

NSW DAIRY FOOD SAFETY SCHEME EVALUATION



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Introduction

NSW is Australia's second largest milk producer with 323,000 dairy cattle¹ and milk production in 2015-16 worth \$594 million.²

The NSW dairy industry has a national and international reputation as a consistent supplier of high quality dairy produce. In 2016-17, compliance with food safety requirements across the NSW dairy sector was 97%.³

Much of the milk produced in NSW southern dairying region is processed into milk powders and other processed dairy products for export. The NSW whole milk industry is domestically focused and is mostly sourced from central and northern NSW dairying regions.

The NSW dairy industry is regulated by the NSW Food Authority (Food Authority) under Food Regulation 2015. The Dairy Food Safety Scheme (Scheme) details how the industry is regulated, providing a safety management framework to control the food safety risks associated with this high-risk product.

The Dairy Food Safety Scheme

The Scheme specifies controls for the safe handling of milk, and products made from milk, intended for human consumption. It covers the milking of animals, through to collection, processing, storage and transport. The Scheme focuses on the dairy food supply chain in minimising foodborne illnesses caused by consumption of dairy products.

Key features of the Scheme include:

1. Over 1,700 licensed dairy businesses;
2. Use of third-party auditors to monitor primary producers;
3. Use of audits and inspections by the Food Authority to monitor processing and transporting; and
4. End product microbiological testing requirements for processors.

The Food Authority consults with the dairy industry on matters relating to the Dairy Food Safety Scheme via the NSW Dairy Industry Consultative Committee.

The Food Authority prepares educational materials and runs training programs for all dairy industry sectors to assist licensees to meet their obligations.

The Scheme is subject to a risk assessment each time the food regulation is re-made. Risk assessments were completed in 2009 and 2014. Licence fees were also reviewed in 2009. These provided opportunities to identify ongoing and emerging issues, assess existing approaches and propose improvements.

¹ Australian Bureau of Statistics (July 2017), 7121.0 – *Agricultural Commodities, Australia, 2015-16* (<http://www.abs.gov.au/ausstats/abs@.nsf/mf/7121.0>). NSW had a 323,000 head dairy herd in 2015-16.

² Australian Bureau of Statistics (July 2017), 7503.0 – *Value of Agricultural Commodities Produced, Australia, 2015-16* (<http://www.abs.gov.au/ausstats/abs@.nsf/mf/7503.0>). \$594 million was the gross value of NSW milk production in 2015-16.

³ NSW Food Authority (October 2017), *Annual Report 2016-17*, page 29 (http://www.foodauthority.nsw.gov.au/Documents/corporate/annual_report_2016_17.pdf).

The evaluation

Objectives

The Scheme has been operating since the Food Authority was formed in 2004. Apart from the risk assessments and licence fee review outlined above, this is the first formal evaluation of the Scheme and the NSW dairy sector since the Scheme commenced.

The evaluation:

- Documented the implementation of the Scheme since 2004;
- Compared the Scheme's objectives with its achievements and recommended improvements;
- Determined the efficiency of the delivery of the Scheme; and
- Documented benchmarks at key control points in the supply chain.

Scope

Products in-scope included pasteurised and raw milk, and milk products for human consumption – cow, goat, sheep, camel and buffalo milk. The evaluation did not include raw milk for bath milk or pet food, cold storage facilities, retail or transport post processing.

Activities within scope focused on the milk supply chain, namely dairy primary producers, dairy producers and processors, bulk milk transporters (of raw milk) and dairy processors.

Methodology

The evaluation reviewed internal Food Authority data, external dairy industry data and new data collected from dairy farmers, dairy transport businesses and dairy factories.

Internal Food Authority data included information on licensing, compliance, audits, inspections, complaints, product verification (end product testing), exceedances, seizures and finances.

External data, which had been published, came from the Australian Milk Residue Analysis Survey, Dairy Australia and the Australian Bureau of Agricultural and Resource Economics and Sciences. Unpublished data on NSW milk quality was obtained from SafeFood Production Queensland, which records performance data for some northern NSW milk factories on behalf of the Food Authority.

Analysis focused on a five-year period, from July 2011 to June 2016.

Phone surveys were conducted in May 2017 with dairy primary producers, including those who also process their own milk. Online surveys were also sent to all dairy transport businesses and dairy processors in NSW. One hundred and eighty-eight (188) dairy primary producers, six primary producers and processors, 64 processors and four transport businesses responded to the surveys.

The evaluation also included a literature review.

Evaluation questions

The effectiveness and efficiency of the Scheme was assessed against four key evaluation questions:

1. Is the Scheme achieving its objectives and can improvements be made?
2. Is the dairy food safety regulation still relevant and can improvements be made?
3. How is the Scheme perceived by industry and does the industry want change?
4. Are there any unintended outcomes due to the Scheme?

Key findings

Internal and external data review

The evaluation determined that the Scheme had met its primary objective – to ensure that NSW dairy food sold for human consumption is safe to eat. For example, there were no foodborne illness outbreaks in NSW linked to locally made dairy products and only nine recalls of NSW-manufactured dairy products during the evaluation period, despite NSW milk production volume of 1,179 million litres in 2015-16.⁴

Other key findings included:

- Dairy producers consistently met agreed quality indicators for their milk, namely for the bulk milk cell count and standard plate count;
- 96% of manufactured dairy products tested were within prescribed microbiological limits;
- The dairy industry fully complied with prescribed agricultural and chemical residue limits in each year of the evaluation period, indicating robust on-farm food safety practices;
- The Food Authority helped reduce duplicative audits by:
 - effecting a Memorandum of Understanding with the Department of Agriculture and Water Resources to audit export registered dairy processing facilities in NSW
 - approving third-party auditors (i.e. those commercially employed) to conduct regulatory audits of NSW dairy farms on its behalf;
- The Food Authority encouraged industry innovation by conducting alternative compliance assessments on new technologies. For example, in 2016, it approved high pressure processing as an alternative to pasteurisation for the safe processing of raw milk;
- The Scheme facilitates a large through-chain data set to be collected. This may be further leveraged to underscore the safety and quality of NSW product for the domestic and international market;
- The Scheme addresses animal health by requiring that hazards arising from milking animals and milking practices be managed; and
- On average, the Food Authority spent an additional \$64,000 annually in overseeing the Scheme (\$784,000) than what it collected in fees from industry (\$720,000).

⁴ NSW Department of Primary Industries (December 2017), *Performance, Data and Insights 2017*, page 59 (https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0004/750352/nsw-dpi-performance-data-and-insights-2017.pdf).

Dairy industry survey

The NSW dairy industry survey provided insights into the industry's view of dairy food safety regulation and the Scheme. The results suggest the Scheme is addressing the key food safety risks identified by the dairy industry through effective regulation, policies and testing.

The key findings included:

- A high degree of confidence in the Food Authority as a regulator. Ninety-two percent of dairy processors surveyed rated their food safety audit experience with the Food Authority positively, with 75% describing them as 'very good';
- Licensees maintain that NSW dairy regulations are easy to comply with as they align with commonly accepted and understood dairy supply chain risks;
- Concern amongst dairy business sectors about the quantity of compliance documentation required. It was unclear from the survey whether the concern related to documentation required under the Scheme or additional documentation required to comply with contractual/commercial requirements and specifications;
- Some concern about regulatory auditor inconsistency in identifying non-compliances and knowledge of dairy supply chain risks;
- The high cost of testing and auditing in the dairy processing sector was not expressly due to regulatory requirements (the significant testing and auditing requirements imposed by customers were beyond the scope of this evaluation); and
- There was interest in developing further guidance and possibly training on:
 - maintaining technical documents and records
 - pest control, and use of agricultural and veterinary chemicals
 - food safety issues and regulatory requirements.

Response

Although the key findings indicate that the Scheme is well managed and administered, the evaluation highlighted some areas for improvement.

The Food Authority has already taken on board many findings and industry suggestions through actions including:

- Developing tools to educate the industry on food safety risk management, including fact sheets, newsletters, face-to-face communications (during audits and inspections) and industry-specific manuals;
- Developing detailed mandatory auditor guidance manual to avoid inconsistency in auditors' identification and categorisation of non-compliances. Additionally, auditors undertake comprehensive annual training on any legislative or administrative changes;
- Regular review and updating of the NSW Food Safety Schemes Manual to ensure that testing requirements are commensurate with risks and industry performance. The Manual was most recently reviewed in 2015; and

- Implementing a targeted compliance program to address industry sectors with chronic low performance issues. This program generally targets small processing businesses.
- As previously noted, the Food Authority also attempts to minimise regulatory burden by approving third-party auditors (i.e. those commercially employed) to conduct regulatory audits of dairy farms on its behalf.

The Food Authority will also undertake the following additional actions:

1. Confirm that use of off-label veterinary chemicals in animals covered by the Scheme can only occur under the direction of a registered veterinarian.
2. Add Property Identification Code and email fields on Byte's⁵ licensing renewal forms to facilitate more rapid communication with licensees during incidents, such as biosecurity or foodborne illness outbreaks. (A project to capture this information is underway).

⁵ Byte is the Food Authority's information management system.



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