



**Australian Government**  
**Department of Agriculture,  
Fisheries and Forestry**

**INTERIM INSPECTOR GENERAL OF BIOSECURITY**

---

## **INCIDENT REVIEW**

**An examination of factors that led to release into Australia of a consignment of soil (declared as fertiliser) and interception at the border of another consignment of soil (declared as fertiliser)**

**INTERIM INSPECTOR GENERAL OF BIOSECURITY**

**June 2012**

No: 2011–12/01

# Contents

**Executive summary ..... 3**

**Key findings ..... 4**

**Recommendations ..... 9**

**Conduct of incident review ..... 10**

**Methodology ..... 11**

**Out of scope..... 12**

**Background and context ..... 12**

**The incident ..... 16**

**Observations and findings ..... 17**

**Chronology of events..... 25**

**Appendix A Fertiliser sampling rates ..... 27**

**Appendix B Import declaration process..... 28**

**Appendix C Overview of DAFF Biosecurity process for profiling in Integrated Cargo System... 29**

**Appendix D Integrated Cargo System ..... 30**

**Appendix E Results of microscopic and chemical (elemental) analysis of sample..... 32**

**Appendix F Photographs of imported material..... 33**

**Glossary..... 34**

## **Executive summary**

At the request of the Minister for Agriculture, Fisheries and Forestry, the Interim Inspector General of Biosecurity (IIGB) included in his 2011–12 audit work plan to undertake an incident review to examine factors that led to release into Australia of a consignment of soil (declared as fertiliser) and interception at the border of another consignment of soil (declared as fertiliser).

### **Objectives**

This incident review was undertaken to examine:

- the factors that led to a consignment of bagged soil (declared as fertiliser) being released into Australia
- the factors that led to interception of a subsequent consignment of soil at the border, that was also declared as fertiliser and came from the same supplier
- the biosecurity risks (excluding analysis of samples) associated with soil, plant and animal material and microorganisms
- whether Australia's procedures and operations need improvement to mitigate the risk of such biosecurity risks recurring.

### **Scope**

The review included examination of Department of Agriculture, Fisheries and Forestry Biosecurity's (DAFF) border procedures and operations for importation of fertiliser consignments (packaged in less than or equal to 100 kilogram bags), as they relate to biosecurity and quarantine risks, including:

- import conditions and permits
- certifications and declarations
- inspection and verification activities at the border
- biosecurity risks associated with soil, plant and animal material, and microorganisms (may exclude sample analysis)
- if improvements are required to Australia's procedures and operations to mitigate the risk of such biosecurity risks occurring in the future.

This incident review focused on the circumstances of two consignments of imported soil declared as fertiliser and amounting to approximately 740 tonnes of containerised sea cargo from China. The first consignment (declared as approximately 590 tonnes) was imported to Australia on 5 May 2011 with accompanying declarations that it consisted of fertiliser packaged in bags less than or equal to 100 kilograms. The second consignment (declared as approximately 150 tonnes) arrived on 3 June 2011, and remained under the control of the Australian Customs and Border Protection Agency as the importer refused to take possession of the cargo. No declaration was made in the Integrated Cargo System (ICS) for this consignment. The same supplier and importer were involved in both consignments.

Mined and chemical fertilisers packaged in less than or equal to 100 kilogram bags could be imported into Australia without the need for an import permit. This incident review looked

specifically at risk management measures that DAFF Biosecurity had then and now has in place to identify and control potential biosecurity risks along the entry pathways for imported fertiliser, packaged specifically in less than or equal to 100 kilogram bags.

During the course of this review, the IIGB consulted key stakeholders. The findings and recommendations are based on analysis of documentary examinations at several locations, in-person and telephone interviews and observations from inspection visits to DAFF's Central-East Regional (CER) office in Sydney, the consignment storage facility at Botany and the relevant Sydney autoclave facility involved in quarantine waste disposal. The supporting data analysis and incident review outcomes are outlined within the body of this report.

## **Key findings**

### **Goods and total tonnage falsely declared**

The supplier declared two consignments of soil as NPK (25:15:5) fertiliser amounting to a total of 740 tonnes. The first consignment that arrived in Australia on 5 May 2011 consisted of 590 tonnes of bagged soil and the second consignment that arrived on 3 June 2011 consisted of 150 tonnes of bagged soil.

Firstly, the IIGB noted that the crude, unrefined soil-like appearance of the contents and the large cargo tonnage involved signified a high probability of wilful intent to substitute a low value commodity for a higher value product and a possible intent to mislead Australia's border protection system. The IIGB was unable to identify the party or parties likely to have been responsible because this was not investigated under the terms of this review.

The circumstances of this incident highlight some vulnerability in risk management in border biosecurity services relating to this commodity and other imported commodities, in general. A high degree of reliance is placed on the integrity of suppliers and the accuracy of declarations. At the time, based on the low biosecurity risk for the product, there was no mandated random inspection in place for fertiliser in bags less than or equal to 100 kilograms. This meant that soil substituted for fertiliser (or other commodity) and ostensibly declared as meeting DAFF's biosecurity requirements was unlikely to be detected during import clearance.

DAFF Biosecurity only became aware of this breach in border biosecurity through the responsible reporting actions of the farmer from Parkes, New South Wales and the customs broker. In this incident, good fortune assisted by the prompt reporting actions of the farmer contributed to biosecurity risk mitigation during the days of 5–13 May 2011 including during the transport and recovery of 44 tonnes of material that had arrived on a farm in Parkes (central New South Wales).

Secondly, the total tonnage for the two consignments was also incorrectly declared as 740 tonnes. Generally, the tonnage of imported sea cargo, as declared, is not reconciled by weighing on arrival. However, in this case, before loading the cargo for re-export from Australia to China, the whole cargo was weighed at the transport company's behest and reported to be approximately 700.6 tonnes. The IIGB estimates that the total weight of the two consignments on arrival would have been approximately 702.14 tonnes and not 740 tonnes as the overseas-based supplier had declared.

The bulk of the consignments of bagged soil remained under DAFF and Customs control at Botany, New South Wales and only 44 tonnes of material (bagged soil, which was shrink-wrapped on pallets) was transported within New South Wales from Botany to the one farm shed in Parkes. This consignment of 44 tonnes was returned to Botany under quarantine and totally accounted for. The IIGB is satisfied that this difference in tonnage (that is, approximately 37.86 tonnes, excluding the 1.54 tonnes of spilled material that was treated by DAFF-approved method of destruction/sterilisation before disposal) between the import and re-export declarations could only be attributed to false tonnage declaration by the overseas supplier.

### **Biosecurity risks**

The IIGB cannot rule out the possibility that this material contained animal or plant pathogens or pests that are not present in Australia, and/or any potential animal or public health threats such as anthrax spores or toxic chemical residues. A laboratory analysis and descriptions of the material indicate that it was soil that included identifiable plant and possibly animal matter.

Importation of soil is prohibited under the Quarantine Proclamation 1998. DAFF Biosecurity did not undertake a detailed sample testing for pests and diseases of the contents of each container in these two consignments. This is a standard practice for prohibited material intercepted by DAFF and ordered for treatment, destruction or re-export.

The IIGB understands such testing would have required a large logistical exercise, involving relocation of 34 (40-foot) shipping containers to suitable premises for unpacking, and significant costs. Possible release and establishment of pests or disease pathogens in the contents could have overshadowed any benefits from knowledge gained by such detailed examination. DAFF inspectors reported no sign of insect or other potential pest activity in or on the bags examined over the period that these consignments remained under DAFF control.

There is no evidence that the imported soil (declared as fertiliser) contacted local soil, crops or livestock on the Parkes farm or elsewhere. That farm undertakes broadacre cropping only and does not carry livestock.

### **Biosecurity risk management following detection of soil in consignments**

The IIGB is satisfied that the DAFF Biosecurity response to this incident provided appropriate biosecurity safeguards after detection of the soil. This response had the objectives of containing the material near the port of arrival and re-exporting the containers and contents. This was the most soundly-based and practical biosecurity risk-management option under the circumstances. It is noted that DAFF Biosecurity also explored alternative risk management options, including autoclave treatment and/or deep burial as contingency arrangements.

### **Contingency option explored for safe end-use of imported consignments**

The IIGB noted that, among other alternatives to re-export of both consignments back to the country of origin, DAFF Biosecurity explored the possibility of using the material in a way that would render it safe, from a quarantine perspective, through the processing it would undergo. For this, a sample was delivered to a laboratory in New South Wales for ascertaining the possible use of the material in brickmaking. However, the material did not meet the standards for brickmaking.

## **Spillage containment**

The IIGB is satisfied that DAFF Biosecurity and the Parkes farmer adequately contained the small quantity of spilled contents from two damaged bags within the farmer's shed. The spilled material was swept up from the enclosed shed's relatively new concrete floor and was re-bagged. One of the damaged bags—securely sealed and covered along with the rest of the consignment (44 pallets of bagged material)—was transported back to the storage warehouse at Botany, New South Wales on 16 May 2011 and consolidated with the rest of the consignment. Another damaged bag securely sealed in a quarantine bag, was delivered to the same premises on 17 May 2011.

The IIGB is satisfied that material spilled from damaged bags both during packing on pallets in preparation for distribution at the Botany warehouse or during transfer for re-export was also contained effectively for disposal as quarantined waste.

## **Containment under quarantine**

Thirteen farmers were scheduled to receive deliveries of the imported commodity. However, only one farmer near Parkes, New South Wales received a delivery (44 tonnes) and promptly reported its soil-like contents. This triggered a DAFF Biosecurity response that included return of that load to the storage warehouse at Botany, New South Wales.

The storage company's warehouse that held the consignment at Botany is not a DAFF Quarantine Approved Premises (QAP). However, DAFF effectively contained the containers carrying the bags of soil by placing them under quarantine and sealing them to ensure material was not removed from the premises. The containers and contents were located indoors on solid concrete flooring within an enclosed warehouse.

## **Disposal of un-exported remnants of consignments**

The IIGB is satisfied that adequate biosecurity was maintained during the DAFF-controlled disposal of 1.54 tonnes of material that remained in damaged bags (including re-gathered spillage from Parkes and Botany) following re-export of the bulk of both consignments. That included the material being transported to a DAFF QAP in Sydney for destruction by autoclave treatment as quarantine waste. The transport vehicle was routinely cleaned and disinfected at the site after unloading the material. Following the autoclaving process that met DAFF's required time and temperature standards, the treated material was buried at a waste disposal site.

## **Amendment to inspection requirements following the incidents**

The incident required a review by DAFF Biosecurity of the import requirements for fertiliser in bags of less than or equal to 100 kilograms and of import clearance procedures.

In response to this incident, in October 2011, DAFF's publicly accessible database for import requirements (ICON) was amended by updating import conditions for mined and chemical fertiliser in bags of less than or equal to 100 kilograms. This update now requires the inspection of a small percentage of consignments of fertiliser (packaged in less than or equal to 100 kilogram bags) where no biosecurity risks are declared.

A summary table for fertiliser sampling rates is provided in Appendix A.

### **Risk status of imported fertiliser packaged in bags of 100 kilograms or less**

The IIGB is satisfied that the biosecurity risk status of importation of fertiliser in bags of 100 kilograms or less has not changed. This incident involved substitution of soil (already a recognised biosecurity risk) for manufactured NPK (25:15:5) fertiliser. The challenge for DAFF Biosecurity is to minimise the risk of non-detection if a similar substitution attempt occurs in future. Improvements to verification (for example, increased surveillance and inspection) and the added deterrence factor associated with these represent ways to achieve this.

### **Large commercial consignments in bags of less than or equal to 100 kilograms**

A substantial number of consignments comprising fertiliser packaged in bags of less than or equal to 100 kilogram bags are imported into Australia every year. Unfortunately, data to determine the mean/median volume of fertiliser in these consignments during a specified period were not available.

The two consignments investigated in this review involved a total of 740 tonnes of imported soil (declared as fertiliser). This significant commercial quantity that was intended for use in broadacre farming highlights the need to consider additional risk management measures that should be applied to large tonnage consignments of fertiliser packed in bags of less than or equal to 100 kilogram capacity.

### **Alert set up for supplier of fertiliser in this incident**

As a standard procedure following such incidents, DAFF Biosecurity has updated the overseas-based supplier's profile enabling automatic referral of future consignments from the supplier who exported substituted material. While this is an important response measure, it is reasonable to expect that connections associated with a detected breach of the trade protocol would be unlikely to use the same company identity for attempts to export further substituted products to Australia.

It is also noteworthy that the importer had not imported this commodity prior to this incident. This may indicate a lack of alertness in his first-time dealing with the overseas-based supplier purporting to deal in fertiliser. In future, additional inspection clearance for first-time importers of fertiliser in commercial quantities would seem warranted.

### **Incident management by DAFF Central East Region**

The IIGB acknowledges that the DAFF operational staff in the CER kept adequate, up-to-date records of events following the incident and generally managed the biosecurity risks to an acceptable level once alerted to the substitution.

However, the IIGB found, in the course of this review, that on-file documentary recording of the DAFF response actions on the farm at Parkes, New South Wales was scant. Essential facts and information of the risk assessment undertaken and risk management measures applied were not compiled into a consolidated report. This lack of a detailed report of findings and DAFF Biosecurity actions taken on the farm at Parkes is a system weakness.

The IIGB notes that DAFF Biosecurity did not attempt to contact the New South Wales Department of Primary Industries to advise them of the action undertaken at the Parkes farm. This state government agency carries response responsibility if a suspect pest or disease incursion had been reported in association with the delivered soil shipment.

### **Biosecurity risk of goods abandoned after being refused entry into Australia**

Some circumstances that played out during this incident highlighted the real and present risk management challenges for DAFF Biosecurity in dealing with goods abandoned by both importer and exporter after having been refused entry on biosecurity grounds after arrival in Australia.

In this case, the large tonnage (740 tonnes) of the consignments and early indications that re-export may not be feasible, left DAFF Biosecurity facing a potential responsibility to ensure treatment and disposal of the goods. Recovery of the substantial costs involved (DAFF estimates were in excess of \$1 million) from the importer or other associated parties was problematic.

With DAFF's assistance, industry arrangements to re-export the goods to the country of origin were successful in this incident.

Specific recommendations relating to key findings are listed below and are included in the body of the report.



---

Dr Kevin Dunn  
Interim Inspector General of Biosecurity



## Recommendations

Number	Recommendation
Improvements to border clearance procedures for mined and chemical fertiliser imported in less than or equal to 100 kilogram bags	
1	That DAFF considers risk-based intensification of inspection regimes for individual large fertiliser tonnage with particular emphasis on first-time importers.
Reporting requirements for response actions taken in the field	
2	That DAFF reviews its procedures for follow-up responses involving imported goods that have been released from quarantine to ensure attending field officer(s) complete an adequately detailed report, proportional to the scale of potential biosecurity risk, within a reasonable timeframe.
Communication between DAFF Central Office and regional office and relevant state and territory agriculture department	
3	That DAFF communicates with the relevant state and territory department (for example, agriculture, primary industries) where biosecurity risks have been identified in imported goods that have been previously released and are located in rural areas.
Follow-up surveillance visit to the farm, to which consignment was moved, by subject matter specialists	
4	That DAFF arranges a follow-up surveillance visit to the Parkes farm by a weed scientist, plant pathologist and entomologist to confirm that no unusual pest or disease has established since the soil consignment was stored at the farm.

## **Conduct of incident review**

### **Role of the IIGB**

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

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

The role also includes the biosecurity measures relating to human health and environmental responsibilities undertaken by DAFF Biosecurity on behalf of the Department of Health and Ageing, and the Department of Sustainability, Environment, Water, Population and Communities. A memorandum of understanding<sup>1</sup> between DAFF and the Australian Customs and Border Protection Service (2011) supports a common approach to border operations.

The IIGB works on a cooperative basis with DAFF Biosecurity, 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 the Biosecurity-related divisions within DAFF and reports to the Australian Government Minister for Agriculture, Fisheries and Forestry.

IIGB reports are publicly available unless they contain confidential information.

### **The IIGB's program**

The IIGB's 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.

To form the program, the IIGB collates potential audit/review topics from a variety of sources, including:

- consultation with DAFF and relevant industries
- outcomes of other relevant reviews/inquiries (such as the Australian National Audit Office and internal DAFF audits)
- observations from 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.

---

<sup>1</sup> <http://www.daff.gov.au/bsg/biosecurity-reform/communications,-media-releases-and-publications/mou>

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:

- balances its own resources
- avoids duplication with other biosecurity-related assurance/audit activities
- balances effort and coverage over the biosecurity continuum and sectors
- balances effort and coverage of the elements of the risk management processes outlined in the ISO 31000:2009 standard.

## **Methodology**

The methodology for this review included:

- conducting an entry meeting and subsequent in-person/phone meetings with key stakeholders (that is, Central Office, regional office staff, the farmer, DAFF staff based in Parkes, autoclave facility staff, and warehouse and customs' staff) to enable the IIGB to:
  - communicate the review's objectives and scope
  - outline responsibilities
  - identify the risks to the review and any appropriate mitigation strategies
  - obtain initial background information about the consignments
  - provide an opportunity for all parties to discuss the review and seek points of clarification from the IIGB about the proposed review process
- conducting a desktop review of relevant DAFF Biosecurity data and documentation (such as, standard operating procedures, work instructions, permits, certificates and communications material) and inspection and verification procedures at the border
- conducting field work to observe/verify DAFF Biosecurity procedures, operations and documentation
- conducting discussions with relevant DAFF Biosecurity staff to understand what had been done to review the circumstances of the consignments
- conducting discussions with relevant Australian Government departments/agencies (outside of DAFF) to understand their role in the process; for example, the Australian Customs and Border Protection Service
- conducting an incident review briefing with DAFF Biosecurity to provide the opportunity for:
  - the IIGB to provide an overview of the incident review findings
  - a discussion how this type of incident can be prevented
- fact checking field work findings, to inform any misinterpretation and provide additional evidence and feedback on the incident review fieldwork process
- developing and providing, to the Deputy Secretary — DAFF Biosecurity, the IIGB's incident briefing report and recommendations
- providing an opportunity for the Deputy Secretary — DAFF Biosecurity to formally respond to the incident briefing report.

## **Out of scope**

The areas not within the scope of this review, as they suitably handled elsewhere, are:

- the policy relating to fertiliser imports
- international trade
- commercial matters and trade illegality
- costs or other financial matters
- onshore surveillance.

## **Background and context**

### **Fertiliser: a commodity of significant potential biosecurity risk**

Fertiliser is defined as a growth enhancer, promotant or regulator that aids plant growth. However, as it is applied directly into the soil, imported fertiliser that is contaminated with soil, animal or plant-based contaminants can create a pathway into Australia for foreign pests and diseases.

Under DAFF Biosecurity policy, the following considerations provide the basis for whether a permit is needed to import mined and chemical fertiliser into Australia:

- Generally, imported fertiliser packaged in greater than 100 kilogram bags (for example, bags, and bulk in ship holds or containers) is considered to have a potentially significant risk of exposure to contaminants during manufacture, storage and transport; for example, bulk commodities transported in ship-holds contaminated by previous cargoes. DAFF Biosecurity inspects all fertiliser imported in this way.
- In contrast, fertiliser packaged in less than or equal to 100 kilogram bags is usually packaged straight into individual units on site and kept under cover, thereby minimising the risk of contamination of product with Quarantine Risk Materials (QRMs). DAFF Biosecurity may (randomly) inspect fertiliser imported in this way.

### **Fertiliser use in Australia**

The annual global trade in fertiliser is around 200 million tonnes. About five to six million tonnes of fertiliser is used annually in Australia. About half is manufactured in Australia, including superphosphate, which is manufactured from imported phosphate rock (source: Fertiliser Industry Federation of Australia [FIFA]).

The Australian fertiliser industry comprises manufacturers (who also import), importers, brokers and/or agents of overseas suppliers and distributors (who sell to the end user).

### **Australian fertiliser imports by type**

Australian fertiliser imports comprise less than 2 per cent of the total world trade (source: FIFA).

Fertiliser imported into Australia can be grouped into three main types:

- Chemical fertiliser, which is a product that is the result of a manufacturing process.
- Mined fertiliser, which is a natural, non-organic product mined from the earth itself.
- Organic fertiliser, which may be made of material of aquatic animal, terrestrial animal, avian or microbial origin.

All fertiliser types imported into Australia are strictly regulated. Applicable import requirements/conditions for each type are accessible on DAFF's Import Conditions (ICON) database.

Fertiliser is imported into Australia:

- bulk in ship holds or containers
- in bags of less than 100 kilograms
- in bags of 100 kilograms or more or
- as liquid (source: DAFF<sup>2</sup>).

More than 85 per cent of fertiliser is transported and sold as bulk product with less than 15 per cent of fertiliser imports being consigned in bags weighing between 20 kilograms and 1 tonne (source: FIFA<sup>3</sup>).

The findings and recommendations presented in this report only examined fertiliser imported into Australia in bags of less than or equal to 100 kilograms.

### **Quarantine risk material and role of DAFF Biosecurity**

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

### **Legislation**

The *Quarantine Act 1908* (Cwlth) — administered by DAFF — has subordinate provisions that mandate the requirements for fertiliser imported into Australia. The Quarantine Proclamation 1998 lists 'fertilisers' as articles and things likely to introduce a disease or pest [see Item 4 in Table 12, Part 5, Division 1, Section 32 of the Proclamation]:

Fertiliser of any type, including synthetic fertiliser, mined fertiliser, chemical fertiliser, and guano, but not including:

- (a) chemical liquid fertiliser; and
- (b) chemical fertiliser packed at the place of production, in new packaging, in bags of 100 kg or less.

It is the importer's responsibility to identify and ensure compliance with DAFF import requirements.

### **Risk management measures applying to importation of fertilisers**

DAFF Biosecurity recognises mined and chemical fertiliser as a commodity of significant quarantine risk. This is due to its potential to be contaminated with QRMs such as grain, seeds and animal material, as well as its direct application to soil in agricultural areas. Quarantine concerns associated with fertiliser imports into Australia have increased since detection of karnal bunt in the United States in 1995, together with other potential pests and diseases of quarantine concern.

---

<sup>2</sup> <http://www.daff.gov.au/aqis/import/imp-fert>

<sup>3</sup> <http://www.fifa.asn.au/>

DAFF is responsible for assessing risks associated with the importation of fertilisers and implementing risk management measures to control them.

DAFF regulates the entry of fertilisers by setting specific requirements and import monitoring compliance by importers. For certain types of fertilisers an import permit is also required.

DAFF Biosecurity's import control requirements for fertilisers are set out on the publicly accessible ICON database. It contains the import conditions, which outline the risk management measures, for more than 20,000 plant, animal, microbial, mineral (including fertilisers) and human products. ICON serves the dual purposes of providing:

- information to the public on the import process and the import conditions for commodities
- instructions to DAFF Biosecurity staff on the entry management process, including inspection requirements and risk management measures, for each commodity.

The process is also supported by online and manual permit systems and a range of forms. The systems are intended to support consistent application of risk management measures for a specific commodity. The process is also a way of collecting information about imports that can inform the setting of risk management measures.

### **Import requirements**

At the time of the incident, for both commercial and non-commercial consignments of mined and chemical fertiliser (packaged in less than or equal to 100 kilogram bags), the following requirements were applicable:

- **Permit to import** — Mined and chemical fertiliser packed at the place of production, in new packaging, in bags of 100 kilograms or less is exempt under the Quarantine Proclamation 1998. That is, such fertiliser may be imported into Australia without the need for an import permit. However, all import requirements/conditions listed for this commodity on DAFF's ICON database must be met.
- **Cleanliness requirements**
  - Each consignment must be free of live insects, seeds, soil, animal material, plant material and other quarantine risk material before arriving in Australia.
  - Consignments that are contaminated will be ordered into quarantine pending determination of treatment options.
  - If no treatment options are available the consignment will be re-exported or destroyed.
- **Processing requirements**
  - Each consignment must be packed at the place of production, in new packaging, and in bags of 100 kilograms or less.
  - The bulk mined or chemical product must not have been stockpiled outside in an open environment.
  - The importer, broker or shipping agent must present supporting evidence (such as a declaration by the manufacturer) confirming processing requirements were met during manufacture.

- **Packing requirements**
  - For import of mined and chemical fertiliser, the weight of individual bags must not exceed 100 kilograms.
  - Consignments that are found to contain bags greater than 100 kilograms will be held pending presentation of an import permit.
  - Containers, timber packing, pallets or dunnage will be subject to inspection and treatment on arrival, unless certified as having been treated by a DAFF Biosecurity approved method ([Cargo Containers: Quarantine aspects and procedures](#)).
- **Documentary requirements** — All documentation presented to the DAFF Biosecurity’s front desk as part of the import process must meet the requirements of the [Minimum Documentary Requirements Policy](#). These include:
  - overarching requirements (for example, it must be legible, in English, signed, dated, 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).
- **Entry management requirements** — Entry management refers to DAFF Biosecurity information requirements to support assessment of non-commodity concerns associated with imported cargo. All documentation presented to DAFF Biosecurity to help determine the level of quarantine risk posed by transportation pathways and packaging must meet the requirements of the [Non-Commodity Information Requirements Policy](#). These requirements address:
  - container cleanliness
  - packaging concerns (such as presence of timber or prohibited packaging material)
  - destination concerns (such as destined for a rural unpack location).

### **Arrival clearance procedure**

Upon arrival in Australia, the imported fertiliser, like all commercial imports above the declaration threshold of \$A1000, must be declared to Customs by way of Full Import Declaration (FID). DAFF electronically targets (or profiles) tariff codes of interest. Three tariff codes are profiled for fertiliser. Imports under the threshold are declared on a Self-Assessed Clearance document that uses a description for profile assessment. Appendix B provides an overview of the import declaration process for imported cargo.

In the case of fertiliser, the importer/broker must make a declaration about the biosecurity risk of the imported fertiliser by answering a series of questions according to certificates and other documents provided by the supplier. These questions are:

- Are the goods non-liquid chemical fertiliser (or non-liquid chemical for manufacture of fertiliser, soil conditioner or potting mix) and in individual packages weighing 100 kilograms or less?
- Were the goods stored outside or packed in a different location to the place of production?

- Do the goods contain any biological material (including any product of animal, plant or microbial origin)?

Fertiliser consignments are considered low risk if, on the imported cargo declaration, the importer/broker answers 'no' to all three questions and no other specific risk is flagged against the importer. After which, the commodity is cleared through the Customs and Border Protection Service' ICS without referral to DAFF Biosecurity.

As listed on DAFF Import Conditions (ICON) database, the import requirements/conditions are the same for both non-commercial and commercial cargo of fertiliser, the same clearance procedure (as described above) applies to both.

If the documentation accompanying the consignment meets all requirements noted under Import Conditions and Entry Management (as listed on DAFF's ICON database for *Fertilisers - Mined & chemical - Bags less than or equal to 100 kilogram*), the consignment is released from quarantine. Where documents do not meet all requirements, the consignment is referred to DAFF Biosecurity.

Appendix C provides an overview of risk profiling for imported cargo before release of fertiliser consignments.

Appendix D provides an overview of ICS processes relating to import reporting and processing as they were applied to the fertiliser consignments in question.

## **The incident**

On 3 May 2011, a consignment, claimed to be of NPK fertiliser from China, consisting of 27 containers was received at Port Botany, Sydney. All containers — each declared as containing 386(±2) bags and totalling approximately 590 tonnes of material — were cleared through Australian Customs and Border Protection Service's ICS without reference to DAFF Biosecurity, as no biosecurity risk was declared or previously known.

The farmer, who received the first and only delivery of the part consignment (44 tonnes of bagged material on pallets) on 12 May 2011 — through the customs agent — alerted DAFF that the bags contained soil, not the NPK fertiliser as the supplier claimed. The pallets and bags were securely transported back to the storage warehouse at Botany, where the rest of the consignment was held. Spillage of material from a couple of damaged bags within the farmer's premises was cleaned up by a DAFF officer and spilled material returned to the warehouse in a quarantine bag. DAFF staff quarantined the whole consignment at Botany.

On 18 May 2011, the broker alerted DAFF that the second shipment was due to arrive in Australia in early-June 2011. On 3 June 2011, a second consignment comprising seven containers and claimed to be NPK fertiliser packaged in less than or equal to 100 kilogram bags — declared as totalling 150 tonnes of material — from the same supplier was intercepted at Port Botany. This consignment also contained soil, and was held under Customs control at a cargo depot on arrival.



The IIGB notes that this incident received wide coverage in the media criticising DAFF's inability to intercept such a huge amount of soil at the border. Presented below are the findings of the incident review undertaken by the IIGB.

## **Observations and findings**

### **Import requirements applicable at the time of the incident**

At the time of importation of these two consignments (May–June 2011), an import permit was not required for import of mineral-based fertiliser packaged in bags of 100 kilograms or less. DAFF Biosecurity has made changes to future inspection arrangements for import clearance of this category of fertiliser. Since the biosecurity risk has not changed for this category of fertiliser, there remains no requirement for an import permit. Import of all other categories of fertilisers listed on the DAFF ICON database and packaged in various sizes continues to require an import permit.

The import conditions at the time of this incident did not require routine inspection of all or part of consignments of fertiliser packaged in less than or equal to 100 kilogram bags as no biosecurity risks were declared.

### **Description of imported material declared as fertiliser**

Despite being accepted as having met the DAFF import requirements on arrival, the contents of the consignment did not match the supplier's description in the documentation required for import to Australia. Based on the declaration, there was no requirement for inspection. The supplier's declaration claimed the consignment consisted of NPK (25:15:5) fertiliser. Subsequent to release of the first consignment, inspection revealed the commodity was soil. Chemical analysis conducted on one sample confirmed that the declared description — NPK (25:15:5) fertiliser — was incorrect. It was reported to DAFF Biosecurity that subsequent samples taken and analysed confirmed that goods were not consistent with the supplier's declaration.

The Parkes-based DAFF quarantine officer and the farmer who received the consignment variously described that the material was moist, chocolate-dark in colour and appeared to have undergone some sort of processing. The material appeared similar to feedlot waste or burnt biological waste and having an unpleasant ammonia-like odour. No insects or any other living creatures were noticed.

Appendix E provides the results of laboratory analysis carried out on one sample of the material.

Appendix F shows physical appearance of the imported material (soil).

### **Properties of imported material the supplier declared as fertiliser**

Chemical analysis of a sample of the consignment, using the advanced laboratory techniques, confirmed very low levels of nitrogen (0.76 per cent), phosphorus (0.28 per cent) and potassium (0.69 per cent). These levels are significantly below the levels the supplier claimed in the analysis report.

Microscopic analysis of the sample confirmed that the material contained a variety of quarantine risk material such as hair, seed pods, plant roots, shredded wood, wood fibres, other cellulosic

matter and small solid orbs, which may have been insect eggs (unconfirmed). Following analysis, the sample was sterilised by autoclaving at the laboratory.

The laboratory report of analysis, conducted in Australia, noted that ‘it appears from the chemical and microscopic analysis that the sample was soil’.

The Soil Science Society of America<sup>4</sup> defines soil as:

The unconsolidated mineral or organic material on the immediate surface of the Earth that serves as a natural medium for the growth of land plants.

The unconsolidated mineral or organic matter on the surface of the Earth that has been subjected to and shows effects of genetic and environmental factors of: climate (including water and temperature effects), and macro- and microorganisms, conditioned by relief, acting on parent material over a period of time. A product-soil differs from the material from which it is derived in many physical, chemical, biological, and morphological properties and characteristics.

No specific pest or pathogen testing was attempted on the contents of the consignments. During this review, the IIGB obtained a copy of one analytical laboratory report relating to one sample (approximately 800 grams) taken from the first consignment (590 tonnes). The results cannot be interpreted as representative of the whole consignment. The results of elemental and microscopic analysis are summarised in Appendix E.

A 20-kilogram sample from first consignment was analysed for brickmaking potential. In addition, at the request of Chinese officials, a further 135 samples were collected and consigned under DAFF control for laboratory analysis. DAFF was not able to obtain a copy of the report, but was advised that the analysis confirmed the goods were not consistent with the supplier’s declaration.

Soil is a highly dynamic, complex and biologically-active system and the reported results cannot satisfactorily inform this review as to what other QRMs may have been present in the consignment as a whole.

The IIGB is unable to attempt an in-depth biosecurity qualitative risk assessment of the contents of this consignment as the following information was not available:

- the origin of the soil
- the depth of collection of soil (top soil or subsoil)
- the history of the site (terrestrial ecosystem) from where the soil was collected (cultivated, uncultivated wasteland or under forest cover; distance from human habitation or industry; used for animal husbandry or poultry; used as tip)
- details of processing or treatment applied to the material before export
- packing details (packaged on site or otherwise)
- storage details before export (under cover or in open environment).

---

<sup>4</sup> <https://www.soils.org/publications/soils-glossary/#>

## **Processes and circumstances surrounding release**

During the examination, consideration was given to import requirements as applicable at the time of the incident as well as clearance procedure by Customs' ICS. The findings highlighted that:

- The first of these two consignments ostensibly satisfied the declaration requirements as fertiliser packed in less than or equal to 100 kilogram bags. No biosecurity risk was declared by the broker at the time of electronic lodgement of the consignment into Customs' automated ICS. As per the ICS clearance protocol, the consignment was not referred to DAFF Biosecurity.
- The clearance system is heavily reliant on the accuracy of the declaration(s) provided by the supplier/exporter, which makes it potentially prone to misuse where the commodity as declared in the declaration(s) is substituted with a sub-standard (or entirely different) product. This is exactly what appeared to have happened in this case.
- Under the automated system of clearance of consignments there is no verification of compliance with import requirements relating to — as listed earlier — cleanliness, packing, and documentation and entry management conditions. In such a circumstance, the commodity cannot be verified by DAFF Biosecurity prior to release.

## **Biosecurity risk profile of the imported material**

Laboratory examination of a sample of the imported material identified it as 'soil, which also contained hair, seed pods, plant roots, shredded wood, wood fibres, other cellulosic matter and small solid orbs, which may have been insect eggs (unconfirmed)'.

Under the subordinate provisions of the *Quarantine Act 1908* (as amended), importation of soil is prohibited unless a Director of Quarantine has granted a permit for it to be imported. No import permit had been granted by the Director of Quarantine for soil in association with these consignments.

In general, depending on its origin and composition, soil has the potential to introduce pests and diseases that threaten animal and plant health, public health and biosecurity of the natural and built environments, including human social amenity.

Several animal, plant and public health pests and diseases absent from all or much of Australia are prevalent in the country of origin of this material (Peoples Republic of China). Some significant examples have the potential to be introduced by contaminated soil. These include foot and mouth disease, anthrax, fusarium wilt (including tropical race 4), sudden oak death and tramp ant species (for example, red imported fire ants). Given the lack of relevant evidence or data from these two consignments, the associated potential biosecurity risks are theoretical only.

The results of laboratory analysis carried out on one randomly drawn sample of the material on the importer's behest are provided in Appendix E. No testing for pests and disease pathogens was conducted on the contents of the two consignments. This is standard practice for prohibited material intercepted by DAFF and ordered for treatment, destruction or re-export.

The Parkes farmer, the quarantine officer who inspected the consignment at the Parkes farm and other DAFF quarantine officers who inspected the consignment reported to the IIGB that there was no sign of activity of insects or other potential pest animals seen in or on the bagged material.

Photos of the material are provided in Appendix F.

### **Changes made to import inspection requirements since the incident**

Since this incident, DAFF Biosecurity has amended the import clearance procedure by mandating inspection of a small percentage of any consignment of this category (that is, packaged in less than or equal to 100 kilogram bags) — where no biosecurity risks are declared — to provide a higher level of biosecurity risk management.

Recently, the Australian Customs and Border Protection Service has made template amendments within its ICS, which will allow DAFF Biosecurity to update the community protection profile for fertiliser packaged in less than or equal to 100 kilogram bags.

On 12 October 2011, DAFF activated a profile in the ICS for consignments lodged under fertiliser-related tariff. Following this, the importers/brokers of 10 per cent of the total lodged consignments were asked: ‘Are the goods non-liquid chemical fertiliser (or non-liquid chemical for the manufacture of fertiliser, soil conditioner or potting mix) and in individual packages weighing 100 kilograms or less?’.

If the importer/broker answered ‘yes’, the consignment would be referred to AQIS Import Management System (AIMS). However, on 1 November 2011, the referral rate was found to be too high and was therefore reduced to 5 per cent.

The IIGB notes two significant factors involved in this incident that require consideration of further changes to import clearance procedures to detect any future attempts to substitute cheap commodities for fertiliser:

- First, the importer in this incident had not imported fertiliser previously. This may indicate a lack of alertness in his first-time dealings with overseas suppliers purporting to deal in fertiliser products.

Currently, DAFF Biosecurity does not target consignments on the basis of whether the importer is first-time importer or a regular importer. This should be reviewed. For a regular importer, the history of imports for the same commodity may provide some level of assurance that the imports would be in line with the description on the supplier’s declaration. However, it would appear appropriate to increase inspection levels of consignments involving first-time importers of commercial consignments to verify the commodity.

- Second, the significant commercial quantity (740 tonnes) involved was clearly intended for use in broadacre farming in rural Australia. Such a destination highlights the need to consider additional risk management measures that should be applied to large tonnage consignments of fertiliser packaged in bags of less than or equal to 100 kilograms capacity.

<b>Recommendation 1</b>
Improvements to border clearance procedures for mined and chemical fertiliser imported in less than or equal to 100 kilogram bags
That DAFF considers risk-based intensification of inspection regimes for individual large fertiliser tonnage with particular emphasis on first-time importers.

### **Transportation and storage**

Following import clearance, for more than eight days (5 May to 13 May 2011), the consignment remained out of DAFF Biosecurity's control. The importer had contracted the company responsible for handling the cargo to also distribute it to 13 farmers in various rural setting throughout New South Wales.

The farmer at Parkes who received the first and only delivery discovered that the material did not match the description of the material he had ordered. Through his agent and the customs broker, the farmer alerted DAFF – leading to trace down and recall of the material.

Forty-four pallets containing bags from the first consignment were transported from a commercial transport and storage warehouse at Botany, New South Wales to a grain farm near Parkes in central New South Wales. Each pallet consigned from Botany was enclosed in shrink-wrap plastic sheeting and placed on the concrete floor toward the rear of an enclosed shed (built in 2006) at the farm. The plastic wrapping and two bags on one pallet were torn during unloading at the Parkes farm. That resulted in spillage of a small amount of contents onto the concrete floor of the farm shed. The plastic shrink-wrap on the remaining pallets remained intact. The spillage was swept up and collected into a quarantine bag by a DAFF officer and returned to the storage warehouse at Botany. Except for one damaged bag the consignment remained on the farm for three days.

Within 96 hours of being alerted that the initial consignment consisted of soil, 44 pallets (equal to 44 tonnes, with bags still on pallets) was securely transported back to Botany on DAFF Biosecurity's direction. The pallets remained covered during transport and storage at the transport company's Botany depot for the weekend and were delivered to the storage warehouse at Botany on 16 May 2011. One damaged bag left behind in the farmer's shed was secured in a quarantine bag by a DAFF officer and delivered to the transport company's regional (Dubbo) office on 17 May 2011 for delivery to the storage warehouse at Botany.

There is no evidence that the imported soil came in contact with local soil, crops or livestock on the Parkes farm or elsewhere. That farm undertakes broadacre cropping only; it does not carry livestock.

Despite some media reporting to the contrary, just 44 tonnes (or 6 per cent) of the declared 740 tonnes in the two consignments were transported from Botany to rural New South Wales.

The balance of both consignments remained under DAFF quarantine direction at the storage and transport warehouse at Botany and under Customs' control at a cargo depot at Port Botany until re-export on 27 November 2011.

## **Risk management undertaken following detection of soil in consignments**

The IIGB notes that prompt actions key stakeholders (that is farmer, importer/broker and DAFF staff) took helped minimise the risks of introducing foreign pests or diseases associated with the soil following its detection.

DAFF CER staff generally kept good documentary records of their actions. However, the DAFF Biosecurity response on the Parkes farm was not documented in detail to include findings and actions. Essential facts and information of the risk assessment undertaken and risk management measures applied was not compiled into a consolidated report. This lack of a detailed report of findings and actions taken by DAFF Biosecurity on the farm at Parkes is a system weakness.

<b>Recommendation 2</b>
Reporting requirements for response actions taken in the field
That DAFF reviews its procedures for follow-up responses involving imported goods that have been released from quarantine to ensure attending field officer(s) complete an adequately detailed report, proportional to the scale of potential biosecurity risk, within a reasonable timeframe.

The IIGB notes that DAFF Biosecurity did not attempt to contact New South Wales Department of Primary Industries to advise them of the action undertaken at the Parkes farm. That state agency carries responsibility for response if a suspect pest or disease incursion had been reported in association with the soil shipment delivered there.

<b>Recommendation 3</b>
Communication between DAFF Central Office and regional office and relevant state and territory agriculture department
That DAFF communicates with the relevant state and territory department (for example, agriculture, primary industries) where biosecurity risks have been identified in imported goods that have been previously released and are located in rural areas.

No pest or disease surveillance was undertaken on the Parkes farm after the bagged soil was transported there. The IIGB identifies the need for DAFF Biosecurity to confirm that storage of 44 tonnes of material within the farmer's shed did not lead to establishment of any foreign weeds, pests and diseases. This could entail one visit by agricultural scientists/subject matter specialists such as a plant pathologist, weed scientist and an entomologist in the near future.

<b>Recommendation 4</b>
Follow-up surveillance visit to the farm, to which consignment was moved, by subject matter specialists
That DAFF arranges a follow-up surveillance visit to the Parkes farm by a weed scientist, plant pathologist and entomologist to confirm that no unusual pest or disease has established since the soil consignment was stored at the farm.

On the broker's request, a second sample (weighing 20 kilograms), drawn by DAFF officers, from the consignment was securely delivered to a laboratory that conducts analysis on materials for brick making. This was to explore the possibility of using the material in some way taking into consideration that the use would have ensured the biosecurity risks had been addressed during processing. This would also have generated income to the broker through sale of bricks and ensured that if the importer abandoned the consignments, the soil had been treated rather than having to pay for safe disposal to an approved provider, the cost of which according to an estimate would have been \$1 million. The experiment of using the soil sample in brick making, where the temperature typically reaches up to 400 °C for at least three hours, was unsuccessful as the material (soil) was found not to meet the applicable standards.

The *Quarantine Act 1908* contains provisions for importing things in contravention of the Act. Prohibited commodities having entered into Australia may be exported from Australia, destroyed or treated. The IIGB notes that destruction or treatment of such a large consignment with significant biosecurity risk was an option that was undesirable on logistical and cost grounds. Management of biosecurity risks by re-export was the most acceptable option.

### **Disposal of spilled soil from the consignments**

The IIGB noted that the bags in which the material was contained were not robust. For example, during re-pack in preparation for re-export to China, 43 bags were damaged, leaking the contents within the quarantine area at the storage warehouse at Botany. The sweepings (amounting to 1.54 tonnes) were re-packaged into quarantine bags.

The spilled material was transported locally to a DAFF Biosecurity approved provider for destruction by autoclaving as quarantine waste, after which it was disposed of by burial at a commercial tip site at Kemps Creek, New South Wales.

### **Communication between DAFF Biosecurity and Chinese consulate staff**

DAFF Biosecurity worked with the relevant Australian government department in seeking assistance from the relevant overseas government to re-export both consignments. Initially, the relevant overseas government advised that the Australian importer must apply for a permit to re-export the product, and the import conditions be determined after an application was lodged. However, the relevant overseas government subsequently advised DAFF that the country of origin would treat the soil as returning goods and no import permit was required.

### **Re-export**

Before loading the cargo on vessel for export from Australia, the soil consignment was weighed electronically by the freight carrier. The IIGB noted that the total weight of consignments on arrival would have been approximately 702.14 tonnes and not 740 tonnes as the overseas-based supplier had declared. The supplier had also declared individual bags consisted of 50 kilograms of mined and chemical fertiliser. Contrary to this, DAFF Biosecurity reported that the individual bags weighed between 30 and 40 kilograms each.

As the whole cargo was totally accounted for, the IIGB is satisfied that this difference in total tonnage (that is, approximately 37.86 tonnes, excluding the 1.54 tonnes of spilled material) could only be attributed to false declaration by the supplier.

Under DAFF Biosecurity supervision, both consignments excluding the 1.54 tonnes of spilled material from perished bags that remained in quarantine were exported to China in November 2011. The residual 1.54 tonnes of material was autoclave-treated and disposed of under DAFF Biosecurity direction.

The Australian and Chinese governments viewed this as a failed commercial transaction, which resulted in an unacceptable biosecurity risk and worked with various industry entities to facilitate delivery of the material back to China.



## Chronology of events

- 3 May 2011 First consignment of 27 containers claiming to be NPK fertiliser packaged in 40 kilogram bags (not palletised) (ex-China) arrives at Port Botany, Sydney.
- 5 May 2011 Based on importer's declaration, goods were cleared electronically through Customs and Border Protection Service automated ICS without reference to DAFF.
- 10 May 2011 Of the 27 containers, nine had been opened and deconsolidated at a nearby transport and storage warehouse at Botany, New South Wales.  
First part-consignment of 44 pallets (shrink-wrapped) despatched from Botany to a farm in Parkes, New South Wales.
- 12 May 2011 The customs broker advised DAFF Biosecurity that the imported material did not match the description of granulated NPK fertiliser the importer had ordered.
- 13 May 2011 DAFF Central East Regional office staff inspected the goods and confirmed that the imported material was soil, not fertiliser.  
All 18 containers were sealed with a DAFF Biosecurity seal and quarantined with the deconsolidated bags.  
Spillage from two damaged bags at farmer's shed cleaned up by DAFF Biosecurity.  
DAFF Biosecurity staff cleaned up spillage from one or two damaged bags at farmer's shed.  
Importer delivered a sample (approximately 800 grams) of the material for chemical analysis to a local laboratory.  
All 44 pallets on two transport units (each carrying 22 pallets) of the material were transported from the farmer's shed to the transport company's depot at Botany.
- 13–16 May 2011 Forty-four pallets of bagged material (including one damaged bag) on transport units remained at transport company's Botany depot.
- 16 May 2011 Forty-four pallets of bagged material delivered from the transport company's Botany depot to the Botany warehouse, where the rest of the consignment was held under quarantine.
- 17 May 2011 The second damaged bag delivered to the Botany warehouse by the transport company.  
DAFF Biosecurity directed the importer to export the first consignment from Australia
- 18 May 2011 Results of chemical analysis of sample confirmed material was not fertiliser, as declared in export documentation from China.  
Broker alerted Department of Agriculture, Fisheries and Forestry that second consignment from the same supplier due to arrive early-June.
- 25 May 2011 Importer stated he could not comply with DAFF Biosecurity direction to export consignment back to the country of origin.
- 1 June 2011 In the presence of DAFF's CER staff, China Commodity Inspection Corporation representatives, on behalf of Chinese Consulate, collected five samples of material from each of 18 containers and palletised bags (135 samples). DAFF Biosecurity delivered these samples for an independent analysis at a DAFF Biosecurity approved laboratory within Australia.  
Containers were resealed with DAFF Biosecurity seals following sample collection.  
Results of laboratory analysis of the product not available.
- 3 June 2011 Another consignment of seven containers of bagged soil arrived at Botany, New South Wales.  
The importer inspected the consignment under Customs' supervision and concluded that the contents were also soil.

Importer did not take possession of the consignment and containers remained under Customs control at a cargo depot.

9 June 2011 DAFF Biosecurity received advice from the Beijing Post that an import permit will be required to import the soil back to China.

12 Oct 2011 DAFF amended and updated import conditions on ICON database for import of mined and chemical fertiliser packaged in less than or equal to 100 kilogram bags.  
A Notice to Industry was issued informing the industry of the amendment to the import conditions.  
DAFF activated profile in the ICS for referral of 10 per cent of lodged consignments for verification inspection.

27 Nov 2011 Both consignments exported back to country of origin (China).

23 Dec 2011 1.54 tonnes of spilled soil from the consignments destroyed by autoclaving by DAFF approved provider.

## Appendix A Fertiliser sampling rates

Bulk or bagged fertiliser	Arrival method	Sampling rate (2.25 litres per 33 tonnes)	Example sampling rate for consignment
Large Bags >100 kilograms	in ship's hold	5% of bags	100 × 1000 kilogram bags, select 5 bags, sieve 6.8 litres = approx. 6 cups per bag sampled
Small Bags ≤ 100 kilograms	in ship's hold	1% of bags	1000 × 100 kilogram bags, select 10 bags, sieve 6.8 litres = approx. 3 cups per bag sampled
Large Bags >100 kilograms	containerised	5 bags per container	FCL contains 20 × 1.2 tonne bags, select 5 bags, sieve 1.7 litres = approx. 2 cups per bag sampled
<b>Small Bags ≤ 100 kilograms</b>	<b>containerised</b>	<b>10 bags per container</b>	<b>FCL contains 1000 × 20 kilogram bags, select 10 bags, sieve 1.7 litres = approx. 1 cup per bag sampled</b>
Bulk	containerised	sample from 5 random points	FCL holds 25 tonnes, sieve 1.7 litres = approx. 2 cups from each point sampled
Bagged and bulk for processing at QAP	containerised	as per permit conditions	

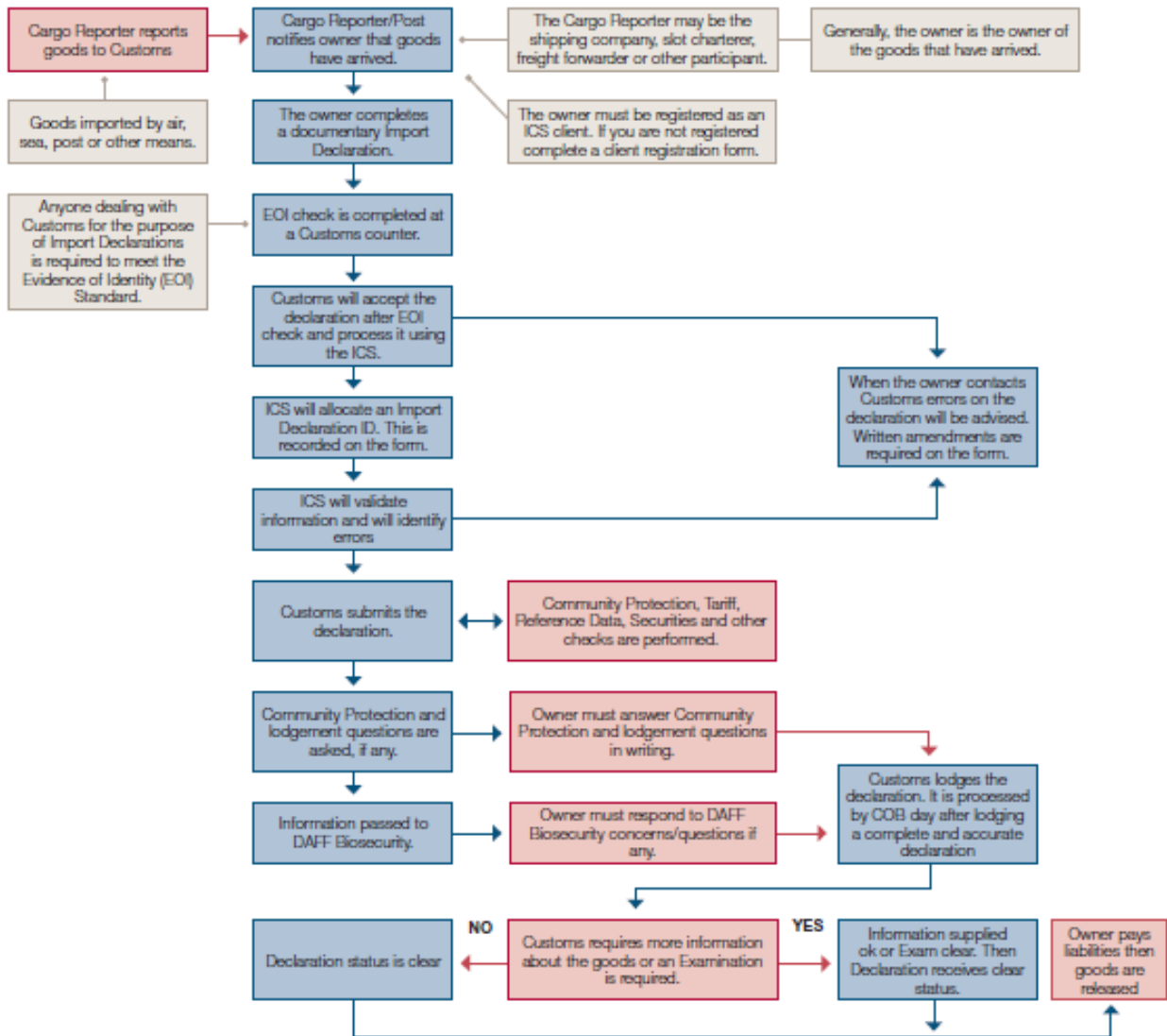
Note: This appendix should be read in conjunction with the updated import conditions for this commodity, accessible through the DAFF ICON database

FCL = Full Container Load; QAP = Quarantine Approved Premises

Source: DAFF *Work Instruction – Imported Fertiliser Inspection ver 5.0*;

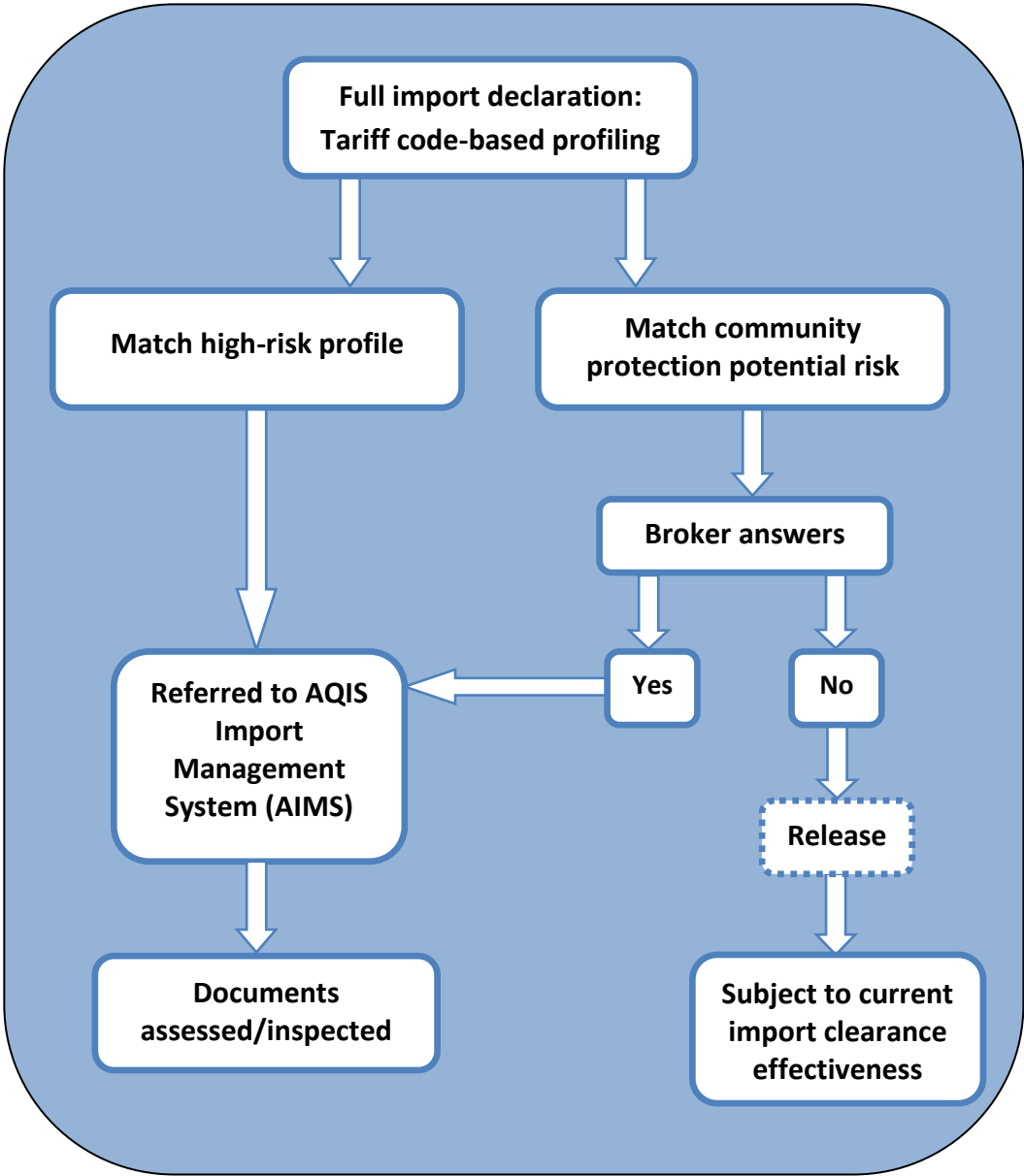
<http://mylink.agdaff.gov.au/aqis/iml/quarantine/ImportClearance/Inspection/4%20Work%20Instructions/Imported%20Fertiliser%20Inspection.pdf>; accessed on 25 May 2012

## Appendix B Import declaration process



Source: Australian Customs and Border Protection Service, *Documentary Import Declaration Comprehensive Guide* <http://www.customs.gov.au/webdata/resources/files/DocImpDecGuide.pdf>; accessed on 25 May 2012

**Appendix C**  
**Overview of DAFF Biosecurity process for profiling in Integrated Cargo System**



Source: DAFF Biosecurity

## **Appendix D      Integrated Cargo System**

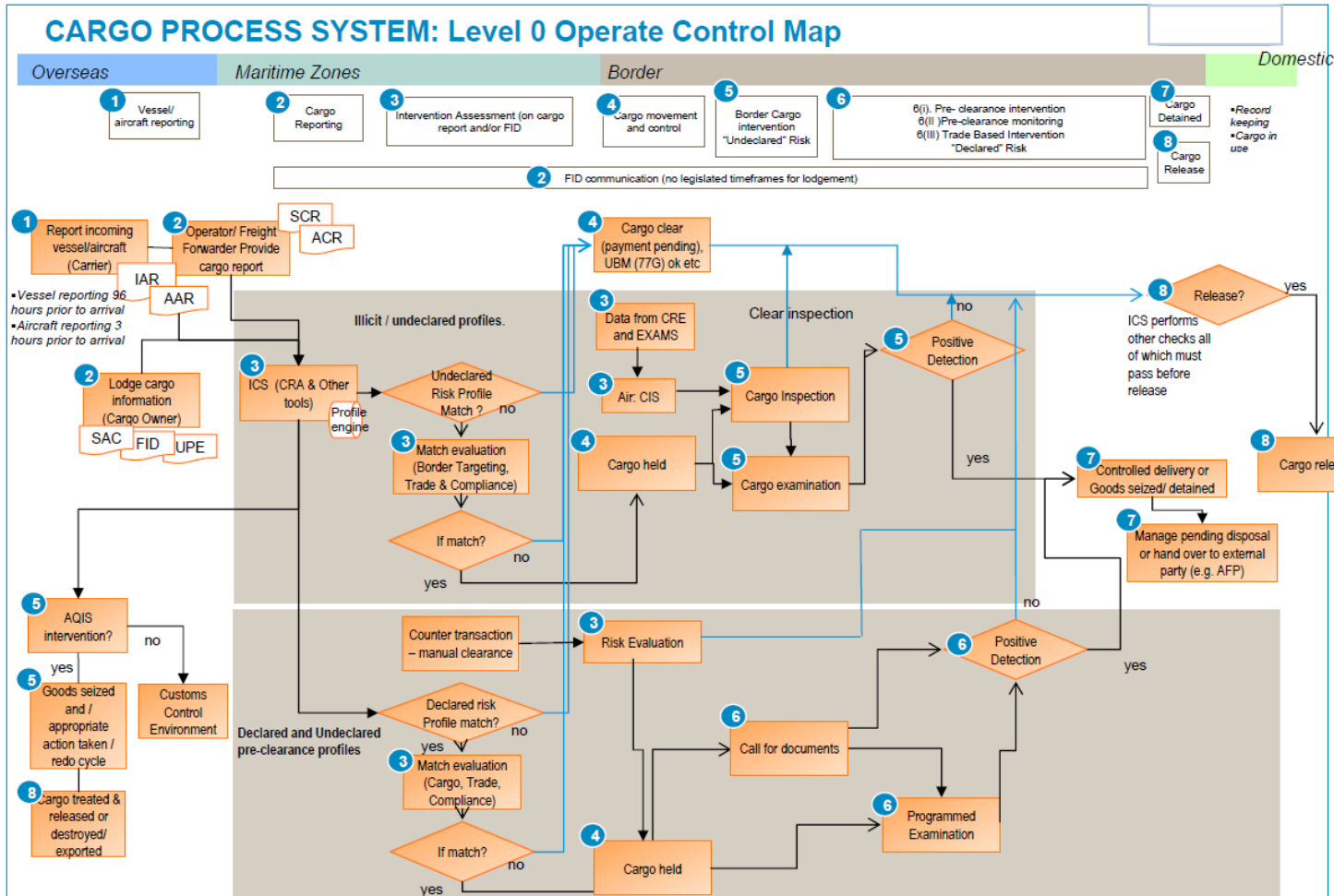
The Integrated Cargo System (ICS) is a software application used for all import and export reporting and processing procedures and is the only method of electronically reporting the legitimate movement of goods across Australia's borders to the Australian Customs and Border Protection Service.

The ICS offers efficient management of all importing and exporting functions including vessel, aircraft and cargo reporting with the ability to track movement of cargo while under Customs control. The ICS also contains a comprehensive register of client and reference information.

The ICS system links Customs and Border Protection with importers and exporters (or their agents), warehouse and depot operators, consolidators and freight forwarders, airline and shipping companies, permit issuing agencies and other government agencies such as the Australian Bureau of Statistics (ABS), the Australian Taxation Office (ATO) and DAFF Biosecurity.

It is an integrated and well structured system with high integrity data architecture. The system features sophisticated risk management technology to help Customs officers target high-risk cargo and compliance assurance models with an emphasis on working with industry to ensure accurate risk assessment and the swift movement of low risk freight.

Source: Australian Customs and Border Protection Service



Source: Australian Customs and Border Protection Service

## Appendix E Results of microscopic and chemical (elemental) analysis of sample

### Sample

Approximately 800 grams of sample, which was part of a shipment of fertiliser (ex-China), was delivered at the laboratory.

### Methodology

The sample was examined under a 40× microscope then analysed by Carbon & Nitrogen (CN) analyser and by Inductively Coupled Plasma (ICP) Spectrometry after acid digestion in accordance with Environmental Protection Agency (EPA) methodology.

### Results

**Microscopic analysis:** The sample was not in the form of pellets and consisted of soil, seed pods, plant roots, hair, pieces of shredded wood, wood fibres and other cellulosic matter. No detectable living insects were found in the sample; however some small solid orbs were found, which may have been insect eggs (unconfirmed).

**Elemental analysis:** The results from analysis of the ‘as received’ sample are:

Element	Value	Unit
Nitrogen	0.76	Per cent (%)
Carbon	8.6	Per cent (%)
Potassium	0.69	Per cent (%)
Calcium	1.46	Per cent (%)
Aluminium	0.87	Per cent (%)
Iron	1.17	Per cent (%)
Sodium	0.28	Per cent (%)
Phosphorus	0.28	Per cent (%)
Zinc	130	Parts per million (ppm)
Chromium	16	Parts per million (ppm)
Copper	32	Parts per million (ppm)

### Comments

It appears from the chemical and microscopic analysis that the sample was soil. Following chemical analysis, the sample was autoclaved.

Source: DAFF



**Appendix F      Photographs of imported material**



Source: DAFF Biosecurity

## Glossary

AIMS	The AQIS Import Management System is the Department of Agriculture, Fisheries and Forestry'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 the Quarantine Officer's decision-making process and communicates this information to the owner/agent/importer. Quarantine Officers use AIMS to assess and manage the quarantine risk of goods identified on the quarantine entry; they will either order the goods into quarantine to determine the most appropriate course of action for items that pose an element of risk, or release the goods from quarantine.
AQIS	The Australian Quarantine and Inspection Service (AQIS) is part of the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). AQIS manages quarantine controls at our borders to minimise the risk of exotic pests and diseases entering the country. AQIS also provides import and export inspection and certification services to help retain Australia's highly favourable animal, plant and human health status and wide access to overseas export markets.
Australian Customs and Border Protection Service (ACBPS)	Manages the security and integrity of Australia's borders. It works closely with other government and international agencies, in particular the Australian Federal Police, the Department of Agriculture, Fisheries and Forestry, the Department of Immigration and Citizenship and the Department of Defence, to detect and deter unlawful movement of goods and people across the border. Also referred to as Customs.
Biosecurity risk	Potential harm to the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests (including weeds) and diseases. For example, damage to Australian forest or grassland ecosystems, grain and horticultural crops and to home and community gardens as a result of entry and establishment of the exotic plant disease Sudden Oak Death. Also referred to as quarantine risk.
Central East Region (CER)	Effective from 1 July 2009, five new regional boundaries were established to enable delivery of nationally-consistent biosecurity services across all regions and aligning resources and management to the delivery of client services across the country. The Central East Region includes New South Wales with the exception of Eden and areas south, the Riverina and far north coast.
Central Office (CO)	Department of Agriculture, Fisheries and Forestry's head office in Canberra.
DAFF	Department of Agriculture, Fisheries and Forestry
Import Condition (ICON) database	ICON is DAFF Biosecurity's import conditions database. It is a simple and convenient way to access information about Australian import conditions for more than 20 000 plant, animal, microbial, mineral and human commodities. It can be used to determine if a commodity intended for import to Australia needs a quarantine permit and/or treatment or if there are any other quarantine prerequisites.
Integrated Cargo System (ICS)	A software application used for all import and export reporting and processing procedures. This is the only method of electronically reporting the legitimate movement of goods across Australia's borders to the Australian Customs and Border Protection Service.
Pest and/or disease	Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products (International Plant Protection Convention). Exotic pests are those not currently present in Australia; endemic pests are those already established within Australia.

Quarantine risk material (QRM)

QRM includes, but is not limited to:

- animal material (such as hair, fur, skin, faeces, shell, blood and fluids, feathers, honey, flesh and bone)
- live animals (such as rodents and reptiles)
- food refuse (such as food scraps)
- live insects (such as Khapra beetle)
- snails (such as giant African snail)
- plant pathogens (such as fungi, nematodes, bacteria, viruses)
- plant material (such as pollen, bark, spores, flowers, seeds, gum, leaves, branches, roots, stems, wood, fruits and vegetables)
- soil (such as dirt, mud, gravel, clay and sand)
- water.

Risk management measure

A measure that, if implemented, could reduce the level of biosecurity risk associated with a pest or disease. For example, restricting the entry of bare rooted plants known to be carriers of the plant disease Sudden Oak Death from countries where that disease is known to occur is a risk management measure to prevent its entry and establishment in Australia. Also referred to as a quarantine measure.