

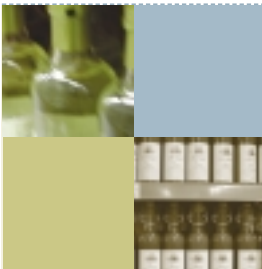


FOOD SURVEILLANCE

AUSTRALIA NEW ZEALAND

Australia New Zealand Food Authority

Summer 2002



Editorial

Welcome to the Summer edition of Australia New Zealand Food Surveillance Newsletter (formerly FoodWatch Australia New Zealand). We have changed the name to Food Surveillance Newsletter because of trade mark issues.

Food Surveillance Newsletter is a publication designed to keep you up to date with food surveillance and monitoring activities in Australia and New Zealand. The response to the first edition (Spring 2001) has been truly outstanding and highlights the need for such a publication.

Food Surveillance Newsletter will only be published electronically on the ANZFA website. It is NOT available in hard copy. As soon as it is published on the website, an email announcing its publication is sent to the approximately 3000 people on the Food Surveillance database, maintained by ANZFA. The email includes a direct link to the Newsletter on the ANZFA website.

If you did not receive the notification email and want to be included on this database, please contact Bernadette Larkins at bernadette.larkins@anzfa.gov.au

This edition includes interesting and timely articles on State, Territory and New Zealand surveillance activities as well as outlining some of the monitoring and surveillance work undertaken at ANZFA and an outline of the OzFoodNet food borne illness surveillance project.

Safety of sprouts

This issue of Food Surveillance Newsletter includes an article from the Western Australian Department of Health on a survey of the microbiological safety and quality of sprouts. The ACT Health Protection Service has also recently published the results of a survey on sprouts. The sprouts survey and other food survey reports conducted by the ACT Health Protection Service can be found at www.health.act.gov.au/publications/foodsurvey

The publication of these Australian surveys is timely as the US Centres of Disease Control and Prevention issued a renewed call in mid January for Americans to avoid fresh alfalfa or other sprouts as a result of another outbreak of food borne illness from this source. Apparently the source of the seed that resulted in this latest outbreak, affecting 32 individuals in four US States, originated from Australia. Report from the Food Safety Network www.foodsafetynetwork.ca

The Bi-national Food Surveillance and Enforcement Strategy

Food Surveillance Newsletter is an initiative of the Bi-national Food Surveillance and Enforcement Strategy (BSES) Working Group which was established in March 1999 by the State and Territory Senior Food Officers, the Australian Quarantine and Inspection Service (AQIS) and ANZFA. The BSES Working Group has developed and progressed a strategy to better plan and coordinate the food surveillance and monitoring activities undertaken by government health agencies in Australia and New Zealand. These activities have historically varied considerably throughout States, Territories and New Zealand.

The Working Group has developed a strategy (the BSES) with a number of broad aims. The aims of the BSES are to:

- discuss and share information relating to monitoring and surveillance within Australia and New Zealand;
- coordinate and analyse existing food surveillance data;
- use monitoring and surveillance data within a broader risk assessment framework to develop and review food regulatory policy;
- establish consistent methodologies for conducting and reporting national (or bi-national) food surveys; and
- build communication networks throughout State, Territory, Commonwealth and New Zealand agencies.

The Working Group meets on a regular basis, almost always by teleconference because of the wide geographical spread of members, to progress its agenda. It has broad representation and is composed of representatives from State and Territory health agencies, the New Zealand Ministry of Health, AQIS, the Australian Government Analytical Laboratory (AGAL), the New Zealand Institute of Environmental Science and Research Ltd (ESR), the Commonwealth Department of Health and Ageing (DoHA) and Agriculture, Fisheries and Forestry – Australia (AFFA). The Working Group is coordinated and chaired by ANZFA.

For more information

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Survey of Food Handling Practices in Australian Food Businesses

In order to evaluate the impact of the new food safety reform package in Australia, in particular the Food Safety Standards, ANZFA commissioned a benchmarking study of food handling practices in Australian food businesses prior to the commencement of these new standards.

The resulting National Food Handling Benchmark study, conducted by Campbell Research & Consulting in all States and Territories, documents research on the awareness and knowledge of safe food handling practices and actual food handling practices by food businesses within Australia.

The Australia New Zealand Food Standards Council agreed in July 2000 that three national Food Safety Standards be included in the new Food Standards Code. Previously, each State and Territory had their own food hygiene regulations. The Australian States and Territories are currently adopting these new standards into their legislation.

The survey was conducted to collect baseline data prior to the adoption of the Food Safety Standards and will be used by ANZFA as a benchmark to evaluate the impact of

implementing these new standards on key stakeholders.

The survey, undertaken between February and May 2001, had two primary objectives. They were to provide separate, independent measures of:

- the level of awareness and knowledge of safe food handling practices, using a Computer Assisted Telephone Interview (CATI) with the owners and managers of 1,200 food businesses; and
- the extent to which safe food handling practices are used in food businesses through an on-site survey by Environmental Health Officers of 483 food businesses.

Questionnaires for each survey were developed around key requirements of the new Food Safety Standards, such as temperature control, preventing contamination, cleaning and sanitation and personal hygiene and health of food handlers. In addition, data were sought on common sources of information and training on safe food handling practices, as well as on the use of written food recall plans and food safety programs.

The research indicates that there is a relatively high level of awareness and knowledge of basic safe food handling practices in food businesses, though the theoretical knowledge did not always match actual practices on-site. Food businesses with written food safety programs more often undertook correct safe food handling procedures than those with no written program. The businesses with written programs tended to be large, high risk businesses. Results in the key areas of protection of food from contamination and personal hygiene indicate that there is a significant minority of businesses that lack knowledge on these issues, particularly amongst medium or low risk businesses and small businesses.

An interpretative summary of results from the telephone survey and observational survey is available on the ANZFA website at www.anzfa.gov.au/mediareleasespublications/ as well as the detailed results from each survey.

For more information

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Survey on the Microbiological Quality of Unpackaged Ice

A survey to assess the microbiological quality of ice served in drinks at food premises in the Brisbane Northside area was conducted by Environmental Health Services Brisbane Northside Public Health Unit (BNPHU) in June and July 2001.

A total of 57 samples were obtained from 30 randomly selected premises (ie restaurants, hotels, fast food outlets and a cinema). Where possible at each of the premises, one sample was obtained from the bulk ice supply (ie. package or ice machine) and one sample from the retail storage (ie. ice container at the bar or ice tray). Microbiological analysis was performed by Queensland Health Scientific Services (QHSS) Public Health Microbiology.

Samples were examined for the presence of the following organisms:

- *Escherichia coli*
- *Coliforms*

A Standard Plate Count was also performed on each sample.

Overall 11 samples (19%), obtained from 8 of the 30 premises included in the survey, failed to meet the microbiological requirements for potable water set by the National Health and Medical Research Council (NH&MRC) Australian Drinking Water Guidelines 1996 (ADWG).

Ice samples obtained from the retail storage contained more coliforms (35%) than ice from the bulk supply (7%).

4 samples (7%) contained a high Standard Plate Count. No samples were reported containing *Escherichia coli*.

Premises were also inspected for compliance with the Food Safety Standards of the Food Standards Code. In particular, production, storage and handling practices of ice at each of the premises were examined.

Based on the results of the survey, it appears that the microbiological quality of ice prepared and served in drinks at food premises in the Brisbane Northside area remain a cause for concern. Good hygienic practices are needed for the production and safe handling of ice within premises. This can be achieved by improving awareness of the potential for ice to become contaminated with food borne pathogens, advising of practical measures to reduce the potential for contamination and continuously assessing the level of compliance within food premises.

A "Guide to the Safe Handling of Ice" information sheet has been developed for food premises producing and handling ice for human consumption. The information sheet details essential information and offers practical advice on how food handlers can prevent ice from becoming contaminated.

For further information contact

Brisbane Northside Environmental Health Services Ph: (07) 3250 8509

Chloropropanols in Soy and Oyster Sauces

– a New Zealand perspective

In the Spring 2001 edition of this Newsletter the background to concerns about contamination of soy and oyster sauces with chloropropanols was introduced.

Chloropropanols are animal carcinogens which may occur in soy and oyster sauces produced using acid hydrolysed vegetable protein.

In parallel to activity in Australia the New Zealand Ministry of Health commissioned an assessment of risks posed to public health by the presence of chloropropanols in soy and oyster sauces in June 2001. The Director-General of Health subsequently issued an Emergency Food Standard adding soy and oyster sauces to the prescribed food list for imported foods with a limit of 1 mg/kg for 3-monochloropropan-1,2-diol (3-MCPD). The Ministry also commissioned the Institute of Environmental Science and Research (ESR) to establish testing methods and carry out a baseline survey of levels of 3-MCPD in soy and oyster sauces available on the New Zealand retail market.

Eighty-nine distinct varieties of soy and oyster sauce were purchased from supermarkets and speciality Asian food retail outlets in Wellington and Christchurch and analysed for 3-MCPD by a technique called gas chromatography-mass spectrometry. The 89 samples of soy and oyster sauce analysed originated from 14 different countries. Table 1 summarises the results of the analyses.

The majority of soy and oyster sauces analysed contained no detectable amounts of 3-MCPD. About 13% contained very low levels of 3-MCPD, while another 13% contained 3-MCPD levels greater than the regulatory limit of 1 mg/kg. This is similar to rates seen in Australian and British studies. Positive results ranged from 0.05 to 630 mg/kg. The figure of 630 mg/kg of 3-MCPD is the highest level internationally reported from surveys of soy sauces and occurred in Gia Minh Seasoning Soy Sauce (pictured), made in Vietnam. Details of other non-complying products are available at the Ministry of Health's website (www.moh.govt.nz).

The Director-General of Health issued Privileged Statements under Section 37 of the Food Act 1981 on 20 September, 28 September and 5 October 2001 warning the public about consumption of non-complying products and encouraging the importers to voluntarily recall these products from the market.

Table 1 Summary of 3-MCPD levels in soy and oyster sauces available in New Zealand

Country of origin	Number of samples Analysed	With 3-MCPD	With 3-MCPD > 1 mg/kg (%)
Australia	1	1	0 (0)
China	14	6	2 (14)
Hong Kong	12	4	4 (33)
Indonesia	8	0	0 (0)
Japan	9	0	0 (0)
Korea	1	0	0 (0)
Malaysia	6	0	0 (0)
New Zealand	16	7	0 (0)
Philippines	2	1	1 (50)
Singapore	9	0	0 (0)
Taiwan	4	3	3 (75)
Thailand	4	1	1 (25)
USA	2	0	0 (0)
Vietnam	1	1	1 (100)
Total	89	24	12 (13)



Since the Ministry of Health added soy and oyster sauces to the prescribed foods list approximately 90 more samples of soy and oyster sauce have been analysed for 3-MCPD, for import release purposes. All of these contained levels of 3-MCPD less than 1 mg/kg, with the majority of samples coming from Korea, Japan, Singapore and Thailand.

The results of import monitoring suggest that the Ministry of Health's strategy of requiring border testing of soy and oyster sauces has been an effective risk management strategy that has resulted in the removal of many lower quality brands of sauce from the New Zealand market.

None of the products found to be non-compliant in the Ministry of Health's baseline survey have subsequently been submitted for import release purposes and these products should quickly disappear from the New Zealand retail market.

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Soy Sauces and Chloropropanols

..... Update

You may recall that the Spring edition of Food Surveillance Newsletter (formerly FoodWatch) carried a lead story on the national recall of two imported soy sauce brands contaminated with unsafe levels of chemicals called chloropropanols. Well, that article was the first instalment – and this can be regarded as the sequel.

The recall of the two soy sauce brands was undertaken in August 2001, as a result of testing commissioned by ANZFA of imported and locally produced soy and oyster sauce products. Samples were tested for the presence of the chloropropanols 3-MCPD (3-monochloropropan-1,2-diol) and 1,3-DCP (1,3-dichloropropanol) which can contaminate these products during manufacture.

Following the commencement of the ANZFA survey, the Queensland Department of Health and the New Zealand Ministry of Health (MoH) also initiated surveys of soy sauce products for 3-MCPD. During the first week of October 2001 results from the Queensland Health and MoH surveys, together with additional test results from the ANZFA survey, revealed a further twelve individual brands containing unsafe (see Box 1) concentrations of 3-MCPD. These twelve brands were then recalled from the market in Australia. Further testing by Queensland Health towards the end last year revealed another two unsafe products which were also subject to recall action.

Other measures taken in order to protect public health and safety include the setting of maximum limits in the Food Standards Code for the chloropropanols in soy and oyster

sausages and the continued testing by AQIS of imported soy sauce products at the Australian border.

In late October 2001 the Australia New Zealand Food Standards Council agreed that maximum limits of 0.2 mg/kg for 3-MCPD and 0.005 mg/kg for 1,3-DCP, calculated on 40% dry matter content, would be included in the Food Standards Code for soy and oyster sauces. These limits came into force in November 2001 for all soy and oyster sauces imported into or manufactured in Australia and New Zealand.

On the advice of ANZFA, AQIS introduced import testing for soy sauce products on 6 July 2001. Consequently, all products imported on or after this date have been tested and found to comply with the maximum limits for both chloropropanols.

In total, over 170 samples of soy sauce products were tested in the three surveys. The results of the testing undertaken in New Zealand are summarised in the preceding article. The combined testing showed that a significant majority of the products had undetectable levels of chloropropanols or levels below the newly implemented maximum limits. These products are listed on the ANZFA and MoH websites. Samples found to contain unsafe levels of chloropropanols and the products that have been recalled can also be found on the ANZFA website.

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Box 1 Criteria used for the recall of soy sauce products

Soy sauce products were recalled in Australia if they were found to contain greater than 3.5mg/kg of 3-MCPD and/or greater than 0.005mg/kg 1,3-DCP. In addition, where levels of 3-MCPD were greater than 0.2mg/kg this information was made available to the States and Territories.

The recall criteria were based on the following considerations:

In June 2001 the FAO/WHO Joint Expert Committee on Food Additives (JECFA) recommended a provisional maximum tolerable daily intake (PTDI) of 0.002mg/kg body weight for 3-MCPD. Based on this PTDI, ANZFA dietary modelling indicates that soy sauce products containing a 3-MCPD level above 3.5mg/kg are unsafe to consume.

The maximum limit of 0.2mg/kg established in the Food Standards Code for this contaminant represents the lowest level that can practically be achieved using good manufacturing practice.

JECFA identified 1,3-DCP as genotoxic in vivo and consequently no level is safe. The maximum limit of 0.005mg/kg for 1,3-DCP in soy and oyster sauces is the current limit of quantification and is considered to be as close as is possible to zero presence.

In the pipeline

Future surveys are planned or underway for a number of food additives and contaminants including.....

Sulphites in foods

In this study ANZFA has collated all available State, Territory and New Zealand data, amounting to over 35,000 test results covering a wide range of foods, with the aim of conducting a comprehensive dietary exposure assessment. The results of the exposure assessment will be compared to the existing Acceptable Daily Intake and recommendations made on further monitoring and surveillance activity, further data needs and other regulatory strategies. Currently the test results have been compiled and coded in preparation for dietary modelling. We plan to report the results of the study in the Food Surveillance Newsletter Autumn edition.

Chloropropanols in other foods

ANZFA is planning a survey to obtain representative data on the presence of chloropropanols in a wider range of foods in the Australian diet. The survey results will be used in a dietary exposure assessment. Foods and food groups chosen for analysis will be guided by the available information, including the results of previous surveys and consideration of foods likely to be contaminated as a result of processing or storage conditions.

The WA Department of Health through the WA Food Monitoring Program Committee proposes to undertake a dual assessment of a limited and targeted range of foods containing hydrolysed vegetable protein (HVP) for chloropropanols and monosodium

glutamate (MSG). The project is scheduled to commence in early 2002 following laboratory testing method verification and validation.

To date, the most comprehensive survey of 3-MCPD in foods was commissioned by the UK Food Standards Agency. The Agency published results for 3-MCPD levels in a broad range of food and food ingredients in February 2001. In this survey 300 retail food products and 63 food ingredients were sampled and analysed. Results showed that 70% of the samples did not contain quantifiable levels of 3-MCPD. However, the results also confirmed that 3-MCPD may be present in a wide range of foods. Detailed results of this survey can be found on the Food Standards Agency website: www.food.gov.uk/science/surveillance/



Enhanced food borne disease surveillance has been identified by the World Health Organisation and many countries around the world, as being an essential tool to help reduce food poisoning. A number of recent reports, including that of the Food Regulation Review in 1998, have highlighted the need to improve food borne disease surveillance in Australia.

To address this, the Department of Health and Ageing created OzFoodNet to provide better understanding of the incidence of food borne disease in the community, what the effects of this are, and what food handling practices are causing food borne illness.

OzFoodNet differs from food surveillance in that it focuses solely on human illness, not the routine testing of food. Although OzFoodNet epidemiologists interview patients to determine the types of food they have eaten, it is rare for these investigations to involve food testing, except in outbreak settings. OzFoodNet shares common elements with the Bi-National Surveillance and Enforcement Strategy (BSES) through enhanced communication, collection and dissemination of data and feedback to stakeholders.

The Commonwealth Department of Health and Ageing has funded OzFoodNet for an initial two year period (due to expire in June 2002). Under this funding arrangement, all States and the Australian Capital Territory employ epidemiologists to improve the existing surveillance mechanisms for food borne disease. The Northern Territory currently participates in OzFoodNet as an observer.

The OzFoodNet collaboration also includes ANZFA, other Commonwealth Departments, the National Centre for Epidemiology and Population Health (NCEPH), the Communicable Disease Network of Australia, and the Public Health Laboratory Network. At present, OzFoodNet covers approximately 70% of the population. Information is collated under the direction of Martyn Kirk, OzFoodNet Coordinating Epidemiologist, and distributed as fortnightly illness-cluster reports.

OzFoodNet epidemiologists hold monthly teleconferences and quarterly meetings of Site epidemiologists. Epidemiologists also communicate rapidly via an electronic listserver.

Activities undertaken by OzFoodNet to date include:

- developing a national outbreak register for food borne disease;
- undertaking a comparison of molecular typing methods for *Campylobacter*;
- initiating a national survey of diarrhoeal disease;
- developing protocols and commencing national case control studies to examine risk factors for campylobacteriosis, listeriosis, Salmonella Enteritidis, and shiga-toxin producing *E. coli*;
- assisting with the investigation of several important outbreaks of food borne disease that have crossed jurisdictional boundaries;
- undertaking a national survey of pathology laboratories; and
- developing links with international agencies to improve our understanding of food borne illness surveillance.

Summaries of OzFoodNet findings and recommendations are available through quarterly reports. The first two quarterly reports for 2001 have been published in *Communicable Diseases Intelligence*, and may be viewed at <http://www.health.gov.au/pubhlth/cdi/>.

OzFoodNet is a major investment in the surveillance of communicable diseases due to food and will facilitate the estimation of costs of food borne illness and identify strategies for its prevention.

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Food Surveillance Newsletter articles do not necessarily reflect the views of ANZFA, New Zealand Ministry of Health, Commonwealth Department of Health and Ageing, AQIS or State and Territory Health Departments, or indicate any commitment of these bodies to a particular course of action.

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