FOOD STANDARDS
Australia New Zealand
Te Mana Kounga Kai – Ahitereiria me Aotearoa

BSE Food Safety Risk Assessment Report

JAPAN

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Scientific Strategy, International and Surveillance Section

Food Standards Australia New Zealand

Executive summary

Food Standards Australia New Zealand (FSANZ) is the regulatory body responsible for conducting bovine spongiform encephalopathy (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* (FSANZ 2010a) are based on those of the World Organisation for Animal Health (OIE) *Terrestrial Animal Health Code* (2009). Japan made a submission in 2013 to be assessed under the current BSE policy.

Japan has detected 36 BSE cases in total, of which two were atypical cases. No BSE cases have been identified in the Japanese cattle population born after January 2002. In response to the first BSE case detected in September 2001, Japan has legislated and implemented comprehensive controls to prevent the re-introduction and amplification of the BSE agent in the Japanese cattle population. The World Organisation for Animal Health (OIE) classified Japan as controlled risk for BSE in May 2009, which was subsequently upgraded to negligible risk status in May 2013.

FSANZ has conducted an assessment of legislative measures in Japan concerning control and prevention of BSE, and an in-country assessment of the application and enforcement of these legislative measures. Five main control areas were examined:

(1) ***Import controls*** to prevent the release into the country of the BSE agent through imports of animals or animal-derived products.

(2) ***Feed ban controls*** to prevent entry of and recycling in the animal feed supply by the BSE agent.

(3) ***Food safety controls*** to prevent contamination of the human food supply with the BSE agent.

(4) ***Traceability and animal identification systems*** to ensure animals and animal-derived products can be effectively identified and recalled if required.

(5) ***Surveillance programs*** to ensure that BSE affected animals are identified and removed from the feed and food production systems.

Control measures to prevent the introduction, recycling and amplification of the BSE agent in Japan are well established. As a consequence, Japan has negligible external exposure to the BSE agent through imported bovine material and strict internal controls to prevent potential amplification in the Japanese cattle population. No meat-and-bone meal (MBM) or greaves that could be converted into livestock feed or fertiliser has been imported into Japan since the import suspension came into effect in October 2001. No MBM has been imported since 2004 for any purpose. Cattle have only been imported from Australia and New Zealand for the eight year period from 2006-2013. Imports from the United States of America (USA) and Canada were banned in 2003 and one head of cattle was imported for research purposes from the Republic of Korea in 2005. Bovine products are imported for human consumption, pet food, and for industrial use and research. These imports are controlled by the Animal Quarantine Service (AQS) to prevent use in animal feed. Beef and beef products originate from countries that have not detected BSE cases or from countries where BSE cases have occurred and have undergone a risk assessment by the Food Safety Commission (FSC) of Japan. The latter beef and beef product imports are subject to age restrictions on source animals.

Animals at the highest risk for BSE are identified through rigorous ante-mortem inspection

procedures and non-ambulatory animals or those animals showing signs consistent with BSE are prevented from entering the slaughter chain. Disposal of such animals is through incineration. All ruminant derived MBM and specified risk materials (SRMs) must be destroyed by incineration in Japan and no ruminant MBM is permitted to be used in any livestock feed. Furthermore, poultry, pig and fish meals are prohibited in cattle feed in Japan to completely eliminate the risk of cross-contamination of cattle feed with mammalian proteins. Japan has successfully implemented complete separation of feed production and feed distribution supply chains for ruminants and non-ruminant livestock and results from both the BSE feed inspection program and the BSE feed testing program since 2005 shows an extremely high level of compliance. Japan has therefore demonstrated a very low likelihood that cattle could be exposed to BSE through contaminated feed.

Japan's mandatory cattle and beef traceability system is comprehensive and uses a single identification number from the birth of calves through to the retail sale of meat. At any point up to retail sale, beef can be traced back to the source animal and all birth and feeding cohort animals can be effectively identified. Beef and beef products intended for human consumption are forward-traceable through the food supply chain and food businesses are required to have an effective recall protocol in place for the recovery of product if required.

Japan has a well-established BSE awareness program across all sectors of the cattle industry to ensure all stakeholders are aware of and comply with their legal obligations. Japan has strict notification requirements and proven procedures for identifying and handling BSE suspect cases. Japan has an extensive laboratory network at the prefectural level with national oversight and confirmatory testing provided by the National Institute of Animal Health (NIAH) and the National Institute of Infectious Diseases (NIID). Diagnostic tests compliant with the OIE standards are used for screening and confirmation and Japan participates in a proficiency testing program with the United Kingdom (UK) and Canadian Reference Laboratories, ensuring that laboratory testing and reporting are maintained at a high standard. Active surveillance for BSE in Japan is in line with OIE recommendations and representative numbers of cattle sub-populations at highest risk of BSE are tested. Japan meets the OIE surveillance points target for both Type A and Type B surveillance. Japan is able to identify, trace and respond to suspect and confirmed BSE cases should they occur.

The competent authorities responsible for BSE controls in Japan, the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Health, Labour and Welfare (MHLW), demonstrated a high degree of oversight of all BSE related controls during the in-country verification visit. Good communication between the two Ministries and between the respective national offices in Tokyo and prefectural offices was evident; as was the strong working relationship between government veterinarians and stakeholders along the beef supply chain.

Japan has comprehensive and well established controls to prevent the re-introduction and amplification of the BSE agent within the cattle population and prevent contamination of the human food supply with the BSE agent. This BSE food safety risk assessment concludes that beef and beef products imported from Japan are safe for human consumption and recommends **Category 1** status for Japan.

Acronyms

AQS	Animal Quarantine Service
BSE	Bovine spongiform encephalopathy
ELISA	Enzyme linked immunosorbent assay
FAMIC	Food and Agricultural Materials Inspection Center
FSANZ	Food Standards Australia New Zealand
FSC	Food Safety Commission
FSCAB	Food Safety and Consumer Affairs Bureau
LHSC	Livestock Hygiene Service Centre
MBM	Meat-and-bone meal
MAFF	Ministry of Agriculture, Forestry and Fisheries
MHLW	Ministry of Health, Labour and Welfare
MIC	Meat Inspection Centre
NIAH	National Institute of Animal Health
NIID	National Institute of Infectious Diseases
NLBC	National Livestock Breeding Centre
OIE	Office International des Epizooties (World Organisation for Animal Health)
TSE	Transmissible spongiform encephalopathy
UK	United Kingdom
USA	United States of America

Glossary

Australian Questionnaire refers to the *Australian Questionnaire to Assess BSE Risk* which lists the data requirements for countries wishing to export beef or beef products to Australia and seeking to be assessed for bovine spongiform encephalopathy (BSE) risk.

BSE agent is the infectious mis-folded protein material, or prion, that causes BSE.

BSE rapid test is a high-through-put screening test to detect the BSE agent in brain samples. Most BSE rapid test kits employ enzyme-linked immunosorbent assay (ELISA) methodology which has been validated by numerous international reference laboratories.

Cohorts as defined under Section 4 of the Australian Questionnaire are all cattle which, during their first year of life, were reared with the BSE cases during their first year of life, and which investigation showed consumed the same potentially contaminated feed during that period, or if the results of the investigation are inconclusive, all cattle born in the same herd as, and within 12 months of the birth of, the BSE cases.

PCR or polymerase chain reaction is a laboratory test used to amplify and identify DNA.

Prions are infectious agents of proteinaceous nature, causing transmissible spongiform encephalopathies (TSEs) in mammals. Among the TSE diseases are the various forms of Creutzfeldt-Jakob disease in humans, BSE in cattle, and scrapie in sheep and goats.

Specified risk material (SRM) The Australian BSE food safety policy (FSANZ 2010b) defines BSE risk materials as tonsils and distal ileum from bovine animals of any age; brains, eyes, spinal cord, skull and vertebral column of bovine animals over 30 months of age.

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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. 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* (the Australian Questionnaire) (FSANZ 2010a). Legislation and standards underpinning BSE controls are also examined as part of the food safety assessment and these were provided as appendices to Japan's response to the Australian Questionnaire.

In general, data requirements in the Australian Questionnaire are based on those of *Chapter 11.4 – Bovine Spongiform Encephalopathy* of the *OIE Terrestrial Animal Health Code* (OIE 2014)[1]. The Australian Questionnaire also seeks additional information on animal traceability and identification, and animal slaughtering and processing systems.

Japan submitted an application to FSANZ for assessment of BSE food safety risk on 22 October 2013. The initial application included documentation submitted to the OIE in 2012 with additional information describing animal traceability and identification and animal slaughtering and processing systems. The in-country verification visit was conducted in July 2014. This 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 Japan.

Overview of Japan's BSE regulatory system

The regulatory system underpinning the prevention and control of BSE in Japan is a shared responsibility of two competent authorities. The Department of Food Safety, Ministry of Health, Labour and Welfare (MHLW) is responsible for food safety controls across the beef and beef products industry and for ensuring specified risk material (SRM) removal, BSE monitoring at slaughterhouses and border control from the perspective of food safety and human risk. The Food Safety and Consumer Affairs Bureau (FSCAB), Ministry of Agriculture, Forestry and Fisheries (MAFF) is responsible for implementing the feed ban, BSE surveillance, traceability through the cattle identification system and border control to prevent the introduction of infectious diseases of livestock into Japan.

Prefectural and municipal governments, in close cooperation with the national government, are responsible for implementing and enforcing BSE controls.

In the MHLW, this involves:

- Ante mortem and post mortem meat inspection at abattoirs
- Routine laboratory testing for BSE at meat inspection centres (MICs)
- Monitoring the disposal of SRMs and bovine meat-and-bone meal (MBM)
- Auditing establishments for compliance.

In the MAFF, this involves:

- Inspecting and monitoring livestock feed manufacturers, distributors and on-farm use and auditing for compliance

[1] The OIE Terrestrial Animal Health Code was most recently revised in 2014, but the data requirements with regard to BSE remain substantially the same and the Australian Questionnaire has therefore not been revised

- Responding to and investigating notifications of cattle deaths
- Testing dead and casualty slaughter animals for BSE at Livestock Hygiene Service Centres (LHSC)
- Monitoring and ensuring compliance with the cattle traceability systems
- Conducting outreach activities with farmers and other stakeholders to raise awareness of BSE and the regulatory system
- The Animal Quarantine Service within MAFF is responsible for enforcing quarantine requirements at the border to prevent the introduction of the BSE agent.

The regulatory system in Japan is reliant on several affiliated organisations to implement BSE controls:

- The Food Safety Commission (FSC) of Japan is an organisation under the administrative control of the Cabinet Office and undertakes risk assessments independently from the risk management organisations, MAFF and MHLW. With respect to BSE controls, the FSC provides food safety advice to the MHLW on domestic controls such as the definition of specified risk material (SRM) and the age of cattle subject to routine BSE testing. The FSC provides BSE risk advice to MAFF and MHLW for imported beef and beef products for enforcement by the AQS. The FSC conducts BSE risk assessments on countries seeking to export beef to Japan
- The Food and Agricultural Materials Inspection Centre (FAMIC) is a government affiliated incorporated administrative agency with a critical role in ensuring an effective ruminant feed ban. FAMIC inspect and audit companies importing and manufacturing cattle feed and have oversight of testing cattle feed for prohibited proteins. FAMIC works in close collaboration with the national and prefectural MAFF offices to enforce the feed ban
- The National Livestock Breeding Centre (NLBC) is a government affiliated incorporated administrative agency responsible for receiving, managing and publishing cattle traceability information. NLBC works in close collaboration with the national and prefectural MAFF offices to maintain the cattle traceability system
- The National Institute for Animal Health (NIAH) is affiliated with the MAFF and conducts confirmatory testing on samples that test positive for BSE by rapid screening test at LHSCs at the prefectural level. The NIAH has oversight of the BSE testing conducted at the LHSCs and trains laboratory staff
- The National Institute for Infectious Diseases (NIID) is affiliated with the MHLW and conducts confirmatory testing on samples that test positive for BSE by rapid screening test at meat inspection laboratories. The NIID has oversight of the BSE testing conducted at the meat inspection laboratories and trains laboratory staff
- The prion research laboratories at Hokakido University and Obihiro University work closely with the NIAH and NIID to evaluate and validate BSE diagnostic tests and reagents. The BSE testing conducted in Japan is jointly coordinated and monitored by these four agencies to ensure consistent application of testing methodologies throughout the country.

BSE History

Thirty six cases of BSE have been detected in Japan since 2001, two of which were confirmed to be atypical BSE. Cases were detected in every year from 2001 to 2009 with a peak in 2006 when ten cases were confirmed. No cases have been detected since January 2009.The majority of cases were born in 1996 (12) and 2000 (13) (Figure 1). Most cases occurred in dairy cattle (30) and most were born (28) and reared (25) in Hokkaido prefecture. One atypical case was confirmed in 2003 in a 23 month old Holstein castrated male born in Tochigi prefecture and the other atypical case was confirmed in 2006 in a 14 year old Japanese Black beef breeding cow from Nagasaki prefecture.

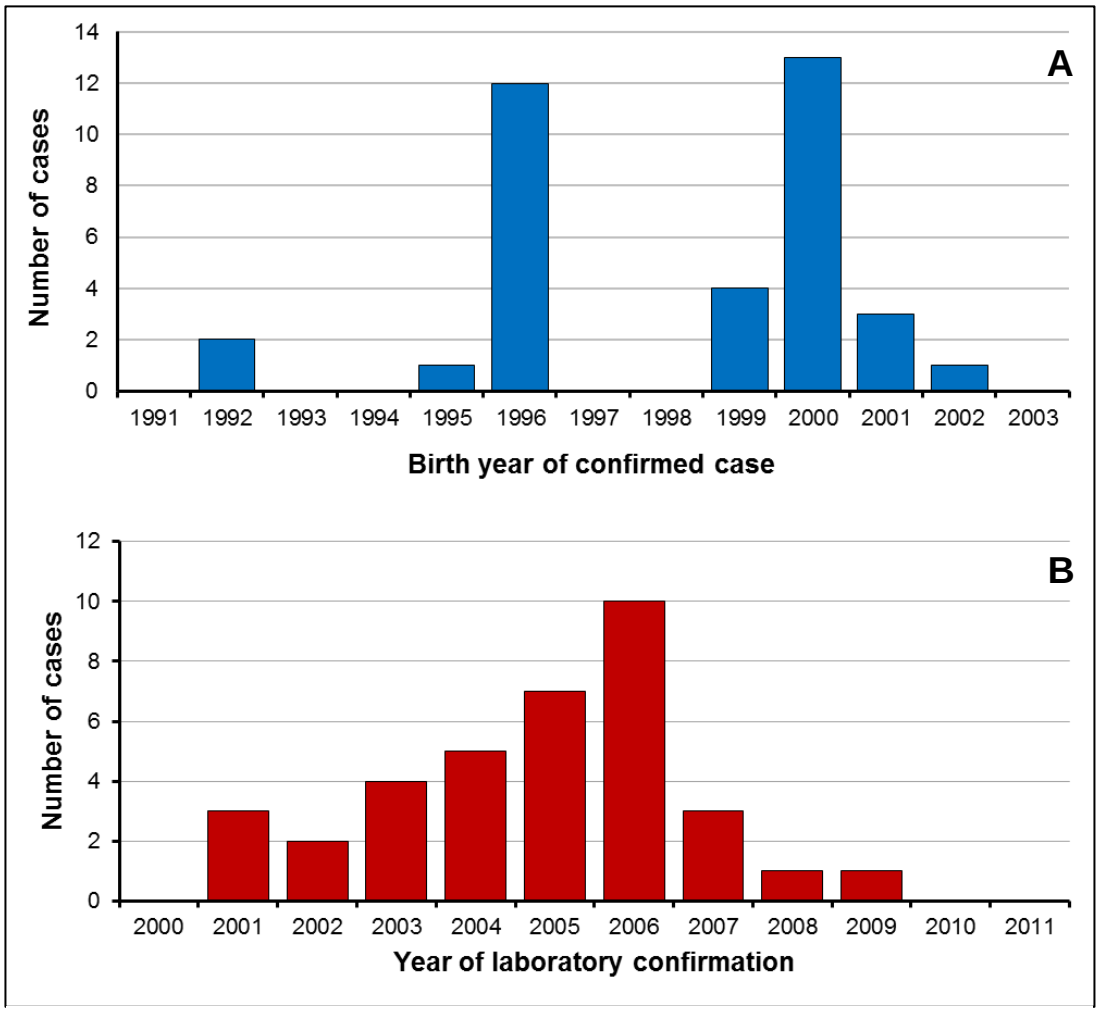

Figure 1. Year of birth (A) and year of laboratory confirmation (B) for the 36 BSE cases detected in Japan

A high degree of uncertainty remains as to the source of the Japanese BSE outbreaks, although a geographical concentration of cases originated in Hokkaido prefecture in 1996 (ten cases) and 1999/2000 (16 cases) and in the Kanto region in 1995/1996 (three cases). An epidemiological investigation conducted in 2007 was unable to definitively verify the source of infection.

Two feed bans have been implemented in Japan; the first non-legislative ban was issued in April 1996 by notification without penalty for breaches of the ban. A further 22 cases were detected in cattle born after this date. The second feed ban was enacted by legislation in

October 2001 and in addition to prohibiting the feeding of ruminant material to ruminants, feed supply regulations and incineration of SRM commenced. The second legislated feed ban also introduced penalty clauses for breaches of the ruminant feed ban. Evidence for the success of the legislated ruminant feed ban is demonstrated by the fact that only one of the cases was born after the subsequent legislation came into effect, and this case was born in January 2002 just three months after the start date.

Further details on the BSE cases and their history are provided in Appendix 2.

The OIE General Assembly classified Japan as having a controlled BSE risk in May 2009, a status that was maintained up until May 2013, at which time Japan's BSE risk status was re-classified to negligible BSE risk at the 81st OIE General Assembly.

Potential for release of the BSE agent through imported materials

1 Importation of MBM

1.1 Overview

Importation of animal protein sourced from ruminants poses a potential food safety risk as it is the primary route through which cattle are exposed to BSE infectivity. Importation of meat-and-bone meal (MBM) and greaves, from ruminants and other livestock species, for the purpose of manufacturing animal feed or fertiliser was suspended in Japan in October 2001. This import suspension also applies to ingredients for the manufacture of pet food, with the exception of poultry offal meal.

1.1 Legislation

Animal and animal products, including MBM and greaves, are listed as quarantine designated items and are subject to quarantine restrictions set out in the *Act on Domestic Animal Infectious Diseases Control* (Act No. 166, May 1951) (subsequently referred to as the *Domestic Animal Infectious Diseases Control Law*). In addition, the importation of MBM and greaves has been subject to an import suspension order since October 2001 (*Temporary suspension of animal protein importation, No. 17/Shouan/2891, August 2005; Partial amendment: No. 23/Shouan/1023, May 2011*), which is enforced by AQS at international airports and seaports.

1.2 Details of MBM imports

No MBM has been imported into Japan for the manufacture, or potential manufacture, of livestock feed or fertiliser since the issuing of the import suspension order in October 2001. Information provided in the submission indicates that no MBM has been imported since 2004 for any purpose.

From 2006 onwards, no greaves has been imported in to Japan. Prior to 2006, greaves was classified along with other animal oil and fat products that were imported for food (e.g. lard) or industrial use (e.g. lubricant). Greaves was included in the import suspension order of October 2001 and no greaves has been imported for use, or potential use, in animal feed while the import suspension order has been in place.

2 Importation of live bovine animals

2.1 Overview

Importation of live cattle represents a potential food safety risk if imported cattle are sourced from countries that do not have adequate control programs in place to minimise the risk of BSE exposure. Importation of cattle from BSE affected countries is currently suspended. Since 2004, cattle have only been imported from New Zealand and Australia and one head was imported from the Republic of Korea for special research purposes.

2.2 Legislation

Live animals and animal products, including MBM and greaves, are listed as quarantine designated items and are subject to quarantine restrictions set out in the *Domestic Animal Infectious Diseases Control Law* and implementation is achieved through the *Enforcement*

Regulations of the Domestic Animal Infectious Diseases Control Law. These regulations outline import prohibition areas for live animals and animal products by virulent infectious disease risk status (Appendix 3, Table A3.1). Further restrictions are applied to countries subject to temporary import suspension associated with the occurrence of BSE (Appendix 3, Table A3.2). Countries that are recognised by Japan as being free of BSE and virulent infectious diseases of ruminants, such as rinderpest and foot and mouth disease, are permitted to export live animals and fresh or frozen beef to Japan subject to animal health requirements (Appendix 3, Table A3.3). Currently only live animals from Australia and New Zealand are permitted to be imported into Japan.

2.3 Details of live cattle imports

Live cattle imports from the United Kingdom (UK) were suspended in 1990 and from the United States of America (USA) and Canada in 2003 in response to the identification of BSE cases in the respective countries. Live cattle imports were suspended from other countries after confirmation of the first BSE cases. Since 2004, imports of live cattle have been exclusively from Australia and New Zealand, with the exception of one head of cattle imported from the Republic of Korea for research purposes in 2005. The number of animals, the country of origin and the purpose of importation for the past eight years are listed in Table 2.1 below.

Table 2.1 Imports of live cattle into Japan from 2006-2013 by country of origin and purpose of import.

Country	Purpose	Year							
		2006	2007	2008	2009	2010	2011	2012	2013
Australia	Dairy[¶]	973	967	649	930	849	678	644	694
New Zealand		-	-	-	-	10	-	-	-
Australia	Fattening[§]	21,249	22,532	18,991	14,911	15,500	11,608	13,719	11,655
New Zealand		2,497	634	-	-	-	-	-	-
Australia	Beef[¶]	-	961	-	-	28	-	-	-
New Zealand	Exhibition	-	6	-	-	-	-	-	-
Total		24,719	25,100	19,640	15,841	16,387	12,286	14,363	12,349

[¶] Breeding stock; [§] Young cattle imported for slaughter after a period of fattening (predominately ≤12 months old and ≤300kg).

3 Importation of bovine products

3.1 Overview

This Section focuses on the risk of releasing the BSE agent through the importation of products containing bovine protein that are intended for human consumption.

3.2 Legislation

The regulatory control on the importation of bovine products is a shared responsibility of MAFF and MHLW, to prevent the introduction of virulent infectious diseases of livestock and ensure a safe food supply, respectively. Bovine products are listed as quarantine designated items and are subject to quarantine restrictions as set out in Section 2.2 above. Meat and offal imported from countries where virulent infectious diseases of livestock occur are required to be heat-processed or subjected to an equivalent approved method (Appendix 3). Importation of processed bovine products are also controlled by the import suspension order applied to MBM and greaves (*Temporary suspension of animal protein importation, No. 17/Shouan/2891, August 2005; Partial amendment: No. 23/Shouan/1023, May 2011*), which

is enforced by AQS at international airports and seaports. Importation suspension has been lifted for certain processed animal products that are confirmed to have been subjected to measures equivalent to those implemented in Japan.

To enact, amend or abolish Ordinances of the MAFF, including import requirements for animal products intended for human consumption, MAFF must first consult with the MHLW with regard to public health implications.

With regard to the conduct of BSE food safety risk assessments of countries wishing to export beef and beef products to Japan, the MHLW engages the Food Safety Commission (FSC) of Japan to undertake independent risk assessments and provide advice. MHLW then provides instruction to quarantine stations to enforce import requirements at the border.

3.3 Type of imported bovine products

Fresh or frozen beef
In terms of exposure of cattle to BSE infectivity through imported bovine products destined for human consumption, the main risk is the improper disposal of waste material or by-products through the processing of whole or half carcasses or bovine cuts with included bone. The majority of fresh and frozen beef imports to Japan are currently boneless cuts of meat. No whole carcasses or half carcasses have been imported into Japan in the past eight years[2]. Imports of fresh and frozen beef and offal from countries where BSE cases have occurred – Canada, USA, France, Netherlands, Ireland and Poland – are subject to restrictions based on risk assessments conducted by the FSC of Japan. The quantities of imported beef and offal from April 2006 to March 2013, and the restrictions that apply, are shown in Appendix 4 (Product Type A, Area 1, Appendix 4).

Heat treated or retorted beef products
The majority of heat treated beef products imported into Japan for human consumption are from countries where BSE has not been detected, but where there is a high likelihood of virulent infectious diseases of livestock being endemic or epidemic. The quantities of imported heat treated beef products, from April 2006 to March 2013, are shown in Appendix 4 (Product Type A, Area 2 or 3, Appendix 4).

Processed bovine protein and other bovine products
Very small volumes of deboned ruminant derived meat meal (Product Type B, Appendix 4) have been imported for human consumption from Australia, New Zealand, USA and Norway. Imports from the USA are subject to the same animal age restrictions as applied to fresh and frozen beef and offal and represent a minimal risk of exposing Japanese cattle to BSE infectivity.

Product Type C (Appendix 4) includes crushed bone, hoof and horn, bone tendon, bone meal, hoof-and-horn meal, and other bone derived from bovine origin, mixed animal-species and unknown animal-species. Bone and bone products are imported for the production of gelatin and bone charcoal for sugar refining, water filtering materials and glaze and horn and hoof products are used for the production of extinguishant and building materials. The majority of imported bone product is crushed bone for gelatin production and limited amounts for converting to bone charcoal. No imports of bone meal have been imported into Japan since 2002 and only small quantities of hoof and horn meal have been imported for use as a fire extinguishant. The imported shipments are consigned directly to the manufacturer with no opportunity for animal contact. In the past eight years, no imports have been received

[2] http://www.customs.go.jp/toukei/srch/indexe.htm;
http://www.customs.go.jp/english/tariff/2014_4/data/e_02.htm

from countries on the prohibition list because of the occurrence of BSE. Bone products must be certified as coming from healthy animals and importers are required to submit “Operation plans” and “Pledge statements” and dispose of residues in such a way as to prevent contamination of livestock feed. Importers are subject to audits by AQS.

Product Type D (Appendix 4) includes blood meal, meat meal, offal meal, leather meal and other kinds of meal of bovine origin. Imported meal is used for research purposes and a ‘pledge’ statement and ‘operation plan’ is required by AQS prior to import. Importers are subject to audits by AQS.

Product Type E (Appendix 4) incorporates a range of processed animal protein including ossein, calcium phosphate, bone ash, animal oil/fat, powdered animal oil/fat, gelatin, collagen, hydrolysed protein, and other processed animal protein derived from cattle, mixed animal-species and unknown animal-species. These products are used for feed (excluding livestock feed), industrial purposes, food and research. As with other processed products, importers are required to submit “Operation plans” and “Pledge statements” and are subject to audits by AQS.

Imported pet food and bovine products destined for pet food manufacture
Ruminant derived meat, offal, bone, meal, processed ruminant proteins and semi moist and prepared pet foods (Product Types F, G, H, I, J, Appendix 4) that are imported for the manufacture of pet food are subject to quarantine restrictions as outlined for Product Types A-E above. Canned and retorted packaged pet food (Product Type K, Appendix 4) are not subject to quarantine restrictions. The majority of ruminant protein imported for pet food is imported as dry pet food or canned retorted pet food and represents minimal risk of exposing Japanese cattle to BSE infectivity.

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

The assessment of imported materials supports the conclusion that the risk of the BSE agent being released into the Japanese cattle population through imports of MBM, live cattle, or beef and beef products is well controlled and unlikely to occur.

No MBM or greaves that could be converted into livestock feed or fertiliser has been imported into Japan since the import suspension came into effect in October 2001. No MBM has been imported since 2004 for any purpose.

From 2006 to present, cattle have only been imported from Australia and New Zealand. Imports from the USA and Canada were banned in 2003 and one head of cattle was imported for research purposes from the Republic of Korea in 2005.

Bovine products are imported for human consumption, pet food, and for industrial use and research. These imports are controlled by the AQS to prevent use in animal feed. Beef and beef products originate from countries that have not detected BSE cases or from countries where BSE cases have occurred and have undergone a risk assessment by the FSC of Japan. The latter beef imports are subject to age restrictions on source animals.

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 (Heim and Mumford 2005; Mumford and Kihm 2006; Hörnlimann et al. 2006; Ducrot et al. 2008) published since the BSE epidemic in the UK 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. 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. Controls throughout the beef production chain to prevent exposure to BSE are summarised in Figure 2.

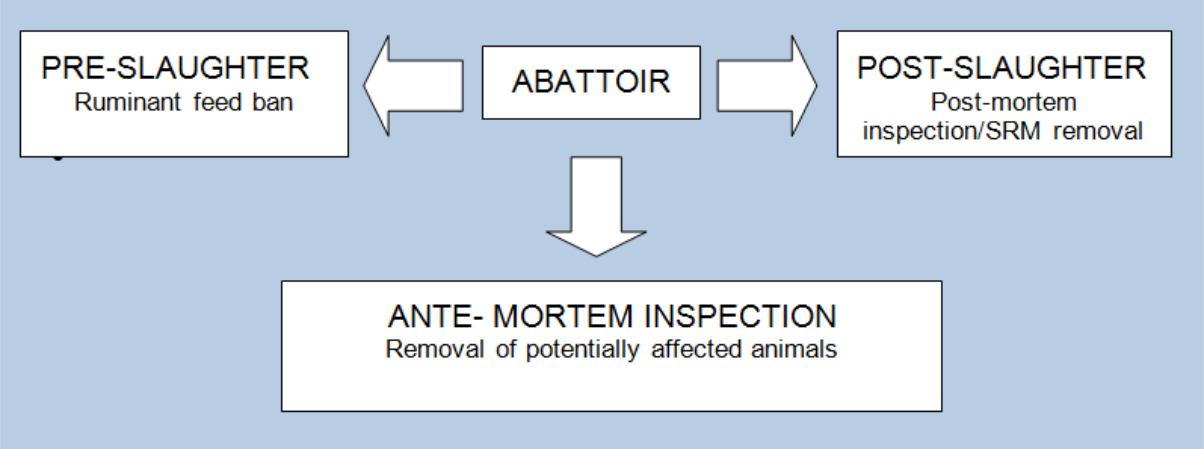

Figure 2. Exposure controls in beef production systems

This Chapter describes the control measures that are in place in Japan 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

The Australian Questionnaire requires countries to demonstrate that a ruminant feed ban has been effectively implemented. More specifically, evidence is required to support that ruminant-derived MBM has not been fed to cattle for the last eight years.

5.2 Legislation

The use of ruminant tissues in ruminant feed was banned by notification in April 1996 without a penalty clause. The feed ban was subsequently strengthened by legislation after the first BSE case was detected in September 2001. The legal instruments for the ruminant feed ban are the *Act Concerning Safety Assurance and Quality Improvement of Feeds* (Law No. 35, April 1953) (Feed Safety Act) and the associated *Ordinance of the Standards of Feed and Feed Additives* (MAFF Ordinance No. 35, July 1976). The *Act on Special Measures against Bovine Spongiform Encephalopathy* (Act No. 70, June 2002) also addresses components of the feed ban:

- The Feed Safety Act gives authority to the Minister of MAFF to set the standards and specifications of livestock feed through the MAFF Ordinance No. 35, 24 July 1976
- The MAFF Ordinance No. 35, 24 July 1976, prohibits the use of all mammalian derived protein and poultry and fish meals in ruminant feed, with the exception of mammalian derived gelatin and collagen, milk and dairy and egg products (Tables 5.1 and 5.2)
- The amendment to MAFF Ordinance No. 35, 24 July 1976, prohibiting the use of animal protein came into effect in October 2001 and the amendment prohibiting the use of fish meal came into effect in February 2002
- The *Act on Special Measures against Bovine Spongiform Encephalopathy* prohibits the use of bovine MBM in cattle feed and prohibits the sale and importation of cattle feed containing bovine MBM
- MAFF Ordinance No. 35, 24 July 1976, specifically prohibits the use of ruminant protein in all feeds (Tables 5.1 and 5.2)
- For products that contain proteins derived from fish, poultry and pigs, including fish meal, MBM and blood meal from pigs and poultry must be labelled (see Table 5.3)
- Ruminant feed must be manufactured on separate production lines from those used for other livestock that include prohibited proteins.

The complete list of rules and guidelines that control the ruminant feed ban are described in Appendix 5.

5.3 Production of animal feedstuffs and use of ruminant derived ingredients

Ruminant and non-ruminant feed must be manufactured in accordance with MAFF Ordinance No. 35, 24 July 1976. Ruminant derived proteins and oils are permitted under controlled conditions. Approval of the Minister of MAFF is required in accordance with *Minister of Agriculture, Forestry and Fisheries Approval Procedures for Animal Protein and Animal Fat In Accordance with the Ministerial Ordinance on the Standards of Feed and Feed Additives* (Food Safety and Consumer Affairs Bureau, #9574, 11 March 2005). The approval procedures stipulate the separation of production lines, premises, storage areas, transport containers and equipment for raw ingredients that are permitted, e.g. containers used to transport vertebral columns are not permitted to be used to transport raw ingredients used for the manufacture of gelatin, collagen or fats and oils. Other aspects include:

- Gelatin and collagen may be permitted if manufactured in approved facilities and according to the following procedure:
    - Those that are derived from skin, which have been manufactured in a process completely separated from the process for manufacturing proteins derived from tissues other than the skin
    - Those that are derived from bone (except the skull and vertebral column), which have been treated under all of the following processes
        - Pressure washing
        - Acid demineralization
        - Prolonged alkaline treatment

- Filtration
- Sterilization for 4 seconds at 138°C.

- For rendering facilities that are approved by MAFF to produce fats and oils to be used in livestock feed, the rendering process must not include:
  - SRMs
  - The spinal column of cattle (except the transverse thoracic vertebrae, transverse lumbar vertebrae, ala sacralis and coccygeal vertebrae)
  - Any parts of cattle that have failed ante mortem or post mortem inspection
  - Any parts of cattle that have not been inspected at an approved abattoir, including cattle that have died on farm.

Table 5.1 Summary of allowable use of animal derived protein in livestock feed

Materials	Origin of materials	Livestock[2]			
		Ruminant	Swine	Poultry	Fish
Gelatin, collagen (Licensed)[1]	Mammal	✓	✓	✓	✓
Milk, dairy products	Mammal	✓	✓	✓	✓
Egg, egg product	Poultry	✓	✓	✓	✓
Powdered blood, plasma	Ruminant	x	x	x	x
	Swine, Horse, and Poultry (Licensed)[1]	x	✓	✓	✓
Fish meal (Licensed)[1]	Fish and shellfishes	x	✓	✓	✓
Chicken meal, feather meal (Licensed)[1]	Poultry	x	✓	✓	✓
Hydrolysis protein, steamed bone meal (Licensed)[1]	Poultry	x	✓	✓	✓
Meat and bone meal, hydrolysis protein, steamed bone meal[3]	Swine (Licensed)	x	✓	✓	✓
	Swine-Poultry mixture (Licensed)	x	✓	✓	✓
	Ruminant	x	x	x	x
Food industrial wastes including animal protein (food waste etc)[4]	Mammal, Poultry, Fish and shellfishes	x	✓	✓	x

Source: http://www.famic.go.jp/ffis/feed/r_safety/r_feeds_safety41.html (FAMIC, Food and Agricultural Materials Inspection Centre)
[1] "Licensed" means the product was manufactured in a facility approved by MAFF to produce animal protein.
[2] MAFF has established Guidelines in order to prevent cross contamination of 'Type A' feed for ruminants and 'Type B' feed for other species.
[3] MAFF inspects in each stages from production to distribution of MBM or other feed.
[4] Prevents both imported and domestic beef scraps from entering the ruminant feed supply.

Table 5.2 Summary of allowable use of animal derived oil in livestock feed

Materials	Maximum limit of insoluble impurities (% w/v)	Livestock				
		For cattle		Other species		
		Substitution milk	Others	Swine	Poultry	Fish
Specific animal oil and fat [1]	0.02	✓	✓	✓		
Tallow [2]	0.15	x	x	✓		
Tallow from swine and poultry	0.15	x	✓	✓		
Spinal column of cattle and/or oil originating from dead cattle [3]	n/a	x	x	x		
Recovered cooking oil (used cooking oil)	0.02	✓	✓	✓		
	0.15	x	x	✓		

Source: http://www.famic.go.jp/ffis/feed/r_safety/r_feeds_safety41.html (FAMIC, Food and Agricultural Materials Inspection Centre)
[1] "Specific animal oil and fat" means oil and fat which has less than 0.02% (w/v) insoluble impurities.
[2] "Tallow" means the oil and fat obtained from rendering (MAFF checks that it does not contain the spinal column of cattle or dead body of cattle (see note 3 below).
[3] "Dead cattle" refers to cattle which died on farm, or has not received inspection at a slaughter house.

5.4 Measures to prevent contamination of ruminant feed with prohibited proteins

The measures to prevent the contamination of ruminant feed with prohibited proteins are outlined in the *Guidelines for the Prevention of the Commingling of Animal Proteins with Ruminant Feed* which were established by order of the Director General of the Food Safety and Consumer Affairs Bureau, MAFF (September 2008, No.15/shouan/1570). These were preceded by similar guidelines, which were established in 2001, that became outdated when the total separation of ruminant and non-ruminant feed production lines came in to effect in March 2005. Key elements of the guidelines include:

- Defining ruminant feed stuff and raw ingredients as 'Type A' feed, and other non-ruminant feed and raw materials that contains or may contain prohibited proteins as 'Type B' feed
- Prohibited proteins are defined as those derived from mammals, poultry, fish, molluscs and crustaceans, animal fat, animal proteins derived from plate waste, or a combination of the preceding. Exclusions are outlined in Tables 5.1 and 5.2, above
- Separation of transport routes used for 'Type A' and 'Type B' feed at a feed mill or farm
- Production facilities for 'Type A' feed shall be closed systems, or adequately separated from 'Type B' feed production to prevent comingling
- Separation of packaging facilities for 'Type A' and 'Type B' feed
- Separation of transport containers used for 'Type A' and 'Type B' feed
- 'Type A' and 'Type B' feed shall not be received at the same time or immediately in succession
- Separation of receival areas for raw ingredients of 'Type A' and 'Type B' feed
- Separation of equipment used for handling 'Type A' and 'Type B' feed
- Separation of storage facilities for 'Type A' and 'Type B' feed, including colour coding
- Separation of shipping docks for unpackaged bulk product for 'Type A' and 'Type B' feed, and separation of the shipping of packaged feed
- 'Type B' feed shall not be fed to ruminants
- Appropriate labelling of 'Type B' feed (Table 5.3)
- Effective and documented management and quality control systems shall be in place
- Records are to be kept for eight years
- If facilities, containers, vehicles or equipment that have been in contact with 'Type B' feed are to be used for 'Type A' feed, then they must be cleaned and visually inspected to ensure all residues have been removed.

During the in-country verification visit, the Australian delegation verified that vehicles that transport 'Type A' and 'Type B' feeds are clearly identifiable. In addition, the Australian delegation was informed that vehicle drivers are required to be well-informed of the legal requirements around the ruminant feed ban.

Table 5.3 Labelling requirement for feed containing proteins from fish, poultry and pigs, including fish meal, MBM and blood meal from pigs and poultry

Precautions for use and preservation: 1. This feed must not be fed for cattle, sheep, goats and deer (it should be noted that to use this feed for cattle, sheep, goats and deer may be subject to penalties). 2. This feed must be stored so as not to be mixed with feed (including ingredients and raw materials for feed production) for cattle, sheep, goats and deer.

5.5 Enforcement of the ruminant feed ban

5.5.1 Inspection framework

MAFF enforce the ruminant feed ban through a combination of audits, visual inspections and feed testing along the entire livestock feed supply chain. Establishments that import livestock feed or feed ingredients, process or manufacture livestock feed and feed ingredients, such as renderers and feed mills, wholesalers, distributors and farms are subject to the inspection framework (Appendix 5). Inspections are conducted in accordance with the *Guidelines for the Prevention of the Commingling of Animal Proteins with Ruminant Feed* (September 2008, No.15/shouan/1570) using inspection guidelines such as *Conducting Inspections and Issuing Guidance Concerning Compliance with Feed Regulations to Prevent Bovine Spongiform Encephalopathy* (Food Safety and Consumer Affairs Bureau # 5656) or similar.

Inspections conducted by FAMIC

FAMIC conducts on-site inspections of ports, importers, warehouses and silos, rendering facilities and large feed mills with a wide distribution. An annual plan is prepared by MAFF based on risk, which places the highest priority on facilities that produce feed or feed ingredients for both ruminants and non-ruminant livestock. MAFF provide instructions to FAMIC to conduct on-site inspections. Inspections are comprehensive and involve plant audits, visual inspection, measures to prevent co-mingling of ruminant and non-ruminant feed and review of records.

Importers who handle large volumes of feed and feed ingredients are audited twice per year and renderers and feed mills are inspected for BSE controls at least once per year. The complete segregation of feed production processes has been in place in all feed mills since 2005.

No ruminant protein (with the exception of gelatin, collagen and milk proteins) has been permitted in any livestock feed since October 2001 and as such livestock feed mills do not handle this material. Ruminant MBM has been destroyed by incineration since October 2001 and destruction is monitored by the MHLW (see below).

With respect to the cattle feed and BSE controls, there has been 100% compliance with the feed regulations for all feed mills and renderers.

Inspections conducted by MAFF prefectural governments

The prefectural governments conduct on-site inspections for feed dealers, livestock farms and feed mills which have a relatively narrow distribution area (i.e., within the prefecture). For the seven year period from 2005 to 2011, in excess of 22,000 inspections were undertaken on cattle farms, feed mills and feed sellers and no infractions were observed. For the years 2012 to 2013, no infractions were reported.

Inspections conducted by MAFF regional governments

Local offices of MAFF conduct investigations of actual feed application including compliance with feed ban on cattle farms. The results of feed testing are described below.

Inspections conducted MHLW and Department of Environment

Facilities that render inedible parts of cattle carcasses and SRMs are inspected and monitored by the MHLW to ensure compliance with the requirements to destroy all ruminant MBM. These inspections occur regularly. During the in-country verification visit, the

Australian delegation was informed by the rendering facility visited in Maebashi that the City Health Office conduct inspections every month to check volumes of raw materials received and volumes of MBM destroyed, amongst other checks on production processes and records management.

For rendering facilities that send ruminant MBM to cement factories for incineration, the Department of Environment audit and inspect renderers and cement manufacturers several times per year on compliance with regulations.

5.5.2 Feed testing program

Feed samples are analysed for the presence of proteins of ruminant and other animal origin by polymerase chain reaction (PCR), enzyme linked immunosorbent assay (ELISA) or microscopy using validated methods. Quality assurance is overseen by FAMIC. A priority is placed on testing feed for cattle (Table 5.4).

Table 5.4 Number of samples tested for prohibited proteins for the fiscal year 2013 by factory and feed type.

Type of factory	Type of Feed	PCR	ELISA	Microscopy
Feed mill	Formula feed for cattle	150	150	171
	Formula feed for fish	1	1	1
	Chicken feed	32	32	32
	Premix (for cattle, pig , or chicken)	1	1	1
Rendering plant	Animal protein mixed feed	2	2	2
	Crab shell powder	1	1	1
	Chicken meal	27	27	27
	Feather meal	16	16	16
	Fish meal	77	77	77
	MBM of pig and chicken origin	24	24	0
	Steamed bone meal (pig and chicken origin)	1	1	0
	Pig MBM	2	2	0
Pre-mix plant	Chicken feed	13	13	13
Warehouse for imported feed	Chicken feed	19	19	19
	Seaweed meal	1	1	1
	Humic acid	1	1	1
	Fodder yeast	1	1	1
Total		**369**	**369**	**363**

For the period 2005 to 2012, in excess of 6,000 samples were collected by FAMIC or the prefectural governments with greater than 99% compliance with regulations. Ten infractions were detected in this period and only two, detected in 2005, were related to cattle feed. One was contamination of cattle feed with poultry proteins prior to the total separation of production lines, and the second was an exceedance of the 0.02% maximum limit of insoluble impurities of animal oil for calf milk replacer (the level was below the 0.15% level deemed acceptable by the OIE (OIE 2014).

For the three year period from 2009 to 2011, in excess of 4,400 inspections and feed testing was undertaken on cattle farms by MAFF regional governments; no infractions were observed. For the years 2012 to 2013, no infractions were reported.

5.6 Evaluation of compliance with the ruminant feed ban

The risk of accidentally feeding ruminants prohibited proteins is extremely low in Japan. All ruminant MBM is destroyed and is not able to be used for any livestock feed, therefore the potential for any cross-contamination is negated. Ruminant derived gelatin, collagen and milk

proteins and ruminant derived oils (maximum permitted limit of 0.02% insoluble impurities) are permitted in ruminant feed, which are manufactured in facilities with strict approvals and oversight from MAFF and FAMIC. These ruminant derived ingredients make up a small proportion of the processed cattle feed used in Japan and present a negligible risk for BSE transmission.

Japan has had complete separation of ruminant and non-ruminant feed manufacturing lines since March 2005, together with the separation of premises, facilities, equipment and transport containers and vehicles to prevent co-mingling. These measures further reduce the already low risk of ruminants being exposed to prohibited proteins.

The information provided by Japan, including results from the audit and inspection framework and the feed testing program, demonstrates an ongoing high level of compliance with the BSE feed regulations. Furthermore, the in-country verification visit was able to verify that there is a high level of awareness of feed regulations at all levels of the livestock feed supply chain, from importers, manufacturers, wholesalers, retailers, transporters and farmers. This assessment concludes that an effective ruminant feed ban has been in place in Japan for greater than eight years.

6 Ante-mortem slaughter controls

6.1 Overview

Older cattle that 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 chains.

6.2 Legislation

The MHLW has jurisdiction over the establishment of abattoirs and their operation through the *Abattoir Law* (Law No. 114, August 1953) and the corresponding MHLW Enforcement Regulation (MHLW Ordinance No. 44, September 1953). Abattoirs cannot be established without a permit granted by the prefectural government and meat and viscera cannot be sold for human consumption unless it has been slaughtered in a government approved abattoir. Key details of this legislation with relevance to BSE ante-mortem controls include the following:

- Cattle cannot be slaughtered for human consumption in locations other than abattoirs
- Cattle cannot be slaughtered unless passing ante-mortem inspection by a MIC inspector of the prefectural government (Article 14)
- Cattle are prohibited from being slaughtered if they show disease signs consistent with BSE or other designated or notifiable infectious disease on ante mortem inspection (Article 16)
- Cattle failing ante-mortem inspection are to be segregated and removed to prevent transmission of disease and the premise is disinfected where required.

6.3 Ante-mortem procedures

All animals are examined according to the requirements of the *Abattoir Law* by following the MHLW guidelines on TSEs, *Implementation Guideline for Transmissible Spongiform Encephalopathy (TSE) Testing* (MHLW Notification No. shoku/306, October 2001). Cattle are checked for the existence of strange cries, turning around and other abnormal behaviours, ataxia and other nervous symptoms, combined with the results of gait checks. According to

the *Act on Special Measures against Bovine Spongiform Encephalopathy*, all cattle >48 months of age are required to be tested for BSE. Animals to be slaughtered are ordered according to age and those >48 months are slaughtered last. Age is determined by the cattle traceability information (refer to Sections 10 and 15 below).

If an animal is suspected to have disease signs consistent with BSE, slaughtering or dressing of the animal is prohibited. If a veterinary inspector prohibits the slaughter or dressing of an animal, the applicant, the abattoir owner and other related parties are notified by the MIC of the prefectural government. The findings are also notified to the food sanitation department and livestock department of the prefecture where the animal originated if different from the slaughter location. Dead animals and downer cattle are removed to LHSCs where investigations and tests, including the BSE screening test, are conducted to determine the cause of disease or death.

6.4 Slaughtering methods

The MHLW amended the Abattoir Law Enforcement Ordinance in April 2009 to prohibit pithing as a method of slaughter. In 2012, a survey of the 149 abattoirs in Japan that slaughter cattle found no instances of where pithing was used to slaughter cattle or injecting compressed air into the cranial cavity to stun cattle. At the time of the survey, 141 abattoirs were practicing stunning by stun gun, 140 of which penetrated the skull. Other stunning methods include non-penetrating stun gun (3) and hammer (15), or a combination of hammer and stun gun (7).

6.5 Handling of BSE suspect cases

Dead cattle ≥24 months of age, downer cattle and other cattle showing neurological signs are removed to LHSCs where investigations and tests, including the BSE screening test, are conducted to determine the cause of disease or death (refer to Section 14.3 below for details of handling dead animals and BSE suspects).

6.6 Evaluation of ante-mortem slaughter controls

Abattoirs must be approved and registered with the prefectural government. Government appointed veterinary inspectors onsite perform ante-mortem and post-mortem inspection and certification of meat being fit-for human consumption. Information from the in-country verification visit indicated that the veterinary inspectors of the MIC inspect the facility every day for compliance with hygiene requirements and veterinary officers of the Regional Bureau of MHLW audit facilities monthly to check inspection and hygiene procedures and records management. The United States Food Safety and Inspection Service (US FSIS) inspectors periodically conduct audits of Japanese export facilities. One of the abattoirs visited during the in-country verification visit is audited yearly for Safe Quality Food (SQF) certification by SGS, a global SQF certifying organisation.

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

7.1 Overview

Post-slaughtering controls are required to ensure that products from diseased animals and tissues potentially containing BSE infective material do not enter the animal feed or human food supply chains.

7.2 Legislation

The MHLW has jurisdiction over the establishment of abattoirs and their operation through the *Abattoir Law* (Law No. 114, August 1953) and the corresponding MHLW Enforcement Regulation (MHLW Ordinance No. 44, September 1953). Abattoirs cannot be established without a permit granted by the prefectural government and meat and viscera cannot be sold for human consumption unless it has been slaughtered in a government approved abattoir. In addition, the *Act on Special Measures against Bovine Spongiform Encephalopathy* (Act No. 70, June 2002) and the corresponding MHLW Enforcement regulation stipulate the age at which animals are subject to mandatory testing and the definition of SRM. The *Food Sanitation Act* (Act No. 233, December 1947) and the corresponding *Specifications and Standards for Foods, Food Additives and others* (MHLW Ordinance No. 370, December 1959) also define SRM and restrictions for human consumption. Key details of these pieces of legislation with relevance to BSE include the following:

- Cattle cannot be dressed for human consumption in locations other than abattoirs
- Carcasses cannot be dressed unless passing post mortem inspection by a prefectural government inspector (Article 14)
- Carcasses are prohibited from being dressed if they show disease signs consistent with designated or notifiable infectious disease on post mortem inspection (Article 16)
- Carcasses and carcass parts that fail post mortem inspection are to be segregated and removed to prevent transmission of disease and the premises are disinfected
- SRM is defined as the head (except the tongue and cheek meat) and spinal cord of cattle >30 months of age, tonsil and distal ileum (limited to a two-meter portion from its junction with the cecum) of cattle of all ages and must be removed in such a way to prevent contamination of edible parts. Further, the vertebral column of cattle >30 months of age containing dorsal root ganglia is defined as SRM and is prohibited for human consumption.
- SRMs are to be destroyed by incineration
- All cattle >48 months of age are to be subject to routine testing for BSE.

Rendering facilities and dead livestock treatment plants cannot be established without a permit granted by the prefectural government according to the *Rendering Plant Control Act* (Act No. 140, July 1948). Rendering facilities must also comply with the *Feed Safety Act* which requires the rendering process of animals other than ruminants, such as swine and poultry, to be physically segregated from that of ruminants. Bovine derived MBM is required to be destroyed by incineration and can occur at either a waste disposal plant or a cement production plant. For incineration at a cement production plant and subsequent use of the ash in cement production, permission is required from the Minister of Environment under the *Waste Management and Public Cleansing Act*.

7.3 Post-mortem procedures

Post mortem inspections are conducted according to the requirements of the *Abattoir Law* by following the MHLW guidelines on TSEs, *Implementation Guideline for Transmissible*

Spongiform Encephalopathy (TSE) Testing (MHLW Notification No. shoku/306, October 2001). Post-mortem procedures are supervised and monitored by the MIC veterinary inspectors. Procedures monitored include:

- Carcass identification
- Removal of tongue and masseter muscles from the head and disposal of remaining head parts in dedicated SRM bins
- For all cattle >48 months of age, a sample of the medulla oblongata is collected through the foramen magnum opening using the spatula technique and submitted to the MIC laboratory for BSE screening
- Inspection of the carcass, viscera and edible and inedible offal and disposal of inedible parts
- Distal ileum (limited to a two-meter portion from its junction with the cecum) is discarded in dedicated SRM bins
- Removal of spinal cord of cattle >30 months of age by vacuum and carcass splitting. Residual spinal cord material is removed and discarded in dedicated SRM bins
- Results of ante-mortem and post-mortem inspections are recorded
- Final certification of passed and inspected product being fit-for-human-consumption
- At the meat cutting plant, bovine vertebral column of cattle >30 months of age is segregated from other bones and discarded in dedicated SRM bins
- All SRMs are sent to a waste disposal plant for incineration or a rendering facility and thereafter incinerated
- Disposal of SRMs and inedible carcass parts and subsequent incineration are subject to compliance inspections.

As a general rule, screening tests shall be conducted on the day of or day after slaughter for bovines aged >48 months. Carcasses of cattle >48 months cannot be further processed and are removed from the abattoir and meat cutting plant until a negative result has been confirmed.

While screening and confirmatory testing are underway, the dressed carcass and body parts, including separated parts, of the corresponding animal are stored in such a way to allow identification. If storage of individual body parts is difficult, several may be stored together. In the case of a BSE-positive screening test, such lots may be incinerated together.

In the case of a BSE-positive screening test, premises and equipment are disinfected by:

- Complete incineration at a minimum 800°C (carcasses, rubber gloves, protective garments)
- Pressurized steam sterilization at 132 to 134°C for an hour (utensils)
- Treatment in a minimum 1M sodium hydroxide solution, at 20C° for an hour (facilities, dirt)
- Treatment in sodium hypochlorite solution of minimum 2% effective chlorine concentration, for an hour (facilities, dirt).

In the case of a BSE-positive screening test, the dressed carcass and corresponding body parts are held until confirmatory testing has been completed. If BSE is confirmed, then the dressed carcass and all corresponding body parts must be destroyed by incineration. Test results are communicated to relevant food sanitation and livestock departments.

After the removal of SRM, irrespective of the animal's age, it is kept in dedicated containers and is either incinerated or rendered and the MBM is subsequently incinerated.

7.4 Rendering processes

As of March 2011, there were 53 renderers processing ruminant material in Japan. The rendering conditions are not specified in the *Feed Safety Act* as no ruminant MBM is used as an ingredient in livestock feed. However the submission provided information on the two main methods used either a Dry method or Wet method, which is defined by the style of cooker (Appendix 6). The wet method, 133°C and 3 bar for >20 minutes, is sufficient to inactivate BSE prions.

For rendering facilities that have been approved by MAFF to process fallen stock, all MBM must be destroyed by incineration at a waste disposal facility or a cement manufacturing facility. No fats and oils from rendering facilities approved to process fallen stock can be used as an ingredient in livestock feed. Information from the in-country verification visit indicated that facilities that render bovine waste and also produce pig and poultry MBM are required to test the latter products for the presence of bovine proteins. The rendering plant visited during the in-country verification visit used the tallow from rendering bovine materials for fuel and performed tests on every daily batch of pig and poultry MBM using the ELISA method.

For rendering facilities that are approved by MAFF to produce fats and oils to be used in livestock feed, the restrictions on raw ingredients are described in Section 5 above.

Facilities that are approved to produce fats and oils are also required to destroy MBM by incineration at a waste disposal facility or a cement manufacturing facility. The volumes of MBM destroyed for the years 2006 to 2011 are provided in Table 7.1, below.

Table 7.1 Volume of MBM destroyed by incineration by fiscal year (FY)*

Fiscal Year	Amount (metric ton)
2006	138,684
2007	124,457
2008	107,706
2009	106,631
2010	102,542
2011	98,660

* FY, Fiscal year extends from 1 April to 31 March the following year.

In 2008, the restrictions on the use of pig derived MBM were relaxed to allow use in poultry and pig feed and the volumes destroyed by incineration decreased. The amount of product incinerated from 2008 to 2011 was predominantly bovine MBM.

7.5 Evaluation of post mortem slaughter controls, SRM removal and rendering procedures

The audit program for compliance with regulations pertaining to post-mortem inspections and SRM removal are the same as for ante-mortem inspection (section 6.6). The inspection program for compliance with regulations pertaining to rendering is the same for the ruminant feed ban described above (section 5.5). In addition, a survey of slaughtering procedures and post-slaughter controls was conducted in 2012 in all abattoirs that slaughter cattle, sheep and goats in Japan. The details of the survey are provided in Appendix 7. The survey found that all abattoirs handle SRMs, including the removal of spinal cord, in a manner that prevents contamination of edible parts of the carcass and that all SRMs are destroyed and prevented from entering both livestock feed supplies and the human food chain.

8 Summary: exposure control

Animals at the highest risk for BSE are identified through rigorous ante-mortem inspection procedures and non-ambulatory animals or those animals showing signs consistent with BSE are prevented from entering the slaughter chain. Disposal of such animals is through incineration. All ruminant derived MBM and SRMs are destroyed by incineration in Japan and no ruminant MBM is permitted to be used in any livestock feed. Furthermore, poultry, pig and fish meals are prohibited to be used in cattle feed in Japan to completely eliminate the risk of cross-contamination of cattle feed with ruminant proteins. Japan has successfully implemented complete separation of feed production and feed distribution supply chains for ruminants and non-ruminant livestock and results from both the BSE feed inspection program and the BSE feed testing program since 2005 shows an extremely high level of compliance. Japan has therefore demonstrated a very low likelihood that cattle could be exposed to BSE through contaminated feed.

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 with respect to Japan.

9 Beef production systems

9.1 Legislation

The MHLW has jurisdiction over the slaughterhouse facilities and has regulatory control over their operation to ensure the safety, wholesomeness, and correct labelling and packaging of meat. Slaughterhouses must comply with the *Abattoir Law* (Law No. 114, August 1953) and the corresponding MHLW Enforcement Regulation (MHLW Ordinance No. 44, September 1953) that sets out the registration, hygiene and other food safety requirements of slaughterhouses for the safe supply of food for human consumption. Slaughterhouses must also comply with specific requirements in the *Act on Special Measures against Bovine Spongiform Encephalopathy* (Act No. 70, June 2002) regarding cattle inspection and the collection, handling and disposal of SRMs. In addition the *Food Sanitation Act* (Act No. 233, December 1947) sets out the requirements for labelling and packaging of food for human consumption.

9.2 Hygiene practices for the minimisation of cross-contamination

Non-edible parts and materials condemned as unfit for human consumption, including SRMs, must be removed and disposed of in accordance with the *Abattoir Law Enforcement Regulation* and the *Act on Special Measures against Bovine Spongiform Encephalopathy*. Waste materials must be collected in manner to prevent contamination of edible parts and be placed in containers used exclusively for this purpose and bearing a label indicating the type of discarded materials therein, removed from the processing room, and disposed of in a manner that will prevent them from being used for animal feed. During the verification visit, the Australian delegation observed that SRM materials were removed using dedicated knives or vacuum tubes and waste was discarded in dedicated, labelled bins.

Information provided in the submission demonstrates that of the 149 abattoirs that slaughter cattle in Japan (current at March 2012), all have a verifiable system (auditable records) for the destruction of SRM material by incineration, either before or after rendering. Furthermore, non-SRM waste materials from abattoirs are generally rendered and the resultant MBM is incinerated to ash for use in cement manufacturing.

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 the origin of contaminated beef or beef products can be traced back to any animals of interest if required.

10.1 Legislation

A single legislative instrument controls Japan's domestic beef traceability system from the birth of calves through to the retail sale of meat. All cattle producers and food business operators along the beef supply chain are subject to the requirements of the *Act for Special Measures Concerning the Management and Relay of Information for Individual Identification of Cattle* (*Cattle Traceability Act*) (Act No. 72, June 2003) and the corresponding *Enforcement Order* (Cabinet Order No. 300, July 2003) (refer to Section 16 for more detail). A single ten digit Individual Identification Number remains with an animal and subsequent beef products along the entire supply chain. In addition, food businesses are required to keep a ledger of delivery and sales records, including names of individuals or businesses involved in the transaction, animal identification numbers, lot numbers and weights.

The requirements of the traceability system mean that animals and beef products can be traced to the animal origin at any point along the supply chain and for beef dispatch records enable product to be traced one step forwards and one step back. Animal movement records and beef and beef product dispatch records are the subject of audit by MAFF officers.

10.2 Details of the traceability systems

Cattle arriving at the abattoir are required to have an official ear tag affixed with the Individual Identification Number (refer to Section 15 below for more detail). The abattoir requires documentation to accompany the shipment of cattle with data on the owner details, age, weight, breed and Individual Identification Number for each animal. The shipping forms and documentation varies for each abattoir. Documents with the pedigree status of Wagyu beef cattle are also provided to the abattoir as this information is used for marketing purposes.

The Individual Identification Numbers on cattle ear tags are checked against the documents provided and these numbers are entered into the abattoir's database and also reported to the Individual Identification Register, which is managed by the National Livestock Breeding Center (NLBC). Cattle are ordered according to age and are assigned a slaughter number that is matched against the Individual Identification Number.

The assigned slaughter number follows the carcass and edible offal along the production line and at the point of carcass chilling; a label with the slaughter number, weight and Individual Identification Number is affixed to each carcass. Within both abattoirs that were visited during the in-country verification visit, all carcasses were deboned and a system to segregate animals on the production line was in place. Deboned meat is vacuum packed and the Individual Identification Number and other information is printed on the label that is affixed to the packed beef and the box. The Individual Identification Number is relayed to the beef buyer. Edible offal, edible off-cuts, trimmings and minced meat are traceable to the daily batch and all Individual Identification Number comprising the batch are recorded and relayed to the beef buyer. Slaughterhouse records for traceability are audited by MAFF officers and must be kept for seven years.

The *Cattle Traceability Act* also requires beef sellers or retailers to display the Individual Identification Number on the package or box. For beef products where an individual animal cannot be identified; the Individual Identification Numbers making up the batch must be displayed in-store or made available on request. Restaurants selling beef cuisine are also required to display or label beef products with the Individual Identification Number from which the product originated.

11 Recall systems

11.1 Legislation

Guideline for Control and Operating Standards to be Conducted by Food Business Operators (MHLW Notification No. shokuan/0227012, February 2004) provides instructions for a food business to have a documented recall protocol. The Guideline states that the recall protocol should include the allocation of responsibilities, specific method for recall, procedures for reporting to the competent authority and publication of recalls to notify consumers.

11.2 Food recall process

The through chain traceability system for cattle and beef facilitates the rapid identification of beef products dispatched to the domestic or export market. Slaughterers, sellers and suppliers of beef are required to keep a ledger of delivery and sale records and if needed recalled product can be identified and removed from sale. Both slaughterhouses visited during the in-country verification confirmed that written recall protocols are in place. Food recalls are published on the MHLW website (http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/shokuhin/kaisyu/index.html) (Japanese only).

12 Summary: BSE food safety controls

Food safety controls across the beef and beef products industry is the responsibility of the MHLW. Compliance with regulations ensures good hygienic practices are employed throughout the beef production and supply chain to prevent cross-contamination of edible product with potential BSE infected materials. Auditable traceability and recall systems enable the recovery of potentially contaminated food products. Businesses producing and selling beef and beef products are required to recall product in such circumstances where the health and wellbeing of consumers is put in danger. In Japan, the beef traceability and recall measures in place mean that the recovery of contaminated beef and beef products could be achieved in a timely and effective manner in the event of an animal disease emergency such as BSE.

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 focused 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 Japan's cattle identification and traceability system which serves to underpin any BSE case investigation.

13 BSE Education and Awareness

Japan has had an active BSE awareness program in place since it was made a designated livestock disease in 1996. The awareness program is targeted to a wide range of audiences including cattle producers, government and private veterinarians, LHSC officers, MIC inspectors and food safety monitors, feed mills and consumers. Documentation was provided with the submission. Examples of the awareness program include the following:

- Seminars are provided to LHSC and AQS officers on basic animal health with respect to BSE including clinical signs and pathogenesis, BSE diagnosis, surveillance, sample collection, epidemiology and latest developments.
- Seminars are provided to meat inspectors of MICs and food safety officers on diagnostic test procedures, latest findings of BSE research and epidemiology.
- Brochures with details of clinical signs, notification responsibilities and cattle feed regulations have been distributed to greater than 80,000 cattle farms across Japan.
- The MHLW maintains a BSE information page that provides information on actions taken by the MHLW, related laws and ordinances, test methods and test results, a list of all the BSE positive cattle and external links to the Food Safety Commission of Japan (FSC), MAFF and national laboratories: http://www.mhlw.go.jp/english/topics/foodsafety/bse/index.html.
- The audit schedule for farms, slaughterhouses and meat sellers with regard to BSE related laws and ordinances ensures that all stakeholders along the beef supply chain have a high awareness of BSE and the associated controls measures.

A variety of media are used, including internet, videos, posters, booklets, brochures and lectures.

14 Disease notification and diagnoses

14.1 Overview

This section focuses on procedures for notification and diagnoses of animals that are tested under the BSE surveillance and monitoring program in Japan.

14.2 Legislation

BSE has been a designated disease since 1996 through the *Domestic Animal Infectious Diseases Control Law*. This Law also provides MAFF with the legal authority to act to control and respond to an animal disease outbreak, including BSE, and sets out the mandatory requirement for veterinarians and livestock owners to immediately report suspected cases of designated and notifiable diseases and establishes penalties for failure to comply with the Law.

The *Abattoir Law* and Enforcement Ordinance establishes the requirement for abattoirs to conduct ante-mortem inspection of all animals prior to slaughter and prohibits the slaughter of animals with clinical signs consistent with BSE.

The *Act on Special Measures against Bovine Spongiform Encephalopathy* establishes the mandatory requirement to notify MAFF of the death of cattle ≥24 months of age and the submission of the dead animal to a LHSC for autopsy and BSE testing. This law also establishes the mandatory requirement for all cattle >48 months to be tested for BSE and for all body parts not to be released from an abattoir until such a time as negative BSE test results have been confirmed.

The *Cattle Traceability Act* and Enforcement Ordinance establishes the mandatory reporting of all cattle deaths irrespective of age and allows authorities to verify the age of fallen stock and cross-check the mandatory notification to MAFF of dead cattle ≥24 months of age. The *Cattle Traceability Act* and the Individual Cattle Identification Register (refer to Section 15 below) allows for the rapid identification of cattle birth and feeding cohorts when a BSE case is identified.

14.3 Identification and handling BSE suspects

Detailed instructions for the identification and handling of BSE suspects in Japan are provided in the *Specific Guidelines on the Prevention of Bovine Spongiform Encephalopathy* (MAFF, November 2004; last revision June 2008). Cattle subjected to BSE testing fall into the following categories:

- Cattle showing progressive behavioural changes that, after a period of observation and differential diagnosis, are determined to be abnormal cattle and a suspected BSE case.
- Cattle showing progressive clinical signs of central nervous system dysfunction, including suspected cases of *Haemophilus somnus* infection, cerebral cortex necrosis, and Downer syndrome, besides specific clinical symptoms, or cattle that display recumbency with an unknown cause.
- All cattle ≥24 months of age that have died from any cause.
- The above points apply to cattle on farm, in transport and at abattoirs.

In the case of BSE suspect cases, the whole animal is submitted to the prefecture's LHSC. The Guidelines provide detailed information on the biosecurity and management requirements for LHSC facilities to prevent the release of the BSE agent. The Guidelines also provide instructions on notification and epidemiological investigation procedures, definitions of cohort animals and the slaughter of suspect animals, disinfection procedures, movement restrictions and the public disclosure of information relating to BSE cases and the control measures taken.

Detailed instructions on the testing of routine slaughter animals >48 months of age are provided in the *Implementation Guideline for Transmissible Spongiform Encephalopathy (TSE) Testing* (MHLW Notification No. shoku/306, October 2001; last revision December 2011). This document is produced by MHLW. The Guideline provides detailed instructions on ante and post mortem inspections focused on BSE, sample collection procedures including detailed pictures, transport and handling of suspected BSE material, disinfection protocols, laboratory procedures, reporting and communication and actions to be taken in the case of BSE positive test results.

Both Guidelines are updated to incorporate any changes in policy, diagnostic tests and other procedures.

14.4 Diagnostic tests

The Committee on Prion Disease (coordinated through MAFF) and the Expert Committee on BSE testing (coordinated through MLHW) have the overarching responsibility of coordinating BSE testing and reporting in their respective Ministries. The standardisation and evaluation of reagents (monoclonal antibodies and synthetic peptides) and validation of test kits is a shared responsibility of the National Institute of Animal Health (NIAH), the National Institute of Infectious Diseases (NIID), Hokakido University and Obihiro University. These four institutions share information and collaborate to ensure that rapid tests and confirmatory tests are consistently applied across BSE testing laboratories.

The NIAH and NIID provide oversight and coordinate the testing of animals submitted to prefectural LHSC laboratories and MIC laboratories, respectively (refer to Appendix 8 for flow chart). The 47 prefectural LHSC laboratories and approximately 100 MIC laboratories use commercial enzyme-linked immunosorbent assay (ELISA) test kits to screen brainstem samples. For animals that test positive by screening test, the test is repeated and samples are submitted to the NIAH or NIID for confirmatory testing by western blot and immunohistochemistry according to methods described in Chapter 2.4.6 of the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals.

14.5 Laboratory assurances and auditing

The NIAH conduct training for all staff collecting brain stem samples and conducting BSE testing in prefectural LHSCs. LHSC laboratories monitor internal quality control and maintain up to date laboratory protocols. The LHSC laboratories are not audited but records are maintained.

The NIAH does not currently have an ISO accredited quality management system, however procedures are in place for managing laboratory protocols and sample handling, biosecurity, equipment manuals, staff training and records management. During the in-country verification visit, the Australian delegation was informed that a QMS manual is in development for future accreditation. The NIAH laboratory is not audited but does participate in international proficiency testing with the UK and Canadian reference laboratories, especially for the detection of atypical BSE cases. The NIAH also collaborates with the BSE testing laboratory in the Republic of Korean.

The NIID provide training for MIC laboratory staff in sample handling and BSE test procedures. MIC laboratories monitor internal quality control and maintain up to date laboratory protocols. Proficiency testing for ELISA based BSE tests in the MIC laboratories are coordinated by the NIID. During the in-country verification visit, the Australian delegation was informed that the Gunma Prefecture MIC laboratory is audited for good laboratory practice twice per year by the food safety department of prefectural government. The laboratory participated in proficiency testing in 2013 and performed tests on three pre-prepared BSE samples with no negative feedback.

As mentioned in the previous section, the NIAH, NIID, Hokakido University and Obihiro University prion disease laboratories share information and samples to ensure the consistent application of BSE tests conducted throughout Japan.

14.6 Penalties and reporting incentives

Veterinarians who fail to comply with the requirements set out in the *Domestic Animal Infectious Diseases Control Law* may be subject to a fine or imprisonment. Cattle owners who have slaughtered animals in accordance with the Law may be eligible for compensation, including costs associated with the incineration or burial of animals.

15 Cattle identification and traceability

15.1 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 capability for effective and timely identification, tracing and removal of beef and beef products from the distribution chain.

15.2 Legislation

As described in Section 10.1 above, a single legislative instrument controls Japan's domestic cattle and beef traceability system from the birth of calves through to the retail sale of meat. The *Cattle Traceability Act* (Act No. 72, June 2003) is a comprehensive legislative instrument that:

- Entrusts the establishment and management of the Individual Cattle Identification Register to the NLBC. This also entails the collection and management of data and the public disclosure of cattle traceability information via the internet
- The information collected for the Individual Cattle Identification Register comprises:
    - Individual Identification Number
    - Date of birth
    - Gender
    - Individual Identification Number of maternal parent
    - Raising location(s) and raising person(s) from birth to slaughter
    - Dates of outgoing and incoming transfers
    - Date of slaughter or death
    - Other details including breed, location of abattoir, date of import for imported cattle.
- Ear tags (one in each ear) bearing a unique ten digit Individual Identification Number and barcode must be attached as soon as possible after birth or importation and removal is forbidden.
- Lost or illegible ear tags can be replaced.
- Managers and/or owners of cattle must immediately notify the NLBC of transfers of cattle to another party, providing information on the Individual Identification Number of transferred cattle, the name or title of the other party to the transfer, the date of the transfer, and other matters.
- Upon receipt of cattle, the new owner must also immediately notify the NLBC, providing information on the Individual Identification Number of transferred cattle, the name or title of the other party to the transfer, the date of the transfer, and other matters.
- Managers and/or owners of cattle must immediately notify the NLBC if cattle die or

are exported, providing information on the Individual Identification Number, date of death or export and other information
- Abattoir owners are responsible for notifying the NLBC when cattle are slaughtered, including the Individual Identification Number and the date of slaughter.
- The Act authorises the inspection of all businesses along the supply chain to ensure compliance with the requirements
- Failure to comply with the provisions set out in the Act is punishable by a fine of 300,000 Yen.

15.3 Current identification system for cattle

Third party private companies are authorised by the MAFF to produce and supply the ear tags with the Individual Identification Number and barcode; available numbers are issued to ear tag manufacturers by the NLBC. Cattle owners apply in advance for ear tags based on the number of calves born in previous years. Cattle breeders and importers are responsible for notifying the NLBC of calf births or cattle imports and this is typically achieved via a secure NLBC website and unique registration details are used to log into the system. Through membership of a Japan Agricultural Cooperative (JA), some cattle owners may engage their JA representative to manage their reporting obligations with respect to cattle traceability.

Ear tags are affixed to each ear by the owner or manager. During the in-country verification visit, the Australian delegation was informed that very young calves are not immediately ear tagged; rather the tag is hung around the newborn calf's neck. Ear tags are attached after approximately one week. Ear tags that are damaged can be replaced and these replacement tags have a marking to indicate that it is a replacement. Cattle cannot be transferred to a new owner or for slaughter without both ear tags attached.

During the in-country verification visit a real-time demonstration of the traceability system was provided via mobile phone internet connection on farms, at slaughter and in a Wagyu beef restaurant using the English language version of the publicly available cattle traceability website (http://www.id.nlbc.go.jp/english/index.html).

15.4 Evaluation and inspection

The methods of notifying the NLBC have in-built quality control components. The seller and buyer are required to input the Individual Identification Numbers and the seller/buyer details into the system and any anomalies, once identified, are verified and corrected under the supervision of MAFF. In addition, on farm inspections are conducted twice per year to verify the Individual Identification Numbers on farm against those listed in the Individual Cattle Identification Register.

16 Summary: BSE control programs and technical infrastructure

Since the identification of the first BSE case in 2001, Japan has taken a very active approach to BSE awareness across the entire cattle sector to ensure all stakeholders are aware of and comply with their legal obligations to prevent the re-introduction and amplification of BSE in Japan. Japan has strict notification requirements and proven procedures for identifying and handling BSE suspect cases. Significant resources in MAFF and MHLW are dedicated to the training of livestock and abattoir veterinarians and laboratory staff and alerting and educating all stakeholders about BSE. Japan has an extensive prefectural laboratory network with national coordination provided by NIAH and NIID and has the field and laboratory expertise

and capability to detect, properly diagnose, and confirm BSE cases.

Japan has a comprehensive and well managed cattle and beef traceability system. Japan's traceability system was implemented in response to BSE and allows full traceability along the whole beef supply chain. At any point up to retail sale, beef can be traced back to the source and all birth and feeding cohort animals can be effectively identified. Full traceability was effectively demonstrated on two farms, two abattoirs, a supermarket and a Wagyu beef restaurant during the in-country verification visit.

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 Chapter 11.5 of OIE's *Terrestrial Animal Health Code*. 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. This chapter provides details of Japan's surveillance activities and historical data.

17 Japan's BSE surveillance program

BSE was listed as a designated disease in 1996 through an amendment to the *Domestic Animal Infectious Diseases Control Law* (Act No. 166, May 1951).

The surveillance system from April 1996 to March 2001 was passive and was reliant on farmers or private veterinarians taking fallen stock to Livestock Hygiene Service Centres (LHSC) for disease diagnosis for which an infectious disease was suspected but the cause of death could not be determined. Between 217 and 251 cattle were tested each year for the five years this surveillance program was in place. From April 2001, a new target of 300 head of cattle per year was set and surveillance efforts actively targeted cattle with neurological clinical signs of disease.

The first BSE case was detected in September 2001. In October of the same year, the surveillance target for fallen stock was expanded to 4500 head with clinical signs of central nervous system disease; routine testing of cattle in slaughterhouses was also commenced in October 2001. Notification of all fallen stock 24 months of age or older and subsequent testing of these animals for BSE was made mandatory in April 2003 by the *Act on Special Measures against Bovine Spongiform Encephalopathy* (Act No. 70, June 2002). By 2004, the testing system for fallen stock was fully established. The testing for BSE of all cattle >20 months of age in slaughterhouses was also made mandatory in July 2002 by the *Act on Special Measures against Bovine Spongiform Encephalopathy*.

Based on risk assessments conducted by the FSC of Japan in 2012 and 2013, the age limit for routine testing of healthy cattle in slaughterhouses was progressively modified as follows:

- From July 2002 to 31 March 2013, all cattle >20 months of age in slaughterhouses were subject to mandatory BSE testing
- From 1 April to 30 June 2013, all cattle >30 months of age were subject to mandatory BSE testing
- From 1 July 2013 to present, all cattle >48 months of age are subject to mandatory BSE testing.

For the purpose of calculating surveillance point's data, healthy cattle sampled for BSE in slaughterhouses are classified as *routine slaughter* (younger animals may be routinely tested for BSE but there is no legal requirement to do so). All cattle 24 months of age or older and showing clinical signs of disease are tested for BSE and are classified as either *casualty slaughter* or *fallen stock*. All cattle, irrespective of age, showing clinical signs consistent with BSE are classified as *clinically suspect* and are sacrificed and tested for BSE. To date, the surveillance program in Japan has not identified any cattle classified as a *clinically suspect* case. The surveillance categories used in Japan in comparison to the OIE categories and location of sampling are described in Table 17.1 below.

Table 17.1 BSE surveillance classifications used in Japan

OIE category	Japan's category	
	Farm level	**Slaughterhouse level**
Clinically suspect	1	4
Casualty slaughter	2	4
Fallen stock	3	-
Routine slaughter	-	5,6

[1] Cattle displaying specified clinical signs, which are defined as cattle on farms that are refractory to treatment and display progressive clinical signs, namely (i) changes in temperament, (ii) nervous hyperesthesia to sound, light, touch or other stimulation, (iii) repeated lowering of its head and pressing against fences or similar behaviour; or (iii) abnormal gait or paralysis of hindquarters. Japan applies the definition of a clinical suspect case very deliberately and strictly.
[2] Cattle ≥24 months of age with central nervous system signs including ones suspected of *Haemophilus somnus* infection, central cortex necrosis and downer cow syndrome, or cattle showing difficulty rising or unable to rise and the cause could not be determined on farms. The surveillance category of *casualty slaughter* also included cattle which were condemned for reasons other than neurological signs and died or were culled on farm.
[3] Cattle ≥24 months of age that died or were culled on farm with signs other than those described for *clinically suspect* or *casualty slaughter*.
[4] Cattle with neurological clinical signs including movement disorders, perception and reflection/consciousness, and/or systemic signs on ante mortem inspection.
[5] Healthy cattle >48 months of age
[6] Other healthy cattle

18 Japan's BSE surveillance points data

The BSE surveillance program in Japan complies with the guidelines set out in Chapter 11.5 of the OIE's Terrestrial Animal Health Code. Japan's BSE risk status was re-classified from controlled risk to negligible risk in May 2013. Prior to this re-classification, Japan was required to comply with 'Type A' surveillance which allows detection of one BSE case in 100,000 adult cattle (at a level of confidence of 95%). The adult cattle population in Japan is greater than 1,000,000 head and for this population size the OIE recommended target for 'Type A' surveillance is 300,000 points, collected over seven consecutive years. For the seven consecutive years from 2006-2012 for which Japan was required to meet the point's total for "Type A" surveillance, the total surveillance points accumulated in Japan exceeded 1.1 million.

With a BSE negligible risk status, Japan is now required to meet the point's total of 'Type B' surveillance, which is 150,000 points and is calculated to allow detection of one BSE case per 50,000 adult cattle. Under the current surveillance program, Japan has been able to satisfy the requirements of both 'Type A' and 'Type B' surveillance. Routine testing of healthy cattle <48 months of age has accounted for 43-46% of the yearly point's total. The change in age limit for routine testing of healthy cattle from >20 months to >48 months should therefore not diminish Japan's capacity to achieve their required surveillance targets.

Table 18.1 BSE surveillance data for the period 2005-2012, summarised by the number of samples and points accumulated for each surveillance sub-population stratified by age class.

Age class	Clinically suspect		Casualty slaughter		Fallen stock		Routine slaughter	
	Samples	Points	Samples	Points	Samples	Points	Samples	Points
FY 2005[1]								
≥1<2y	0	0	0	0	0	0	280,541	2,805
≥2<4y	0	0	3,632	1,453	25,705	5,141	702,596	70,260
≥4<7y	0	0	6,454	10,326	36,104	32,494	110,573	22,115
≥7<9y	0	0	2,876	2,013	14,678	5,871	52,951	5,295
≥9y	0	0	1,723	345	11,514	1,151	69,150	0
Total	0	0	14,685	14,137	88,001	44,657	1,215,811	100,475
Points total: 159,269								
FY 2006[1]								
≥1<2y	0	0	0	0	0	0	272,785	2,728
≥2<4y	0	0	3,348	1,339	25,571	5,114	693,545	69,355
≥4<7y	0	0	6,082	9,731	35,916	32,324	112,440	22,488
≥7<9y	0	0	2,739	1,917	14,602	5,841	53,845	5,385
≥9y	0	0	1,640	328	11,454	1,145	70,317	0
Total	0	0	13,809	13,316	87,543	44,425	1,202,932	99,955
Points total: 157,695								
FY 2007[1]								
≥1<2y	0	0	0	0	0	0	277,460	2,775
≥2<4y	0	0	3,178	1,271	24,513	4,903	700,215	70,022
≥4<7y	0	0	5,790	9,264	34,430	30,987	111,891	22,378
≥7<9y	0	0	2,611	1,828	13,998	5,599	53,582	5,358
≥9y	0	0	1,564	313	10,980	1,098	69,974	0
Total	0	0	13,143	12,676	83,921	42,587	1,213,122	100,533
Points total: 155,795								
FY 2008[1]								
≥1<2y	0	0	0	0	0	0	281,339	2,813
≥2<4y	0	0	2,949	1,180	25,491	5,098	708,624	70,862
≥4<7y	0	0	5,563	8,901	35,803	32,223	112,800	22,560
≥7<9y	0	0	2,550	1,785	14,556	5,822	54,018	5,402
≥9y	0	0	1,527	305	11,418	1,142	70,543	0
Total	0	0	12,589	12,171	87,268	44,285	1,227,324	101,638
Points total: 158,093								
FY 2009[1]								
≥1<2y	0	0	0	0	0	0	284,612	2,846
≥2<4y	0	0	2,864	1,146	26,023	5,205	705,205	70,521
≥4<7y	0	0	5,492	8,787	36,551	32,896	108,578	21,716
≥7<9y	0	0	2,535	1,775	14,860	5,944	51,996	5,200
≥9y	0	0	1,519	304	11,656	1,166	67,902	0
Total	0	0	12,410	12,011	89,090	45,210	1,218,293	100,282
Points total: 157,503								
FY 2010[1]								
≥1<2y	0	0	0	0	0	0	278,011	2,780
≥2<4y	0	0	3,017	1,207	28,440	5,688	692,531	69,253
≥4<7y	0	0	5,857	9,371	39,946	35,951	107,807	21,561
≥7<9y	0	0	2,718	1,903	16,240	6,496	51,627	5,163
≥9y	0	0	1,628	326	12,739	1,274	67,420	0
Total	0	0	13,220	12,806	97,365	49,409	1,197,396	98,757
Points total: 160,973								
FY 2011[1]								
≥1<2y	0	0	0	0	0	0	267,029	2,670
≥2<4y	0	0	2,660	1,064	28,288	5,658	677,216	67,722
≥4<7y	0	0	5,389	8,622	39,732	35,759	109,262	21,852
≥7<9y	0	0	2,546	1,782	16,153	6,461	52,324	5,232
≥9y	0	0	1,524	305	12,671	1,267	68,330	0
Total	0	0	12,119	11,773	96,844	49,145	1,174,161	97,477

Points total: 158,395								
FY 2012[1]								
≥1<2y	0	0	0	0	0	0	0	0
≥2<4y	0	0	2,613	1,045	28,790	5,758	683,149	68,315
≥4<7y	0	0	5,363	8,581	40,437	36,393	107,656	21,531
≥7<9y	0	0	2,547	1,783	16,440	6,576	51,554	5,155
≥9y	0	0	1,525	305	12,896	1,290	67,326	0
Total	0	0	12,048	11,714	98,563	50,017	909,685	95,002
Points total: 156,732								
Points total 2006 - 2012: **1,105,187**								

[1] Years refer to the Japanese fiscal year (FY) which extends from 1 April to the 31 March the following year. At the time of writing, the surveillance data available was for the FY 2012 which includes data up to 31 March 2013. The data presented in this table for *routine slaughter* are from samples collected under the superseded surveillance requirements of mandatory testing of all cattle >20 months of age.

19 Summary: BSE surveillance

Japan has an ongoing BSE surveillance program. Current surveillance practices have been in place since 2004 and for the seven year period from 2006-2012 greater than 1.1 million points have been accumulated, exceeding the requirements of both “Type A’ and “Type B” surveillance. For a country such as Japan, which has had BSE cases, surveillance monitors the progress and efficacy of control measures introduced to prevent the re-introduction and amplification of the BSE agent in the cattle population. In this context, BSE surveillance data accumulated by Japan since 2004 demonstrates that controls established by the Japanese authorities (feed ban, destruction of risk materials, import restrictions and traceability) have effectively mitigated BSE risk.

Conclusions and BSE risk categorisation

Overall, Japan has demonstrated that there are well-established and effective systems in place across the beef production sector to prevent the re-introduction and amplification of BSE within the cattle population and to prevent contamination of the human food supply with the BSE agent.

Control measures to prevent the introduction, recycling and amplification of the BSE agent in Japan are well established. As a consequence, Japan has negligible external exposure to the BSE agent through imported bovine material and strict internal controls to prevent potential amplification in the Japanese cattle population. No MBM or greaves that could be converted into livestock feed or fertiliser has been imported into Japan since the import suspension came into effect in October 2001. No MBM has been imported since 2004 for any purpose. Cattle have only been imported from Australia and New Zealand for the eight year period from 2006-2013. Imports from the USA and Canada were banned in 2003 and one head of cattle was imported for research purposes from the Republic of Korea in 2005. Bovine products are imported for human consumption, pet food, and for industrial use and research. These imports are controlled by the AQS to prevent use in animal feed. Beef and beef products originate from countries that have not detected BSE cases or from countries where BSE cases have occurred and have undergone a risk assessment by the FSC of Japan. The latter beef imports are subject to age restrictions on source animals.

Animals at the highest risk for BSE are identified through rigorous ante-mortem inspection procedures and non-ambulatory animals or those animals showing signs consistent with BSE are prevented from entering the slaughter chain. Disposal of such animals is through incineration. All ruminant derived MBM and SRMs must be destroyed by incineration in Japan and no ruminant MBM is permitted to be used in any livestock feed. Furthermore, poultry, pig and fish meals are prohibited in cattle feed in Japan to completely eliminate the risk of cross-contamination of cattle feed with mammalian proteins. Japan has successfully implemented complete separation of feed production and feed distribution supply chains for ruminants and non-ruminant livestock and results from both the BSE feed inspection program and the BSE feed testing program since 2005 shows an extremely high level of compliance. Japan has therefore demonstrated a very low likelihood that cattle could be exposed to BSE through contaminated feed.

Japan's mandatory cattle and beef traceability system is comprehensive and uses a single identification number from the birth of calves through to the retail sale of meat. At any point up to retail sale, beef can be traced back to the source animal and all birth and feeding cohort animals can be effectively identified. Beef and beef products intended for human consumption are forward-traceable through the food supply chain and food businesses are required to have an effective recall protocol in place for the recovery of product if required.

Japan has a well-established BSE awareness program across all sectors of the cattle industry to ensure all stakeholders are aware of and comply with their legal obligations. Japan has strict notification requirements and proven procedures for identifying and handling BSE suspect cases. Japan has an extensive laboratory network at the prefectural level with national oversight and confirmatory testing provided by NIAH and NIID. Diagnostic tests compliant with the OIE standards are used for screening and confirmation and Japan participates in a proficiency testing program with the UK and Canadian Reference Laboratories, ensuring that laboratory testing and reporting are maintained at a high standard. Active surveillance for BSE in Japan is in line with OIE recommendations and representative numbers of cattle sub-populations at highest risk of BSE are tested. Japan meets the OIE surveillance points target for both Type A and Type B surveillance. Japan is able to identify, trace and respond to suspect and confirmed BSE cases should they occur.

The competent authorities responsible for BSE controls in Japan, MAFF and MHLW, demonstrated a high degree of oversight of all BSE related controls during the in-country verification visit. Good communication between the two Ministries and between the respective national offices in Tokyo and prefectural offices was evident; as was the strong working relationship between government veterinarians and stakeholders along the beef supply chain.

Japan has comprehensive and well established controls to prevent the re-introduction and amplification of the BSE agent within the cattle population and prevent contamination of the human food supply with the BSE agent. This BSE food safety risk assessment concludes that beef and beef products imported from Japan are safe for human consumption and recommends **Category 1** status for Japan.

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Appendices

Appendix 1: Overview of cattle and beef production in Japan

The cattle population in Japan as at February 2011 was 4.23 million head, comprised of 1.47 million dairy cattle and 2.76 million beef cattle. Hokkaido prefecture in the north of the country is the main cattle production region in Japan, accounting for 56% of the dairy herd (and 52% of milk production) and 19% of the beef herd. Other major beef production regions are Miyazaki and Kagoshima prefectures in the south, accounting for 9 and 13% of the beef herd, respectively. Nationally beef production is ensconced in the smallholder sector with the majority of beef farm households having less than 10 head per farm. In contrast, in Hokkaido prefecture, the majority of beef farm households are medium to large enterprises having greater than 20 head per farm (Figure A1.1). The average herd size nationally is 40 head per farm, increasing to 178 head per farm in Hokkaido and just 33 head per farm for the rest of the country. For the national dairy herd, the majority of dairy farm holdings are small to medium enterprises, as compared to Hokkaido prefecture where the majority of dairy farms are medium to large enterprises (Figure A1.2).

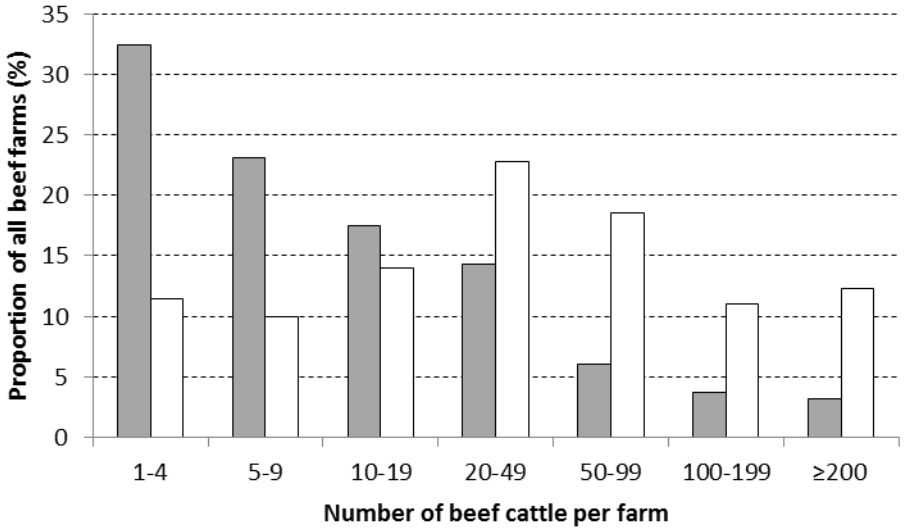


Figure A1.1 Average farm size for beef cattle in Japan (grey bar) and Hokkaido prefecture (white bar). (Source: 87th Statistical Yearbook of the Ministry of Agriculture, Forestry and Fisheries, 2011-2012. http://www.maff.go.jp/e/tokei/kikaku/nenji_e/87nenji/#nse005, accessed 20 February 2014).

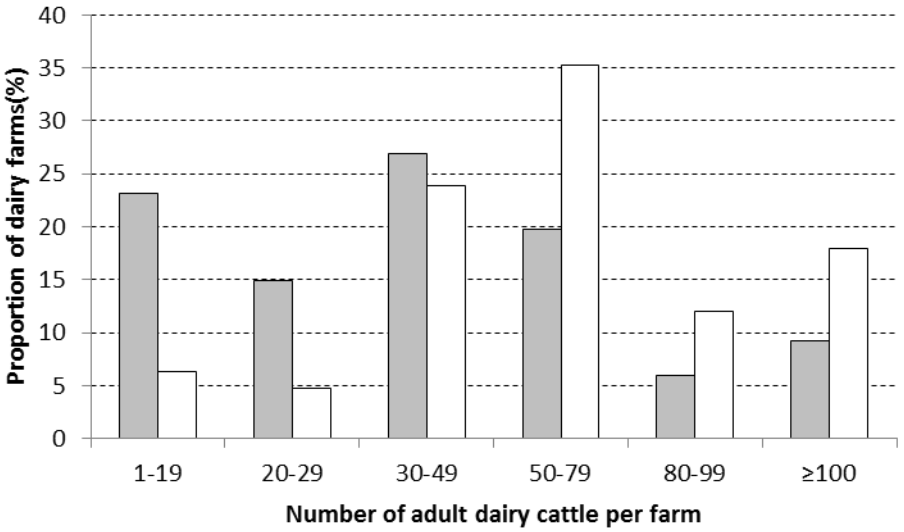


Figure A1.2 Average farm size for dairy cattle in Japan (grey bar) and Hokkaido prefecture (white bar). (Source: 87th Statistical Yearbook of the Ministry of Agriculture, Forestry and Fisheries, 2011-2012).

Table A1.1 Cattle population of Japan by prefecture and production type, February 2011

Prefecture	Dairy cattle population	Beef cattle population	Total (%)
Hokkaido	827,900	535,900	1,363,800 (32.2)
Aomori	13,500	58,900	72,400 (1.7)
Iwate	46,900	109,000	155,900 (3.7)
Miyagi	23,500	90,000	113,500 (2.7)
Akita	6,060	20,300	26,360 (0.6)
Yamagata	13,400	41,600	55,000 (1.3)
Fukushima	17,100	74,200	91,300 (2.2)
Ibaraki	29,600	54,700	84,300 (2.0)
Tochigi	53,000	94,200	147,200 (3.5)
Gunma	39,200	64,800	104,000 (2.5)
Saitama	12,400	19,900	32,300 (0.8)
Chiba	38,400	39,000	77,400 (1.8)
Tokyo	1,870	900	2,770 (0.1)
Kanagawa	8,870	4,730	13,600 (0.3)
Niigata	9,220	13,500	22,720 (0.5)
Toyama	2,570	4,250	6,820 (0.2)
Ishikawa	4,330	2,830	7,160 (0.2)
Fukui	1,370	3,470	4,840 (0.1)
Yamanashi	4,140	7,240	11,380 (0.3)
Nagano	19,500	28,500	48,000 (1.1)
Gifu	7,940	35,800	43,740 (1.0)
Shizuoka	15,700	24,100	39,800 (0.9)
Aichi	31,100	53,200	84,300 (2.0)
Mie	6,500	27,100	33,600 (0.8)
Shiga	4,000	17,000	21,000 (0.5)
Kyoto	4,980	6,870	11,850 (0.3)
Osaka	1,750	850	2,600 (0.1)
Hyogo	18,400	55,700	74,100 (1.8)
Nara	3,940	4,140	8,080 (0.2)
Wakayama	750	3,550	4,300 (0.1)
Tottori	10,400	20,400	30,800 (0.7)
Shimane	9,930	31,900	41,830 (1.0)
Okayama	18,100	35,600	53,700 (1.3)
Hiroshima	9,970	26,300	36,270 (0.9)
Yamaguchi	3,680	17,600	21,280 (0.5)
Tokushima	6,340	27,600	33,940 (0.8)
Kagawa	5,300	18,200	23,500 (0.6)
Ehime	7,350	17,200	24,550 (0.6)
Kochi	4,710	5,760	10,470 (0.2)
Fukuoka	16,600	25,200	41,800 (1.0)
Saga	4,060	62,200	66,260 (1.6)
Nagasaki	9,690	88,100	97,790 (2.3)
Kumamoto	43,600	145,700	189,300 (4.5)
Oita	15,200	62,500	77,700 (1.8)
Miyazaki	13,800	239,700	253,500 (6.0)
Kagoshima	16,200	360,700	376,900 (8.9)
Okinawa	4,660	82,200	86,860 (2.1)
Total	**1,467,480**	**2,763,090**	**4,230,570 (100.0)**

(Source: 87th Statistical Yearbook of the Ministry of Agriculture, Forestry and Fisheries, 2011-2012).

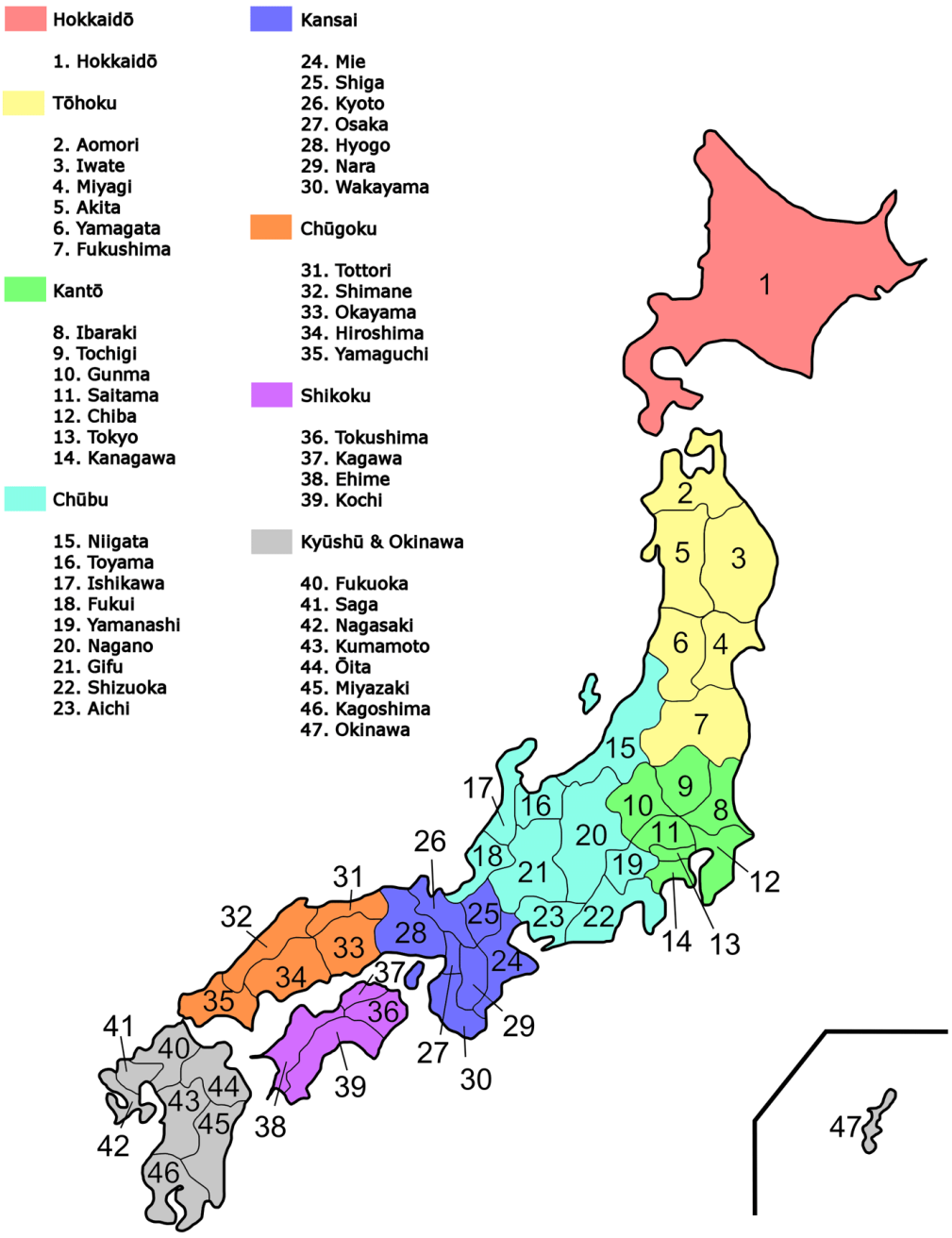


Figure A1.3 Map of prefectures of Japan
(Source: http://mapsof.net/map/regions-and-prefectures-of-japan#.UvmzTLG4aic)

Appendix 2: BSE History

In total, 36 cases of BSE have been confirmed.

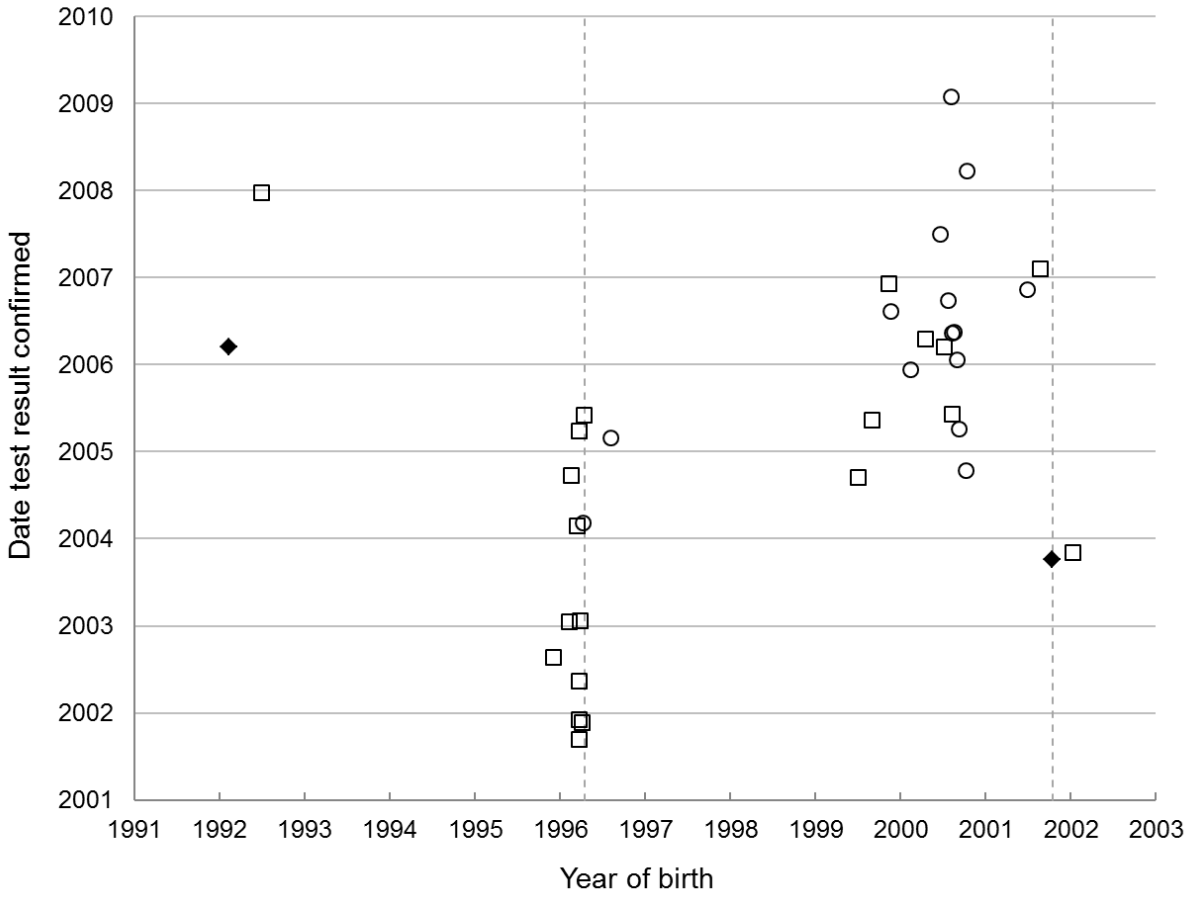


Figure A2.1 BSE cases by year of birth and year of laboratory confirmation of a positive test result. Open squares represent cases detected from slaughterhouses (20 cases) and open circles represent cases detected from farms (14 cases). Solid diamonds represent atypical BSE cases (two cases). First dashed line (16 April 1996) indicates introduction of ban on feeding cattle with ruminant protein by notification. Second dashed line (15 October 2001) indicates introduction of the 'real' feed ban by legislation.

Table A2.1 Summary of the 36 cases of BSE detected in Japan since 2001.

Case Number	Date of BSE confirmation	Date of birth	Age (months)	Prefecture where case was reared	Prefecture where case originated	Farm type	Breed	Sex[¶]	Cohorts[§]	Sample origin[¶¶]
1	10/09/2001	26/03/1996	65	Chiba	Hokkaido	dairy	holstein	f	59	sh
2	21/11/2001	4/04/1996	67	Hokkaido	Hokkaido	dairy	holstein	f	81	sh
3	2/12/2001	26/03/1996	68	Gunma	Gunma	dairy	holstein	f	96	sh
4	13/05/2002	23/03/1996	73	Hokkaido	Hokkaido	dairy	holstein	f	52	sh
5	23/08/2002	5/12/1995	80	Kanagawa	Kanagawa	dairy	holstein	f	37	sh
6	20/01/2003	10/02/1996	83	Wakayama	Hokkaido	dairy	holstein	f	33	sh
7	23/01/2003	28/03/1996	81	Hokkaido	Hokkaido	dairy	holstein	f	17	sh
8[#]	6/10/2003	13/10/2001	23	Fukushima	Tochigi	fattening	holstein	cm	116	sh
9	4/11/2003	13/01/2002	21	Hiroshima	Hyogo	fattening	holstein	cm	134	sh
10	22/02/2004	17/03/1996	95	Kanagawa	Kanagawa	dairy	holstein	f	0	sh
11	9/03/2004	8/04/1996	94	Hokkaido	Hokkaido	dairy	holstein	f	16	f
12	13/09/2004	3/07/1999	62	Kumamoto	Kumamoto	dairy	holstein	f	5	sh
13	23/09/2004	18/02/1996	103	Nara	Hokkaido	dairy	holstein	f	8	sh
14	14/10/2004	8/10/2000	48	Hokkaido	Hokkaido	dairy	holstein	f	62	f
15	26/02/2005	5/08/1996	102	Hokkaido	Hokkaido	dairy	holstein	f	6	f
16	27/03/2005	23/03/1996	108	Hokkaido	Hokkaido	dairy	holstein	f	1	sh
17	8/04/2005	11/09/2000	54	Hokkaido	Hokkaido	dairy	holstein	f	11	f
18	12/05/2005	31/08/1999	68	Hokkaido	Hokkaido	dairy	holstein	f	31	sh
19	2/06/2005	16/04/1996	109	Hokkaido	Hokkaido	dairy	holstein	f	7	sh
20	6/06/2005	12/08/2000	57	Hokkaido	Hokkaido	dairy	holstein	f	18	sh
21	10/12/2005	13/02/2000	69	Hokkaido	Hokkaido	dairy	holstein	f	9	f
22	23/01/2006	1/09/2000	64	Hokkaido	Hokkaido	dairy	holstein	f	45	f
23	15/03/2006	8/07/2000	68	Hokkaido	Hokkaido	dairy	holstein	f	19	sh
24[#]	17/03/2006	10/02/1992	169	Nagasaki	Nagasaki	breeding	japanese black	f	3	sh
25	19/04/2006	18/04/2000	71	Okayama	Hokkaido	dairy	holstein	f	13	sh
26	13/05/2006	11/08/2000	68	Hokkaido	Hokkaido	dairy	holstein	f	11	f
27	19/05/2006	20/08/2000	68	Hokkaido	Hokkaido	dairy	holstein	f	9	f
28	11/08/2006	21/11/1999	80	Hokkaido	Hokkaido	dairy	holstein	f	19	f
29	28/09/2006	24/07/2000	75	Hokkaido	Hokkaido	dairy	holstein	f	26	f
30	13/11/2006	28/06/2001	64	Hokkaido	Hokkaido	dairy	holstein	f	17	f
31	8/12/2006	12/11/1999	84	Hokkaido	Hokkaido	dairy	holstein	f	15	sh
32	7/02/2007	26/08/2001	65	Hokkaido	Hokkaido	dairy	holstein	f	30	sh
33	2/07/2007	21/06/2000	84	Hokkaido	Hokkaido	mixed	japanese black	f	8	f
34	21/12/2007	1/07/1992	185	Hokkaido	Shimane	fattening	japanese black	f	3	sh
35	24/03/2008	12/10/2000	89	Hokkaido	Hokkaido	breeding	japanese black	f	9	f
36	30/01/2009	5/08/2000	101	Hokkaido	Hokkaido	dairy	holstein	f	6	f

[#] Atypical BSE case; [¶] f=female, cm=castrated male; [§] Total number of cohorts culled = 1032; [¶¶] sh=slaughterhouse, f= collected from cattle that died on farm

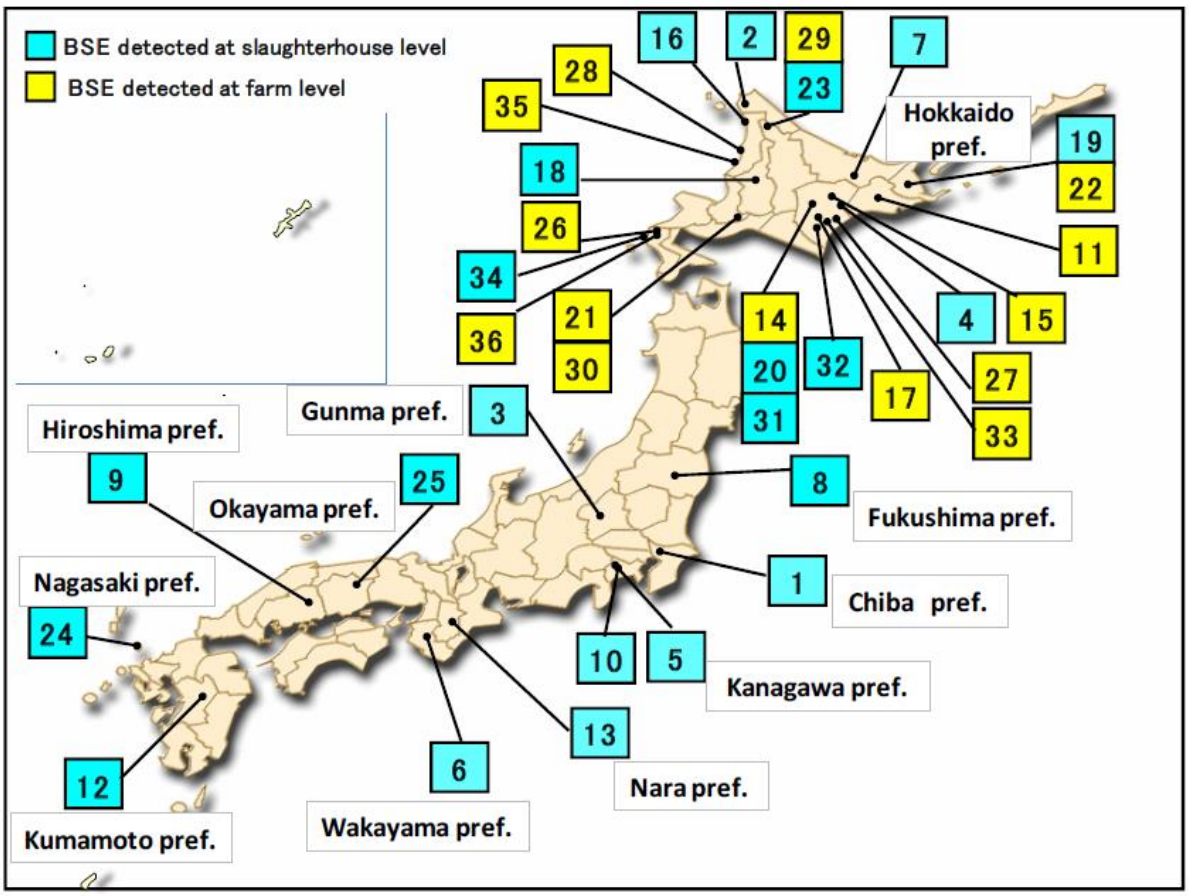


Figure A2.2 Location of the 36 BSE cases detected in Japan since 2001 (case numbers, in boxes, can be referenced in Table A2.1 above)

Appendix 3: Legal and regulatory control of animal and animal product imports

Table A3.1 Import prohibition areas for cloven hoof animals and their products[¶]

Area description	Countries	Live animals	Semen, embryos	Ham sausage bacon	Meat viscera
Area 1: Areas which are free from virulent infectious diseases affecting domestic animals	Finland, Sweden, Norway, Poland, Hungary, Czech Republic, Denmark, Italy (except salgenia island), San Marino, Liechtenstein, Swiss, The Netherlands, France, Austria, Spain, Portugal, Germany, Belgium, Ireland, Iceland, Brazil (State of Santa Catalina only), United Kingdom (Great Britain and Northern Ireland only), Canada, U.S.A. (Mainland, Hawaii and Guam only), Mexico, Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, The Dominican Republic, Chile, Northern Mariana, New Zealand, Vanuatu, New Caledonia and Australia (39 areas)	Importable [1,2,3]			
Area 2: Areas recognised as having an undeniable possibility of outbreaks of virulent infectious diseases affecting domestic animals	Singapore,Romania, Slovenia, Croatia, Bosnia Herzegovina (5 areas)	Importable [1]			Import prohibition [1,4]
Area 3: Areas recognised as having outbreaks or possibility of outbreaks of virulent infectious diseases affecting domestic animals	Areas other than those mentioned above	Import prohibition		Import prohibition [1,4]	

[1] The need of inspection certificate. Although the listed items are importable, they must be accompanied with an inspection certificate issued by the appropriate government agencies of the exporting countries described that they are satisfied with the Japanese standards or requirements. Quarantine articles must be accompanied with the inspection certificate.

[2] Import suspension on bovine, ovine or goat and their products from countries where BSE cases have occurred (see below Table A4.3 for list of countries where suspension is current)

[3] Beef or beef offal exported from Canada, USA, France, The Netherlands or Ireland; only those commodities treated in accordance with the animal health requirements concluded between Japan and the respective countries authorities, including specific export programs and designation of facilities, are acceptable. Beef products (e.g. sausage, beef jerky) have not been allowed to be imported.
[4] Heat-processed or other process under the standards set forth by the Minister of the Ministry of Agriculture, Forestry and Fisheries, Japan, in only those processing facilities designated by the Minister or the appropriate government agencies of the exporting countries
[¶]Adapted from Article 43 of the Enforcement Regulations of the *Domestic Animal Infectious Diseases Control Law*
(Source: Animal Quarantine Service; http://www.maff.go.jp/aqs/english/news/im_prohibit.html; accessed 9 April 2014)

Table A3.2 Countries subject to temporary import suspension for animals and animal products due to occurrence of BSE

United Kingdom	Slovenia	Liechtenstein
Switzerland	Sweden	Spain
Portugal	USA*[§]	Italy
Luxemburg	Brazil [¶]	Slovakia
The Netherlands*	Ireland*	Finland
Germany	France*	Poland*
Greece	Belgium	Israel
Czech Republic	Denmark	Canada*[§]
Romania		

* Beef and beef offal from these five countries is permitted to be exported to Japan subject to animal health requirements agreed to by Japan and the respective country authorities. Beef products such as sausage and beef jerky have not been permitted to be imported into Japan.
From 1 February 2013, beef imported from Canada and France must originate from cattle ≤30 months of age; beef from the USA must originate from cattle <30 months of age; and beef from the Netherlands must originate from cattle ≤12 months of age.
From 2 December 2013, beef imported from Ireland must originate from cattle ≤30 months of age.
From 1 August 2014, beef imported from Poland must originate from cattle ≤30 months of age
(Source: Animal Quarantine Service; http://www.maff.go.jp/aqs/english/news/im_prohibit.html; accessed 25 August 2014).
[¶] Beef imports from Brazil were suspended on 8 December 2012 (Source: Animal Quarantine Service; http://www.maff.go.jp/aqs/english/. Accessed 25 August 2014).
[§] From 12 December 2005, beef imports from Canada and USA were permitted from cattle ≤20 months of age (Source: submission). Importation was temporarily suspended from the USA on 20 June 2006 due to the presence of vertebral column in a shipment of meat; trade was resumed on 27 July 2006. Previously, imports were banned following the detection of a BSE case in May 2003 in Canada and December 2003 in the USA (Source: Annual Health, Labour and Welfare Report 2007-2008, http://www.mhlw.go.jp/english/wp/wp-hw2/part2/p2c9s3.pdf Accessed 25 August 2014).

Table A3.3 'Third Free' Countries recognised by Japan's Animal Quarantine Service as being free of BSE and virulent infectious diseases[¶] of ruminants

Norway	Honduras	Chile
Hungary	El Salvador	Northern Mariana Islands
Iceland	Nicaragua	New Zealand
Mexico	Costa Rica	Vanuatu
Belize	Panama	New Caledonia
Guatemala	Dominican Republic	Australia

[¶] Includes rinderpest and foot and mouth disease
(Source: Animal Quarantine Service; http://www.maff.go.jp/aqs/english/news/third-free.html; accessed 9 April 2014).

Appendix 4: Countries from which bovine material or products that could include bovine material or other sources of ruminant proteins have been imported since 2006

Table A4.1 Countries from which bovine meat and bovine proteins or products possibly containing bovine proteins have been imported for the FY* 2006 – 2013

Country of origin	Products imported 2006-2013	OIE Country BSE risk classification	Beef import suspended due to BSE cases	Virulent infectious disease classification[8]
Argentina	A,C,E,F,G,J,K	Negligible	No	Area 3
Australia	A,B,C,D,E,F,G,H,I,J,K	Negligible	No	Area 1
Austria	E,J,K	Negligible	No	Area 1
Bangladesh	C	-	No	Area 3
Belgium	E,J,K	Negligible	Yes	Area 1
Bhutan	E,J	-	No	Area 3
Botswana	K	-	No	Area 3
Brazil	A,C,E,F,G,J,K	Negligible	Yes	Area 1
Canada	A,C,E,I,J,K	Controlled	Yes[1]	Area 1
Chile	A,C,E,F,G,I,K	Negligible	No	Area 1
China	A,C,D,E,F,G,H,I,J,K	Negligible	No	Area 3
Costa Rica	A,C	Controlled	No	Area 1
Czech Republic	E,J	Controlled	Yes	Area 1
Denmark	E,I,J,K	Negligible	Yes	Area 1
Djibouti	C	-	No	Area 3
Egypt	E,K	-	No	Area 3
Ethiopia	C	-	No	Area 3
Finland	E	Negligible	Yes	Area 1
France	A,C,E,I,J,K	Controlled	Yes[2]	Area 1
Georgia	E,J	-	No	Area 3
Germany	D,E,I,J,K	Controlled	Yes	Area 1
Guatemala	E,J	-	No	Area 1
Haiti	E,J	-	No	Area 3
Honduras	A,C	-	No	Area 1
Hungary	A,E,J,K	Negligible	No	Area 1
Iceland	E,J	Negligible	No	Area 1
India	A,C,E,F,G,K	Negligible	No	Area 3
Indonesia	C,E,G,J,K	-	No	Area 3
Ireland	E,J,K,	Controlled	Yes[3]	Area 1
Israel	E,J,K	Negligible	Yes	Area 3
Italy	E,I,J,K	Negligible	Yes	Area 1
Korea (Republic of)	A,C,D,E,I,J,K	Negligible	No	Area 3
Luxemburg	E	Negligible	No	Area 3
Madagascar	C	-	No	Area 3
Malaysia	E,J,K	-	No	Area 3
Mali	K	-	No	Area 3
Malta	K	Negligible	No	Area 3
Mexico	A,C,E,G,J,K	Controlled	No	Area 1
Mongolia	A,C,E,G,J,K	-	No	Area 3
Myanmar	C	-	No	Area 3
Netherlands	A,E,I,J,K	Negligible	Yes[4]	Area 1
New Zealand	A,B,C,D,E,F,G,I,J,K	Negligible	No	Area 1
Nicaragua	A,C	Controlled	No	Area 1
Nigeria	C	-	No	Area 3

Norway	A,B,C,D,E,F,H,J,K	Negligible	No	Area 1
Pakistan	C,D,E	-	No	Area 3
Panama	A,C,K	Negligible	No	Area 1
Papua New Guinea	E,K	-	No	Area 3
Paraguay	C,E,J	Negligible	No	Area 3
Peru	C,E,G,K	Negligible	No	Area 3
Philippines	A,C,E,J,K	-	No	Area 3
Poland	E,J	Controlled	Yes[5]	Area 1
Portugal	K	Negligible	Yes	Area 1
Puerto Rico	E	-	No	Area 3
Qatar	E,J	-	No	Area 3
Romania	E	Negligible	Yes[6]	Area 2
Russia	E,K	-	No	Area 3
Singapore	E,J,K	Negligible	No	Area 2
Slovakia	E	Negligible	Yes	Area 3
Slovenia	K	Negligible	Yes	Area 2
South Africa	C,E,J,K	-	No	Area 3
Spain	E,J,K	Controlled	Yes	Area 1
Sri Lanka	C	-	No	Area 3
Sweden	E,J,K	Negligible	Yes	Area 1
Switzerland	E,I,J,K	Controlled	Yes	Area 1
Taiwan	A,C,E,J,K	Controlled	No	Area 3
Tanzania	C	-	No	Area 3
Thailand	A,C,E,F,G,I,J,K	-	No	Area 3
Togo	C	-	No	Area 3
Turkey	E	-	No	Area 3
Uganda	C	-	No	Area 3
United Arab Emirates	E,K	-	No	Area 3
United Kingdom	E,I,J,K	Controlled	Yes	Area 1
United States of America	A, B,C,D,E,F,G,I,J,K	Negligible	Yes[7]	Area 1
Uruguay	A,C,E,J,K	Negligible	No	Area 3
Vanuatu	A,C	-	No	Area 1
Vietnam	C,E,J,K	-	No	Area 3
Zimbabwe	C	-	No	Area 3

Key:

A. Meat and offal for human consumption; meat, ham, sausage, bacon, organ/digestive tract, casing and fat of bovine origin, or containing/potentially containing bovine origin ingredients.
B. Bovine derived meat meal derived only from deboned meat for human consumption.
C. Bone includes bone, crushed bone, hoof and horn, bone tendon, bone meal, hoof-and-horn meal, and other bone derived from bovine origin, mixed animal-species and unknown animal-species.
D. Meal includes blood meal, meat meal, offal meal, leather meal and other kinds of meal of bovine origin. Non-bovine derived meal excluded. Meal almost exclusively used for research purposes and 'pledge' statements and 'operation plans' required by AQS prior to import.
E. Processed animal protein includes ossein, calcium phosphate, bone ash, animal oil/fat, powdered animal oil/fat, gelatin, collagen, hydrolysed protein, and other processed animal protein derived from cattle, mixed animal-species and unknown animal-species. Imported for animal feed (excluding livestock feed), industrial use, food and research.
F. Meat and offal of ruminant origin, or containing/potentially containing ruminant origin ingredients intended for pet food (complementary to Product Type A).
G. Bone includes bone, crushed bone, hoof and horn, bone tendon, bone meal, hoof-and-horn meal, and other bone derived from ruminant origin intended for pet food (complementary to Product Type B).
H. Meal includes blood meal, meat meal, meat-and-bone meal, offal meal, leather meal and other kinds of meal of ruminant origin or containing/potentially containing ruminant origin ingredients intended for pet food (complementary to Product Type D).
I. Semi-moist pet food and other types of prepared pet food. Since 2008, dry pet food has been categorised as processed animal protein intended for pet food (see Product Type J below).
J. Processed animal protein (except MBM) intended for pet food: ossein, calcium phosphate, bone ash, greaves, animal oil/fat, powdered animal oil/fat, gelatine, collagen, hydrolysed protein, dry pet food and other processed animal protein intended for pet food (complementary to Product Type E).
K. Canned and retorted packaged pet food.

* FY, Fiscal year extends from 1 April to 31 March the following year.
[1] From 1 February 2013, beef and beef products from Canada must originate from cattle ≤30 months of age. From December 2005 to the recent change, the age limit on Canadian beef and beef products was from cattle ≤20 months of age. Beef imports were banned from Canada in May 2003 until December 2005.
[2] From 1 February 2013, beef and beef products from France must originate from cattle ≤30 months of age. Prior to this change, imports of beef and beef products from France were prohibited.
[3] From 2 December 2013, beef and beef products from Ireland must originate from cattle ≤30 months of age. Prior to this change, imports of beef and beef products from Ireland were prohibited.
[4] From 1 February 2013, beef and beef products from The Netherlands must originate from cattle ≤12 months of age. Prior to this change, imports of beef and beef products from The Netherlands were prohibited.
5 From 1 August 2014, beef and beef products from Poland must originate from cattle ≤30 months of age. Prior to this change, imports of beef and beef products from Poland were prohibited.
[6] From 23 June 2014, beef and beef products were suspended from Romania due to a case of BSE
[7] From 1 February 2013, beef and beef products from the USA must originate from cattle <30 months of age. From December 2005 to the recent change, the age limit on US beef and beef products was from cattle ≤20 months of age. Beef imports were banned from the USA in December 2003 until December 2005.
[8] Refer to Table A3.2 above for description of area classifications

Table A4.2 Imports of bovine derived products or products possibly containing bovine proteins for the FY 2006 – 2013, by country of origin (metric tons)[#]								
Country	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
A. Meat and meat products								
Argentina	140	208	214	206	224	143	249	138
Australia	463,952	431,940	401,921	396,371	394,549	377,064	346,234	323,372
Brazil	2,078	1,998	2,762	4,648	3,162	2,853	1,190	-
Canada	2,471	4,240	5,769	10,361	15,486	12,356	12,792	15,519
Chile	2,178	2,197	2,178	1,318	1,010	879	780	709
China	16,222	13,898	7,750	7,228	9,468	11,804	11,874	9,428
Costa Rica	526	642	462	-	288	178	114	50
France	-	-	-	-	-	-	-	119
Hawaii	-	<1	-	-	-	-	-	-
Honduras	32	87	299	184	69	-	25	17
Hungary	60	9	25	16	24	31	7	<1
India	-	-	<1	<1	-	-	-	-
Korea (Rep.)	11	5	<1	<1	<1	-	-	-
Mexico	9,037	10,964	14,614	14,104	18,118	22,387	26,898	24,872
Mongolia	-	-	-	-	<1	-	-	-
Netherlands	-	-	-	-	-	-	-	25
New Zealand	45,381	40,635	37,929	35,335	37,348	34,937	37,075	35,381
Nicaragua	378	552	489	437	608	883	712	449
Norway	164	113	143	132	113	62	114	111
Panama	482	633	329	199	140	265	267	376
Philippines	-	<1	-	-	-	-	-	-
Taiwan	-	-	-	<1	-	-	-	<1
Thailand	3,550	3,614	5,094	5,545	5,607	6,101	6,227	6,792
Uruguay	2	<1	<1	-	-	<1	<1	6
USA	9,110	40,083	63,500	82,268	107,209	138,790	148,898	227,747
Vanuatu	551	429	533	259	330	327	348	287
Total	556,325	552,247	544,099	558,613	593,753	609,058	593,810	645,386
B. Meat meal								
Australia (bovine)	<1	<1	1	<1	<1	<1	<1	-
Australia (cervid)	-	<1	-	-	-	-	-	-
Australia (ovine)	-	-	-	-	-	-	-	<1
New Zealand (bovine)	-	-	-	<1	<1	-	<1	-
New Zealand (ovine)	-	-	-	-	-	<1	<1	-
Norway (bovine)	-	-	<1	-	-	-	-	-
USA (bovine)	<1	<1	<1	<1	-	<1	<1	<1
C. Bone and bone products								
Argentina	47	141	146	133	226	5	<1	-
Australia	1,039	838	773	889	476	766	1,182	283
Bangladesh	955	1,617	1,884	1,001	569	745	753	339
Brazil	5	4	8	3	2	6	2	-
Canada	<1	10	5	<1	-	0	-	-

Chile	62	71	70	26	16	22	14	15
China	49	86	50	41	18	65	46	33
Costa Rica	61	4	9	-	0	0	1	-
Djibouti	-	-	11	-	-	-	-	-
Ethiopia	4	3	-	3	11	6	12	5
France	-	-	-	-	-	-	3	1
Honduras	6	3	-	2	-	-	-	-
Hong Kong	<1	-	-	-	-	-	-	-
India	749	847	899	1,356	576	6,496	665	1,037
Indonesia	<1	42	295	359	471	597	757	506
Korea (Rep.)	5	-	-	-	-	-	-	-
Madagascar	3	3	7	9	-	6	6	4
Mexico	8	39	68	62	37	59	26	76
Mongolia	-	-	-	-	-	<1	-	-
Myanmar	420	280	-	805	1,005	692	1,299	1,098
New Zealand	1,468	1,254	1,203	1,031	1,797	3,425	2,112	1,482
Nicaragua	7	16	8	21	17	20	8	5
Nigeria	6	-	2	6	5	5	2	3
Norway	-	<1	-	-	-	-	-	-
Pakistan	2,343	2,082	1,925	1,840	1,575	391	825	1,044
Panama	5	7	4	6	-	-	-	-
Paraguay	<1	40	-	-	-	-	-	-
Peru	-	-	-	1	1	-	-	-
Philippines	-	<1	-	-	-	-	-	-
South Africa	10	10	5	-	<1	-	-	-
Sri Lanka	167	121	118	-	-	-	-	-
Taiwan	1	1	3	3	2	2	1	2
Tanzania	-	-	-	-	4	-	-	-
Thailand	36	25	19	11	13	5	1	2
Togo	15	-	-	-	-	-	-	-
Uganda	42	23	-	14	4	-	<1	<1
Uruguay	17	11	9	4	4	10	5	10
USA	8,894	9,478	8,510	9,701	6,449	6,105	8,073	9,755
Vanuatu	-	<1	1	-	-	-	-	-
Vietnam	8	10	7	6	2	0	3	2
Zimbabwe	-	-	1	-	-	-	-	-
Total	16,432	17,066	16,039	17,336	13,281	19,429	15,798	15,702
D. Meal								
Australia	<1	<1	1	<1	<1	<1	<1	-
China	-	6	-	-	-	-	-	-
Germany	-	-	<1	-	-	-	-	<1
Korea (Rep.)	-	-	-	-	-	<1	-	-
New Zealand	<1	<1	<1	<1	<1	<1	<1	-
Norway	-	-	<1	-	-	-	-	-
Pakistan	-	<1	-	-	-	-	-	-
USA	3	2	1	4	3	1	3	1
Total	3	8	2	4	4	2	4	1
E. Processed animal protein								
Argentina	<1	41	22	2	83	102	3	2
Australia	57,820	65,704	52,641	35,330	39,102	47,100	30,626	21,681

Austria	7	20	19	16	14	14	4	12
Belgium	72	58	100	359	258	875	1,817	1,585
Bhutan	-	-	8	-	-	-	-	-
Brazil	186	302	264	377	366	553	521	49
Canada	102,207	46,355	52,886	33,364	59,050	59,539	53,803	53,647
Chile	-	<1	-	<1	-	-	-	-
China	6,826	7,338	6,960	3,293	4,838	2,739	1,951	1,579
Columbia	-	-	-	-	-	-	-	-
Croatia	-	-	-	-	-	-	-	-
Czech	-	-	<1	-	<1	<1	<1	644
Denmark	238	318	453	420	458	495	437	431
Egypt	45	105	120	105	90	-	-	-
Finland	-	-	-	-	-	-	<1	<1
France	11,386	18,522	21,970	23,469	26,574	29,957	33,662	33,534
Georgia	-	-	-	6	-	-	-	-
Germany	2,059	900	1,288	799	705	619	570	3,444
Guatemala	-	-	-	-	-	<1	-	-
Haiti	138	-	-	-	-	-	-	-
Hawaii	-	<1	-	-	<1	-	-	-
Hong Kong	-	-	<1	-	<1	<1	2	4
Hungary	718	597	562	553	395	314	243	77
Iceland	-	-	-	-	-	-	<1	-
India	9,272	8,008	7,917	7,244	7,553	6,809	6,822	7,208
Indonesia	35	37	11	8	67	3	1	<1
Ireland	3	27	17	44	27	4	-	<1
Israel	<1	<1	-	-	<1	-	-	<1
Italy	52	52	78	19	26	71	44	72
Korea (Rep.)	5,864	8,361	17,156	11,468	14,456	16,268	14,623	14,911
Luxemburg	-	<1	-	-	-	-	-	-
Malaysia	<1	24	64	<1	-	-	<1	<1
Mexico	2	1	22	1	2	6	3	5
Mongolia	<1	<1	-	-	-	<1	-	-
Netherlands	11,084	26,912	23,711	33,537	30,660	31,488	30,407	33,260
New Zealand	1,035	1,215	1,645	1,583	1,620	1,686	1,571	1,313
Nicaragua	-	-	-	-	-	-	-	-
Norway	68	<1	128	76	213	164	73	-
Pakistan	-	<1	20	60	20	62	21	-
Paraguay	-	<1	-	-	-	-	-	-
Peru	-	2	-	-	-	-	-	-
Philippines	-	<1	<1	<1	-	<1	-	88
PNG	-	10	8	10	2	8	3	4
Poland	-	<1	18	2	-	-	-	2
Puerto Rico	<1	<1	-	-	-	-	-	-
Qatar	-	-	-	-	-	<1	-	-
Romania	-	-	<1	-	-	-	-	-
Russia	-	-	-	-	<1	-	-	-

Singapore	6	21	2	34	32	37	39	44
Slovakia	<1	-	-	-	<1	-	-	-
South Africa	-	-	-	-	-	<1	<1	<1
Spain	23	7	19	15	12	111	138	34
Sweden	<1	<1	7	7	24	24	31	30
Switzerland	3	5	9	4	15	14	16	5
Taiwan	5,621	4,929	6,277	6,192	4,916	3,272	2,296	6,190
Thailand	18,201	18,772	20,144	26,115	28,761	42,742	54,150	60,348
Turkey	-	-	-	-	-	-	<1	-
UAE	-	<1	-	-	-	-	-	-
UK	329	791	644	298	421	513	144	145
Uruguay	33	68	98	21	51	27	31	31
USA	147,868	124,694	151,688	141,757	130,285	118,242	105,423	91,826
Vietnam	387	256	161	4	-	281	693	1,614
Total	381,586	334,455	367,140	326,863	351,099	364,140	340,167	333,818

Key:

A. Meat and offal for human consumption; meat, ham, sausage, bacon, organ/digestive tract, casing and fat of bovine origin, or containing/potentially containing bovine origin ingredients.
B. Ruminant derived meat meal derived only from deboned meat for human consumption.
C. Bone includes bone, crushed bone, hoof and horn, bone tendon, bone meal, hoof-and-horn meal, and other bone derived from bovine origin, mixed animal-species and unknown animal-species.
D. Meal includes blood meal, meat meal, offal meal, leather meal and other kinds of meal of ruminant origin. Non-ruminant derived meal excluded. Meal almost exclusively used for research purposes and 'pledge' statements and 'operation plans' required by AQS prior to import.
E. Processed animal protein includes ossein, calcium phosphate, bone ash, greaves, animal oil/fat, powdered animal oil/fat, gelatin, collagen, hydrolysed protein, and other processed animal protein derived from cattle, mixed animal-species and unknown animal-species. Imported for animal feed (excluding livestock feed), industrial use, food and research.

[#] -, no actual import; <1, volume less than one metric tonne.

The following table represents imports of products of ruminant origin (bovine, ovine, caprine and cervid), or containing/potentially containing ruminant origin materials, intended for pet food from 2006 to 2013.

Table A4.3 Annual imports of ruminant meat or ruminant derived products intended for pet food manufacture by country of origin (metric tonnes)[#]

Country of origin	2006	2007	2008	2009	2010	2011	2012	2013
F. Meat and meat products								
Argentina	<1	<1	-	-	-	-	-	-
Australia	292	284	303	166	150	115	54	56
Chile	-	-	1	1	<1	-	-	-
China	-	-	-	-	<1	-	-	-
New Zealand	42	7	21	21	33	33	33	53
Norway	4	-	-	-	-	-	-	-
Thailand	<1	-	-	11	<1	-	-	-
USA	10	5	2	3	2	<1	-	3
Total	349	296	327	202	185	148	87	112
F. Offal								
Argentina	-	-	-	<1	<1	-	<1	-
Australia	1	2	1	<1	1	<1	1	1
Brazil	-	-	2	3	3	2	2	-
Chile	-	-	2	-	1	<1	-	-
India	-	-	<1	<1	-	-	-	-
New Zealand	3	1	2	1	2	2	3	4
Norway	1	-	-	-	-	-	-	-
Total	4	3	7	5	7	5	7	5
G. Bone and bone products								
Argentina	47	38	38	28	24	5	<1	-
Australia	46	24	34	25	14	6	10	9
Brazil	<1	<1	<1	<1	-	-	-	-
Chile	1	-	-	-	-	-	-	-
China	41	80	44	42	17	62	38	27
India	1	<1	1	2	3	1	4	14
Indonesia	-	-	-	-	-	-	-	1
Mexico	-	-	-	-	<1	-	-	-
Mongolia	-	-	-	-	1	<1	-	-
New Zealand	<1	42	60	62	75	44	59	48
Peru	-	-	-	1	1	-	-	-
Thailand	12	4	7	8	2	<1	<1	-
USA	47	47	35	44	43	46	44	45
Total	195	236	220	211	179	164	156	144
H. Meal								
Australia	<1	<1	1	<1	<1	<1	-	-
China	-	6	-	-	-	-	-	-
Norway	-	-	<1	-	-	-	-	-
Total	<1	6	1	<1	<1	<1	-	-

I. Other animal products subject to animal quarantine inspection								
Australia	10	18	9	14	20	65	26	31
Canada	1	-	<1	<1	-	-	-	-
Chile	-	<1	<1	-	-	-	-	-
China	-	<1	21	1	-	-	-	-
Denmark	<1	-	-	-	-	-	-	-
France	-	24	-	-	-	-	1	-
Germany	<1	-	<1	-	-	-	-	-
Italy	9	6	<1	-	-	-	-	-
Korea (Rep.)	-	144	1	-	-	-	-	-
Netherlands	-	-	<1	-	-	1	-	-
New Zealand	<1	<1	<1	<1	<1	29	62	88
Switzerland	-	<1	-	-	-	-	-	-
Thailand	68	242	193	-	-	>1	-	-
UK	-	-	-	-	-	-	-	<1
USA	263	1,510	676	-	-	1	<1	-
Total	351	1,945	900	15	20	96	89	119
J. Processed animal protein (except MBM)								
Argentina	<1	-	-	-	-	-	-	<1
Australia	52,096	63,415	51,794	34,414	39,053	46,620	27,952	20,642
Austria	6	20	14	13	9	14	4	12
Belgium	69	45	92	352	251	868	1,811	1,573
Bhutan	-	-	8	-	-	-	-	-
Brazil	26	26	4	30	16	18	18	21
Canada	57,567	5,548	7,562	5,994	7,558	6,864	6,993	7,404
China	3,761	3,162	1,697	591	2,325	848	183	137
Czech	-	-	-	-	<1	<1	<1	644
Denmark	36	113	255	241	145	258	208	244
France	11,109	18,416	21,848	23,342	26,485	29,804	33,537	33,377
Georgia	-	-	-	6	-	-	-	-
Germany	297	335	695	474	484	566	503	3,382
Guatemala	-	-	-	-	-	<1	-	-
Haiti	138	-	-	-	-	-	-	-
Hong Kong	-	-	-	-	<1	<1	<1	4
Hungary	329	248	296	253	165	115	113	60
Iceland	-	-	-	-	-	-	<1	-
Indonesia	15	17	11	8	7	3	-	<1
Ireland	3	27	17	41	27	4	-	-
Israel	<1	-	-	-	-	-	-	-
Italy	52	30	54	17	19	71	41	71
Korea (Rep.)	83	84	298	392	500	494	314	405
Malaysia	-	24	-	<1	-	-	-	-
Mexico	1	-	-	-	-	5	-	-
Mongolia	<1	<1	-	-	-	<1	-	-
Netherlands	10,752	26,777	23,529	33,425	30,580	31,374	30,291	33,329
New Zealand	4	-	-	<1	3	3	1	16

Norway	68	-	-	-	<1	-	-	-
Paraguay	-	<1	-	-	-	-	-	-
Philippines	-	<1	<1	<1	-	<1	-	88
Poland	-	-	-	-	-	-	-	2
Qatar	-	-	-	-	-	<1	-	-
Singapore	-	-	<1	7	<1	<1	-	-
South Africa	-	-	-	-	-	<1	-	-
Spain	23	7	15	12	6	2	7	6
Sweden	-	<1	7	7	24	24	31	30
Switzerland	<1	<1	6	1	5	1	<1	<1
Taiwan	10	39	89	10	118	166	91	78
Thailand	15,777	16,442	17,884	24,153	26,600	40,743	52,275	58,262
UK	20	7	2	138	79	76	29	121
Uruguay	33	68	98	21	51	27	31	31
USA	130,468	111,906	132,110	134,942	129,770	117,611	104,433	90,622
Vietnam	<1	-	46	4	-	<1	-	<1
Total	282,743	246,757	258,433	258,888	264,280	276,579	258,866	250,561
K. Products not subject to animal quarantine inspection								
Argentina	1	-	-	-	-	-	-	-
Australia	12,927	14,873	14,319	14,044	11,884	10,783	9,072	8,048
Austria	3	<1	2	3	8	21	22	84
Belgium	<1	13	<1	-	12	23	14	4
Botswana	-	-	<1	-	-	-	-	-
Brazil	64	99	3	2	35	17	-	1
Canada	18	7	1	3	19	23	1	<1
Chile	-	-	<1	<1	-	-	-	-
China	16,201	16,716	16,523	13,121	13,930	16,512	16,489	15,226
Denmark	11	684	414	410	349	307	367	292
Egypt	-	-	-	-	-	-	<1	-
France	19	58	207	334	241	221	153	88
Germany	22	58	47	6	9	2,383	39	44
Hong Kong	17	<1	1	1	<1	<1	1	<1
Hungary	-	-	<1	-	-	-	<1	-
India	<1	-	-	-	-	-	<1	-
Indonesia	16	-	<1	-	<1	<1	-	-
Ireland	<1	3	-	-	-	<1	-	<1
Israel	-	-	<1	-	-	-	-	-
Italy	197	346	310	452	269	183	194	578
Korea (Rep.)	140	259	42	87	74	187	266	127
Macao	5	-	-	-	-	-	-	-
Malaysia	<1	-	<1	-	-	<1	<1	<1
Mali	-	-	-	-	<1	-	-	-
Malta	-	-	-	<1	-	-	-	-
Mexico	<1	<1	1	-	13	22	6	19
Mongolia	-	5	-	<1	-	-	-	-
Netherlands	31	16	188	25	154	189	72	13

New Zealand	1,208	1,802	1,177	<1	<1	36	66	69
Norway	-	-	<1	-	-	-	-	-
Panama	-	-	-	-	<1	-	-	-
Peru	-	-	-	-	<1	-	-	-
Philippines	-	-	<1	-	<1	<1	-	<1
PNG	-	-	20	-	-	-	-	-
Portugal	<1	-	<1	-	-	-	-	-
Russia	-	<1	-	-	-	-	-	-
Singapore	-	-	-	<1	-	-	<1	<1
Slovenia	-	-	-	<1	-	-	-	-
South Africa	<1	<1	-	-	-	-	<1	-
Spain	-	9	<1	<1	<1	2	1	-
Sweden	<1	<1	-	1	11	30	15	7
Switzerland	-	-	-	-	-	-	<1	<1
Taiwan	8	20	18	3	2	3	1	8
Thailand	8,913	11,183	11,338	10,511	10,104	11,341	11,252	12,983
UAE	-	-	-	<1	-	-	<1	-
UK	<1	<1	<1	<1	9	5	12	48
Uruguay	<1	<1	1	-	6	-	-	-
USA	2,974	2,769	2,674	2,006	686	1,241	1,439	633
Vietnam	4	<1	11	11	7	<1	33	56
Total	42,782	48,923	47,297	41,021	37,824	43,531	39,517	38,330

Key:

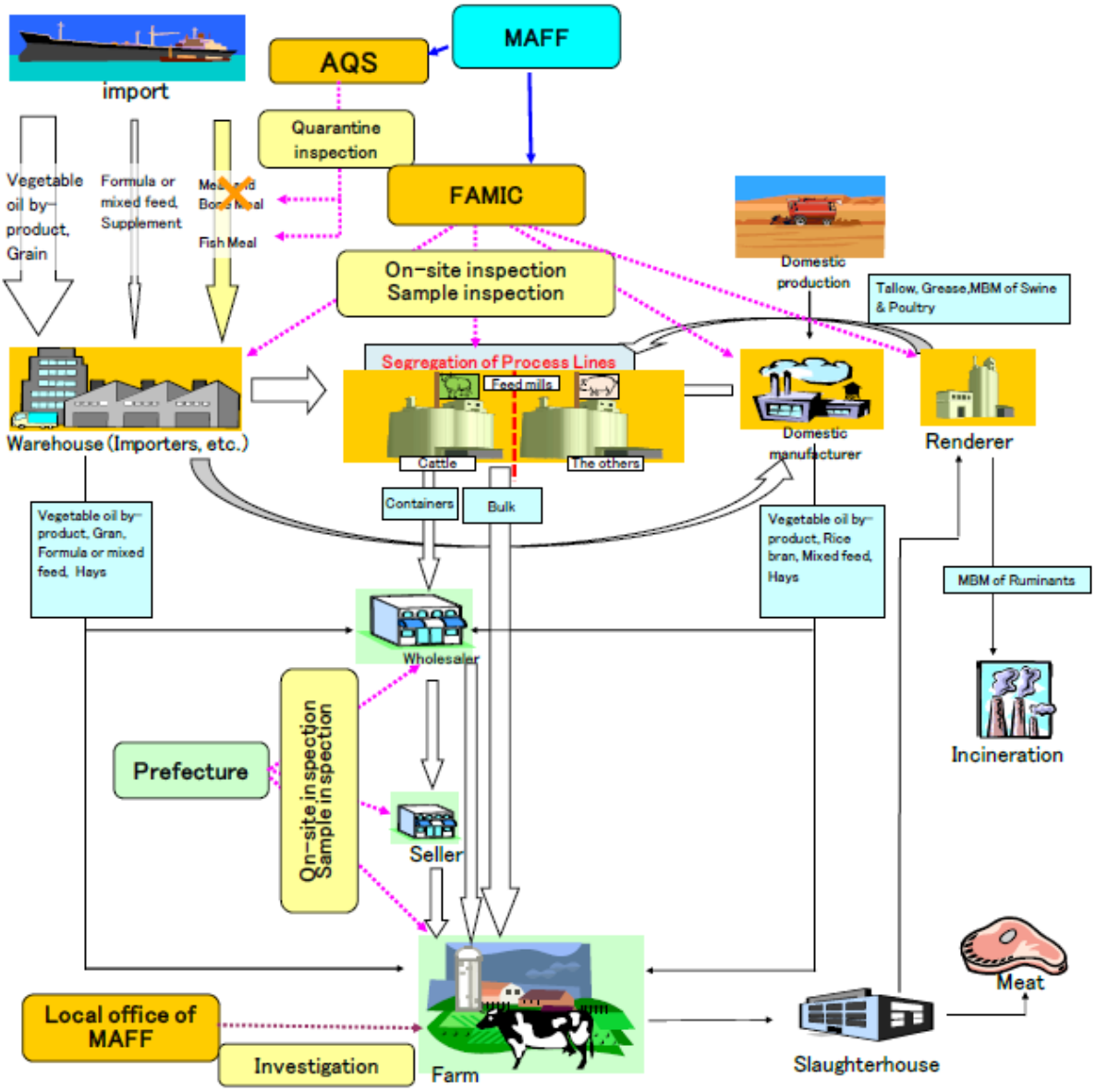
F. Meat and offal of ruminant origin, or containing/potentially containing ruminant origin ingredients (complementary to Product Type A).
G. Bone includes bone, crushed bone, hoof and horn, bone tendon, bone meal, hoof-and-horn meal, and other bone derived from ruminant origin (complementary to Product Type B).
H. Meal includes blood meal, meat meal, meat-and-bone meal, offal meal, leather meal and other kinds of meal of ruminant origin or containing/potentially containing ruminant origin ingredients (complementary to Product Type D).
I. Semi-moist pet food and other types of prepared pet food. Since 2008, dry pet food has been categorised as processed animal protein (see Product Type J below).
J. Processed animal protein (except MBM) intended for pet food: ossein, calcium phosphate, bone ash, greaves, animal oil/fat, powdered animal oil/fat, gelatin, collagen, hydrolysed protein, dry pet food and other processed animal protein (complementary to Product Type E).
K. Canned and retorted packaged pet food.

[#] -, no actual import; <1, volume less than one metric tonne.

Appendix 5: Legislative and non-legislative instruments of the ruminant feed ban and inspection framework for the prevention of BSE

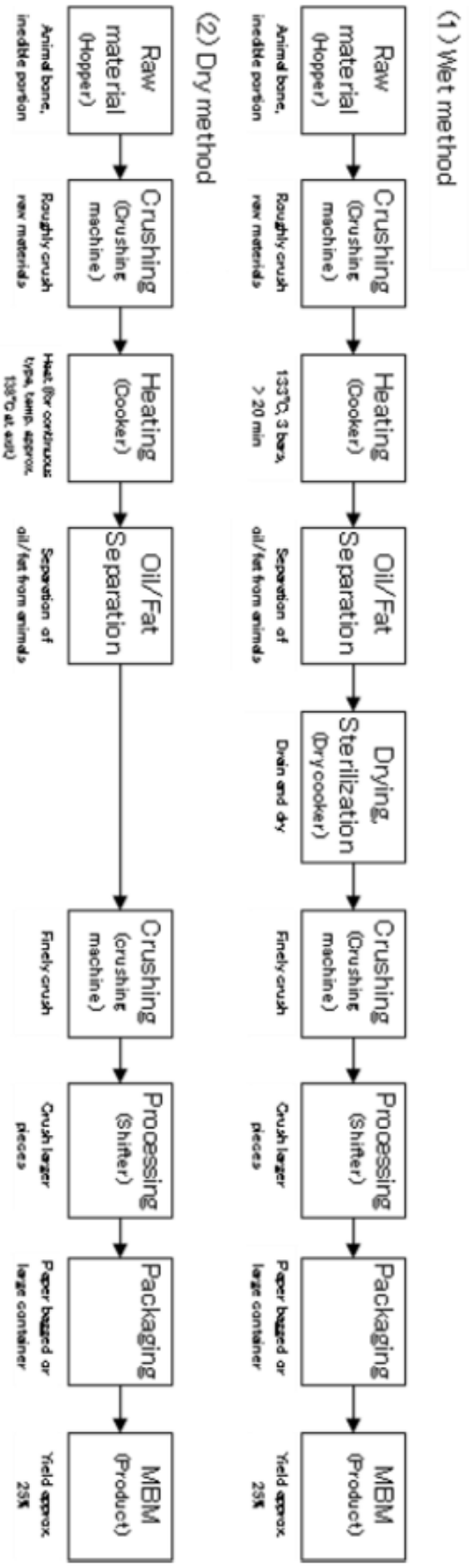
Laws and related rules and notifications relavent to the enforcement and monitoring of Japan's current livestock feed regulations			
Feed Safety Act and the related rules and notification	**Appendix Number in submission**	**Article or section**	**Description of item with regard to BSE control**
Act Concerning Safety Assurance and Quality Improvement of Feeds	4		Lays out the requirements for standards and specifications for feed, testing, labelling, business registration, record keeping, inspection and penalties associated with livestock feed manufacture.
Act concerning Safety Assurance and Quality Improvement of Feeds, Implementing Order	24	Article 1	Animal species subject to the regulation
Act on Safety Assurance and Quality Improvement of Feeds, Rule	25	Article 68, 70 Article 72 Article 73, 74, and 76	• Items to be notified by importers and feed manufacturers to obtain approval by the Minister • Items to be kept on record by importers and feed manufacturers and record retention period • Items to be reported to MAFF by FAMIC and prefectures in relation to on-site inspection
Enforcement Ordinance of the Standards of Feed and Feed Additives	26	Table 1-2	• Standards for feed (raw materials that may/may not be used for ruminants and other livestock) • Feed manufacturing standards (Segregation of process line) • Standards for methods of manufacture gelatin, collagen, and animal protein derived from swine, poultry, and fish and shellfishes • Obligation for rendering plants to be approved by the Minister of MAFF as conforming to standards • Labeling specifications for raw material and feed
Ministerial approval Procedure for animal protein and animal oil/fat in accordance with the specification of the Enforcement Ordinance of the Standards of Feed and Feed Additives	27		• Production standards that rendering plants manufacturing the following materials are required to follow: blood meal/plasma protein derived from swine or horse, meat-and-bone meal, hydrolysed protein and steamed bone meal derived from swine, poultry meal, feather meal and blood meal/plasma protein derived from poultry, hydrolysed protein and steamed bone meal derived from poultry, protein derived from fish and animal fat/oil • Procedure of approval for rendering plants that meets the standards (Ministerial approval system)
Specification of Guideline to prevent contamination of animal protein from ruminant feed	28		Guideline for the control of import, manufacture and distribution of feed to prevent contamination of animal protein from ruminant feed. Effective by March 2005.
Specification of Guideline to prevent contamination of animal protein derived from ruminant from ruminant feed	29		Guideline for control import, manufacture and distribution of feed to prevent contamination of animal protein from animal feed. Effective since April 2005.
Test and guidance to implement feed	30		Procedure to enhance cooperation between the national government and the prefectural

restrictions for prevention of BSE		government in monitoring (on-site inspection/investigation) to prevent BSE
Feed Inspection Regulations	31	Rules for feed inspectors conducting on-site inspection
Administrative Standard Procedures Regarding the Act Concerning Safety Assurance and Quality Improvement of Feed Safety Act and the related rules and notification	32	Shared liability among the national government, FAMIC and prefectures about role and authority in feed regulation items and outline regarding prevention of BSE spreading
Feeds		
Establishing Feeds Inspection Implementation Guidelines (Excerpt)	33	Sampling procedure on on-site inspection
Check list for on-site inspection (set by FAMIC)	34	Manual and checklist used on on-site inspection
Protocol for feed testing (microscopic, ELISA, PCR)	35	Protocol of sample analysis for collected feed samples
Guidance on strict prohibition for feeding feed containing protein derived from ruminants to cattle (Notification No. 13/Seichiku/3285 issued by Director of feed, Livestock Industry Department, Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries, dated September 25, 2001)		Administrative notification in response to the urgent investigation on cattle farm conducted in September 2001



Outline of inspection framework for ruminant feed ban compliance

Appendix 6: Rendering processes



Appendix 7: Abattoir survey for controls on BSE, March 2012

1. Establishments targeted	
Number of abattoirs slaughtering cattle	149
Number of abattoirs slaughtering sheep and goats	63
2. Usual procedures of stunning for cattle	
Number of abattoirs that use stun guns (guns used for slaughtering animals) for stunning cattle	141
A The bullet penetrates the skull	140
B The bullet do not penetrates the skull	3
Number of abattoirs that use hammers for stunning cattle	15
Use stun guns together with hammers	7
Number of abattoirs that use a device injecting compressed air or gas into the cranial cavity	0
3. Usage of pithing in slaughtering procedures	
Number of the abattoirs that do perform pithing	0
A. Pithing performed on all or almost all cattle	0
B. Use of pithing depends on the condition of the cattle, etc.	0
C. Pithing performed only for exceptional cases	0
Number of the abattoirs that do not perform pithing	149
4. Preventive measures to avoid scattering spinal cord tissue particle when splitting carcasses	
Basic Information	
A. carcass splitting is conducted with washing cut saw and the spinal cord collected after wash	145
B. Incineration of the collected spinal cord	145
C. Saws are washed and disinfected appropriately each time an animal has been processed	145
D. Spinal cord is removed from the vertebral column appropriately using metal instrument after the carcass splitting	145
E. Dressed carcasses are washed using high pressure water to remove remaining spinal cord tissue	145
F. The trained inspection personnel verify that carcasses are free from spinal cord tissue	145
Number of the abattoirs performing measures other than A-F, above	135
A. Number of abattoirs that do not perform carcass splitting	4
B. Number of abattoirs splitting carcass at off centre of vertebral column	8
C. Number of abattoirs where spinal cord is aspirated using an applicable instrument which has the ability of removing the spinal cord from the vertebral column before carcass splitting	128
5. Incineration of the SRMs of cattle	
Incineration of the SRMs	
A. Incinerated at abattoirs	52
B. Incinerated by industrial waste processing company	33
C. Incinerated at industrial waste processing establishment in the municipality	16
D. Incinerated after processed into meat-and-bone at dedicated rendering plant	49
E. Incinerated after processed into meat-and-bone at rendering plant other than dedicated rendering plant	13
Verification of the SRMs incineration	
A. Verify to ensure the SRMs are incinerated properly and	149

records are kept	
B. Verify to ensure the SRMs are incinerated properly but records are not being kept	0
C. No verification whether SRMs are incinerated properly	0
D. Other (no record of processes)	0
6. Handling of the SRMs of sheep and goat	
Incinerated at abattoirs	27
Incinerated by industrial waste processing company	8
Incinerated at industrial waste processing establishment in the municipality	14
Incinerated after processed into meat-and-bone at dedicated rendering plant	10
Incinerated after processed into meat-and-bone at other than dedicated rendering plant	5
7. SSOP regarding the SRMs	
Number of abattoirs slaughtering cattle, sheep and goat	153
A. SSOPs are developed	153
B. SSOPs are not developed	0
Inspection and record keeping according to the SSOP	
A. Inspections are conducted at a defined frequency in accordance with the SSOP and the records are kept	153
B. Inspections are conducted at a defined frequency in accordance with the SSOP but the records are not being kept	0
C. Neither inspections are conducted at a defined frequency in accordance with the SSOP nor the records are being kept	0
D. Other (no record of processes)	0

Appendix 8: Flow chart for BSE testing in Japan