Undeclared importation of food from the Republic of Korea detected in December 2010

INTERIM INSPECTOR-GENERAL OF BIOSECURITY

INCIDENT REVIEW

March 2013

No: 2012-13/06

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On 2 March 2012 the Minister for Agriculture, Fisheries and Forestry requested the Interim Inspector–General of Biosecurity (IIGB) provide independent advice on an incident involving the detection of the undeclared/unlawful importation of food products from the Republic of Korea.

Objective

The incident review was undertaken to examine biosecurity risks associated with the importation of undeclared/unlawful food products from the Republic of Korea. The review included an examination of procedures and operations in relation to:

- import restrictions
- provision of certifications and declarations
- inspection and verification activities at the border
- biosecurity risks associated with the importation and distribution of the undeclared food products.

The IIGB also considered whether the Department of Agriculture, Fisheries and Forestry (DAFF) procedures and operations should be improved to reduce the likelihood of such biosecurity risks recurring.

The incident

On 4 April 2011 DAFF announced via a media release (DAFF 2011a) that it had uncovered evidence of deliberate and unlawful importation and distribution for retail sale of significant quantities of prohibited food items from the Republic of Korea. In December 2010 a shipment of prohibited food was identified during a random import clearance effectiveness inspection of frozen fish products. The prohibited foods included cooked and uncooked pork, chicken, beef and dairy products.

Australia does not permit the importation of uncooked meat from the Republic of Korea. Canned/retorted meat products or products containing meat flavours are allowed if Australia's import requirements regarding processing, sourcing of meat and product packaging are met. These restrictions are in place to meet Australia's appropriate level of protection standards against exotic diseases.

DAFF took prompt action to contain biosecurity risks associated with this incident. One such action was the launch of Operation Hayride in 2011. This major national investigation and compliance initiative targeted deliberate and serious breaches of the *Quarantine Act 1908* associated with the unlawful importation and distribution for retail sale of prohibited food items from the Republic of Korea.

DAFF's nationwide investigations revealed a network of importers, brokers and quarantine approved premises (QAP) operators engaged in the deliberate unlawful importation and distribution of prohibited food items for retail sale. The investigations found that the prohibited food items were either wrongly declared or not declared during their importation to avoid being directed for DAFF inspection and quarantine.

Noncompliant food products were recovered from several retail stores in Queensland, New South Wales and Victoria. In its efforts to recover the prohibited food, DAFF intercepted 225 consignments,

attended over 300 retail premises across Australia and seized an estimated 132 tonnes of imported food products.

In addition to pursuing legal action against importers, DAFF has imposed administrative sanctions on QAPs involved in the unlawful importation. These sanctions include revocation of approvals that allow individuals to hold imported goods at their own premises. Goods seized during Operation Hayride have been destroyed using DAFF-approved methods such as autoclaving, deep burial or incineration. Around 10 per cent of the goods were placed in secure storage under DAFF's control, to be used for evidentiary purposes and later destroyed at the conclusion of legal action.

At the time of the initial detection of undeclared food items from the Republic of Korea, an extensive outbreak of foot and mouth disease (FMD) was occurring in that country. The initial outbreak of FMD type A was reported to the World Organisation for Animal Health on 7 January 2010. This outbreak was believed to have started on 2 January 2010. Subsequent outbreaks involving FMD type O were confirmed in April and November 2010. The November outbreak was the most extensive FMD outbreak ever experienced in the Republic of Korea. Korea also experienced a series of outbreaks of highly pathogenic notifiable avian influenza (HPNAI) in poultry beginning with an outbreak on a farm on 29 December 2010.

Key findings and observations

This incident involved the undeclared/unlawful importation of food products from the Republic of Korea that were prohibited under DAFF import conditions. Legal proceedings in October and November 2012 have demonstrated that importers deliberately falsified documentation in order to circumvent import biosecurity controls.

The incident highlighted the complex challenges and vulnerabilities in border risk management processes for detecting undeclared/unlawful goods, in this case food products. DAFF is responsible for administering two sets of legislative requirements with which importers must comply. The first set of requirements addresses quarantine (biosecurity) concerns set out in the *Quarantine Act 1908*. The second set of requirements addresses food safety concerns set out in the *Imported Food Control Act 1992*. Imported food items must meet quarantine requirements in order to be permitted into Australia. However, the food safety requirements are not applied until the imported food has satisfactorily met quarantine requirements. This review focused on the biosecurity concerns set out in the *Quarantine Act 1908*.

Recommendations arising from the key findings are included in this report.

Import restrictions and requirements

In order to meet Australian standards for an appropriate level of protection, import restrictions are implemented to mitigate the biosecurity risk associated with the import of particular products. The restrictions take the form of import conditions with which importers are required to demonstrate compliance. These conditions are set down in relevant import permits issued by DAFF.

Australia has several restrictions on the importation of meat and food items containing meat from the Republic of Korea. Unprocessed meat product imports are not permitted. Some processed products may be imported if processing requirements are met, such as heat treatment and packaging, and they are assessed as shelf stable. Meat has to be sourced from animals that were free of infectious diseases at the time of slaughter.

When DAFF was notified that an outbreak of foot and mouth disease (FMD) had occurred in the Republic of Korea on 2 January 2010, it implemented what is now the *Overseas Exotic Disease Incident Strategy* (DAFF 2010a). This involved an immediate risk review followed by the implementation of measures, including reassessment of all existing permits that designated the Republic of Korea as the country of origin. As a result DAFF amended existing import permits for products such as lightly processed cheese and some milk products. The measures covered goods produced from 5 December 2009 to take account of incubation periods for FMD in the initial Korean outbreak. Imports of certain other food products of animal origin continued to be allowed depending on the levels of processing. These restrictions remain in place and will continue until DAFF determines that the Republic of Korea meets Australia's requirements for a disease-free country with respect to FMD.

Any consignments attached to varied permits were either intercepted at the border by DAFF inspection staff or traced and recalled if they had already been cleared.

This incident demonstrates that the effectiveness of import restrictions as a biosecurity risk control relies heavily on the integrity of importers and the accuracy of their import declarations. The IIGB notes that, by informing importers about goods that can enter Australia, DAFF controls aim to stop non-permitted, high-risk food products and other goods from being exported from overseas countries.

The IIGB notes that the DAFF import clearance system, which is based on permits, declaration and certification with inspections (when deemed to be required), is not fundamentally designed to detect deliberate attempts to import unlawful/undeclared products to Australia. This incident clearly demonstrates that some importers will knowingly act unlawfully, deliberately circumvent biosecurity controls and contravene import restrictions.

The *Quarantine Act 1908* does not provide for assessment of whether an import permit applicant is a fit and proper person. Import permits may only be revoked or suspended when there is a change in quarantine status or the risk associated with the commodity. Proposed amendments to biosecurity legislation could see the establishment of a criterion for a fit and proper person which would enable DAFF to determine whether permits should be issued to importers with poor compliance histories. In principle, the IIGB supports this as a further preventative control layer within the biosecurity control framework.

The IIGB considers DAFF had in place and executed adequate response plans and procedures to deal with the legal importation of food products that may have been affected by the outbreaks of FMD in the Republic of Korea. However, DAFF must further develop strategic and operational processes designed to anticipate and prevent deliberate attempts by importers to bring unlawful/undeclared products to Australia, especially when import trade patterns are disrupted due to a major change in biosecurity status of the exporting country.

Certificates and declarations

Certificates and declarations are the documentary means by which an importer demonstrates to DAFF that the product being imported meets the relevant import conditions (for example, the product was heat treated to required specifications). These certificates and declarations are provided to the importer by the manufacturer and supplier based in the exporting country.

Certification by the exporting country's government authority may also be required for some products.

The IIGB notes that, in assessing whether consignments need quarantine intervention, DAFF continues to rely on the accuracy and completeness of consignment documentation, as well as the correctness of answers importers/brokers give to the profile questions in the Integrated Cargo System (ICS).

This incident's findings showed a significant threat that imported food consignments that warrant quarantine intervention are bypassing inspection because importers/brokers are providing (intentionally or unintentionally) incorrect information. Developing and improving appropriate profiling questions that provide better information for assessment against the large number of internationally accepted tariff codes is a significant ongoing improvement challenge that DAFF is addressing within its available resources.

DAFF uses the AIMS computerised network system as its primary tool for cargo clearance. It is the administrative information management system for entry clearance assessments of import documentation. AIMS has significant limitations that could pose system-failure risk as the volume of import trade increases. For example, its free text fields are limited to a few hundred characters. These fields are used by DAFF officers to capture information related to the assessment and inspection of consignment documentation and goods. Officers frequently have to create multiple administrative lines for a specific consignment to capture sufficient information, including compliance-related details. As a result, valuable information may be missed when a particular consignment is being assessed. As DAFF's biosecurity system is focused on a risk return approach, and with the establishment of a criterion for a fit and proper person, this information becomes vital.

Inspection and verification

DAFF's biosecurity import clearance process for goods relies heavily on assessment of documentation. Consignments can be granted import clearance on biosecurity grounds on the basis of satisfying requirements for import documentation. If the goods are found to be compliant with the permit requirements on documentation assessment and no other risk factors are determined or inspection prompts flagged the goods are released without inspection. However, certain consignments are directed for DAFF inspection.

DAFF uses several inspection regimes to monitor and assess biosecurity risks. Import clearance effectiveness activities include inspections at importer's premises (called follow-up inspections), tailgate inspections and documentary assessment processes. Some consignments that are selected for routine biosecurity inspection to verify compliance with import conditions are unpacked from the container at a nominated QAP before the DAFF inspection officer arrives. This system offers an unscrupulous importer an opportunity to avoid detection by redirecting, in advance, any undeclared/unlawful products. This vulnerability was noted by the IIGB during on-site observation of a routine inspection.

Imported food products can be inspected to ensure they meet Australian requirements for public health and safety and compliance with Australian food standards as detailed in the Australia New Zealand Food Standards Code. The legal basis for the food safety inspection of imported food is the *Imported Food Control Act 1992*. This legislation allows DAFF to run a food safety inspection program

known as the Imported Food Inspection Scheme (IFIS). Foods are referred to DAFF for inspection under the IFIS by the Australian Customs and Border Protection Service.

Other control strategies

In response to this incident, DAFF has increased the number of compensating strategies designed to enable the detection of undeclared/unlawful products.

DAFF has several control strategies designed to detect the importation of undeclared/unlawful products. These include import clearance effectiveness (ICE) inspections and targeted inspection campaigns.

ICE inspections are randomly selected by DAFF entry management officers. The IIGB notes that from January 2010 to May 2012 DAFF conducted 17 132 ICE inspections nationally. Of these 1421 failed the inspection (8.3 per cent failure rate). These failures included commodity and/or non-commodity (packaging or container-related) issues. Significantly, they also included both incorrectly and unlawfully declared products.

The IIGB notes that DAFF launched the cargo compliance verification program on 1 February 2013. This program, which has replaced the ICE program, will implement a number of improvements to the random inspection of imported containerised sea cargo.

The incident under review and the outcomes of subsequent targeted intervention campaigns by DAFF demonstrate that there exists a significant risk of noncompliance. This risk is exemplified in this incident by the misrepresentation (deliberate or inadvertent) of the nature of these consignments. Misrepresentation includes wrongful declaration of the contents of the consignment, inclusion of prohibited foodstuffs within the consignment and vague or misleading labelling of packaging in order to conceal the presence of components of biosecurity concern (for example, meat).

The IIGB notes the incident under review was detected in an ICE inspection and, as a result, Operation Hayride was instigated. Subsequently, several targeted campaigns have been implemented since Operation Hayride and more are planned. These campaigns are designed to detect noncompliance and the presence of undeclared/unlawful imports. These campaigns are supplemented with the use of supplier importer profiles to facilitate and monitor compliance with quarantine requirements.

The IIGB notes targeted inspection campaigns based on a history of noncompliance and intelligence information serve as a deterrent to would-be illegal importers.

It is likely that deliberate schemes to unlawfully import prohibited food items containing pig, beef and poultry meats (in this case from the Republic of Korea) had previously been, and could continue to be, undetected. The large volume of trade and the resource limitations of border agencies such as DAFF provide opportunities for unscrupulous import practices. The IIGB is satisfied DAFF took appropriate operational steps to respond to the biosecurity risk once the undeclared/unlawful importation in this incident was detected. DAFF has introduced further measures to mitigate attempts to illegally import high risk and prohibited goods products.

Targeted campaigns and profiling to deter and detect noncompliance

Targeted campaigns continued to be conducted by DAFF during 2012. These campaigns identified several consignments containing undeclared/unlawful products. During this review, the IIGB

observed a targeted campaign inspection where several undeclared (including prohibited) food products were detected.

Those targeted campaigns made use of improved profiling by DAFF, including supplier importer profiles to identify consignments for inspection.

The effectiveness of DAFF controls over imported products relies on sound routine clearance systems, as well as proven capabilities to deter or detect attempts by importers to bypass these biosecurity controls and introduce products illegally into Australia.

The IIGB notes the need for DAFF to develop more sophisticated strategies and operations to deter and detect noncompliance, including illegal importation activities.

The IIGB supports an increased emphasis by DAFF on targeted inspection campaigns. This and other deterrent and detection strategies should be underpinned by improvements to DAFF's surveillance and intelligence systems. These systems need robust analytical and predictive functionalities. The IIGB also supports the greater emphasis DAFF has placed on refining and enhancing profiling for the importation of food products and other cargo.

This incident highlights the challenging environment DAFF faces in maintaining adequate levels of biosecurity risk management of food imports (and other goods in general) that service the needs of Australia's ethnocultural communities. DAFF must communicate effectively with these communities to ensure people understand why these biosecurity controls exist and what they involve. The IIGB notes the difficulties posed to biosecurity and food program inspection and compliance officers in dealing with product labelling written in a foreign language.

It was noted that DAFF has initiatives in place to build and maintain communication with some ethnocultural communities, such as in DAFF's South East region. The IIGB supports this approach and encourages DAFF to extend these initiatives to all regions.

The level of improvement needed to deter and detect noncompliance, especially illegal importation, is considerable and may also require some realignment of the organisational culture in DAFF toward its regulatory responsibility. Such changes may impact to varying degrees on DAFF's interest in ensuring timeliness of import clearance. Equally important is the need for investment in new skills, training and information systems to enable development of DAFF's surveillance and intelligence systems.

Biosecurity risks

The IIGB found that DAFF acted promptly and adequately to review and make appropriate changes to existing import permits for products that may have been affected by the 2010 outbreaks of FMD in the Republic of Korea.

As the DAFF investigation that followed the December 2010 detection of undeclared/unlawful food products containing meat showed, a potentially high-risk situation of this type had existed for at least one year. DAFF control systems were found to be vulnerable to illegal exploitation with regard to undeclared/unlawful meat-based products from the Republic of Korea, especially considering the extensive FMD outbreaks in that country at the time.

In assessing the level of biosecurity risk that this food posed to Australia, the IIGB considered the range of factors that could facilitate or mitigate the establishment of major exotic animal diseases in Australia. The highest risk scenario was that the consumption of these undeclared/unlawful food

imports by animals susceptible to FMD and HPNAI would lead to the establishment of those diseases in Australia. That risk would be greatest where food containing viable viruses is deliberately used as a feedstuff for a susceptible host animal.

Biosecurity risks associated with the importation of pig meat and chicken meat have been assessed comprehensively by DAFF, in accordance with the import risk assessment handbook (DAFF 2011c). The conclusion of these import risk assessments found that the unrestricted importation of pig meat and chicken meat (imported without any biosecurity risk management measures) is not acceptable. The IIGB notes a similar risk profile is applicable to beef.

Conclusions of this review are based on the information available to the IIGB. The absence of information on many key background aspects of the food products in the incident did not allow the IIGB to undertake a quantitative or objective risk assessment. For example, the IIGB found that it is not possible to ascertain whether the pig meat, beef or chicken meat originated from the Republic of Korea or was imported into the Republic of Korea from another country. Reasoned assumptions are the basis for most assessment outcomes.

This incident involved unlawful, unrestricted importation of pig meat, beef and chicken meat. It could not be demonstrated that the food products concerned met Australia's standard for appropriate level of protection.

Australia has not had a reported outbreak of foot and mouth since this incident. New South Wales animal biosecurity authorities have reported that a single outbreak of highly pathogenic notifiable avian influenza near Maitland, New South Wales in late 2012 was attributable to a spillover of infection from its reservoir in wild waterbirds that had direct contact with free-range poultry on the farm involved.

This report provides consideration of biosecurity risks associated with this incident.

Conclusions

Overall, there was a heightened biosecurity risk to Australia as a result of the importation of the undeclared/unlawful Korean food products detected during this incident. The IIGB notes that DAFF's random biosecurity inspection process (ICE) did detect the goods concerned. However, the IIGB also notes that such undeclared/unlawful import trade is likely to have escaped detection over the preceding 12 months or more.

The IIGB is generally satisfied that, after detection had occurred, DAFF undertook an appropriate and coordinated agency response to contain the biosecurity risks associated with the incident. However, the IIGB noted that DAFF did not advise relevant state government animal biosecurity authorities immediately after the incident was detected. This could have ensured that surveillance was enhanced for diseases of principal concern. The IIGB also noted that some livestock industries were critical of DAFF for not providing early advice about the detection of the incident and ensuing investigations.

Given the increase in the volume of food imported to Australia over the last decade, routine import clearance inspection of most consignments is impractical and probably unwarranted. Many lines of food products present extremely low or no biosecurity risk if they have been imported legally and in accordance with Australia's import requirements.

DAFF's routine import clearance processes rely on the integrity of suppliers/importers and are designed to facilitate the timely clearance of imported consignments. Routine inspection of certain consignments is undertaken only when DAFF's assessment of import documentation identifies the need to do so. The IIGB notes that DAFF's import permit management processes were adequately designed and delivered.

This incident and the outcomes of subsequent targeted intervention campaigns by DAFF in relation to imported food demonstrate that wrongful declarations (deliberate or inadvertent) by supplier/importer networks pose a significant risk. Wrongful declarations include incorrect descriptions of the contents of consignments or of manufacturing/processing details, neglecting to declare prohibited foodstuffs in the consignment and vague or misleading labelling of packaging in order to conceal the presence of components of biosecurity concern (for example, meat). It is also likely that other illegal food imports were (and may continue to be) undetected due to the volume of trade and limitation to DAFF's surveillance/intelligence capabilities and capacity.

The recommendations in this report would strengthen DAFF's risk mitigation processes. The IIGB notes that, as a result of the incident, DAFF has implemented additional controls in the form of targeted inspection campaigns and expanded profiling. The IIGB endorses increased use of these compensating measures to deter and detect noncompliance, including attempts to import undeclared/unlawful goods. To underpin these initiatives, DAFF must upgrade its surveillance and intelligence systems to include robust analytical and predictive functionalities. The IIGB notes that this will require substantial resource investment.

After the assessment of biosecurity risks associated with the unlawful importation of the food products discussed in this report, the IIGB has concluded that it was fortunate that exotic diseases of livestock have not established in Australia as a result of this incident.

Several individual factors that may have mitigated the risks of entry, exposure and establishment of diseases of concern were identified in this review of this incident. These factors are discussed in this report.

Acknowledgements

The IIGB acknowledges the support and assistance of DAFF Border Compliance Division staff and inspection officers from the Central Office, North East, Central East and South East regions. Staff provided information and access to facilities within the regions.

Recommendations

Information used for inspection purposes	
1	That DAFF amend its food import clearance procedures to ensure that inspection officers are provided with copies of the consignment documents originally submitted by importers/brokers for assessment by entry management officers.
Reaffirmation of the role and mission of DAFF in administering the *Quarantine Act 1908*	
2	That DAFF review the organisational culture of staff with biosecurity-related responsibilities to ascertain any need for clarification of the degrees of emphasis to be placed on regulatory functions and timeliness of import clearance.
Coordination of information and intelligence for biosecurity risk management	
3	That DAFF improve its analytical and predictive functions by expanding its strategic and operational intelligence capabilities, including the development of a complementary information management system.
Proactive quarantine inspection regime to address importation of undeclared/unlawful products	
4	That DAFF routinely consider using targeted inspection campaigns of imports of non-affected food items from any country from which significant import trade of meat products is suspended due to changes in its animal disease status.

[Signed]

Dr Kevin Dunn
Interim Inspector-General of Biosecurity
15 March 2013

Conduct of incident review

This incident review was undertaken by the Interim Inspector-General of Biosecurity (IIGB). Details of the IIGB's role and program are at Appendix A.

Objective

The review examined biosecurity risks associated with the importation of undeclared/unlawful food products from the Republic of Korea. The review included an examination of border procedures and operations in relation to:

- import restrictions
- provision of certifications and declarations
- inspection and verification activities at the border
- biosecurity risks associated with the importation and distribution of the undeclared food products.

The IIGB also considered whether DAFF's procedures and operations should be improved to reduce the risk of such biosecurity risks recurring.

Scope

The review was limited to an examination of DAFF's biosecurity risk mitigation activities in relation to the undeclared/unlawful imported food from the Republic of Korea. The IIGB assessed:

- import restrictions—whether these considered the key biosecurity risks, as identified by DAFF
- certificates and declarations—effectiveness of processes for obtaining and reviewing import certification and declarations
- inspection and verification activities at the border—effectiveness of the process in place for inspection and verification activities.

The review also considered the risks of foreign animal diseases, such as FMD and HPNAI, being introduced into Australia as a result of the importation of undeclared/unlawful food products.

The assessment addressed the period between 1 December 2009 and 30 November 2011. However, where appropriate, the IIGB has provided observations and recommendations pertaining to current processes that were observed as part of this incident review.

Methodology

General

The IIGB held discussions with relevant DAFF stakeholders (including officers at the regional offices) involved in this incident, and conducted research, where relevant, to obtain a better understanding of the processes that were in place in relation to:

- import restrictions
- the provision of certifications and declarations
- inspection and verification processes at the border.

Information gathered would be used to assess how these processes were applied to the control of importation of meat products from the Republic of Korea between 2009 and 2011 and where possible, map the end-to-end processes identified here to determine whether:

- these processes link to the process control objectives
- potential control weaknesses and/or improvements can be identified.

Import restrictions

The IIGB undertook to determine relevant changes that occurred during the assessment period to the Republic of Korea's disease status (for example, as a result of the foot and mouth disease outbreak) and how the changes in status:

- were communicated throughout the relevant areas within DAFF
- impacted import permit conditions, the issuing of permits during the assessment period and inspection and verification processes.

Based on information contained in DAFF's AIMS database, the IIGB undertook to determine whether any permits were issued in relation to the importation of meat products from the Republic of Korea during the assessment period. Where applicable, the IIGB would assess whether permits were issued in accordance with the import conditions that were in place.

Certifications and declarations

Where applicable, the IIGB undertook to assess available import documentation records to determine whether they were processed in accordance with relevant procedures, and whether or not necessary certifications and declarations were obtained.

Inspection and verification activities

The IIGB:

- reviewed relevant procedural documentation existing during the assessment period in relation to inspection and verification processes for meat and other food products from the Republic of Korea.
- obtained data for the assessment period regarding the importation of food products, in order to determine the nature of the food being imported and the activities in regions processing the imports.
- obtained data for the assessment period regarding the extent of inspection and verification activities conducted in relation to the importation of food products.

- assessed whether any changes were made to inspection and verification procedures, processes and frequency levels as a result of increased risks associated with the importation of meat products.
- conducted detailed testing in relation to inspection/verification activities to determine whether these were conducted in accordance with relevant biosecurity policies and procedures. Detailed testing included visits to regional offices that processed the relevant consignments and to a range of food import premises to observe inspection clearance activities. Discussions were held with regional officers to determine whether any further control weaknesses and/or opportunities for improving current inspection and verification processes could be identified.

To inform his report, the IIGB engaged a consultant to examine and report on the border control aspects of import permit systems, inspections and verification activities relating to the importation of food items from the Republic of Korea into Australia.

Consideration of the biosecurity risks

The IIGB considered factors or circumstances that would facilitate and/or mitigate the likelihood that exotic diseases, notably foot and mouth disease or highly pathogenic notifiable avian influenza would gain entry via high risk pathways in Australia.

Out of scope

The areas outside the scope of this review are:

- policy relating to the importation of meat products
- international trade
- commercial considerations
- costs or other financial matters
- IIGB-commissioned analysis of laboratory samples
- investigatory processes associated with any aspect of trade illegality
- onshore surveillance

The IIGB was not requested by the Minister of Agriculture, Fisheries and Forestry to examine biosecurity risks associated with undeclared/unlawful dairy products detected during Operation Hayride.

Background and context

The incident

On 20 December 2010 a DAFF officer from North East region conducted a random import clearance effectiveness inspection of a consignment of frozen fish food products imported from the Republic of Korea. This consignment had been cleared on documentation alone before its capture for a random biosecurity inspection. During the inspection, the quarantine officer was unable to identify some of the goods inside the boxes because the labelling on the packets was not in English. The DAFF inspector also identified several products that appeared to contain meat and that had not been declared. These products were separated from the remainder of the consignment and ordered into quarantine.

At the time of the incident Australia did not (and still does not) permit the importation of uncooked meat from the Republic of Korea. Canned/retorted meat products or certain products containing meat flavours are allowed if Australia's import requirements regarding processing, sourcing of meat/level of meat content and packaging are met. These biosecurity restrictions are in place to meet Australia's standards for an appropriate level of protection with regard to exotic animal disease risks.

In response to this detection of undeclared food items, DAFF took action to contain associated biosecurity risks and launched Operation Hayride, a major national investigation and enforcement initiative targeting deliberate and serious breaches of the *Quarantine Act 1908*. This operation targeted the unlawful importation and distribution for retail sale of prohibited food items from the Republic of Korea.

On 21 December 2010 officers from DAFF's North East Investigations and Enforcement Program attended the premises where the initial detection occurred to conduct investigations into the importation of the suspected meat products. The importer acknowledged the deliberate undeclared/unlawful importation of the meat products and indicated to DAFF that this had been occurring for 12 months in order to compete at a commercial level with other companies engaged in the same practice. The importer indicated that this was a longstanding practice, particularly in New South Wales and Victoria.

The results of DAFF's investigations suggest that a network of importers, brokers and operators of quarantine approved premises was engaged in the deliberate unlawful importation and distribution for retail sale of prohibited food items from the Republic of Korea. The investigations established that the prohibited food items were either wrongly declared or not declared during their importation to avoid being directed for DAFF inspection and quarantine requirements.

The initial detection of the undeclared/unlawful food items from the Republic of Korea occurred in December 2010, shortly after a series of outbreaks of foot and mouth disease in that country. On 7 January 2010 Korean authorities confirmed an outbreak of foot and mouth involving type A virus had occurred on 2 January 2010. Outbreaks involving type O virus were confirmed in the Republic of Korea in April and November 2010.

An initial outbreak of highly pathogenic notifiable avian influenza on a poultry farm was also reported on 29 December 2010.

Between January and April 2011 DAFF recovered a significant amount of prohibited food items imported from Korea. Officers inspected 225 consignments and attended over 300 retail premises in Brisbane, the Gold Coast, Melbourne and Sydney. DAFF estimates that 132 tonnes of food products were seized, including dairy products and food containing cooked and uncooked pork, beef and chicken.

DAFF classified the seized consignments into five main product groups: dairy, noodles, dumplings, frozen meat and other products. Dairy products (mainly ice cream) comprised about 26 per cent of the estimated total tonnage of seized goods. The other products category included prepared meals, mayonnaise, stock powders (including meat products), fish and silkworm products. Photographs of selected items seized are shown at Appendix D.

Based on DAFF records and photographs, it is apparent that product names and details on most cartons and packaging containing these food products were printed in the Korean language. In only a few cases, names and details were printed in English.

Across the five main product groups about 53 per cent of the total tonnage seized was classified as 'meat not shelf stable' and 28 per cent was classified as 'meat shelf stable' (Table 1).

Table 1 Quantities of food product types seized in Operation Hayride, 2011

Classification	Example products	Estimated tonnes
Meat products not shelf stable	Dumplings, hot dogs, ham steaks, schnitzels	70.575
Dairy products	Canned coffee milk drink, ice cream	34.280
Meat products shelf stable [a]	Noodles with discernable meat pieces, canned meat	27.120

Note: [a] Shelf stable food is defined as food that will last for an extended period, packaged or not, without any special storage conditions.
Source: DAFF

DAFF took legal action in response to these biosecurity breaches. As at 31 December 2012, there was one completed prosecution (for two related entities) under section 70C (3) of the *Quarantine Act 1908* and one completed prosecution (for two related entities) under section 67 (3) of the *Quarantine Act 1908*. Ongoing investigations under Operation Hayride are expected to lead to further prosecutions.

In addition to pursuing prosecution action, DAFF has applied administrative sanctions against the operators of quarantine approved premises (QAPs) involved in the unlawful importation. Administrative sanctions include the revocation of approvals that allow importers to hold imported goods at their own premises. For example, on 4 April 2011 the department issued the first letter of revocation of a QAP approval to an operator involved in the illegal importation and distribution of 13 tonnes of prohibited food products imported unlawfully from the Republic of Korea.

In August 2011 DAFF issued notices of refusal to approve QAP applications for a further two premises. In addition, one QAP owner has voluntarily surrendered his approval.

Approval suspension or revocation action is proceeding against a further six QAPs alleged to be involved in the unlawful importation of prohibited commodities from the Republic of Korea. Evidence from investigations is expected to result in action against six other QAPs.

In addition to legal action, DAFF met with Korean diplomatic and trade representatives on several occasions in March and April 2011 to inform them of the biosecurity issues involved in this incident.

The IIGB notes that goods seized during Operation Hayride have been destroyed using DAFF-approved destruction methods, such as autoclaving, incineration or deep burial by DAFF-approved operators and premises. Exporting the goods was not considered an option because of the potential biosecurity risk associated with these food items and the possibility of reintroduction to the market. Goods held by DAFF for evidentiary purposes will be destroyed once legal proceedings have been completed.

Quarantine risk material and role of DAFF

DAFF undertakes science-based risk assessments and provides quarantine policy advice to protect the economy, the environment, social amenity, and human, animal and plant health from the risk of foreign pests and diseases.

Animal diseases of concern to Australia

DAFF has undertaken various import risk analyses of food products containing meat from pigs, poultry or cattle. These analyses have identified disease agents for which the risks of unrestricted entry are too high to meet Australia's standards for an appropriate level of protection.

The import risk assessment of pig meat (DAFF 2004) identified diseases and disease agents of risk to Australia as:

- African swine fever
- Aujeszky's disease
- classical swine fever
- foot and mouth disease
- Nipah virus
- porcine reproductive and respiratory syndrome
- post-weaning multisystemic wasting syndrome
- rinderpest
- swine vesicular disease
- trichinellosis (*Trichinella spiralis).*

In the case of *Trichinella spiralis*, Nipah virus, *Salmonella typhimurium* DT104 and *Brucella suis* the Australian Government Department of Health and Ageing advised DAFF that risk management measures would be required to address human health concerns that would arise should these disease agents enter and establish or spread in Australia.

The import risk assessment of chicken meat (DAFF 2008) identified diseases and disease agents of risk to Australia as:

- highly pathogenic notifiable avian influenza
- low pathogenicity notifiable avian influenza
- Newcastle disease
- very virulent infectious bursal disease
- exotic antigenic variant strains of infectious bursal disease virus, *Salmonella pullorum*, S. *gallinarum*, S. *enteritidis*
- multi-drug resistant strains of *S. typhimurium*.

These import risk assessments have concluded that the biosecurity risks associated with the unrestricted importation of pig meat and chicken meat are not acceptable. Given that the meat ingredients in the illegally imported food included some beef, the IIGB recognised foot and mouth disease and potentially (in view of the unknown origin of the beef) bovine spongiform encephalopathy as the disease of cattle of most concern.

Importing food products into Australia

DAFF is responsible for administering two sets of legislative requirements with which imported food must comply. The first set of requirements addresses quarantine concerns set out in the *Quarantine Act 1908*. The second set of requirements addresses food safety concerns set out in the *Imported Food Control Act 1992*. Imported food items must meet quarantine requirements in order to be permitted into Australia. Food safety requirements are applied after the imported food has satisfactorily met quarantine requirements.

The *Quarantine Act 1908* requires that all imports of food comply with relevant quarantine import conditions. In general, commercial importers of food such as fresh fruit and vegetables or food containing milk, egg, meat or other animal products may require an import permit before importing the food. This allows the assessment of the biosecurity risks associated with the product and the application of risk management measures through the import conditions on the import permit.

The *Imported Food Control Act 1992* provides for the inspection and control of imported food using a risk-based Imported Food Inspection Scheme. Food Standards Australia and New Zealand advise DAFF on the risk categorisation of foods for inspection under the scheme. Food Standards Australia and New Zealand categorises food as risk if it has the potential to pose a medium to high risk to public health. DAFF's Imported Food Notice 09– 12 (DAFF 2012b) advises on foods that will be inspected and analysed in accordance with this notice because they are considered a risk under the Imported Food Control Order 2001. Part 6 Division 2 Sections 39 and Section 40 of the Quarantine Proclamation 1998 deal with the importation of meat and dairy products. A summary of these sections appears in Appendix B.

Biosecurity Import requirements and restrictions on food containing meat from the Republic of Korea

Prior to the 2010 foot and mouth disease outbreak, Australia did not allow the importation of unprocessed or uncooked meat products from the Republic of Korea; however, canned/retorted meat products could be imported if:

- during the canning/retorting process the product was heated to a minimum core temperature of 100 °C (or equivalent to achieve an F0 value of 2.8)
- the final product is in a hermetically sealed container that has been heat treated so it is shelf stable
- it does not contain bovine meat
- the meat was sourced from animals that passed ante- and post-mortem veterinary inspection under official veterinary supervision and is considered to be fit for human consumption
- the product does not contain meat from sheep or goats older than 12 months originating from countries or zones not considered free from scrapie.

Imports of canned foods containing less than 5 per cent of chicken or pork meat are permitted into Australian without an import permit and canned foods containing 5 per cent or more of chicken or pork meat require an import permit.

Australia allows imports from the Republic of Korea of products such as noodles containing meat-based flavours if:

- the beef contained in the product is derived from bovine animals born, raised and slaughtered in Australia or New Zealand
- the products are processed in an approved plant
- the meat is heat treated to a core temperature of 100 °C for at least 30 minutes
- the product contains no discernible pieces of meat
- the meat-based flavour is packed in clean new bags, wrappers or packing containers
- the meat-based flavour has not been exposed to contamination before export
- the product does not contain sheep or goat offal
- the product does not contain meat from sheep or goats older than 12 months originating from countries or zones not considered free from scrapie.

The import conditions determine which documents DAFF uses to assess what has been declared by the broker and/or importer. These documents include government-to-government certification, manufacturer's statements, commercial invoices, lot codes, marks and numbers, and bills of lading. If documents are incomplete or questionable, the consignments can be held until appropriate documentation is presented.

Food import clearance process

Importers or customs brokers declare consignments electronically on the Integrated Cargo System (ICS) managed by the Australian Customs and Border Protection Service (Customs). Upon arrival in Australia, food consignments valued above the declaration threshold of $1000 must be declared to Customs through a full import declaration. Importers or their brokers are required to submit consignment information into ICS and apply respective tariff codes to different food products in the consignment. Applications for a food control certificate are also assessed on the information entered into the ICS database.

All imported goods are assigned a tariff classification by Customs that determines the rate of duty payable for that product. DAFF uses tariff codes provided on import declarations to identify goods that are high risk for quarantine.

The volume of cargo entering and leaving Australia makes large-scale physical inspection of consignments impractical. DAFF uses risk assessment to target consignments that may pose a biosecurity and/or imported food risk. Based on the information provided by the importer/broker, ICS will identify and profile goods (per the tariff code, origin of goods, goods descriptions). Consignments of interest to DAFF are routed by ICS to DAFF through the import management system (AIMS). Importers/brokers have an opportunity to make amendments to the information they declare through ICS in order to ensure that it is accurate and complete. Through the AIMS database, DAFF is able to monitor and record details of any amendments made to the consignment.

Under the Imported Food Inspection Scheme, all risk category foods are referred for DAFF assessment via AIMS. A list of risk foods is found in Schedule 1 of the Imported Food Control Order 2001. DAFF also provides details on its website about these foods and import conditions that apply to them. A list of risk foods is at Appendix C.

The importer/broker notifies DAFF approximately three days before a consignment is due to arrive in Australia. At this point, as part of DAFF's entry management process, the importer/broker submits relevant documentation for initial assessment of the consignment. A DAFF officer assessing the consignment documentation accesses details of the consignment that have been forwarded to AIMS through ICS. The system shows the DAFF officer which product lines were directed to quarantine and displays the answers provided by the importer/broker to relevant profiling questions in ICS. At the same time, the DAFF officer checks DAFF's import conditions database (ICON) to determine whether the import permit for the particular consignment is valid.

Based on the information provided in the ICS by the importer/broker, she or he will be notified if the consignment is subject to quarantine and if it requires a food control certificate. The certificate provides direction to permit the movement of the food to a premise when an inspection can be carried out. The food control certificate also permits re-labelling of the food if necessary to comply with Australia's food labelling requirements. As well as inspecting the food the DAFF officer may also take samples for analysis against food safety standards. Under the *Imported Food Control Act 1992*, the importer is responsible for ensuring food imported into Australia is compliant with Australian food standards and public health and safety requirements.

Profiling

DAFF uses profiling to predict where risk is likely to be present in cargo consignments and to ensure that ICS refers imported goods of potential biosecurity concerns to DAFF for further risk assessment and/or intervention. This assists the deployment of resources to areas of significant risk. DAFF has refined these profiles over several years. In addition to supplier importer profiles, DAFF uses community protection and cargo risk assessment profiles.

DAFF's suite of profiles helps identify potential noncompliance and supports targeted inspection activities. Suppliers or importers whose consignments fail to meet quarantine requirements can be targeted for increased monitoring or inspection to ensure ongoing compliance. Supplier importer profiles are used to manage biosecurity risks that have been identified in previous consignments. These profiles are generally used for issues relating to container cleanliness, undeclared packaging or dunnage, and detection of live insects.

Community protection profiles are made by matching the tariff code supplied on the import declaration form against the tariff criteria in each individual profile.

Cargo risk assessment profiles are used extensively by DAFF to refer consignments of potential quarantine concern for further processing on full import declarations, cargo reports, self assessed clearance documents, and impending arrival report and unaccompanied personal effect documents.

Non-commodity Concerns for Containerised Cargo Clearance Scheme

This scheme, which replaces the Broker Accreditation Scheme, focuses on the clearance of non-commodity concerns for containerised sea freight.

Under this scheme an accredited person, usually the broker, will answer questions about, for example, how the goods are packed in the container. The ICS assesses the response to determine whether the information the broker provides triggers a concern about the goods or packaging. The ICS also checks lodgement answers against client information held in ICS to verify whether the

broker is appropriately accredited. High risk answers will result in ICS sending the full import declaration and risk information to AIMS.

Non-commodity concerns are not directly related to the actual goods that make up the consignment but rather deal with items such as packaging materials (for example, wooden packing crates or pallets) and contamination of the container itself (for example, with soil or animal/plant trash).

Import inspections

DAFF uses several inspection regimes to monitor and assess biosecurity risks. Import clearance effectiveness activities include inspections at importer's premises (called follow-up inspections), tailgate inspections and documentary assessment processes. These activities aim to verify the compliance of imported containerised sea cargo and are randomly applied to consignments that would not typically be directed for inspection.

DAFF has national guidelines that help staff in regional offices select an import clearance effectiveness activity and issue quarantine directions (DAFF 2007). Work instructions also provide guidance on conducting import clearance effectiveness surveillance inspections and follow-up inspections, and on managing data collected as part of these activities (AQIS 2006a, 2006b).

Once a consignment has been randomly selected, an appointment is made with the importer or their broker/agent for a seals intact inspection. DAFF inspectors physically check the consignment against declarations made by the broker and/or importer during the import entry process. If the issues are not resolved on site, the consignment may be redirected into quarantine for investigation or treatment. Instances of noncompliance are recorded and used by DAFF to develop a supplier importer profile that may direct future consignments for inspection until a history of compliance is re-established.

Targeted inspection campaigns

Since Operation Hayride, DAFF has undertaken two targeted campaigns—Operation Abercorn and Operation Balmain. These were designed to identify noncompliance behaviour and possible criminal activity associated with imported cargo. Campaign operations were triggered by noncompliance histories in import pathways and by the use of objective analysis of DAFF intelligence.

The first of these campaigns stemmed from intelligence identified through Operation Hayride. Operation Abercorn, which ran from February to April 2012, targeted consignments destined for Class 2.5 quarantine approved premises (temperature controlled storage facilities). It was DAFF's first campaign to test the compliance of imported temperature controlled shipping containers.

Operation Balmain, which ran from May to July 2012, targeted the biosecurity compliance of declared banana imports. It originated from an import clearance effectiveness inspection that found raw bananas (with skin on) in imported consignments that had been declared as containing processed bananas.

Documentary requirements—certificates and declarations

All documentation presented to DAFF as part of the import process must meet the requirements as set out in DAFF's Minimum Documentary Requirements Policy (DAFF 2010b). These include:

- overarching requirements—for example, documentation must be legible, in English, signed, dated and linked to the consignment
- document format requirements—for example, as per nationally accepted practice and standards or on company letterhead
- prescribed information requirements—for example, treatment certificates must include a description of the goods/packaging treated and manufacturer's declarations setting out product content as per quarantine requirements.

Observations and findings

The IIGB's observations and findings focused on DAFF's biosecurity controls and processes for the importation of food products, and the department's ability to respond to the illegal entry of such products. In addition, the IIGB considered the responsiveness of DAFF's import control system to a major change in the disease status of a food exporting country, in this case the Republic of Korea. The IIGB also considered the biosecurity risks that these undeclared/unlawful food products posed to Australia.

Import restrictions

In December 2010, at the time of the initial detection of the undeclared/unlawful food items from the Republic of Korea, DAFF reviewed its clearance procedures and implemented tightened procedures to deal with the breakdown in quarantine compliance for entry of food products. This initiative included new targeted operations on QAPs and product lines. It also included a major trace and seize operation for unlawfully imported Korean food products. The IIGB found this was an appropriate response that took account of the risks associated with the concurrent outbreak of foot and mouth disease (FMD) in the Republic of Korea and allowed trade to continue for food products not containing quarantine risk material.

In response to the FMD outbreak in January 2010, DAFF issued Notice to Industry 1/2010 advising shipping agents/operators of the outbreak and the measures that DAFF would be implementing (DAFF 2010c). These measures would apply to all affected products produced in the Republic of Korea from 5 December 2009. The IIGB notes that DAFF took a conservative approach in backdating these measures to account for any unusually long incubation periods for FMD.

DAFF advised industry that following the FMD outbreak that was believed to have started on 2 January 2010, increased quarantine measures would be implemented for a range of import pathways. DAFF advised industry that import permits for specific products would be varied as the existing treatments and/or import conditions were judged insufficient to manage the heightened biosecurity risk associated with the outbreak. These products were:

- lightly processed cheeses
- milk products with more than 10 per cent dairy content (for example, yoghurt, fresh milk, powdered milk)
- semen and embryos from species susceptible to FMD
- biological products produced from species susceptible to foot and mouth disease (for example, veterinary and human pharmaceuticals and laboratory reagents).

DAFF also identified a range of products that would be allowed entry if the processing or treatment was sufficient to manage the associated risk of FMD. These products included:

- processed meat or dairy products (for example, shelf stable hermetically sealed/retorted meat and dairy products, chocolate and confectionary, some highly processed cheeses)
- biological products from non-susceptible species
- processed canned and dried pet food
- scoured wool, animal hair and leather products
- new and used saddles, harnesses and tack

- second-hand farming equipment.
- All affected businesses were also informed of changes affecting their import permits.

DAFF's examination of the ICON import permit system revealed that of 40 valid import permits where the country of origin or manufacture was the Republic of Korea, 20 of these permits related to high risk commodities. DAFF varied these permits and wrote to the 20 permit holders informing them that any products manufactured on or after 5 December 2009 would not be permitted entry into Australia. Consignments that were in transit were intercepted at the border. For consignments that had already been released, importers were contacted and products recalled if they had been manufactured on or after 5 December 2009.

The IIGB notes that the processes described above were formalised by DAFF into a work instruction *Overseas Exotic Disease Incident Strategy* (DAFF 2010a).

The IIGB notes that despite DAFF's response to the foot and mouth disease outbreak, it was possible that undeclared/unlawful food products containing meat were entering Australia undetected until 20 December 2010.

Importers and brokers

The effectiveness of DAFF's import restrictions as a biosecurity risk control relies largely on the integrity of importers, customs brokers and the accuracy of their declarations.

This incident has also exposed a significant vulnerability in controls over the food import trade to Australia. Some importers and brokers will exploit the trust DAFF places in that sector with regard to compliance with import requirements. It is apparent some participants in the importing industry view biosecurity requirements as nothing more than administrative impediments.

This incident is an example of the existence of dishonesty by importers but also apparent collusion in the entire supply chain from the supplier through to the importer.

While the scale of this problem should not be overstated by being based on this incident and some additional findings during subsequent targeted campaigns in 2011 and 2012, the IIGB notes that an increased emphasis by DAFF on regulatory compliance in the food importing sector is warranted.

DAFF's import clearance systems are designed to inform importers of products that can enter Australia. The aim is that informed importers will stop the export of non-permitted, high-risk products from overseas countries. In the last decade, the level of imports of food products to Australia has escalated. In 2003-04 the total value of imported food and beverage products was $6.080 billion, compared with $10.613 billion in 2010-11 (DAFF 2012a).

The incident under review highlights the challenging environment DAFF faces in maintaining adequate levels of biosecurity risk management of food imports that service the demands of Australia's ethnocultural communities. DAFF must communicate effectively with these communities to ensure people understand why biosecurity controls exist on these foods and what they involve. The IIGB notes the difficulties experienced by biosecurity and food program inspection and compliance officers in dealing with product labelling written solely in a foreign language, in this case Korean.

It was noted that DAFF has initiatives in place to build and maintain communication with some ethnocultural communities, such as in DAFF's South East region. The IIGB supports this approach and encourages DAFF to extend these initiatives to all regions.

The IIGB notes that DAFF has built its import clearance systems to facilitate biosecurity clearance and reduce delays in administrative and other routine clearance processes. However, these processes are not designed primarily to be controls that deter or detect unlawful/undeclared products entering Australia. As is apparent from this incident, certain importers may opt to act unlawfully and try to circumvent import restrictions.

Under current legislative arrangements, DAFF is unable to consider as part of the import permit application assessment whether an applicant is a fit and proper person, even though the department may have information to suggest the applicant has a history of consistent noncompliance. Currently, import permits may only be revoked or suspended when there is a change in quarantine status or risk associated with these particular goods. If the information provided in the application meets DAFF's requirements, the department cannot deny granting an import permit.

Amendments to biosecurity legislation currently under consideration provide for the inclusion of fit and proper person consideration in the assessment criteria for import permit applications. The changes would give DAFF more flexibility to determine whether permits should be issued to importers with a poor compliance history. These amendments would provide a further preventative layer within the biosecurity control framework.

The IIGB notes the role of customs brokers and their relationship with DAFF. Brokers provide a facilitating link between exporters, importers and Australia's international border authorities. They provide documentation (including electronic lodgement of applications) and facilitate communication between importers and DAFF in order to obtain entry clearance of import consignments. The IIGB notes that customs brokers are licensed and maintained under the *Customs Act 1908*. DAFF undertakes formal liaison with brokers, especially through the Customs Brokers and Forwarders Council of Australia, but can apply no specific maintenance controls or sanctions on their role.

Some DAFF officers expressed frustration about the lack of sanctions against broker transgressions. The IIGB notes that biosecurity legislation under consideration appears to provide DAFF with more control and sanction provisions over brokers.

The IIGB notes the prosecution and conviction of individuals involved in this incident. While this legal action will help highlight the importance of compliance with biosecurity controls in the importation of food, prosecution alone will not necessarily ensure greater compliance in future. It is apparent that Australian demand for various types of overseas goods is a commercial incentive for unscrupulous importers to find other ways of illegal entry.

Certificates and declarations

A key step in the entry clearance process for imported consignments is DAFF's assessment of consignment certificates and declarations provided by the importer/broker. DAFF relies on the accuracy and completeness of consignment details, as well as the correctness of answers provided to profiling questions in ICS, to direct consignments for quarantine. Incorrect answers and/or incomplete information could result in product lines bypassing quarantine inspection.

The IIGB notes this vulnerability can be exploited for unlawful purposes. For example, it appears that public availability of tariff codes offers opportunities to brokers and importers to deliberately mis-code products in an attempt to bypass biosecurity inspection or imported food program interventions (for example, sampling and testing for food hygiene assurance).

The information importers and brokers provide through the ICS determines whether they are notified that the consignment is subject to biosecurity intervention. They can update this information to ensure it is accurate and complete. DAFF is able to monitor any such amendments.

Developing and setting appropriate profiling questions in ICS is a significant task. The IIGB notes that DAFF continues to review and amend profile questions to be less ambiguous and more specific. AIMS has limitations that could be exposed as the volume in trade increases. DAFF acknowledges that the free text fields are limited to a few hundred characters. These fields are used by officers to capture valuable information related to the assessment and inspection of consignment documentation and goods. Officers frequently have to create multiple administrative lines for a specific consignment to capture sufficient information. As a result, valuable information may be missed when a particular consignment is reviewed. As DAFF's biosecurity system is focused on a risk return approach, and with the establishment of a criterion for a fit and proper person, this information becomes vital.

The IIGB notes that DAFF's response to an outbreak such as foot and mouth disease in the Republic of Korea included various communication strategies informing staff of recent disease outbreaks; these form part of DAFF's *Overseas Exotic Disease Incident Strategy*.

Certificates and declarations must be provided in order to attest that the products in a consignment meet quarantine requirements (see import restrictions). This process relies on the accuracy of certificates and declarations provided by importers/brokers. This incident shows that some importers/brokers prepare declarations for what they know to be prohibited products in such a way as to attempt to meet and pass quarantine requirements.

Manufacturer's declarations are checked to see whether the product complies with quarantine requirements. However, DAFF staff informed the IIGB that some importers had access to manufacturers' templates and declarations, including signatures, which they modified and then provided to DAFF.

The IIGB also found that DAFF's website provided sample information on what should be included in a manufacturer's declaration. This information was found to have been copied and pasted verbatim into declarations provided for assessment. The IIGB notes that although the validity of some manufacturer's declarations appears to be highly questionable, the declaration is one of the main consignment documents that DAFF officers assess in the entry management process.

The IIGB notes that, in order to enable the efficient clearance of goods, DAFF must maintain administrative systems to inform importers of Australia's import requirements and entry management processes.

In the context of the incident identified in December 2010, the administrative processes described above were in place at the time of the incident and continue unchanged.

Vulnerabilities in the import control system that were exploited in this incident must be addressed. The IIGB notes that, with the possible exception of a major upgrade to and/or replacement of the

current AIMS, changes to administrative processes alone are unlikely to be the answer. Improvements in surveillance, intelligence, targeted campaigns and deterrence strategies are likely to prove the best response to these challenges.

Inspection and verification activities at the border

Subsequent to the assessment of certificates, declarations and other related documentation, a consignment may be directed to undergo a quarantine inspection. This may involve the entire consignment or only items of biosecurity concern. A routine biosecurity inspection will be booked and the relevant inspection officer will attend either the importer's quarantine approved premises (QAP) or, should the importer not have such premises, a third party QAP nominated by the importer. DAFF inspection officers will be prompted by, and provided with, consignment and location details necessary to conduct the inspection. This information is based on assessment of consignment documentation during the entry management process.

DAFF inspection activities of imported foodstuffs may involve both biosecurity risk management and food safety. The IIGB examined these different responsibilities with a focus on whether food safety activities required under the Imported Food Inspection Scheme distract DAFF inspection staff from biosecurity scrutiny of imported foodstuffs. As noted in this report, unscrupulous brokers or importers have deliberately misrepresented tariff codes on import documents in order to avoid imported food program interventions and the ensuing costs to importers. This behaviour also poses a biosecurity risk.

The IIGB notes that DAFF inspectors who deliver the Imported Food Inspection Scheme program are qualified and experienced biosecurity inspectors. In their food safety inspection role, inspectors are also alert to biosecurity issues that they may encounter. During interviews several inspectors stated that they regard biosecurity risk management as the chief concern.

The IIGB was satisfied that Imported Food Inspection Scheme duties do not threaten or diminish the level of biosecurity risk management attention given by DAFF inspectors to imported foods. Indeed, there appeared to be a useful synergy in having DAFF inspectors operating under the two programs.

The IIGB notes that DAFF officers conducting biosecurity inspections may not always see in advance the consignment documentation submitted for assessment as part of the entry management process. Several DAFF inspectors are mobile operatives and are tasked while on the move.

Often it is the importer who provides the inspector with copies of the documentation at the time of the routine quarantine inspection. Although the inspection officer will have been given basic information about the specific consignment, the importer could conceal products by presenting documents at inspection that are not the same as those previously submitted for assessment to DAFF entry management officers. Information provided by DAFF suggests this may have been the case for several consignments subject to this incident review.

Recommendation 1
Information used for inspection purposes
That DAFF amend its food import clearance procedures to ensure that inspection officers are provided with copies of the consignment documents originally submitted by importers/brokers for assessment by entry management officers.

Other control strategies

In the case of a routine biosecurity inspection, the consignment is unloaded from the container and placed in a designated area for inspection before the DAFF officer arrives at the QAP. Under these circumstances, unscrupulous operators would have no difficulty removing undeclared or illegally substituted products before the inspection officer arrives.

The IIGB noted that since the incident, DAFF has increased the intervention strategies designed to detect unlawful/undeclared products. While targeted inspection strategies such as the import clearance effectiveness program were already in use, the number of interventions and their emphasis has increased as a result of this incident. Interventions include leakage surveys and targeted campaigns that take into account:

- importer compliance history
- importer–supplier relationships
- QAP compliance history
- broker compliance history.

Generally the compliance history of an importer/broker/supplier would not be readily available to, or considered by, a DAFF inspector when undertaking routine inspection. This is not the case with targeted inspections.

Import clearance effectiveness inspections

The IIGB notes that the incident was identified as a result of a random import clearance effectiveness (ICE) inspection. This indicates that these inspections can contribute to the detection of undeclared/unlawful products. Table 2Table 1 shows the number of ICE activities undertaken across Australia and results from January 2010 to May 2012.

Table 2 Import clearance effectiveness program activities, January 2010 to May 2012

Year	**Entry** (no.)	**Failed entry** (no.)	**Fail** (%)
2012 (January to May)	2 742	154	5.6
2011	6 420	476	7.4
2010	7 970	791	9.9

Source: DAFF

From January 2010 to May 2012, 17 132 consignment entries were selected for ICE interventions, 90 per cent (15 420) were physically inspected, of which 8.3 per cent (1 421) failed to comply. These failures included commodity and/or non-commodity (packaging or container-related) issues. Significantly, they also related to both incorrectly and unlawfully declared products. The IIGB noted

that once cargo is selected for an ICE inspection, the inspection must be conducted within 24 hours; otherwise the goods must be released. This was the reason only 90 per cent were inspected.

The IIGB noted that DAFF launched the cargo compliance verification program on the 1 February 2013. The cargo compliance verification program has replaced the ICE program. The introduction of the cargo compliance verification program will implement a number of improvements to the random inspection of imported containerised sea cargo.

Targeted campaigns

DAFF had conducted several small-scale desktop intelligence operations before it launched Operation Hayride in 2011. Operation Hayride was designed to:

- investigate the extent of the illegal importation to facilitate prosecution and administrative action against those engaged in illegal activities
- prevent similar noncompliant biosecurity risk goods being imported to, and distributed within, Australia
- recover goods already illegally imported.

The IIGB notes that between January and April 2011 DAFF took intensive action to recover an estimated 132 tonnes of prohibited food items. DAFF inspected 225 consignments and attended over 300 retail premises in Brisbane, the Gold Coast, Melbourne and Sydney.

In 2012 DAFF initiated two other campaigns, Operation Abercorn and Operation Balmain, which successfully identified other instances of unlawful activity. These actions formed part of a program of targeted campaigns and other initiatives designed to improve the effectiveness of risk profiling. The IIGB notes that DAFF has applied lessons learnt from this incident and from Operation Hayride to subsequent targeted campaigns.

Operation Abercorn, which ran from February to April 2012, targeted the biosecurity compliance of imported temperature controlled shipping containers (Class 2.5 QAP) in Brisbane, Fremantle, Melbourne and Sydney. Operation Abercorn drew on intelligence gathered during Operation Hayride that revealed a correlation between undeclared products and Class 2.5 QAP operators. During Operation Abercorn, 16 targeted inspections resulted in the detection of 37 per cent biosecurity noncompliant goods, including undeclared finfish, ice cream and trade samples of fresh ginger and chilli.

Operation Balmain, which ran from May to July 2012, was established as a result of an import clearance effectiveness inspection that found raw bananas (with skin on) in imported consignments that had been declared as containing processed bananas. As part of Operation Balmain targeted inspections were undertaken in Brisbane, Fremantle, Melbourne, Townsville and Sydney. Eleven of the 20 consignments inspected contained noncompliant biosecurity material, including undeclared kaffir lime leaves found to contain citrus canker (destined for retail food shops for cooking), undeclared finfish, tyres, tobacco, chilli samples, incorrectly declared spring rolls, tamarind and preserved plums.

During the fieldwork component of this review, the IIGB observed a targeted campaign inspection on a consignment of food imported from the Philippines in which a range of prohibited and undeclared products were detected, including 426 cartons (about 2600 kilograms) of undeclared finfish processed to varying levels, 10 cartons (100 kilograms) of undeclared coconut pie, 30 cartons

(60 kilograms) of undeclared fish flakes, 13 packets (13 kilograms) of meat hot dogs, 6 packets (2.4 litres) of yoghurt drink and 46 cartons (626.5 kilograms) of shredded coconut.

During Operation Hayride the recording of information regarding the goods seized was not consistent across the regions, DAFF acknowledges that its field staff lacked data collection skills. This was apparent to the IIGB when examining records of the events associated with this incident. The IIGB notes that specific training has been provided to field staff since then. DAFF has also issued *Guidelines for post border recovery operations* (DAFF 2012c).

Based on discussions with DAFF regional staff, the IIGB notes that some inspectors seemed to be unsure about the emphasis that they should give to regulatory compliance compared with a perceived need to ensure timeliness of import clearance of cargo. This appears to relate to their routine operational duties and to any ability they may have for follow-up pursuit of intuitive leads in their regulatory roles. The IIGB notes that DAFF could benefit from a review of the culture of its regulatory staff.

Recommendation 2
Reaffirmation of the role and mission of DAFF in administering the *Quarantine Act 1908*
That DAFF review the organisational culture of staff with biosecurity-related responsibilities to ascertain any need for clarification of the degrees of emphasis to be placed on regulatory functions and timeliness of import clearance.

Intelligence and profiling

The DAFF clearance system for imported foods (and cargo) generally relies on the use of profiling. Biosecurity-related profiles developed by DAFF exist in ICS, which can automatically direct cargo consignments for quarantine intervention based on the answers importers and brokers give to profile questions.

DAFF also applies additional profiles to selected importers and suppliers based on compliance history. Supplier importer profiles are used to monitor importers who are associated with more than one case of noncompliance.

Supplier importer profiles were implemented during the targeted campaigns in 2011–12 to monitor noncompliant importers. Since Operation Hayride, DAFF has focused on streamlining data analysis methodology and the application of profiles in order to increase the efficiency and effectiveness of targeted campaigns.

The IIGB noted that DAFF collects and analyses data for specific purposes, for example investigations, QAP monitoring and broker compliance. The assembly of information and intelligence appears to occur within units in DAFF in the absence of a structured system of sharing information and analysis outcomes between and across units. For example, the IIGB notes that a project looking at broker transgression uses individual emails to convey information and advice to entry management officers. The current AIMS database does not support an automated process to enable sharing and wider accessibility of this information between relevant DAFF areas.

The IIGB notes that DAFF has established a small, dedicated intelligence unit whose role is to assess and analyse information, identify risk areas and anticipate likely scenarios for the illegal importation

of prohibited products. The IIGB strongly encourages further development of the capability and capacity of this skills base. This should be supported by further development of an information management system to facilitate gathering, processing and sharing of intelligence. This should assist the delivery and public protection of the regulatory role. This incident demonstrates that a strategic expansion of this system is a necessary augmentation of the risk return service delivery policy recently adopted by DAFF. The IIGB notes that this will require substantial resource investment.

Recommendation 3
Coordination of information and intelligence for biosecurity risk management
That DAFF improve its analytical and predictive functions by expanding its strategic and operational intelligence capabilities, including the development of a complementary information management system.

The IIGB notes that DAFF has a system to respond promptly to changes in the significant disease and pest status of an exporting country. However, the IIGB considers that when this response includes the suspension of significant levels of trade in food products, DAFF does not appear to have a coordinated process to anticipate the likelihood of attempts to illegally import those types of products by substitution in unaffected food item pathways.

In such circumstances, introduction of targeted campaigns involving specific profiling activities would appear to be warranted.

Recommendation 4
Proactive quarantine inspection regime to address importation of undeclared/unlawful meat-based products
That DAFF routinely consider using targeted inspection campaigns of imports of non-affected food items from any country from which significant import trade of meat products is suspended due to changes in its animal disease status.

Overall Biosecurity Assessment

The biosecurity risks associated with the importation of food products from any country that contain meat derived from pigs and chickens have been assessed by the Australian Government Department of Agriculture, Fisheries and Forestry. See the complete list of import risk analyses on the DAFF website. These import risk analyses have concluded that biosecurity risks associated with the importation of pig and chicken meat without risk management measures (unrestricted risk) is not acceptable.

This assessment undertaken by the IIGB is not an import risk analysis. This is an assessment of possible risks associated with an incident of illegal importation of food products that had already arrived in Australia. A significant amount of time has passed since the detection of these unlawful food products and this had been taken into consideration. Fortunately, since this incident Australia has not had any reported outbreaks of exotic animal diseases associated with the imported food products.

In assessing the risks arising from the incident under review, the IIGB concluded that foot and mouth disease (FMD) was the most serious potential biosecurity risk to Australia. The Republic of Korea was experiencing major outbreaks of FMD in the period leading up to the detection by DAFF of the undeclared/unlawful food imports.

The risk of highly pathogenic notifiable avian influenza (HPNAI) was also examined due to its potential impact on Australian avian industries and, potentially, public health. Other livestock disease risks have been considered and are assessed as being of lesser risk of entry or consequence in this incident.

Establishment of FMD or HPNAI requires initial introduction of viable virus into Australia; however, introduction of the viruses alone does not necessarily lead to establishment of the diseases.

The highest risk scenario for establishment of FMD or HPNAI as a result of these unlawful food imports entering high risk pathways would result from the direct consumption of food containing viable virus by an Australian animal susceptible to these viruses. This would have to be followed by epidemiological contact between the newly infected animal and wider susceptible animal populations. In the IIGB's assessment of possible disease risk pathways for these diseases and other disease risks identified for consideration in this report, the exposure pathway of most concern involved backyard pig or poultry scenarios.

A proportion of the seized goods have been retained under DAFF's biosecurity control for legal evidentiary purposes. The IIGB is satisfied that the remainder of the seized food products have been disposed of by approved DAFF treatments for quarantine risk materials.

In undertaking the assessment of risks associated with this incident, the IIGB found that:

1. An estimated 132 tonnes of food products (including products containing pork, chicken and/or beef meats or dairy ingredients) was seized by DAFF from retail stores located in metropolitan Sydney, Melbourne, Brisbane and the Gold Coast. That tonnage is extremely low compared with the amount of food products entering Australia from overseas but is significant in terms of biosecurity risk.
2. Biosecurity risks associated with the food products seized in response to the detection on 20 December 2010 have been suitably managed by DAFF. It is likely that similar non-

permitted food products from the Republic of Korea entered Australia undetected for at least one year before that detection; however, it is not possible to ascertain the quantity of such products.

3. It is not possible to verify whether the pig meat, beef or chicken meat in these products originated from the Republic of Korea or were imported into the Republic of Korea from another country.
4. Given the FMD outbreaks in the Republic of Korea, particularly the type O outbreak between November 2010 and March 2011, and the paucity of information available about Korean biosecurity controls between farms and to and within abattoirs, the IIGB cannot rule out that tissues from FMD-infected animals, especially pigs, may have been incorporated into one or more unlawfully imported product lines containing meat.
5. The unlawfully imported products, based on size of packages and product descriptions, were intended primarily for domestic human consumption. Most of the discrete sub-packages appeared to be of single meal size.
6. It is reasonable to assume that the food products would have required little or no further processing, apart from reheating or cooking. Thus the likelihood of a large amount of food waste containing meat being disposed of was very low. Of the extensive range of types of products seized, no consignments of pork or beef needed further transformation (for example deboning or trimming). In the absence of other evidence, it is reasonable to assume that any earlier undetected unlawful import consignments would have been similar in type.
7. The location of retail locations and communities that would have been likely to purchase these speciality Korean food products appear to be limited to major metropolitan areas. Waste generated from trade and consumption of these products would most likely have been disposed of through urban waste services and buried at metropolitan landfills.
8. The volume of waste from these food products would have constituted an extremely small proportion of the total tonnage of domestic and commercial waste (including food waste) disposed at metropolitan landfills. It is therefore unlikely that animals susceptible to FMD, especially pigs, consumed waste containing viable FMD virus at metropolitan landfills.
9. Although swill feeding of livestock (including poultry) is banned in all states and territories, knowledge of, and adherence to, these laws is likely be low. Thus, the feeding of human food waste to backyard pigs and/or poultry is considered the pathway of most concern for exposure to FMD or HPNAI-susceptible animals.
10. Based on their intended use as human food in meal-sized packages, it is very likely that most of the food products containing meat received heat treatment to cooking temperatures during processing and/or use. This would have significantly lowered (and possibly eliminated) the viability of FMD and HPNAI viruses that may have been present in these imported food products.
11. Australia has not had any reported outbreaks of foot and mouth since this incident. NSW animal biosecurity authorities have reported that a single outbreak of highly pathogenic notifiable avian influenza near Maitland, New South Wales in late 2012 was attributable to a spillover of infection from its reservoir in wild waterbirds that had direct contact with free-range poultry on the farm involved.

After the assessment of biosecurity risks associated with the unlawful importation of the food products discussed in this report, the IIGB has concluded that it was fortunate that exotic diseases of livestock have not established and spread in Australia as a result of this incident.

Several individual factors that may have mitigated the risks of entry, exposure and establishment of diseases of concern were identified in this review of this incident. These factors are discussed in this report.

Biosecurity risks of undeclared imported food products from the Republic of Korea

The incident involved the undeclared/unlawful importation from the Republic of Korea of food products containing meat (mostly pork, chicken and or/beef). DAFF's response to the initial detection included tracing and seizing as much of those imported consignments as possible and instigating an ongoing targeted program to detect and potentially deter any further attempts to import such food products. DAFF seized an estimated 132 tonnes of food products for which no import permits had been issued.

The IIGB noted that DAFF investigations elicited verbal admissions by one importer involved that the undeclared/unlawful importation of such products had been occurring for one or more years. It is likely that food products (containing meat and dairy ingredients) unlawfully imported from the Republic of Korea were being used in Australia before the initial detection by DAFF in December 2010.

As part of this review, the IIGB undertook an assessment focusing on the most significant exotic animal disease risks to Australia posed by this incident. Attention was given to DAFF's import risk analyses of pig meat and chicken meat (DAFF 2004, 2008), and on disease agents for which the unrestricted risk of entry, establishment and/or spread was assessed as being too high to meet Australia's standards for an appropriate level of protection. These import risk analyses for pig meat and chicken meat (DAFF 2004, 2008) play an important part in Australia's biosecurity protection. The Australian Government uses risk analyses to assist it in considering the level of quarantine risk that may be associated with the importation of proposed importation of goods. These risk analyses:

- identify the pests and diseases of quarantine concern that may be carried by the good
- assess the likelihood that an identified pest or disease or pest would enter, establish or spread
- assess the probable extent of the harm that would result.

These import risk analyses are undertaken by DAFF using technical and scientific expertise in the relevant fields. In this review and its assessments, the IIGB has used the pig meat and chicken meat import risk analyses (DAFF 2004, 2008) as important references.

The IIGB considers that several diseases may have been of likely relevance to this incident, including:

- foot and mouth disease
- highly pathogenic notifiable avian influenza
- very virulent infectious bursal disease
- exotic strains of infectious bursal disease
- Newcastle disease
- classical swine fever

- porcine reproductive and respiratory syndrome
- post-weaning multisystemic wasting syndrome
- Trichinella spiralis
- bovine spongiform encephalopathy.

The IIGB identified the main potential risks were FMD and HPNAI, especially given reported outbreaks of these diseases in several regions in the Republic of Korea during the 12 months preceding detection of the undeclared/unlawful importation of the food products. The potential consequences (including economic impact) of the establishment of these two diseases in Australia makes them of greater concern than other disease risks considered in relation to this incident. The consequences of establishment of FMD are so high that it ranks above the other diseases considered.

Establishment of these exotic viral diseases requires an initial entry of an infective dose of viable virus into a susceptible animal in Australia. However, introduction of viable virus in a food product through Australia's border does not necessarily lead to establishment of disease. Several factors must coincide to create a transmission pathway to result in the infection of a susceptible host animal and establishment of the disease.

Conclusions of this review are based on the information available to the IIGB. The absence of information on many key background aspects of the food products in the incident did not allow the IIGB to undertake a quantitative or objective risk assessment. Reasoned assumptions are the basis for most assessment outcomes.

Types of food products detected in this incident

The viability of contaminant FMD or HPNAI viruses can be affected by processing food products, especially any meat ingredients. The IIGB has considered the type of food unlawfully imported and the relative proportion of the various types of risk items (especially meat) in the total tonnage seized by DAFF. More detailed descriptions of the types of food items seized during Operation Hayride are described in an earlier section of this review.

The IIGB's analysis relied on a sample of data compiled by DAFF for legal evidentiary purposes. The IIGB notes DAFF's advice that these goods were representative of the type of goods seized during Operation Hayride. The quality of the data was variable; for example, not all weights were recorded, nor were product contents fully described.

Based on data for the Central East and South East regions, of a total 954 individual food products seized, 43 per cent were classed as meat products (for example, sausages, hams and chicken schnitzels), 32 per cent as dumplings, and 10 per cent as noodles and other products (for example, stock and fish). These figures exclude dairy products, which are outside the scope of this incident review.

Further analysis of sample data from the Central East and South East regions indicates that, of the products containing meat, dumpling products comprised about 80 per cent by weight, meat products 13 per cent and noodles 1 per cent.

To better understand the biosecurity risk that these food items may have posed, the products were categorised by type of meat and percentage of meat content in the food item.

Analysis indicated that the dominant meat types (by weight in the food items classed as meat or frozen meat) were pork, chicken or a combination of both. In the case of dumpling products, in the South East region, vegetables were the main ingredients, comprising over 80 per cent by weight. Of the dumpling products containing meat, pork was the main meat ingredient. Beef was a very small meat constituent compared with pork and chicken.

Meat from animals susceptible to FMD and HPNAI was found in several of the illegal food products. However, the proportion of meat relative to other ingredients in the food is a factor in assessing the risk of viable virus entering a pathway and establishing a disease in Australia.

From information provided, including photographs of goods seized, written descriptions and weight of packets or individual items, it would appear that the products were packaged in retail-size packs. Although uncooked meat items, such as sausages, were listed in the items seized, these were also presented in retail-size packs. The size of packaging suggests that further processing, for example boning and trimming, was not required. This would have reduced (but not removed) the risk that meat in the imported products contained FMD virus and would have significantly limited the amount of waste generated from consumption of these goods.

Foot and mouth disease

Based on the consequence assessment of its introduction to Australia, the IIGB considers the risk of foot and mouth disease (FMD) to be the highest biosecurity concern in this incident.

For FMD to be transmitted through the international movement of food products associated with this incident, an unbroken transmission pathway would need to occur, including:

- actively infected livestock, particularly those with the virus present in the bloodstream, enter an abattoir in the Republic of Korea (or somewhere else if meat imported from elsewhere was involved) and are not detected and rejected prior to slaughter
- tissues from these animals (especially bone marrow, lymph nodes, viscera, clotted blood or muscle that has not undergone rigor mortis and reached muscle pH 6.0 or less) enter the food chain
- these tissues, either together with or without muscle meat that has undergone rigor mortis, are incorporated into the trade commodity
- virus remains viable in these tissues during the processing and handling conditions associated with the manufacture of these food products
- virus remains viable in the handling and processing of the food products (for example, thawing/refrigeration or cooking) by traders and end-use consumers
- food product containing viable virus particles in sufficient concentration to establish infection is consumed by an FMD-susceptible animal in Australia.

The likelihood of viable FMD virus in these food products entering high risk pathways and leading to consumption by a pig would be linked to cases of inadequate treatment and disposal of food waste from households and from food service establishments. DAFF's import risk analysis for pig meat (DAFF 2004) identified three groups of pigs that may be directly exposed to uncooked meat scraps: feral pigs, backyard pigs and pigs in small commercial enterprises.

This link between food waste consumption (including swill feeding) and establishment of disease is historically recognised and documented. Pigs are more likely to eat waste and or swill than other susceptible livestock such as cattle and sheep.

In the DAFF import risk analysis for pig meat, the overall likely consequences associated with the unrestricted risk for the importation of pig meat and exposure to backyard pigs were assessed as extreme for foot and mouth disease.

In this incident, a range of factors would have affected the likelihood of susceptible animals in Australia consuming undeclared/unlawful imported food product containing meat. These factors are:

- intended purpose of the undeclared/unlawful imported goods
- location of retail stores and consumers where goods were sold/seized
- location demographics of relevant ethnocultural communities
- volume of waste generated from these imported goods
- means of disposal of waste
- access to waste by susceptible animals.

Most of the goods seized by DAFF were small commercially packaged food items that appeared to have been processed to various degrees. Some (about 28 per cent) were shelf stable products. Most of the products were imported in retail-sized packs and appeared to be intended for sale to domestic or restaurant trade customers, for human consumption. The relatively small individual pack sizes of most products would have lessened the opportunity for waste or unsold product to be diverted in bulk form for another use, for example as animal feed.

The IIGB considers it likely that any such products unlawfully imported from the Republic of Korea since December 2009 that have escaped DAFF's trace-back and seizure campaign have been used for human consumption. Presence of viable FMD virus in any meat product ingredient would not affect the appearance or wholesomeness of the imported product for human consumption.

DAFF's analysis of the addresses of retail shops where the goods were seized indicates that most food items in the unlawful importation incident were for sale in metropolitan areas. In Melbourne, most retail outlets for these illegally imported products were within a 21 kilometre radius of the central business district (CBD). In Sydney they were within a 30 kilometre radius of the CBD, in Brisbane within a 14 kilometre radius and at the Gold Coast within about 16 kilometres of Surfers Paradise.

This geographical assessment correlates with ancestry data from the 2011 Census of Population and Housing which shows that people of Korean ancestry lived mostly in the capital cities; in both New South Wales and Victoria, 96 per cent lived in Sydney and Melbourne, with the remaining 4 per cent in both states living outside the cities. In Queensland, of the 86 per cent of persons classed as Korean 64 per cent were located in Brisbane and 22 per cent in the Gold Coast (ABS 2011).

It is reasonable to conclude that food waste consisting of unconsumed products involved in this incident would most likely have been generated in the metropolitan locations discussed and disposed of through municipal waste disposal services. The only other likely means would be recycling within a domestic residential location; for example, composting or possible feeding of backyard poultry or pigs.

The location and operations of municipal landfills would affect the possibility of FMD-susceptible animals, especially feral pigs, accessing such waste.

Given the probable major city location of consumers of the products involved in this incident, any waste most likely would have been treated by burial at metropolitan waste disposal sites, especially landfills under full-time management operations. The IIGB could find no reports of the presence of feral pigs on metropolitan tips in Australian major cities.

Another mitigating factor in this municipal landfill disposal scenario would have been the small quantity of waste generated from the illegally imported foods in this incident relative to the total amount of domestic waste (including domestic food waste) during the period. For example, in the Sydney metropolitan area around 4 million tonnes of waste was disposed of at landfills in 2008–09 (DECCW 2011). This large dilution effect would reduce the likelihood of a pig consuming waste from food products involved in this incident.

If backyard recycling was used as a means of disposing of waste from these illegally imported food products, the potential risk associated with feeding of waste to backyard animals should be considered.

Consumption by pigs of contaminated food waste of foreign origin provides the most likely scenario for FMD to establish in Australia. The FMD outbreak in the United Kingdom in 2001 is believed to have originated with commercial pigs being fed swill from overseas food containing viable virus.

While swill feeding is banned in all Australian states and territories, a study undertaken by the Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease (Australian Biosecurity CRC 2009) and Schembri and colleagues (2010) found inconsistencies in the definition of swill across state/territory legislation. They also found that small piggery operators and households in the peri-urban environment had low levels of knowledge about on-farm biosecurity practices and disease risk, had a poor understanding of swill feeding, and limited contact with veterinary services. While deeper analysis of these issues is outside the scope of this incident review, the IIGB recognises their importance as risk factors in the possible transmission pathways.

Transmission of FMD can occur through direct contact between animals or by indirect means such as contact by susceptible animals with contaminated matter, for example equipment, faeces or feedstuff. An unbroken chain of epidemiological steps is needed to complete this transmission pathway. For example, one backyard pig infected with FMD virus in a metropolitan area may recover or die (either naturally or be slaughtered) and may not come in contact (directly or indirectly) with other susceptible animals. In such a case, the disease would not establish beyond the first infected animal.

The IIGB cannot rule out the possibility that a pig in a backyard holding may have been exposed to food waste generated from undeclared/unlawful imported products associated with this incident.

The influence of other factors, mainly the likelihood that most of the imported food had been cooked and consumed by people, the low levels of residual waste and the disposal/dilution of such waste in metropolitan landfills are likely to have mitigated risk to some extent in this incident.

Australia's response to the foot and mouth disease outbreak in the Republic of Korea in 2010

The IIGB notes that 11 months before it detected undeclared/unlawful food imports from the Republic of Korea, DAFF had acted promptly to review and tighten import biosecurity requirements for relevant permitted goods from Korea. This action was in response to an outbreak of FMD in that

country. The IIGB is satisfied that risk management for FMD was effectively applied to the lawful importation of goods from that country.

DAFF monitored the disease status in countries on a daily basis through the Program for Monitoring Emerging Diseases, an online system for reporting outbreaks of infectious disease and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed. Reports made to the World Organisation for Animal Health were also monitored. The IIGB notes that the changed FMD status in the Republic of Korea was promptly recognised by DAFF in 2010.

Once confirmation had been received, a public quarantine alert was placed on DAFF's ICON database to inform regional biosecurity officers and importers. The alert included information on disease status, the affected country and the range of commodities that could potentially be affected and action being taken. Potentially affected importers were informed of the ICON alert through the Biologicals Consultative Group and what was then the AQIS/Industry Cargo Consultative Committee (DAFF Cargo Consultative Committee).

The IIGB noted that DAFF issued notices to shipping agents and operators on 8 January 2010 advising that it would increase quarantine measures following a confirmed outbreak of FMD in the Republic of Korea. In that advice, it was stated the outbreak was believed to have started on 2 January 2010.

DAFF advised importers/shippers that if increased quarantine measures were considered necessary or if imports were to be suspended, then import permits would be varied or suspended as appropriate. Accordingly, all affected businesses would have been informed of changes affecting their permits.

Increased quarantine measures were put in place for a range of import products and disease entry pathways. These measures applied to all affected goods produced in the Republic of Korea on or after 5 December 2009, in order to account for any unusually long incubation period of the disease. The IIGB notes that Australia's policy is to prohibit the importation of unprocessed meat products from the Republic of Korea.

In response to the FMD outbreak in the Republic of Korea, DAFF interrogated ICON to identify all import permits affected by the FMD outbreak. This process enabled DAFF to vary import permits for relevant goods.

Highly pathogenic notifiable avian influenza

The risk pathway of most significance for the introduction or establishment of highly pathogenic notifiable avian influenza (HPNAI) as a result of the incident under review would have involved the direct consumption of food products containing viable virus by commercial or backyard poultry, such as chickens, ducks, turkeys and geese, or caged or wild birds.

In the case of the major commercial chicken meat and egg industries in Australia, the IIGB notes that they employ industry-wide and enterprise-level biosecurity risk management to very high standards. There would be negligible risk of waste from illegally imported food products in this incident entering high or moderate biosecurity poultry industry enterprises.

Pathway scenarios for the illegally imported chicken meat products include the waste being:

- dumped at municipal tips and then consumed by birds such as crows, ibises and seagulls
- fed to backyard domestic poultry
- fed to poultry in small low-biosecurity commercial poultry operations.

Unlike FMD and pigs, worldwide few outbreaks of HPNAI in poultry birds are reported, or suspected, as having been introduced by susceptible avian species consuming bird meat contaminated with viable HPNAI virus. Experimental transmission to healthy chickens that were fed meat from infected chickens has been reported in at least one study. Between-bird transmission of HPNAI is predominantly through contact of susceptible birds with infected birds, with contaminated feed or water supplies, or with cages or other equipment contaminated with faeces/nasal secretions from infected birds.

The IIGB notes recent advice from the European Food Safety Authority is that no evidence exists to indicate avian influenza can be transmitted to humans through consumption of contaminated food, notably poultry products and eggs (EFSA 2005).

Data accessed and analysed by the IIGB indicate only a very small proportion of products containing raw poultry meat were found in the seized goods. Most products containing poultry meat appeared to have been pre-processed (including heat treatment) and to have been packaged in a meal-sized form that required reheating/cooking.

The IIGB has found that disposal of this waste through metropolitan landfills would likely involve very small amounts of waste greatly diluted in general urban waste. This dilution would suggest that the risk of the illegal waste being consumed by wild birds present at landfills is very low.

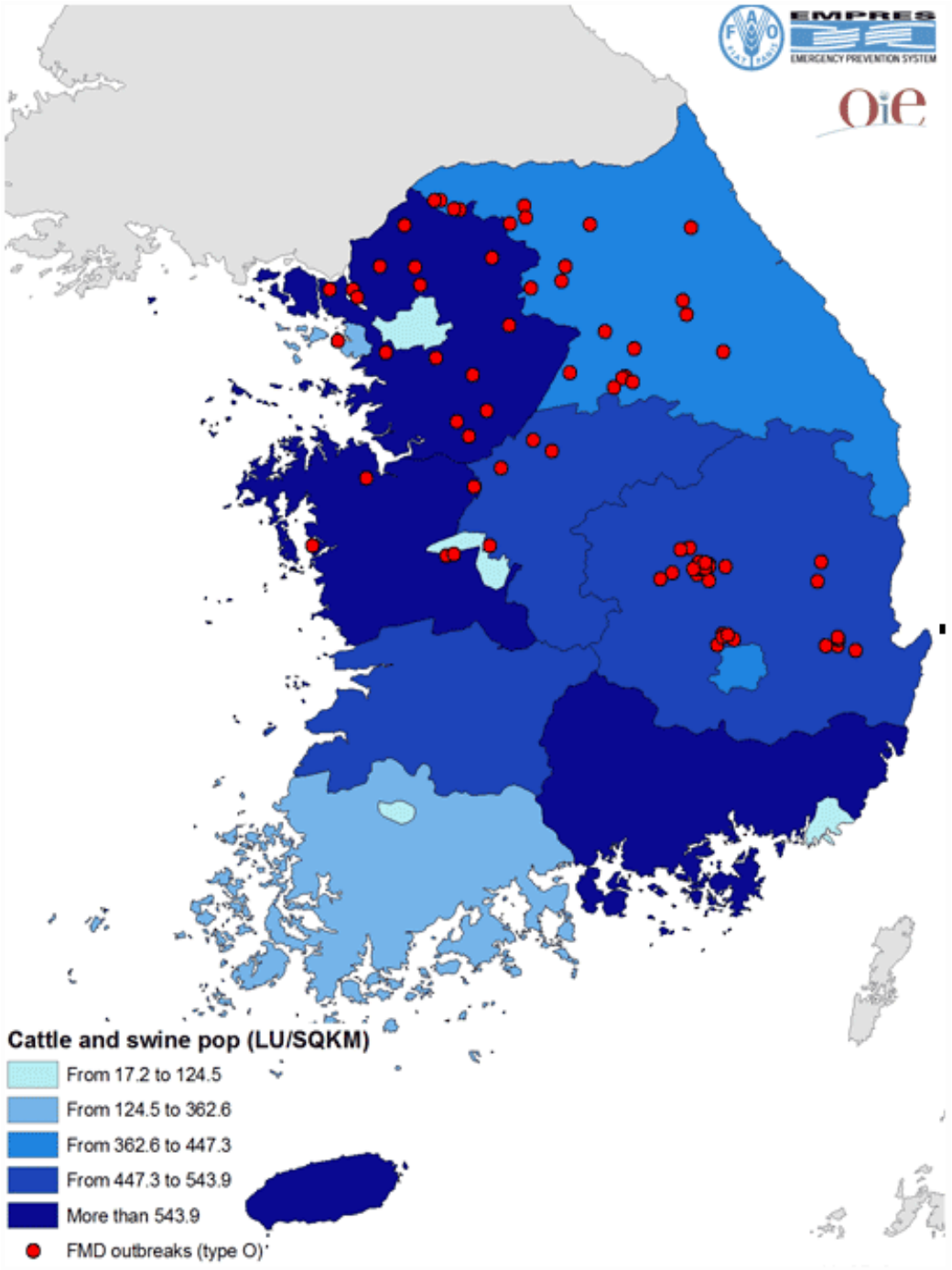
Exposure of poultry to the food waste would most likely have involved residential backyard situations. Given the relatively small amounts of waste that would have been generated from the imported poultry products in this incident, it is unlikely to have been gathered and fed in small low-biosecurity commercial poultry. The IIGB notes that the possibility of consumption by poultry in a backyard situation of waste from food involved in this incident cannot be ruled out. In order for poultry to be infected, the food waste must contain HPNAI-contaminated poultry meat with sufficient dosage of viable virus.

Outbreaks of foot and mouth disease and highly pathogenic notifiable avian influenza in the Republic of Korea in 2010

The detection of undeclared/unlawful importation of food products from the Republic of Korea occurred in December 2010.

In 2010 outbreaks of FMD and HPNAI in the Republic of Korea were reported to the World Organisation for Animal Health (OIE). Further outbreaks were reported in 2011 (Map 1).

Map 1 Density of cattle and swine and locations of foot and mouth disease outbreak in the Republic of Korea, November 2010 to March 2011



Source: Office of the Chief Veterinary Officer, Department of Agriculture, Fisheries and Forestry (DAFF 2011b)

The first outbreak of FMD (type A) was reported to the OIE by Korean officials on 7 January 2010. This was followed by an outbreak of type O on 9 April 2010. Subsequent outbreaks of type O were reported to the OIE on 22 April 2010 and 29 November 2010. From January to March 2011, 175 outbreaks of FMD across the country were reported of which five were type A and 170 were type O. The final outbreaks (type O) were resolved by April 2011. The disease control response resulted in 3.37 million, pigs, cows, goats and deer being destroyed (Rushton & Knight-Jones 2012).

Fifty-three outbreaks of HPNAI in poultry were also reported between 29 December 2010 and 16 May 2011. This was after the notification of outbreaks in wild birds that started on 29 November 2010.

According to reports, Korean authorities undertook a range of control measures, including surveillance, control on the movement of livestock within the country, stamping out and vaccination.

Reports about the extent of FMD outbreaks in the Republic of Korea suggested a significant risk that food products containing meat that were manufactured during the outbreaks could have been contaminated with viable virus.

The IIGB was unable to obtain detailed information about biosecurity controls exercised by the Korean Government before and at the time of the reported outbreaks. The lack of information makes it impossible to assess the likelihood that the outbreaks in 2010 resulted in viable FMD or HPNAI viruses being present in food products containing meat of Korean origin from pigs, cattle or poultry that were manufactured before the detection of this incident. That the meat products in those consignments cannot be confirmed as originating in that country and lack of other key information further precludes a definitive risk assessment.

Consequently, the IIGB could not make conclusive findings about specific biosecurity risks associated with the illegally imported food products that are the subject of this incident review.

Appendix A: Role of the IIGB

As part of its preliminary response to the 2009 review of Australia's quarantine and biosecurity arrangements (the Beale Review), the Australian Government agreed to establish a statutory office of the Inspector-General of Biosecurity. The role would be established under the proposed biosecurity legislation. In advance of this enabling legislation, interim administrative arrangements are in place.

On 1 July 2009, the Australian government appointed an Interim Inspector-General of Biosecurity (IIGB). The role covers systems and their risk management measures for which DAFF is responsible.

The scope of the role also includes biosecurity measures relating to human health and environmental responsibilities undertaken by DAFF on behalf of the Department of Health and Ageing, and the Department of Sustainability, Environment, Water, Population and Communities. A 2011 memorandum of understanding between DAFF and the Australian Customs and Border Protection Service supports a common approach to border operations.

The IIGB works with DAFF, relevant Australian Government departments, competent authorities and organisations/companies involved in the biosecurity continuum.

The IIGB is independent from the organisational and functional arrangements of biosecurity divisions within DAFF and reports to the Minister for Agriculture, Fisheries and Forestry. The IIGB makes key findings and recommendations publicly available unless they contain confidential information. The department provides administrative support to the IIGB through the IIGB Support Unit.

IIGB program

The IIGB program of activities includes a comprehensive agenda of systems performance audits designed to provide assurance of biosecurity systems and risk management measures across Australia's biosecurity continuum. The IIGB collates potential audit/review topics from a variety of sources, including:

- DAFF and relevant industries
- relevant reviews/inquiries (such as the Australian National Audit Office and internal DAFF audits)
- previous IIGB audits
- expert advice
- media coverage.

The IIGB also considers the Minister's requests to undertake specified audits or reviews relating to the biosecurity system. The IIGB prioritises audit/review topics. This includes an indicative qualitative risk assessment to assess the effects and likelihood of breakdowns in the biosecurity systems being audited. The IIGB also aims to:

- work within resource limits
- avoid duplication with other biosecurity-related assurance/audit activities
- balance effort and coverage over the biosecurity continuum and sectors
- balance effort and coverage of risk management processes outlined in the ISO 31000:2009 standard.

Appendix B: Australian quarantine legislation

This section summarises Part 6 Division 2 sections 38 to 40 of the Quarantine Proclamation 1998.

Table B1 Selected prohibited meat and meat products, Quarantine Proclamation 1998

Item	Animal, article or part
30	Meat products, if retorted, containing less than 5 per cent by weight of meat, and not requiring refrigeration to maintain quality
31	Meat products, if commercially manufactured, retorted and shelf-stable without refrigeration, for the personal consumption of the person wishing to import the product
31A	Meat or meat products, other than pork or avian meat if clearly labelled as a product of New Zealand, and if for the personal consumption of the person wishing to import the article
32	Meat or meat products, other than pork or avian meat, if declared to be of New Zealand origin and: a) clearly labelled with date of processing; and b) clearly labelled with the name and address of the processing premises; and c) the outermost wrapping of the largest packaged unit is labelled 'Product of New Zealand' d) Note if the container is a full sealed shipping container, it is not necessary for each individual package to carry the 'Product of New Zealand' label
33	Meat-based flavoured products, from any kind of meat (including pork or avian meat) from any country and from any country (including New Zealand) if commercially manufactured and packaged and not containing discernible pieces of meat, for the personal consumption of the person wishing to import the product
34	Commercially prepared meat floss, it without discernible meat portions, and if for the personal consumption of the person wishing to import the article
35	Meat and meat products if: a) included in noodles as an additional ingredient, or as a flavouring that is derived from any kind of meat; and b) the noodles are for instant use; and c) the noodles are shelf stable; and d) the noodles are for the personal consumption of the person wishing to import them
36	Meat and meat products if: a) included in pasta as an additional ingredient, or as a flavouring that is derived from any kind of meat; and b) the pasta is for instant use; and c) the pasta is shelf stable; and d) the pasta is for the personal consumption of the person wishing to import it
37	Pork crackling or pork rind that is: a) shelf stable; and b) for the personal consumption of the person wishing to import it

Note: Excerpt from Quarantine Proclamation 1998, Part 6 Division 2 Section 38, Dead animals or animal parts the importation of which is prohibited other than subject to conditions (Quarantine Act, ss 5 (1) and 13 (1) (d), (e) and (f)), Table 13 Dead animals and animal parts—Meat and meat products.

39 Importation of meat and meat products (Quarantine Act, ss 5 (1) and 13 (1) (d), (e) and (f)

1) The importation into Australia of meat or meat product (except meat or a meat product to which subsection (2) applies) is prohibited unless a Director of Quarantine has granted a permit to import the meat or meat product into Australia.
2) This subsection applies to meat or a meat product that:
   a) Is mentioned in an item in Table 13 [summarised in Table B1]; and
   b) Complies with any restriction or condition set out in the item.

40 Importation of dairy products (Quarantine Act, ss 5 (1) and 13 (1) (d), (e) and (f))

1) The importation in Australia of a dairy product (except a dairy product to which subsection (2) applies) whether for human consumption or not, is prohibited unless a Director of Quarantine has granted a permit to import dairy product into Australia.
2) This subsection applies to the following dairy products (if not intended to be used for stockfeed):
   a) a dairy product imported directly from New Zealand that is, or whose dairy product ingredients consist only of:
      i. milk produced in New Zealand; or
      ii. dairy products made in New Zealand from milk that did not originate in, pass through, a country other than New Zealand or Australia;
   b) a commercially prepared dairy product that is an infant food, if the person who seeks to import the product is entering Australia and has the care of, and is accompanied by 1 or more infants
   c) goods of which each individually packaged unit contains less than 10 per cent by weight (other than any added water) of a dairy product)
   d) commercially prepared and packaged chocolate
   e) lactose, and its derivatives
   f) commercially prepared and packaged clarified butter oil
   g) personal consignments of commercially prepared and packaged dairy products that are manufactured in a country recognised by the Office International des Epizooties as free from foot and mouth disease, and approved by the Director of Quarantine, that are intended for human consumption
   h) biscuits, breads and cooked cakes (other than cheese cakes and cakes containing dairy fillings or toppings that have not been cooked with the cake);
   i) biscuits, bread and cooked cakes and cooked cakes containing dairy fillings and toppings manufactured in a country recognised by the Office International des Epizooties as free from foot and mouth disease, and approved by the Director of Quarantine, that are intended for human consumption
   j) a dairy based powered beverage that:
      i. includes coffee or flavouring as an ingredient; and
      ii. is presented as being for instant use; and
      iii. is shelf stable; and
      iv. is for the personal consumption of the person wishing to import it.

See the full text of the Quarantine Proclamation 1998 at the ComLaw website.

Appendix C: Risk category foods

DAFF's food notices (DAFF 2012b) advise on foods that will be inspected and analysed because they are considered risk food under the Imported Food Control Order 2001. Food Standards Australia New Zealand (FSANZ) is the government body responsible for developing and maintaining the Australia New Zealand Food Standards Code. FSANZ monitors food safety incidents worldwide and provides advice to DAFF on monitoring and testing imported food. FSANZ advises DAFF when food poses a medium-high risk to human health and on appropriate testing. The Australian Customs and Border Protection Service refers 100 per cent of risk category foods through the Integrated Cargo System to DAFF for inspection and testing against a list of potential hazards determined by FSANZ. Such hazards include *Escherichia. coli; Listeria monocytogenes* and *Salmonella*. Food items include:

- beef, beef products and food containing beef or beef products as an ingredient
- meat—cooked and processed meat or manufactured meat
- chicken meat—cooked (chilled or frozen)
- poultry pâté and poultry livers—cooked (chilled or frozen)
- pig meat—cooked (chilled or frozen)
- meat—uncooked and processed meat or manufactured meat (ready for consumption)
- fish—tuna and mackerel whole, filleted or further processed, whether dried or not
- finfish—ready to eat processed finfish (including vacuum packed), other than ambient stable sealed packages of finfish
- marinara mix (seafood mix)
- crustaceans—cooked (chilled or frozen)
- prawns and shrimp—cooked (chilled or frozen)
- bivalve molluscs
- cheese and curd
- coconut dried
- nuts—peanuts and pistachios and products made from these nuts
- pepper, paprika, chilli and capsicum dried
- sesame seeds and sesame seed products
- brown or hijiki seaweed that is dried, fresh or frozen
- satay and peanut sauce
- chips, crackers, snacks and other packaged and ready to eat products made from cassava.

Appendix D: Photographs of selected items seized during Operation Hayride

Frozen meat products

Pork cutlets

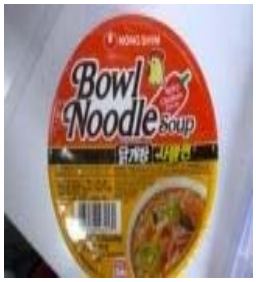
Sausage

Pork intestine

Ham

Dumplings

Noodles



Source: DAFF

Glossary

AIMS	DAFF's database system for retaining records of quarantine entries for goods entering Australia. AIMS provides quarantine management of imported goods (including food) and non-commodity items, records DAFF's decision-making process and communicates this information to the owner/agent/importer.
Appropriate level of protection (ALOP)	Level of protection deemed appropriate by a country establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory. Also known as the acceptable level of risk.
Beale review	*One biosecurity: a working partnership*, released by the Australian Government on 18 December 2008, was an independent review of Australia's quarantine and biosecurity arrangements chaired by Mr Roger Beale AO.
biosecurity risk	Potential harm to the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests and diseases.
Integrated Cargo System (ICS)	Electronic system maintained by the Australian Customs and Border Protection Service (Customs) and administered by Customs and DAFF. The ICS enables electronic lodgement and processing of imported consignments using data entered by custom brokers or by Customs officers.
Import Clearance Effectiveness (ICE) Program	Designed to measure the performance of DAFF profiling and referral mechanisms operating in the ICS and of DAFF's import management activities (for example, documentary assessments) conducted on consignments that have been referred to DAFF for quarantine assessment.
order into quarantine	Process of detaining goods to isolate quarantine risk under the *Quarantine Act 1908*.
profile	Set of criteria to be matched against data obtained from a cargo document or from a data file so as to identify potential risks.
quarantine approved premises (QAP)	Facility approved by DAFF for the performance of quarantine under section 46A of the *Quarantine Act 1908*. For the purpose of this document, a QAP is the area specifically meeting the necessary standards for the Class of QAP.
retorted product	A product that is heated in an unopened, hermetically sealed container for a period, and to a temperature beyond 100 °C, sufficient to render the contents commercially sterile.
risk management	Identification, documentation and implementation of the measures that can be applied to reduce risks and consequences (OIE International Animal Health Code).
seized goods	Goods of quarantine concern that are not declared to a quarantine officer, and are found during an inspection and seized and ordered into quarantine, pending treatment, export or destruction as per the import conditions.
shelf stable	Food that will last for an extended period, packaged or not, without any special storage conditions.
supplier importer profile (SIP)	Suppliers or importers who are profiled accordingly by DAFF are subject to increased monitoring inspections of their imported cargo.

References

ABS 2011, *Community profiles*, Australian Bureau of Statistics, Canberra, available at abs.gov.au/websitedbs/censushome.nsf/home/communityprofiles?opendocument&navpos=230.

AQIS 2006a, 'Work Instruction, ICE Inspections at CEFs', version 9, Import Clearance Effectiveness, Cargo Risk Management Unit, Import Clearance Program, Department of Agriculture, Fisheries and Forestry, Canberra, July 2006.

AQIS 2006b, 'Work Instruction, ICE Follow-up Inspections, version 3, Import Clearance Effectiveness, Cargo Risk Management Unit, Import Clearance Program, Department of Agriculture, Fisheries and Forestry, Canberra, July 2006.

Australian Biosecurity CRC 2009, Research project 3.016RE 'Peri-urban regional surveillance for the pig industry in eastern Australia', Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease, Queensland.

DAFF 2012a, 'DAFF Imports Compliance Statement 2012–13', Department of Agriculture, Fisheries and Forestry, Canberra, available at daff.gov.au/aqis/about/biosecurity-compliance-strategy/daff-imports-compliance-statement-2012-13.

DAFF 2012b, 'Imported Food Notice 09/12: Tests applied to risk category foods', Department of Agriculture, Fisheries and Forestry, available at daff.gov.au/__data/assets/pdf_file/0010/2232973/ifn-09-12.pdf (pdf 1.20mb).

DAFF 2012c, *Guidelines for post-border recovery operations*, Biosecurity, Department of Agriculture, Fisheries and Forestry, Canberra.

DAFF 2011a, *Importers facing prosecution for illegal Korean foods*, media release DAFF11/006D, Department of Agriculture, Fisheries and Forestry, Canberra, 4 April.

DAFF 2011b, 'Foot and mouth—exercises and recent outbreaks. What have we learned?' presentation to Animal Health Government Industry Foot and mouth Forum, April, Canberra.

DAFF 2011c, *Import risk analysis handbook 2011*, Department of Agriculture, Fisheries and Forestry, Canberra, available at daff.gov.au/ba/ira/process-handbook.

DAFF 2010a, 'Work instruction: Overseas Exotic Disease Incident Strategy', version 3, Biologicals Import Program, Biosecurity Services Group, Department of Agriculture, Fisheries and Forestry, Canberra, 25 June 2010.

DAFF 2010b, *Minimum Documentary Requirements Policy*, version 1.5, Australian Quarantine and Inspection Service, Department of Agriculture, Fisheries and Forestry, Canberra, July 2010.

DAFF 2010c, 'Seaports quarantine operational notice, response arrangements—Outbreak of FMD in the Republic of Korea (South Korea)', SQON no. 01/2010, Australian Quarantine and Inspection Service, Department of Agriculture, Fisheries and Forestry, Canberra, 8 January 2010.

DAFF 2008, *Generic import risk analysis for chicken meat. Final report: Part A*, Department of Agriculture, Fisheries and Forestry, Canberra, October.

DAFF 2007, 'National guidelines, Import clearance effectiveness (ICE), Follow-up selections and administration procedures', version 2, Australian Quarantine and Inspection Service, Department of Agriculture, Fisheries and Forestry, Canberra.

DAFF 2004, *Generic import risk analysis (IRA) for pig meat. Final import risk analysis*, Department of Agriculture, Fisheries and Forestry, Canberra, February.

DECCW 2011, *Waste Avoidance and Resource Strategy Progress Report 2010*, vol. 1, NSW Department of Environment, Climate Change and Water, Sydney, February 2011.

EFSA 2005, *EFSA provides update on avian influenza and food policy*, media release , European Food Safety Authority, Parma, Italy, 26 October 2005, available at efsa.europa.eu/en/press/news/biohaz051026.htm.

Rushton, J & Knight-Jones T, 2012, 'The impact of foot and mouth disease—supporting document no. 1, paper prepared for the FAO/OIE Global conference on foot and mouth disease control, 27-29 June 2012, Bangkok, Thailand.

Schembri, N, Hernández-Jover, M, Toribio, JA & Holyoake, PK 2010, 'Feeding of prohibited substances (swill) to pigs in Australia', *Australian Veterinary Journal*, vol. 88, no. 8, August.