

BSE
Food Safety
Risk
Assessment
Report

Lithuania

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Risk Assessment Production Process Section

Food Standards Australia New Zealand

Executive summary

Food Standards Australia New Zealand (FSANZ) is the regulatory body responsible for conducting 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*¹ are based on those of the World Organisation for Animal Health (OIE) *Terrestrial Animal Health Code* (2009)². Lithuania made a submission in 2011 to be assessed under the current BSE policy.

Lithuania was previously assessed by the Australian BSE Country Categorisation Committee for Human Food Products (ABCCC) in 2004 for the purpose of country categorisation. The review was based on a completed country questionnaire and EUROSTAT export statistics on exports of live bovine animals, meat-and-bone meal (MBM) and greaves from EU member states between 1980 and 2000. The ABCCC categorised Lithuania as Category C³. Countries in this category were known to have considerable exposure to BSE risk materials, but have not reported indigenous cases of BSE. Similarly, the Geographical BSE-Risk (GBR) of Lithuania in 2003 was Category III, meaning that it was considered likely, but not confirmed, that domestic cattle were infected with the BSE agent at that time⁴.

FSANZ has conducted an assessment of Lithuanian legislative measures 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 of the BSE agent through imports of animals or animal-derived products.
- (2) **Feed ban controls** to prevent contamination of the animal feed supply with 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.

The risk of the BSE agent being released into the Lithuanian cattle population through imports of MBM, live cattle, or beef and beef products is effectively managed. Lithuania has been an EU member state since May 2004. The introduction of live cattle, beef and beef products was aligned with EU legislation in 2002, and introduction of live cattle has been restricted to trade with other EU member states and European Economic Area (EEA) members since that year. No beef or beef products have been imported from non-EU countries since 2005, and no beef or beef products have been imported from countries classified by the OIE as having less than controlled status. Introduction of MBM or greaves has likewise been limited to trade with EU or EEA member states.

The risk of introducing and recycling BSE infectivity through ruminant feed is addressed at multiple control points in Lithuania, and the risk of BSE entering and recycling within the bovine feed system or entering the human food supply in Lithuania is low. A ruminant feed ban has been in place since 2000. Audit, inspection and sampling procedures are in place to

ensure that contamination of ruminant feedstuffs with prohibited animal proteins is prevented during production, storage and transport. Controls have been in place since 2000 to ensure that SRM are appropriately removed and disposed of, and to ensure that bovine animals that could be infected with BSE do not enter the human food supply.

Comprehensive food safety controls exist in Lithuania to allow effective protection of the human food supply from potential BSE contamination. Measures to prevent SRM from contaminating the food supply are in place and have been fully aligned with EC regulations since 2000. Lithuanian controls on traceability of beef and beef products, and on food recall systems generally, are also fully compliant with EC regulations. The SFVS implements the Rapid Alert System for Food and Feed (RASFF) system in conjunction with other EU member states and EEA member countries. Lithuania has had a comprehensive contingency plan in place since 2004 for the response to a suspect BSE event, which is approved by the European Commission.

Lithuania has appropriate control programs for the identification and notification of BSE clinical suspects, and for the laboratory diagnosis of BSE should it occur. BSE has been a notifiable disease in Lithuania since 1992, and comprehensive measures ensure that there is sufficient BSE awareness among veterinarians, animal keepers, slaughterhouse personnel, stock transporters and other relevant personnel. Incentives and penalties are in place to promote compliance. The designated reference laboratory for TSEs in Lithuania uses diagnostic tests compliant with the OIE Standards, and maintains proficiency by both internal and inter-laboratory proficiency testing. Individual identification of all cattle born in or introduced into Lithuania has been mandatory since 2000. Lithuania has a centralised animal identification system and internet-based database, from which regular reports are generated to monitor effectiveness. Animal holdings are subject to State Food and Veterinary Service of the Republic of Lithuania (SFVS) inspections, according to a risk-based Annual Plan, that include bovine identification.

Lithuania carries out surveillance in compliance with the guidelines in Articles 11.5.20 to 11.5.22 of the OIE's Terrestrial Animal Health Code. Lithuania's total points for the 7 years 2004-2011 were well in excess of the target specified by the OIE for a country with the current cattle population of Lithuania, for either Type A or Type B surveillance. Current surveillance practices have been in place since 2004.

In conclusion, robust control of the risk of BSE entering and recycling within the bovine feed system or entering the human food supply in Lithuania has been in place for at least eight years, together with appropriate targeted surveillance activities. The FSANZ BSE food safety assessment of Lithuania recommends **Category 1** status for the Republic of Lithuania.

Acronyms

ABCCC	Australian BSE Country Categorisation Committee
BIP	Border Inspection Post
BSE	Bovine Spongiform Encephalopathy
CNS	Central nervous system
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
EC	European Commission
EEA	European Economic Area
EFSA	European Food Safety Authority
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FSANZ	Food Standards Australia New Zealand
HACCP	Hazards Analysis and Critical Control Points
IDCC	Infectious Disease Control Centre
MBM	Meat-and-bone meal
NFVRAI	National Food and Veterinary Risk Assessment Institute
OIE	Office International des Epizooties (World Organisation for Animal Health)
PCR	Polymerase Chain Reaction
RASFF	Rapid Alert System for Food and Feed
SFVS	State Food and Veterinary Service of the Republic of Lithuania
SOP	Standard Operating Procedure
SRM	Specified risk material
TRACES	Trade Control and Expert System
TSE	Transmissible spongiform encephalopathy
UK	United Kingdom of Great Britain and Northern Ireland
US	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 BSE risk.

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

Cohorts, for the purpose of Section 4 of the Australian Questionnaire are all cattle which, during their first year of life, were reared with cattle in their first year of life that subsequently developed BSE, and which investigation shows 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.

Specified risk material as defined by EU legislation includes tonsils, intestines and mesentery from bovine animals of all ages; brains, eyes, spinal cord, skull (excluding mandibles) from bovine animals over 12 months of age; and also vertebral column (excluding the vertebrae of the tail, the spinous and transverse processes of the cervical, thoracic and lumbar vertebrae, the median sacral crest and the wings of the sacrum) for bovine animals over 30 months of age.

Third countries for the purposes of this assessment are non-EU countries.

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Introduction

Food Standards Australia New Zealand (FSANZ) is the regulatory body responsible for assessing the food safety risk of bovine spongiform encephalopathy (BSE), and assigning a status to countries that seek to export beef or beef products to Australia. FSANZ evaluates BSE food safety risk according to scientifically recognised and internationally accepted practices for the control and prevention of BSE. Although FSANZ sets a number of joint food standards for both Australia and New Zealand, it is not responsible for setting hygiene and primary production-related standards concerning BSE controls.

In March 2010 the Australian Government revised its BSE food safety policy.¹ Under this policy, individual countries submit applications to FSANZ that include comprehensive data relevant to their BSE risk and associated risk management and controls, in accordance with requirements set out in the *Australian Questionnaire to Assess BSE Risk* (the Australian Questionnaire).² In general, data requirements in the Australian Questionnaire are based on those of *Chapter 11.5 – Bovine Spongiform Encephalopathy* of the World Organisation for Animal Health (OIE) *Terrestrial Animal Health Code (2011)*.³ The Australian Questionnaire also seeks information on animal traceability and identification, animal slaughtering and processing systems.

FSANZ assesses the information and data submitted by the applicant country through: (1) a desk assessment of legislative measures concerning controls around the introduction, spread and prevention of BSE; and (2) an in-country assessment to verify the application and enforcement of these measures.

In addition to submitted documentation, legislation and standards underpinning BSE controls are examined as part of the desk assessment. Publically available documentation issued by other statutory bodies, such as various European Union agencies, may also be reviewed. Countries that submitted an application for a BSE risk assessment retain their existing BSE status until the risk assessment is complete. Lithuania submitted an application to FSANZ for assessment of BSE food safety risk on 11 July 2011. The application included documentation submitted to the OIE on 23 March 2011. The in-country verification visit was conducted in September 2012. The findings of visits to various establishments across the production system, as well as information on the competent authority oversight, are included in this report.

Lithuania submitted an application to FSANZ for country categorisation of BSE food safety risk on 14 April, 2011. The following report describes the BSE food safety risk assessment conducted by FSANZ to determine the risk that the BSE agent is present in beef and beef products imported from Lithuania.

Overview of Lithuania's BSE Regulatory System

Lithuania aligned its legislation with that of the EU in 2002 and joined the EU in 2004. Therefore, Lithuanian legislation concerning BSE has been equivalent to that of other EU member states since 2002, and the same since 2004.

The competent authority responsible for prevention and control of BSE in Lithuania is the State Food and Veterinary Service of the Republic of Lithuania (SFVS), an independent budgetary institution under the Government of the Republic of Lithuania. The SFVS has overall responsibilities in relation to food and feed safety, animal health and animal welfare.

The SFVS is directly accountable to the Prime Minister of Lithuania.

The SFVS was formed in 2000. The SFVS applies a 'from field to fork' philosophy. Areas of control include: food; food additives; drinking water; animal feeds; veterinary medicinal products and biocides; chemical, physical and microbiological hazards relevant to crops; and production, import, transportation, storage and trade of food. The SFVS also prepares legislation around food, feed and animal health.

The Chief Veterinary Officer (CVO) represents Lithuania in the EU, OIE, Food and Agriculture Organisation of the United Nations (FAO) and other international organisations.

Further information on the structure and function of the SFVS is presented in **Appendix 1**.

BSE History

BSE has never been reported in the Republic of Lithuania.

Lithuania is a member of the OIE, which in 2010 recognised Lithuania as having a 'controlled BSE risk' status in accordance with Chapter 11.5 of the *Terrestrial Code* of the OIE.

Lithuania is a member of the EFSA Scientific Network on BSE-TSE. Lithuania was assessed by the European Scientific Steering Committee in 2003 and given a Category III status: 'It is concluded that it is likely but not confirmed that domestic cattle are (clinically or pre-clinically) infected with the BSE-agent.' Importation of retorted beef and beef products from Lithuania has been permitted by DAFF Biosecurity (formerly AQIS) with Lithuania classified under Category C, pending the outcome of risk assessment.

Potential for release of the BSE agent through imported materials

Release of the BSE agent into a country's cattle population can occur through the importation of infected live animals or specific commodities contaminated with the BSE agent and subsequent exposure to these by susceptible animals. Avenues that could potentially introduce BSE include live cattle, meat-and-bone meal (MBM) or animal feed containing MBM, fresh meat, or food products of bovine origin — particularly if specified risk materials (SRM) are not removed or cross contamination has occurred during processing or SRM removal.

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

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

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

Lithuania is a member state of the European Union (EU). Transfer of animals or commodities between EU member countries is not regarded as importation or export, but is classified as 'trade'. To avoid confusion, this distinction will be followed in this report.

The State Food and Veterinary Service of the Republic of Lithuania (SFVS) administers and enforces legislation regarding BSE control.

1 Introduction of MBM or greaves

1.1 Overview

Introduction, into a country, of animal protein sourced from ruminants in other countries poses a risk of exposing cattle to BSE infectivity, with consequent food safety risk to human beings who consume products from those cattle.

1.2 Legislation

Introduction of protein from animal sources is highly restricted in Lithuania.

From 1991 through to May 2004, when Lithuania joined the EU, Lithuania operated an import permission system. From February 1992, importation of animals and products of animal origin was only permitted from countries that had been free of BSE for the preceding 5 years. As part of applying for import permission, importers were required to provide information about the country and region of origin of the consignment, the Border Inspection Post (BIP) of entry and the destination of the consignment. A veterinary certificate, agreed between the Republic of Lithuania and the country of origin, was required with all consignments.

Since Lithuania joined the EU in May 2004, importation, or introduction through intra-Community trade, of MBM and greaves has been subject to the Regulation of the European Parliament and of the Council (EC) 1774/2002, which lays down health rules concerning animal by-products not intended for human consumption. Key aspects of (EC) 1774/2002 relevant to trade in animal by-products include the following:

- Animal by-products are classed as Categories 1, 2 and 3. Category 1 materials, the highest risk, must be incinerated, with or without prior rendering. All parts of the body of an animal with a TSE are classed as Category 1. Specified risk materials (SRM) are also classified as Category 1 material. The bovine organs and tissues that are considered to be SRM are specified in Regulation (EC) No 999/2001, and comprise the skull, including the brain and eyes, the tonsils and the spinal cord of animals aged over 12 months, and the intestines from duodenum to rectum of animals of all ages. Category 1 material also includes tissues of animals rejected for human consumption because of other communicable diseases.
- Category 2 material includes animal by-products such as digestive tract content and slaughterhouse wastes other than Category 1 materials. Category 2 also includes animal products contaminated by veterinary drugs or otherwise unsuitable for human consumption, and products from third countries that seized at border inspection as not approved for import.
- Category 3 material includes parts of slaughtered animals which are fit for human consumption but which are not eaten, such as skins and hooves, or parts of slaughtered animals which are rejected as unfit for human consumption but are not affected by any sign of a communicable disease. Category 3 also includes bones and greaves of healthy animals, fish and fish byproducts intended for fishmeal, and poultry byproducts such as feathers and eggshells.
- Collection, transport, storage and dispatch of animal by-products are subject to strict controls.
- Category 1 or 2 material, and processed animal proteins, cannot be transported between Member States unless the Member State of destination has authorised the receipt of the material.
- All transit, storage and processing plants for animal proteins must be approved and regularly inspected by the competent authority.
- Only animal proteins handled, processed, stored and transported in accordance with the Regulation may be placed on the market. The same is true of pet foods, articles for pets to chew, technical products and fat derivatives.
- Feeding a species with processed animal proteins derived from the bodies of animals of the same species is prohibited. This ban does not include milk or colostrum.
- Importation of animal by-products from non-EU countries is permitted only if the country of origin has controls in place equivalent to those in the EU. The EU maintains a list of approved countries and approved establishments within those countries.

1.3 Details of MBM imports

Greaves of bovine origin were not imported, or introduced by trade, in the years 2001-2009 inclusive, nor were any feedstuffs containing either MBM or greaves of bovine origin imported in those years. Introduction of MBM was limited to 67 metric tons in 2004, comprising 47.6 tons of pig skin meal for feeding of fur animals and 19.3 ton of poultry MBM for producing pet food, all imported from Germany.

Animal feeds containing MBM or greaves were introduced into Lithuania in 2010, but none of the feeds contained MBM or greaves originating from ruminants. With the exception of Norway, all the countries of origin of the animal feeds imported in 2010 were EU member states. Norway is a member of the European Economic Area (EEA), and is obliged to implement all EU legislation relevant to the functioning of the internal market. Therefore, EU regulations related to BSE control were applicable to all shipments.

Lithuania has only one rendering plant that handles Category 1 materials, as well as Category 3 materials. This plant also collects and processes by-products from Latvia and Estonia. Both of those countries have been EU members since 2004 and must comply with EU regulations with regard to BSE. The facility has its own dedicated transport fleet for each category of material, so materials for rendering from Latvia and Estonia go directly to the rendering plant.

2 Introduction of live cattle

2.1 Overview

Importation or introduction through trade within the EU of live cattle represents a potential food safety risk if cattle are sourced from countries which do not have adequate control programs in place to minimise the risk of BSE exposure. Live cattle introduced into Lithuania since 2004 have all been sourced from EU member states, with the exceptions of cattle introduced from Switzerland and from Romania prior to 2007. Romania joined the EU in 2007 and Switzerland has had Controlled BSE status since the same year. Lithuania has never imported cattle from the UK or Portugal, the two countries most severely affected by the BSE epidemic. This history of importation is consistent with low risk of introduction of the BSE agent.

2.2 Legislation

From 2002 Lithuania applied Council Directive 72/462/EEC to inspection issues pertaining to importation of bovine, ovine and caprine animals, swine, fresh meat or meat products from other countries. Prior to membership of the EU, this was done under national legislation (Official Gazette, 2002, No. 70-2965, *on importation of bovine, ovine and caprine animals and swine, fresh meat or meat products from third countries in to Republic of Lithuania*). Since Lithuania joined the EU in May 2004, intra-Community trade of bovines has been carried out in accordance with Council Directive 64/432/EEC. Importation of bovines from third countries is subject to compliance with Council Decision 79/542/EEC.

Council Directive 64/432/EEC specifically addresses intra-Community trade in bovines and swine. Although this Directive was issued years before the BSE epidemic arose in the UK, and much of it is devoted to the control of brucellosis and zoonotic tuberculosis, it laid down conditions which have assisted countries in controlling BSE. Key aspects of the Directive relevant to BSE control include the following:

- Only clinically healthy animals, which have been on the holding from which they are loaded for at least 30 days, may be loaded for intra-Community transport.
- Animals must have been in the exporting Member State for at least 6 months in the case of animals traded for breeding or production, and at least 3 months in the case of animals traded for slaughter.
- Animals must have an officially approved earmark.
- Animals must be accompanied by a health certificate.

- Animals must be traded through frontier posts approved for the inspection and introduction of livestock.
- Countries may require that arrival of a shipment of animals to a frontier post must be notified in advance.
- Destination countries have the power to refuse entry to livestock, or to order the immediate slaughter or destruction of the livestock, if they are suspected of being infected with a notifiable disease.
- Member States may prohibit or restrict entry of animals from another Member State if there is an epizootic outbreak in the Member State of origin.

Council Decision 79/542/EEC concerns the importation of live animals and fresh meat from countries outside the EU, and establishes the official status of a list of parts of third countries from which live animals or fresh meat may be imported.

2.3 Details of live cattle introduced into Lithuania

Numbers of cattle imported into Lithuania in the interval 2004-2010 inclusive are presented in **Table 1**. With the exceptions of Romania, Norway and Switzerland, all of the countries of origin became EU member states no later than 2004. Romania became a member state in 2007. Norway is an EEA member and therefore obliged to implement all EU legislation relevant to the functioning of the internal market. Switzerland has a close trading relationship with the EU, including a number of treaties with the EU that make much of EU law applicable to Switzerland. Switzerland introduced control measures, including a feed ban, in 2001 to eradicate BSE and was upgraded to controlled status in 2007 by the OIE.

Table 1: Live Cattle Brought Into Lithuania, 2004 – 2011 inclusive				
Origin	Breeding	Fattening and Slaughter	Other	Total
Austria	250	1	-	251
Belgium	127	4	-	131
Czech Republic	154	62	2	218
Denmark	1700	29	-	1729
Estonia	2179	4531	-	6710
Finland	1650	2	-	1652
France	1465	3	-	1468
Germany	7685	86	34	7805
Ireland	310	22	-	332
Italy	948	1	-	949
Latvia	15929	32216	-	48145
Luxembourg	56	0	-	56
Netherlands	1478	14	-	1492
Norway	464	368	-	832
Poland	12870	39837	1	52708
Romania	161	714	-	875
Sweden	925	209	-	1134
Switzerland	5	5	-	10
				126497

Lithuania has never introduced cattle from the United Kingdom or Portugal, the two countries most severely affected by the BSE epidemic.

The documentation, including movement documents and health certificates, and ear tags of

cattle entering Lithuania from other EU countries are checked at the border. Once the animals are in Lithuania, they are entered and tracked in the same bovine database as that which tracks movement and fate of Lithuanian-born cattle.

3 Importation of beef and beef products

3.1 Overview

This section focuses on the risk of releasing the BSE agent through the introduction of beef-containing food products which are intended for human consumption. Since 2002, most beef and beef products have entered through intra-Community trade, with the exceptions of imports from Brazil, New Zealand, Canada and the USA. Brazil and New Zealand are both recognized by the OIE as having Negligible BSE risk status. No importations have been made from the USA since 2002 or from Canada since 2005, and both of these countries have Controlled BSE risk status and a history of very few BSE cases. The risk of introduction of the BSE agent into Lithuania through beef or beef products has been minimal for more than 8 years.

3.2 Legislation

3.2.1 Regulatory Agencies

Imports and exports of animal products, and trade in animal products within the EU, are subject to regulation by the Animal Health and Welfare Department of the SFVS.

3.2.2 Legislation

From 2002 to 2004, Lithuania applied Council Directive 72/462/EEC to inspection of fresh meat or meat products. The EU Directive was transposed into Lithuanian legislation as Official Gazette, 2002, No. 70-2965, *On importation of bovine, ovine and caprine animals and swine, fresh meat or meat countries from third countries in to Republic of Lithuania*. Lithuania joined the EU in May 2004 and EU Directives and policies have applied directly since that time. Bovine products from third countries that do not comply with import requirements would be returned to the country of origin or sent directly for disposal by rendering. Fresh meat brought into Lithuania must be from animals that resided in the country of origin for at least three months. Meat may be imported from non-EU countries only if those countries meet EU requirements for animal health, including requirements related to slaughterhouse conditions, ante- and post-mortem inspection, storage and transport conditions, and certification. Importations of fresh meat can only occur at suitably equipped border posts, and must be inspected at the border post, as mandated in Regulation (EC) No 206/2010.

3.3 Type of imported beef or beef products

The countries of origin and total quantity of bovine meat imported into Lithuania from 2004 to 2010 inclusive are presented in **Table 2**. Imports of casings and offal are included in the totals. No imports or introductions by intra-Community trade were made in 2006, 2007 or 2008. With the exceptions of Brazil, Canada, New Zealand and the USA, all countries of origin listed in Table 2 are EU member states. The OIE recognizes Brazil and New Zealand as countries with negligible BSE risk status. The OIE classifies Canada and the USA as having controlled BSE risk. No beef or beef products have been imported from non-EU countries since 2005. Approximately 100 metric tons of beef enters Lithuania each month from other EU member states.

Table 2: Beef and beef products brought into Lithuania 2002-2011 inclusive

Origin	Beef, Casings and Offal (metric tons*)	Years of import (inclusive, excluding 2006 - 2008)
Austria	13	2002-2010
Belgium	10 697	2009-2011
Brazil	70	2005
Canada	371	2005
Czech Republic	1	2010
Denmark	1 472	2002-2004
Estonia	261	2002-2011
Finland	1	2009
France	41	2010
Germany	670	2002-2011
Hungary	1 662	2010-2011
Ireland	186	2002-2011
Italy	10 805	2009-2011
Latvia	2 039	2003-2011
Netherlands	55	2009-2011
New Zealand	69	2005
Poland	1 435	2002-2011
Romania	5 876	2011
Spain	1	2010
Sweden	211	2002-2004
USA	38	2002
Total:	35 974	

* Rounded to nearest whole number

4 Summary: potential for release of the BSE agent through materials imported or introduced through intra-Community trade

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

Prior to joining the EU, Lithuania operated its own import permission system for animals and products of animal origin, and from February 1992, such imports were permitted only from countries that had been free of BSE for the preceding 5 years. Lithuania aligned its legislation with regard to importation of bovine, ovine and caprine animals, swine, fresh meat or meat products with EU legislation in 2002, and became an EU member state in May 2004.

The introduction of MBM or greaves into Lithuania from other countries have been subject to EU legislation and have been limited to shipments from other EU member states or from countries that are members of the EEA and therefore required to comply with EU legislation.

Live cattle entering Lithuania since 2004 have principally been from other EU member states. The exceptions originated from Romania, Norway and Switzerland. Romania joined the EU in 2007. Norway is a member of the European Economic Area (EEA), and is obliged to implement all EU legislation relevant to the functioning of the internal market, including EU regulations related to BSE control. Switzerland has a number of treaties with the EU which make EU laws with regard to trading applicable in Switzerland.

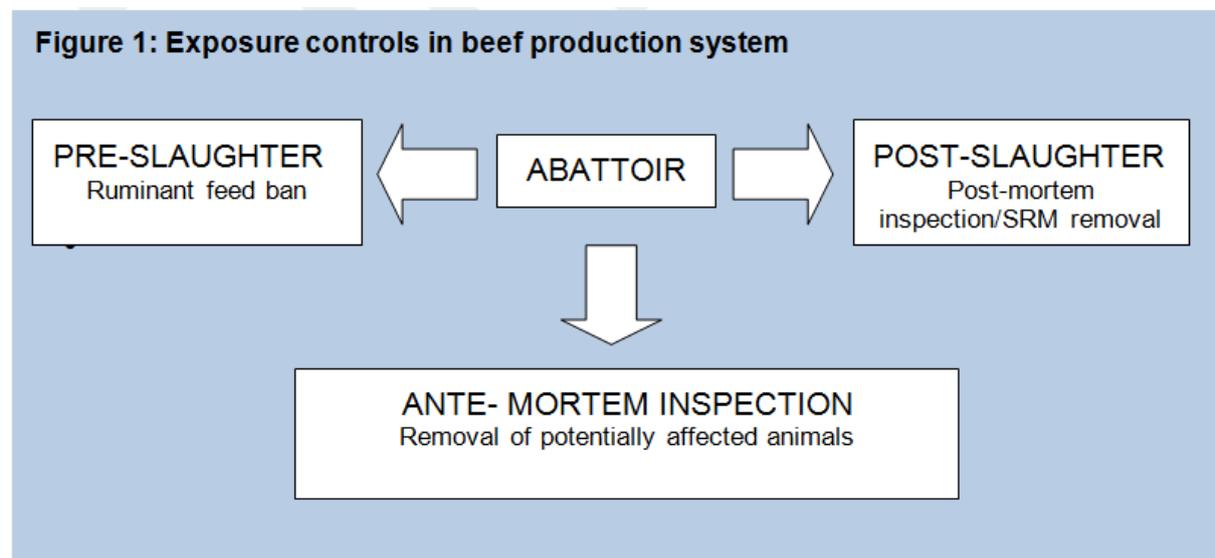
No beef or products derived from beef have been imported into Lithuania from non-EU countries since 2005.

Exposure control

The exposure of cattle to BSE contaminated material and amplification of the infective agent 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^[5-8] 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 1**.



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

5 Pre-slaughter controls: ruminant feed ban

5.1 Overview

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

5.2 Legislation

Rules for the disposal and processing of animal waste, concerning the placing of animal waste on the market, for the prevention of pathogens of mammalian or fish origin contaminating feedstuffs, and imposing a ruminant feed ban compliant with Regulation (EC) No 999/2001, have been in place in Lithuania since 2000.

Prior to Lithuania joining the EU in 2004, EU regulations were transposed into Lithuania's national legislation through Orders of the Director of the SFVS. Council Directive 90/667/EC of November 1990 and the amending Directive 90/425/EEC were transposed in 2000 and Regulation (EC) No 999/2001 was similarly transposed in 2002. Since 2004, EU regulations have been applied directly. Thus, current Regulations in place are Regulation (EC) No 1774/2002 and Regulation (EC) No 999/2001, and subsequent EU legislation pertaining to BSE, listed in **Appendix 3**.

Under Regulation (EC) No 1774/2002, only materials derived from animals declared fit for human consumption following veterinary inspection may be used for the production of feeds, and intra-species recycling is banned. Excluded animal materials are subject to an identification and traceability system, under which MBM and fats destined for destruction must be permanently marked to avoid possible diversion of unauthorized products into food and feed. Regulation (EC) No 1774/2002 covers the classification of animal by-products into Category 1, 2 or 3. Category 1 materials must be incinerated, with or without prior rendering, and cannot be incorporated into feed for ruminants or other animals.

Among other measures for BSE control, Regulation (EC) No 999/2001 identifies the tissues from cattle that are specified risk materials (SRM) and mandates their destruction. Import of SRM or products containing them, from non-Member States is prohibited, and they may be transported between Member States only for the purpose of incineration. In addition, the feeding of mammalian proteins to domestic animals other than cats and dogs is prohibited, with the exception of certain substances shown to be of negligible risk, such as milk.

The Order of the Director of SFVS No B1-352 was gazetted in May 2006 and has been kept up to date by amending Orders since. The legislation covers the following:

- The requirement for registration of establishments trading, using, or storing animal by-products or feed containing animal by-products.
- Standards of construction and function of such establishments.
- Requirements for trade, use and storage of animal products including milk products, fish meal, di-calcium phosphate, tri-calcium phosphate, blood products, blood meal, and feed stuffs containing any of these animal products
- Requirements for traceability of feed meal
- Provision for official controls.

Council Decision 2000/766/EC (2000) prohibited the use of animal protein in animal feed for food production animals, with certain exceptions such as the feeding of fishmeal to non-ruminants and the feeding of milk or milk products to food production animals, and Commission Decision 2001/9/EC (2000) laid down details of control measures required to implement Council Decision 2000/766/EC. Briefly, specific aspects of ruminant feed control covered by 2001/9/EC include:

- Routine testing of feedstuffs for ruminants, to ensure prohibited animal proteins are not present.
- Controls on the use of fishmeal in feed for non-ruminants to ensure that all fishmeal consignments are tested for mammalian proteins; that transport and storage of

fishmeal is separated from transport or storage of other feed materials; that manufacture and packaging of feeds containing fishmeal are completely separated from the manufacture and packaging of feed for ruminants; and that that fishmeal-containing products are labelled as not to be fed to ruminants.

- That similar controls to those specified for fishmeal are also applicable to dicalcium phosphate, with additional requirements that these feed ingredients are prepared from animals that are fit for human consumption and that specified conditions of production of dicalcium phosphate from bones, and hydrolysed proteins from hides and skins, are met.
- That production of pet foods is conducted at plants that do not produce feed for animals that are destined for human consumption.
- That trade in processed animal proteins between EC member states is subject to strict controls on source, labelling, transport and final use.
- That export of processed animal proteins to non-member states meets EC requirements, and that importations of animal proteins from non-member states are subject to strict controls.
- That EU regulations pertaining to the testing and documentary checks of raw ingredients for compound animal feed, and the compound feedstuffs themselves, are complied with.

Lithuania has transposed the Commission Decision 2001/9/EC into national legislation, in the form of the Order of the Director of the SFVS No 301 of 16 July 2001 "*On the prohibition of producing feedingstuffs for pets and fur animals in common production rooms of the establishments*". This order mandates the separation of the production of cattle feed from pet food, and also mandates the exclusion of SRM from the feed chain. This order has been updated by the Order of the Director of the SFVS No 413 of 6 October 2001 *on amendment of State Food and Veterinary Service Director Order No 301 of 16 July 2001*.

Regulation of feedstuff sampling is mandated under the Order of the Minister of Agriculture No 208 (Official Gazette, 2000, No 60-1786) which is in compliance with the directive 76/371/EC, and covers quantity requirements for samples, preparation and packaging of samples, dispatching samples for testing and record-keeping related to sampling.

The *Law on feedingstuffs of the Republic of Lithuania* (Official Gazette, 2000, No 34-952) mandated the establishment and maintenance of:

- Safety and labelling requirements for animal feedstuffs.
- Quality declarations for animal feedstuffs.
- Standards of veterinary and hygiene conditions of premises.
- Lists of prohibited substances, feed materials and feed additives.
- Highest permissible levels for contaminants, products and feed additives in manufactured animal feedstuffs.
- Standards manufacture, use and marketing of feed additives.

5.3 Measures to prevent cross-contamination of ruminant and non-ruminant protein

SFVS is responsible for the control of the quality of animal feedstuffs, including the control

and inspection animal holdings, animal by-product storage and processing plants, and establishments producing or handling feed of animal origin. If a feed mill intends to market its products, it must have SFVS approval. Companies that produce compound feedstuffs, premixes or feed additives are subject to detailed inspections at least once a year. Other establishments that are inspected include food companies that produce raw materials from by-products, and places of supply and distribution. The frequency of inspection is determined on the basis of the amount and assortment of feedstuffs produced, and may also be triggered by complaints or reports of infringements.

Animal feeds are principally sold in bags in Lithuania. Labels on bags must indicate whether there are proteins of animal origin in the contents, and if animal proteins are present, must carry a warning that the contents must not be fed to ruminants. Animal-derived proteins are found only in pet foods, feeds for fur animals such as mink, and feeds for farmed fish.

5.4 Evaluation of the ruminant feed ban

Imported or traded feeds or raw materials

Introduction of feed or raw ingredients into Lithuania, and transit through Lithuania, is under SFVS control. Advance notification of all shipments entering the EU is required, and all shipments are inspected. Shipments in transit through the EU, such as shipments across Lithuanian territory to the Kaliningrad region of Russia, must fulfil EU requirements, including entry of details of animals or animal products into the Trade Control and Expert System (TRACES), which is an EU-wide internet-based management tool for tracking movement of animals or animal products. Shipments in transit are subject to verification checks at both entry and exit, and are sealed by both Customs and the Veterinary Service upon entry. Notification of entry is sent to the exit post, and the exit post sends a return notification to the entry post when the shipment leaves the EU.

No feed of animal origin is imported into Lithuania from outside the EU. Raw materials for use in animal feeds may be imported, subject to presentation of correct documentation at the border and to testing for prohibited animal proteins at the site of destination. Forward notification of arrival of such a shipment is sent to the SFVS head office and to the territorial SFVS of the destination. Documentation accompanying the shipment is stamped to indicate that the shipment may not be used until it has been tested for animal proteins and results have been received. Collection of samples for testing is conducted by the territorial division of the SFVS. If feed containing animal proteins was imported, it would be subject to testing at the border inspection post (BIP). Records of all shipments are kept at the BIP, both electronically and in paper form, for not less than three years.

Feed mill assessment

Currently there are 45 establishments in Lithuania that produce combined livestock feeds. One large feed mill was visited by FSANZ personnel in the course of the in-country visit in September 2012. The feed mill that was the subject of the visit does not produce ruminant feeds or feeds containing mammalian proteins, but the parent company does produce ruminant feeds and dog food. Ruminant feeds are produced at a site that belongs to another company. The parent company provides the raw materials and recipes, and the other company provides the manpower and premises. Ruminant feed is also produced using a mobile factory that goes to farms that have their own grain supply, and mixes feed on the farm. Thus, the production of ruminant feed is physically separated from the feed mill where feeds that may contain fishmeal, such as feed for pigs, poultry or farmed fish, are produced. Dog food, that contains mammalian MBM, is produced on yet another physically separate site. Thus, the EU requirement that manufacture of ruminant feeds must be physically separate from manufacture of feeds for other species is met.

Suppliers of raw materials must go through an approval process that includes an on-site inspection and testing of samples. The company has its own laboratories and also uses external accredited laboratories in Lithuania and elsewhere in the EU. Documentation of sources of raw materials is maintained for two years in the laboratory and is then archived for at least five years. Traceability of raw material to finished product is achieved electronically, and traceability of all components in a finished product was demonstrated.

The presence of a warning on labels, that the feed must not be fed to ruminants, was demonstrated on the label of a feed for farmed fish. The warning was translated as “It is forbidden to feed this product to ruminants”.

Feed for sale is bagged. The company has its own fleet of vehicles for bagged feed, as well as a fleet for bulk feed which is transported to its own poultry production facilities. There are Standard Operating Procedures (SOPs) for cleaning and disinfection of vehicles.

The company operates a Hazard Analysis and Critical Control Points (HACPP) system. There is an approved recall procedure specified within HACCP, and a recall simulation is conducted once a year.

Each territorial branch of the SFVS has an Annual Plan for inspections and audits of premises in its territory. The Annual Plan is risk-based and takes into consideration factors such as size and production quantity. Different feed producers are assigned to different risk groups. The facility visited by FSANZ is in the middle risk groups and is inspected annually. SFVS inspection includes HACCP and internal controls, and sampling of raw materials and finished feeds. In addition, SFVS is empowered to make an unannounced inspection if there is any reason for concern, such as a customer complaint.

Farm assessment

A large dairy farm, with 600 milking cows and 1300 other cattle, was included in the FSANZ in-country assessment in September 2012. This farm also grows grain and feeds the cattle on silage and grain-based feeds manufactured on the property. Additives and premixes are purchased from suppliers with whom they have contracts, and records of these purchases are retained. Feedstuffs are produced as needed, and each milking cow is fed on an individually calculated ration based on her milk production. All livestock producers in Lithuania are required to have a contract with a private veterinarian, who is on-site every day and updates documentation daily. The property is classified by SFVS as being in the middle risk group and is subject to SFVS inspections annually. SFVS inspections include feed production and documentation, as well as animal identification, animal welfare and veterinary medicines.

Rendering plant assessment

The sole rendering plant in Lithuania that renders material that is considered to be at risk for BSE infectivity (Category 1 material) is classified as high risk by the SFVS and is subject to inspections every quarter. All MBM produced from Category 1 material is incinerated on the same site. Records are retained for not less than three years.

Testing of feeds and raw materials

All official testing of animal feeds and raw materials for animal proteins is conducted at the National Food and Veterinary Risk Assessment Institute (NFVRAI). Testing is in compliance with EC 152/2009. The current official method is microscopy. The laboratory is conducting a research and development program on using a Polymerase Chain Reaction (PCR)-based

method, although they have encountered problems with false positive results that reflect the presence of dairy proteins in feed samples.

Testing of animal feedstuffs for animal proteins has been in place since 2002. Results were provided from 2004 inclusive to show the number of tests conducted and that all results to date have been negative.

6 Ante-mortem slaughter controls

6.1 Overview

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

6.2 Legislation

The notification program for BSE is mandated under the Order of the Director of SFVS No 279 (2000). In Lithuania, ante mortem and post mortem examinations are performed in accordance with Regulation (EC) No 854/2004 *laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption*.

Requirements of this legislation relevant to ante-mortem and post-mortem inspection of cattle include the following:

- An official veterinarian, appointed by the competent authority, is responsible for auditing and inspection tasks including food chain information, ante-mortem inspection, animal welfare, post-mortem inspection, management of SRM and other by-products, and laboratory testing.
- Ante-mortem inspection must take place with 24 hours of arrival at the slaughterhouse and less than 24 hours prior to slaughter.
- Carcasses and offal must be subject to post-mortem inspection without delay following slaughter.
- The official veterinarian is to ensure that the food business operator takes all necessary measures to avoid contaminating meat with SRM during stunning and slaughter, and during removal of SRM.
- The official veterinarian is responsible for ensuring that appropriate collection, identification and submission of samples is carried out within the framework of monitoring and control of zoonoses and zoonotic agents.
- The official veterinarian is responsible for supervising the marking of carcasses or part-carcasses of cattle that have been found, following ante- and post-mortem inspection, to be suitable for human consumption.
- The official veterinarian must record and evaluate the results of inspection activities, and must make appropriate notifications of findings, including notifying the competent authority of suspected cases of infectious diseases listed by the OIE.

6.3 Ante-mortem procedures

Ante mortem inspection is performed by the official veterinarian. Inspection is performed within 24 hours after arrival of animals at the slaughterhouse.

As part of ante-mortem inspection, documentation is examined as follows:

- Information from holding on history of animals intended for slaughter;
- Information received from the TRACES database in the cases where the animals for slaughter arrive from another EU country; or of the veterinary certificate for the animals arriving from a third country;
- The identification marks (ear tags) of each animal according to which the origin of the animal can be traced back.

During ante mortem inspection the official veterinarian must establish:

- that the animals do not have clinical signs consistent with the presence of diseases communicable to humans/animals;
- that they do not have clinical signs of diseases or health disorders which might make their meat unfit
- that there is no evidence that the animals were treated with, or fed on, substances which might make the meat hazardous for human health;
- that the animals are not tired, excited, or injured;
- that animal welfare requirements were not compromised during the journey.

Ante-mortem and post-mortem inspection data are retained in the Register in the form approved in Annex 2 *The instruction on the assessment on suitability in food of meat and other slaughter products in animal slaughterhouses*. The data are retained for not less than three years.

6.4 Slaughtering methods

As mandated by Annex X1 to Regulation (EC) No 999/2001, stunning and slaughter are by captive bolt followed by exsanguination. This method is used throughout the EU and is in compliance with the recommendations of the OIE Terrestrial Animal Health Code, chapter 11.5.

6.5 Evaluation of ante-mortem slaughter controls

FSANZ personnel visited two slaughterhouses during the in-country assessment in September 2012, and also reviewed ante-mortem slaughter controls with the SFVS. Veterinary personnel responsible for ante-mortem and post-mortem inspection at slaughterhouses are SFVS employees. Slaughterhouses have permanent Veterinary Inspectors with advanced education, as required by EU regulations.

All slaughterhouses in Lithuania must be approved by the SFVS, and must have a HACCP system and a Quality Manual. Approved establishments are entered into a public register. Most cattle are slaughtered in one of four slaughterhouses. Both slaughterhouses included in the in-country assessment are large facilities, with the capacity to slaughter 30-35 cattle per hour, and both produce beef and beef products for sale both within the EU and to countries outside the EU.

Advance notification, prior to sending an animal to a slaughterhouse, is mandatory and must include identification and any veterinary treatments.

Unloading of livestock at slaughterhouses must be attended by a veterinarian for animal welfare reasons. The veterinarian checks the accompanying documentation and the identification numbers of the animals. The slaughterhouses have not experienced incidents of animals losing both ear tags in transit, but should this occur the procedure would be to isolate the animal until the identity was established. Cattle are also subject to isolation if

there are discrepancies in the documentation, until those discrepancies are resolved. Cattle are sorted by age and gender at unloading, to facilitate slaughter by ascending age. Older cattle that are subject to sampling for BSE are slaughtered after young stock each day.

Ante-mortem inspection is carried out by a veterinarian. Clinical suspects at ante-mortem inspection are reported to be very rare, but are isolated if they are detected. Further details on the handling of clinical suspects were provided by one slaughterhouse. Because cattle may show transient neurological signs as a result of transport, the clinical suspect is observed to determine whether it recovers within a few hours. If it recovers, it is slaughtered as the last animal on that day, a sample of brainstem is taken regardless of the animal's age, and the carcass is held back from further processing until a negative BSE result is received. If the animal does not recover within a few hours it is terminated, a brainstem sample is taken, and the rest of the animal is sent for rendering as Category 1 material.

Training for veterinarians working in slaughterhouses includes specialist training, an annual Continuing Education requirement, monthly regional meetings which are also attended by private veterinarians in the region, and quarterly review of issues are raised on internal audits. All slaughterhouses have permanent Veterinary Inspectors with advanced training.

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

7.1 Overview

Lithuania has procedures for post-mortem inspection, SRM removal and rendering procedures which have been fully aligned with those of the EU since 2000.

7.2 Legislation

Official veterinarians must ensure that all SRM are processed and disposed of in accordance with the requirements of Annex XI to Regulation (EC) No 999/2001 *laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies*, including those derived from animals slaughtered on farm and fallen stock.

Annex X1 to Regulation (EC) No 999/2001 concerns removal of SRM. Key details in this Annex, applicable to slaughterhouses and cutting plants, include the following:

- Defined SRM in bovine animals are the skull, including the brain and eyes, the tonsils and the spinal cord of animals aged over 12 months, and the intestines from duodenum to rectum of animals of all ages.
- SRM must be stained with a dye and must be despatched with a view to subsequent incineration.
- SRM must be completely separated from other waste not intended for incineration.
- Mechanical recovery of meat from the skull and vertebral column is prohibited
- Frequent official inspections must be carried out to verify the requirements of the Annex.
- If SRM are not removed from a dead animal or one that is not destined for human consumption, then the parts of the body containing the SRM, or the entire body, must be disposed of as SRM.

7.3 Post-mortem procedures

The Order of the Director of the SFVS No 279 (16 October 2000) defined SRM and

mandated that SRM must be removed and destroyed. The Order was amended in 2009 on the basis of information provided by the OIE and to maintain consistency with legal acts of the EU that had been amended. Prior to 2009, annual surveillance included brainstem sampling of all cattle over 30 months of age. Decision 2009/719/EC, as amended under 2011/358/EU, revised this to all bovines over 48 months of age subject to emergency slaughter, showing neurological signs or that died or killed on-farm, and all bovines over 72 months of age that are slaughtered for human consumption.

7.4 Handling of suspect diseased cattle

If a neurological disorder is detected in a bovine animal during ante mortem inspection, actions are taken according to Regulation of the European Parliament and Council (EC) No. 999/2001 *laying down health rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies*. The animal is killed and the brainstem sample submitted for testing.

7.5 Rendering processes

Lithuania has only one rendering plant, which has been operating since 1986. Rigorous controls apply to the collection, transport, storage and dispatch of Category 1 materials. Special processing standards for the treatment of ruminant animal waste were introduced in January 1995 and reinforced in April 1997, to require pressure-cooking at 133°C and 3 bars pressure for a minimum of 20 minutes for all mammalian waste used in production of MBM. The rendering plant was approved according to the requirements of Regulation (EC) No 1774/2002 on 27 October 2004. It is subject to SFVS audit inspections every quarter.

7.6 Evaluation of post-slaughter controls

The beef slaughter line was in operation at both slaughterhouses during the FSANZ visits. Carcasses were individually identified by means of labels on each shoulder and each hindquarter. The labels provide detailed information about the carcass, including the individual identification number and the source. Stamps with abbreviated information are also applied to the carcass in similar locations as back-ups.

Both slaughterhouses were designed so that the slaughter line was on the second floor, so that SRM could be dropped directly into the rendering plant's containers through chutes. Floor washings are also treated as Category 1 material. SRM are dyed blue in the container. Appropriate precautions against cross-contamination of edible meat with SRM were noted. Spinal cords are removed by vacuum.

Cattle over 72 months of age are subject to routine testing for BSE and are slaughtered last on each day of slaughter. Appropriate precautions for preventing processing of cattle over 72 months until sampling results had been received, in the form of dedicated chilling rooms with locks and signage, were observed. Brainstem samples are sent for testing in the evening and results are received the next day, after which carcasses are released for further processing.

BSE control measures are built into the HACPP system at both establishments. Slaughterhouses are subject to EU Veterinary Commission audits, and SFVS also has an internal audit service. Slaughterhouses are audited by the SFVS at an average frequency of 2.5 times per year. In addition, monthly reports are made on both ante-mortem and post-mortem inspection findings.

The rendering plant was included in the in-country inspection by FSANZ personnel in September 2012. The plant handles Category 1 and Category 3 by-products, and treats all

Category 2 material as Category 1. Although the Category 1 and Category 3 facilities are on the same site, they are physically separate, and are accessed by separate, one-way routes. The company has its own fleet of collection vehicles, and trucks and containers are dedicated as either for Category 1 or Category 3. All Category 1 MBM is incinerated at the same establishment. The only product from Category 1 material that leaves the premises is rendered fat, which is sold for use as biofuel.

The rendering plant is subject to internal audit annually. The rendering plant is classified as a high-risk establishment, and is inspected by the SFVS every quarter.

8 Summary: exposure control

The risk of introducing and recycling BSE infectivity through ruminant feed is regulated at multiple control points in Lithuania.

A ruminant feed ban has been in place since 2000 and is subject to monitoring and enforcement, including routine sampling of feed for prohibited material. Testing of feed samples has been in place since 2002. The physical separation of production of ruminant feeds from the production of feeds that are permitted to contain animal protein, such as pet food and feeds for farmed mink is mandated by law. Audit, inspection and sampling procedures are in place to ensure that contamination of ruminant feedstuffs with prohibited animal proteins is prevented during production, storage and transport.

Robust controls have been in place since 2000 to ensure that SRM are appropriately removed and disposed of, and to ensure that cattle that are not accepted for slaughter are also disposed of, including any bovine animal that could be infected with BSE. Quality systems are in place to ensure appropriate slaughtering and processing techniques are employed to minimise cross-contamination of carcasses.

The risk of BSE entering and recycling within the bovine feed system or entering the human food supply in Lithuania is low.

BSE food safety controls

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

9 Beef production systems

9.1 Hygiene practices for the minimisation of cross-contamination

Annex X1 to Regulation (EC) No 999/2001 concerns removal of specified risk material (SRM). Key details in this Annex, applicable to slaughterhouses and cutting plants, include the following:

- Defined SRM in bovine animals are the skull, including the brain and eyes, the tonsils and the spinal cord of animals aged over 12 months, and the intestines from duodenum to rectum of animals of all ages.
- SRM must be stained with a dye and must be despatched with a view to subsequent incineration.
- SRM must be completely separated from other waste not intended for incineration.
- Mechanical recovery may not be used to harvest meat from the skull or spinal column.
- Slaughter by captive bolt must be conducted in such a way that the central nervous tissue is not lacerated.
- Frequent official inspections must be carried out to verify the requirements of the Annex
- If SRM are not removed from a dead animal or one that is not destined for human consumption, then the parts of the body containing the SRM, or the entire body, must be disposed of as SRM.

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

The SFVS system for beef or beef products traceability follows the requirements by Regulation (EC) No 1760/2000 which specifies the establishment of a computerised system for the identification and registration of bovine animals and also covers the labelling and traceability of beef and beef products. All EU countries follow the requirements of this Regulation.

10.2 Evaluation of traceability for beef and beef products

Both slaughterhouses included in the in-country assessment also perform further deboning, processing and packing on the same premises. Thorough labelling of carcasses was demonstrated. At the first slaughterhouse, traceability and market recall are included in the sanitary programs within the Quality Management System (QMS) and full traceability, either forward or backward, can be completed within 2 hours. For products derived from more than one animal, such as minced beef, products can be traced to a slaughter batch and therefore to a limited number of animals. The second slaughterhouse also practiced comprehensive audits of traceability, including traceability of packaged beef purchased in a local supermarket back to animal and farm of origin.

11 Recall systems

11.1 Legislation

Regulation (EC) No 1760/2000 covers labelling of beef and beef products, with the objective of giving maximum transparency in the marketing of beef. The Regulation includes the following requirements:

- A compulsory labelling system linking the carcass, quarter or pieces of meat on the one hand to the individual animal from which it came (or group of animals for combined meat products such as mince).
- The label must include the identification number of the animal of origin, the approval number of the slaughterhouse, and the approval number of the cutting plant for meat cuts.
- The label must include the Member State(s) or country/countries of birth, fattening and slaughter.

These requirements facilitate trace-back of beef and beef products to the animal or animals of origin.

For the purposes of traceability and recall, SFVS has approved the SOP "Control on traceability of food or feed KT-2-1-4", and an English-language copy of this document was provided.

11.2 Food recall process

As specified in "Control on traceability of food or feed KT-2-1-4", the stages of food handling must be treated as an unbreakable chain from animal and plant to the supply of products to the consumer. The system operates on the principle of 'one step back-one step forward'. At each step of the production chain, the person or company involved must keep accurate records of:

- Name and address of supplier, and details of the product(s) supplied
 - Name and address of the purchaser (excepting final consumers), and details of the products acquired
- Details to be recorded include, but are not limited to, purchase/delivery date, amount, lot number(s), packaging, and type of treatment.

Record retention requirements are as follows:

- For products without a specified durability date – 2 years
- For products with a durability date specified – to the expiry of the durability date plus 3 months

- For products with durability date less than 3 months (e.g. fruit or vegetables) – for at least 6 months after the date of manufacture or sale.

Compliance with the traceability system for food products is subject to audit by officials of the regional branch of the SFVS. The audit process includes document review and also physical inspection of products and their packaging, labelling and storage conditions.

Products placed on the market must be labelled in accordance with the Lithuanian Hygiene Norm HN 119:2002 *Labelling of Foodstuffs* and other relevant legislation. The label of the product must clearly indicate name and address of the manufacturer or importer, the name, type, durability date and/or lot number or manufacturing date and other labelling particulars mandated by legislation. All food or feed trading entities must have in place a transparent system for traceability of wrapped and bulk products.

As part of the inspection process, officials of the regional SFVS shall check control systems for withdrawal from the market of products unfit for human or animal consumption. Food production entities are required to register every case of withdrawal, including details of the amount withdrawn. Entities are expected to have storage space for withdrawn products, and to document the further use, disposal or rendering of all withdrawn product. Animal by-products must be handled by businesses approved by SFVS for the purpose.

The SFVS has responsibility for implementation of the Rapid Alert System for Food and Feed (RASFF) which is held in conjunction with other EU member states as well as Norway, Iceland, Lichtenstein and Switzerland. No food recalls of beef or beef products from Lithuania have been notified under this system to date.

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

Lithuania has had a contingency plan for BSE since 2004. This contingency plan is approved by the European Commission and is subject to annual review and revision.

The contingency plan includes the following:

1. Information about BSE (clinical signs and differential diagnoses)
2. Chain of command
3. List of experts and contact information
4. Resources (e.g. equipment and facilities) required in a disease emergency
5. Operation manual
6. Instructions for dealing with BSE, including measures in the event of suspected case/s and measures in the event of confirmed case/s.
7. List of diagnostic laboratories, and contact details
8. Means of publicity and disease awareness.

The Infectious Disease Control Centre (IDCC) of the SFVS is responsible for application of eradication measures of contagious diseases in the event of an outbreak. In its activities, the IDCC is guided by the *Law on Veterinary Activities of the Republic of Lithuania* (Official Gazette, 1992, No 2-15) and the contingency plans on the eradication of diseases. Local IDCC centres are established in territorial branches of the SFVS, and are subject to direction by the central IDCC.

Each County IDCC is headed by the chief of the County SFVS, and other members include

other senior SFVS personnel. Each District IDCC is headed by the chief of the district SFVS and includes as members senior veterinarians and the senior inspector of foodstuffs for the district.

The listed experts have a responsibility to assist and advise the SFVS in:

- An immediate epidemiological enquiry that includes a broad assessment of the risk involved
- During the course of the disease, control campaigns to deal with particular problems as they emerge
- Maintenance of expertise within Lithuania, and development of new control strategies and techniques
- Sampling, testing and interpretation of results of laboratory tests
- Establishment of disease control measures
- Training and advising of other staff on disease emergency measures.

An epidemiological report must be prepared for any primary outbreak and should include:

- The situation of the infected holding/s
- The number and species of susceptible and other livestock
- The methods of husbandry
- The number of clinically affected animals and the estimated age of the oldest lesions
- The size and location of the holding and its links with other holdings
- The local meteorological situation
- Recent movements of animals and personnel onto and off holdings.

On the basis of the epidemiological report, the head of the expert group is responsible for advising the local or central IDCC on:

- The possible origin of the infection
- The likely period of infection of the premises
- The holdings most at risk from movements
- The tracing and other measures required to limit the spread of disease.

13 Summary: BSE food safety controls

Robust food safety controls exist in Lithuania to allow effective protection of the human food supply from potential BSE contamination. Measures to prevent SRM contaminating the food supply are in place and have been fully aligned with EC regulations since 2000. Lithuanian controls on traceability of beef and beef products, and on food recall systems generally, are also fully compliant with EC regulations. The SFVS implements the RASFF system in conjunction with other EU member states and EEA member countries. Lithuania has had a comprehensive contingency plan for the response to a suspect BSE event, which is approved by the European Commission, in place since 2004.

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

14 BSE Education and Awareness

A BSE Awareness program was first mandated by the Order of the Director of the SFVS No. 279 of 16 October 2000, which came into effect on 22 November 2000. This Order was later superseded by the Order of the Director of the SFVS No. 468, dated 10 October 2002. The awareness programme currently applied throughout the Republic of Lithuania is in accordance with OIE Code, Article 11.6.2 § 2.

There is one veterinary school in Lithuania, the Lithuanian Veterinary Academy. Students at the Veterinary Medicine Faculty are introduced to:

- The clinical signs of TSEs
- The epidemiology of TSEs
- The notification procedures
- The control measures
- The epidemiological situation in Lithuania, other EU member states, and other countries.

To maintain awareness of BSE among farmers, animal keepers and the general public, the Department of Information and Informatics of the SFVS works in collaboration with the media. Public access to information is provided by the following resources:

- The SFVS website, www.vet.lt, which provides public access to daily press releases, news of the activities of the SFVS and other topical news.
- The National Food and Veterinary Risk Assessment Institute (NFVRAI) website www.nmvrvi.lt which provides similar information to the website of the SFVS.
- Information published on the SFVS website is also sent to the websites of ELTA and BNS, which are the biggest mass media companies in Lithuania.
- Publication by the SFVS of the monthly newsletter *Nuo lauko iki stalo* ('From field to fork') which provides news and information on food safety, animal disease control activities, risk assessments, animal welfare control and other related subjects.
- The SFVS Department of Information and Informatics keeps in direct contact with journalists of the main national and commercial television stations, radio companies, newspapers and journals. Journalists and reporters are invited to attend all major SFVS arranged press conferences and events.
- The newspaper *Valstiečių laikraštis* ('Farmers newspaper'), published twice a month, provides topical information on SFVS activities.

Regular courses are held for the training of SFVS staff, diagnostic laboratory staff, official veterinarians, veterinary practitioners, slaughterhouse personnel, animal breeders, animal keepers and animal handlers. This includes monthly meetings of private veterinarians and

SFVS veterinarians at the regional level. Every livestock farmer is required by law to have a contract with a private veterinarian, and these veterinarians are responsible for distributing information to farmers with whom they have a contract.

15 Disease notification and diagnoses

15.1 Overview

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

15.2 Legislation

BSE has been a notifiable disease in the Republic of Lithuania since 1992. The *Law on Veterinary Activities of the Republic of Lithuania* (Official Gazette, 1992, No 2-15) regulates procedures related to disease prevention, diagnosis and eradication. No cases of BSE have been recorded in ruminants in Lithuania to date.

The notification program for TSEs was approved by Order of the Director of SFVS No. 279 in 2000. This Order is a transposition into Lithuanian legislation of the Council Directive 90/667/EEC.

The BSE surveillance program complies with the guidelines of Articles 11.6.20 to 11.6.22 of the OIE *Terrestrial Animal Health Code*.

15.3 Identification and handling BSE suspects

From 2001, the Enfer rapid post-mortem test was used to monitor BSE in all emergency slaughtered and fallen cattle that were over 20 months or were considered to be at risk. The test was also used for monitoring of scrapie in small ruminants.

From October 2002, surveillance for BSE was reinforced, under Order of the Director of SFVS No 468, which extended BSE surveillance to include all healthy bovine animals over 24 months at slaughter, all emergency-slaughtered bovines over 24 months, and all fallen stock over 24 months. From 2004 Regulation (EC) No 999/2001 has been applied directly. As a result of subsequent decisions and amendments, the following animals are currently subject to testing for the purposes of surveillance:

- All bovine animals over 48 months of age that are subject to emergency slaughter, are showing suspicious clinical signs, are fallen stock or are killed on farm
- All bovine animals over 72 months of age that are slaughtered for human consumption.

Any animal that shows clinical signs that give rise to a suspicion of a TSE is placed under official movement restrictions pending the outcome of clinical and epidemiological investigations by an official veterinarian of the SFVS. The animal must be separated from other animals.

Rabies is endemic in foxes (*Vulpes vulpes*) and raccoon dogs (*Nyctereutes procyonoides*) in Lithuania, and rabies infections occur in cattle. All cattle that are suspected of being infected with rabies are also regarded as suspect BSE cases, and are tested for BSE. Clinical signs of bovine rabies may include hyperesthesia, excitability, aggression, apprehension, hyper salivation, and abnormal gait.

15.4 Diagnostic tests

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

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

Diagnostic procedures and methods used in Lithuania are compliant with Chapter 2.4.6 of the OIE *Manual of Standards for Diagnostic Tests and Vaccines for Terrestrial Animals*. In accordance with current EU policy, BSE testing of cattle is carried out on routinely slaughtered animals over 72 months of age, on fallen stock and emergency slaughtered stock over 48 months of age, and on clinical suspects.

BSE testing is performed at the National Veterinary Laboratory (NVL) of the National Food and Veterinary Risk Assessment Institute, which is the designated reference laboratory for TSEs in Lithuania, and the sole laboratory for TSEs investigation in Lithuania. NVL is accredited according to EN 45001 and EN ISO/IEC 17025, and in the GOST-R and Hygiene Systems in the Russian Federation.

Prior to 2001, testing was conducted by histopathology. From 1 July 2001, Lithuania introduced rapid testing using the Enfer test, an ELISA chemiluminescence test, which uses a polyclonal anti-PrP serum for detection. Since 2002 the Enfer test has been progressively replaced by another rapid test, the TeSeE Western blot (Bio-Rad) test, which has the advantage over the Enfer test that it can be used to detect TSEs in cattle, sheep, goats and deer. The Bio-Rad test is an ELISA sandwich test for detection of TSE-prion in ruminant CNS tissues and involves the use of two monoclonal antibodies. Immunohistochemical examination was introduced in 2004.

Samples from routinely slaughtered bovines are tested by the rapid BioRad test. Samples from clinical suspects are tested by means of histopathology and immunohistochemistry. The laboratory currently processes approximately 400 to 500 brainstem samples a day, and has processed over 700,000 brainstem samples over the last 11 years, with no positive results found.

15.5 Laboratory assurances and auditing

Proficiency testing of the rapid test is conducted twice a year. In addition, Proficiency of test performance is tested yearly by external inter-laboratory tests and there have been no unsatisfactory results received.

15.6 Penalties and reporting incentives

Compensation for animals, products or raw materials that require emergency slaughter or destruction as part of eradication of TSEs has been mandated under successive Resolutions

and Orders in the legislation since 2001. The keeper of the suspect animal is only compensated if the keeper immediately notifies the SFVS and takes all the precautionary measures to prevent dissemination of the infectious agent.

Compensation is assessed by a committee that includes an official veterinarian of the SFVS in the region, an officer of the District Agriculture Service, and representatives of farmers' associations. The report of the committee is sent to the Ministry of Agriculture, which reports to the Lithuanian Government. Compensation is paid from a Government reserve fund for emergencies. The compensation is based on the previous month's market value, and takes into account the breed and the degree of genetic improvement of the animal, but cannot be greater than the market value. Compensation must be paid within 90 days of slaughter of animals slaughtered in the framework of an animal diseases control program.

Animal keepers are required to report clinical suspects within 24 hours, or be subject to financial penalties. Animal keepers are also required to have a contract with a private veterinarian who visits the holding daily, and these veterinarians are also required by law to report suspect cases.

16 Cattle identification and traceability

16.1 Overview

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

16.2 Legislation

The Lithuanian system for the identification and registration of bovine animals has been fully aligned with EU regulations (EC) No 1760/2000 since 2000. This regulation establishes a system for the identification and registration of bovine animals, and also imposes requirements for the labelling of beef and beef products. Key requirements of this regulation relating to the identification of cattle include the following:

- Each member state must have a national computerised database
- The database must record the identity of cattle, all the holdings in the territory of the member state, all movements of cattle.
- All cattle must have ear tags in each ear, and a movement record ('passport')
- Both ear tags on a bovine animal must bear the same unique identification code, which allows identification of the animal and trace-back of its place of birth and its movements.
- Animals without ear tags and passport may not be moved.
- No ear tag may be removed or replaced without the permission of the competent authority
- Allocation, distribution and application of ear tags must be done in a manner determined by the competent authority.

- Animal keepers must maintain an up-to-date register of cattle on their holdings.
- Animal keepers must report all births, deaths and movements of cattle to the competent authority within a time determined by the competent authority.
- An animal's passports must be returned to the competent authority upon the death or slaughter of the animal.
- Member States must be able to carry out adequate and efficient control measures to ensure compliance with the Regulation.

The Lithuanian national bovine database is maintained by the Ministry of Agriculture.

16.3 Current identification systems for cattle

Cattle in Lithuania, in common with cattle elsewhere in the EU, are individually identified by two ear tags, one in each ear. Prior to July 1, 2011, a passport was issued for each animal within fourteen days of the notification of birth. In 2011 the EU recognized the Lithuanian bovine identification as sufficiently reliable that calves born since July 1, 2011 do not require passports. Each holding must maintain an individual register of the cattle on that holding. The SFVS undertakes compliance audits of cattle identification regulations by on-site inspection of about 10% of the holdings.

Lithuania has operated a computerized database for all bovine animals since 2000. The database was initially started on a regional basis but was rebuilt as a national database in 2004. The database contains the following information for each animal:

- identification code
- date of birth
- sex
- breed or colour of coat
- identification code of the mother, for cattle born in Lithuania
- identification code assigned in the country of origin, for imported cattle
- identification number of the holding where the animal was born
- identification numbers of all holdings on which the animal has been kept
- dates of each movement from or to holdings
- date of death or slaughter.

The national bovine database is accessed through the internet and is updated in real time. There are approximately 2,500 people entering data and approximately 8,000 people accessing data. Originally only State Veterinary Inspectors could enter data, but now veterinarians, control assistants and livestock inseminators can also enter data. Since 2009, farmers have been permitted to enter data, subject to conditions. Slaughterhouses and the rendering plant also enter data.

Births, deaths and movements must be entered into the database within seven days. Calves must be ear-tagged by seven days of age, and are entered into the database at ear-tagging. Calves that die prior to being entered into the database may be incinerated on the property of birth, but all other cattle must be sold as livestock, sold for slaughter or sent for rendering. If an animal loses a tag, the keeper has a maximum of three days to order a new tag, and seven days to replace the lost tag. Replacement tags have a Roman numeral to indicate that

they are replacements. There are three companies approved by the Ministry of Agriculture to distribute tags. Ear tags may be ordered by farmers or their veterinarian.

The bovine database produces reports for regional scrutiny, and non-conformances are monitored. The major cause of non-conformance is late notification. However, compliance is generally good. Compliance is linked to premiums, and also to subsidisation of rendering. Farmers pay only 25% of the real cost of having fallen stock rendered.

Cattle holdings are subject to announced and unannounced inspections. Veterinary Inspectors inspect farms for compliance with animal identification law on the basis of an Annual Plan. The Annual Plan uses a risk-based approach to select which properties to inspect. Risk factors that increase the likelihood of an inspection include a history of noncompliance, and a keeper aged over 70 years. Quarterly reports on compliance are issued by all regional branches of the SFVS. By law, at least 3% of holdings must be inspected annually, but the SFVS chooses to inspect 10%.

If an animal showed signs of neurological disease on ante-mortem inspection at a slaughterhouse, tracing of herd of origin, movements during its lifetime, and identification of its herd cohorts, could be determined immediately.

16.4 Evaluation of the cattle identification scheme

The practical aspects of the bovine identification scheme, from the animal keeper's point of view, were discussed with the farm owner and their private veterinarian during the visit to a dairy farm that was part of the FSANZ in-country assessment. Aspects of the identification scheme were also discussed at the rendering plant.

Farmers have on-site access to the national bovine database. Calves are born in a dedicated calving shed and tagged on the day of their birth. Births are entered into the database three times each week. Movements are usually entered within 24 hours. Milking cows do occasionally lose ear tags, which are replaced by the veterinarian. In the event that a cow dies on the farm, the rendering plant is notified, the carcass is left at a designated pick-up point on the farm, and the database is updated. The carcass goes to the rendering plant with ear-tags intact. The rendering plant collects the brainstem sample, and retains ear-tags for a year.

The farm has a contract with a private veterinarian, who is required to visit the property daily. There is a paper register of livestock on the property, and this is updated daily by the veterinarian.

The dairy farm is in the middle risk group and is subject to annual identification checks by the SFVS. The SFVS inspection also includes documentation, animal welfare, feeds and veterinary medicines.

17 Summary: BSE control programs and technical infrastructure

Lithuania has appropriate control programs for the identification and notification of BSE clinical suspects, and for the laboratory diagnosis of bovine CNS tissue infected with BSE.

BSE has been a notifiable disease in Lithuania since 1992, and a BSE Awareness program has been in place since 2000. Veterinary students are introduced to the clinical signs and notification procedures of BSE, and there are Continuing Education programs and regular meetings to keep veterinary practitioners' understanding of BSE up to date. Regular courses are also available for animal keepers, slaughterhouse personnel, stock transporters and diagnostic laboratory personnel. Information is available to the general public in a variety of

formats. There are incentives to motivate animal keepers to report clinical suspects, and both farmers and their veterinarians face penalties for failure to report suspect cases.

There is one diagnostic laboratory, the National Veterinary Laboratory of the National Food and Veterinary Risk Assessment Institute, which is the designated reference laboratory for the diagnosis of TSEs in Lithuania. The laboratory uses diagnostic tests compliant with the OIE Standards, and maintains proficiency by both internal and inter-laboratory proficiency testing.

Lithuania has a centralised animal identification system and internet-based database, and identification of all cattle born in or introduced into Lithuania has been mandatory since 2000. Compliance with the identification system is good. Animal holdings are subject to SFVS inspections that include bovine identification checks. The Annual Plan for inspections is risk-based.

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 11.6 of OIE's *Terrestrial Animal Health Code*.² The degree and quality of surveillance for BSE within the cattle population of a country, combined with other systems for BSE control, helps to determine the BSE risk status of the country.

The BSE surveillance programme in the Republic of Lithuania complies with the guidelines in Articles 11.5.20 to 11.5.22 of the OIE's *Terrestrial Animal Health Code*. This chapter provides further details of Lithuania's surveillance activities and historical data.

18 Lithuania's BSE surveillance program

Council Directive 90/667/EEC was transposed into Lithuania's legislation by the Order of the Director of SFVS No. 279, 2000. Under this Order, the rapid post mortem test for monitoring of BSE was mandated for:

- Emergency-slaughtered and fallen stock, clinical suspects and high-risk bovines over 20 months of age.
- Monitoring for scrapie in small ruminants.

Surveillance for BSE was subsequently reinforced by the Order of the Director of SFVS No. 468, 2002. Under this Order, surveillance for BSE was amended to include:

- All healthy bovines slaughtered at over 24 months of age
- All emergency-slaughtered bovines over 24 months of age
- Fallen stock over 24 months of age.

Annual BSE monitoring in certain EU member states, including Lithuania, was revised under Decision 2009/719/EC, as amended under 2011/358/EU. The following bovine animals are currently subject to BSE monitoring:

- All bovines over 48 months of age subject to emergency slaughter
- All bovines over 48 months of age showing symptoms of disease
- All fallen bovines (i.e., died or killed on-farm) over 48 months of age
- All bovines over 72 months of age that are slaughtered for human consumption

Individual animal identifications are used to determine age of cattle sampled, and the proportion sampled. Individual identification by ear tag has been in place since 2000, and the SFVS carries out spot inspections of approximately 10% of holdings annually for compliance with cattle identification regulations.

The size of the Lithuanian national cattle herd from 2000 to 2012 inclusive is shown in **Table 3**.

Table 3: Cattle population in Lithuania, 2000-2011 inclusive	
2000	932 825
2001	721 342
2002	882 233
2003	902 036
2004	916 715
2005	902 362
2006	859 920
2007	800 526
2008	752 571
2009	702 487
2010	688 210
2011	686 849
2012	713 972

Rabies is endemic in Lithuania, and all cattle suspected of being infected with rabies are also tested for BSE. Like BSE, rabies in cattle causes clinical signs of progressive disease of the central nervous system. Clinical signs common to both diseases include hyperesthesia, excitability, aggression, apprehension, salivation and abnormal gait. The total numbers of TSE tests in Lithuania, in the years 2002 through to 2009 inclusive, are presented in **Table 4**. No positive cases of BSE have been diagnosed in the Republic of Lithuania.

Table 4: Total number of TSE tests conducted in Lithuania, 2002-2009								
Species	2002	2003	2004	2005	2006	2007	2008	2009
Enfer TSE test								
Cattle	5732	2860	4556	51128	33336	33876	52889	19416
Sheep	22	25	8	539	721	879	1978	528
Goat	0	0	0	4	10	31	79	15
Total	5754	2885	4564	51671	34067	34786	54946	19959
Bio-Rad test								
Cattle	4865	6591	45941	35003	53834	66732	40124	69031
Sheep	28	54	226	489	1104	2107	1237	1591
Goat	0	0	4	2	12	49	50	81
Total	4893	6645	46171	35494	54950	68888	41411	70703
Histopathology								
Cattle	539	295	6	15	4	4	1	2
Sheep	9	4	0	0	0	0	0	0
Goat	11	0	0	0	0	1	1	0
Total	559	299	6	15	4	5	2	2
Annual Total Tests	11206	9829	50741	87180	89021	103679	96359	90664
Overall Total	538679							

19 Lithuania BSE surveillance points data

Lithuania is required to practice Type B surveillance as a controlled BSE risk country under the requirements of the OIE.

Data summarising BSE sampling in Lithuania from 2005-2011 inclusive are presented in **Table 5**.

Table 5: Summary Table for BSE Surveillance in Lithuania, 2005-2011 inclusive									
Year	Surveillance Subpopulations								Points total for year
	Routine slaughter		Fallen stock		Casualty slaughter		Clinical suspects		
	Samples	Points	Samples	Points	Samples	Points	Samples	Points	
2005	81769	7806.93	3958	1063.7	331	209.2	137	35705	44784.83
2006	80576	9192.54	6220	1768.3	455	294.3	155	37900	49155.14
2007	93127	10448.42	7024	2028.3	929	599.8	134	33080	46156.52
2008	85568	8311.88	5658	1675.5	2073	1523.6	174	42250	53760.98
2009	84112	7520.4	2168	630.2	1936	1408.1	243	71405	80963.70
2010	81381	8246.26	1809	492.6	1577	1176.2	206	66660	76575.06
2011	60093	6114.8	2650	984.4	1242	921.5	7	3565	60093.00
Subtotals and Total	566626	57641.23	29487	8643	8543	6132.7	1056	290565	411489.20

Data summarizing the population of cattle over 24 months of age in Lithuania from 2005 to 2011 inclusive are presented by region in **Table 6**.

Table 6: Population of cattle older than 24 months in Lithuania							
Region	2005	2006	2007	2008	2009	2010	2011
Alytaus apskr.	25936	25864	23636	24698	22735	21787	20592
Kauno apskr.	63050	62499	59521	62073	57520	54944	49914
Klaipėdos apskr.	41973	42773	40358	41173	39970	40633	38970
Marijampolės apskr.	49947	51433	49650	50965	47527	45287	42132
Panevėžio apskr.	54968	54980	53213	53316	50362	49326	46921
Tauragės apskr.	50365	52453	52025	53493	52335	52186	51066
Telšių apskr.	34461	35808	35722	37015	35922	36291	35044
Utenos apskr.	30921	29726	28028	27444	25403	24773	23363
Vilniaus apskr.	36634	33391	29356	28306	26497	24858	21802
Šiaulių apskr.	62722	62928	60511	62111	57370	56114	51271
Totals	450977	451855	432020	440594	415641	406199	381075

Points targets specified by the OIE for Type B surveillance are compiled over the most recent seven years. For a national herd of between 400,000 and 600,000 cattle over 24 months of age, the points target is 60,000. Lithuania's surveillance points total for the seven years from 2005 to 2011 inclusive is 411,489.2, well in excess of this target and satisfy Type A surveillance. Detailed surveillance points data for the years 2002-2011 are presented in **Table 7**, and show that appropriate attention is paid to testing older cattle which are at greatest risk of subclinical or clinical BSE.

Table 7: BSE Surveillance Points Data 2002 - 2011

Age range	Routine slaughter		Fallen stock		Casualty slaughter		Clinical suspects	
	Samples	Points	Samples	Points	Samples	Points	Samples	Points
2002								
>1, <2	0	0	4	0.8	2	0.8		0
≥2, <4	680	68	80	16	16	6.4	0	0
≥4, <7	3038	607.6	272	244.8	11	17.6		0
≥7, <9	1012	101.2	92	36.8	3	2.1		0
≥9	5028	0	852	85.2	46	9.2		0
Totals	9758	776.8	1300	383.6	78	36.1	0	0
2003								
>1, <2	0	0	16	3.2	9	3.6	0	0
≥2, <4	388	38.8	251	50.2	17	6.8	6	1560
≥4, <7	1833	366.6	474	426.6	14	22.4	8	6000
≥7, <9	566	56.6	183	73.2	8	5.6	10	2200
≥9	4631	0	1263	126.3	65	13	4	180
Totals	7418	462	2187	679.5	113	51.4	28	9940
2004								
>1, <2	14	0.14	14	2.8	0	0	1	0
≥2, <4	9663	966.3	776	155.2	54	21.6	13	3380
≥4, <7	12754	2550.8	816	734.4	45	72	43	32250
≥7, <9	4236	423.6	166	66.4	21	14.7	13	2860
≥9	20839	0	898	89.8	80	16	57	2565
Totals	47506	3940.84	2670	1048.6	200	124.3	127	41055
2005								
>1, <2	23	0.23	7	1.4	1	0.4	0	0
≥2, <4	18439	1843.9	1094	218.8	66	26.4	26	6760
≥4, <7	26367	5273.4	569	512.1	79	126.4	30	22500
≥7, <9	6894	689.4	342	136.8	38	26.6	16	3520
≥9	30046	0	1946	194.6	147	29.4	65	2925
Totals	81769	7806.93	3958	1063.7	331	209.2	137	35705
2006								
>1, <2	4	0.04	4	0.8	0	0	0	0
≥2, <4	22251	2225.1	1543	308.6	103	41.2	39	10140
≥4, <7	32270	6454	1022	919.8	113	180.8	28	21000
≥7, <9	5134	513.4	580	232	49	34.3	16	3520
≥9	20917	0	3071	307.1	190	38	72	3240
Totals	80576	9192.54	6220	1768.3	455	294.3	155	37900
2007								
>1, <2	2	0.02	5	1	0	0	0	0
≥2, <4	25966	2596.6	1729	345.8	210	84	30	7800
≥4, <7	35394	7078.8	1222	1099.8	230	368	25	18750
≥7, <9	7730	773	583	233.2	100	70	17	3740
≥9	24035	0	3485	348.5	389	77.8	62	2790
Totals	93127	10448.42	7024	2028.3	929	599.8	134	33080
2008								
>1, <2	18	0.18	10	2	0	0	0	0
≥2, <4	19363	1936.3	1452	290.4	517	206.8	43	11180
≥4, <7	27470	5494	1054	948.6	624	998.4	30	22500
≥7, <9	8814	881.4	401	160.4	264	184.8	23	5060
≥9	29903	0	2741	274.1	668	133.6	78	3510
Totals	85568	8311.88	5658	1675.5	2073	1523.6	174	42250
2009								
>1, <2	0	0	8	1.6	12	4.8	3	0
≥2, <4	10779	1077.9	268	53.6	226	90.4	50	13000
≥4, <7	27687	5537.4	408	367.2	622	995.2	66	49500
≥7, <9	9051	905.1	198	79.2	205	143.5	19	4180
≥9	36595	0	1286	128.6	871	174.2	105	4725
Totals	84112	7520.4	2168	630.2	1936	1408.1	243	71405
2010								
>1, <2	2416	24.16	0	0	0	0	0	0
≥2, <4	15029	1502.9	285	57	289	115.6	36	9360
≥4, <7	24665	4933	273	245.7	445	712	60	45000
≥7, <9	17862	1786.2	216	86.4	360	252	42	9240
≥9	21409	0	1035	103.5	483	96.6	68	3060
Totals	81381	8246.26	1809	492.6	1577	1176.2	206	66660
2011								
≥2, <4	8595	859.5	903	180.6	215	86	2	520
≥4, <7	18395	3679	657	591.3	384	614.4	4	3000
≥7, <9	15763	1576.3	345	138	185	129.5	0	0
≥9	17340	0	745	74.5	458	91.6	1	45
Totals	60093	6114.8	2650	984.4	1242	921.5	7	3565

20 Summary: BSE surveillance

Lithuania has an ongoing TSE surveillance program within its ruminant populations. Lithuania is required to carry out Type B surveillance in compliance with the guidelines in Articles 11.5.20 to 11.5.22 of the OIE's Terrestrial Animal Health Code. Current surveillance practices have been in place since 2004. Lithuania's total points for the period 2004-2011 (7 years) added up to a sum of 411,489.2, which is well in excess of the target of 60,000 specified by the OIE for a country, zone or region with the current adult bovine population of Lithuania to satisfy Type A surveillance.

Conclusions and BSE Risk Characterisation

As an EU member state, Lithuania has legislative controls and systems to prevent the introduction and amplification of the BSE agent within the Lithuanian cattle population and contamination of the human food supply with the BSE agent. In-country assessment by FSANZ personnel confirmed that legislative requirements relevant to BSE prevention and control are effectively implemented.

The risk of the BSE agent being released into the Lithuanian cattle population through imports of MBM, live cattle, or beef and beef products is effectively managed. Lithuania has been an EU member state since May 2004. The introduction of live cattle, beef and beef products was aligned with EU legislation in 2002, and introduction of live cattle has been restricted to trade with other EU member states and EEA members since that year. No beef or beef products have been imported from non-EU countries since 2005, and no beef or beef products have been imported from countries classified by the OIE as having less than controlled status. Introduction of MBM or greaves has likewise been limited to trade with EU or EEA member states. As an EU member state, Lithuania has kept up to date with evolving knowledge of BSE transmission and has amended its control policies as appropriate.

The risk of introducing and recycling BSE infectivity through ruminant feed is regulated at multiple control points in Lithuania, and the risk of BSE entering and recycling within the bovine feed system or entering the human food supply in Lithuania is minimal. A ruminant feed ban has been in place since 2000. Audit, inspection and sampling procedures are in place to ensure that contamination of ruminant feedstuffs with prohibited animal proteins is prevented during production, storage and transport. Controls have been in place since 2000 to ensure that SRM are appropriately removed and disposed of, and to ensure that bovine animals that could be infected with BSE do not enter the human food supply.

Lithuania has appropriate control programs for the identification and notification of BSE clinical suspects, and for the laboratory diagnosis of bovines infected with BSE. BSE has been a notifiable disease in Lithuania since 1992, and comprehensive programs to ensure that there is sufficient BSE awareness among veterinarians, animal keepers, slaughterhouse personnel, stock transporters and other relevant personnel are maintained. Incentives and penalties are in place to promote compliance. The designated reference laboratory for TSEs in Lithuania uses diagnostic tests compliant with the OIE Standards, and maintains proficiency by both internal and inter-laboratory proficiency testing.

Individual identification of all cattle born in or introduced into Lithuania has been mandatory since 2000. Lithuania has a centralised animal identification system and internet-based database, from which regular reports are generated to monitor effectiveness. Animal holdings are subject to SFVS inspections, according to a risk-based Animal Plan, that include bovine identification.

Comprehensive food safety controls exist in Lithuania to allow effective protection of the human food supply from potential BSE contamination. Measures to prevent SRM from contaminating the food supply are in place and have been fully aligned with EC regulations since 2000. Lithuanian controls on traceability of beef and beef products, and on food recall systems generally, are also fully compliant with EC regulations. The SFVS implements the RASFF system in conjunction with other EU member states and EEA member countries. Lithuania has had a comprehensive contingency plan for the response to a suspect BSE event, which is approved by the European Commission, in place since 2004.

Lithuania carries out Type B surveillance in compliance with the guidelines for controlled status countries in Articles 11.5.20 to 11.5.22 of the OIE's Terrestrial Animal Health Code.

Current surveillance practices have been in place since 2004. Lithuania's total points for the 7 years 2004-2011 were well in excess of the target specified by the OIE for a country with the current cattle population of Lithuania, for either Type A or Type B surveillance.

In conclusion, robust controls to prevent BSE from entering and recycling within the bovine feed system or entering the human food supply in Lithuania have been in place for at least eight years. The FSANZ BSE food safety assessment of Lithuania recommends **Category 1** status for the Republic of Lithuania.

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Appendix 1: State Food and Veterinary Service

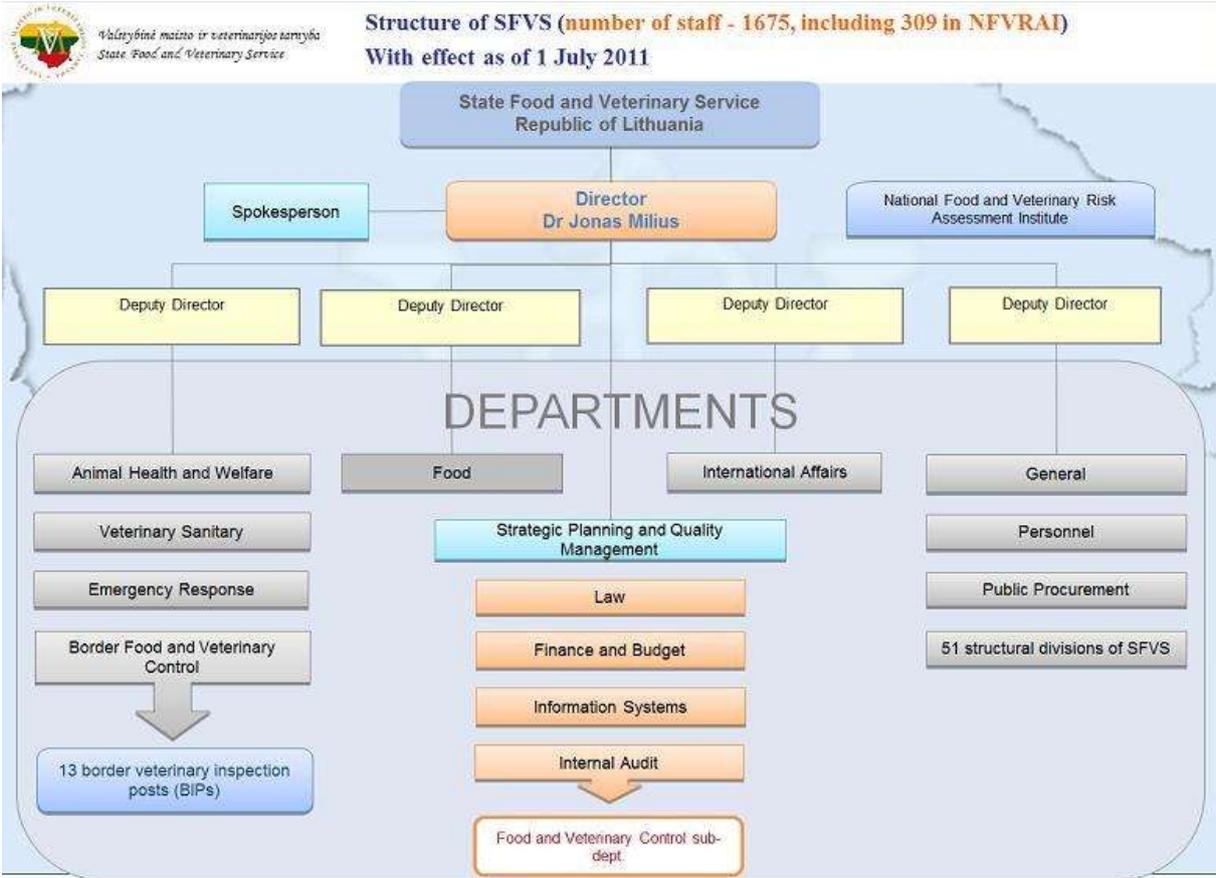
The competent authority responsible for prevention and control of BSE in Lithuania is the State Food and Veterinary Service of the Republic of Lithuania (SFVS), an independent budgetary institution under the Government of the Republic of Lithuania. The SFVS has overall responsibilities in relation to food and feed safety, animal health and animal welfare. The SFVS is directly accountable to the Prime Minister of Lithuania.

The SFVS was formed in 2000. Prior to that, there were three separate organisations all involved in food safety. The SFVS applies a ‘from field to fork’ philosophy, and in the case of water, ‘from bore to tap’. Areas of control include food; food additives; drinking water; animal feeds, veterinary medicinal products and biocides; chemical, physical and microbiological hazards relevant to crops; and production, import, transportation, storage and trade of food. The SFVS also prepares legislation

The Chief Veterinary Officer (CVO) represents Lithuania in the EU, OIE, Food and Agriculture Organisation of the United Nations (FAO) and other international organisations.

The organisational structure of the SFVS is shown in **Figure 2**

Figure 2: Organisational structure of the SFVS



The National Food and Veterinary Risk Assessment Institute (NFVRAI) is a subordinate institution to, and directly accountable to, the SFVS. Analytical capabilities include chemistry, radiology, bacteriology, histopathology, serology, virology, and analysis for genetic modification.

The border inspection posts (BIPs) are part of, and staffed by, the SFVS. There are five BIPs on roads entering Lithuania, three at seaports, three on railroads and one at Vilnius airport.

Approximately 50% of SFVS employees are veterinarians. Approximately 18% are food inspectors with backgrounds that include biology, chemistry, food technology and medicine. Other SFVS employees include accountants, lawyers, human resources specialists, IT specialists, veterinary assistants and laboratory technicians.

A total of 40545 animal food handling businesses, and 33025 non-animal food handling businesses, are under SFVS control, as shown in **Figures 3** and **4**.

Figure 3: Animal food handling businesses under SFVS control

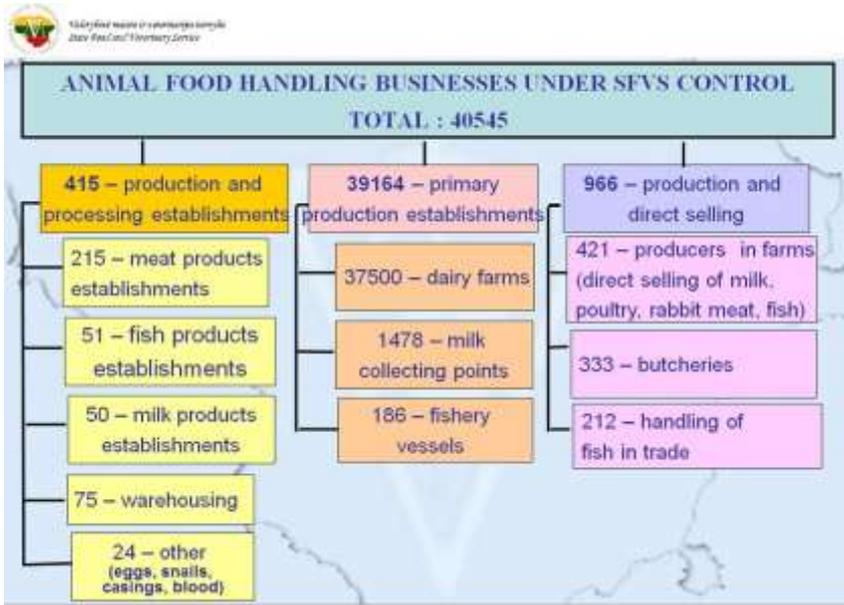
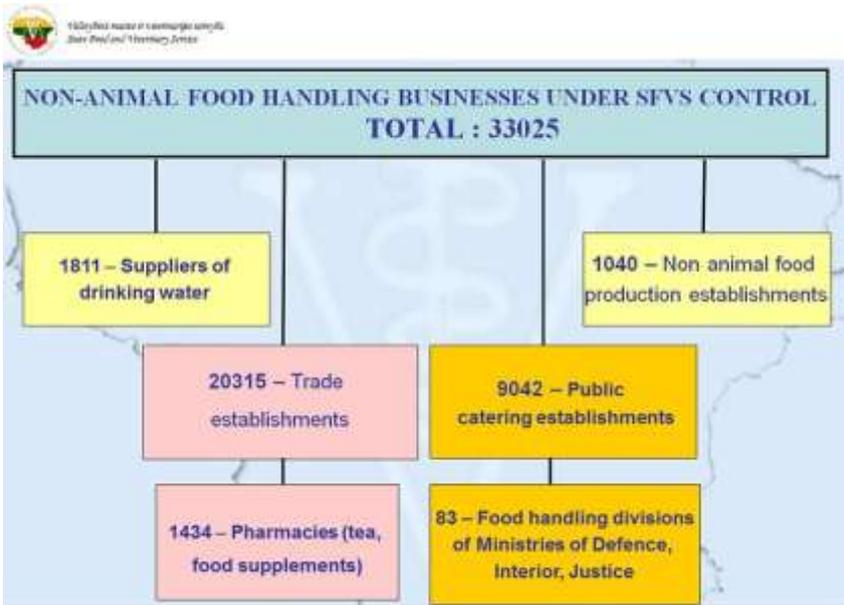
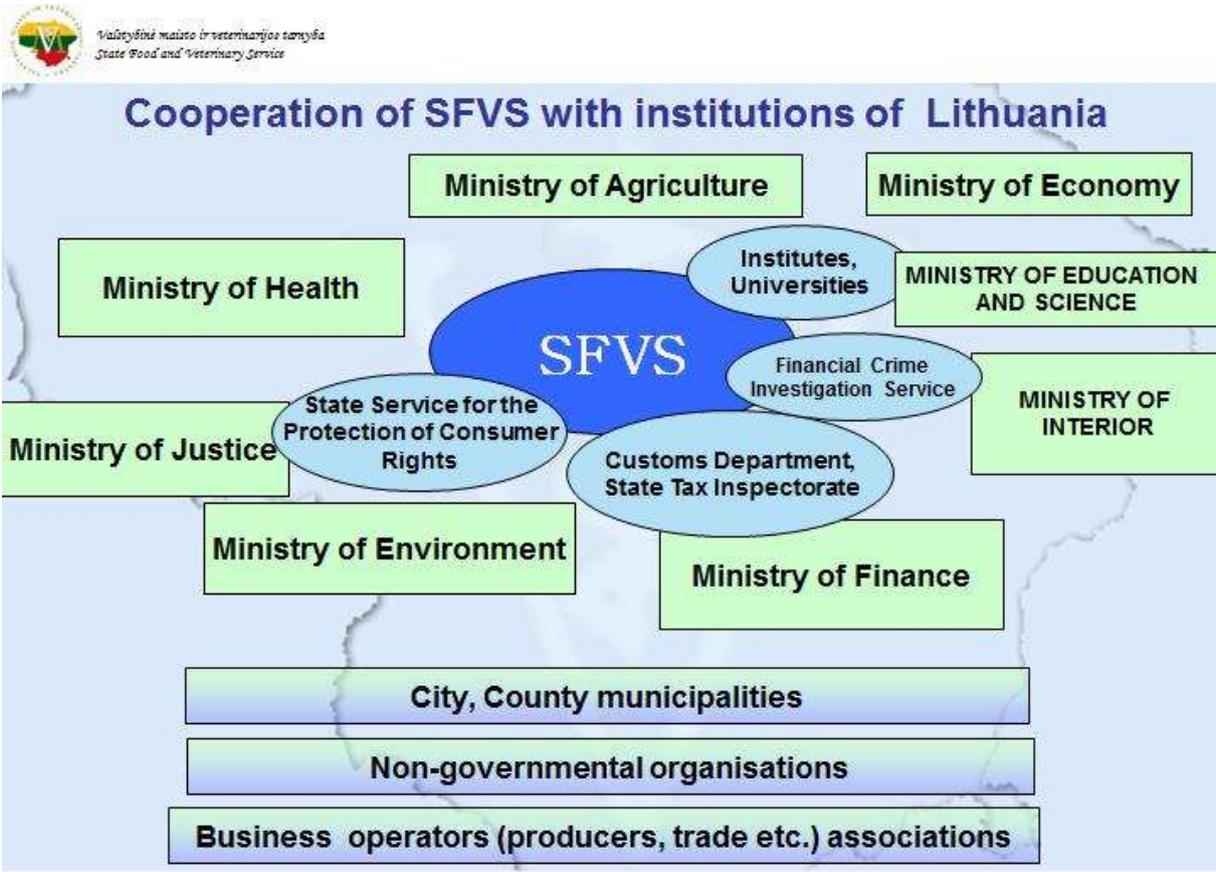


Figure 4: Non-animal food handling businesses under SFVS control.



The SFVS cooperates with number of other Lithuanian institutions and associations, both governmental and non-governmental, as illustrated in **Figure 5**.

Figure 5: Cooperation of SFVS with institutions of Lithuania.



Appendix 2: Cattle and holdings in Lithuania

Both dairy and beef industries are present in Lithuania, and production of beef from the male offspring of dairy cows (dairy-beef) is a growing industry. Currently most adult cattle are dairy cattle and subject to premiums. The common dairy breeds are Lithuanian Red or Lithuanian Black-and-White. These breeds are largely derived from Simmentals and Holsteins.

Only three farms in Lithuania have more than 1000 cattle. The number of farms by herd size, and the number of cows in herds of specified size, at 1 August 2012, is shown in **Table 8**.

Table 8: Farms by cattle herd size in the Republic of Lithuania, 1 August 2012				
Herd size	Farms by cattle herd size		Cattle in herds of specified size	
	Number of farms	% of farms	Total number of cows	% of cows
1-2 cows	44177	52.4%	61441	9%
3-5 cows	19365	22.9%	72118	10%
6-10 cows	9580	11.4%	72264	10%
11-20 cows	5493	6.5%	79108	11%
21-30 cows	1933	2.3%	48203	7%
31-50 cows	1670	2.0%	65263	9%
51-100 cows	1262	1.5%	87404	12%
101-150 cows	384	0.5%	46647	7%
> 150 cows	442	0.5%	181524	25%
Total	84306	52.4%	713972	100%

The percentages in **Table 8** are illustrated in the following figures:

Figure 6: Lithuanian cattle farms by herd size.

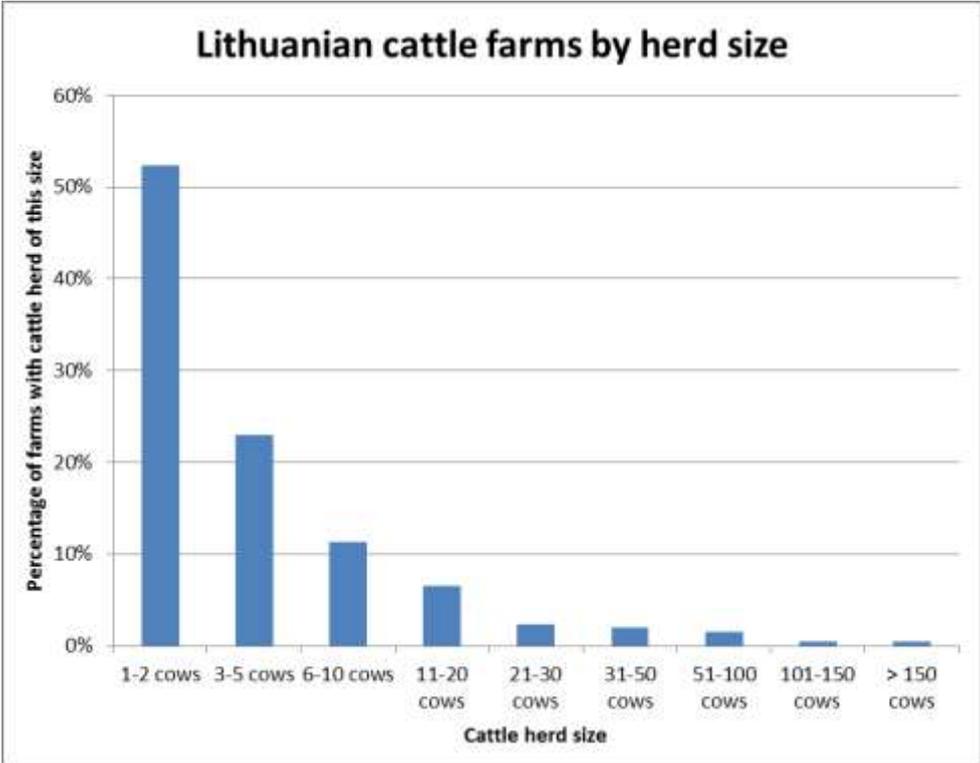
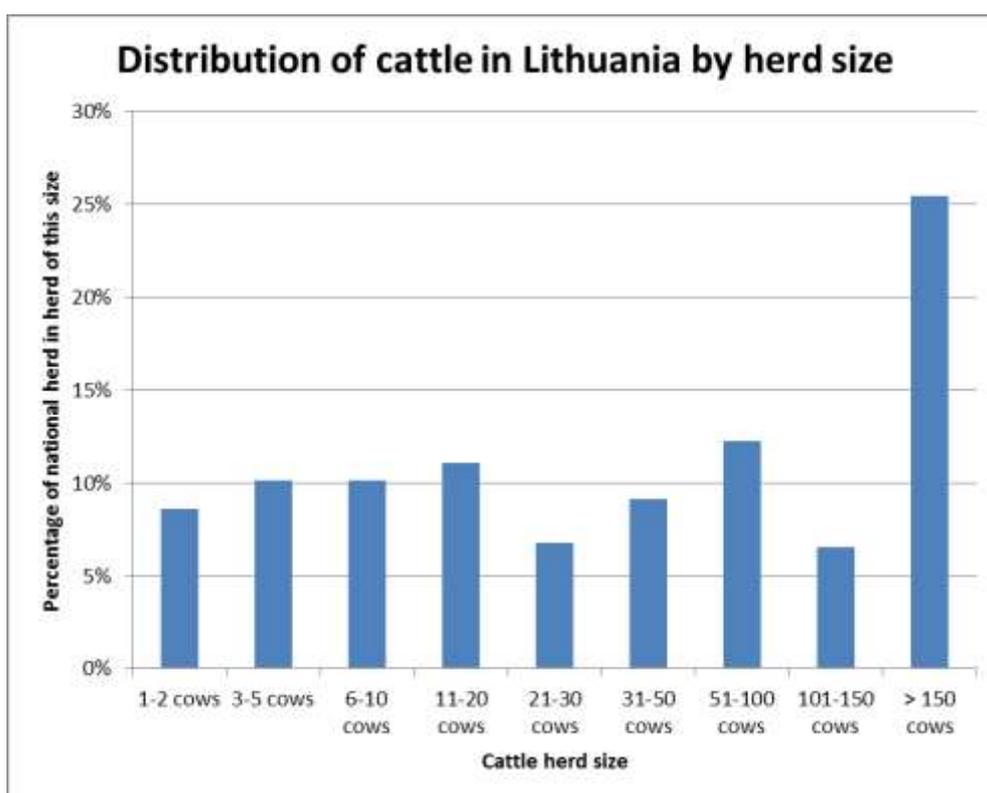


Figure 7: Distribution of cattle in Lithuania by herd size.



Total cattle numbers, up to 2011 inclusive, are shown in **Table 9**. Unlike the data in Table 6, these data include all cattle, including those less than 24 months of age.

Table 9: total number of cattle herds and cattle in Lithuania 2000-2011						
Region	2000		2001		2002	
	Herds	Cattle	Herds	Cattle	Herds	Cattle
Alytus	19012	49452	18233	48116	18150	54111
Kaunas	33110	121253	33641	113288	31621	115965
Klaipeda	26305	135021	23881	91030	23881	96577
Marijampole	22330	102186	22024	99303	21181	94232
Panevezys	27599	107448	27013	90419	25915	111245
Taurage	33015	122612	32452	12847	26008	116660
Telsiai	19050	83380	20243	81207	19886	92229
Siauliai	17240	70886	18380	57882	19378	63075
Utena	21845	66539	21157	63753	20356	67491
Vilnius	28828	74048	27584	63497	26535	70648
Total:	248334	932825	244608	721342	232911	882233

**Table 9 continued: total number of cattle herds and cattle in Lithuania
2000-2011**

Region	2003		2004		2005	
	Herds	Cattle	Herds	Cattle	Herds	Cattle
Alytus	17576	53933	14860	55756	15921	55105
Kaunas	28795	122683	27265	121641	25790	124345
Klaipeda	18877	90048	17574	93572	15739	87545
Marijampole	20465	102160	19766	109159	18403	103201
Panevezys	22953	107427	21459	97149	20252	101968
Taurage	28646	132914	23302	138762	25292	127960
Telsiai	16843	94692	15364	93853	16842	105792
Siauliai	15079	68441	14875	80583	13512	74994
Utena	18564	63873	16957	62395	15344	58840
Vilnius	25100	65865	23804	63845	23278	62612
Totals:	212898	902036	195226	916715	190373	902362
Region	2006		2007		2008	
	Herds	Cattle	Herds	Cattle	Herds	Cattle
Alytus	12867	46294	12082	43497	10955	40548
Kaunas	22326	116416	20077	108336	17383	101414
Klaipeda	13748	87223	13474	85776	10781	75226
Marijampole	15558	98403	13380	88803	12339	85097
Panevezys	17129	99001	14425	90914	12745	88124
Taurage	20678	121122	18205	112390	16277	108222
Telsiai	16210	103889	13774	99751	12739	93440
Siauliai	11947	72693	11789	72976	9289	66386
Utena	13292	55750	11459	50056	11459	50056
Vilnius	20322	59129	16994	48027	15124	44058
Totals:	164077	859920	145659	800526	129091	752571
Region	2006		2007		2008	
	Herds	Cattle	Herds	Cattle	Herds	Cattle
Alytus	9538	37403	8864	36821	7966	35695
Kaunas	15752	93430	14404	90120	12779	89338
Klaipeda	9300	73216	8788	73676	7792	75168
Marijampole	10719	77419	9844	74989	8313	73506
Panevezys	11522	82961	10591	80117	9308	79320
Taurage	13930	96944	12794	95803	10421	94753
Telsiai	11175	89873	10701	89438	9796	93066
Siauliai	8547	64919	8117	65822	7031	66851
Utena	9426	44076	8725	41848	7682	41801
Vilnius	14120	42246	12979	39576	11454	37351
Totals:	114029	702487	105807	688210	92542	686849

Appendix 3: EU Legislation Concerning or Relevant to BSE Control

LEGISLATION		SUMMARY OF CONTENT RELATED TO BSE CONTROL	
General			
Regulation (EC) No 999/2001	Rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies including:	<ul style="list-style-type: none"> • Definition of SRM • Categorisation of animal by-products (not for human consumption) • Controls for imports of live animals • Adequate training to handle BSE cases • Surveillance • Regulations on intra-community trade for products of animal origin • Restrictions on use of ruminant-derived material 	Annex IV of this regulation (as amended) comprises most of the provisions on restrictions for animal feeding (i.e. the feed ban)
Regulation (EC) No 722/2007	Definition and criteria for the BSE status of Member States (amendment to 999/2001)		
Decision 2008/829/EC	Gives list of current BSE status of EU and Third countries		
Importation of MBM			
Regulation (EC) No 1774/2002	Certification requirements for animal protein		
Regulation (EC) No 1069/2009	Import controls on animal by-products		
Importation of Live Cattle			
Regulation (EC) No 206/2010	Certification requirements for introduction of live animals or fresh meat from third countries		
Importation of Beef and Beef Products			
Directive 2002/99/EC	General animal health rules in relation to introducing products of animal origin for human consumption		
Regulation (EC) No 853/2004	Hygiene rules for food of animal origin including definitions of different types of meat products		
Regulation (EC) No 854/2004	Conditions for trade between Member States for products of animal origin intended for human consumption		
Regulation (EC) No 722/2007	Requirements for ante- and post-mortem inspection for traded or imported products		
Regulation (EC) No 206/2010	Lists third countries that are eligible to bring in fresh meat into the EU within specific veterinary certification requirements as detailed in this regulation		
Pre-slaughter Controls: Feed Ban			
Decision 1994/381/EC	Ban on the use of mammalian protein for feeding to ruminants		
Decision 2000/766/EC	Total ban on the processed animal protein for use in feed for any farmed animals		
Directive 882/2004/EC	Official controls for food and feed and requirements for national authorities to carry out official controls		

Regulation (EC) No 956/2008	Permits the use of fish protein to be used as milk replacers in calf feeds
Regulation (EC) No 163/2009	Allows use of materials of plant origin which contains insignificant amounts of bone spicules due to environmental contamination, but only where a favourable risk assessment has been conducted
Regulation (EC) No103/2009	Prohibits the use of milk and milk products derived from small ruminants for feeding to ruminants
Regulation (EC) No 1069/2009	Categorisation of animal risk material
Regulation (EC) No 152/2009	Sampling methods and preparations for testing feed for animal protein contamination
Regulation (EC) No 163/2009	Amendment to Regulation 999/2001 allowing insignificant amounts of bone spicules if there has been a favourable risk assessment
Ante-mortem Slaughter Controls	
Decision 418/2000/EC	Prohibition on the use of pithing or high-pressure gas injection into the brain during slaughter
Regulation (EC) No 854/2004	Slaughtering establishments must procedures based on HACCP principles and approved and authorised by the national authority
Post-slaughter Controls: Post-mortem inspection, SRM removal, Rendering Procedures	
Regulation (EC) No 1774/2002	Rules for collections, transport, storage, handling, processing, and disposal or use of animal by-products
FVS Order No 87 (2003)	Instructions on collection and disposal of specified risk material
BSE Food Safety Controls	
Regulation of Cabinet of Ministers No 310	Instructions for animal stunning and slaughter process
Regulation (EC) No 854/2004	Food safety requirements for meat including inspection procedures and SRM removal
Regulation (EC) No 852/2004	Requirements for use of HACCP and documentation
Regulation (EC) No 852/2004	General hygiene requirements for foods of animal origin
BSE Control programs and Technical Infrastructure	
Directive 1992/450/EC	EU requirement for BSE as notifiable disease (amended under Regulation 999/2001)
Regulation of the Cabinet Ministers No 177	Compensation for losses due to eradication of animal infection diseases
FVS Order No 355	Implementation of payment system for authorized vets
FVS Order No 64	Instruction on TSE eradication
FVS Order No 65	General part of the eradication plan of highly dangerous infectious disease (Contingency Plan)
Cattle Identification and Traceability	
Regulation (EC) No 820/1997	1997 System established for identification and registration of bovine animals and labelling of beef and beef products by 1 January 2000 (in operation by 1999)
Regulation of Cabinet of Ministers No 10	Provisions for animal and herd registration

Regulation (EC) No 1760/2000	Specific rules to strengthen 1997 legislation including requirements for a computerised system and traceability for animals and products from third countries.
Regulation (EC) No 1760/2000	Requirements for traceability systems for food
Regulation (EC) No 178/2002	Requirements for recall systems to ensure food withdrawal and recall from the market
Regulation of Cabinet Ministers No. 650 (preceded Regulation of Cabinet of Ministers No 712, 2003)	Registration of animals, herds, and holdings, and identification of animals
Regulation (EC) No 911/2004	Specifies requirements for ear tags, passports, and registers for data.