

# Securing our food supply

*Wells and Edwards present current strategies aimed at securing food supply chains into future emergency response systems*

## Abstract

In the post 11 September 2001 and Bali bombing environment, great effort is being made to ensure the security of Australia's critical infrastructure including the food supply chain. Australian governments have established a partnership arrangement with industry for ensuring the security of our critical infrastructure. An industry-led Food Chain Assurance Advisory Group has been set up to identify and address potential gaps and vulnerabilities in the existing food safety and security system. The Group is working on a strategy and work plan to address key recommendations from a strategic assessment of the system.



## Protecting our critical infrastructure

Ensuring the security of our critical infrastructure, those things essential to the normal flow of our daily lives, is a major concern for governments and industry in the new security environment following the 11 September 2001 and Bali bombing incidents. With much of the country's critical infrastructure owned and operated by the private sector, the Australian, State and Territory governments agreed on the need for a partnership with industry to enable the sharing of security information. This partnership was formed with the setting up of the Critical Infrastructure Protection (CIP) program in 2003. The program consists of the Trusted Information Sharing Network (TISN) overseen by the Critical Infrastructure Advisory Council (CIAC), and includes Infrastructure Assurance Advisory Groups (IAAGs) to ensure the identification and protection of the

critical infrastructure of particular industries or sectors.

The Australian Government Attorney-General's Department established the TISN and the CIAC including the TISN website, [www.tisn.gov.au](http://www.tisn.gov.au) as an information and networking tool for critical infrastructure protection. The work of the TISN is underpinned by an 'all hazards' approach to addressing risk in the new security environment.

The food supply chain has been identified as part of our critical infrastructure and a Food Chain IAAG (The Food Chain Group) has been established as part of the TISN.

## What is the Australian food supply chain?

The food supply chain covers a spectrum of activities from agricultural production of bulk food commodities and ingredients

through fresh produce to manufacturing, distribution, sales and consumption. It includes fresh and processed food products, ingredients and beverages.

The food sector is a significant contributor to the economy and an integral part of the normal flow of our daily lives. It contributes in excess of seven percent to the nation's annual gross domestic product. It makes a major contribution to our social, economic and political wellbeing and is a significant element of our national infrastructure.

Food processing is Australia's largest manufacturing industry generating total sales in excess of \$55 billion. Food production, not including retail, employs around 250,000 people with one in four manufacturing jobs in the processed food industry. The majority of these jobs are in regional and rural Australia.



Consumer expenditure on food in 2002–03, total was approximately \$80 billion, or about 46 percent of Australian retail spending. Australian food exports were \$22 billion, or 19 percent of Australian merchandise exports (DAFF 2004).

### Is our food supply chain at risk?

For an advanced western society, we still experience a significant level of foodborne illness in our community. Each year in Australia about six million people experience an episode of gastroenteritis from contaminated food. Doctors and laboratories are required by law to notify health departments of certain infections or if they recognise an outbreak. However, the majority of foodborne infections are mild and do not require medical attention. Around 25–30,000 notifications of eleven potentially foodborne diseases are reported to health departments for investigation each year. Outbreaks are less common, with health departments investigating approximately 90 outbreaks of foodborne disease each year. This level of background illness, and the time required to identify the cause and source of the infection, makes it difficult to quickly recognise an incident of accidental or deliberate food contamination.

New risks to agriculture and food production have arisen in our current security environment. Alternate capabilities using emerging technologies could be used against economic targets such as agriculture and food industries. This possibility has been raised world-wide by the World Health Organisation, which states: “The prospect of malicious contamination of food for terrorist purposes is a real and current threat” (WHO 2002). Assurances about the security of the food supply chain are increasingly required, with Australian businesses now required to establish systems to meet heightened US standards for security, and it is likely more will be required for other key export markets.

While the risk of deliberate contamination of our food supply is low, elements of the food supply chain are potentially vulnerable. An act of deliberate contamination could be very serious in terms of human health and trade.

### How do we deal with risk in the food supply chain?

For our agriculture and food industries, safety and security are integrated concepts.

“Outbreaks of both unintentional and deliberate food borne illness can be managed by the same mechanisms. A comprehensive approach including sensible prevention, preparedness, response and recovery measures constitutes the most efficient and effective way of countering all such emergencies, including food terrorism,” (WHO 2002)

Identifying and managing risk through an ‘all hazards’ approach is a basic tenet of good business practice and corporate governance, equally relevant in the agriculture and food industries as any other.

Australia already has a rigorous food safety and security system. A range of industry and government arrangements is already in place to assist industry in meeting current safety and quality standards. The system, including good business management practices and corporate governance arrangements, already provides a high degree of protection of the food supply chain.

However, the system is designed primarily to provide protection against natural and accidental risks to the food supply. Our challenge is to ensure the system is capable of dealing with attempts to deliberately contaminate the food supply as well.

### What is critical in the food supply chain?

Food is different from many other elements of our critical infrastructure. We enjoy access to a wide range of food products from a diverse range of production areas, processors, manufacturers and retailers. The supply of food is not reliant on any particularly significant production facilities. Indeed, while devastating for the business affected, the destruction of physical

facilities is most unlikely to have a serious impact on our food supply. What is critical in the food chain is the food itself. Deliberate contamination of the food supply has the potential to threaten public health through injury, illness or death, and undermine confidence in the safety of the food we eat and in our export markets. The mere threat or claim of contamination has the potential to severely affect markets and consumption.

Furthermore, should there be an undeclared incident of deliberate contamination of the food supply, it would be some time before authorities or food businesses could recognise it as a deliberate incident. Health authorities constantly monitor and manage the background incidence of foodborne illness across the nation. Under these circumstances, a deliberate incident may not be immediately apparent.

## The food chain group

The Food Chain Group of the TISN was formed in July 2003 and is an industry-led body comprising industry and government representatives of the key components of the food supply chain. The Group is chaired by Mr Dick Wells, Chief Executive of the Australian Food and Grocery Council, with secretariat support provided by the Australian Government Department of Agriculture, Fisheries and Forestry. The role of the Group is to provide leadership and co-ordination in ensuring the food safety and security system is capable of dealing with new and emerging risks to the food supply chain.

The Group has completed a strategic assessment of the food safety and security system to identify potential gaps and vulnerabilities in the event of deliberate attempts to contaminate the food supply. The outcomes of the assessment have formed the basis for the development of a strategy and work plan for the Group, industry and government

to ensure the resilience of the food safety and security system.

The food supply chain is also highly reliant on a range of support and service provider sectors and industries for the continuity of production, manufacturing, and supply. These include water, transport, energy and communications, to mention a few. Significant disruption in any of these sectors has the potential to impact directly on the maintenance of our food supply. The Food Chain Group recognises the importance of these dependencies, the need to fully understand them, and appropriate mechanisms to manage the consequences of disruptions in other sectors. This is an area to be further evaluated and addressed by the Group.

## A food supply chain safety and security strategy

The Food Group recognises that elements of our food supply chain are potentially vulnerable. While every effort must be made to ensure the safety and security of the food supply chain, it is neither practical nor economically feasible to attempt to protect against all risks. We adopt a risk-based approach in which we consciously accept a certain level of risk. This calls for a high degree of community awareness, and vigilance in industry and government and a preparedness to manage risk and the consequences of incidents.

The provision of targeted information and awareness raising is an important aspect in securing and maintaining the integrity of the food safety and security system and will underpin the delivery of the Group's strategy. The strategy will also improve the co-ordination of existing prevention and preparedness arrangements, including any required enhancements in the existing testing and detection systems. It will also ensure response and recovery

plans and capabilities are relevant, tested and validated. Research and development will investigate the means to manage gaps and potential vulnerabilities in the food safety and security system. A program of audit, testing and validation will underpin the strategy to ensure the system continues to be robust and resilient to new and emerging risks.

## Conclusion

Australia currently has a robust food safety and security system that is designed primarily to deal with accidental or natural contamination of the food supply. While the risk of deliberate contamination is low, it would be irresponsible to ignore the risks inherent in the new security environment. The industry/government partnership established to assess and address potential gaps and vulnerabilities in the existing system will lead to a national strategy aimed at securing our food supply into the future.

## References

- Australian Government Department of Agriculture, Fisheries and Forestry, Australian Food Statistics—Interim 2004
- Terrorist Threats to Food: Guidance for Establishing and Strengthening Prevention and Response Systems—Food Safety Department, World Health Organisation 2002

### Authors

Dick Wells is the Chief Executive of the Australian Food and Grocery Council (AFGC) and chair of the Food Chain Assurance Advisory Group. He has extensive experience working in government and industry. Before joining the AFGC Dick worked as Director with the Allen Consulting Group and was the Executive Director of the Minerals Council of Australia.

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