# BSE Food Safety Risk Assessment Report

# New Zealand

*Last Update: 31/10/2011*

*Risk Assessment Production Process Section*

*Food Standards Australia New Zealand*

# Executive summary

Food Standards Australia New Zealand (FSANZ) is the regulatory body responsible for conducting BSE food safety assessments of countries that seek to export beef or beef products to Australia. FSANZ analyses the information provided by applicant countries and assigns them a BSE risk status. The requirements detailed in the *Australian Questionnaire to Assess BSE Risk*[1] are based on those of the World Organisation for Animal Health (OIE) *Terrestrial Animal Health Code* (2009).[2] New Zealand was previously assessed by FSANZ in 2003 and have made a submission in 2010 to be assessed under the current BSE policy.[3]

The risk of the Bovine Spongiform Encephalopathy (BSE) agent being released into the New Zealand cattle population through the import of meat and bone meal (MBM), live cattle, and/or beef and beef products is negligible. All MBM imported into New Zealand (intended for use as fertiliser) has historically been sourced from BSE-negligible risk countries. Cattle previously imported from the United States and the United Kingdom are no longer alive. All living cattle, imported from Canada and Australia, are kept under close surveillance by the Ministry of Agriculture and Forestry (MAF).[a] Australia has been the only country permitted to export cattle to New Zealand since June 2006. No imported cattle (or their offspring) have ever shown clinical signs suggestive of BSE.

Imported beef and beef products are sourced solely from countries that have been categorised by the OIE, possess a pre-clearance arrangement and have been also categorised, and therefore approved to trade, by the New Zealand government. Pre-clearance and certification measures are also in place to ensure that biosecurity and food safety standards are met. Australia has been the primary exporter of beef and beef products to New Zealand since 1997. Sound biosecurity and food safety controls are in place at import and domestic levels in New Zealand to prevent the introduction of the BSE agent through these commodities.

In New Zealand, the risk of ruminant animal feed and human food chain systems being exposed to the BSE agent is negligible due to controls around slaughtering, rendering and feed production. New Zealand does not mandatorily remove SRMs from the human food chain but has the capability to do so to meet market access requirements and customer product specifications. Cattle that are unfit for human consumption are buried, incinerated or rendered; if rendered, the resulting MBM is used for fertiliser and non-ruminant feed only. The ruminant feed ban has been legislated for over ten years in New Zealand, and it is a mandatory requirement to have separate feed production lines when manufacturing feed for both ruminants and non-ruminants. All feed manufacturers that produce both ruminant protein-containing feeds and ruminant protein-free feeds at the same premises are required to implement a *Ruminant Protein Control Programme* to ensure ruminant feed is free of ruminant protein. Renderers and feed manufacturers must ensure correct labelling of MBM and feed containing ruminant protein and prevent cross-contamination during production. In addition, monitoring and external auditing by MAF and approved third parties ensure compliance with standards and that corrective actions are enforced.

Well established ante-mortem and post-mortem inspection procedures at the slaughterhouse level throughout New Zealand minimises the risk of the BSE agent entering the human food

[a] During 2010, MAF and NZFSA, the two agencies charged with responsibility for managing BSE risks were merged. In 2011, the pace of change has further increased, with restructuring of the merged organisation. Much of this change has occurred in the interval between the country visit and the production of a draft report on the visit. Consequently the report refers to agencies and groups which no longer exist in the form mentioned. The ability to manage and respond to risks is unchanged or improved.

chain. It is a mandatory requirement for ante-mortem and post-mortem inspectors to hold a qualification approved by MAF. Proper segregation procedures ensure that cattle assessed as being unfit for human consumption (such as fallen stock, downer cattle, and BSE clinical suspects) through ante-mortem inspection are disposed of and do not enter the human food chain. Measures are also in place to prevent cross-contamination between carcasses throughout the slaughtering process.

New Zealand has a mature system in place to limit the distribution (and subsequent consumption) of contaminated and/or unsafe food products via recall and withdrawal procedures that are enforced by MAF. In addition, an Electronic Certification (E-cert) system facilitates export product tracking and can be utilised in a recall situation involving exported products.

Cattle identification and traceability systems are in place in New Zealand. Cattle identification has been mandatory for nearly ten years, and is currently facilitated by two existing industry-based systems. Despite the absence of a single uniform national individual cattle identification and traceability system, this assessment considers New Zealand's cattle identification and traceability to be sound in the context of other existing BSE controls throughout the beef supply chain. Information on animal identification and movements are available to a large degree through interrogation of discrete animal recording databases and through Animal Status Declarations (ASD) data. Inspection of ASDs by government-approved assessors (AsureQuality) ensures accuracy in the information declared. A future identification and traceability system in New Zealand will provide a unified and centralised database of animal identification and traceability information. This system will further enhance the efficiency of trace-back and response in the event of an emergency disease situation. In addition, a landowner property database (FarmsOnline) has been established to which animal movements can be linked.

A comprehensive targeted BSE surveillance program is in place in New Zealand. The program complies with the guidelines prescribed by the OIE *Terrestrial Animal Health Code*. General Transmissible Spongiform Encephalopathy (TSE) surveillance has been undertaken since 1973 with routine testing of brain samples of cattle displaying signs of neurological disease. Since adopting the OIE surveillance points system in July 2005, New Zealand has exceeded the requirements to be classified as a negligible BSE risk country.

BSE has been a notifiable disease in New Zealand for over a decade. The existence of case definition criteria facilitates the notification and sampling of suspect clinically-affected cattle. A compensation scheme for farmers and veterinarians stimulates notification and sampling, whilst penalties exist if there are failures. The high level of notification is supported by a strong BSE awareness program that has been in place for over 20 years. A robust laboratory system receives and processes surveillance samples and facilitates correct disease diagnoses. A network of MAF-approved contracted laboratories and the national reference laboratory with links to international reference laboratories, ensures that BSE will be diagnosed should it occur. The diagnostic methods that are employed (histopathology and Western blotting) are approved by the OIE. All of the aforementioned components contribute towards the detection and accurate diagnosis of clinical BSE suspect animals.

BSE has never been reported in New Zealand and the country is currently classified by the OIE as a country with negligible risk of BSE.

Based on the current risk assessment of New Zealand's control measures and systems around BSE, it is recommended that New Zealand be given a **Category 1** status in relation to country BSE food safety risk status. According to the BSE policy, this means that there is minimal likelihood that the BSE agent has or will become established in the national herd and enter the human food chain. Beef and beef products derived from animals from New Zealand

is therefore regarded as posing a negligible risk to human health.

# List of Acronyms

| | |
|---|---|
| AHB | Animal Health Board |
| ASD | Animal Status Declaration |
| AQIS | Australian Quarantine Inspection Service |
| BSE | Bovine Spongiform Encephalopathy |
| CNS | Central nervous system |
| EC | European Commission |
| EFSA | European Food Safety Authority |
| FAO | Food Act Officer |
| FVO | Food and Veterinary Office (of the EC) |
| IHS | Import Health Standard |
| IFR | Imported Food Requirement |
| FSANZ | Food Standards Australia New Zealand |
| HACCP | Hazard Analysis Critical Control Point |
| IDC | Investigation and Diagnostic Centres |
| LIC | Livestock Improvement Corporation |
| MAF | Ministry of Agriculture and Forestry |
| MBM | Meat and bone meal |
| MINDA | Management Information System for Dairy Administration |
| NAIT | National Animal Identification and Tracing |
| NZFSA | New Zealand Food Safety Authority (now merged with MAF) |
| OIE | Office International des Epizooties (World Organisation for Animal Health) |
| OMAR | Overseas Market Access Requirements |
| RPCP | Ruminant Protein Control Programme |
| SSOP | Sanitary Standard Operation Procedure |
| SRM | Specified risk material |
| TSE | Transmissible Spongiform Encephalopathy |
| VAFP | Verification Animal and Food Products |

# Glossary

**Import Health Standard**[b]

These are documents that state the mandatory requirements to be met in order for risk goods to be imported into New Zealand. These documents are issued under section 22(1) of the *Biosecurity Act 1993*.

**Imported Food Requirements**[c]

These are guidance documents that Food Act Officers (FAO) use when determining whether a prescribed food complies with the *Food (Prescribed Foods) Standard 2007*

**Food Safety Programme**[d]

This is a written programme designed to identify and control food safety risk factors. These risk factors are hazards that may relate to the production, manufacture, preparation, packaging, storage, handling, transport and distribution of food.

**Pre-clearance arrangement**

This is an arrangement between New Zealand and another country which sets out the scope of products eligible for importation as well as specific requirements which must be met (such as certification).

**Prescribed Food**[e]

This is a term used to describe foods which present a greater risk to public health compared to other foods. Prescribed foods are also known as high-risk foods, high regulatory interest foods, and foods requiring clearance.

**Risk Management Programme**[f]

This is a written programme designed to assist premises in managing the hazards, wholesomeness and labelling of animal material and products. The risk management program describes how products will be processed to meet the requirements of the *Animal Products Act 1999*.

**Ruminant Protein Control Programme**[g]

This is a plan that outlines the measures designed to prevent the contamination of ruminant feed by ruminant protein.

[b] http://www.biosecurity.govt.nz/ihs/search
[c] http://www.foodsafety.govt.nz/industry/importing/nzfsa-clearance/
[d] http://www.foodsafety.govt.nz/industry/general/fsp/overview.htm
[e] http://www.foodsafety.govt.nz/industry/importing/specific-foods/prescribed-foods/
[f] http://www.foodsafety.govt.nz/industry/general/rmp/overview.htm
[g] http://www.biosecurity.govt.nz/pest-and-disease-response/pests-and-diseases-watchlist/tse/surveillance/ruminant-programme

# Table of Contents

# Introduction

Food Standards Australia New Zealand (FSANZ) is the regulatory body responsible for assessing the BSE food safety risk of, and assigning a status to, countries that seek to export beef or beef products to Australia. Although FSANZ sets a number of joint food standards for both Australia and New Zealand, it is not responsible for hygiene and primary production related standards and programs concerning bovine spongiform encephalopathy (BSE) controls. The Ministry of Agriculture and Forestry (MAF), is the agency within New Zealand responsible for implementing these standards and programs.

Individual countries are responsible for submitting comprehensive data to FSANZ around their BSE risk and associated risk management and controls. FSANZ assesses the information and data submitted by the applicant country in accordance with requirements set out in the *Australian Questionnaire to Assess BSE Risk*[1]. Legislation and standards underpinning BSE controls are also examined as part of the food safety assessment and these are listed in *Appendix 1 (New Zealand Legislation and Standards)*.

In general, data requirements in the Australian Questionnaire are based on those of *Chapter 11.5 – Bovine Spongiform Encephalopathy* of the World Organisation for Animal Health (OIE)'s *Terrestrial Animal Health Code* (20011).[2] The Australian Questionnaire also seeks additional information on animal traceability and identification, and animal slaughtering and processing systems.

New Zealand submitted an application to FSANZ for country categorisation of BSE food safety risk on 28 April, 2010. The New Zealand submission was a compilation of its 2006 submission to the OIE and its 2009 market access application to the Japanese Food Safety Commission. The following report describes the BSE food safety risk assessment conducted by FSANZ to determine the risk that the BSE agent is present in beef and beef products imported from New Zealand.

# BSE History

BSE has not been reported in New Zealand. Previous risk assessments undertaken by FSANZ, European Food Safety Authority (EFSA) and the OIE have all shown there to be a negligible risk of BSE occurring in the New Zealand cattle population. FSANZ previously assessed New Zealand's BSE risk in 2003 and concluded the country to be of 'negligible' risk. In 2005, EFSA classified New Zealand's Geographical BSE Risk level as 'I', also indicating that it is highly unlikely that domestic cattle were (clinically or pre-clinically) infected with the BSE-agent. In 2006, OIE classified New Zealand as a 'BSE-free' country until this was amended to 'negligible risk' in May 2007.[4,5] 'Negligible risk' is the best possible ranking which can be applied.

# Potential for release of the BSE agent through imported materials

The importation of specific commodities is a possible avenue through which the BSE agent can be released into a country's cattle population. Commodities that could potentially introduce BSE, if contaminated, include: meat and bone meal (MBM), live cattle, and a range of products of bovine origin.

Section 1.1 of the Australian Questionnaire requests information on annual volumes of MBM that have been imported into a country during the last eight years. If applicable, countries are also required to provide evidence that rendering parameters are sufficient to inactivate the BSE agent should it be potentially present.

Section 1.2 of the Australian Questionnaire requires details of live cattle that have been imported during the last seven years. Evidence of the origin of the cattle must be supplied, as well as the BSE risk status of the exporting countries. Similarly, Section 1.3 of the Australian Questionnaire requires data concerning the origin and annual volumes of products of bovine origin (beef and beef products) that have been imported during the past eight years.

This chapter addresses the above requirements by describing the history of importation of MBM, live cattle, and beef products into New Zealand, as well as relevant legislation, certification and other controls that underpin the integrity of the system.

## 1 Importation of MBM

### 1.1 Overview

Importation of animal protein sourced from ruminants poses a food safety risk as it is the primary route through which cattle are exposed to BSE infectivity. Importation of protein from animal sources is highly restricted in New Zealand. No MBM or feed products and ingredients of ruminant origin have been imported into New Zealand during the last eight years. With the exception of samples for testing, Australia is currently the only country that is permitted to export MBM to New Zealand; such imports ceased in 2002 and since this time all MBM has been locally produced.

### 1.2 Legislation

The Ministry of Agriculture and Forestry (MAF) administers and enforces legislation regarding the importation of animal protein, including MBM, into New Zealand.

Restrictions on the importation and use of any risk commodities (MBM, live cattle, or beef products) are defined by Import Health Standards (IHS) which are issued by MAF and enforceable under section 22 of the *Biosecurity Act 1993* (the Biosecurity Act).[6] The IHS specifies the requirements that must be met prior to the importation of any risk goods.

According to the *Import Health Standard for the Importation into New Zealand of Processed (Rendered) Animal Protein for Further Processing into Petfood from the European Community,*[7] imports of MBM or other ruminant protein for inclusion into ruminant feeds in any form, composition or admixture are not permitted. IHSs are supported by the *Biosecurity (Ruminant Protein) Regulations 1999* (the Ruminant Protein Regulations)[8] which state that it is an offence to feed any form of ruminant-derived protein (imported or domestic) to ruminants. A legislated feed ban came into effect in New Zealand from January 2000. Only countries that are permitted to export MBM or ruminant-derived protein to New Zealand are listed within regulations.

## 1.3 Details of MBM imports

### *1.3.1 Countries of origin*

Except samples imported for laboratory analysis, New Zealand has not imported MBM or any ruminant derived feed ingredients from any country since 2002. Prior to this, New Zealand imported MBM from Australia starting from 1990.

### *1.3.2 Types of materials, species composition and uses*

An average of 15,000 tonnes of MBM was imported annually from Australia between 1990 and 2002. There were two types of imported meal: Type 1 and Type 2. Type 1 meal refers to meals other than meat or liver meal, but pertained to meat offal, and Type 2 meal refers to meat meal. Both meal types are unfit for human consumption. Type 1 meal formed the bulk of MBM imports.

Detailed information provided on the species composition of imported MBM was not provided in the New Zealand submission. However, since all material was sourced from Australia (a BSE-negligible country), this is not considered critical information for this assessment.

As required under legislation, New Zealand has never permitted the importation of MBM for the purpose of feeding to ruminants. MBM (Type 1 or Type 2 meal) was imported from Australia for use as fertiliser. Prior to the implementation of controls on the feeding of ruminant protein, New Zealand cattle were almost exclusively pasture-fed or fed with supplements based on pasture. There was minimal use of concentrates. More recently there has been use of palm kernel extract and maize silage as feed supplements; these do not contain any MBM. It is unlikely that imported MBM has been used for the feeding of ruminants in New Zealand.

An in-country visit confirmed that New Zealand imported 13.2 kg of MBM from several countries in 2009. However, the imported MBM was used entirely for laboratory analytical studies and not for livestock feed.

### *1.3.3 Certification and clearance*

According to the IHS for the *Importation into New Zealand of Processed (Rendered) Animal Protein for Further Processing into Petfood from the European Community*, an import permit is not required for any mammalian protein including ruminant-derived material.[7] The responsibility lies with the importer who has to comply with legislation as detailed previously. However, for exporters, packaging must be labelled as: “Not for use in ruminant feedstuffs” and the consignment must be accompanied by a completed health certificate which meets zoosanitary certification requirements. Other than Australia, the only country with an IHS for the importation of rendered animal material is the European Union (EU); however, no MBM has ever been imported from the EU with the exception of samples for laboratory analysis.

### *1.3.4 Rendering process used in source country*

All MBM imported from Australia was heat-treated which, according to MAF’s *Code of Practice for Rendering* involves subjecting the raw material to a temperature of at least 90°C for at least 10 minutes.[9] The purpose of this is to eliminate vegetative bacteria (such as *Listeria spp.* and *Salmonella spp.*), but not prions. Although this process does not meet the OIE minimum rendering specifications to remove BSE infectivity (133°C at 3 bars for 20 minutes), material has only been sourced from a negligible risk country.

# 2 Importation of live cattle

## 2.1 Overview

Importation of live cattle represents a potential food safety risk if imported cattle are sourced from countries which do not have adequate control programs in place to minimise the risk of BSE exposure. New Zealand has imported limited numbers of live cattle from Australia during the last seven years. Between 1982 and 1999, live cattle were also imported from Canada, the United Kingdom, and the United States. Imported cattle do not enter the human food chain or the animal feed chain through rendering. A description of the fate of these animals was provided in the submission and is detailed below.

## 2.2 Legislation

Importation of live cattle is regulated by MAF.

New Zealand has previously imported cattle from Australia, Canada, the United States, and the United Kingdom. With the exception of Australia, no IHSs for live cattle are currently available for other countries and therefore imports are illegal. Live cattle imports from the United Kingdom have been banned since December 1988 and Australia has been the only country permitted to export cattle to New Zealand since June 2006.

The *Import Health Standard for the Importation of Buffalo and Cattle into New Zealand from Australia*[10] is enforceable under section 22 of the Biosecurity Act. The IHS provides detailed conditions, including pre-export requirements, which must be met to allow biosecurity clearance of imported cattle. An import permit must be obtained from MAF for each consignment, and cattle must spend at least 30 days in pre-export isolation at a premise approved by the Australian Quarantine Inspection Service (AQIS).[h] Zoosanitary certification and relevant laboratory test results must accompany the consignment to New Zealand. The conditions are certified by an official veterinarian in the exporting country that declares the animals free of infectious diseases.

Compulsory and permanent identification of all (including imported) cattle aged over one month was fully implemented by the New Zealand Parliament from July 2001. This is detailed in section 3 of the *Biosecurity (Animal Identification Systems) Regulations* [11] and is discussed more fully in Section 16 of this report as part of the animal identification and traceability requirements.

There are several related regulations that pertain to imported animals. Firstly, under Section Three of the *Biosecurity (Imported Animals, Embryos, and Semen Information) Regulations 1999*,[12] MAF must be notified if imported animals are: i) transferred to a new owner; ii) deceased; iii) slaughtered or destined for slaughter, or iv) lost. Also, the loss of an identification device must be reported. Second, under Section Five of the *Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006* products derived from imported animals are defined as “high risk material”and such material is not permitted to enter the human and animal food chain.[13]

## 2.3 Details of live cattle imports

Information on the number and fate of imported cattle were provided by New Zealand. Imports of cattle from all countries have been for breeding purposes only.

[h] Supervision and approval of premises by AQIS ensures that the specifications and management procedures listed in the *New Zealand MAF Standard for Pre-export Isolation (PEI) Premises for Ruminants/Lamoids from Australia* are met.

### *2.3.1 Australia*

Australia has been the only country permitted to import live cattle since June 2006 albeit in limited numbers (137 head since 2000). Imported cattle are monitored via an active surveillance program and are inspected annually by MAF Veterinary Officers. An in-country visit confirmed that New Zealand continues to import low numbers of live cattle from Australia.

### *2.3.2 The United States*

Between 1985 and 1999, 57 cattle were imported from the United States. Although all animals imported from the United States have been slaughtered, there is a lack of information regarding the fate of animals including whether they were rendered or possibly entered the food chain.

### *2.3.3 Canada*

Between 1985 and 1999, 92 cattle were imported from Canada. Of the animals that were imported from Canada, only four are still alive. All 92 cattle have been monitored by MAF veterinary officers and none have shown signs suggestive of BSE.

### *2.3.4 The United Kingdom*

Thirteen animals were imported from the United Kingdom between 1982 and 1987. Although there was considerable effort to determine the fate of these animals, it could not be confirmed whether five of the thirteen animals had been excluded from rendering, and thus may have been introduced into ruminant feed. None of the imported animals showed any signs suggestive of BSE during their lifetime. Of the thirteen imported animals, one died during a snowstorm, one was exported to Australia, and eleven (including the five that may have been rendered) were slaughtered by mid-1999.

# 3 Importation of beef and beef products

## 3.1 Overview

This section focuses on the risk of releasing the BSE agent through the importation of beef-containing food products which are intended for human consumption. Importation of beef and beef products are highly regulated by the New Zealand system. Imports are not permitted from countries which do not have adequate BSE controls and regulations in place. Australia is the main source country for imports of beef and beef products (which New Zealand refers to as bovine meat or bovine meat products).

## 3.2 Legislation

### *3.2.1 Regulatory Agencies*

As with imported MBM and live animals, importation of beef and beef products falls under the jurisdiction of MAF. However, since these products are destined for human consumption, food safety regulations (also under the jurisdiction of MAF) also apply. Countries wishing to export bovine products to New Zealand must be categorised for food safety by MAF.

### *3.2.2 Legislation*

Foods that represent a relatively high risk to public health are systematically monitored for specific hazards and are termed 'prescribed foods'. Under the *Food (Prescribed Foods) Standard 2007*, "any meat or other food product of a bovine animal, and any food product derived from or containing the meat or products of a bovine animal" is a Prescribed Food for the purpose of BSE monitoring.[14] This Standard is pursuant to section 11P of the *Food Act 1981* (the Food Act), which states that a MAF Food Act Officer (FAO) must be satisfied that the product complies with "all relevant provisions of any regulations made pursuant to [the Food] Act".[15] Prescribed Foods can be imported if the country of origin has been assigned a pre-clearance arrangement which attests that they adequately adhere to the OIE's BSE controls (relevant to the BSE risk category). Countries intending to export bovine meat products to New Zealand are also categorised by MAF; the country categorisation assigned by MAF is generally consistent with that of the OIE risk status.

### *3.2.3 Clearance requirements*

To obtain biosecurity clearance, importers must comply with the relevant IHS specific to their country and commodity. The commodity cannot enter New Zealand if a corresponding IHS is non-existent.

An IHS for bovine meat and bovine meat products exists for Australia, Canada/United States, European Union, Japan and Vanuatu to address biosecurity risks posed by foot and mouth disease (FMD), rinderpest and BSE. Evidence of zoosanitary certification from the exporting country's competent authority is required for all consignments at the port of arrival with the exception of Australia. New Zealand recognises Australia's animal health status for BSE, FMD and rinderpest. Hence, zoosanitary certification for beef from Australia is not required if it the product can be identified to be of Australian or New Zealand origin. For biosecurity clearance of retorted beef, each consignment must have a manufacturer's declaration stating the retort process has achieved $F_o3$.[i] Biosecurity clearance is given at the border after MAF biosecurity staff are satisfied that the IHS conditions have been met.

The importer must also meet the appropriate imported food requirements under the Food Act. Imported Food Requirements (IFRs) provide administrative guidance to an FAO by setting out clearance options and procedures for importers of Prescribed Foods. The *Imported Food Requirement for ovine Meat and Bovine Meat Products* sets out the clearance procedures required for the importation of bovine meat products (such as documentation checks and physical inspections), as well as specific pre-clearance arrangements for a number of countries.[16]

Pre-clearance arrangements for bovine meat and meat products currently exists for nine countries – Australia, Brazil, Canada, Croatia, the European Union, Japan, Mexico, the United States, and Vanuatu. Each pre-clearance arrangement covers the scope of products that are eligible for importation, as well as other requirements which must be met (such as certification). For example, manufacturer's declarations rather than government certification are required for each consignment of incoming bovine products from Australia, whilst government certification is the only option for the other eight countries. The certification requirements for these countries include attestations relating to registration and approval of premises, origin, veterinary inspection, type of processing and absence of SRMs. Brazil, Croatia and Mexico do not have a specific IHS for bovine meat and bovine products. The only beef products permitted from these countries are retorted beef under the generic IHS. An exception to this is tacos containing cooked beef from Mexico, which also requires manufacturer's declarations. To meet IFR requirements, all countries with the exception of

[i] $F_o3$ refers to a time-temperature parameter of 121°C for 3 minutes.

Australia are required to provide government certification according to their pre-clearance arrangement conditions (*Table 1*).

| **Table 1: Mandatory declarations required on certification** | | |
|---|---|---|
| **Country** | **Certification/Manufacturers' Declaration requirements** | |
| Australia | IHS | No certification required. Product needs to originate from Australia or New Zealand. |
| | IFR | Manufacturer's declaration stating product is of Australian or New Zealand origin. |
| Canada & United States | IHS | Government certificate required.<br>Removal of specified risk material (SRM). |
| | IFR | Product derived from animals that have passed ante-mortem and post-mortem veterinary inspection and were processed in premises under operator supervision.<br>Further specific declarations required in the pre-clearance arrangement. |
| Japan | IHS | Government certificate required.<br>Removal of specified risk material (SRM). |
| | IFR | Product derived from animals that have passed ante-mortem and post-mortem veterinary inspection.<br>Further specific declarations required in the pre-clearance arrangement. |
| EU | IHS & IFR | Government certificate required.<br>Product derived from animals that were born, reared and slaughtered in the EU and in compliance with Regulations of the European Parliament and the Council (EC) No 999/2001 and (EC) No 1774/2002 as applicable. |
| Vanuatu | IHS | Government certificate required.<br>Product derived from animals that have passed ante-mortem and post-mortem inspection and were processed in premises under operator supervision.<br>Country freedom from BSE. |
| | IFR | Premises under the supervision of the veterinary authority.<br>Further specific declarations required in the pre-clearance arrangement. |
| Mexico | IHS (Tacos containing cooked beef) | Government certificate required.<br>Country freedom from BSE.<br>Product derived from animals that have passed ante-mortem and post-mortem veterinary inspection at the time of slaughter.<br>Premises under the supervision of the veterinary authority.<br>Premises licensed to export to USA. |
| | IHS (retorted product) | Manufacturer's declaration retorted to $F_o3$. |
| | IFR (all beef) | Government certificate required.<br>Specific declarations required in the pre-clearance arrangement. |
| Brazil & Croatia | IHS | Manufacturer's declaration retorted to Fo3. |
| | IFR | Government certificate required.<br>Specific declarations required in the pre-clearance arrangement. |

### 3.3 Type of imported beef or beef products

#### *3.3.1 Fresh or frozen beef*

Since 1996, the only form of fresh or frozen beef that has been imported into New Zealand is trimmed or prepared cuts. Since no whole or half carcasses have been imported, the likelihood that SRMs have been included is minimal.

Of the fresh or frozen beef cuts imported into New Zealand from 1997 to mid-2010, Australia was the main source country throughout this time period. The United States have imported processed beef cuts within this period (1997, 2001, 2007 and 2009). From 2001-2002, imports of fresh or frozen beef cuts originated from Canada and Korea. Importation of beef from Vanuatu commenced in 2007. Imports from the United States, Korea, Vanuatu and Australia have included both boneless and bone-in cuts of beef, while only a single consignment of boneless beef cuts were imported from Canada during 2001.

#### *3.3.2 Processed beef products*

New Zealand's food safety import conditions for fresh or frozen and processed (retorted) beef products are based on a country's OIE BSE risk categorisation and the scope of the products being imported.[17] Importation is permitted if the type of beef or beef product being exported meets the relevant pre-clearance arrangement. However, the risk of FMD limits the scope of products eligible for importation. The range of beef products eligible for importation into New Zealand from those countries with an approved IHS are summarised in *Table 2*. An in-country visit confirmed that the majority of imported beef products (from 2003 onwards) have been retorted and highly processed.

## 4 Summary: potential for release of the BSE agent through imported materials

The information provided by New Zealand indicates that the risk of the BSE agent being released into the New Zealand cattle population through imports of MBM, live cattle, or beef and beef products is negligible.

Australia has been the only source of imports of MBM to New Zealand and this ceased in 2002; the only use of imported MBM in New Zealand has been as fertiliser. Samples of MBM that have been imported since 2002 have only been used for laboratory analysis. Since June 2006, only Australian cattle have been permitted for import, and these cattle are inspected annually for signs of BSE by MAF veterinarians. Bovine meat products for human consumption are the only ruminant protein materials that are currently imported into New Zealand in significant amounts, and the majority are imported from Australia, a negligible risk country.

The BSE-affected countries from which imports of ruminant material are permitted are the United States, Canada, and the European Union. Such imports are limited to beef and beef products for human consumption (no MBM or live cattle) and pre-clearance arrangements and certification are required to ensure appropriate BSE controls are met.

Since New Zealand was last reviewed by Australia for categorisation of BSE risk in 2003, New Zealand has implemented further regulations to prevent the release of BSE into the New Zealand cattle population through imported material. The most significant of these is the classification of beef and beef products (which are the only ruminant material imported from BSE-affected countries) as a Prescribed Food. This means that any imports must meet specific pre-clearance arrangements to ensure that beef production systems of the exporting country effectively manage BSE risk.

Australia is currently the sole country that is permitted to export live cattle to New Zealand. Imports of bovine-derived products for human or animal consumption are only permitted from countries that have been issued with an IHS. Hence, it is concluded that current imports would pose a negligible risk for the BSE agent to be released into the New Zealand cattle population.

| **Table 2: Range of beef products currently assessed under biosecurity regulations as eligible for importation into New Zealand[j]** | |
|---|---|
| **Countries** | **Types of products covered in respective IHS** |
| Australia | Cattle meat includes meat and meat products derived from cattle, buffalo and buffalo/cattle cross animals. |
| Brazil | Retorted beef products and animal product-based floss, flavouring or stock*, and* products containing animal product-based flavouring or stock (eg instant foods, camping mixes, soup mixes). |
| Canada, United States | Bovine meat and meat products for human consumption (excluding SRMs) |
| Croatia | Retorted beef products and animal product-based floss, flavouring or stock*, and* products containing animal product-based flavouring or stock (eg instant foods, camping mixes, soup mixes). |
| EU | Bovine meat (beef) for human consumption:<br>Includes all parts of domestic bovine animals (including buffalo, *Bubalus bubalis,* and bison, *Bison bison*) that are suitable for human consumption. Commodities that may be imported under this IHS include fresh meat, meat products, minced meat, meat preparations, bones and bone products, processed animal protein products, blood and blood products.<br>(Fresh meat refers to meat, including meat vacuum-wrapped or wrapped in a controlled atmosphere, which has not undergone any treatment other than cold treatment to ensure preservation. This includes minced meat and unprocessed (fresh) blood, bones and fat for human consumption.) |
| Japan | Bovine meat products for human consumption:<br>Includes all fresh, frozen cooked or preserved meat and meat products (including offal) for human consumption that is derived from domestic cattle (*Bos taurus, B. indicus*), buffalo (*Bubalus bubalus, Syncerus caffer nanus*), bison (*Bison bison, B. bonasus*) and their crosses. |
| Mexico | Tacos containing cooked beef. Retorted beef products and animal product-based floss, flavouring or stock*, and* products containing animal product-based flavouring or stock (e.g. instant foods, camping mixes, soup mixes). |
| Vanuatu | Cattle meat (beef) products for human consumption:<br>Includes all fresh and frozen meat and meat products (including offal) derived from domestic cattle, buffalo, bison and their crosses. |

[j] Human health requirements and clearance requirements are detailed earlier in this report.

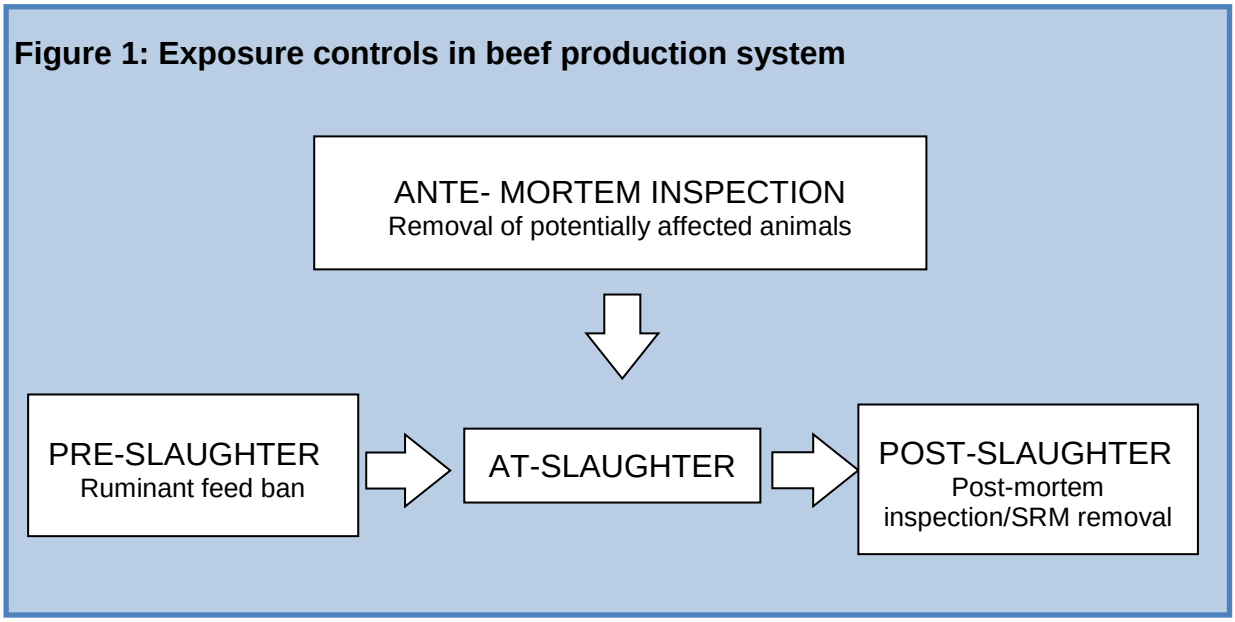
# Exposure control

The exposure of cattle to BSE infectivity and amplification within the feed system is controlled by preventing the feeding of ruminant-derived protein to ruminants. Depending on the BSE status of a country (such as whether a case of BSE has occurred and/or risk factors for BSE exist), prevention is achieved through regulations in three key areas across the beef production system:

- ***Pre-slaughter*** controls which prevent the feeding of ruminant protein to ruminants
- ***At slaughter*** controls which cover animal inspection procedures to ensure potentially affected animals are removed from the animal feed and food production systems
- ***Post-slaughter*** controls which ensure that potentially infected tissues are removed and do not enter the animal feed and food production systems

Scientific evidence published since the BSE epidemic in the United Kingdom has established that feed ban regulations and procedures to prevent cross-contamination of ingredients used for cattle feed are critical control measures for preventing the recycling and amplification of BSE.[18-21] Measures to prevent non-ambulatory (downer) cattle from entering the animal feed and human food chain should also be adopted. For countries where BSE has occurred or risk factors exist, controls should also extend to exclusion of potentially infectious tissue (SRM) from animal feed including pet food and human food products. New Zealand currently does not have a legislative requirement to remove SRM from animal feed due to their negligible risk status. Controls throughout the beef production chain to prevent exposure to BSE are summarised in *Figure 1*.

**Figure 1: Exposure controls in beef production system**




This chapter describes the control measures that are in place in New Zealand that prevent the contamination and recycling of the BSE agent in cattle feed as well as assuring that food for human consumption is free of BSE.

# 5 Pre-slaughter controls: ruminant feed ban

## 5.1 Overview

Under the Australian BSE Questionnaire countries must demonstrate that an effective ruminant feed ban been has been effectively implemented. More specifically, evidence is required to support that ruminant-derived MBM has not been fed to cattle for the last 8 years.

## 5.2 Legislation

New Zealand's ruminant feed ban legislation (*Biosecurity (Ruminant Protein) Regulations 1999*[8]) was enacted in January 2000 and falls under the control of MAF. From 1996 to 2000 a voluntary ruminant feed ban was imposed by the feed milling industry that restricted the use of ruminant protein to the feeding of non-ruminants.

Under the Ruminant Protein Regulations:

- The feeding of ruminant protein to ruminants "in any form, composition, or admixture" is prohibited.
- It is an offence to allow, cause, or permit a ruminant to consume ruminant protein, or allow someone else to feed ruminant protein to ruminants.
- The use of dairy products in ruminant feeds is permitted.
- Feed manufacturers producing both ruminant protein-containing feeds and ruminant protein-free feeds at the same premise must have a MAF-registered *Ruminant Protein Control Programme* or RPCP (detailed in Section 5.4.1 of this report).
- There are labelling requirements for animal feeds or fertiliser containing ruminant protein (but excluding retail pet foods). Renderers are also required to label MBM according to the Ruminant Protein Regulations.

Breaches to the Ruminant Protein Regulations are subject to strict penalties and these are set out in the Biosecurity Act.

In addition, the *Dedicated Ruminant Feed Processing Line Requirements* (introduced by MAF in July 2006) require the physical separation of ruminant and non-ruminant feed processing lines and equipment (detailed in Section 5.4 of this report).[22] To be eligible for MAF-registration, all feed mills must conform to this requirement.

## 5.3 Use of bovine materials in animal feedstuffs

MBM or other ruminant-derived materials have not been imported into New Zealand since 2002. Prior to this MBM was only imported from Australia (see Section 1 of this report). The risk of cross-contamination of domestically produced animal feedstuffs with imported ruminant-derived MBM that may be contaminated with the BSE agent is therefore considered negligible.

New Zealand cattle are predominantly pasture-fed or fed with supplements based on pasture. MBM or concentrates derived from animal protein has not been extensively used. Prior to the industry-imposed ruminant feed ban, approximately 12% of all stock feed produced in New Zealand was fed to ruminants (5% to calves and 7% to dairy cows and other ruminants). The submission indicated that some of the stock feed may have contained ruminant protein. Since the mandatory ban came into force, ruminant protein has been replaced with fishmeal, milk powder, soybean meal or other vegetable protein. MBM

produced in New Zealand from 2000 has only been used for fertiliser or the production of feed for non-ruminant animals (poultry and pigs).

## 5.4 Measures to prevent cross-contamination of ruminant and non-ruminant protein

In 2008, there were 24 feed mills in New Zealand that processed ruminant-derived material. Of these, only eight produced feed for both ruminants and non-ruminants. MAF does not keep separate statistics of feed mills that process non-ruminant material as this is not restricted. The main mechanisms to minimise the risk of cross-contamination of ruminant feedstuffs are the use of dedicated lines for the processing of ruminant and non-ruminant material and labelling of ruminant-derived feeds.

The requirements for dedicated lines are defined in the Ruminant Protein Regulations[8] and include:

- Complete physical separation of feed processing equipment used for producing feeds for ruminants from those used for producing feeds for non-ruminants (which may contain ruminant protein).
- Physical separation of ingredients upon arrival to bagged packing and storage.
- Wind-borne contamination should be prevented. If intake pits for risk materials cannot be adequately separated by distance, barrier(s) of appropriate design and dimensions should be present between these materials and the intake lines for ruminant feed ingredients.
- Prevention of contamination during the pre-mill and post-mill transport phases.

There are strict labelling regulations under sections 13 and 14 of the *Biosecurity (Ruminant Protein) Amendment Regulations 2010*[23] such that all feed that contains ruminant protein (including fertiliser) must display the following label:

"*Notice: Do not feed to sheep, cattle, deer, goats, buffaloes, or other ruminant animals. This product contains or may contain ruminant protein.*"

### *5.4.1 Ruminant Protein Control Programmes*

A Ruminant Protein Control Programme (RPCP) describes procedures and guidelines for feed manufacturing establishments to ensure that the requirements under the Ruminant Protein Regulations are met. A MAF-registered RPCP is a statutory requirement when feeds for both ruminant and non-ruminant animals are produced within the same premises. Currently, no rendering facilities are required to have a RPCP as there are none that produce both feeds for ruminants and non-ruminants. The RPCP contains specific provisions to minimise the risk of contamination of feed intended for ruminants by ruminant protein. The key components of the RPCP include:

- Details of feed mill operators, employees, location, and destination of product;
- Types of products produced and feed formulas, clearly identifying when ruminant materials are to be used;
- Sources of ingredients;
- Transfer, transport and storage of ruminant protein including labelling; and
- Compliance programs including staff training, audit plans, and record keeping.

Additionally, the NZFSA Code of Practice for the production of rendered products outlines the mandatory requirements for accurate labelling, separation of, and dedicated lines for, ruminant material and non-ruminant material, and the requirement to operate under a RPCP.[9]

## 5.5 Evaluation of the ruminant feed ban

New Zealand has assessed the effectiveness of their feed ban regulations by auditing the RPCPs of feed companies and undertaking sampling surveys of formulated feeds and feed ingredients for contamination with ruminant material.

### *5.5.1 RPCP Audit Process*

Once a RPCP is registered, MAF Verification Animal and Food Products (VAFP) staff (warranted under the Biosecurity Act) conducts an initial audit on behalf of MAF Biosecurity. Annual audits take place thereafter and are conducted by independent auditors that are approved during RPCP registration; operators nominate an auditor from an approved list. MAF has a close relationship with the New Zealand Feed Manufacturers Association (NZFMA) and uses this organisation as a communication channel to ensure that feed producers who produce mixed feeds are well informed of the need to have a RPCP. The MAF Compliance and Enforcement Group (CEG) enforce the Ruminant Protein Regulations and ensure that all feed premises are compliant.[24,25] The MAF CEG undertakes random audits of all known feed producers and conduct follow-up audits of premises where infractions are found.

In 2008, 16 feed mills were randomly inspected by the MAF CEG. Two feed mills did not have a registered RPCP in place, and risk management procedures were developed thereafter. In 2009, 18 feed mills were randomly inspected with only one infraction detected. Follow-up audits ensured that all establishments reached compliance. In a summary document provided by MAF during the in-country visit, a report showed all premises with registered RPCPs were audited during the 2010/2011 period and all were compliant with the Ruminant Protein Regulations.[26]

An amendment to the Ruminant Protein Regulations that took effect from 1 July 2011 requires RPCPs to be audited by auditors authorised by the MAF Chief Technical Officer (CTO). Section 103 of the Biosecurity Act provides CTOs with the authority to appoint appropriate inspectors. The amendment strengthens the legislative basis for audit activities.[6]

### *5.5.2 Feed Sampling Surveys*

MAF VAFP conducts feed sampling in premises where risk is identified through external audits. Following a series of surveys from 2003 to 2005 where ruminant feed samples were analysed for the presence of ruminant protein, it was determined that the incorrect labelling of feed and the absence of dedicated lines were causes of cross-contamination. Consequently, in 2006, MAF introduced an industry-wide requirement to have complete separation of feed production lines. As of July 2006, only eight feed mills produced feed for both ruminants and non-ruminants and a RPCP is required for these premises. The majority of feed mills have moved to the production of ruminant-free feedstuffs which can be used for all species, whilst a minority are dedicated to non-ruminant feed production (thereby allowed to use ruminant protein).

Overall, there have been very few breaches to the feed ban regulations and those detailed in the submission were of a minor nature (e.g. inaccurate wording on labels) suggesting that there is generally widespread compliance across the industry. Furthermore, continual

education and verification activities, including sampling of feed on a random basis, reflects the country's proactive approach to ensure compliance with the ruminant feed regulations.

# 6 Ante-mortem slaughter controls

## 6.1 Overview

Older cattle which are non-ambulatory (downer cattle, fallen stock) and/or showing signs of neurological disease consistent with an established BSE case definition present the highest risk of infection with the BSE agent. Such animals should be targeted and prevented from entering the ruminant feed and human food chain.

## 6.2 Legislation

The management of biological risk that may arise through animal material or products falls under the *Animal Products Act 1999* (the Animal Products Act)[27] which is implemented and enforced by MAF. Procedures concerning ante-mortem inspection, handling suspect animals and slaughter methods are regulated and defined in notices, standards and codes of practice, all of which are warranted under this Act; some have been developed by relevant industry bodies in conjunction with MAF.

Under the Animal Products Act, ante-mortem inspection procedures have been issued by MAF and specifications are defined in the *Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006*.[28] The notice does not include specific provisions for BSE but sets general requirements for handling suspect animals that are not fit for human consumption or may introduce hazardous animal material to a processing facility. Ante-mortem inspectors must hold specific qualifications which certify an examiner's competency to conduct ante-mortem inspection. Qualifications listed in the *Animal Products (Official Assessors: Ante-Mortem and Post-Mortem Inspectors) Notice 2009*[29] and *Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006*[13] include certificates in meat inspection (such as the National Certificate in Meat Inspection Services and the Certificate of Meat Inspection) or registration as a veterinarian under the *Veterinarians Act 2005*.

## 6.3 Ante-mortem procedures

The *Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006*[28] specifies the following requirements for ante-mortem examination of animals:

- Assessment of slaughtering suitability – all cattle must undergo ante-mortem examination prior to slaughter.
- Assessment of processing suitability – the examiner decides when an animal is unsuitable for slaughter and determines appropriate treatment, processing, and/or disposal.
- Handling injured or dead animals – cattle that are dead or are injured during transport or at the slaughterhouse must be slaughtered without delay.
- Removal of animals from the slaughterhouse is only permitted if the ante-mortem examiner has given approval.
- Identification of animals – all animals that present for slaughter are to be identified for the purpose of verifying their origin.
- Risk management procedures which include systems for identifying, controlling, and

disposal of diseased, defective and condemned animal material.

### 6.4 Slaughtering methods

*Industry Standard 5: Slaughter and Dressing* sets guidelines for suitable methods for stunning and slaughter of cattle.[30] The methods are consistent with recommendations under the BSE chapter of the OIE *Terrestrial Animal Health Code*.

Animals which are assigned as clinical suspects, downer cattle, or fallen stock are removed from the main production chain and are slaughtered in facilities separate to cattle that have passed ante-mortem inspection under the supervision of MAF veterinarians.

### 6.5 Handling of suspect diseased cattle

Consistent with OIE recommendations, any animal displaying behavioural or clinical signs consistent with the BSE case definition during ante-mortem inspection are defined as a "BSE suspect". Brain tissue from these animals is tested for BSE as part of New Zealand's BSE surveillance program; this is discussed in greater detail in Section 18 of this report.

BSE clinical suspects (as well as fallen stock and downer cattle) are condemned during ante-mortem inspection. Material derived from these cattle is referred to as "medium risk raw material" which is defined under *Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006* as "derived from slaughtered or killed animals that are suspected to be diseased" and must meet specific processing requirements including removal from the main production line during slaughter.[13] Clinical suspects may be buried, incinerated or rendered.[k] In the latter case, medium risk material is transported directly to a licensed thermal processing premise for denaturing (to eliminate all vegetative bacteria) prior to being rendered into MBM for animal (non-ruminant) consumption or fertiliser. In practice, the thermal process involves rendering the material at 90°C for ten minutes.

## 7 Post-slaughter controls: post-mortem inspection, SRM removal, and rendering procedures

### 7.1 Overview

BSE has not occurred in New Zealand and therefore, removal of central nervous system (CNS) tissue or other tissue considered as risk material has not been a requirement. New Zealand has detailed post-mortem procedures which have been developed to assess the suitability of the slaughtered product for human consumption and to minimise the risk of food-borne illness associated with contaminated meat products.

### 7.2 Legislation

The Animal Products Act[27] regulates the production and processing of animal material and animal products produced in and exported from New Zealand. This Act requires all cattle slaughtering premises to have an approved and registered risk management program that incorporates Sanitary Standard Operation Procedures (SSOPs) and Hazard Analysis Critical Control Point (HACCP) principles.

Requirements concerning hygiene, handling of raw material, and ante-mortem and post-

[k] If a clinical suspect is identified on a farm, the animal is slaughtered and sampled on-farm. Brain stem samples are taken by a veterinarian and the carcass is buried or incinerated.
The FVO of the EC audited farms as part of its wider third party audit of New Zealand's BSE control systems in 2006; the audit confirmed burial or incineration as the usual disposal methods on farm.

mortem inspection are defined in notices under the Animal Products Act. The *Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006*[28] lists the components of a risk management program that include:

- Systems for identifying, controlling, and disposing of diseased or condemned material
- Procedures for carrying out post-mortem examinations
- Requirements concerning animals that are declared as being unfit for slaughter for human consumption.

Premises are also required to meet the *Animal Products (Specifications for Products Intended for Human Consumption) Notice 2004*.[31] This Notice details general requirements related to general and personal hygiene but also includes provisions for the management of animal material or animal products that are not suitable for human consumption (termed "minimal, medium and high risk raw material").[l]

### 7.3 Post-mortem procedures

Post-mortem practices are harmonised through standards and notices issued by MAF and developed in consultation with relevant industry bodies. The standards and notices establish requirements on how to prevent carcasses from diseased animals entering processing and to ensure adequate hygiene practices are maintained (as summarised in *Table 3*). The implementation of these standards is largely undertaken by approved third party organisations with MAF oversight and verification.

### 7.4 Rendering processes

Rendering plants in New Zealand employ one of three rendering processes. These are: i) dry batch rendering; ii) the Centrimeal semi-continuous process; and iii) the continuous dry rendering process. Temperatures reached in these processes vary from 95°C to 135°C and are intended to remove microbiological infectivity and not specifically intended to remove BSE infectivity but may reduce the latter to some extent.

### 7.5 Compliance with legislation

Slaughterhouses and rendering plants are audited by MAF VAFP, and AsureQuality. AsureQuality is a state-owned enterprise that is approved to audit these establishments on behalf of MAF.[25] AsureQuality have three broad roles. Firstly, they are Official Assessors (under the Animal Products Act) and are responsible for on-line meat inspection. Secondly, they conduct ante-mortem and post-mortem examination under the supervision of a MAF VAFP official. Thirdly, they are third-party verifiers (also recognised under the Animal Products Act) of Risk Management Programmes and Food Safety Programmes. However, such programs in export premises are generally audited by MAF VAFP, primarily because major markets require government officials to perform this role. Where it is an importing country requirement, official meat inspectors and veterinarians from MAF VAFP undertake inspection of carcasses for the absence of risk material as categorised by the country prior to export.

[l] According to the *Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006*:
*High risk material* is "declared by the Director-General to contain infectious agents or substances harmful to animals";
*Medium risk material* is "derived from slaughtered or killed animals that are suspected to be diseased" and
*Minimal risk material* "does not result in any direct or indirect harm to animals on consumption."

| Table 3: Post-mortem controls – Standards and Notices for Meat Processing | |
|---|---|
| **Notice or Standard or Manual** | **Requirements or Instructions** |
| *Animal Products (Specifications for Products Intended for Human Consumption) Notice 2004*[31] | • Separate facilities for the holding of suspect animals and for the post-mortem examination of animals found to be dead or dying<br>• Minimisation of cross-contamination between carcasses that have passed post-mortem inspection and those that have not |
| *Manual 16: Post-mortem Inspection Procedures*[32] | • Recording requirements for defects and disposal<br>• Standards around missing tissues during post-mortem examination. |
| *Industry Standard 5: Slaughter and Dressing*[30] | • Instructions for dressing techniques, inspection, and procedures concerning condemned material<br>• The final carcass inspector checks for the presence of any condition that may impact on the fitness of the resulting animal product for its intended purpose, while minimising cross-contamination between carcasses |
| *Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006*[13] | • Requirements for processing and handling of by-products and waste to be used for animal consumption<br>• Includes procedures for segregating potentially hazardous material |
| *Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006*[28] | • Post-mortem examination must take place without delay following the dressing of the animal<br>• The post-mortem examiner must first be aware of the ante-mortem examiner's assessment of the suitability of the animal for processing |

### *7.5.1 Rendering facilities*

MAF VAFP audits rendering plants to ensure compliance to the Animal Products Act and to ensure that MBM is labelled in accordance with the Ruminant Protein Regulations.

The submission gave evidence of compliance activities in rendering plants during 2004 and 2005. In 2004, three of five MBM samples from rendering plants that processed material intended for ruminant consumption (total of 36 plants) tested positive for ruminant protein. In 2005, only one rendering plant was inspected and ruminant protein was detected in ruminant feed within this plant. Follow-up audit activities of these rendering plants (where non-conformances were identified) demonstrated that corrective action had taken place, reflecting a high level of compliance in the rendering industry.

### *7.5.2 Third party audit of meat processing plants*

During October 2006, the European Commission's Food and Veterinary Office (FVO) conducted an audit of New Zealand's BSE surveillance and control programs. The auditing of meat processing plants formed a component of this exercise. One slaughterhouse was

audited and a focus was placed on the following:

- Management of SRM and removal methodology;[m]
- Controls around condemned, inedible and waste material (such as collection, identification and segregation); and
- Certification (such as the use of E-cert and its role in ensuring that products are eligible for certification to the EU).

The FVO also audited the rendering department associated with the above slaughterhouse and focussed on:

- Management and fate of SRM and condemned and waste materials during rendering processes;
- Rendering temperatures and calibration of gauges;
- Bagging of MBM and labelling;
- Segregation of edible and inedible tallow; and
- Certification.

No significant defects were identified by the FVO in both slaughterhouse and rendering premises at the time of the audit.

# 8 Summary: exposure control

In New Zealand, the risk of introducing and recycling BSE infectivity through the ruminant feed system is prevented by:

- Ante-mortem inspection at slaughterhouses;
- The establishment and enforcement of an effective ruminant feed ban;
- Procedures in place within feed mills and rendering facilities that prevent cross-contamination of ruminant and non-ruminant material; and
- Requirements for clear labelling of all feed containing ruminant protein to help ensure that it is not fed to ruminants.

BSE has not been detected in New Zealand; it is therefore not a mandatory requirement to remove central nervous system tissue and other risk materials.[m] Regulated processes both at ante- and post-mortem inspection levels assure that diseased and BSE-suspect animals are not processed for the human food supply. Quality systems also ensure appropriate slaughtering and processing techniques are employed to minimise cross-contamination of carcasses. The risk of BSE entering and recycling within the bovine feed system or entering the human food supply in New Zealand is negligible.

[m] It is not a requirement in New Zealand to remove SRM. However, this is a specific EU market access requirement.

# BSE food safety controls

The Australian Questionnaire requires countries to have in place effective controls during the slaughtering process so that food for human consumption is prevented from becoming contaminated with materials that may be BSE-infected. It also requires a country to demonstrate effective and timely systems for the accurate identification, traceability and recall of meat and meat products in the event of a food safety issue. The following chapter addresses these requirements within New Zealand.

## 9 Beef production systems

### 9.1 Hygiene practices for the minimisation of cross-contamination

The removal of SRM such as CNS tissue from the food supply is not a requirement in New Zealand as the country has been assigned a negligible BSE risk status by the OIE. However, it is often done to meet requirements for specific markets and for specific customers. General hygiene requirements exist within beef production facilities throughout New Zealand that would minimise the risk of contamination with BSE infectious material if a BSE-positive animal was introduced into the processing environment. These include:

- The sterilisation of potentially contaminated equipment;
- Carcasses that have passed post-mortem examination not being permitted to come into contact with those that have failed inspection;[31] and
- All primary processors of animal material being required to operate under a registered risk management program (under section 13 of the Animal Products Act). Such a program must detail the procedures to identify, control, manage, eliminate, or minimise risk factors.[27]

## 10 Traceability systems for beef and beef products

In the event of a BSE case, traceability systems should demonstrate that they can achieve timely and effective identification, tracing and recall of beef and beef products from all BSE affected animals. The system should be able to identify and trace beef and beef products from the point of retail sale back to the point of manufacturing and (where applicable) to the point of slaughter. The system should integrate with cattle identification and traceability measures such that suspect animals can be traced back to the herd of origin to identify feed cohorts or other animals of interest, and traced forward to identify feed cohorts from the herd of origin.

### 10.1 Legislation

MAF has responsibility for the Official Assurances Programme (OAP) which combines a number of statutory requirements for traceability applicable to animal products destined for export markets; the key requirements are listed in *Table 4*.[33] This legal framework ensures that there are detailed mandatory procedures to enable traceability of exported animal products in the event of a disease emergency.

The OAP gives instructions and specifications for export products including certification showing the country of origin from which the product or material was derived or other trace-back information to meet general export requirements. Overseas Markets Access Requirements (OMARs) give instructions and specifications including certification requirements for specific markets above the general export requirements. All beef and beef products exported to Australia are exported in accordance with the OAP and the Australian

OMAR.

| Table 4: Statutory Requirements for Traceability of Exported Animal Products | |
|---|---|
| *Animal Products Act 1999* (section 159)[27] | Records must be kept to enable trace-back of animal products or materials (e.g. abattoir kill sheets that detail the 'run number' of carcasses and the time they entered the boning room) |
| *Animal Products Regulations 2000* (section 8)[34] | Stipulates that any operator who has a risk management program must have a tracking system that enables identification and traceability of animal material or product |
| *Animal Products (Ancillary and Transitional Provisions) Act 1999* (sections 17-19)[35] | Defines persons authorised to issue certification for exported animal materials or products |

### 10.2 Details of the export product tracking system

New Zealand's export product tracking system utilises Electronic Certification (or E-cert), a web-based application that processes and maintains records of suitability of all animal products destined for export (including beef and beef products). Records maintained by E-cert include eligibility declarations (ED) and electronic export certificates.

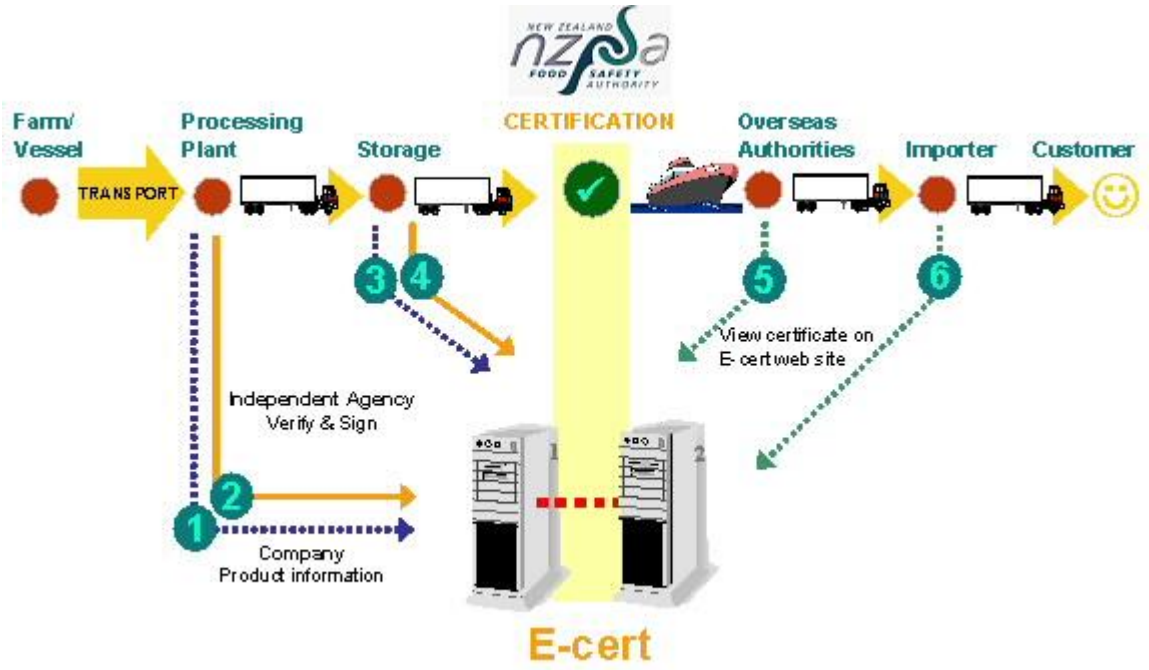
ED documents contain all the essential information used by MAF VAFP to reach a decision on whether to approve the product as suitable for export. These records are checked and verified at various points. Initially, an ED is prepared by the operator and contains information taken from ASDs. If approved by MAF, the ED is updated by the operator to include relevant processing information prior to further verification by MAF. If approved, the operator generates an export certificate to for MAF verification, clearance and signature to accompany the consignment to its destination.

The main outcome of the E-cert system is to issue an electronic certificate to importers for presentation to importing country authorities; the electronic certificate indicates that the product complies with the regulatory requirements of the importing country. Prior to issuing an electronic certificate, all eligibility documents and export certificates are assessed by an official verifier (also known as an independent reviewer or inspector).[36]

Products imported into New Zealand from other countries are only eligible for further importation into Australia if these products meet Australian requirements, including the origin of the beef. These requirements are detailed in the AQIS Imported Food Notice for beef and beef products.[37]

A diagrammatic representation of the main stages for the recording of product data in the E-cert system (labelled 1-6) is shown at *Figure 2*. Overseas competent authorities have access to the E-cert system, which serves to provide assurances between governments.

**Figure 2***:* Movement data of a product being recorded into the E-cert system at various stages (labelled 1-6) from production to export




*Source: http://www.foodsafety.govt.nz/industry/exporting/ecert/animal-products/*

# 11 Recall systems

## 11.1 Legislation

Section 40 of the *Food Act 1981* (the Food Act)[15] and section 85 of the Animal Products Act[27] provides legal authority to the Director-General of MAF to recall food in situations where food safety or non-compliance with legislated standards occurs. The legislation provides authority to direct a recall to importers, manufacturers, or sellers of food and establishes powers to issue an order to destroy any food that is unfit for human consumption.

## 11.2 Food recall process

To comply with the Animal Products Act, primary production businesses must operate under a Risk Management Programme (RMP) that is approved and registered with MAF. The RMP is designed to identify and control risk factors affecting food safety and suitability. The RMP also defines general operating procedures based on the principles of HACCP and includes requirements for an operator to have an established agency plan for food recalls and the capacity to implement it when needed. As part of Australian market access requirements for beef imported from New Zealand, all primary processing of beef is required to operate under a RMP. Secondary processing of beef products may operate either under a RMP or Food Safety Programme (FSP) (under the Food Act) the latter only in establishments that are specifically listed as eligible to export beef products to Australia. A business operating under a FSP is only able to export beef to Australia if specific criteria, agreed by the Australian Quarantine and Inspection Service (AQIS), are met; this includes traceability requirements. FSPs are also based on the principles of HACCP and are required to include recall procedures.

Defined procedures for the recall of food products are detailed in *Recall Guidance Material (2005)*.[38] Under these guidelines:

- Food businesses are required to notify MAF of the incident and keep them informed throughout all stages of the recall process. Conversely, MAF has procedures in place that ensures close liaison with the company to ensure success in the recall effort.
- The product recall team is required to collect (amongst other things) information concerning distribution details and whether the product has been sold to consumers.
- Procedures must detail which form of media is most practical (e.g. media release, paid advertisement in newspapers, on radio or television).
- Procedures are in place for products that have been returned to retail outlets or via the distribution chain. (E.g. return of the product to a central site, separating the retrieved product from other products, or destruction if deemed unsafe for human consumption).
- Records of the amount of product recovered and product codes must be retained. .

# 12 Contingency plan for the investigation and response to a suspect BSE event

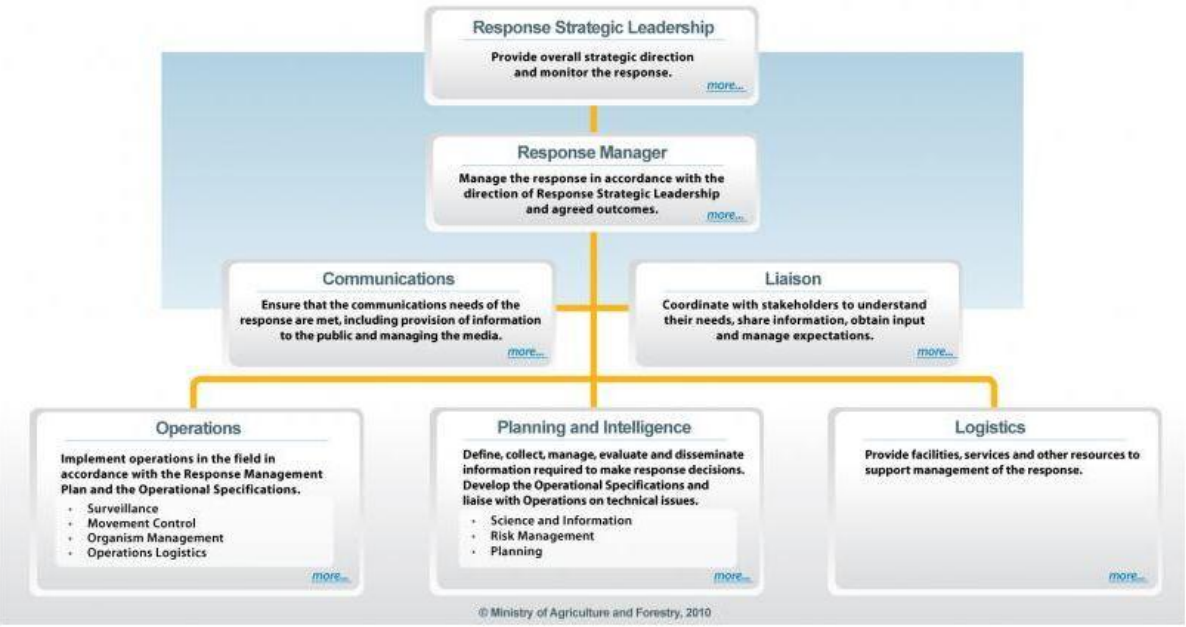
The Biosecurity Act provides a range of controls to be used in the event of suspicion or confirmation of release of an exotic organism, agent or disease. These are backed up by policies and contractual arrangements which provide the context and detail around how MAF will respond to the detection of exotic diseases such as BSE. The *MAF 153 Series of Standards - Response Programme for Exotic Diseases of Animals* (MAF 153 Standard),[39] which for a long time underpinned the response to exotic disease events, have largely been superseded by the *Policy for MAF's Responses to Risk Organisms*[40]. This policy document details how biosecurity responses to risk organisms are managed and is used in conjunction with procedures within the Biosecurity Response Knowledge Base (BRKB)[41]. Together, the MAF policies and procedures provide arrangements for a systematic national recall capability which applies across all biosecurity sectors. A structural diagram of the system reproduced from the MAF website is shown in *Figure 3*.

Supporting the BRKB system, the National Biosecurity Capability Network is a network of people and resources managed by AsureQuality that has been established to identify and source operational capability for biosecurity responses led by MAF.

At this point, the only element of the MAF 153 Standard that is still being transitioned to the new arrangements is the response time specified for responding to specific diseases.

In the event that a BSE case were identified, MAF personnel would oversee the tracing and treatment of all products that are suspected to be contaminated, and the decontamination of any processing sites such as slaughtering facilities. It also liaises with the MAF Verification Agency on food safety and market access requirements.

**Figure 3***:* Structural overview and the components of the response system with the Biosecurity Response Knowledge Base*.*




*Source: http://brkb.biosecurity.govt.nz/response-system/structure/response-struct/index.htm (Accessed 28 October 2011)*

## 13 Summary: BSE food safety controls

Food safety controls are well-established in New Zealand to allow effective protection of the human food supply from potential BSE contamination. This conclusion is based on legislation that ensures good hygienic practices are employed throughout the beef production chain and contingency measures that would be enacted in the event of an animal disease emergency such as BSE.

The safety of beef and beef products at the slaughterhouse level is based on several key practices and controls. Firstly, all cattle that enter any slaughterhouse in New Zealand must undergo ante-mortem inspection. Second, cattle that are categorised into any of the BSE at-risk surveillance subpopulations (fallen, downer, and clinical suspects) are not slaughtered for human consumption, and may only be rendered for producing non-ruminant feed or fertiliser. Third, carcasses that have not passed post-mortem inspection are not processed or permitted to come into contact with other carcasses.

The Electronic Certification (E-cert) system provides additional assurances that the beef and beef products exported from New Zealand are safe for human consumption and their origin able to be identified. This system ensures that animal products exported from New Zealand are consistent with Australia's food safety requirements. Through E-cert, market eligibility and product status are traced from production to export, and sanitary export certificates are issued by the competent Government authority. Furthermore, New Zealand has established systems in place to limit the distribution (and subsequent consumption) of contaminated and/or unsafe food products via recall and withdrawal procedures that are enforced by MAF.

# BSE Control Programs and Technical Infrastructure

The following chapter addresses the requirements in the Australian Questionnaire to have appropriate control programs that support a capability to adequately identify, notify, and diagnose cattle that display signs meeting the case definition of BSE. This assessment covers systems focussed on the notification and disease investigation of clinical suspects, diagnostic methods to detect the presence of the BSE agent in infected tissues, and BSE awareness programs and education. This chapter also assesses New Zealand's cattle identification and traceability system which serves to underpin any BSE case investigation.

## 14 BSE Education and Awareness

New Zealand's BSE awareness program was initiated by MAF in 1990. The awareness program is a component of the country's comprehensive transmissible spongiform encephalopathy (TSE) surveillance and monitoring program which, in relation to scrapie, has been operating since the 1970's. The purpose of the BSE awareness program is to ensure that all personnel that handle cattle on a routine basis (veterinarians, farmers, livestock workers) are aware of the clinical signs of BSE and the need to report suspect animals. Training of veterinarians (in brain removal) and laboratory workers (in diagnostic methods) also forms a component of the awareness program.

Written material in the form of circulars and information kits has been disseminated to all registered veterinarians and those working in the livestock industry to enhance awareness associated with BSE clinical signs. Updated information on BSE is also regularly publicised in agricultural and veterinary publications that have a wide circulation amongst veterinarians, farmers, and the livestock industry within New Zealand. *Vetscript* (a publication sent to members of the New Zealand Veterinary Association) and *Synapse* (a publication from the New Zealand Veterinary Pathology service) is often used to update the veterinary community on the BSE surveillance program (such as changes to incentive payments and BSE clinical signs). New Zealand's submission includes a list of material used to stimulate awareness of TSEs from 1989 to mid-2006. Students enrolled at the Massey University veterinary school (which is the only veterinary school in New Zealand) receive a number of lectures and tutorials on TSEs.

The in-country verification visit to New Zealand indicated that a greater proportion of recent awareness efforts are now focussed on veterinarians compared to farmers. However, rural communities have been targeted as part of the awareness campaign. Fact sheets have been distributed during major national field days (held annually) and articles have been published in the rural press. Livestock industry organisations have also been active in encouraging farmers to report suspect cases for investigation.

Videos have also been used extensively as part of New Zealand's BSE awareness program and have included:

- videos on scrapie and BSE provided to farmers' organisations by MAF;
- a video magazine containing an item on BSE sent to every dairy farmer in the country in 1999; and
- a video (produced in Australia and the United Kingdom) on the clinical aspects of BSE and scrapie used extensively for training MAF staff, veterinary practitioners and final year veterinary undergraduates.

MAF also coordinates communication forums (such as the TSE Liaison Group) that encourage livestock producers and veterinarians to submit surveillance samples and report

suspect BSE cases for investigation. Other Government/industry committees meet regularly to discuss TSEs and other related matters of agricultural significance (such as importation policies, disease surveillance and exotic disease preparedness).

# 15 Disease notification and diagnoses

## 15.1 Overview

This section focuses on procedures for notification and diagnoses of animals that are tested under the New Zealand BSE surveillance and monitoring program. This program was launched in 1990 to support international acceptance of the country's TSE-free status. The program is managed by MAF staff with periodic oversight from the New Zealand Government's TSE Liaison Committee which includes members from MAF, the Ministry of Health, and animal industry and biopharmaceutical organisations.

## 15.2 Legislation

TSEs in general have been notifiable in New Zealand since 1993 (when the Biosecurity Act was promulgated). BSE has been a notifiable disease since 1989. Section 46 of the Biosecurity Act requires that the suspected presence of a notifiable organism be reported to the relevant MAF-appointed Chief Technical Officer.[6]

The *Biosecurity Amendment Act 1997* amends the original Act to allow the classification of the BSE agent as an "unwanted organism" and enable further regulations for imported materials, surveillance, and reporting.[42]

## 15.3 Identification and handling BSE suspects

Key people handling live cattle (abattoir workers, farmers, field staff, and veterinarians) have been trained and are required to look for signs of BSE. As detailed in Section 14 of this report, New Zealand's BSE awareness program ensures that production staff and veterinarians have been informed of the clinical signs for BSE and their reporting responsibilities. New Zealand's definition of clinical BSE suspect animals is largely consistent with definition established by the OIE. Clinical suspect animals are disposed of via rendering, burial or incineration.

Farmers notify their local veterinarian if an animal shows symptoms consistent with BSE. If the veterinarian believes the animal fits the sampling criteria[43] they will remove the whole brain and fix it in 10% formalin. The fixed brain is examined at an approved veterinary diagnostic laboratory as described in Section 15.4. A piece of fresh spinal cord is also collected, although this is only tested if the histopathological examination does not completely rule out TSE disease. Both samples, however, were routinely tested until 2008. Training has been and continues to be provided to veterinarians in the collection of bovine brain samples. Detailed instructions for meat slaughter plant veterinarians are available in the '*Bovine TSE Brain Stem Sampling Procedure'* article.[44]

In situations where factors other than clinical symptoms indicate that animals are suspected to be BSE-infected (such as ingestion of contaminated feed), the Investigation and Diagnostic Centre (IDC) can be informed via a toll-free number. Both spinal cord and brain specimens are submitted directly to the IDC for diagnostic investigation.[44] If a BSE case is suspected (or initial results are equivocal) through an initial laboratory screening test, a formal investigation takes place.

### 15.4 Diagnostic tests

According to Chapter 2.4.6 of the OIE *Manual of Standards for Diagnostic Tests and Vaccines for Terrestrial Animals* (OIE Manual of Standards),[45] there are multiple methods for detecting BSE in brain or other CNS tissue including:

- Histopathological examination of brain or CNS tissue, which detects characteristic neuropathological changes such as spongiform and other characteristic changes;
- Immunohistochemistry, which detects abnormal prion accumulation in the brain tissue;
- Western blot rapid tests, which detect the abnormal prion protein from fresh (unfixed) tissue; and
- Other rapid tests such as BioRAD ELISA that detects the abnormal protein.

In New Zealand, histopathology is used for routine screening, with follow-up tests including the BioRAD ELISA and Western blot if required. To ensure consistency in determining characteristic neuropathological changes and limit variability in analytical sensitivity, diagnostic tests are carried out at MAF-approved diagnostic laboratories. In the event of an equivocal result, the sample is forwarded to an independent expert pathologist who reports their findings to the IDC (MAF's reference laboratory) who may conduct further testing such as Western blot analyses if required. Decision-making regarding further testing is the responsibility of the IDC. Where confirmation of a suspect positive case is required, samples are sent to a TSE reference laboratory – the Veterinary Laboratories Agency in Weybridge (United Kingdom).

All laboratory tests for BSE in New Zealand follow the *Australia and New Zealand Standard Diagnostic Protocols*.[46] These protocols are also used by Australian Animal Health Laboratories for surveillance of TSEs in Australia and are consistent with the OIE Manual of Standards.[45] The protocols include detailed instructions for conducting the diagnostic tests listed above.

### 15.5 Laboratory assurances and auditing

All laboratories operate under quality assurance systems and are regularly audited. Laboratories also have their own internal proficiency systems. Examples of internal proficiency systems are:

- National inter-lab checking – where laboratories seek another laboratory for a second opinion;
- Participation in the Veterinary Laboratory Association program that validates sample analyses from laboratories around the world; and
- Practice slides – for histopathologists to investigate and develop their diagnostic ability.

All of the above proficiency systems were in place in the laboratory visited as part of the in-country verification component of this risk assessment. The laboratory was accredited by International Accreditation New Zealand (IANZ) and is audited by MAF at least once every three years.

### 15.6 Penalties and reporting incentives

Under section 46 of the Biosecurity Act, failure to notify authorities of a suspected BSE case can result in fines for individuals of up to $100,000, or 5 years in jail. Corporations may be fined up to $200,000.[6]

MAF provides financial incentives to farmers and veterinarians who participate in the TSE Surveillance Program to encourage submission of samples from clinical suspects. Current reporting incentives have been designed according to OIE recommendations for countries with negligible BSE risk status.[43]

## 16 Cattle identification and traceability

### 16.1 Overview

Cattle traceability systems should enable effective and efficient identification, tracing and recall of beef and beef products from all BSE affected animals in the event that BSE has occurred. The system should be able to identify and trace beef and beef products from the point of retail sale back to the point of manufacturing and, where applicable, to the point of slaughter. The system should integrate with cattle identification and traceability measures such that the origin of contaminated beef or beef products can be traced back to any animals of interest if required. The system should ensure effective and timely identification, tracing and removal of beef and beef products (suspected to be BSE-infected) from markets and the distribution chain.

### 16.2 Legislation

The *Animal Identification Act 1993* provides the basis for MAF to develop and implement mandatory systems for animal identification. Current regulations under the *Biosecurity (Animal Identification Systems) Regulations 1999* require compulsory identification of cattle and deer. The regulations were implemented primarily for control of bovine tuberculosis and require that all cattle aged one month and over be identified before any movement from their herd of birth.[11] Penalties can be imposed by MAF for failure to comply with identification requirements (described in Section 16.3).

### 16.3 Current identification systems for cattle

New Zealand operates a National Identification Programme (NIP) for cattle and deer. The NIP is intended to trace suspect and confirmed cases of bovine tuberculosis; however, this system is also used for tracing BSE-suspect animals. The NIP is operated by the Animal Health Board (AHB) who has legislated responsibility to implement and manage the National Pest Management Strategy to eradicate bovine tuberculosis from New Zealand. The NIP requires farmers to identify animals aged 30 days or older by ear tag when they are moved to another property, farm, or abattoir. Movements are recorded up to the point of slaughter according to individual animal identification number assigned at the farm of origin.

Currently there are two MAF-approved systems for the identification and tracing of bovine animals in New Zealand.[47] The first is operated by the AHB. As part of this system, a unique herd number is issued to all cattle and deer owners in New Zealand. The second system is a voluntary scheme for dairy cattle that is managed by the Livestock Improvement Corporation (LIC). Although the system was set up primarily for herd management, it has a high level of participation and records are kept for most cattle movements. Farms are voluntarily registered with the industry-operated management system called the Management Information System for Dairy Administration (MINDA). Animal identification numbers are also registered with MINDA and although there is a commercial incentive to update the MINDA

database when animals are moved (i.e. increased sale value of stock), this is not a mandatory requirement. The LIC also runs a comprehensive production tracking database that allows monitoring of production records (such as breeding, production worth, and reasons for culling).

Under current arrangements, cattle owners are permitted to use either the National ID Program or the LIC MINDA voluntary scheme. Both systems are recognised by MAF as complying with mandatory requirements for cattle identification.

### 16.4 Animal Status Declarations

There is no comprehensive, centralised data management system that maintains identification numbers and movements for individual animals. ASDs are a vital source of such data; ASDs are the primary records of all animal movements and enable tracking of the animal back to its farm of origin. The ASD includes information such as farm of origin, destination, birth or import details, vaccination, TB status and whether they have been fed ruminant protein in their lifetime. The ASD must be retained by the supplier and the recipient of animals for at least four years; however, saleyards must retain original ASDs for seven years.[n] At the saleyard, ASDs are checked and verified by stock agents prior to the arrival of the animals. Animals are not accepted for sale if its corresponding ASD is absent or the details are found to be incorrect. AsureQuality is responsible for the inspection of ASDs and incoming animals to sale yards; AsureQuality personnel are authorised as Official Assessors under the Animal Products Act.

### 16.5 Imported cattle

New Zealand requires all imported cattle to be identified with two official ear tags before entry into New Zealand. Imported cattle are inspected in both countries. Owners of imported animals are required to supply an Annual Status Report to MAF; this is retained by the MAF Verification Agency. The status report advises of any changes in ownership and location of residence since the previous report, and whether identification devices are still in place. Annual monitoring of imported animals is mandatory and is the sole purpose of the 'Imported Animal Verification Program'. Annual verification is performed by MAF officials whose authority is equivalent to that of an Animal Product Officer (under the Animal Products Act).[48] Apart from monitoring and tracing the movements of all imported animals, MAF also maintains an 'Imported Live Animal List'.

### 16.6 National Animal Identification and Tracing system

New Zealand plans to implement the National Animal Identification and Tracing (NAIT) system for cattle and deer. The NAIT system is to be implemented, administered and funded by shareholders including MAF. The goal of the NAIT system is to provide farmers, processors and government authorities with current location and movement history of all cattle and deer. The system is designed to trace animals across their lifetime to safeguard against biosecurity risks and facilitate traceability of meat or meat products in outbreaks of food-borne illness or other food incidents. The system becomes mandatory for all cattle in July 2012.

The information required under the proposed NAIT will vary between processors and farmers. Processors will be required to record the arrival of animals into their premise and confirm slaughter dates. Farmers can submit information to NAIT via the following ways: i) the internet; ii) the NAIT call centre; and iii) an accredited third-party service provider. Information that farmers are required to submit to the NAIT system include:[49]

[n] The FVO of the EC visited a farm as part of its wider third party audit of New Zealand's BSE control systems in 2006; ASDs were examined and were found to be correctly completed.

- Registration of all newborn animals. Farmers will be required to tag and register animals within six months of their birth or before the first off-farm movement (whichever occurs earlier);
- Location and farm-to-farm movements (destination and the animals that are being moved). Complementing the new NAIT system will be a centralised register of rural property information called FarmsOnline. This register will provide a complete source of property information to match against animal movements and covers a high proportion of New Zealand farms. This resource will enhance the process of responding to rural adverse events;
- Treatments (such as hormone growth promotants); and
- Deaths and missing animals.

# 17 Summary: BSE control programs and technical infrastructure

BSE has been listed as a notifiable disease in New Zealand for over a decade and comprehensive BSE education and awareness programs have been in place for over 20 years. Farmers, veterinarians, and other cattle handlers are educated to recognise the clinical signs associated with the disease through ongoing awareness and education exercises for BSE and the provision of incentives to facilitate reporting. The capacity to accurately diagnose diseased animals is underpinned by a network of MAF-approved laboratories, as well as training in and the use of diagnostic methods that are approved by OIE.

Despite the lack of a single, centralised data management system for cattle in New Zealand, this assessment considers New Zealand's cattle traceability to be satisfactory in the context of other existing BSE controls throughout the beef supply chain. Furthermore, compulsory identification and tracking of cattle and deer has been in place for nearly a decade; ASDs are relied upon for movement information and are verified by government-approved assessors (AsureQuality). There is also a comprehensive register of rural property information and together with various industry-based animal identification systems this ensures efficient and effective responses to disease outbreaks, including trace-back, is achieved when required.

# BSE Surveillance

Section 3 of the Australian Questionnaire requires countries to provide evidence of the number of BSE-related samples collected for each cattle subpopulation, with data stratified by year and age group. Such data are then used to derive BSE surveillance point calculations using the recommendations of Article 11.5.22 of OIE's *Terrestrial Animal Health Code*.[2] The degree and quality of surveillance for BSE within the cattle population of a country, combined with other systems for BSE control, helps to determine the BSE risk status of the country.

To identify BSE-positive cattle, New Zealand routinely collects samples from animals across three main subpopulations: clinical suspect animals, fallen stock, and downer animals (as defined in Article 11.5.21 of the OIE *Terrestrial Animal Health Code*). This chapter provides further details of New Zealand's surveillance activities and historical data.

## 18 New Zealand BSE surveillance program

The New Zealand TSE monitoring program is a significant component of the exotic animal diseases surveillance program in New Zealand and is administered by MAF. The current BSE surveillance program is based on structured, non-random surveillance of the following three subpopulations of cattle, all of which are over 30 months of age:

- clinical suspect cattle (displaying behavioural or clinical signs consistent with BSE);
- downer cattle (non-ambulatory, recumbent, or unable to walk or rise without assistance); and
- fallen cattle (found dead).

The majority of surveillance samples for the laboratory analysis of BSE are collected at the farm level. Private veterinarians are major contributors towards BSE surveillance and assist in providing coverage across all regions. This ensures that the surveillance samples obtained are geographically representative across cattle-producing areas of the country. Ear tags and dentition are used to determine the age of sampled animals.

According to Statistics New Zealand's *Agricultural Production Census/Survey*, the nation's cattle population during 2007 was approximately 9.7 million, with dairy cattle outnumbering beef cattle (5.3 million versus 4.4 million head, respectively). Thirty-five per cent of beef cattle were aged 24 months or older.[50]

## 19 New Zealand BSE surveillance points data

According to Chapter 11.5 of the OIE Terrestrial Animal Health Code, an adult cattle population size greater than one million cattle requires at least 300,000 points for the achievement of adequate Type A surveillance and at least 150,000 points for Type B surveillance.[2]

New Zealand adopted the OIE BSE surveillance points system in July 2005, when the country was regarded by OIE as a 'BSE-free' country, to help satisfy Type A surveillance criteria. Prior to the adoption of the points system, relatively fewer clinical suspect samples were collected (an average of 87 samples per year prior to 2005 compared to 1,637 samples in 2005). Conversely, the level of sampling of other subpopulations (fallen, downer, and clinically normal animals) decreased upon adoption of the points system.

Once New Zealand had adopted the OIE points system in 2005, meat industry stakeholders set themselves a target of collecting at least 400 brains per year from suitable field cases (compared to an average of 100 brains per year prior to 2005). According to a *Surveillance* publication in 2006, a total of 916,580 points was accrued as part of Type A surveillance, with the majority of samples obtained from cattle aged between four to seven years.[51] Of the 2,325 cattle brains collected in 2005, 70.4% were from the clinical suspect subpopulation (which also included downer cattle at this time), and the rest were attributable to fallen stock. Based on data from 2005 alone, New Zealand surpassed the 300,000 points target set by the OIE for Type A surveillance.

New Zealand's BSE status was revised to negligible risk by the OIE in May 2007, resulting in a reduction of surveillance requirements to Type B surveillance.[52] From 2007 to the end of 2009, the number of points accrued by New Zealand was 298,970; well in excess of the 150,000 that is required to be accumulated over a seven-year period for Type B surveillance.

## 20 Other historical BSE surveillance in New Zealand

The New Zealand meat industry funded an enhanced BSE surveillance program (that used Western blot as the primary diagnostic method) from 2000 until mid-2005. Testing was limited to cattle over two years of age that presented to slaughterhouses and rendering plants. These animals were either: imported, dead on arrival, found dead or condemned in yards, or destined for pet food. Hence, testing as part of this program was collectively referred to as "slaughterhouse surveillance". During this surveillance initiative, a total of 7,920 samples were collected. No BSE positive samples were detected.

Also, a retrospective study of fixed, adult bovine brains held by MAF and Massey University was undertaken in October 1988. A total of 50 brains were re-examined and no lesions suggestive of BSE were found.

## 21 Third party audit of the TSE monitoring program

The FVO of the European Commission (EC) conducted an audit of the New Zealand TSE Surveillance Program during October 2006. According to the MAF *Surveillance* publication in 2007, two recommendations were made. First, the EC recommended that a detailed clinical history accompany all clinical suspect samples; this was adopted by New Zealand in May 2007. Second, it was recommended that samples be allocated according to the subpopulations specified in Appendix 3.8.4 of OIE's *Terrestrial Animal Health Code* (2006).[53] As a result, downer cattle that were previously classified as clinically suspect animals were separated from this subpopulation and reclassified as casualty slaughter animals from 2007; points pertaining to 2005 and 2006 were recalculated accordingly.

## 22 Summary: BSE surveillance

New Zealand has a strong commitment to an ongoing TSE surveillance program within its ruminant populations. A TSE surveillance program commenced in 1973 targeting cattle displaying signs of neurological disease and which routinely sampled brains for indications of TSE-related diseases. New Zealand began to formally test cattle for BSE in the 1990s; many samples were collected from the abattoir setting under an enhanced "slaughterhouse surveillance" program that commenced in 2000.

After adopting the OIE surveillance points system in 2005, New Zealand has exceeded the threshold of surveillance points required to achieve the requirements to be classified as a country with negligible BSE risk. Through appropriate auditing by the EC, the surveillance system has amended its case definitions for subpopulation categories to ensure consistency

with the OIE requirements. The New Zealand BSE surveillance system is reliable and continues to attain the surveillance points threshold needed for Type B surveillance and a classification of negligible risk status from the OIE.

# Conclusions and BSE risk categorisation

New Zealand has sound biosecurity and food safety controls in place to prevent the introduction of the BSE agent to the cattle population through the importation of live cattle, MBM, and other beef and beef products. At the domestic level, well regulated ante-mortem and post-mortem inspection procedures are practiced at slaughter establishments to ensure that suspect diseased cattle do not enter the human food or ruminant feed systems, and to ensure that beef and beef products produced from domestic cattle are safe and fit for human consumption. These procedures are mandated by appropriate legislative instruments and are enforced and audited for compliance by the New Zealand government, and at times approved third party auditors. Similarly, at the rendering and ruminant feed production level, an effective ruminant feed ban and labelling requirements exists to ensure that ruminants are not fed and exposed to ruminant-derived protein materials.

There are currently two cattle identification systems under the National Identification Programme for cattle and deer that are maintained by industry and facilitate national cattle identification and traceability. Although a single centralised data management system for cattle identification does not yet exist in New Zealand, the system compensates for this through utilisation of the industry-managed systems and ASD information to obtain identification and movement information when needed. ASDs are inspected by AsureQuality (on behalf of MAF) to ensure accuracy of information; this is important in the event of a food safety issue that requires trace back. Despite the lack of a uniform national individual cattle identification and traceability system in New Zealand, this assessment considers New Zealand's cattle identification and traceability to be satisfactory in the context of other existing BSE controls throughout the beef supply chain. A future national identification and traceability system in New Zealand will enable the integration of animal and property information and will further enhance the efficiency of traceability.

New Zealand possesses an effective surveillance program to detect BSE should it occur. Since its adoption of the OIE surveillance points system in 2005, New Zealand has satisfied the criteria for adequate Type A and Type B surveillance. Over the last few years, New Zealand has surpassed the surveillance requirements to be classified as a country with negligible BSE risk.

This assessment by FSANZ concludes that beef and beef products exported from New Zealand pose a negligible risk to human health and that New Zealand be given a **Category 1** status in relation to country BSE food safety risk status. This category indicates that there is a minimal likelihood that the BSE agent has or will become established in the national herd from New Zealand and enter the human food chain.

# References


(1) Food Standards Australia New Zealand. *Australian Questionnaire to Assess BSE Risk*. 2010 Mar 1.

(2) Office International des Epizooties. *OIE Terrestrial Animal Health Code - Chapter 11.5. - Bovine spongiform encephalopathy*. 2010.

(3) Food Standards Australia New Zealand. *Bovine Spongiform Encephalopathy (BSE): Requirements for the Importation of Beef and Beef Products for Human Consumption – Effective 1 March 2010*. 2010 Mar 1.

(4) Biosecurity New Zealand. *OIE recognises New Zealand BSE risk as negligible*. 2007 Jun 7.

(5) Biosecurity New Zealand. *TSE Programme*. Surveillance 2008;35(2).

(6) Ministry of Agriculture and Forestry. *Biosecurity Act 1993*. 2010.

(7) Biosecurity New Zealand. *Import Health Standard for the Importation into New Zealand of Processed (Rendered) Animal Protein for Further Processing into Petfood from the European Community*. 2004.

(8) Ministry of Agriculture and Forestry. *Biosecurity (Ruminant Protein) Regulations 1999*. 1999.

(9) New Zealand Food Safety Authority. *Code of Practice: Rendering*. 2009.

(10) Biosecurity New Zealand. *Import Health Standard for the Importation of Buffalo and Cattle into New Zealand from Australia*. 2006 Jun 7.

(11) Ministry of Agriculture and Forestry. *Biosecurity (Animal Identification Systems) Regulations 1999*. 1999.

(12) Ministry of Agriculture and Forestry. *Biosecurity (Imported Animals, Embryos, and Semen Information) Regulations 1999*. 1999.

(13) New Zealand Food Safety Authority. *Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006*. 2006.

(14) New Zealand Food Safety Authority. *Food (Prescribed Foods) Standard 2007*. 2007 Jul 19.

(15) New Zealand Food Safety Authority. *Food Act 1981*. 2007 Sep 3.

(16) New Zealand Food Safety Authority. *Imported food requirements: Bovine meat and bovine meat products*. 2010.

(17) Hellstrom J. *Officials' Review of New Zealand's BSE Country Categorisation Measure*. 2010 Feb 11.

(18) Ducrot C, Arnold M, de KA, Heim D, Calavas D. *Review on the epidemiology and dynamics of BSE epidemics*. Vet Res 2008 Jul;39(4):15.

(19) Hoernlimann B, Riesner D, Kretzschmar H. Prions in Humans and Animals. 2006.

(20) Heim D, Mumford E. *The future of BSE from the global perspective*. Meat Science 2005;70(3):555-62.

(21) Mumford EL, Kihm U. *Integrated risk reduction along the food chain*. Annals New York Academy of Sciences 2006;1081:147-52.

(22) Biosecurity New Zealand. *Ruminant Protein Control Programme*. [Date Accessed: 13-1-2011]; Available from: http://www.biosecurity.govt.nz/pest-and-disease-response/pests-and-diseases-watchlist/tse/surveillance/ruminant-programme

(23) Ministry of Agriculture and Forestry. *Biosecurity (Ruminant Protein) Amendment Regulations 2010*. 2010 May 31.

(24) New Zealand Food Safety Authority. *NZFSA Verification Agency - Levels of Audit and Review*. 2009 Jan 16.

(25) Ministry of Agriculture and Forestry. *New Zealand Animal Products' Export System: Managing the Risks (Administrative Organisation of National Supervision and Management)*. 2011 Feb.

(26) Ministry of Agriculture and Forestry. *Summary prepared for FSANZ*. 2011.

(27) New Zealand Food Safety Authority. *Animal Products Act 1999*. 1999.

(28) NZFSA. *Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006*. 2006.

(29) New Zealand Food Safety Authority. *NZFSA Animal Products (Official Assessors: Ante-mortem and Post-mortem Inspectors) Notice 2009*. 2009 Apr 30.

(30) Ministry of Agriculture and Forestry. *Industry Standard 5: Slaughter and Dressing*. 2002.

(31) New Zealand Food Safety Authority. *Animal Products (Specifications for Products Intended for Human Consumption) Notice 2004*. 2004.

(32) New Zealand Food Safety Authority. *Manual 16 - Post-mortem Inspection Procedures*. 2003.

(33) New Zealand Food Safety Authority. *Official Assurances Programme - Animal Products*. 2009 Dec.

(34) Ministry of Agriculture and Forestry. *Animal Products Regulations 2000*. 2000 Oct 16.

(35) Ministry of Agriculture and Forestry. *Animal Products (Ancillary and Transitional Provisions) Act 1999*. 1999 Sep 8.

(36) New Zealand Food Safety Authority. *E-cert*. [Date Accessed: 2010]; Available from: http://www.foodsafety.govt.nz/industry/exporting/ecert/

(37) Australian Quarantine Inspection Service. *Imported Food Notice (12/11): BSE certification requirements for imported beef and beef products*. 2011 Jun.

(38) New Zealand Food Safety Authority. *Recall Guidance Material*. 2005.

(39) Biosecurity New Zealand. *MAF 153 Series of Standards: Response Programmes for*

*Exotic Diseases of Animals*. 2004.

(40) Biosecurity New Zealand. *Policy for MAF's Responses to Risk Organisms*. 2008 Jul.

(41) Ministry of Agriculture and Forestry. *Biosecurity Response Knowledge Base*. [Date Accessed: 17-10-2011]; Available from: http://brkb.biosecurity.govt.nz

(42) Biosecurity New Zealand. *Biosecurity Amendment Act 1997*. 1997.

(43) Biosecurity New Zealand. *TSE Surveillance Initiatives*. Available from: http://www.biosecurity.govt.nz/pests-diseases/animals/tse/surveillance-incentives.htm

(44) New Zealand Food Safety Authority. *Bovine TSE Brain Stem Sampling Procedure*. 2007 Apr 24.

(45) Office International des Epizooties. *Manual of Standards for Diagnostic Tests and Vaccines for Terrestrial Animals (Chapter 2.4.6. Bovine Spongiform Encephalopathy)*. 2008.

(46) Cook R, Richards R, Middleton D. *Australia and New Zealand Standard Diagnostic Procedure (August 2010)*. 2010 Aug.

(47) Livestock Improvement Corporation. *Tag Regulations: National Investigation Scheme (1999)*. 2011.

(48) Ministry of Agriculture and Forestry. *Reporting obligations for owners' of imported cattle, buffalo, sheep, goats and deer or embryos and semen from these animals*. 2008 Jun 20.

(49) National Animal Identification and Tracing. *The NAIT System*. [Date Accessed: 2011]; Available from: http://www.nait.org.nz/nait_The_NAIT_System.cfm

(50) Ministry of Agriculture and Forestry. *MAF Livestock Statistics - Beef and dairy cattle numbers as at 30 June 1971 to 2007*. 2008.

(51) Biosecurity New Zealand. *TSE Programme*. Surveillance 2006;33(2).

(52) Biosecurity New Zealand. *Recent changes to the TSE Surveillance Program*. 2010.

(53) Biosecurity New Zealand. *TSE Programme*. Surveillance 2007;34(2).

# Appendix 1: New Zealand Legislation and Standards

**Importation of Live Cattle**

**Biosecurity Act 1993**

*Section 22: Import health standards*

(1) The Director-General may, following the recommendation of a chief technical officer, issue an import health standard specifying the requirements to be met for the effective management of risks associated with the importation of risk goods before those goods may be imported, moved from a biosecurity control area or a transitional facility, or given a biosecurity clearance; and may, in a like manner, amend or revoke any import health standard so issued.

(1A) An import health standard issued under this section applies to goods the importation of which involves, or might involve, an incidentally imported new organism.

**Biosecurity (Animal Identification Systems) Regulations 1999**

*Section 3: Requirement to use identification system for cattle for bovine tuberculosis control*

(1) Every person who owns or is in charge of a cattle beast aged 30 days or more must use an identification system, approved for the purpose of enabling the identification of cattle, to identify each cattle beast in the following circumstances:
(a) when the cattle beast is moved to a herd, a place of slaughter, or a place of show—
(i) from the herd of origin; or
(ii) from the place or establishment at which the cattle beast is being kept:
(b) when the ownership of a herd of cattle is wholly or partially transferred, whether by sale, lease, gift, or other means and that herd is moved from the place or establishment at which it is kept.
(2) The cattle beast must be identified in accordance with an identification system before it is moved in accordance with subclause (1).
(3) This regulation does not apply to a cattle beast when moved from a transitional facility to a herd, or the place or establishment at which the cattle beast will be kept.
(4) Until 1 July 2001, this regulation does not apply to a cattle beast born before 1 July 1999.
(5) Until 1 July 2004, this regulation does not apply to a cattle beast if—
(a) the cattle beast was born before 1 July 1999; and
(b) the cattle beast is being moved directly to a place of slaughter from its herd of origin or from the place or establishment at which it is being kept.

**Biosecurity (Imported Animals, Embryos, and Semen Information) Regulations 1999**

*Section 3: Notification requirements in respect of imported specified animal*

The owner or person in charge of an imported specified animal must, within the time required by regulation 4, notify the Director-General of the following:
(a) the date that ownership of that animal is transferred, and the name and address of the new owner:
(b) if that animal dies:
(c) the date that animal is slaughtered or consigned for slaughter, and the name and address of the place of slaughter:
(d) if that animal cannot be located:
(e) if ear tags issued in respect of the importation of that animal are lost or become illegible.

**Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006**

*Section 5: High risk raw material*

(1) "High risk raw material" means a type of animal material or product that is-
(a) declared by the Director-General to contain infectious agents or substances harmful to animals; or
(b) medium risk raw material or minimal risk raw material that has come into contact with any high risk raw material; or
(c) animal material or product that is derived from ruminant animals imported live into New Zealand.

*Section 6: Medium risk raw material*

"Medium risk raw material" means, animal material or product that is-
(a) derived from slaughtered or killed animals that are suspected to be diseased;
(b) derived from animals slaughtered and killed for specific disease eradication purposes as directed by the Director-General;
(c) derived from mammals and birds that have died in the field;
(d) derived from homekill or recreational catch;
(e) derived from animal material or product from any animal containing residues of agricultural compounds or veterinary medicines, toxic substances or natural substances, including shellfish affected by marine biotoxins, which may result in harm to the consumer, except where any particular residue or toxic substance can be processed or treated so that they can be reduced to a level that is unlikely to result in harm to the consumer;
(f) derived from animal material or product which is not fit for animal consumption without further processing or treatment;
(g) any other material declared to be medium risk raw material by the Director-General;
(h) any minimal risk raw material that has come into contact with any medium risk raw material.

*Section 7: Minimal risk raw material*

"Minimal risk raw material" means any animal material or product that is not of a kind listed above and which does not result in any direct or indirect harm to animals on consumption.

**Importation of MBM**

**Import Health Standard for the Importation into New Zealand of Processed (Rendered) Animal Protein for Further Processing into Petfood from the European Community**

*Section 2: Importer's Responsibilities*

2.1 The feeding of ruminant protein (e.g. rendered protein derived from cattle, sheep, goats, deer) in any form, composition or admixture to ruminants (e.g. cattle, sheep, goats, deer, alpacas) is prohibited under the Biosecurity (Ruminant Protein) Regulations 1999.
2.2 Products containing ruminant protein, or any material from premises that render, produce or utilise ruminant protein, must not be sent for further processing to any premises where feed suitable for ruminants is produced under the Biosecurity (Ruminant Protein) Regulations 1999.
2.3 Consignments containing ruminant protein, or any material from premises that render, produce or utilise ruminant protein, must be labelled in accordance with clause 14(c)(ii) of the Biosecurity (Ruminant Protein) Regulations 1999.

**Biosecurity (Ruminant Protein) Regulations 1999**

*Section 4: Offence to feed ruminant protein to ruminants*

(1) A person commits an offence if that person knowingly—
(a) feeds ruminant protein in any form, composition, or admixture to a ruminant; or
(b) allows, causes, or permits a ruminant to consume ruminant protein in any form, composition, or admixture; or
(c) allows, causes, or permits other persons to feed ruminant protein in any form, composition, or admixture to a ruminant.
(2) A person who commits an offence under subclause (1) is liable to the penalty specified in regulation 18.

**Importation of Beef and Beef Products**

**Biosecurity Act 1993**

*Section 22: Import health standards*

(1) The Director-General may, following the recommendation of a chief technical officer, issue an import health standard specifying the requirements to be met for the effective management of risks associated with the importation of risk goods before those goods may be imported, moved from a biosecurity control area or a transitional facility, or given a biosecurity clearance; and may, in a like manner, amend or revoke any import health standard so issued.

**Import Health Standard for Specified Foods for Human Consumption Containing Animal Products**

*Section 2.4*: New Zealand Food Safety Authority (NZFSA) has in place import procedures to manage the risks to public health from Bovine Spongiform Encephalopathy (BSE) in food for human consumption. Under the BSE procedures, a country must be categorised according to its BSE risk status before it can export commercial bovine meat products to New Zealand. Importers are advised to consult the NZFSA website: *http://www.nzfsa.govt.nz/importing/documents/imported-food-requirements/bovine-meat/index.htm* to check the countries that can export bovine products to New Zealand and the requirements that apply to those countries.

**Imported food requirements: Bovine meat and bovine meat products**

*Section 4.1: Categorisation of countries under the BSE Measure*

The countries listed below have a pre-clearance arrangement with NZFSA. Each pre-clearance arrangement is specific in terms of scope and import conditions (including certification).

**Australia** - Arrangement with Australia (in place until bovine meat and bovine meat products for BSE are included under the Trans Tasman Mutual Recognition Arrangement).

**Brazil** - Pre-clearance arrangement in place.

**Canada** - MAF has formally recognised the consumer safeguards provided by Canada's regime to manage the human health risks of BSE as being equivalent to those provided by New Zealand's BSE Country Categorisation Measure. The process used to determine equivalence is science and risk based.

**Croatia –** Pre-clearance arrangement in place.

**European Union** - MAF has formally recognised the consumer safeguards provided by the European Union to manage the human health risks of BSE as being equivalent to those provided by New Zealand's BSE Country Categorisation Measure. Agreement between the European Community and New Zealand on sanitary measures is applicable to trade in live animal and animal products, 'EC/NZ: Council Decision on Sanitary Measures Applicable to Trade in Live Animals and Animal Products' was signed on 17 December 1996.

**Japan –** pre-clearance arrangement in place.

**Mexico** - Pre-clearance arrangement in place.

**United States** - MAF has recognised the consumer safeguards provided by United States regime to manage the human health risks of BSE as being equivalent to those provided by New Zealand's BSE Country Categorisation Measure.

**Vanuatu** - Pre-clearance arrangement in place.

**Import Health Standard for Specified Foods for Human Consumption Containing Animal Products**

*Section 7.1:*

Retorted animal products from *any country* may be given biosecurity clearance provided all the following requirements are met:
i. The product is shelf-stable
ii. The product is commercially prepared and packaged
iii. The product is in its original sealed packaging on arrival
iv. For bone-in amphibian, avian and mammalian meat products, the product is accompanied by a Manufacturer's Declaration that certifies that the bone-in meat products were subjected to a thermal treatment of Fo3 or greater.

**Pre-slaughter Controls: Ruminant Feed Ban**

**Biosecurity Act 1993**

*Section 165: Regulations*

(1) The Governor-General may from time to time, by Order in Council, make regulations for all or any of the following purposes:
(i) prescribing technical standards to be met by persons involved in the handling of diseased or pestiferous organic material:
(k) requiring the identification of, and prohibiting, regulating, or controlling the use of organic material including the prohibition or regulation of organic material as food for organisms:

**Biosecurity (Ruminant Protein) Regulations 1999**

*Section 4: Offence to feed ruminant protein to ruminants*

(1) A person commits an offence if that person knowingly—
(a) feeds ruminant protein in any form, composition, or admixture to a ruminant; or
(b) allows, causes, or permits a ruminant to consume ruminant protein in any form, composition, or admixture; or
(c) allows, causes, or permits other persons to feed ruminant protein in any form, composition, or admixture to a ruminant.
(2) A person who commits an offence under subclause (1) is liable to the penalty specified in regulation 18.

**Biosecurity (Ruminant Protein) Regulations 1999**

*Section 5: Operators to prepare ruminant protein control Programme*

(1) A person who is, and intends to remain, an operator on the date these regulations come into force must prepare a ruminant protein control programme and submit it to the Director-General, for registration, by 1 January 2001.

(2) A person who intends to become an operator, and a person referred to in subclause (4)(a) who intends to remain an operator, must prepare a ruminant protein control programme and submit it to the Director-General for registration.
(3) A ruminant protein control programme is not effective until it is registered under regulation 9.
(4) A person referred to in subclause (1)—
(a) who does not submit a ruminant protein control programme under subclause (1) by 1 January 2001, must not produce feed intended for ruminants after that date; and
(b) who has submitted a programme under subclause (1) by 1 January 2001 that is not registered, may produce feed intended for ruminants without a registered programme until 1 April 2001 but not after; and
(c) must produce feed intended for ruminants according to the programme submitted, once it is registered.
(5) A person referred to in subclause (2) must not produce feed intended for ruminants without a registered programme.
(6) A person who fails to comply with the requirements of subclause (1), (2), (4), or (5) commits an offence and is liable to the penalty specified in regulation 18.

**Biosecurity (Ruminant Protein) Regulations 1999**

*Section 13: Obligation to label*

(1) A feed supplier must ensure that feed that may be fed lawfully to ruminants is labelled so as to include the most appropriate of the following notices:
"Notice: suitable for feeding to [*insert ruminant species or type*]":
"Notice: suitable for inclusion in feed intended for ruminant animals".
(2) A feed supplier must ensure that feed that may not be fed lawfully to ruminants is labelled as follows:
"Notice: not to be fed to sheep, cattle, deer, alpacas, goats, or other ruminant animals".

*Section 14: Labelling details*

Every label required by regulation 13 must—
(a) be conspicuous and easily legible; and
(b) occupy at least 5% of the total area covered by all labelling of the feed or fertiliser; and
(c) be permanently stamped, affixed, or marked on—
(i) the package or container for the feed or fertiliser; or
(ii) the invoice, waybill, or similar document for feed or fertiliser supplied in bulk quantity; and
(d) be of such a nature and material that it will not fade or become detached under normal conditions.

**Biosecurity Act 1993**

*Section 157: Penalties*

(6) Every person who commits an offence against any regulations made under this Act is liable on summary conviction,—
(a) in the case of an individual person, to a fine not exceeding $5,000:
(b) in the case of a corporation, to a fine not exceeding $15,000.

**Ante-mortem Slaughter Controls**

**Animal Products Act 1999**

*Section 13.1: Who must have a risk management programme?*

Subject to subsection (3), the following persons must operate under a registered risk management programme, whether as the registered holder of the programme or as a business to which the programme applies under section 17A, in respect of their production or processing of animal material or animal product:
(a) all primary processors of animal material:
(b) all secondary processors of animal products intended for human or animal consumption, except to the extent that they are subject to the Food Act regime:
(c) retail butchers who are dual operator butchers:
(d) such other persons as may be specified by Order in Council under section 15 as requiring to operate under a risk management programme.

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 15: Requirements for risk management programmes*

(1) The operator must ensure that risk management programmes for the animal material covered by this notice include –
(a) a system for identifying, controlling, and where required by the ante-mortem examiner, post-mortem examiner, official assessor or animal product officer, disposal of diseased, defective and condemned animal material; and
(b) requirements relating to the facilities and areas provided for carrying out post-mortem examinations; and
(c) requirements relating to the facilities and areas provided for carrying out post-mortem examinations of animals declared unfit for slaughter for human consumption by the ante-mortem examiner.

**Amendments to the BSE Measures Applying to Imported Food For Human Consumption: March 2007**

*Table 2: Commodity-specific mitigation measures*

Commodity (f): Meat and meat products, including deboned skeletal

meat, other than commodities listed elsewhere in (the) table

Category 2 and Category 3 countries: Air injection stunning and pithing prohibited; SRM excluded; mechanically recovered meat excluded; no restriction on age at slaughter.

**Industry Standard 5: Slaughter and Dressing**

*Section 2.2: MAF RESPONSIBILITIES*

The following are the responsibility of MAF:

- the verification of compliance by the company with the regulatory requirements and the company's quality management plan;
- ongoing communication and co-operation with company staff responsible for the slaughter and dressing operation;
- the control of identified non-compliance.

**Post-slaughter controls: post-mortem inspection, SRM removal, and rendering procedures**

**Industry Standard 5: Slaughter and Dressing**

*Section 16.3 PROCESSING OF SUSPECTS*

16.3.1 All personnel concerned shall be told when suspect animals are being presented for slaughter so that they may take the necessary precautions.
16.3.2 Suspect animals are retained for further inspection. Positive identification of the head, viscera and carcass shall be maintained throughout the dressing procedure. When necessary any additional tissues or organs as directed by the veterinarian shall also be retained.
16.3.3 A veterinarian shall supervise the inspection of heads, viscera and carcasses from suspect animals and shall make the final judgement.
16.3.4 The area and time of veterinary handling of suspect animals shall be confirmed by the Technical Supervisor after consultation with the company. The following two methods, or a combination of them, may be used.
16.3.5 After normal inspection is completed, the head, viscera and carcass, (with the AgM74s attached) shall be retained in the retain area for re-inspection and final judgement by a veterinarian.
16.3.6 The carcass is held as long as necessary at the final inspection point. The carcass, with the head on the head rail and the viscera on the viscera table or in the gut buggy (all identified with AgM74s), shall receive the necessary inspection under the immediate supervision, and subject to the final judgement, of a veterinarian.
Note: The duties normally assigned to a veterinarian may be performed at domestic premises by the supervising meat inspector or sole charge inspector.

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 18: Ante-mortem examination required*

Prior to undertaking any post-mortem examination, the post-mortem examiner must, where applicable, know the ante-mortem examiner's assessment of the suitability of the animal for processing.

*Section 19: Requirements for post-mortem examination*

(1) A post-mortem examination must be undertaken by a post-mortem examiner without delay following the dressing of an animal intended for human consumption and in accordance with the relevant risk management programme and this Part .
(3) The post-mortem examination must be conducted so as to minimise crosscontamination between carcasses and in accordance with the procedures described in Section 2 and Appendix 3 of Manual 16.

*Section 22: Diseased or defective animal material*

(1) The operator must ensure that diseased or defective animal material that is identified by the post-mortem examiner is removed from the animal material
(2) The post-mortem examiner must re-examine the animal material once the diseased or defective animal material has been removed before the remaining animal material may be considered as fit for intended purpose.

**Animal Products (Specifications for Products Intended for Animal Consumption) Notice 2006**

*Section 64: Handling and processing*

(1) The operator must ensure that-
(a) contact between exposed surfaces of a carcass and the integument, hooves, trotters, or feet of the same or another carcass is minimised; and
(b) after slaughter the animal material or product is not dressed or processed in any way on the floor surface; and
(c) opening cuts are made in a manner that minimises cross contamination; and
(d) contact between carcasses and animal material prior to passing postmortem inspection is minimised to the extent necessary to ensure that the potential transfer of contaminants is minimised; and
(e) carcasses and animal products that have not passed post-mortem examination are separated from those that have passed post-mortem examination; and
(f) contamination of animal material from the gastrointestinal tract contents is minimised; and
(g) handling and processing procedures are carried out without unnecessary delay and in a manner that minimises the transfer, proliferation, and redistribution of contaminants on and between animal material or product; and
(h) hygienic techniques are used during dressing.

*Section 65: Post-mortem examination*

(3) Any carcass or animal material found to be unfit for purpose must be immediately identified as such by the operator and separated to ensure that is not mistaken as fit for purpose.

*Part 5 - Product Eligibility for Animal Consumption*
*Section 37: Eligibility*

(1) Minimal risk raw material is eligible for animal consumption without further processing.
(2) Medium risk raw material must be further processed to eliminate any hazard to the intended consumer prior to sale for animal consumption.
(3) High risk raw material is not eligible for processing for animal consumption, except in accordance with clause 5(2) and disposition must be in accordance

with instructions issued under clause 5(2).

*Part 8 – Rendering of animal material*
*Section 72: Material to be rendered (medium risk material)*

(1) Medium risk raw material must be subjected to a thermal process, or otherwise treated to destroy all vegetative bacteria, viruses and protozoa, and inactivate chemical substances that are potentially harmful if consumed by animals.
(2) The operator must ensure thermal processing or other treatment has been confirmed as valid by a suitably competent person to demonstrate compliance with subclause (1).

*Section 73: Security (medium risk material)*

(1) Supplies of medium risk raw material must be denatured to ensure that they cannot be mistaken as being fit for any other purpose prior to dispatch for rendering.

**Code of Practice: Rendering (Part 2: Good Operating Practice)**

*Section 15.2: Mandatory requirements (ruminant protein controls)*

2. Animal product operators must clearly label any animal product which contains ruminant protein in accordance with the Biosecurity (Ruminant Protein) Regulations 1999.
3. For the purposes of subclause (2), tallow is considered to be protein free if the maximum level of insoluble impurities in the tallow does not exceed 0.15% by weight.
4. When ruminant animal material and non-ruminant animal material are processed in the same premises separate dedicated lines for each animal material must be used.
5. Despite subclause (4), ruminant animal material and non-ruminant animal material may be processed in a common processing line, provided all resulting animal product is clearly labelled as containing ruminant animal material.
6. Animal product operators who are required to have a ruminant protein control programme, as required under the Biosecurity (Ruminant Protein) Regulations 1999, must include this as a supporting system within their risk management programme.

**BSE Food Safety Controls**

**Animal Products Act 1999**

*Section 45: Director-General may issue specifications supplementary to animal product standards*

(1) The Director-General may from time to time, by notice under section 167, set specifications and other detailed requirements that—
(a) are specified or contemplated by or necessary to give effect to any standard prescribed under section 44:
(b) are necessary or desirable to amplify the manner in which any such standard may or must be achieved.
(2) The Director-General may set specifications under this section only after having regard to the matters specified in section 44(7) and (except where section 163(5) applies) after appropriate consultation carried out in accordance with section 163.

*Section 167: Notices*
(1)(h) setting specifications and providing for matters of detail in relation to animal product standards in accordance with section 45.

**Animal Products (Specifications For Products Intended For Human Consumption) Notice 2004**

*Section 73: Suspect animal material*

(1) This clause applies to operators involved in the primary processing of suspect animal material that is derived from farmed mammals, farmed birds or live possums.
(2) When processing suspect animal material, an operator must ensure —
(a) the suspect animal material is identified; and
(b) that if the suspect animal material is of a nature that cross-contamination could occur, then —
(i) the animal material is processed in such a way that any potential cross contamination to non-suspect animal material or animal product is minimised; and
(ii) the processing area is cleaned prior to the processing of any other animal material or animal product.
(3) If cross-contamination occurs, the operator must take adequate corrective actions to
ensure that the affected animal material is still suitable for processing or the resulting animal product is fit for intended purpose.
(4) Suspect animal material or animal product must be held under sufficient control to ensure that it is not released until all relevant tests and examinations have been

*Section 74: Handling and processing*

(4) Opening cuts must be made in a manner that minimises cross contamination.
(7) Contact between carcasses within the primary processing premises, prior to passing the post-mortem examination, must be minimised to the extent necessary to ensure that the potential spread of contaminants is minimised.
(8) Carcasses that have not passed post-mortem examination must not come into contact with carcasses that have passed post-mortem examination.

**Animal Products (Official Assessors: Ante-Mortem and Post-Mortem Inspectors) Notice 2009**

*Section 5: General competencies*

(1) A person applying to be an ante-mortem or post-mortem inspector must hold one of the following qualifications:
(a) National Certificate in Meat Inspection Services (registered by the New Zealand Qualifications Authority (NZQA)):
(b) Certificate of Meat inspection (issued by the Director, Meat Division, MAF):
(c) Certificate of Competency for Meat Inspection (issued by MAF Quality Management):
(d) Qualification in Meat Inspection (issued by the Australian Quarantine and Inspection Service (AQIS)):
(e) registration as a veterinarian under the Veterinarians Act 2005:
(f) an alternative qualification accepted by the Director-General as being a generally equivalent qualification to those listed in paragraphs (a) to (e).
(2) An ante-mortem inspector holding the National Certificate in Meat Inspection

Services must also hold the Optional Advanced Meat Inspection Service Strand of that Certificate for the same species as the post-mortem qualification.
(3) A post-mortem inspector is not required to hold a qualification for ante-mortem inspection.
(4) The qualifications held must include the species for which the ante-mortem or post-mortem inspection is undertaken.
(5) A trainee must complete his or her full training in a timely manner.
(6) An ante-mortem or post-mortem inspector must have knowledge of the relevant market access requirements and specifications and to the extent relevant to an official assessors activities the training programme must enable an official assessor to demonstrate an understanding of the Act, including;
(a) the object of the Act; and
(b) the role, responsibilities, and duties of the inspection agency; and
(c) the role of NZFSA; and
(d) the relevant regulations, export requirements, notices and specifications made under the Act.
(7) Any person who qualified more than three years before making an application must be able to demonstrate a meaningful involvement in performing ante-mortem and post-mortem inspection over the intervening years or undergo re-qualification. The extent and nature of re-qualification training must be documented by the inspection agency.

*NOTE: Subclauses 1 and 2 above are also mentioned in Schedule 3 of the Animal Products (Specifications For Products Intended For Human Consumption) Notice 2004*

**Industry Standard 5: Slaughter and Dressing**

*Section 2.3: ASURE NEW ZEALAND RESPONSIBILITIES*

- the ante- and post-mortem inspection of animals.

Inspection staff shall ensure that within their areas of responsibility:

- hygienic practices are maintained;
- all product is properly inspected;
- the provisions of this industry standard are met;
- liaison occurs with company supervisory staff.

**Industry Standard 5: Slaughter and Dressing**

*Section 9.1.2: Inspection requirements (location)*

No persons other than MAF or ASURE , or other approved persons, shall be stationed in the main chain areas set aside for head, carcass and viscera inspection.

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 4(1): Interpretation*

suspect animal material means animal material or animal material derived from a line of animals showing symptoms or suspected of being diseased or contaminated, or having an abnormality, that may affect the suitability for processing or the manner of processing of the animal material, and includes –

(a) animals with clinical disease; and
(b) tuberculosis (Tb) reactors; and
(c) animals covered by a veterinary certificate of disease or injury; and
(d) animals from risk sources named in surveillance lists issued under the Contaminant Monitoring and Surveillance Regulated Control Scheme; and
(e) animals covered by a supplier statement indicating an uncertain animal suitability status

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 7(1): Assessment of suitability for processing*

(1) The ante-mortem examiner must assess whether any animal that he or she examines under clause 6(1) presents any abnormality that may ─
(a) constitute a hazard in any resulting animal material or animal product; or
(b) contaminate any animal material or animal product through the dressing of the animal; or
(c) affect the processing environment to the extent that it may create a hazard in any animal material or animal product.

(2) On the completion of the ante-mortem examination (or re-examination), and taking into account the assessment in subclause (1) and information supplied in any relevant supplier statement, the ante-mortem examiner must make a decision regarding the suitability for processing of the animal, and decide whether the animal –
(a) is suitable for slaughter for human consumption; or
(b) is suitable for slaughter pending treatment for, or recovery from, an abnormal condition, and, if appropriate, specify when the animal must be submitted for re-examination; or
(c) must be slaughtered without delay to prevent the deterioration of an abnormal condition, provided the condition would not prevent all or part of the carcass being fit for human consumption, and processing of the carcass will not detrimentally affect the hygiene of the processing environment; or
(d) is suspect animal material, and is required to be slaughtered at a time designated by the ante-mortem examiner; or
(e) is not fit for slaughter for human consumption and is to be disposed of in an appropriate manner.
(3) The ante-mortem examiner must determine the appropriate manner of disposal of animal material that is not suitable for human consumption.

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 9: Dead and moribund animals*

(1) Any moribund animal at a primary processing place or premises must be killed without delay.
(2) Dead (not slaughtered) or moribund animals at a primary processing place or premises are not suitable for human consumption, and the operator must dispose of the animal in an appropriate manner as advised by the ante-mortem examiner.

**Industry Standard 5: Slaughter and Dressing**

*Section 4.1: Status of animals for slaughter*

All animals entering the slaughter-floor shall have undergone ante-mortem inspection and been designated as suitable for slaughter. Confirmation that ante-mortem inspection has occurred must be available for verification/audit by the post-mortem inspectors before finalising the result of inspection. The method of notification and verification shall be approved by the Technical Supervisor.

**Industry Standard 5: Slaughter and Dressing**

*Section 16.2: ARRANGEMENTS FOR SLAUGHTER*

The Technical Supervisor shall consult with management to arrange the time of slaughter of suspects, after which the slaughter board shall be fully or partially cleaned and/or sterilised depending on the post mortem findings and the degree of contamination of the slaughter floor.

*Section 16.3: PROCESSING OF SUSPECTS*

16.3.1 All personnel concerned shall be told when suspect animals are being presented for slaughter so that they may take the necessary precautions.
16.3.2 Suspect animals are retained for further inspection. Positive identification of the head, viscera and carcass shall be maintained throughout the dressing procedure. When necessary any additional tissues or organs as directed by the veterinarian shall also be retained.
16.3.3 A veterinarian shall supervise the inspection of heads, viscera and carcasses from suspect animals and shall make the final judgement.
16.3.4 The area and time of veterinary handling of suspect animals shall be confirmed by the Technical Supervisor after consultation with the company. The following two methods, or a combination of them, may be used.
16.3.5 After normal inspection is completed, the head, viscera and carcass, (with the AgM74s attached) shall be retained in the retain area for re-inspection and final judgement by a veterinarian.
16.3.6 The carcass is held as long as necessary at the final inspection point. The carcass, with the head on the head rail and the viscera on the viscera table or in the gut buggy (all identified with AgM74s), shall receive the necessary inspection under the immediate supervision, and subject to the final judgement, of a veterinarian.
**Note:** The duties normally assigned to a veterinarian may be performed at domestic premises by the supervising meat inspector or sole charge inspector.

*Section 16.3: FURTHER INVESTIGATION*

Suspect carcasses retained for further investigation shall not be branded with the inspection legend. They shall have retain labels attached to each carcass, quarter or side, and shall be held chilled in a MAF security area. Retained carcasses may be boned and held in carton form (Refer to Meat IS 6)

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 24: Collection and submission of samples*

(2) The post-mortem examiner may submit samples of animal material for laboratory

analysis where necessary to assist with assessment of its fitness for intended purpose.
(5) The post-mortem examiner must forward to NZFSA as soon as practicable, all laboratory submission forms and reports relating to the analysis of lesions specified in subclause (3) whether or not the results are confirmed.

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 19: Requirements for post-mortem examination*

(3) The post-mortem examination must be conducted so as to minimise cross-contamination between carcasses and in accordance with the procedures described in Section 2 and Appendix 3 of Manual 16.

**Animal Products (Specifications For Products Intended For Human Consumption) Notice 2004**

*Section 6: Facilities and equipment etc*

(6) All premises that slaughter and dress farmed cattle, sheep, horses, pigs, deer, goats, ostriches and emus must be provided with facilities for the holding of suspect animals and for the post-mortem examination of animals found to be dead or dying, which may be the same facilities.

*Section 73: Suspect animal material*

Suspect animal material or animal product must be held under sufficient control to ensure that it is not released until all relevant tests and examinations have been completed and a decision is made on its disposition.

*Section 74: Handling and processing*

(7) Contact between carcasses within the primary processing premises, prior to passing the post-mortem examination, must be minimised to the extent necessary to ensure that the potential spread of contaminants is minimised.
(8) Carcasses that have not passed post-mortem examination must not come into contact with carcasses that have passed post-mortem examination.

**BSE Control Programs and Technical Infrastructure**

**Biosecurity Act 1993**

*Section 46: Duty to report notifiable organisms*

(1) Every person who—
(a) at any time suspects the presence of an organism in any place in New Zealand; and
(b) suspects that it is for the time being declared to be a notifiable organism under subsection (2) of section 45 of this Act; and
(c) believes that it is not at the time established in that place;
and
(d) has no reasonable grounds for believing that the chief technical officer is aware of its presence or possible presence in that place at that time,—

shall without unreasonable delay report to the chief technical officer its presence or possible presence in that place at that time.
(2) Every person who—
(a) at any time suspects the presence of an organism in a place in the region, or in any part of the region, of a regional council; and
(b) suspects that it is for the time being declared to be an organism notifiable within the region or part under subsection
(3) of section 45 of this Act; and
(c) believes that it is not at that time established in that place; and
(d) has no reasonable grounds for believing that the chief technical officer is aware of its presence or possible
presence in that place at that time,—
shall without unreasonable delay report to the chief technical officer its presence or possible presence in that place at that time.

**Biosecurity Amendment Act 1997**

*Clause 2: Interpretation*

"**Unauthorised goods** means any goods that are—
"(a) Uncleared goods in a place that is not a transitional facility or a biosecurity control area (other than goods that, in accordance with the authority of an inspector, are—
"(i) Proceeding from a transitional facility or a biosecurity control area to a transitional facility, biosecurity control area, or a containment facility; or
"(ii) Being exported from New Zealand); or
"(b) Uncleared goods that are in a transitional facility or a biosecurity control area to which those goods proceeded, other than in accordance with the authority of an inspector, from some other transitional facility, or biosecurity control area, and have not later received the authority of an inspector to remain there; or
"(c) Goods which have been given a biosecurity clearance by an inspector following receipt by that inspector of false, incomplete, or misleading information concerning the goods; or
"(d) A restricted organism in a place that is not a containment facility (other than an organism that,—
"(i) In accordance with the authority of an inspector, is proceeding from a transitional facility, biosecurity control area, or a containment facility to another transitional facility, biosecurity control area, or containment facility;
or
"(ii) Is in a transitional facility or biosecurity control area to which it has proceeded in accordance with the authority of an inspector; or
"(iii) In accordance with the authority of an inspector, is being exported from New Zealand); or
"(e) A restricted organism that is in a containment facility to which it proceeded other than in accordance with the authority of an inspector, and has not later received the authority of an inspector to remain there:
"**Unwanted organism** means any organism that a chief technical officer believes is capable or potentially capable of causing unwanted harm to any natural and physical resources or human health:."
(3) Section 2(1) of the principal Act is amended—
(a) By omitting from the definition of the term **New Zealand territory** the word "territory", and substituting the words "land and the waters":
(b) By adding to the definition of the term **organism**, the following paragraph:
"(f) Includes any particle that is a prion:".

## Cattle Identification and Traceability

**Biosecurity (Animal Identification Systems) Regulations 1999**

*Section 3: Requirement to use identification system for cattle for bovine tuberculosis control*

(1) Every person who owns or is in charge of a cattle beast aged 30 days or more must use an identification system, approved for the purpose of enabling the identification of cattle, to identify each cattle beast in the following circumstances:
(a) when the cattle beast is moved to a herd, a place of slaughter, or a place of show—
(i) from the herd of origin; or
(ii) from the place or establishment at which the cattle beast is being kept:
(b) when the ownership of a herd of cattle is wholly or partially transferred, whether by sale, lease, gift, or other means and that herd is moved from the place or establishment at which it is kept.
(2) The cattle beast must be identified in accordance with an identification system before it is moved in accordance with subclause (1).
(3) This regulation does not apply to a cattle beast when moved from a transitional facility to a herd, or the place or establishment at which the cattle beast will be kept.

**Biosecurity Act 1993**

*Section 50: Identification systems*

(1) The Director-General may, from time to time, approve systems administered by specified persons for the purpose of enabling the identification of organisms and their products and associated premises.
(2) The Director-General may approve identification systems under this section for any of the following purposes:
(a) facilitating pest management:
(b) marking the presence or absence in organisms of particular qualities relating to the purposes of this Act:
(c) meeting the certification requirements of overseas authorities in respect of New Zealand exports.
(3) When considering the approval of an identification system under this section, the Director-General shall ensure that the identifications to be used—
(a) provide unique, clear, and lasting identification having regard to the purpose for which the identifications are needed; and
(b) do not create confusion with any other generally used system of identification.

**Animal Products (Ante-mortem and Post-mortem Examination of Mammals, Ostriches and Emu Intended for Human Consumption) Notice 2006**

*Section 14: Identification system*

Operators must have in place a system for identifying all animals presented for slaughter at their premises, for the purpose of tracking the animal's origin. The system must ensure the following information is recorded in writing for each mob:
(a) date and time of arrival:
(b) supplier (name in clear wording or in code):
(c) number of animals:
(d) class of animals:
(e) any marks, brands, or other distinguishing features if the holding facility contains animals from more than one supplier:
(f) information to determine where the animals from the mob are being held:
(g) the current ante-mortem status of the animals:
(h) name and signature of the ante-mortem examiner and the date of examination:
(i) relevant information from the supplier statement:
(j) additional information that may assist in the final assessment of suitability for processing.

**Animal Products (Specifications For Products Intended For Human Consumption) Notice 2004**

*Section: 36B Supplier statements for the movement of farmed animals*

(1) Persons in control of farmed animals described in clause 36A (2) must complete an animal status declaration, or an animal status declaration for pigs, if relevant, and supply it to the new person in control when those animals are moved to a new premises, property or saleyard.
(2) No animal status declaration (or animal status declaration for pigs) is required where farmed animals are moved to a new premises, property or saleyard and there is no change to the person in control.
(3) The animal status declaration (or the animal status declaration for pigs) must be completed in accordance with its stated requirements as approved by the Director-General.
(4) The person in control must complete the animal status declaration (or the animal status declaration for pigs) to the best of their knowledge, and using any supplier statements supplied by previous persons in control of the farmed animals.
(5) The person in control may supply the animal status declaration (or the animal status declaration for pigs) to the new person in control by electronic transmission.

(7)(a) A copy of the animal status declaration (or the animal status declaration for pigs) must be kept by the supplier and recipient of the farmed animals for a period of 1 year after the animal movement is completed and it must be made available for audit.
(b) The supplier of the farmed animals must keep:
(i) any records and other information used to complete the animal status declaration (or the animal status declaration for pigs); and
(ii) manufacturer's declarations relating to the composition of animal feeds fed to farmed ruminants;
while the animals are under the control of that person and for 1 year after the animal movement is completed and they must be made available for audit.
(8) If a person in control ceases to be engaged or employed at a premises, property or

saleyard, any animal status declarations (or animal status declarations for pigs) and records must be kept at the premises, property or saleyard to which the declarations relate.

**Biosecurity Act 1993**

*Section 154: Offences*

(l) knowing that a notice under section 130(1) of this Act is in force in relation to a place, without the permission of an inspector or authorised person,—
(iv) removes, alters, or defaces any identification that an inspector or authorised person has directed be used to identify any organism, risk goods, or other goods in the place:

*Section 157: Penalties*

(1) Every person who commits an offence against any of paragraphs (f), (g), (h), (i), (j), (k), (l), or (m) of section 154 is liable on conviction on indictment,—
(a) in the case of an individual person, to imprisonment for a term not exceeding 5 years, a fine not exceeding $100,000, or both:
(b) in the case of a corporation, to a fine not exceeding $200,000.

**Biosecurity (Imported Animals, Embryos, and Semen Information) Regulations 1999**

*Section 5: Annual status report*

(1) The owner or person in charge of an imported specified animal must supply to the Director-General, by 30 June of each calendar year, an annual status report.
(2) The report must advise of—
(a) any change of the place where that animal is kept if there has been a change of place since the last annual status report or notification; and
(b) whether that animal's ear tags remain in place; and
(c) any change in the name and contact address of the owner or person in charge of that animal since the last annual status report or notification.
(3) The information required by subclause (2) may be provided using the annual status report form approved by the Director-General.

**Biosecurity (Imported Animals, Embryos, and Semen Information) Regulations 1999**

*Section 3: Notification requirements in respect of imported specified Animal*

The owner or person in charge of an imported specified animal must, within the time required by regulation 4, notify the Director-General of the following:
(a) the date that ownership of that animal is transferred, and the name and address of the new owner:
(b) if that animal dies:
(c) the date that animal is slaughtered or consigned for slaughter, and the name and address of the place of slaughter:
(d) if that animal cannot be located:

(e) if ear tags issued in respect of the importation of that animal are lost or become illegible.

*Section 4: Time and manner of notification*

A notification required by regulation 3 must be given,—
(a) in the case of an animal that dies from illness or is put down because of illness, within 4 hours of the owner or person in charge knowing of the death of the animal, by telephoning the Ministry of Agriculture and Forestry's 24-hour telephone number for reporting suspected exotic diseases; or
(b) in every other case referred to in regulation 3, within 7 days, in writing or by telephone, fax, or electronic mail.