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Technical information note

Food defence

This information note outlines 'food defence' as it relates to various dairy supply chain operations, and describes strategies used to address the risks of potential deliberate product contamination.

What is 'food defence'?

Food defence is a term that emerged following a number of terrorist attacks, predominantly those carried out in the USA in 2001, which prompted the investigation of other possible modes of terrorist activity. For the dairy industry food defence can be defined as:

"*Having a system in place to prevent, protect, respond to and recover from the intentional introduction of contaminants into our nation's food supply to cause public health, psychological, and/or economic consequences.*"[1]

Food protection is a broader term that includes intentional, implied and unintentional contaminations, combining the aspects of food quality, food safety and food defence. Within the Victorian dairy industry, food safety issues associated with production and manufacturing are addressed through approved food safety programs (FSPs). Consideration and awareness of food defence issues will assist in limiting the potential for compromising the safety of dairy products through deliberate contamination.

In conjunction with the advice provided in this note, businesses should also refer to relevant government support material, such as the *Good Security Good Business* guide from the Trusted Information Sharing Network.[2]

Those with the motivation to attempt to contaminate food may include:

- disgruntled employees (including former employees)
- people with an issue against a specific manufacturer
- people who aim to attract attention and media notoriety
- extortionists with the intention of receiving money
- terrorists with the aim of retribution or causing fear within the population.

A contamination attempt may occur in any of the primary production, processing (manufacturing), or post-processing areas of the food chain. Any contamination occurring at the primary production or processing stages can potentially reach more consumers than if it occurred in the retail area, where it may be limited to single packs of product. Even harder to prevent is the threat of an attack, with no accompanying contamination, but which can still have serious repercussions for a business and the broader community (such as the tarnishing of company reputation or loss of community confidence in products).

Defending against intentional contamination

The United States Food and Drug Administration (FDA) responded to the terrorist issue by releasing the *Food Security Preventive Measures Guidance*[3] in 2003. A later guide, the *Food Defense Plan Builder*[4] (released 2012), is a software program that assists in the development of customised plans to minimise the risk of intentional contamination at a food facility (whether primary production, manufacturing, retail or transportation). The downloadable program guides the user through a series of questions about their facility, with the end result providing a comprehensive food defence plan tailored to their situation. The program can be accessed at:
www.fda.gov/food/fooddefense/

The final **food defence plan** produced through this program consists of:

Broad mitigation strategies – These provide the basis of the comprehensive food defence plan. Strategies include security and screening procedures for the facility, materials, and people. Understanding and evaluating the broad mitigation strategies assists the user to document current practices and determine any gaps or deficiencies. These strategies for food defence are similar to the good manufacturing practices (GMPs) or prerequisite programs for food safety.

Vulnerability assessment – This is a process of identifying, quantifying, and prioritising processing operations in a facility; evaluating individual steps within the production processes; and identifying steps with the greatest risk for intentional contamination. This assessment is similar to the Hazard Analysis Critical Control Point (HACCP) analysis for food safety.

Focused mitigation strategies – These make use of science-based procedures, practices, or processes that can be used to minimise the vulnerability of the specific process steps identified in the vulnerability assessment.

Emergency contacts – This report includes specific company information, food defence team members, and emergency contacts. The food defence team should also be identified under the company's broader incident or crisis management team protocol.

Action plan – This lists all of the action steps identified from the mitigation strategies sections as needing to be taken, and helps the user track and manage each step.

Supporting documents – Documents such as process flow charts, facility maps, recall plans, company-specific policies or documents can be incorporated into the plan.

The following areas expand on some of the detail that dairy farmers, carriers, manufacturers and distributors should consider.

Management

- Conducting an initial assessment of security procedures currently in place.
- Developing a confidential security management strategy.
- Having a product recall plan and strategy, and regularly testing its effectiveness (e.g. through mock recalls).
- Providing training to staff in food security awareness.
- Providing appropriate supervision to all staff with access to product or ingredients.
- Reviewing the effectiveness of the food security plan at least annually.
- Alerting law enforcement and authorities responsible for products about threats or incidents.

The human element

- Obtaining and verifying work references before taking on staff.
- Keeping alert for possible reactions by disgruntled employees (e.g. 'heat of the moment' actions)
- Undertaking police reference checks on persons before employing them.
- Limiting access to product and ingredients to only those staff that need to be in production areas.
- Preventing staff from bringing personal items into areas where product or ingredients are accessible.
- Being alert for atypical staff health conditions or a spread of those conditions.
- Accompanying all visitors at all times when they are in areas with access to product and ingredients.

The facility

- Providing a secure perimeter barrier around the premises.
- Securing doors and other entry points to areas where product or ingredients can be accessed.
- Conducting routine security checks of product and raw materials.
- Monitoring the security of the premises, including the possibility of installing video monitoring systems.
- On farm, consider locking all entrances to the vat room and entry points on the bulk milk tank.

Operations

- Using only appropriately licenced sources of product and ingredients.
- Supervising all deliveries of feedstock, product and ingredients, and inspecting for any tampering, contamination or damage.
- Inspecting bulk unloading equipment and pumps in the receiving area before use.
- Reconciling the product and amount received with the amount delivered.
- Investigating any documents with suspicious alterations.
- Storing all product, ingredients and product labels in a secure location.
- Using only reputable transport companies and establishing delivery schedules.

Emergency point of contact

Should any dairy farmers, manufacturers, carriers, or distributors suspect that tampering or malicious, criminal or terrorist activity may have taken place, they should immediately inform both the police and Dairy Food Safety Victoria. Such suspicions should not be taken lightly, as they may have serious implications for both the business and consumers.

Depending on the severity of the incident, initiation of business emergency or crisis response plans may be appropriate, and a product recall program may also need to be initiated. The Australian National Security website[5] may be a pertinent reference point in instances that are significant industry-wide issues.

Key points to consider

- Food defence is a strategy that all businesses in the food chain should be familiar with. Intentional acts of contamination could have devastating effects on both the individual business and the broader industry.
- Business owners should investigate tools that are available to help them mitigate the risks of deliberate attacks on their business, and have a food defence plan in place.
- Maintaining vigilance, and the awareness of potential risks, are important in helping minimise the likelihood of an incident occurring.

References

1. C Yoe, M Parish, D Eddy, D Lei, B Paleg & J Schwarz, 'The Value of the Food Defense Plan', *Food Safety Magazine*, April/May 2008.

2. The Australian Government Attorney-General's Department, Trusted Information Sharing Network, *Good Security Good Business*, Commonwealth of Australia, Canberra 2008.

3. US Food and Drug Administration, *Guidance for Industry, Dairy Farms, Bulk Milk Transporters, Bulk Milk Transfer Stations and Fluid Milk Processors. Food Security Preventive Measures Guidance*, US Department of Health and Human Services, Maryland July 2003.

4. United States Food and Drug Administration, *Food Defense Plan Builder*, US Department of Health and Human Services, Maryland 2012. www.fda.gov/food/fooddefense/

5. The Australian Government Attorney-General's Department, *Information for Businesses. Australian National Security*, Commonwealth of Australia, Canberra 2011.

Further information

Further food safety technical information is available at **www.dairysafe.vic.gov.au**

Or contact Dairy Food Safety Victoria on **(03) 9810 5900** or **info@dairysafe.vic.gov.au**