

ANNUAL FOOD TESTING REPORT 2016 - 2017



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Contents

Introduction	3
Why test?	3
A year in review	4
Verification programs	4
Food Safety Schemes verification program for ready to eat products	4
Raw poultry verification program	5
Egg farm and egg grading facility surveillance program	5
Kilojoule menu labelling verification program	6
Research and targeted projects	7
Microbiological quality of ready-to-eat (RTE) chilled foods	7
Undeclared allergens in food	7
<i>Campylobacter</i> in plant products, meat, offal and chicken liver	8
Rice based desserts sold at room temperature	9
Microbiological quality and handling practices of cut melon and papaya at retail	10
Projects continuing into the 2017-2018 financial year	10
Food safety compliance	11
Samples taken during audits and inspections	11
Foodborne illness investigations.....	11
Complaints and compliance projects	12
Compliance projects	13

Introduction

The NSW Food Authority's (the Food Authority) primary objective is to provide consumers in NSW with safe and correctly labelled food.

To support this objective the Food Authority regularly conducts testing of food products to ensure compliance with regulatory requirements, gather information to identify and respond to food safety issues and as part of foodborne illness investigations. The Food Authority also undertakes scientific surveys to identify and better understand food safety issues and risks in NSW. The data obtained in surveys allows the Food Authority to identify and respond to key food safety issues and develop systems and processes to manage the prevention of food poisoning effectively and maintain food safety. The data is used to guide approaches to deliver outcomes in the NSW Government's Food Safety Strategy 2015-2021.

DTS Food Assurance (DTS) is the primary testing provider for the Food Authority. Testing services provided by DTS include microbiological, chemical, foreign object identification, allergen contamination, nutritional composition and testing for genetically modified organisms (GMO). DTS has had accreditation from the National Association of Testing Authorities (NATA) since 1961.

At the end of each financial year, the Food Authority reports on the testing conducted by the Food Authority's primary testing provider. This report does not include testing conducted by other laboratories.

Why test?

Samples are submitted for testing for reasons such as hygiene assessment, foodborne illness investigation, verification of food safety programs and for research purposes. Testing results are then used to:

- Ensure compliance to regulatory requirements
- Assist with the development of food regulatory framework
- Assist with the evaluation and review of regulations
- Assist with enforcement action
- Respond to incidents that occur in the industry
- Provide scientifically based industry communication, training and advice
- Provide scientifically based consumer advice and information
- Assist local government with any concerns and complaints
- Assist with the development of emergency management framework

A year in review

Between July 2016 and June 2017, a total of 4,103 samples were sent to DTS and tested for 15,872 individual tests (Table 1). Sample types analysed included meat, seafood, dairy, plant products, packaged food, food from retail outlets and environmental samples (e.g. swabs and feed samples). Most samples were submitted for multiple tests which may have included both chemical profiling and microbiological assessment. Over 300 different types of tests were performed including pH, water activity, microbiological assessment, allergens, caffeine, heavy metals and additives such as colours and preservatives.

Table 1. Number of samples per category

Category	Number of samples
Verification programs	1,394
Research and targeted surveys	823
Food safety compliance	1,886
Total	4,103

Verification programs

Food Safety Schemes verification program for ready to eat products

The Food Safety Schemes verification program monitors ready-to-eat (RTE) food that is produced under a NSW Food Safety Scheme (the Schemes). Samples collected as part of this program include dairy, meat, plant products and seafood. RTE foods that were manufactured or packaged under the Schemes were purchased from retail or directly from the manufacturer and tested against the requirements as set out in the Food Safety Schemes Manual. When a sample was found to be non-compliant with these requirements, the manufacturer was inspected by an authorised officer from the Food Authority and appropriate action was taken.

Between July 2016 and June 2017, a total of 402 samples were randomly collected from 193 businesses and submitted for testing (Table 2).

A total of eight products were found to be non-compliant due to the following reasons:

- Three samples of uncooked comminuted fermented meats (UCFM) contained *Escherichia coli* greater than the regulatory limit
- Two samples of hard cheese contained *E. coli* greater than the regulatory limit
- One sample of oysters contained *E. coli* greater than the regulatory limit
- Two samples of RTE chicken contained *Listeria monocytogenes*

These non-compliant samples resulted in 4 inspections, 1 improvement notice and 1 warning letter being issued.

Table 2. Number of samples analysed for the Food Safety Schemes verification program

Scheme	No. of samples tested	No. of non-compliant samples (%)
Meat	143	3
Dairy	133	2
Plant products	102	0
Seafood	24	1
Total	402	8 (2.0%)

Raw poultry verification program

The raw poultry verification program gathers ongoing data on the prevalence and levels of *Campylobacter* and *Salmonella* in raw poultry to monitor changes over time and analyse the effectiveness of Standard 4.2.2.

Samples of raw poultry were collected from processing facilities and retailers in NSW and tested for *Campylobacter* and *Salmonella*.

Between July 2016 and June 2017, a total of 88 whole chickens and chicken portions were collected from processing plants and 298 chicken portions were collected from retail outlets. At the processing plants, *Salmonella* was detected in 14.8% of samples and *Campylobacter* was detected in 88.6% of samples with 26.1%¹ above the limit of quantification for *Campylobacter*. At retail, 25.8% of samples tested positive for *Salmonella* and *Campylobacter* was detected in 86.2% of samples with 8.1%² of total samples above the limit of quantification for *Campylobacter*.

Egg farm and egg grading facility surveillance program

The egg farm and egg grading facility surveillance program gathers information on the prevalence of *Salmonella* at these businesses.

Results are compared to baseline data acquired prior to the introduction of *Standard 4.2.5 Primary Production and Processing Standard for Eggs and Egg Product* in 2012 and data collected from the commencement of the surveillance program. Results will be used for assessing the impact of *Standard 4.2.5*.

Between July 2016 and June 2017, a total of 412 environmental samples and 23 egg samples were collected from 19 businesses. Environmental samples consisted of boot swabs, stock feed and faecal samples and each egg sample consisted of between six and twelve pooled eggs. *Salmonella* was detected in 57 samples (13.1%), collected from eight of the businesses surveyed. All except two positive samples were environmental samples and the two positive egg samples were eggs taken directly from the laying shed prior to washing. Detection of *Salmonella* in the poultry environment is expected.

¹ Originally reported as 33.0%

² Originally reported as 17.8%

Kilojoule menu labelling verification program

Food labelling regulation in NSW requires specific take away and fast food businesses to label the kilojoule information of standard menu items at the point of sale. This requirement is in response to increased consumer demand for information and part of the NSW Government's broad set of responses to tackle obesity. This regulation applies to 'standard food outlets' (retail businesses that sell standard food items) with 20 or more outlets in NSW or 50 or more outlets nationally.

The Food Authority's kilojoule menu labelling verification program compares the declared value to the actual energy value from testing to ensure that companies remain diligent about the accuracy of their labelling.

Each year, approximately 5% of the standard menu items from each chain are tested. Where variation between the analysis and published information is greater than 20%, two further samples are collected from two different locations. The average of the three results is then calculated and compared with the labelled value. This helps to account for the variation in handling practices at different outlets. If the difference between the declared and analytical energy value is still greater than 20%, the company's head office is contacted to investigate.

Between July 2016 and June 2017, a total of 95 food products from 29 chains were tested, which represents 51% of chains captured by the Food Regulation 2015 in 2016-2017. During initial testing, 38 products (40%) tested from twenty chains had a kilojoule content discrepancy of more than 20%. After repeat sampling, and taking the average of the three samples from the three different outlets, 34 samples (36% from the original sample size) from sixteen chains still had a discrepancy of more than 20%. Twelve of these products had a lower energy content than labelled and 22 products had a higher energy content than labelled. All issues identified were discussed directly with the relevant head office and rectified for example by changing the labelling, changing the product formulation or educating the food handlers on correct product formulation.



Research and targeted projects

The Food Authority conducted a number of research projects in 2016-2017. The aim of these projects was to gather data to inform the Food Authority's future risk assessment work. Projects listed below have been completed and reports for these projects are available on the Food Authority's web page or are currently being finalised.

Microbiological quality of ready-to-eat (RTE) chilled foods

In today's convenience driven market chilled ready-to-eat (RTE) foods that require no/minimal reheating before consumption are an expanding product line. RTE meals are fully prepared meals purchased in a store to be eaten elsewhere. RTE chilled products include salads, pasta, soups, traditional "meat and three veg", sandwiches and sushi. Many of the chilled RTE products are not sterile and may contain raw ingredients. They may or may not have had an in-pack pasteurisation treatment. Their safety, quality and shelf life are dependent on a combination of heat treatment, storage conditions, formulation and intrinsic properties of the food (e.g. pH, water activity, preservatives).

The aim of this survey was to provide background information on the microbiological quality of RTE chilled products sold in NSW.

A total of 280 samples of pre-packaged, chilled RTE food were tested for a range of microorganisms. Samples were purchased from supermarkets, greengrocers and other outlets. Frozen food and unpackaged food were not included in this survey. When assessed against the Food Authority's '*Microbiological quality guide for ready-to-eat foods*', 97.5% of samples were classified good or acceptable. Six samples (2.1 %) were classified potentially hazardous due to the presence of *Listeria monocytogenes*. The levels of *L. monocytogenes* in these samples were all below quantification however they were classified potentially hazardous as the food matrix would allow growth of *Listeria monocytogenes* to occur. These six samples were foods that vulnerable people such as pregnant woman, elderly and the immunocompromised are advised to avoid. One sample was classified unacceptable due to the presence of *Bacillus cereus* at a level of 1.7×10^3 CFU/g. This was a Lebanese chicken salad which had a shelf life of three days left at the time of purchase. This product was from a company that provides home delivery meals but this sample was bought in a boutique health food store.

Lastly, high levels of indicator organisms were detected in 10% of samples (pathogenic organisms were not detected in any of these samples). These results do not pose a food safety issue but may indicate poor hygiene during manufacture.

Undeclared allergens in food

The aim of this project was to determine the prevalence of undeclared allergens in a variety of packaged and unpackaged food. A total of 520 samples were purchased at random from supermarkets, greengrocers, cafes and other retail outlets between January 2016 and February 2017 in the greater Sydney area. Samples consisted of a variety of food categories and included samples with a '*free claim*', and '*may contain*' statement and samples that made no reference to any allergens. Samples purchased unpackaged from retail establishments were only those that made a '*free claim*'. Samples were tested for one or more allergens.

A total of 15.4% (n=79) of samples contained allergens that were not in the ingredient list (but may or may not have had a '*may contain*' statement). Twenty-three of these were unpackaged products from retail outlets and they contained 7.1 ppm to 8,000 ppm of the '*free claim*' allergen.

Fifty-six were packaged samples where:

- Twelve had a '*free claim*' for the detected allergen (ranging from 9.2 to 9,600 ppm),

- Twelve had no statement about the detected allergen (ranging from 17 to 9,100 ppm),
- Twenty-three made a precautionary 'may contain' or equivalent statement about the detected allergen (ranging from 3.9 to 9,100 ppm).

Of those samples with positive detections, 41 had levels of the undeclared allergen over 100 ppm. Thirty-three of these were dark chocolate or samples that used dark chocolate as an ingredient that contained undeclared dairy. This survey also found a high degree of variation in 'may contain' statements.

Appropriate enforcement action was taken where there was a breach in labelling compliance including eleven recalls, one withdrawal, three warning letters, four inspections (with no further action) and referring six products to other jurisdictions for action (for companies not based in NSW).

Campylobacter in plant products, meat, offal and chicken liver

This survey was carried out to gather information on the prevalence and level of *Campylobacter* in a range of products including plant products, cuts of meat, offal and chicken liver at retail level in NSW. Products were also tested for *E. coli* and *Salmonella*.

Plant products

A total of 397 samples of plant products were purchased at random from greengrocers and supermarkets and tested. *Campylobacter* was detected in six samples (1.5%) including sliced mushrooms, snow pea sprouts, baby spinach, soya sprouts, lettuce and mixed sliced vegetables. *E. coli* was detected in 4.0% of samples which was not unexpected, considering the samples were raw produce. However, three samples (0.8%) contained *E. coli* at unexpected elevated levels (above 3,000 CFU/g). These were bean sprouts; snow pea sprouts and whole lettuce. Two samples of mung bean sprouts contained *Salmonella*. *Salmonella* was not detected in any other sample. The *Salmonella* positive mung bean sprout samples were from the same producer over a short time period. An investigation was conducted and 59 environmental and food samples were taken from the sprout producer. Two environmental swabs and two further samples of mung bean sprouts were positive for *Salmonella*. A prohibition order and improvement notice was issued and the contamination issue was rectified.

Meat and offal

A total of 569 samples of raw meat and offal were tested. Overall prevalence for *Campylobacter* was 10.4%. *Campylobacter* prevalence for each meat and offal type ranged from 1.5% in beef meat to 55.9% in lamb offal. *Salmonella* prevalence ranged from 0% in beef and lamb meat to 28.6% in pork offal and *E. coli* prevalence ranged from 11% in beef offal to 57.1% in pork offal. In general, beef had the lowest prevalence across the three organisms, pork had the highest prevalence for *E. coli* and *Salmonella* and lamb had the highest prevalence for *Campylobacter*. Looking at the different organs analysed, twenty-seven lamb kidney samples were tested and 55% of these were positive for *Campylobacter*, fifteen lamb liver samples were tested and 80% of these were positive for *Campylobacter* and fourteen lamb hearts were tested and 42% were positive for *Campylobacter*. Lamb livers were twice as likely to be contaminated with *Campylobacter* than lamb hearts.

Chicken liver

Chicken livers were tested to determine the prevalence of *Campylobacter* on the outside as well as the inside of the liver. To test externally the liver was rinsed in peptone saline and the rinse used for analysis. To test internally, the liver was then dipped in boiling water for 15 seconds to sterilise the outside surface.

Prevalence of *Campylobacter* in chicken livers was very high. Five livers from each of 51 batches were tested individually for *Campylobacter* (totalling 255 samples) and 96% of them tested positive for *Campylobacter*. Both internal and external parts of the chicken liver were tested. All batches tested had at least one liver that had

Campylobacter both externally and internally. No batch was free from *Campylobacter*. *Campylobacter* was not detected in 2.7% individual livers (n=7, from 3 batches).

Rice based desserts sold at room temperature

Rice based desserts, commonly known as rice cakes, are popular in countries such as Korea, Japan, China, Vietnam, Malaysia and Indonesia. Rice based desserts can be manufactured using different bases (such as regular rice or glutinous rice), sugar, and a variety of other ingredients (such as nuts, red beans, yellow beans, mung beans and sesame seeds). They are usually cooked by steaming, frying or boiling.

This project was carried out to review the manufacturing processes, gather information on the microbiological quality at the manufacturer and retail, and to gather information on the industry's compliance with the requirements in the Food Standards Code (the Code).

A total of 54 samples were collected from 11 manufacturers. *E. coli*, *S. aureus* and *Salmonella* were not detected in any of the samples. *B. cereus* was detected in two moulded rice cakes manufactured by two different businesses at 100 CFU/g and 300 CFU/g, which is considered as acceptable for this type of product when compared to the Food Authority's 'Microbiological quality guide for ready-to-eat foods' (one product was tested on the day of manufacture and the other one was tested after one day of storage). Additional samples from these two batches tested at different stages of the shelf-life did not contain detectable levels of *B. cereus*.

A further 105 samples were purchased at retail from around Sydney and tested. Results from most samples (79%) were categorised as good or acceptable. A further 21% of samples, mostly rice balls, were categorised as unsatisfactory due to high Standard Plate Count (SPC), and/or yeasts. Additional handling after the cooking steps of rice balls may contribute to this result. *E. coli*, *S. aureus* or *Salmonella* were not detected in any of the samples. *B. cereus* was detected in one rice ball sample at 1,000 CFU/g, which is considered unsatisfactory when assessed against the Food Authority's 'Microbiological quality guide for ready-to-eat foods'. This product was tested at the end of its shelf life and based on the information provided by the manufacturer, would have been on the shelf for five days at the time of testing.

A factsheet was developed to provide guidance to manufacturers on how to produce rice based desserts safely. The project report and factsheet can be found on the Food Authority's website.

Microbiological quality and handling practices of cut melon and papaya at retail

The purpose of this survey was to gather data on the prevalence of pathogenic bacteria on cut melons and papayas and the handling of these products at retail level to better inform risk management.

A total of 191 samples of pre-cut melons and papayas were purchased from 45 greengrocers and supermarkets across Sydney. Samples were photographed and transported under temperature control to the laboratory and the top 1-1.5 cm layer of the cut melon or papaya was tested for Standard Plate Count (SPC), *E. coli*, *Salmonella* and *L. monocytogenes*.

The microbiological quality of samples tested was very good. *Salmonella* was not detected in any sample. *E. coli* was detected in one sample of watermelon at 1,100 cfu/g and *L. monocytogenes* was detected in one sample of honeydew with a level under the limit of quantification (<10 cfu/g).

Of more interest were the differing levels of SPC. SPC can provide a general indication of the microbiological quality of a food. However, it does not differentiate between the natural microflora of a food and spoilage microorganisms. It should not be used to predict the safety of the product and is influenced by the storage conditions of the product. As cut melons and papaya are a raw food it is expected that they will have a low to medium SPC. A high SPC may indicate that the product has been prepared unhygienically, stored inappropriately or nearing the end of its shelf life. The Food Authority's *Microbiological quality guide for ready-to-eat foods* categorises fresh cut fruit as Category C and thus no limit has been set for an unsatisfactory SPC. In this study, only three (1.6%) samples had a SPC <10 cfu/g. These were two watermelon and a pawpaw samples, purchased during summer and stored at ambient temperature inside the store. The majority (63%) of samples had an SPC between 1,000 and 100,000 cfu/g. Thirteen (7%) samples had an SPC greater than the maximum level of quantification (30,000,000 cfu/g). These samples were all purchased in summer and consisted of eight honeydews, one papaya, three rockmelon and one watermelon sourced from eleven stores.

Projects continuing into the 2017-2018 financial year

Projects continuing into 2017-2018 include:

- *Campylobacter* attribution survey (National project)

Food safety compliance

The Food Safety Compliance Unit is responsible for:

- Conducting audits and inspections of food businesses
- Investigating breaches in compliance to the Code
- Investigating suspected foodborne illness
- Investigating labelling complaints and compliance
- Addressing issues identified by Food Safety Officers during audits

These investigations can result in the analysis of food for a wide variety of tests. Enforcement action is instigated for any non-compliant samples. Between July 2016 and June 2017, a total of 1,886 samples were submitted to DTS by the Compliance Unit (Table 3).

Table 3. Samples submitted by the Compliance Unit

Category	Number of samples
Samples taken during audits and inspections	33
Foodborne illness investigations	591
Complaints and compliance projects	1,262
Total	1,886

Samples taken during audits and inspections

Samples taken during audits usually consist of raw meat samples that have failed a field test for sulphur dioxide (SO₂) which is not permitted in raw meat (SO₂ is permitted in sausages at a certain level). If a field test is positive, a three-part sample is then taken and submitted to DTS for SO₂ analysis. Occasionally, sausage samples are also submitted for analysis to ensure they are under the maximum permitted level and for correct meat speciation.

Between July 2016 and June 2017, 1206 audits of licensed retail meat businesses were conducted and 17 samples of raw meat from eight butchers were submitted for SO₂ testing as a result of a positive field test. Fifteen of these samples were positive, ranging from 40 to 700 mg/kg. Appropriate enforcement action was taken for these samples. Other samples taken during audits and inspections include cheese for pH and water activity, raw meat for meat speciation and raw and processed meat for microbiological quality.

Foodborne illness investigations

The Food Authority investigates suspected cases of foodborne illness in partnership with NSW Health, local councils, and interstate agencies. Between July 2016 and June 2017, a total of 591 food and environmental samples were submitted for testing in response to foodborne illness investigations and their follow up activities.

Salmonella and *Listeria monocytogenes* continued to be the two most common microorganisms of concern. Outbreaks of foodborne illness linked to the use of raw egg continued to be the single most common type of incident investigated by the Food Authority, although were well down on previous years. A notable outbreak is outlined below:

Salmonella outbreak from raw egg products

The Food Authority investigated an outbreak with 17 cases of *Salmonella* Typhimurium. Cases were from the Central Coast, Eastern Suburbs and Upper North Shore with onset of illness between 7 and 30 December, 2016. All cases reported eating from the same café on the Central Coast. The café made several items using raw eggs including mayonnaise, hollandaise sauce and French toast.

A total of 102 environmental and food samples were taken from two suspect food venues and from the supplier of the eggs used at these outlets. Several food items, swabs of equipment and other food contact surfaces were tested for the presence of *Salmonella*. One food item, an uncooked egg and cream mix for French toast, was positive for *Salmonella*. Several chopping boards and a metal mixing bowl that had been cleaned were also positive for *Salmonella*. All *Salmonella* isolates were a genetic match to human clinical isolates implicated in the outbreak. A failure to adequately clean and sanitise utensils and food contact surfaces was a significant contributing factor in this outbreak. In addition, the café did not have a procedure in place for monitoring the pH of the raw egg mayonnaise. The sample of egg and cream mixture that was positive for *Salmonella* was sampled from the refrigerator, but at the time of sampling had a temperature of 17°C (indicating temperature abuse prior to being placed back in the refrigerator).

The café was issued with penalty notices for failing to sanitise equipment with fines totalling \$2640 and required to pay inspection costs of \$1265. The café no longer sells raw egg mayonnaise and has amended their hygiene and sanitation practices.

Complaints and compliance projects

Complaint samples usually result from either a member of the public contacting the Food Authority's helpline or from local council. Samples may be acquired from the complainant or from retail outlets, manufacturers or importers. Common complaints include unlabelled allergens, allergen contamination or poor labelling. Compliance projects usually result from an incident, increase in unknown illnesses, increase in a particular issue seen during audits or inspections or an overseas or interstate event.

Between July 2016 and June 2017, 1,262 samples were submitted due to a complaint or compliance project.

Complaint samples

Unlabelled allergen complaints are one of the most common complaints made to the Food Authority. Outlined below are two such complaints and their subsequent investigation.

Undeclared peanut in sesame wheat sticks

A caller to the Food Authority's helpline indicated they had purchased a packet of sesame wheat bars for their 4-year-old child who was allergic to peanuts. After consuming part of the product, the child had a severe allergic reaction and was admitted to hospital. The caller then noticed that the importer had placed a sticker over the label warning that the product was made in a facility that also processes peanuts. The Food Authority collected the remaining uneaten product from the complainant and tested the product for peanut. Test results showed that the bars contained 45,000 ppm peanut protein. In addition, an unopened sample from the same batch, which was sourced from the importer, was also tested for peanut and contained 750 ppm peanut. This variation is typical of cross over during manufacturing and the company also manufactures a peanut flavoured variety of the wheat bars. The importer was investigated and a recall instigated for the sesame wheat bars. The importer was issued with a penalty notice and fined \$1,320 for selling food that is unsuitable.

Dairy in dairy free rice milk bar

A member of the public contacted the Food Authority's helpline indicating that their child, who is allergic to dairy, experienced an allergic reaction after consuming a dairy-free rice milk bar. The complainant could provide a sample of

the open rice milk bar as well as an additional unopened sample. The open bar was found to contain 2,600ppm of total milk and the unopened bar was found to contain 2,500 ppm. The importer was based interstate and was referred to the relevant jurisdiction for enforcement action and the product was recalled.

Compliance projects

Significant compliance projects this year include:

***Listeria* in delicatessens**

A cluster of eight listeriosis cases was detected in 2016 and was attributed to smallgoods sold through supermarket delicatessens, with people affected across three jurisdictions. Investigations using whole genome sequencing (WGS) linked the listeriosis cases with an RTE meat product, its manufacturer and supermarket delicatessens.

The Food Authority, in collaboration with Canada Bay Council and Northern Beaches Council, inspected 31 retail delicatessens and tested 507 environmental and food samples for *Listeria* spp and *L. monocytogenes*. No food contact surface was positive for *L. monocytogenes*. However, *Listeria* spp was detected in 15% of utensils, 13% of chopping boards, 10% of knives and 6.5% of food slicers tested.

L. monocytogenes was detected on non-food contact surfaces with 12.9% of delicatessens having *L. monocytogenes* detected on the floor.

***Salmonella* in rockmelons**

Outbreak response

In response to an outbreak of *Salmonella* Hvittingfoss linked to one rockmelon farm in the Northern Territory, 136 samples of rockmelon from different wholesalers and farms were tested for *Salmonella*. *Salmonella* was detected in 24 rockmelons grown at the same farm located in the Northern Territory, linked to the *Salmonella* outbreak.

After the outbreak

After the outbreak the Food Authority, in conjunction with NSW Department of Primary Industries Agriculture, conducted a food safety workshop for NSW rockmelon growers in November 2016. This workshop focused on key risk areas during production such as wash water quality, dirt build up, equipment hygiene and use of sanitiser.

Following the workshop, during February and March 2017, 253 environmental and melon samples were taken from growers in NSW to examine hygiene during processing and identify any issues. This project found general hygiene was poor, wash and sanitiser steps were ineffective, HACCP plans failed to identify key risk area and third party audits sometimes occurred while the facilities were not in operation or another commodity was being processed.

Further work is being conducted in this area in conjunction with the relevant industry bodies and processors and these businesses are now compliant with food safety requirements.

***Salmonella* in bakeries using raw egg mayonnaise**

Hot bread shops selling Vietnamese style pork or chicken rolls with salad, ham, pate, and raw egg butter/mayonnaise are common in Sydney. While these businesses account for a fraction of the food produced, and sold in Sydney, they account for some of the largest point-source outbreaks of *Salmonella* recorded in NSW. The number of outbreaks typically rises during summer due to the hotter weather. This association between illness and hot bread shops selling these items is not unique to NSW, with large outbreaks also being recorded in other jurisdictions. Contributing factors for *Salmonella* outbreaks include lack of appropriate skills/knowledge in relation to safe food handling, inappropriate use of raw egg foods, poor hygiene, inadequate cleaning/sanitising of food contact surfaces and temperature abuse of food items.

During 2016 and 2017, the Food Authority in collaboration with eight local councils inspected 39 hot bread shops, twenty of which were using raw egg products. The objectives of these inspections were to assess cleaning and sanitation practices and the use of raw egg products. The majority of facilities were not being maintained to the required standard of cleanliness and knowledge of appropriate sanitiser use was poor. A total of 88 environmental samples from those businesses making raw egg products were tested for *Salmonella*. *Salmonella* was not detected in any sample. Sixteen of these businesses switched to pasteurised egg products after inspection.

The project findings showed that these retail businesses lack the required education to achieve compliance despite regular intervention from Council inspections. During the project, translated fact sheets were distributed and officers provided verbal education to food handlers. Joint investigations with local council in the use of raw egg mayonnaise is continuing to assist in increasing compliance and education in this sector.

Undeclared allergens in nuts and spices

The Food Authority investigated the presence of undeclared allergens in a range of nuts and spices sourced directly from the processor. Sixteen nut and spice processors were inspected and 56 samples of nuts and spices were analysed. The results showed 23.2% contained undeclared gluten ranging from 7 to 150 ppm, 5% contained undeclared peanut ranging from 3 to 6.7 ppm and almond was detected in one sample of walnut meal at 3500ppm. The processor of the walnut meal was reinspected and it was determined that process and cross contamination control was lacking. Enforcement action was taken against the processor.



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