety Auditor Manual (the manual) has been developed. The manual provides implementation details for the various elements of the National Food Safety Audit Policy.

The manual has four sections:

- > The National Food Safety Audit Policy
- > Criteria and approval processes for food safety auditors
- > Monitoring activities of the approved auditor
- > Managing the audit process.

The group has met in person twice and conducted several teleconferences. Work is continuing in 2008–09 to complete the manual for endorsement by ISC, and to develop a communications strategy.

### **ISC Sprouts Working Group**

This group did not meet in 2007–08.

### **ISC Food Safety Management Working Group**

This group held two teleconferences during the reporting period.

The group decided that the National Food Safety Management Framework would be implemented using the FRSC risk profiling framework, which places business sectors into risk profile categories. The working group will develop:

- > A suite of risk management options (regulatory and non-regulatory)
- > Risk management criteria that will be applied when making decisions about the use of the risk profiling framework
- > A process for identifying and applying a food safety management option appropriate to the level of food business risk.

### **ISC National Enforcement Policy Working Group**

This working group is developing the national enforcement policy as part of the ISC 'Strategy for Consistent Implementation of Food Regulation in Australia'. Application of this policy will result in consistent approaches to enforcement, while providing flexibility and uniformity. A consistent approach to enforcement ensures that food businesses do not face unfair competition, nor gain a commercial advantage. Food legislation is not limited to issues of food safety, but is also designed to regulate fraud and deception in the labelling, advertising and sale of food to protect consumers from deceptive trade practices.

Enforcement action must be conducted in an efficient manner. Food laws provide regulators with a range of enforcement measures of varying severity and efficiency that can be applied to achieve compliance. This policy requires a graduated application of enforcement measures, commencing with lighter measures and then progressing to more severe enforcement measures. The use of more serious enforcement options, such as prosecution, should only occur in serious matters, or after exhaustion of other enforcement options.

As a result of application of this policy, enforcement of food law should occur within the context of a graduated but proportionate response to compliance failures.

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### **ISC Seafood Standard Implementation Group**

The group was established by ISC to work with the seafood industry on implementation issues in relation to the new Primary Production and Processing Standard for Seafood.

It was agreed that the seafood regulators would implement consistent food safety management arrangements depending on jurisdiction arrangements and use the FSANZ guide Safe Seafood Australia. It was also agreed that the seafood regulators would support industry development of guidelines and codes of practice for industry to maintain a consistent approach. The group met once during 2007–08.

### **ISC Working Group on the Food-Medicine Interface**

This group's focus is to establish an agreed process through which regulators can identify the regulatory regime appropriate for dealing with a particular product or group of products that sit at the food-medicine interface. The group met several times during 2007–08 and has developed draft Operation Guidelines, which document the process developed by the working group and define the role of the Expert Group and information sharing portal. These issues will continue to be progressed through 2008–09.

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## Administration of the *Food Act 2001* in South Australia

The administration of the *Food Act 2001* in South Australia and the food standards which apply under the Act is the responsibility of the Department of Health and local government.

### Responsibilities of the Department Of Health

The department is responsible for the following:

- > Oversight of administration of the Act
- > Monitoring compliance with labelling, composition, microbiological and chemical requirements of the Code throughout SA
- > The safety and suitability of food sold, and monitoring and enforcement of compliance with Food Safety Standards in unincorporated areas of the state (85% of the geographical area of SA)
- > Monitoring food safety related incidents and initiating appropriate responses
- > Providing advice to local governments dealing with minor food borne disease outbreaks in their areas and leading investigations and remediation of more significant outbreaks
- > The exercise of emergency powers to remove, prevent or reduce the possibility of a serious health risk including initiation and coordination of food recalls
- > Providing advice, support and assistance to local government
- > Providing advice to food businesses and the public on food issues
- > Advising the Minister on issues pertaining to the application of the Act and food issues generically.

The department responsibilities are delivered by:

#### Food Policy and Programs Branch

This branch is responsible for the day-to-day administration of the Food Act, as described previously (except for the role of the Regional Services Section as described below). More specifically the branch prepares advice to senior department staff and the Minister for Health on food issues, development of legislation and proposed amendments to the Code.

The branch monitors compliance with the Code and publishes the results of surveys undertaken for this purpose on its web site. The branch also conducts environmental investigations of major food poisoning outbreaks. This involves an immediate response to stop the supply of suspect food, the collection of samples to confirm the source of the outbreak and an analysis of the food handling procedures to determine the cause of the outbreak.

The branch also participates in the development of state and national food regulatory policy and contributes to national programs which facilitate a consistent approach across jurisdictions to the implementation and enforcement of food regulations and standards. Also, the branch provides assistance to the food industry in the implementation of significant new legislation.

## Communicable Diseases Control Branch

Under the *Public and Environmental Health Act 1987* laboratories and medical officers are required to notify occurrences of food borne diseases to the department's Communicable Diseases Control Branch (CDCB). Monitoring and analysis of these reports by CDCB provides an alert for food borne disease outbreaks in the community. A follow-up interview with affected persons, including an assessment of foods eaten during the days prior to the onset of the illness, is used to trace potential causes of food borne disease outbreaks. The application of statistical tools assists CDCB to identify the likely food or business responsible for the outbreak.

## Regional Services Section of the Applied Environmental Health Branch

The Regional Services Section administers the Food Act to 'unincorporated' areas of the state (not serviced by a local council). This primarily involves remote areas of South Australia.

Details of surveillance activities have been reported in a manner consistent with data collated from local government surveys and are contained in the following tables.

### *Authorised Officer Qualifications*

| Authorised Officers | Environmental Health Degree | Full-Time |
|---------------------|-----------------------------|-----------|
|                     | 5*                          | 5         |

### *Qualifications of Authorised Officers*

### *Food business inspections and food safety risk categories*

| Inspections           | Food safety risk classification |        |     | Number of businesses |
|-----------------------|---------------------------------|--------|-----|----------------------|
|                       | High                            | Medium | Low |                      |
|                       | 1                               | 103    | 0   | 104                  |
|                       |                                 |        |     | Total                |
| Inspections conducted | 2                               | 143    | 0   | 145                  |
| Follow-up inspections | 1                               | 30     | 0   | 31                   |

### *Enforcement actions conducted 2007-08*

| Business Type    | Totals   | Totals       | Totals    |
|------------------|----------|--------------|-----------|
|                  | Warnings | Impr* Notice | Expiation |
| Bakery           | 1        | 0            | 0         |
| Hotel/Pub/Tavern | 1        | 0            | 0         |
| <b>TOTALS</b>    | <b>2</b> | <b>0</b>     | <b>0</b>  |

\*Improvement Notices

### *Complaints received by regional services*

| Type                              | Total    | Found to be valid |
|-----------------------------------|----------|-------------------|
| Alleged food poisoning            | 2        | 0                 |
| Personal hygiene or food handling | 1        | 0                 |
| Others                            |          |                   |
| Water                             | 1        | 1                 |
| Non-notified premises             | 1        | 1                 |
| <b>TOTALS</b>                     | <b>5</b> | <b>2</b>          |

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## Roles and responsibilities of local government

Local government is responsible for the following functions within their areas:

- > Safety and suitability of food sold, and monitoring and enforcement of compliance with Food Safety Standards, including undertaking appropriate inspections
- > Managing minor food borne disease outbreaks within council boundaries and assisting the department with investigations into any significant food borne disease outbreaks within SA
- > Monitoring and taking action as appropriate to ensure efficiency with which food recalled for health and safety reasons, is removed from sale
- > Receiving notifications from food businesses.

Environmental Health Officers (EHOs) representing local councils are the front line for food safety in South Australia. EHOs routinely inspect food businesses to ensure that the premises, equipment and the standard of food handling will result in the supply of safe and suitable food. A key part of their role is the provision of advice and educational materials to food businesses. They also respond to complaints about food businesses and investigate food poisoning outbreaks independently, or with the assistance of officers from the department.

## Effective administration

### Establishing roles and responsibilities with Local Government and PIRSA

The Memorandum of Understanding (MOU) between the Minister for Health and the Local Government Association of SA (LGA SA) for the exercise of functions under the *Food Act 2001* establishes the roles and responsibilities of the department and local councils.

To maintain food safety through all stages from primary production to the consumer, the responsibilities and cooperative arrangements between the department, PIRSA and local government are defined through a MOU between the department and PIRSA for Surveillance, Incident Response and Regulation of Food Safety in the Primary Industry Sector in South Australia; and a MOU between the Minister for Agriculture Food and Fisheries, Minister for Health and Local Government Association of SA: 'Regarding Management of Food Safety at Accredited Meat Processors in South Australia'.

The review of the MOU between the Minister for Health and the LGA SA for the exercise of functions under the *Food Act 2001* was largely completed during 2007–08, with formal endorsement expected during 2008–09.

The review of the MOU between the department and PIRSA for Surveillance, Incident Response and Regulation of Food Safety in the Primary Industry Sector in South Australia continued during 2007–08.

To facilitate effective administration of the Act in South Australia and implementation of food safety standards, the department undertook a number of activities in 2007–08:

### Establishing roles and responsibilities with the Dairy Authority

Under the Primary Produce (Food Safety Schemes) (Dairy Industry) Regulations 2005 dairy farmers, dairy manufacturers, dairy distributors, and dairy produce carriers are required to have food safety accreditation administered by the Dairy Authority of SA (DASA). As food businesses they are also subject to regulation under the *Food Act 2001*. Under Section 108 of the Act, the Minister of Health (by Gazettal Notice of 17 July 2003) exempted these accredited businesses from a requirement to comply with Parts 5, 7 and 8 of the Act. These businesses are bound by all other parts of the Act. The Ministerial exemption minimises the areas of overlap of responsibilities under the two legislative instruments. To manage the potential for administrative overlap a working party of representatives from the department, local government and DASA was formed to prepare a MOU to clarify relevant agency responsibilities and define procedures for resolving administrative uncertainty. The MOU is well advanced but requires additional consideration due to the imminent introduction of a National Primary Production and Processing Standard for Dairy Products.

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## Department of Health/Local Government Strategic Planning Day

The second of the combined strategic planning days with local government was held on the 7 April 2008 to foster a closer working relationship with local government.

A variety of issues were raised and discussed including the review of the Minister for Health/LGA SA Primary Production and Processing MOU, the introduction of the National Seafood and Ready-to-Eat Meat Standards and a discussion of the new Catering Standard and the role of local government in its enforcement.

Other issues of interest included a revamp of the council Food Act questionnaire to provide more detailed and relevant information for reporting in the Food Act Report. Councils also indicated their interest in being consulted on the types of food surveys carried out by the department and the ISC National enforcement policy.

## Food Special Interest Group of the SA Division of the Australian Institute of Environmental Health (Food SIG)

The Department of Health has maintained its association with the Food Special Interest Group (SIG). SIG has continued to be an active group with meetings well attended regularly, and strong participation in the various working groups and committees that were formed throughout the year. The implementation of mandatory Food Safety Programs for food businesses serving food to vulnerable populations has been the main focus for the group this year and will continue to be as EHOs step into the auditing role.

Throughout the year SIG has been involved in the consultation process for many important activities. These include::

- > Support for the introduction of Food Safety Programs by providing workgroup membership to develop and implement the program to aged care and child care centres.
- > Review of the Food Act for the Minister for Health/LGA SA MOU, supporting key improvements including strengthening the intent and inclusion of Food Safety Programs and auditing responsibilities, and the addition of a work program.
- > Active contribution to the Food Act Information System (FAIS) Review supporting a council-wide survey to assess the current use of FAIS, problems encountered and future needs.
- > Providing an information resource to the SA Food Handler Update (SAFHU) which is distributed to more than 9 500 businesses by over 30 councils.
- > Participation and support for Food Safety Week through the 'Back to Basics' theme focusing on key food safety issues — clean, cook, chill and separate.

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## SA Division of the Australian Institute of Environmental Health and the Department of Health Executive bi-monthly meetings

SA Health meets with the Australian Institute of Environmental Health (AIEH) every second month to discuss and interact on topical issues. The meeting also provides a forum for communicating policy interpretation, implementation of new legislation and flagging potentially significant issues.

Topics addressed throughout the year included:

- > Implementation of Food Safety Auditing
- > Review of MOUs
- > Review of FAIS
- > National Ready-to-Eat Meat Primary Production and Processing Standard
- > National Seafood Primary Production and Processing Standard
- > Naming Successful Food Act Prosecutions
- > Development of MOU between the Dairy Authority of SA, LGA SA and the Minister for Health
- > Safe Drinking Water Act
- > I'm Alert Food Safety Training
- > Incident Response Planning
- > Intelligence gathering and use by the Department of Health
- > ISC National Enforcement Policy
- > Tools to determine food handler food safety competency
- > Priority risk classification of food business sectors.

## Environmental Health Managers Forum

An inaugural meeting of Environmental Health Managers from local government and the Managers of Environmental Health Programs within SA Health took place on 1 May 2008.

The meeting focussed on the need to open and maintain communication channels to provide leadership and policy application. Purpose, intent and membership were defined.

The group resolved that the intent of the meetings were to:

- > Focus on Environmental Health in local government
- > Give consideration to AIEH and the role it would play
- > Cover policy and professional development
- > Consider links to the LGA Chief Executive Officer's forum
- > Consult with the LGA for endorsement and or direction on recognising the group.

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## Activities of the Food Policy and Programs Branch

### Monitoring compliance with the *Food Act 2001*

The Food Policy and Programs Branch conducts sampling surveys of various foods that are of public health concern, or to confirm compliance with the compositional and labelling requirements of the Code. The surveys completed by the branch in 2007–08 include:

- > FSANZ 2007 national food handling survey
- > Egg food industry bulletin survey
- > Microbial quality of soft serve ice cream survey
- > Retail fresh chicken and egg survey
- > Microbiological quality of uncooked fermented meat.

Complete reports for the surveys can be found in the appendices.

Past and current surveys listed above can be found on the branch web site at:  
[www.health.sa.gov.au/pehs](http://www.health.sa.gov.au/pehs) - click on 'Food'.

Following a full assessment of all results, a final report will be prepared and included in next year's annual report for the survey.

#### Report — Soft cheese and dairy based dips survey

This survey was carried out from December 2007 to June 2008, with 100 samples of soft cheese and dairy based dips collected from 20 manufacturers to-date. Samples were collected from retail outlets or from the manufacturer. The products were manufactured in metropolitan areas, regional SA and interstate. Two unpasteurised imported cheese products were also tested. Samples were tested for *Salmonella spp.*, *Listeria monocytogenes*, *E. coli* and *Staphylococci*.

The preliminary results from this survey indicate a high level of compliance with the Food Standards Code microbiological standards. Two SA manufacturers were re-sampled due to the presence of indicator organisms.

A full assessment of all results is currently underway and a final comprehensive report will be prepared and included in next year's annual report.

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### South Australian participation in national food surveys — the ISC national coordinated survey plan

The ISC national coordinated survey plan consists of surveys which are selected to gather information on current national issues of food safety and compliance. The Food Surveillance Network, made up of senior representatives from the states and territories, manages the plan on behalf of ISC. A state or territory is nominated to coordinate each survey with other jurisdictions participating. During this reporting period the department participated in the following surveys:

#### 23<sup>rd</sup> Australian total diet survey (ATDS)

The focus of the 23<sup>rd</sup> ATDS was agricultural and veterinary residues, metals, mycotoxins and fluoride. The survey was divided into two parts, a summer sampling period (January and February) and a winter sampling period (June and July).

Samples were collected from a wide range of retail stores throughout the Adelaide metropolitan area. In all, a total of 246 samples were collected during both the summer and winter period. All samples were packaged in SA and sent to a laboratory in Queensland for analysis. After all samples and results have been completed Food Standards Australia New Zealand will produce a detailed report.

#### National spices survey

The Spices survey report was a national ISC survey to review the microbiological standard of spices and spice blends available in retail outlets. This survey was coordinated by Victoria Health in 2006–07. Victoria Health is currently collating results and will produce a draft report for approval by all jurisdictions. South Australia collected approximately 40 spices including turmeric, cloves, Chinese 5 spices and a number of spice blends. Each sample comprised five units/packs with the same batch code. The spices were tested for *Salmonella*, *Bacillus cereus* and *Clostridium perfringens*.

The Spices survey report has not yet been finalised, however a draft report is nearing completion and will be released to FSANZ and the participating jurisdictions for comment shortly.

#### Investigation of food safety incidents

While a significant number of complaints are received (mainly from the public), the following is an account of investigations conducted by the department to establish validity of claims and, where possible, to identify the cause of contamination and implement necessary corrective actions.

In all, 33 serious cases were investigated, 16 of these involved collaboration with other agencies, either local government or PIRSA. As a result of possible tampering, two cases were the subject of criminal investigations. These investigations were led by SA and interstate police departments. Five cases were traced to interstate manufacturers and were referred to interstate regulatory agencies.

Eighteen of the cases resulted in food businesses implementing corrective action to prevent recurrence of the issues involved. No further action was required by food businesses in 10 cases. Two voluntary product withdrawals were undertaken in addition to three market level recalls.

Seven cases continue as ongoing/open files.

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## Food recalls

In the 2007–08 financial year, a total of 54 recalls were initiated by FSANZ. Six of these recalls were trade recalls where the company recovers the product from distribution centres, wholesalers, hospitals, restaurants etc, but the product has not been release in retail stores. The remaining 48 recalls were consumer level recalls, where the product is recovered from throughout the distribution chain to retail outlets and from consumers. The majority of food recalls are carried out voluntarily by food businesses when production monitoring or public complaint has identified a food safety risk. Most voluntary recalls are precautionary and are not associated with cases of illness. Food recalls, whether initiated voluntarily or by a state or territory agency, are nationally coordinated by FSANZ.

The food business undertaking a recall is responsible for ensuring that the recall is carried out as soon as an issue is identified. All businesses should have a food recall plan that sets out a staged process they must follow in the recall of their product This may include media statements to raise public awareness, and requesting local councils to check that food businesses in their area are aware and acting on the recall.

During the 2007–08 reporting period FSANZ advised states and territories of 54 food recalls. Table 1 lists the reasons for the recall and Table 2 below lists the states involved in each of the recalls.

**Table 1**

| <b>Reason for recall</b>                                       | <b>Number</b> |
|--|---------------|
| Microbiological contamination                                  | 20            |
| Chemical contamination   | 4             |
| Foreign matter in food   | 17            |
| Labelling non-compliance representing a health and safety risk | 13            |

**Table 2**

| <b>Jurisdictions affected by recall</b>      | <b>Number</b> |
|--|---------------|
| National (all states and territories)        | 23            |
| SA only                                      | 1             |
| Some states and territories including SA     | 6             |
| Some states and territories not including SA | 24            |

During 2007–08 two recalls were initiated by SA Health following the detection of microbial contamination of a ready-to-eat meat and histamines in tuna.

### Department of Health prosecutions

There were no prosecutions prepared in the 2007–08 year.

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## Food safety management

### Food Safety Programs (FSPs)

Food safety programs have been mandated nationally for businesses providing food to vulnerable populations in hospitals, aged care facilities, child care facilities, meals delivery organisations like Meals on Wheels, and for caterers to the general public.

Food Standards Australia New Zealand (FSANZ) developed the Vulnerable Populations' standard – 3.3.1, with stakeholder consultation. It was introduced into the Food Standards Code in October 2006 with a two-year implementation period.

FSANZ continues to develop the catering standard with stakeholder input. A template is planned for the catering sector.

The Department of Health has established the framework within which food safety programs, auditing and auditors will be managed. The Minister for Health agreed that the department would conduct the food safety audits for public hospitals and not-for-profit delivered meals organisations including Meals on Wheels. Auditing commenced in April with the target implementation date of October 2008.

Development of the auditor workforce is continuing with training completed and progression through the auditor competencies required to attain National Food Safety Auditor Certification Scheme. Auditor approval by the Department of Health commenced in April and is continuing into 2008–09.

#### Department of Health/Environmental Health Officer (EHO) Food Safety Program Working Group

The department established a small working group with local government EHOs to advise on matters pertaining to FSP and auditing. The group reconvened with slightly modified membership in 2007–08 to review the audit system documentation that was being developed in line with the introduction of mandatory FSP and auditing for vulnerable population businesses. This documentation included the department's policy for the implementation of Standard 3.3.1 and 'Auditor Guidelines'. Two meetings were held with the remainder of the communication conducted via electronic media.

#### Department of Health Catering Food Safety Program Working Group

This working group has members from the South Australian catering industry and is chaired by the Department of Health. The purpose of the group is to monitor progress of the proposed national standard for FSP for catering to the general public. The group met once during 2007–08 and the Department of Health liaised with members by email.

#### National Catering Template Development Working Group

The initial meeting of the Template Working Group was held on the 26 June 2008 with representation from:

- > FSANZ
- > Queensland Health
- > NSW Food Authority
- > SA Health
- > Restaurant and Caterers Australia.

The outcomes from this meeting were that FSANZ would, following a review of the various food safety programs already available and with input from the group members, develop a draft version of a template for caterers covering only the technical and food safety aspects of developing a food safety program.

Secondly, determination would be sought from ISC as to how the template was to be used in the various jurisdictions, and therefore which content needed to be included that was additional to the core technical and food safety components.

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## Department of Health/Primary Industries and Resources SA

### Interagency Food Safety Forum

An interagency food safety forum has been established to achieve a high degree of public health protection and consumer confidence by improving the safety of food from the primary production and processing sectors.

The objectives of the forum are to:

- > Oversee the joint State Government food safety work program and to report to the chief executives and ministers
- > Maintain and strengthen the working relationship between the Department of Health and Primary Industries and Resources SA.

The forum is co-chaired by the Director Public Health, Department of Health, and the Executive Director – Agriculture and Wine, PIRSA, and consists of senior officials from the department, PIRSA and Dairy Authority SA. Meetings are held every three months and the forum met four times in 2007–08.

The work program includes clarifying aims and goals of food safety regulation, such as resolving the potentially conflicting goals of safeguarding public health and industry development and cooperation, through-chain risk profiling, and putting in place appropriate management strategies, commencing with smallgoods and proceeding to deal with other high risk primary production and processing areas such as poultry.

### Primary Industries Resources SA (PIRSA)

During May 2008, Listeria workshops were conducted for businesses that manufacture packaged ready-to-eat meat products. The aim of the workshops was to facilitate awareness and understanding of the national protocol that outlines the minimum acceptable requirements for the control of Listeria.

Topics covered in the two-and-a-half-hour workshops included swabbing techniques, improving practices to better manage *Listeria*, actions to be taken and overall cost projections. Seminars were held at six country and four metropolitan venues. The sessions were provided at no cost to businesses and delivered by a recognised expert in the field. All workshops were well received with attendance figures close to 140 persons representing 90 businesses complemented by the presence of staff from several testing laboratories, State and Australian Government regulators, training bodies and other industry heads. These businesses now have a greater appreciation of the risks associated with vacuum packaging of ready-to-eat meats. All businesses will need to review their food safety plans, some have indicated they no longer wish to vacuum package ready-to-eat meats.

An Egg Wash Validation Project was conducted by PIRSA to assess the efficacy of commercial egg washing in South Australia was carried out by a range of operators, from small on-farm producers to large commercial grading floors, using a variety of equipment and chemicals. Eggs were sampled prior to and after commercial washing regimes and microbiologically tested to give a total viable count of bacteria.

Test results showed a significant decrease in bacteriological counts from all systems regardless of whether the eggs were visually clean or dirty prior to washing. The project demonstrated that correctly controlled egg washing can effectively reduce bacterial counts on the surface of eggs.

### Development of SA Legislation

SA Health is also contributing to the development of South Australian Egg Regulations to be implemented and administered by PIRSA. A public consultation paper is currently being prepared and will consider the scope and application of the proposed regulations.

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## Educational activities

### Food Safety Resource CD and Bug Buster DVD

The department has continued to provide resources for food businesses that serve food to vulnerable people as outlined in Standard 3.3.1. The FSP templates for hospitals, aged care and child care centres have been reviewed, with version two developed. An update is planned for the food safety resource CD in 2008–09.

A questionnaire has been developed for the bug busters training DVD to assist food businesses to assess competency of their staff.

### Food Safety Program Information Sessions

To support the implementation of Standard 3.3.1 the department conducted six public information sessions and workshops for all stakeholders on the implementation of FSP and auditing requirements. Sessions were held in Booleroo Centre, Port Lincoln, Wudinna, Barmera, Murray Bridge and Mt Gambier.

The department has presented information sessions on implementation of FSP and auditing for The Institute of Hospitality in Healthcare and at Safe Work Week at North Adelaide and Kadina on behalf of the SA Aged Care Industry OHS&W Advisory Committee.

### Start Right Eat Right for Child Care Centres

The Start Right Eat Right program focuses on nutrition and food safety in child care environments.

The department has been working with the facilitators of the Start Right Eat Right program to workshop the requirements of moving from Food Safe to the food safety program requirements.

The department also conducted a presentation for the Child Care Association to capture child care centres not accredited to Start Right Eat Right.

### Meals on Wheels SA

The department presented at two Meals on Wheels SA quarterly supervisor cook of the day conferences in August and February. Information was presented on the requirements of FSP and the departments audit system. The department commenced auditing Meals on Wheels fresh cook facilities in April. Ten were completed in this financial year. Auditing is continuing into 2008–09. The department is providing assistance in the development of the Meals on Wheels cook/chill template.

### Presentations to the Australian Institute of Environmental Health (AIEH)

The department gave a presentation about mandatory food safety programs and auditing at the annual conference of the AIEH. The AIEH members are mostly from local government and are involved in enforcing food regulations.

The department attended most AIEH Food Special Interest Group meetings and provided updates regarding the implementation of mandatory food safety programs and audit requirements.

### Auditor Training for Department of Health and Local Government Officers

The department is facilitating Lead Auditor in Food Safety Management Systems training sessions through the training provider SAI Global. This will provide assurance that Department of Health and local government food safety auditors are competent to audit high risk food businesses. Four training sessions were conducted this financial year, bringing the total number of training sessions provided to five. Seventy-nine professionals from the department and local councils attended the sessions. A further training session is anticipated in 2008–09.

### Food Safety Week

Food Safety Week is a national event organised by the Food Safety Information Council. Each year has a different theme, and this year's theme was 'Back to Basics — Clean, Cool, Chill & Separate'. The event was launched at the Wayville Farmers Market by the Minister for Health. Departmental staff manned information displays in Rundle Mall and the Adelaide Central Market for two days of the week and gave out information pamphlets and fridge magnets for those who asked a food safety question.

The department also made available approximately \$5 000 in grants to councils that developed innovative ways to communicate the Food Safety Week theme.

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The councils that were successful in obtaining grants were:

- > **Mitcham Council** Conducted education sessions in three local primary schools and then prepared a quick and easy lunch using safe food handling skills
- > **City Tea Tree Gully** Produced activity sheets for the 3+ age group featuring cartoon type pictures to illustrate food safety
- > **City of Charles Sturt** Purchased Glitter Bug Lotion and Glitter Buddy Kit and set up display at Centro Shopping Centre at Arndale and provided information sheets
- > **City of West Torrens** Displayed signs at three prominent sites around the council area and also provided facts sheets and pamphlets to display in council customer service area
- > **Coorong Council** Held a barbecue at the Meningie Area High School to illustrate hand washing, cooking and correct food preparation
- > **Mt Barker Council** Held a barbecue lunch in the main street to hand out promotional material, provided a talk to Teen Challenge and inserted a leaflet into the local Courier newspaper
- > **Pt Adelaide/Enfield** Set up two stalls in the Port Mall Shopping Centre during food week. Council staff on the stall gave away fresh fruit and vegetables to promote health eating
- > **Mt Gambier/Grant** Conducted book readings at the local library, launch of the City of Mt Gambier Strategic Environmental Health plan and held a display of food safety information at a local shopping centre
- > **City of Onkaparinga** Promoted health and hygiene practices to low socioeconomic groups within the city; these included cooking demonstrations, providing food safety pamphlets, giving power point presentations and providing demonstrations of correct hand washing procedures
- > **Salisbury** Set-up visual display stands to promote food safety in eight community centres throughout their area. The council also provided large shopping cooler bags.

#### **Presentation to students/education institutions**

Food Policy and Programs Branch staff gave lectures and talks to a number of interested groups and organisations, including a lecture to Adelaide University medical students incorporating an overview of food safety, and lectures to Flinders University nutrition students on food law in general, and specifically on the proposed nutrition, health and related claims standard.

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## Communication and consultation

The department used a number of different means this year to facilitate communication and consultation with stakeholders,

### Food Regulation Inter-Departmental Committee

In response to the Minister for Health's proposal, a SA Government Food Regulation Inter-Departmental Committee (IDC) was established in October 2005 to facilitate improved communication and consultation between relevant government organisations regarding food regulation matters.

The South Australian Government departments represented are:

- > Department of Health (chair, secretariat)
- > Department of Premier and Cabinet
- > Department of Primary Industries and Resources South Australia
- > The Department of Trade and Economic Development
- > The Attorney General's Department – Office of Consumer and Business Affairs.

The Terms of Reference are to:

- > Consider food regulation, policy and industry compliance issues
- > Actively share information that may be relevant or of interest to South Australian Government agencies in relation to food regulation and policy
- > Consider issues referred to it by government, ministers or the Premier's Food Council
- > Advise the Minister for Health and other relevant ministers on food regulation and policy issues.

The IDC meets prior to the Australian New Zealand Food Regulation Ministerial Council meetings. The committee met once in 2007–08.

### Premier's Food Council Inter-Agency Food and Wine Issues Group

The Food and Wine Issues Group is a whole of government group of senior public servants who have the authority to commit the support and resources of their agencies to support implementation of the State Food Plan, and to address issues raised by the Premier's Food Council. Meetings of the group are chaired by the convenor of the Premier's Food Council, Mr Michael O'Brien MP. The Department of Health is a member and attends quarterly meetings.

### SA Meat Food Safety Advisory Committee

The department is a prescribed member of the South Australian Meat Food Safety Advisory Committee under the Primary Produce (Food Safety Schemes) (Meat Food Safety Advisory Committee) Regulations 2005. The committee considers issues pertinent to the Primary Produce (Food Safety Schemes) (Meat Industry) Regulations 2006 under the *Primary Produce (Food Safety Scheme) Act 2004*.

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# Food borne disease investigations in South Australia 2007–08

## Introduction

The Communicable Disease Control Branch (CDCB) at the Department of Health conducts epidemiological investigations into food borne disease outbreaks in conjunction with local government Environmental Health Officers (EHOs) and the Food Policy and Programs Branch, which provides food technology and environmental investigation expertise and performs environmental and food premises investigations. Primary Industry and Resources South Australia (PIRSA) staff also assists in trace back investigations. The IMVS conducts microbiological testing and molecular typing of food and environmental samples and isolates, respectively.

Epidemiological information including food history questionnaires of cases, environmental reports of on-site visits to premises and laboratory results of stool and food samples are collated to provide a descriptive analysis of outbreaks. This information assists to determine the appropriate analytical approach for analytical studies.

Epidemiological analysis may demonstrate a statistical association between illness and the consumption of a particular food item. Microbiological and molecular evidence can support an association when a very similar or identical microorganism is found in both cases and a food vehicle suspected on epidemiological grounds.

The specific food vehicle or source of an outbreak is difficult to identify, as often there is no remaining implicated food at the start of the investigation. Additionally, faecal samples from affected persons are not always provided for testing.

The department investigated seven outbreaks of gastrointestinal illness which were known or suspected to be food borne during the period July 2007 to June 2008. Two outbreaks occurred in aged care facilities, two in restaurants, one was associated with a private function and two occurred in community settings. In addition, five clusters (cases linked by a particular causative organism) of illnesses that are commonly, though not exclusively, food borne were investigated, but the source was not identified. Where a cluster had some cases associated with a premises it may have been classified as an outbreak, based on the strength of the association.

A summary of these outbreaks and clusters and their settings is presented in Tables 1 and 2.

### Outbreak No. 1: *Norovirus* — restaurant

The department was notified of an outbreak of gastroenteritis in a restaurant in metropolitan Adelaide in July 2007. There were reports from two groups of people of gastrointestinal illness after eating at the same restaurant on the same day. One case was confirmed as *Norovirus* infection. Environmental investigation of the restaurant reported satisfactory conditions and all food samples taken were negative for the tested pathogens. The source of the infections remains unidentified.

### Outbreak No. 2: *Salmonella* Typhimurium phage type 193 — private function

The department investigated gastrointestinal illness among people celebrating a birthday, who consumed food at a private residence. Among the attendees, 30 people reported illness and four were confirmed as infected with *Salmonella* Typhimurium phage type 193. A cohort study was conducted and environmental and food samples collected, but the exact food source of the illness remains unknown.

### Outbreak No. 3: *Campylobacter* — aged care facility

In August 2007, the department was notified of six cases of gastroenteritis associated with an aged care facility, four of whom were confirmed with *Campylobacter* infection. There were no reports of sick care workers. An environmental investigation and infection control measures were instituted. The specific mode of transmission was not determined.

### Outbreak No. 4: *Norovirus* — rural work place

In September 2007, the department investigated a report of gastrointestinal illness among rural workplace workers with on-site catering. Faecal specimens were positive for *Norovirus*. A local environmental health officer inspected the site and reported satisfactory catering conditions.

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## Outbreak No. 5: Unknown pathogen — rural community setting

In January 2008, the department investigated a suspected food borne outbreak in five children in a rural setting who developed sudden onset of gastrointestinal symptoms soon after eating cereal with milk. The children were camping in transitional accommodation in very hot weather. No pathogens were isolated from faecal specimens.

## Outbreak 6: Unknown cause — restaurant

In March 2008, a small outbreak was reported from two groups of people that ate fish over two consecutive nights from one restaurant and reported fever, vomiting and diarrhoea. Fish was not available for testing and the tartare sauce was negative for any pathogen. The environmental investigation reported satisfactory condition of the premises and good food handling and hygiene practices. The source of this illness was undetermined.

## Outbreak No. 7: *Salmonella* Typhimurium phage type 135 — aged care facility

In June 2008, a suspected food borne outbreak was investigated in an aged care facility when 21 confirmed cases of *Salmonella* Typhimurium phage type 135 were notified. Five cases were hospitalised and three residents died. The deaths were referred to the coroner.

An investigation was conducted by the department with assistance from the local government Environmental Health Officers. A cohort study demonstrated an association between illness and the consumption of vitamised and/or soft diets. A number of secondary cases were observed in one wing of the facility and were consistent with person-to-person spread. Extensive environmental testing was undertaken. Advice on infection control measures and kitchen hygiene practices was provided to the staff of the facility.

## Cluster 1: *Salmonella* Typhimurium phage type 44 — community

A prolonged investigation of *Salmonella* Typhimurium phage type 44 infections was conducted from October to December 2007, with 17 cases of *Salmonella* typhimurium phage type 44 notified to the department. Most cases were from metropolitan Adelaide. People affected were interviewed to determine foods consumed prior to the onset of illness. A common source of these infections was not identified. The most commonly consumed food items included chicken, beef, sliced deli meats and eggs, but these were from a variety of sources.

## Cluster 2: *Listeria monocytogenes* — community

Listeriosis is a rare but very serious infection that affects the vulnerable groups of people, that is those who are immunocompromised, pregnant women and their unborn babies and the elderly. Between October and November 2007, the department investigated three cases of *Listeria monocytogenes* serotype 01 in elderly people from metropolitan Adelaide. Each was interviewed to determine foods consumed prior to the onset of illness and no common link was found. The sources of these infections remain undetermined.

## Cluster 3: *Salmonella virchow* 8 — community

Increased *Salmonella virchow* 8 notifications were observed during December 2007 and January 2008. Ten cases aged between <1 and 64 years were notified within a three-week period. These people were interviewed, but no links detected. The source of the infections remains unknown.

## Cluster 4: *Salmonella* Typhimurium phage type 9 — community

The department identified an increase of *Salmonella* Typhimurium phage type 9 infections within Adelaide during the two weeks between December 2007 and January 2008. All fourteen cases were from metropolitan Adelaide and were investigated. Three cases ate at a common restaurant and various common shopping venues were identified. An environmental investigation was conducted at the restaurant. All environmental and food samples were negative. No plausible hypothesis was developed.

## Cluster 5: *Salmonella* Typhimurium 135 — community

The department observed increased notifications of cases of *Salmonella* Typhimurium 135 infection between January and May 2008. There were 17 cases compared to five at the same time in 2007. Of the cases, two were members of the same household; three had a history of dining at a common restaurant. However, for the rest of the cases no epidemiological links were determined. Environmental investigation at the restaurant revealed satisfactory conditions. Molecular typing patterns were consistent with the epidemiological findings. The source of these infections remains undetermined.

**Table 1: Summary of outbreaks/clusters of food borne or suspected food borne disease according to the setting of outbreak in SA**

| Setting             | Number of outbreaks/clusters |
|---------------------|------------------------------|
| Aged care facility  | 2                            |
| Private function    | 1                            |
| Restaurant/café     | 2                            |
| Community outbreaks | 2                            |
| Community clusters  | 5                            |
| <b>Total</b>        | <b>12</b>                    |

**Table 2**

| No | Month      | Organism             | People at risk | Location                    | No. ill | Evidence | Transmission                                |
|----|------------|----------------------|----------------|-----------------------------|---------|----------|---|
| 1  | July 2007  | Norovirus            | Unknown        | Restaurant                  | 12      | D        | Unknown                                     |
| 2  | July 2007  | STM 193              | 70             | Private residence           | 30      | D        | Food borne                                  |
| 3  | Aug 2007   | <i>Campylobacter</i> | Unknown        | Aged care facility          | 6       | D        | Unknown                                     |
| 4  | Sept 2007  | Norovirus            | 55             | Rural workplace (Community) | 24      | D        | Unknown                                     |
| 5  | Jan 2008   | Unknown pathogens    | Unknown        | Rural community             | 5       | D        | Unknown                                     |
| 6  | March 2008 | Unknown cause        | Unknown        | Restaurant                  | unknown | D        | Unknown                                     |
| 7  | June 2008  | STM 135              | Unknown        | Aged care facility          | 31      | D/S      | Food borne (major Person to person (minor)) |

**Clusters investigated**

|    |                 |                                  |         |           |    |   |         |
|----|-----------------|----------------------------------|---------|-----------|----|---|---------|
| 8  | Oct–Dec 2007    | STM 44                           | Unknown | Community | 17 | D | Unknown |
| 9  | Oct–Dec 2007    | <i>Listeria monocytogenes</i> 01 | Unknown | Community | 3  | D | Unknown |
| 10 | Dec 07–Jan 2008 | <i>Salmonella virchow</i> 8      | Unknown | Community | 8  | D | Unknown |
| 11 | Dec 07–Jan 2008 | STM 9                            | Unknown | Community | 14 | D | Unknown |
| 12 | Jan–May 2008    | STM 135                          | Unknown | Community | 17 | D | Unknown |

STM = *Salmonella Typhimurium*; D= Descriptive; S= Statistical

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## Local government activities under the *Food Act 2001* 2007–08

Under the *Food Act 2001*, it is mandatory for local government councils to provide the department with information on their activities. For the purpose of this annual report, a request for information was circulated to all councils.

Councils are empowered under Parts 4 and 5 of the Act to ensure that proper standards of hygiene are maintained in relation to the manufacture, transportation, storage and handling of food for sale. They are also responsible for taking measures to prevent the sale of unfit food and to investigate complaints related to the sale of unfit food. EHOs are authorised under the Act to issue orders and notices and take action for breaches.

### Authorised Officers

In addition to understanding the make up and knowledge base of Environmental Health Officers, it is important to be able to forecast where people with appropriate skills and knowledge will be recruited to fulfil future needs. There are reported difficulties recruiting suitably experienced and qualified people, particularly in the rural centres.

*All EHOs must be authorised officers under the Food Act 2001.*

| Authorised Officers<br>(Currently working in local government) | Environmental<br>Health Degree | Other<br>Qualifications | Full-Time | Part-Time |
|--|--------------------------------|-------------------------|-----------|-----------|
|  | 140*                           | 20*                     | 132       | 18        |

\* Numbers may be duplicated where EHO's are employed in more than one council

### Inspections

To gain a better understanding of how inspections are organised and undertaken by local government, it was necessary to establish the size and make up of food businesses across South Australia. The frequency of inspections conducted at food businesses has not been clearly defined, with councils using a number of reference sources as demonstrated in the table below. A new system of Risk Classification of Food Businesses is currently being developed and will have the potential to bring uniformity to risk classification and inspection frequency of food businesses.

| Food Businesses Risk Classification Systems Used by Councils |           |
|--|-----------|
| ASFA   | 19        |
| Council  | 7         |
| FAIS   | 2         |
| FSANZ  | 32        |
| SA Health  | 1         |
| Not provided   | 3         |
| <b>TOTAL</b>   | <b>64</b> |

The following table clearly establishes how many food businesses exist and the proportion of businesses by food safety risk categories. These figures have been combined with the number of inspections conducted by local government to ensure that planning and inspection frequencies are appropriate and maintained.

| Inspections                  | Food Safety Risk Classification |        |       | Number of Businesses |
|------------------------------|---------------------------------|--------|-------|----------------------|
|                              | High                            | Medium | Low   |                      |
|                              | 1 575                           | 7 864  | 3 349 | <b>12 860</b>        |
|                              |                                 |        |       | <b>Total</b>         |
| <b>Inspections Conducted</b> | 1 195                           | 5 628  | 1 496 | <b>8 319</b>         |
| <b>Follow-up Inspections</b> | 265                             | 2 062  | 256   | <b>2 583</b>         |

## Inspection Fees

Councils have the power to charge fees for inspection services and are using a variety of reference sources for setting fees.

| Basis for setting council inspection fees |           |
|---|-----------|
| Council Policy                            | 12        |
| Food Regulations                          | 14        |
| LGA MOU                                   | 1         |
| No Fee                                    | 27        |
| Not provided                              | 10        |
|   | <b>64</b> |

## Complaints

Consumer enquiries and reports of illness, non-compliant businesses or food, constitutes an important source of information. In addition to providing opportunity for the public to interact with Environmental Health Officers (EHOs) first hand, they provide a shop window for food safety and give EHOs the opportunity to promote food safety. All complaints are logged and generally risk classified to ensure that the most serious cases are dealt with as a priority. The table below has classified complaints/reports into a list of most likely sources in addition to reporting on whether the complaint and investigation was found to be valid.

| <b>Consumer complaints/reports</b> |              |                          |
|------------------------------------|--------------|--------------------------|
| <b>Type</b>                        | <b>Total</b> | <b>Found to be valid</b> |
| Foreign matter in food             | 260          | 124                      |
| Micro contamination                | 114          | 50                       |
| Chemical contamination or residue  | 5            | 0                        |
| Alleged food poisoning             | 333          | 27                       |
| Unclean premises                   | 152          | 56                       |
| Personal hygiene or food handling  | 221          | 57                       |
| Pest infestation                   | 68           | 23                       |
| Refuse storage                     | 86           | 39                       |
| Labelling issues                   | 37           | 15                       |
| Others                             | 184          | 170                      |
| <b>TOTALS</b>                      | <b>1 460</b> | <b>461</b>               |

## Orders/notices issued to food businesses

A new national enforcement policy is being developed, but in the meantime it is important to know that food businesses throughout South Australia are treated fairly and equitably in relation to sanctions being applied to food businesses that fail to meet legislative requirements. The following table provides an indication of the nature of sanctions applied to each food business group. The table indicates that a graduated response is generally in place with warnings making up the largest single sanction applied, progressing to improvement notices and expiations as food businesses failed to respond or issues became more serious.

*Enforcement tools by category*

| Business type       | TOTALS     | TOTALS       | TOTALS    |
|---------------------|------------|--------------|-----------|
|                     | Warnings   | Impr* Notice | Expiation |
| Aged care           | 12         | 1            | 0         |
| Bakery              | 77         | 29           | 10        |
| B&B Motel           | 7          | 2            | 0         |
| Café                | 73         | 29           | 2         |
| Canteen             | 21         | 5            | 0         |
| Caterer             | 4          | 1            | 0         |
| Charitable          | 4          | 0            | 0         |
| Child care          | 2          | 2            | 0         |
| Club                | 33         | 4            | 0         |
| Deli                | 68         | 12           | 3         |
| Delivered meals     | 0          | 0            | 0         |
| Distributor         | 0          | 0            | 0         |
| Farm gate sales     | 0          | 0            | 0         |
| Fish monger/seafood | 2          | 2            | 1         |
| Fruit & veg         | 6          | 3            | 2         |
| Function centre     | 9          | 0            | 0         |
| Liquor store        | 0          | 0            | 0         |
| Manufacturer        | 4          | 5            | 2         |
| Mobile food van     | 5          | 3            | 3         |
| Restaurant          | 86         | 80           | 24        |
| Service station     | 21         | 3            | 3         |
| Snack bar/Kiosk     | 19         | 1            | 0         |
| Stall               | 4          | 2            | 0         |
| Supermarket         | 39         | 18           | 11        |
| Take away           | 120        | 44           | 22        |
| Temporary business  | 17         | 0            | 0         |
| Hospital            | 10         | 1            | 1         |
| Hotel/pub/tavern    | 102        | 41           | 13        |
| Others              | 161        | 16           | 2         |
| <b>TOTALS</b>       | <b>906</b> | <b>304</b>   | <b>99</b> |

*\*Improvement Notices*

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## Council Prosecutions

A number of food businesses were prosecuted in the past 12 months as detailed below.

| Prosecutions        |          |
|---------------------|----------|
| EHA                 | 1        |
| Pt Adelaide/Enfield | 2        |
| <b>Total</b>        | <b>3</b> |

## Highlights of other local government activities

### Food safety education

#### City of Charles Sturt

The City of Charles Sturt continued to provide the Vietnamese Food Safety Education Program during 2007–08. Vietnamese food handlers from food businesses in the area participated in the program. With the assistance of an information folder produced by the council, together with a presentation provided in both English and Vietnamese, participants gained a greater understanding of food safety fundamentals in the kitchen. They gained an understanding of the legislative requirements of the Food Safety Standards and the *Food Act 2001*.

The council also produced four educational fact sheets and distributed them to all food businesses. The fact sheets provided comprehensive information relating to four of the most frequently identified areas of common non-compliance issues including misuse of tea towels, suitability and maintenance of premises, fittings and equipment, disposable food handler gloves and temperature control of potentially hazardous foods. The information contained in the fact sheets was designed to provide clarity and assist with the interpretation of the relevant sections of the Food Safety Standards.

#### Eastern Health Authority

The Eastern Health Authority (EHA) developed a training course titled *Preventing Kitchen Nightmares — A Guide to Food Safety Fundamentals*. The three-hour course aimed to educate food handlers, managers and owners of food businesses about the basic principles of food safety, food hygiene and food preparation. The EHA has also reported changes in the way food is being safely stored and produced in local businesses.

The authority participated in the Northpark Shopping Centre 'Good Health and Lifestyle' show in October 2007. A stall was set up in the shopping centre to provide information on a wide range of health information including setting up a food business based in the home. Brochures and other give-aways were distributed during the day resulting in a positive response from the public, concluding that the display was effective in promoting Public and Environmental Health.

#### City of Port Lincoln

The City of Port Lincoln organised a Food Safety Training course to assist Priority 1 food businesses and organisations in preparing their staff for the implementation of food safety programs. Staff members from non-classified food businesses were also encouraged to attend. Those attending the course included management staff of the food businesses and food handlers. Competent participants achieved the unit 'Follow Workplace Hygiene Procedures' from the Certificate II in Hospitality (Operations) training package.

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## Food safety week

### City of Port Adelaide Enfield

Port Adelaide Enfield Council participated in this year's Food Safety Week. The aim of the week was to promote healthy eating, *Go for 2 fruit & 5 veg®* and safe food handling. Council's Environmental Health Team developed an initiative to provide free fruit to the community throughout the week and actively promote safe food handling through the distribution of temperature gauges and information brochures. Environmental Health Officers attended two community malls and handed out fresh fruit, temperature gauges and information brochures. The aim of the exercise was to share positive information and discussion with the community around healthy eating and safe food handling practices in the home.

The City of Port Adelaide Enfield also participated in the 2007 National Food Handling Survey to test the impact of food safety standards on food businesses by assessing and measuring food handling practices.

### City of Tea Tree Gully

Tea Tree Gully produced a cartoon activity sheet which was aimed at the four-to-seven year-old age group. The sheets aimed to promote basic food handling and hygiene concepts to young children and their parents. The sheets included:

- > Linking the correct action to an image
- > Identifying what was wrong in a particular kitchen image
- > Identifying foods that belonged in the fridge
- > A colouring in page, demonstrating a food handling message.

A display was placed in the children's section of the library and the activity sheets were made available to young children.

## Food sampling/ surveys

### City of Onkaparinga

The City of Onkaparinga's Environmental Health Officers were involved in the Department of Health Egg Survey aimed to determine the effectiveness of the Egg Food Industry Bulletin which was developed by the department. Food businesses were asked if they received the bulletin and if they had acted upon it. There were also questions in regards to egg suppliers, storage temperatures and broken and cracked eggs. There were eight food businesses surveyed in the period ending October 2007.

### City of Salisbury

The City of Salisbury carried out a food sampling program that targeted hot and cold salad bars. As people normally serve themselves at these salad bars there are a number of food safety and food hygiene risks that could result from this type of food service arrangement.

In all, a total of 18 salads were selected from nine premises. Each premise provided a hot and cold sample, which included pasta salad, coleslaw, rice salads, as well as hot foods such as potato and vegetable bakes. The samples were tested for Standard Plate Count (SPC), *Escherichia coli* (*E. coli*), *Salmonella*, and *Bacillus cereus*.

The results of the sampling were reported to each of the premises, along with recommendations and information on best practices for food handling within the premises. The main areas of concern highlighted to businesses were temperature control, cleanliness and hygiene of food handlers.

# Appendix 1

Food Standards Australia New Zealand (FSANZ)  
2007 national food handling survey

Local councils in SA participated in data gathering for the 2007 national food handling survey. In August 2000, the Australia New Zealand Food Standards Council agreed to the inclusion of three Food Safety Standards in the Food Standards Code. The three standards, developed by FSANZ, contain requirements relating to food safety practices, premises and equipment. The purpose of these new standards was to allow consistent food safety regulations to be implemented across all states and territories.

South Australia, along with other State and Territory Governments, introduced the new Food Safety Standards into their legislation between 2001 and 2003. (*FSANZ Food Standards Codes 3.1.1, 3.1.2 & 3.2.3*).

The standards included requirements for food businesses in relation to:

- > The skills and knowledge of food handlers and their supervisors
- > Specific food handling controls for certain steps in the production chain
- > Having a system to recall unsafe food
- > The health and hygiene of food handlers
- > The cleaning, sanitation and maintenance of equipment and the premises
- > The suitability of the food premises and equipment.

## 2001 Benchmark Survey

In 2001 a benchmark survey was commissioned to measure the safe food handling knowledge and practices prior to full introduction of the standards.

## 2007 Follow-up Survey

The follow-up survey was conducted in 2007 (and reported herein) and measures the impact of the standards on food handling practices and knowledge among food businesses.

Comparison of the Telephone (Table 1) and Observational Survey (Table 2) results between 2001 and 2007 demonstrate increased knowledge of safe food handling and improved food handling practices since the implementation of the Food Safety Standards.

Compared with 2001:

- > More businesses knew the correct storage temperature for chilled food
- > More businesses knew the correct temperature for holding hot food
- > More businesses knew the correct temperature and time for safely cooling food
- > More businesses knew when chemical sanitisers should be used.

Compared with 2001, businesses improved their food handling practices as follows:

- > More businesses had temperature probes that were more frequently used
- > More businesses that had potentially hazardous food checked that the food was received at a safe temperature
- > More businesses had improved their storage practices for chilled food
- > More businesses that cooked food monitored that it was cooked at the correct temperature
- > More businesses improved their protection of food from contamination
- > More businesses provided appropriate hand washing facilities for staff
- > More businesses used commercial dishwashers and hot water glass washers.

Food businesses found it easier to locate food safety information, felt better informed about food safety regulations, and many indicated that they had changed their practices as a result of the implementation of the Food Safety Standards.

In general, greater knowledge and safer food handling practices were identified in businesses that directly supply or manufacture food to high risk businesses such as hospitals, nursing homes or child care centres, large businesses, and businesses with a food safety program.

There were improvements in knowledge of safe food handling practices; however gaps were identified in the following areas of knowledge about:

- > Correct storage temperature of chilled food and the holding temperature of hot food
- > Correct cooling times and temperatures for cooked food
- > Hand contact with ready-to-eat food (for example, bread and ham)
- > Correct cleaning and sanitising temperatures.

Survey respondents identified an improvement in food handling practices. However 10% of food business respondents demonstrated a lack of awareness of procedures including requirements to:

- > Check the temperature of delivered, potentially hazardous food using a thermometer or have an alternative system to ensure safety
- > Cool food within specified time and temperature limits
- > Protect stored chilled food from contamination in the cool room
- > Supervise displays of ready-to-eat-food
- > Isolate leftover displayed food from the new batch for the next day
- > Provide warm running water for hand washing
- > Supply single use towels for hand drying
- > Ensure staff wash and dry their hands correctly
- > Maintain clean premises
- > Contact a pest control company or have a pest control program.

**Table 1**

| Telephone Survey (400 businesses in SA)                              | 2007 National Results | Above National SA Rate | Below National SA Rate | 2001 National Results |
|--|-----------------------|------------------------|------------------------|-----------------------|
| <b>Storing Chilled Food</b>  |                       |                        |                        |                       |
| Q26. Should store at 5°C or less                                     | 85%                   | 89%                    | -                      | 78%                   |
| <b>Cleaning and Sanitation</b>                                       |                       |                        |                        |                       |
| Q39a. Chemical sanitisers should be mixed with hot water – False     | 64%                   | 70%                    | -                      | 53%                   |
| <b>Information, Standards &amp; Regulation</b>                       |                       |                        |                        |                       |
| Q43. Contact local council for food safety information               | 51%                   | 63%                    | -                      | 49%                   |
| <b>Information, Standards &amp; Regulation</b>                       |                       |                        |                        |                       |
| Q43. Contact local council for food safety information               | 51%                   | 63%                    | -                      | 49%                   |
| Q46. Aware of new Food Safety Standards                              | 62%                   | 70%                    | -                      | 57%                   |
| Q48f. Changed equipment washing practices                            | 73%                   | 81%                    | -                      | N/R                   |
| <b>Food safety programs</b>  |                       |                        |                        |                       |
| Q50. Heard of food safety programs, Food Safety Plans or HACCP plans | 81%                   | 85%                    | -                      | N/R                   |

Table 2

| Observational Survey (118 businesses)                 | 2007 National Results | Above National SA Rate | Below National SA Rate | 2001 National Results |
|---|-----------------------|------------------------|------------------------|-----------------------|
| <b>Receiving food</b>                                 |                       |                        |                        |                       |
| Q10. Food delivered out of businesses' hours.         | 25%                   | 36%                    | -                      | 24%                   |
| Q18. Staff know how to use probe thermometer.         | 93%                   | 98%                    | -                      | 91%                   |
| <b>Food storage</b>                                   |                       |                        |                        |                       |
| Q21. Alternative system for chilled food safety.      | 0%                    | 2%                     | -                      | 2%                    |
| Q30. Adequate equipment for hot food.                 | 94%                   | 100%                   | -                      | N/R                   |
| <b>Cooking, cooling, reheating and displaying</b>     |                       |                        |                        |                       |
| Q43. Displayed ready-to-eat food supervised by staff. | 59%                   | 82%                    | -                      | 85%                   |
| <b>Hand washing</b>                                   |                       |                        |                        |                       |
| Q73. Use hot water to sanitise.                       | 31%                   |                        | 18%                    | 58%                   |
| Q82. Staff members wash and dry hands correctly.      | 87%                   | 94%                    | -                      | 84%                   |
| <b>General assessment of premises</b>                 |                       |                        |                        |                       |
| Q92. Adequate ventilation.                            | 97%                   | 100%                   | -                      | 90%                   |
| <b>Food recall and safety plan</b>                    |                       |                        |                        |                       |
| Q103. Written food safety program.                    | 39%                   | -                      | 28%                    | 19%                   |

# Appendix 2

## Egg food industry bulletin survey

As a result of a number of food poisoning incidents associated with eggs, a food industry bulletin was distributed to food businesses in South Australia in April 2007, highlighting food safety issues associated with the handling, packaging, storage and distribution of eggs in South Australia.

Following release of the bulletin, a survey was undertaken to gauge the impact the bulletin had in respect of food businesses' workers knowledge of requirements for handling, packaging, storage and distribution of eggs.

A team of Environmental Health Officers (EHOs) from councils across South Australia participated with SA Health. Team members were involved in distributing and gathering questionnaires and in providing support by responding to ad hoc questions, and of the sharing of information informally. SA Health would like to thank these dedicated staff members for their assistance.

The survey was conducted over three two-monthly periods, September to October 2007, November to December 2007 and January to February 2008. Data was collected during these survey periods and is represented in the table below.

Twelve questions were asked which required food business workers to demonstrate their knowledge as a result of information provided in the bulletin. The survey was conducted during normal inspection visits to verify that the practices they described had been implemented. Responses to the questionnaire indicate that distribution of the bulletin was generally successful and that a high proportion of food business staff acted on the information contained in the bulletin.

Food business staff members were able to identify storage and handling conditions and were aware of corrective action options available where products did not conform to food safety requirements. High scores were obtained particularly in the areas of form labelling and traceability and the understanding of risks associated with cracked and dirty eggs.

#### *Food business egg survey: September 2007 to February 2008*

|   | Food Service |     | Bakeries |     | Other Manuf'rs |      | Institutions |     | Combined |     |     |
|---|--------------|-----|----------|-----|----------------|------|--------------|-----|----------|-----|-----|
| Number of businesses.   | 255          |     | 25       |     | 2              |      | 37           |     | 319      |     |     |
| 1 Does the business claim to have received the Bulletin?  | 162          | 64% | 16       | 64% | 1              | 50%  | 21           | 57% | 200      | 63% | *   |
| 2 Does the business claim to have acted on the Bulletin?  | 135          | 53% | 10       | 40% | 1              | 50%  | 20           | 54% | 166      | 52% |     |
| 3 Is the business assured that the supplier is following the Health Directive?                            | 185          | 73% | 18       | 72% | 1              | 50%  | 28           | 76% | 232      | 73% | **  |
| 4 Has the business raised concerns with a supplier or rejected eggs as a consequence of the Bulletin?     | 49           | 19% | 5        | 20% | 0              | 0%   | 5            | 14% | 59       | 18% |     |
| 5 Has the business changed suppliers or switched to pasteurised product as a consequence of the Bulletin? | 23           | 9%  | 3        | 12% | 0              | 0%   | 2            | 5%  | 28       | 9%  |     |
| 6 Does the business know the eggs are 15°C or less on receipt?  | 173          | 68% | 16       | 64% | 2              | 100% | 25           | 68% | 216      | 68% |     |
| 7 Are the eggs stored at 15°C or less?  | 211          | 83% | 22       | 88% | 1              | 50%  | 35           | 95% | 269      | 84% |     |
| 8 Does the business know why broken, cracked or dirty eggs are a risk?                                    | 213          | 84% | 22       | 88% | 2              | 100% | 36           | 97% | 273      | 86% |     |
| 9 The Bulletin is on the premises.  | 96           | 38% | 6        | 24% | 0              | 0%   | 15           | 41% | 117      | 37% |     |
| 10 Eggs are stored at 15°C or less.   | 164          | 64% | 23       | 92% | 1              | 50%  | 35           | 95% | 223      | 70% |     |
| 11 Cartons are clean and labelled with the correct supplier's or egg farm's name.                         | 231          | 91% | 22       | 88% | 2              | 100% | 35           | 95% | 290      | 91% | *** |
| 12 Two cartons are free of broken, cracked or dirty eggs.   | 225          | 88% | 22       | 88% | 2              | 100% | 36           | 97% | 285      | 89% |     |

\* Absence of manager a factor.

\*\* Some businesses received the Health Directive from egg suppliers.

\*\*\* Includes some catering packs.

# Appendix 3

Food safety survey report

June 2008

Survey of soft serve ice cream

**Author: Madeleine Carter, Scientific Officer**

## Aims and scope of the investigation

The purpose of this survey was to determine the microbiological quality of soft serve ice cream from various retail outlets such as cafés, buffet restaurants, fast food outlets and mobile ice cream vendors in metropolitan Adelaide.

The microbiological quality of soft serve ice cream is important in the protection of public health and safety, as poorly cleaned and sanitised dispensing machines can compromise the microbiological quality of soft serve as well as pose a risk to public health and safety.

## Background to the survey

A microbiological survey of soft serve ice cream was conducted by the South Australian Department of Health, known then as the South Australian Health Commission, in 1996. Results from that survey demonstrated that 58% of the samples complied with the prescribed microbiological standard which existed at that time.

## Standards

Mandatory microbiological standards have been set where risk assessment has shown that the risk of food borne illness associated with the consumption of certain foods is relatively high and that a standard could contribute to the management of the risks identified.

Standard 1.6.1 of the Food Standards Code specifies the microbiological standards for nominated foods or classes of foods (Table 1). Foods listed in this standard must meet the prescribed microbiological limits at any stage of their manufacture or sale.

Where justification for a microbiological standard was not found, guideline criteria were developed for some foods, which included soft serve ice cream. For particular foods not listed in the standard, Food Standards Australia New Zealand (FSANZ) has developed microbiological guideline criteria which are designed to complement the risk management strategies:

**Table 1**

| Food  | Micro-organism                     | n | c | m               | M                   |
|---|------------------------------------|---|---|-----------------|---------------------|
| Ice cream and edible ices (for example, soft serve, gelati) | Coliforms/g                        | 5 | 2 | 10              | 10 <sup>2</sup>     |
|   | <i>Escherichia coli</i> /g         | 5 | 0 | 0               |                     |
|   | <i>Listeria monocytogenes</i> /25g | 5 | 0 | 0               |                     |
|   | <i>Salmonella</i> /25g             | 5 | 0 | 0               |                     |
|   | SPC at 30 <sup>o</sup> /g          | 5 | 2 | 10 <sup>4</sup> | 5 x 10 <sup>4</sup> |

*n* = the number of sample units which must be examined from a lot\* of food.

*c* = the maximum allowable number of defective sample units. This is the number of sample units which may exceed the microbiological limit specified by 'm'.

*m* = the acceptable microbiological level in a sample unit.

*M* = the level which when exceeded in one or more samples, would cause the lot to be rejected.

\* A lot means a quantity of food, which is prepared or packed under essentially the same conditions usually from a particular preparation or packing unit and during a particular time ordinarily not exceeding 24 hours.

## Which foods were tested?

In total 20 premises were sampled and as shown in Table 2, five samples were taken from each premise which allows for an accurate evaluation of the results. These premises included eight retailers who predominantly sell ice cream, one mobile ice cream van, six fast food outlets and six retail food outlets that also sell soft serve ice cream.

## What did we test for?

The FSANZ Food Standards Code microbiological criteria include guideline microbiological limits for the following:

- > Coliforms
- > *Escherichia coli*
- > *Listeria monocytogenes*
- > *Salmonella*
- > Standard Plate Count.

The samples collected in this survey were therefore tested for the above to allow us to better interpret the results by comparing them to the guidelines.

### Results

**Table 2**

|             | Standard Plate Count | Coliforms | <i>E coli</i> | <i>Salmonella</i> | <i>Listeria</i> |
|-------------|----------------------|-----------|---------------|-------------------|-----------------|
| <b>Pass</b> | 15                   | 15        | 20            | 20                | 20              |
| <b>Fail</b> | 5                    | 5         | Nil           | Nil               | Nil             |

## Follow-up activities

Where high standard plate counts were identified in previous research there was a close association with the presence of coliforms and *E coli*. This can be attributed to a lack of awareness of cleanliness and sanitisation procedures by staff and food handlers and/or difficulty in cleaning and sanitising older equipment.

Businesses where test results failed to meet the standard were retested after receiving advice about how to clean and sanitise their ice cream machines. An Environmental Health Officer from each relevant council provided advice and inspected the business for hygiene and food handling practices as part of sampling follow-up. Councils will continue to monitor the businesses and pay particular attention to the cleanliness of their ice cream machines.

### Survey questions

|                             |   |  |  |                    |                     |
|-----------------------------|---|--|--|--------------------|---------------------|
| Q1. How old is the machine? | 1–2 years<br>4  | 2–5 years<br>4                               | 5–10yrs                                      | >10 yrs old<br>5   | Not Identified<br>7 |
| Q2. Frequency of cleaning.  | Daily<br>5  | 3 times per week<br>3                        | Weekly<br>6                                  | Fortnightly<br>6   | Monthly             |
| Q3. How is it cleaned?      | Hot water?<br>Yes / No<br>10 = hot<br>2 = cold<br>8 = warm                    | Manual/<br>Automatic<br>16 = Man<br>4 = Auto | Sanitiser?<br>Yes / No<br>12 = Yes<br>8 = No |                    |                     |
| Q4.                         | If sanitiser is used is the concentration as per manufacturer's instructions? |  |  | 13 = Yes<br>7 = No |                     |
| Q5.                         | If sanitiser is used is the contact time as per manufacturer's instructions?  |  |  | 13 = Yes<br>7 = No |                     |

## Discussion of results

Of a total of 100 samples taken from 20 outlets no batch failed the standard for *E coli*, *Salmonella* or *Listeria monocytogenes*. Lab results of five businesses identified high total plate counts in addition to presence of coliforms above acceptable tolerances. Ice cream is tested prior to distribution. The most likely source of contamination can be attributed to poor cleaning and sanitising practices associated with ice cream machines.

In 1996, a survey of soft serve ice cream revealed 58% of samples analysed complied with the prescribed microbiological standard. This survey demonstrates that 75% of all samples analysed complied with the prescribed microbiological standard, showing a significant improvement in compliance.

## Conclusion

The survey found a high level of compliance with foods tested for *E coli*, *Salmonella* and *Listeria monocytogenes*. Forty percent of premises recorded high total plate counts, which is a clear indication of poor cleaning and sanitisation of ice cream machines.

The majority of machines that returned positive results were old machines which were difficult to clean. A number of supposedly clean machines still contained ice cream at the time of swabbing. Additional samples were taken from the offending premises with assistance from the local council's Environmental Health Officer. It is the council's responsibility to maintain satisfactory hygiene standards in food premises. Councils will continue to monitor these premises in the future. However two of the premises have now ceased selling soft serve ice cream due to the age of their vending machines. All other businesses have had improved test results and will be required by the council to monitor their machines with the use of regular testing.

# Appendix 4

## Microbiological survey report

July 2008

Survey of retail chicken meat for *Salmonella* spp.  
and *Campylobacter* spp., and retail eggs for *Salmonella* spp.

**Research/Survey:** Phil Eckert, Environmental Health Officer

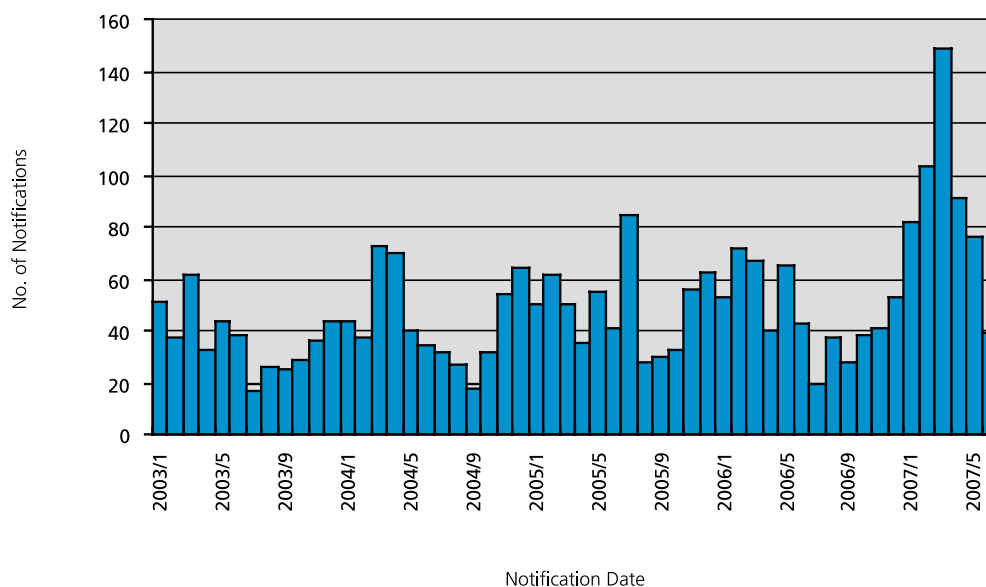
**Author:** Glen Martin, Manager of Implementation and Enforcement

## Background

Chicken meat has been identified internationally as a source of human infection by *Salmonella* spp. and *Campylobacter* spp., typically through cross contamination, mishandling or undercooking. Human infection with *Salmonella* spp. from eggs is also recorded in Australia and internationally. During 2007 the rates of reported human cases of these two pathogens (combined) increased significantly in South Australia (SA) consistent with national trends. The following charts<sup>1</sup> highlight the number of human *Salmonella* and *Campylobacter* cases (from all potential sources) in South Australia (January 2003 to April 2007).

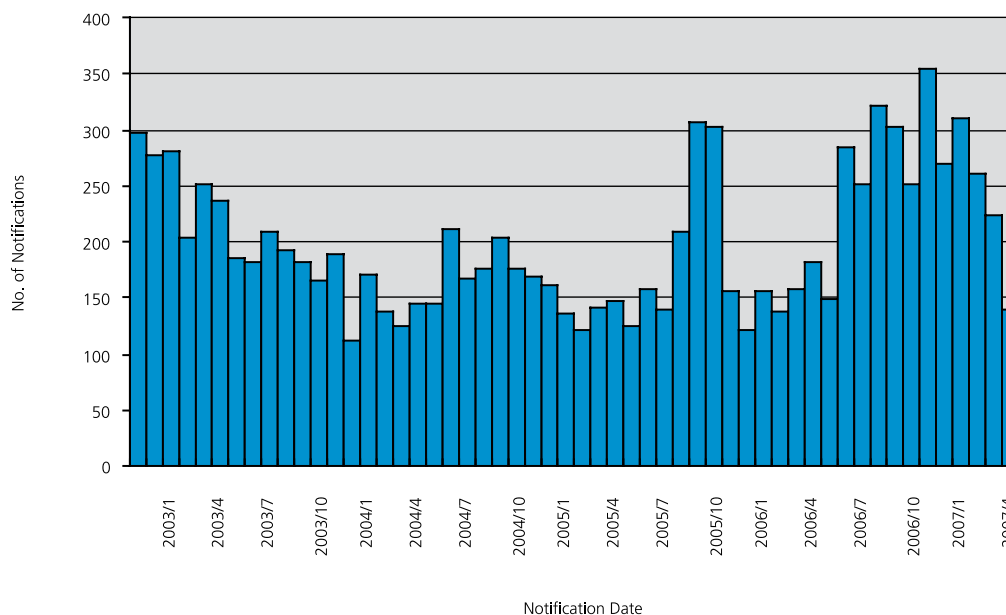
In the first three months of 2007, there were 12 suspected egg associated outbreaks, with all Australian jurisdictions (except the Northern Territory) experiencing at least one outbreak. The outbreaks affected at least 465 people. During 2007 many *Salmonella* serovars were common to several jurisdictions, suggesting the possibility of common sources or reservoirs of infection. Three *Salmonella* outbreak investigations in SA, and investigations in other jurisdictions, identified egg layer farms as a source of contamination. SA Health and the Primary Industries and Resources for South Australia (PIRSA) implemented measures to improve the safety of eggs both on-farm and in the retail food service sector. New national Primary Production Standards are currently being developed for poultry meat and also for eggs.

**Number of Human *Salmonella* cases in South Australia, Jan 2003 to April 2007**



1. <sup>1</sup>OzFoodnet report — M Kirke April 2007.

*Number of Human Campylobacter cases in South Australia, Jan 2003 to April 2007*



## Objective

The poultry and egg surveys provided a period of continued surveillance to identify the prevalence and type of *Salmonella* spp. and *Campylobacter* spp. in poultry meat and *Salmonella* spp. in eggs sold at retail to consumers in South Australia.

The surveys aimed to:

- > Compare results obtained with data gathered from previous surveys
- > Establish the rigour of current produce labelling and traceability systems in place
- > Assess the effectiveness of the food safety standards for poultry and egg products to manage food safety risks associated with *Salmonella* spp. and *Campylobacter* spp.
- > Assess whether serotypes prevalent in poultry meat and egg commodities were also prevalent in illnesses reported to the department's Communicable Disease Control Branch (CDCB)
- > Determine if survey results may be used to support negotiations in the development of new Primary Production
- > Provide opportunity for collaboration within SA Health, with the CDCB and also with PIRSA.

## Scope for the surveys

For the period 1 January to 30 June 2008, 355 samples of fresh chicken meat and 206 samples of eggs (206 x 1 dozen) were purchased and submitted for analysis from retail outlets across the metropolitan area of Adelaide.

## Sampling and survey methodology

Chicken samples comprised approximately 50% skin-on and 50% skin-off portions purchased from supermarkets and butchers at a ratio of 80:20 respectively. Preference was given to sealed and labelled tray packs, containing approximately 500grams, with product identification and date marking for traceability. Purchases included product from as many processors as possible (including those from other states).

Egg samples comprised 50% cage eggs, 30% free-range eggs and 20% barn-laid eggs. Eggs were purchased from supermarkets and fruit and vegetable retailers at an approximate ratio of 80:20 (1 dozen = 1 sample).

Sample details were recorded individually on microbiological request forms and each sample was digitally photographed with the corresponding sample number clearly visible on the sample package. Each egg sample was marked with a sample number on the outer carton and photographed (including date mark and business details). A significant proportion was from interstate producers.

Samples were submitted to the Food and Environmental Laboratory at the Institute of Medical and Veterinary Science (IMVS) in Adelaide under temperature control as soon as practicable after purchase.

## Analysis methodology

Conducted by IMVS:

- > Meat and egg samples were tested for *Salmonella* using the Enzyme-linked Immunosorbent Assay (ELISA) method. Confirmation was performed using Australian Standard Methods. No enumeration was performed
- > Chicken meat was tested for *Campylobacter* using Australian Standard Methods
- > The surface rinse technique was used for both chicken meat and eggs
- > The contents of the eggs were also tested by pooling the contents of each dozen whole eggs
- > *Salmonella* isolates from samples were forwarded to the IMVS *Salmonella* Reference Laboratory for further typing.

## Results of testing

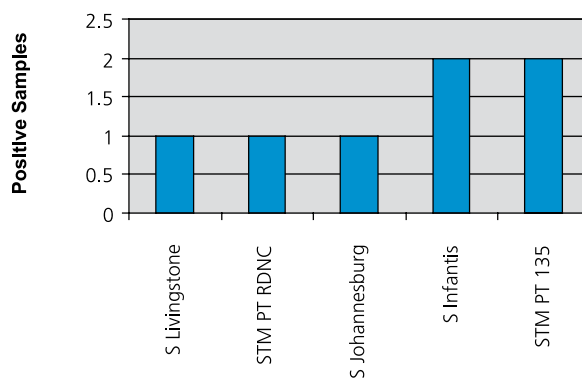
### Eggs

Overall incidence of *Salmonella* from the content of eggs from all laying sources equated to 0%. Overall incidence of *Salmonella* on the shell of eggs from all laying sources equated to worst case incidence of 3%.

A recent survey conducted by Food Standards Australia New Zealand (FSANZ) as part of a national risk assessment of eggs and egg products identified internationally that the incidence of *Salmonella* on the shell of whole eggs is between 0 and 9.4%

|                                      | Free-range | Barn-laid | Cage | TOTALS |
|--------------------------------------|------------|-----------|------|--------|
| <b><i>Salmonella</i> on Shell</b>    |            |           |      |        |
| Not Detected                         | 67         | 24        | 108  | 199    |
| <i>S. livingstone</i>                | 1          | -         | -    | 1      |
| STM PT RDNC                          | -          | -         | 1    | 1      |
| <i>S. johannesburg</i>               | -          | -         | 1    | 1      |
| <i>S. infantis</i>                   | -          | -         | 2    | 2      |
| STM PT 135                           | -          | -         | 2    | 2      |
| <b><i>Salmonella</i> in contents</b> |            |           |      |        |
| Not Detected                         | 68         | 24        | 114  | 206    |

#### *Salmonella* on Shell of Eggs

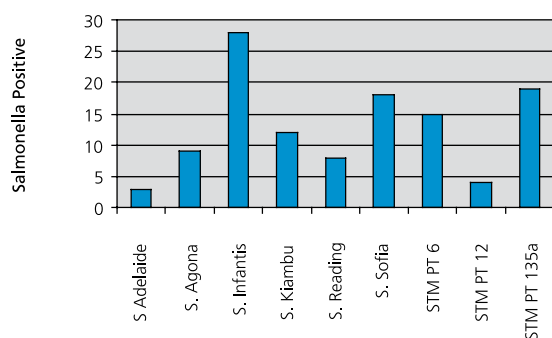
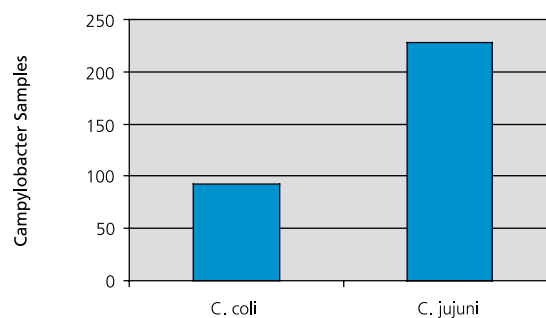


### Poultry meat

*Salmonella* was detected on 38.5% of samples of skin-on poultry meat and on 37.2% of skin-off poultry meat, giving a combined total of detection of *Salmonella* on 37.8% of poultry meat samples.

*Campylobacter* was detected on 89.7% of samples of skin-on poultry meat and on 90.5% of samples of skin-off poultry meat, giving a combined total 90.1%

| <i>Salmonella</i>                 | Skin-on poultry meat | Skin-off | TOTAL |
|-----------------------------------|----------------------|----------|-------|
| ND                                | 96                   | 124      | 220   |
| <i>S. adelaide</i>                | 1                    | 2        | 3     |
| <i>S. agona</i>                   | 4                    | 5        | 9     |
| <i>S. give</i>                    | 1                    | -        | 1     |
| <i>S. infantis</i>                | 11                   | 17       | 28    |
| <i>S. kiambu</i>                  | 5                    | 7        | 12    |
| <i>S. livingstone</i>             | 1                    | -        | 1     |
| <i>S. mbandaka</i>                | 1                    | -        | 1     |
| <i>S. muenster</i>                | 1                    | -        | 1     |
| <i>S. ohio</i>                    |                      | 1        | 1     |
| <i>S. reading</i>                 |                      | 8        | 8     |
| <i>S. seftenberg</i>              |                      | 1        | 1     |
| <i>S. sofia</i>                   | 8                    | 10       | 18    |
| <i>S. subsp 1 ser rough:r:1,5</i> |                      | 1        | 1     |
| <i>S. subsp 1 ser 16:1, v:-</i>   | 3                    | 1        | 4     |
| <i>S. tennessee</i>               | 1                    | 1        | 2     |
| <i>S. typhimurium PT 6</i>        | 7                    | 8        | 15    |
| <i>S. typhimurium PT 12</i>       | 1                    | 3        | 4     |
| <i>S. typhimurium PT29</i>        | 1                    | -        | 1     |
| <i>S. typhimurium PT 41</i>       | 1                    | -        | 1     |
| <i>S. typhimurium PT 135a</i>     | 11                   | 8        | 19    |
| <i>S. typhimurium PT 194</i>      | 1                    | 1        | 2     |
| <i>S. typhimurium PT 197</i>      | 1                    | -        | 1     |
| <i>S. virchow PT 36 Var 1</i>     | -                    | 1        | 1     |
| <i>Campylobacter</i>              | Skin-on poultry meat | Skin-off | TOTAL |
| Not Detected                      | 16                   | 19       | 35    |
| <i>C. coli</i>                    | 42                   | 50       | 92    |
| <i>C. jejuni</i>                  | 98                   | 130      | 228   |

*Salmonella* on Poultry Meat*Campylobacter* on Poultry Meat

## Discussion of results

When compared with national and international surveys, the results obtained for this survey are not unexpected and provide a valuable and timely reference source. The findings demonstrate the need for government to continue industry initiatives relating both to egg production and handling of raw poultry. The results particularly reinforce the value of continued promotion of safe food messages to consumers and food handlers relating to thorough cooking and prevention of cross contamination. These results will also be of assistance in informing the development of national primary production standards for eggs and poultry meat.

The surveys were aimed predominantly at identification of the incidence of *Salmonella* on eggs and of *Salmonella* and *Campylobacter* on poultry meat. They did not attempt to attribute numbers of colonies or predict whether infective doses were present. The development of an unbiased database that identified the likely source of specific pathogens proved to be useful in epidemiology and in tracing products back to primary production and distribution networks.

In both poultry meat and egg products, identification of *Salmonella* Typhimurium phage types provided opportunity to trace product from the market place back through the supply chain. Results also provided a useful reference source for likely foods implicated in food borne illness reported to the department, but did not always provide conclusive proof of infection sources.

### Eggs

The incidence of *Salmonella* on the shell of eggs from all laying sources was 3%. As eggs were sampled in batches of one dozen, it could not be determined by this survey how many eggs per dozen were contaminated with *Salmonella*. The reference to 3% is therefore a reference to worst possible case. The lowest possible number could be 0.25%.

The recent Australian survey *Quantitative Risk Model for Non-SE Salmonella spp. in Egg and Egg Products*<sup>1</sup> did not identify *Salmonella* on the shell of eggs. The sample site for this study was in packing facilities, as opposed to this survey's methodology to sample at retail sales outlets.

Possible routes of infection from eggs may be from inadequate handling practices or personal hygiene as the contents of eggs were free of *Salmonella*. Other potential sources for infection include consumption of undercooked egg or egg products and consumption of raw egg products possibly after cross contamination from the external surface of the shell.

Survey results provide objective evidence that current food safety regulatory systems which focus on packing facility controls do not necessarily provide sufficient control further back into the primary production chain. Focus on raw material inputs and grower/producer practices throughout the breeding and laying cycles, in addition to process controls in packing facilities, may further assist in pathogen reduction. Incorporation of food safety objectives into proposed Primary Production Standards in the Food Standards Code provide a potential to implement nationally enforceable food safety measures at producer level.

<sup>1</sup> *Risk Model for Non-SE Salmonella spp. in Egg and Egg Products Thomas Et Al (2006)*

The survey identified a variation in results between free-range, barn and cage eggs. The sample size is not statistically valid; however the difference between results for each sector suggests that further research may be required to establish validity.

Industry and public education must also be considered as possible means to improve handling and hygiene awareness, particularly the possibility of cross contamination. Industry promotion has commenced with the development and distribution to egg producers of a SA Health Directive, Ten Point Plan and also the issue of an industry bulletin to retail food industry supported by a survey by Environmental Health Officers to gauge effectiveness of the program.

At a national level, FSANZ is making progress in the development of the national *Primary Production and Processing Standard for Eggs and Egg Products*, which will, however, not provide enforceable standards until 2010. Some states have already implemented standards within their own jurisdictions (for example, Queensland and Tasmania). In South Australia, PIRSA is undertaking public consultation in the near future regarding the establishment of SA Egg Regulations under the *Primary Produce (Food Safety Schemes) Act 2004*.

## Poultry meat

The most recent and relevant survey *A Baseline Survey of the Microbiological Quality of Chicken Portions and Carcasses at retail in Two Australian States (2005 to 2006)*<sup>2</sup> provided statistically comparable results, *Salmonella* was found in 47.7% and 35.5% of retail chicken samples and *Campylobacter* was found in 87.7% and 93.3% of samples in New South Wales and SA respectively.

During the corresponding period a great deal of proactive work has been undertaken by industry to reduce pathogens during poultry slaughtering operations. While significant system improvements have been made to facilities and food safety programs, the efforts do not appear to have resulted in a reduction in the incidence of pathogen detection (at retail level), whilst the level of reported illness remains constant.

Survey results for *Salmonella* in poultry meat did not vary greatly between skin-on and skinless style products. This indicates that handling and cross contamination along the supply chain are potential sources of contamination, and reinforces the need for consideration of additional controls throughout the primary production, processing, food service and retail sectors.

The survey results question the effectiveness of current regulatory controls on managing the prevalence of particular pathogens along the supply chain. A focus on raw material inputs and grower practices throughout the breeding and growing cycles may further assist in pathogen reduction. Incorporation of food safety objectives into proposed national Primary Production Standards in the Food Standards Code provide an opportunity to establish common goals leading to improvement in the application and verification/validation of food safety measures.

<sup>2</sup> *A Baseline Survey of the Microbiological Quality of Chicken Portions and Carcasses at retail in Two Australian States (2005 to 2006)* A. Poynton Et Al *Journal of Food protection*, Vol 71, No. 6 2008.

# Appendix 5

Food safety survey report

June 2008

Survey of uncooked fermented meats

**Author: Carmel Barber, Scientific Officer**

## Aims

The survey aimed to determine the level of compliance with microbiological standards in uncooked fermented manufactured meats that are sold in South Australia.

Cooked manufactured meats are not subject to the same legal standard and were excluded from this survey. Heat treated fermented manufactured meats are subject to the same legal standard for microbial quality and these producers were included.

## Background

Uncooked fermented meats are a high risk product for the growth of pathogenic *E. coli*.

Following the *Escherichia coli* 0111 food poisoning outbreak in early 1995 associated with uncooked fermented meat (UCFM) products manufactured in South Australia, the National Food Authority (now Food Standards Australia New Zealand) introduced new standards for the manufacture of UCFM products in 1996. One of the new standards included a requirement for manufacturers to monitor their products for *Escherichia coli*. Standard 1.6.2, clause 9 (5) of the Food Standards Code requires that:

'As part of the validation or verification requirements of the food safety program, the number of *Escherichia coli* organisms must be recorded for the: –

- (a) raw meat ingredients used to make a UCFM; and
- (b) product after fermentation and any subsequent process.'

While the frequency of monitoring is not specified in the Food Standards Code, analysis is carried out at least quarterly by the larger manufacturers and records are required to be kept for either one year after the minimum durable life of the product, or two years, whichever is greater. Smaller producers may only test during periods of production, as these can be sporadic and seasonally variable.

The test records are expected to be viewed by auditors as part of the regular audit of the food safety program mandated in Standard 1.6.2.

## Previous work

In 2002, the Department of Human Services (DHS) collated copies of certificates of analysis and information relating to testing frequencies and corrective action from the 20 identified manufacturers in South Australia. Isolations over the period 1997–2001 varied according to the test method used by the laboratory but indicated a very low level of detection. All mettwurst and salami samples conformed to the requirement that no *E. coli* be detected in 0.1g.

## Assessment of results

Food Standards Australia New Zealand (FSANZ) mandates microbiological standards for UCFM. The limits are set out in the schedule to Standard 1.6.1 of the Food Standards Code — Microbiological standards for food.

| Column 1   | Column 2                                   | Column 3 | Column 4 | Column 5        | Column 6 |
|--|--|----------|----------|-----------------|----------|
| Food   | Micro-organism                             | n        | c        | m               | M        |
| All comminuted fermented meat which has not been cooked during the production process. | Coagulase-positive <i>Staphylococci</i> /g | 5        | 1        | 10 <sup>3</sup> | 104      |
|  | <i>Escherichia coli</i> /g                 | 5        | 1        | 3.6             | 9.2      |
|  | <i>Salmonella</i> /25 g                    | 5        | 0        | 0               |          |

*n* means the minimum number of sample units which must be examined from a lot of food.

*c* means the maximum allowable number of defective sample units.

*m* means the acceptable microbiological level in a sample unit.

*M* means the level at which, when exceeded in one or more samples would cause the lot to be rejected.

Additionally, the Australia New Zealand Food Authority, now FSANZ, developed *Guidelines for the microbiological examination of ready-to-eat foods* and *Recall guidelines for packaged ready-to-eat foods found to contain Listeria monocytogenes at point of sale*, in 2001. These guidelines were applied to foods in this survey.

## Sampling and survey methodology

A majority of locally manufactured products were sampled. Interstate manufacturers were sampled from local outlets, such as supermarkets. Sampling included fermented heat treated product, which must conform to the same standard as not heat treated product.

There are 28 South Australian manufacturers of fermented comminuted meat products and four major interstate manufacturers, as well as supermarket generic branded product, available in the South Australian retail marketplace.

The sample focus was:

- > All major interstate suppliers
- > All local manufacturers who heat treat their product
- > Approximately half of the local manufacturers who do not heat treat their product.  
(The determining factors for sampling local not heat treated product were the scope of the business, potential availability of product, and an estimate of how large their retail trade would be.)

As a result, a total of 22 out of 32 potential manufacturers were sampled. The majority of producers were based in the metropolitan and outer metropolitan areas of Adelaide. Only four products were identified as those of rural manufacturers and the majority of these were in the Barossa Valley and Riverland regions of the state. The remaining products were manufactured interstate, as described by the following table.

|                           | SA Metro | SA Rural | Vic | Qld | NSW | WA |
|---------------------------|----------|----------|-----|-----|-----|----|
| <b>Uncooked Fermented</b> | 9        | 2        | 2   | 1   | 1   | 1  |
| <b>Fermented Smoked</b>   |          | 1        | 1   |     |     |    |
| <b>Heat Treated</b>       | 2        | 1        | 1   |     |     |    |

The sampled product was variously described as Mettwurst, Salami, Cacciatore, or Casalingo.

The Food Standards Code requires that five samples of each product be taken in order to assess compliance with the standard. Therefore 110 individual samples were collected. Two manufacturers were sampled each week and sampling was conducted over eight weeks. Samples were refrigerated on purchase and delivered cold to the testing laboratory.

Product was tested for Coagulase-positive *Staphylococci*, *Escherichia coli* and *Salmonella* against the criteria of Standard 1.6.1. Additionally, samples were tested for *Listeria monocytogenes* and compared with FSANZ *Guidelines for the microbiological examination of ready-to-eat foods* and *Recall guidelines for packaged ready-to-eat foods found to contain Listeria monocytogenes at point of sale*. The samples were delivered to IMVS food and environmental laboratory and Australian Standard methods were used.

## Handling of results

The survey was intended to indicate an overview of the microbiological status of UCFM sold in South Australia.

Microbiological test results were evaluated against Standard 1.6.1 and compared to the FSANZ *Guidelines for the microbiological examination of ready-to-eat foods* and *Recall guidelines for packaged ready-to-eat foods found to contain Listeria monocytogenes at point of sale*. In the event of a failure against the standard the relevant authority, (Primary Industries and Resources SA (PIRSA) for South Australian manufacturers), was notified immediately to implement corrective action. In the event of a failure, further sampling and analysis was also undertaken from that producer to assess the extent of any potential risk to consumers and assess which corrective action was to be applied. It was intended that if a high percentage of manufacturers failed (for example, more than 25%), sampling of the remaining manufacturers was to be conducted.

**Results of testing:**

The majority of samples complied with the requirements of the Food Standards Code.

| Product       | Group        | <i>E. coli</i>        | <i>Salmonella</i>   | Coagulase Positive<br><i>Staphylococci</i> | <i>Listeria</i>  |
|---------------|--------------|-----------------------|---------------------|--|--|
| Salami        | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | Heat treated | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Danish Salami | UCFM         | 1 sample<br>mpn 3.6/g | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Salami        | Heat treated | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | Heat treated | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Salami        | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Cacciatore    | UCFM         | 1 > 3.6<br>1 > 9.2    | 2 present in<br>25g | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Casalingo     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | 3 samples <i>L. monocytogenes</i><br>detected <100 orgs<br>per gram.<br>1 sample <i>L. innocua</i><br>detected |
| Cacciatore    | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | 1 sample <i>L. innocua</i><br>detected   |
| Salami        | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Salami        | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Cacciatore    | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Salami        | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Mettwurst     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |
| Casalinga     | UCFM         | < 0.3/g               | N/D in 25g          | <100/g                                     | N/D in 25g   |

## Follow-up activities

One product tested positive for *Salmonella* and also exceeded the limits for *E. coli*. This result was reported to the manufacturer and the PIRSA Meat Hygiene Unit was notified of the result. A second sample of the same batch was collected using an official sample protocol and this sample also failed to meet the standard requirements. In discussion with SA Health, the Meat Hygiene Unit and FSANZ, the manufacturer decided to undertake a voluntary recall of all product produced from this batch of meat. This proved to be an extensive undertaking as the meat mixture is marketed under a variety of size products which have differing maturation rates.

One other product had low levels of *Listeria monocytogenes* in three out of five samples and this manufacturer was also referred to the Meat Hygiene Unit. This was part of a very small batch and had not been supplied to other retailers. The FSANZ Guidelines suggest the result of less than 100 colony forming units is considered marginal and potentially low risk; due to the pH and water activity of the product. However, the manufacturer decided to destroy the remaining product.

PIRSA has advised SA Health that the Meat Hygiene Unit conducted an audit of premises and a review of manufacturing practices against the *Primary Produce (Food Safety Schemes) Act 2004*, the Food Standards Code and the Meat & Livestock Australia Guideline for Smallgoods Manufacture.

## Discussion of results

Twenty two manufacturers were sampled; one product failed to meet the microbiological standard for uncooked fermented manufactured meat due to the presence of *Salmonella* and this product was subjected to a consumer level recall.

Two other products had marginal results, and one other sample detected *E. coli* at a level described as 'most probable number 0.36 orgs/g.' This level, which is only slightly above the limit of detection, is well below that described as the upper limit of the acceptable microbiological level in a sample unit. One other product showed *L. monocytogenes* at levels below that which FSANZ recommends a recall of the product. Additionally, the pH and water activity of the samples suggested that this product would not maintain the growth of *L. monocytogenes*.

One other sample showed *Listeria innocua*. This type of *Listeria* is not considered to be pathogenic, and therefore not a risk to health. The Meat Hygiene Unit was informed, as the presence of non pathogenic *Listeria* could be an indicator of the potential for other pathogens to contaminate the food; and this may require some follow-up at the next scheduled audit of the business.

The PIRSA Meat Hygiene Unit has informed SA Health that detailed investigation into the source of meat for the one product that had *Salmonella* present came from a different meat supplier. Subsequent testing of raw materials identified that purchasing of frozen trimming may have led to unusually high microbiological counts that could not be adequately inactivated by the fermentation process. As a result, PIRSA have revised the raw meat test procedures and in particular stressed the need for batch testing of raw meat inputs whenever a change of supplier occurs.

The Meat Hygiene Unit has further advised that all manufacturers test their raw products quarterly, and on any change of supplier. Additionally, many manufacturers test and hold their product prior to release for sale, and all manufacturers test their final product at least quarterly.

## Conclusion

A comprehensive survey of the microbiological status of uncooked fermented comminuted manufactured meat sold in South Australia has shown a high level of compliance with the Food Standards Code.

In relation to *E. coli* detections, this result confirms the observed high level of compliance seen in the 2002 study. One sample failed to meet the standard for *Salmonella* absent in 25g. This producer had sourced their raw material from a different supplier, following a fire and closure of their regular suppliers' abattoir.

This result has led to the Meat Hygiene Unit issuing a directive to all producers of uncooked, and cooked fermented comminuted meat products, to ensure that raw ingredients for their product are assessed regularly for microbial quality as part of their food safety plan.



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