



Food  
Authority

# Evaluation of the Egg Food Safety Scheme

Benchmark survey of NSW  
egg businesses

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## **About this document**

This document has been prepared to report the benchmark findings of the NSW Food Authority's (the Authority) evaluation survey of the NSW egg industry and to assist the Authority's processes to implement the NSW Egg Food Safety Scheme (the Scheme).

The findings were presented to the Authority's Poultry and Egg Industry Consultative Committee in June 2010.

If you have any questions about this document, please contact the NSW Food Authority Consumer and Industry Helpline on 1300 552 406 or [contact@foodauthority.nsw.gov.au](mailto:contact@foodauthority.nsw.gov.au).

## **Acknowledgements**

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## Executive summary

The NSW Food Safety Scheme (the Scheme) for eggs and egg products commenced on 18 June 2010<sup>1</sup>. Businesses under the Scheme are required to apply for a licence with the NSW Food Authority (the Authority) and to implement certain food safety management requirements. For some businesses this means a food safety program (FSP) that complies with Standard 3.2.1 – *Food Safety Programs* of the Food Standards Code<sup>2</sup> (Standard 3.2.1). Businesses had until 20 December 2010 to implement the Scheme's food safety requirements.

In February 2010, a self-assessment survey was sent to more than three hundred NSW egg businesses. The Authority sought to gather industry profile information and to benchmark food safety practices prior to the commencement of the Scheme.

This survey was the first phase in the Authority's benchmark evaluation of the egg industry.

The evaluation survey aimed to:

- gather information on the various activities undertaken by egg businesses,
- assess industry preparedness prior to the implementation of the Scheme,
- identify ways the Authority could best provide egg businesses with food safety information relating to the Scheme, and
- refine and update the Authority's industry database of potential licence holders.

The Authority plans to use the data collected from this study to establish a pre-regulation benchmark against which the impact of the Scheme can be measured in the future. Thirteen per cent of identified NSW egg businesses completed the survey.

Key findings were:

- Seven in ten businesses surveyed revealed that they produce free-range eggs
- One third of surveyed businesses yet to implement a food safety program
- Only a small proportion of survey participants were incorrectly handling broken eggs
- Almost three quarters of businesses surveyed said they need help to learn about the new requirements
- Just over six in ten businesses surveyed indicated they would be interested in attending a briefing session about the Scheme and the new requirements

The evaluation findings have been used to construct a profile of the NSW egg industry. They have also informed the Authority's processes in implementing the Scheme for eggs and egg products.

## **1. Introduction**

### **1.1 About the Egg Food Safety Scheme**

The Egg Food Safety Scheme (the Scheme) was introduced in NSW on 18 June 2010. Businesses under the Scheme are required to apply for a licence with the NSW Food Authority (the Authority) and to implement certain food safety management requirements.

Before the Scheme commenced an evaluation survey (phase I) was sent to more than 300 NSW egg businesses. The Authority sought to gather industry profile information and to benchmark food safety practices prior to the commencement of the Scheme.

### **1.2 Objectives**

The objectives of the Phase I evaluation were to:

- gather information on the various activities undertaken by egg businesses,
- assess industry preparedness prior to the implementation of the Scheme,
- identify ways the Authority could best provide egg businesses with food safety information relating to the Scheme,
- refine and update the Authority's industry database of potential licence holders, and
- use information collected from this study to establish a pre-regulation benchmark against which the impact of the Scheme can be measured in the future.

## **2. Conducting the study**

When the Authority introduces a Food Safety Scheme, industry profile information such as business location, size and types of activities performed by businesses helps inform the Authority's implementation processes.

### **2.1 More than 300 NSW egg businesses were sent a survey form to complete**

Over a four week collection period (22 February to 19 March 2010) a voluntary self-assessment survey was sent to 311 identified NSW egg businesses<sup>i</sup> that do one or more of the following:

- produce eggs
- wash, grade or dry clean eggs
- examine eggs to detect for cracks
- manufacture egg products (eg egg pulp collection)
- pasteurise egg products
- store or transport cracked eggs or egg products

Businesses were invited to submit their survey responses either online or in paper form.

The Authority used SurveyMonkey™, a web-based database program, to manage the survey data.

### **2.2 A 13% response rate was achieved**

The Authority received completed surveys from 40 NSW egg businesses. This represents approximately 13% of the total number of identified NSW egg businesses at the time of the evaluation.

Around 5% of businesses advised that they were no longer operating as an egg business. The Authority used the information to update and refine its list of potential licence holders.

### **2.3 Information about the egg industry assists the implementation process**

Businesses were asked questions about their FSP so that the Authority could assess their preparedness for implementing Scheme requirements.

Industry profile data was collected in order to inform the development of industry assistance material such as factsheets and FSP templates.

The Authority also aimed to gather feedback from businesses on implementation assistance needs. Businesses were asked to express their interest in attending information sessions on the new requirements.

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<sup>i</sup> Businesses were identified using a variety of resources including online search engines, Australian Businesses Register, and the Authority's Notification and Food Safety Information System.

### 3. Survey findings were used to establish the NSW egg industry profile

#### 3.1 Almost half of businesses responding to the survey produce eggs only

Information about the types of activities undertaken by NSW egg businesses informs the development of FSP templates and other industry assistance materials. Of the 40 businesses that completed the survey, almost all (95%) indicated that they produce eggs, often combined with other activities.

Almost half (45%) of the businesses indicated that they produce eggs only. A similar number (43%) stated that they produce and grade<sup>ii</sup> eggs. A smaller percentage (8%) indicated that they undertake all three activities—produce, grade and process<sup>iii</sup> eggs. See Table 1 below.

**Table 1. Activities undertaken by egg businesses<sup>a</sup>**

| Activity                         | Percentage response of businesses (n) |
|----------------------------------|---------------------------------------|
| Produce eggs only                | 45% (18)                              |
| Produce and grade eggs           | 43% (17)                              |
| Produce, grade, and process eggs | 8% (3)                                |
| Grade eggs only                  | 3% (1)                                |
| Process eggs only                | 3% (1)                                |

<sup>a</sup> Activities listed in Table 1 align with the Authority's licence categories

#### 3.2 Over 80% of surveyed businesses are required to apply for an Authority licence

Under the Scheme, businesses that produce or grade more than 20 dozen eggs for sale in any week are required to be licensed with the Authority<sup>3</sup>. Businesses that process, store or transport egg products<sup>iv</sup>, or produce speciality eggs<sup>v</sup>, must also hold a licence. Licensed businesses are either audited or inspected.

Small businesses that produce no more than 20 dozen eggs for sale in any week are not required to hold a licence but must notify the Authority of their business details and adhere to certain requirements<sup>4</sup> of Food Regulation 2010.

Figure 1 shows the percentage of survey participants that are required to obtain a licence compared with those producing lower levels who must notify their details. Of all the businesses responding to the survey, 83% (n=33) indicated that they produce a sufficient quantity of eggs to require a licence. Thirteen percent of businesses (n=5) will not need a licence because they produce no more than 20 dozen eggs for sale every week.

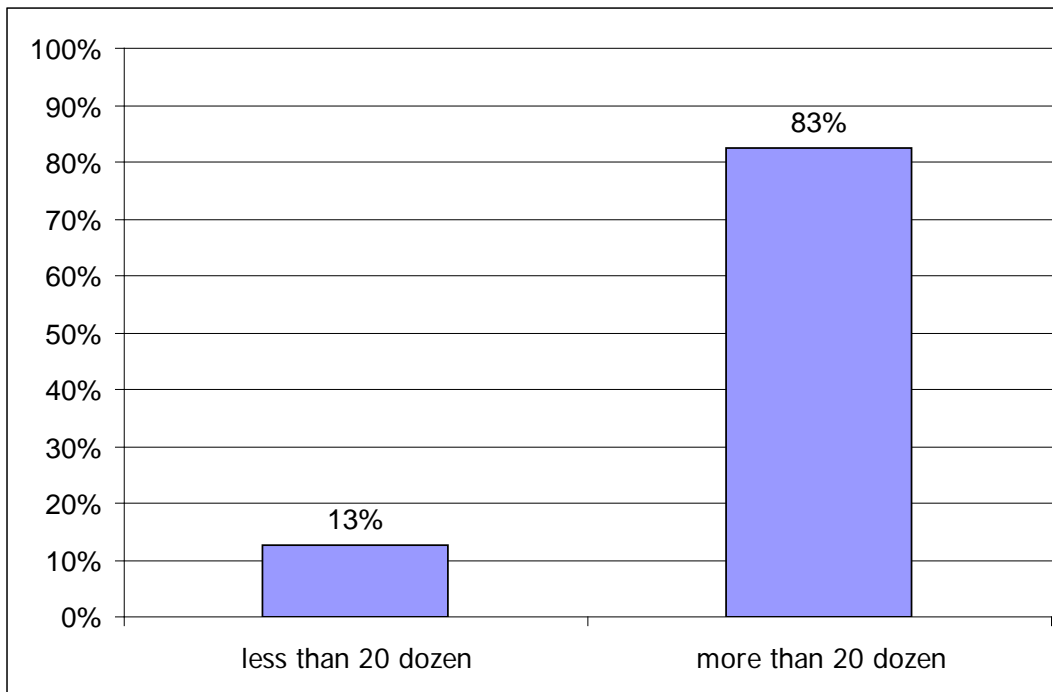
<sup>ii</sup> Includes egg businesses that wash, and/or examine eggs to detect for cracks

<sup>iii</sup> Includes businesses that manufacture or pasteurise egg products with at least 80% egg white and/or yolk

<sup>iv</sup> Store and/or transport egg products with at least 80% egg white and/or yolk, cracked eggs or speciality eggs.

<sup>v</sup> NSW businesses that produce specialty eggs were not included in the evaluation

**Figure 1. Egg businesses and weekly production volumes**



### 3.3 Free range egg production the most common system for survey participants

Businesses were asked what egg production system(s) they use: cage, barn laid and/or free range. Of the businesses that responded to this question (n=38), 70% indicated that they operate with a free range system, 28% a cage system and 15% a barn laid system. See Table 2 below.

The majority of businesses surveyed (87%) operate with one production system only (n=33), and 14% operate with more than one system (n=5).

**Table 2. Type of production system used by NSW egg businesses**

| Type of production system | Percentage response of businesses (n) |
|---------------------------|---------------------------------------|
| Free range                | 70% (28)                              |
| Cage                      | 28% (11)                              |
| Barn laid                 | 15% (6)                               |



## 4. Food safety program preparation

### 4.1 One-third of surveyed businesses yet to implement a food safety program

Half (n=20) of the survey respondents indicated that they did not have a food safety program (FSP) in place. However, only one-third (35%) of respondents that did not have an FSP in place would in fact be required to implement an FSP.

Under the Scheme, egg businesses that wash eggs, examine eggs to detect cracks<sup>vi</sup> and/or process<sup>vii</sup> eggs are required to comply with certain clauses of the Food Standards Code and implement an FSP that complies with Standard 3.2.1- Food Safety Programs.

Of the businesses that indicated that they had FSPs (46%, n=18), about 60% (n=11) said that their program had been externally audited in the past 12 months.

A small proportion (5%) of surveyed businesses indicated that they were in the process of implementing an FSP. See Table 3 below.

**Table 3. Number of businesses surveyed with an FSP**

| Response                              | Percentage response of businesses (n) |
|---------------------------------------|---------------------------------------|
| Yes, not audited                      | 18% (7)                               |
| Yes, audited in the past 12 months    | 28% (11)                              |
| No                                    | 50% (20)                              |
| In the process of implementing an FSP | 5% (2)                                |

Under the Scheme, businesses that produce eggs only (and do not examine eggs to detect for cracks) are not required to implement an FSP but must implement certain food safety requirements. These requirements include basic documentation and record keeping<sup>5</sup>.

<sup>vi</sup> Conduct final crack detection before sale

<sup>vii</sup> Manufacture (eg collecting pulp) or pasteurise products with at least 80% egg white or yolk, or manufactures specialty eggs.

#### 4.2 Small proportion of surveyed businesses incorrectly handling broken eggs

Businesses were surveyed on their practices in relation to handling cracked and broken eggs.

Under the Scheme, cracked eggs must only be sold to licensed egg businesses.

Survey results indicated that 27% (n=10) of businesses handled cracked eggs for human consumption. These respondents stated that they either collected pulp or sold eggs for further processing. However, almost three-quarters (73%) of businesses surveyed stated that they did not handle cracked eggs for human consumption. Instead, cracked eggs were used or sold as stock feed or discarded.

**Table 4. Handling cracked and broken eggs**

| Activity                                 | Percentage response of businesses (n) |             |
|--|---------------------------------------|-------------|
|  | Cracked eggs                          | Broken eggs |
| Used or sold for human consumption       | 27% (10)                              | 9% (3)      |
| Removed from the human food supply chain | 73% (27)                              | 91% (29)    |

■ Complies with Clause 159 and 160 of Food Regulation 2010,

■ Does not comply with Clause 160 Food Regulation 2010

Over 90% of businesses surveyed (91%, n=29) indicated that their broken egg handling practices would align with Scheme requirements. These businesses stated that broken eggs were used or sold as stock feed or discarded.

Conversely, 9 per cent (n=3) of respondents indicated that they handled broken eggs for human consumption. These businesses indicated that they used or sold broken eggs for further processing. These activities do not align with the requirements of the Scheme, which stipulates that a person must not sell a broken egg intended for human consumption.

The findings informed the Authority's implementation approach. Accordingly, industry assistance materials included information on correct handling practices for cracked and broken eggs.

## 5. Industry assistance is needed to implement the Scheme

### 5.1 Three-quarters of survey participants requested assistance from the Authority

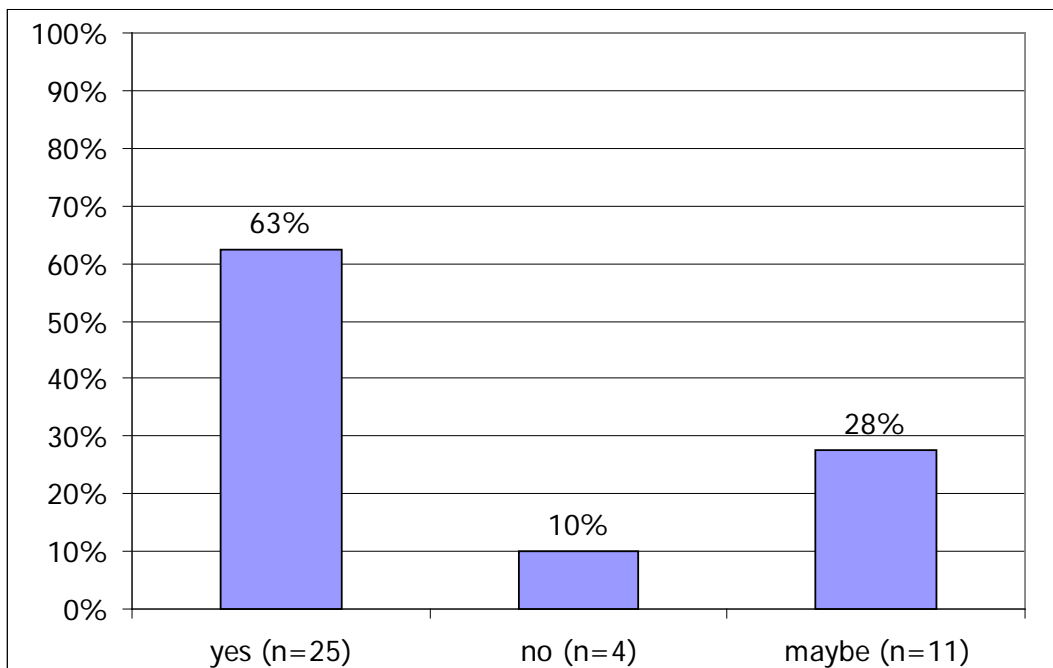
Almost three-quarters (73%) of respondents (n=35) indicated that they required assistance from the Authority, such as information sheets, food safety program templates or an industry helpline, to implement the Scheme. See Table 5.

**Table 5. Need for implementation assistance**

| Answer              | Percentage response of businesses (n) |
|---------------------|---------------------------------------|
| A lot of assistance | 8% (3)                                |
| Some assistance     | 65% (26)                              |
| No assistance       | 15% (6)                               |

Most businesses that participated in the survey (63%, n=25) indicated that they were interested in attending an information session about the Scheme. Only 10% stated that they were not interested and three in ten (28%) were unsure. See Figure 2 below.

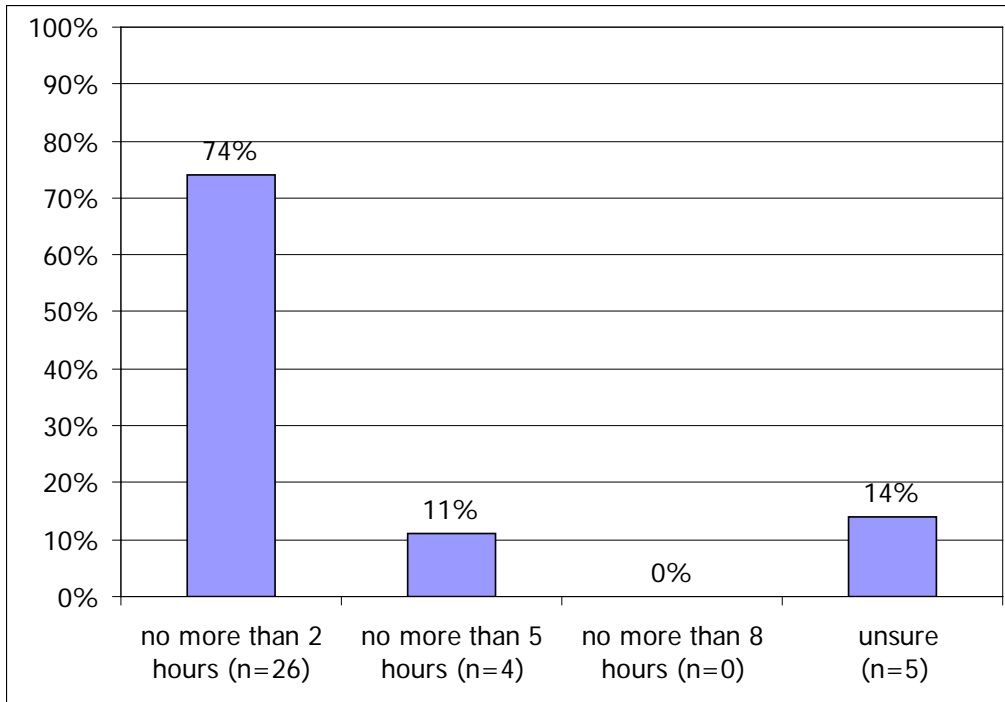
**Figure 2. Businesses interest in attending information sessions about the Scheme**



### 5.2 Most businesses would travel up to 2 hours to attend an information session

Three quarters (74%) of respondents indicated that they would travel up to two hours to attend a briefing session about the Scheme requirements. One in ten (11%) businesses indicated that they would travel no more than five hours, and understandably no businesses would be willing to travel more than eight hours.

**Figure 3. Time prepared to travel to attend an information session**



Businesses were also asked to select their preferences for the information session. Most indicated they would prefer a weekday between 9am and 5pm (31%), followed by weekdays after 5pm (23%). The least preferred time was weekdays before 9am and weekends (6%). See Table 6.

**Table 6. Preferred information session times**

| Answer                   | Percentage of responses (n) |
|--------------------------|-----------------------------|
| Weekdays before 9am      | 6% (2)                      |
| Weekdays between 9am-5pm | 31% (11)                    |
| Weekdays after 5pm       | 23% (8)                     |
| On weekends              | 6% (2)                      |
| Any time is suitable     | 20% (7)                     |
| Unsure                   | 14% (5)                     |

### 5.3 Communicating Scheme requirements needs multiple approaches

The survey results indicated that the NSW egg industry is reliant on multiple sources when accessing food safety information. Industry appeared to access information equally via the internet, print and in person.

Almost half (45%) of the businesses responding to the survey (n=17) indicated that they receive food safety information from magazines or newspapers. Four in ten (42%) businesses also indicated that they receive information from Australian Egg Cooperation Limited (AECL), the internet (including via the Authority's website) or by word of mouth.

These findings provide guidance on the ways in which the Authority should implement the Egg Scheme in NSW. They highlight the importance of using all three approaches:

- web-based/internet,
- print, and
- via the Authority's food safety officers,

when providing information about the Scheme requirements to industry stakeholders.

**Table 7. Main sources of food safety information**

| <b>Answer</b>                         | <b>Percentage response of businesses (n)</b> |
|---------------------------------------|--|
| Magazines or newspapers               | 45% (17)                                     |
| Internet                              | 42% (16)                                     |
| AECL (auditors, website, newsletters) | 42% (16)                                     |
| Word of mouth                         | 42% (16)                                     |
| NSW Food Authority (website)          | 40% (15)                                     |
| Industry associations                 | 26% (10)                                     |
| NSW Department of Primary Industries  | 26% (10)                                     |
| Private/independent auditors          | 26% (10)                                     |
| Other                                 | 24% (9)                                      |

## 6. Conclusion

Findings have been used to gather industry profile information and benchmark food safety practices prior to the commencement of the Egg Food Safety Scheme.

These survey results have informed the Authority's processes in implementing the Scheme. Specifically, they have been used to inform the:

- development of standardised inspection/audit tools, information sheets and food safety program templates, and
- the way the Authority has chosen to communicate requirements to licence holders (eg the decision to include an education component in every first inspection and audit).

The results have also highlighted areas for the Authority's food safety auditors to focus on during first mandatory inspections and audits. These include certain food safety program requirements and handling practices for cracked and broken eggs.

Given that this evaluation (phase I) was a self-assessment survey, the Authority plans to complete further evaluation work (phase II) when regulatory visits commence. This will involve an onsite assessment of food safety practices and the collection of egg farm environment samples for microbiological analysis.

Future work will include gathering further information on egg production systems (eg barn laid, cage or free-range), and industry practices in NSW licensed egg businesses.

## References

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