# BSE Food Safety Risk Assessment Report

# Latvia

*Last Update: March 2014*

*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. According to the BSE food safety policy,[1] FSANZ analyses the information provided by applicant countries and assigns them a BSE risk status. Information provided must address the requirements detailed in the *Australian Questionnaire to Assess BSE Risk* (Australian Questionnaire)[2] which are based on those of the (OIE) *Terrestrial Animal Health Code (2011)*.[3] Imported beef and beef products are only permitted from countries which have been assessed and are assigned a favourable BSE risk status (Category 1 or Category 2). Countries seeking market access for fresh beef products are also subject to an assessment of animal quarantine risks by the Australian Department of Agriculture, Fisheries and Forestry.

Latvia made a submission to FSANZ in July 2011 to be assessed for BSE food safety risk. Latvia was previously assessed by FSANZ for BSE risk status in 2002 under the former BSE food safety policy and assigned Category C status[a] and currently exports retorted beef products to Australia under the Category C requirements. Latvia currently holds "controlled" BSE risk status from the OIE.

FSANZ has carried out an assessment of legislative measures concerning control and prevention of BSE in Latvia, and an in-country assessment to verify the application and enforcement of these 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.

Only very small numbers of bovine animals and small amounts of bovine-derived products are imported into Latvia. Fish meal is the main type of meat meal imported. Live cattle are mainly imported for slaughter at ages less than 30 months. Bovine animals and bovine-derived products are predominantly sourced from European Union countries. Importation into Latvia of materials at risk of BSE contamination has not occurred for over ten years.

---

[a] Source: FSANZ ABCCC Final and Interim Reports on country BSE risk or AQIS Imported Food Notice 04/07

Feed ban controls legislated in Latvia include restrictions on feed for bovine animals, as well as procedures applied at slaughter or during processing that prevent the contamination of the feed supply with the BSE agent. The controls were found to be effectively enforced across the Latvian beef production system. Complete separation of ruminant feed lines to minimise the risk of cross contamination in animal feed production has been in place since 2001. A ban on feeding mammalian protein to ruminants has been in place since 2001. Legislation for removal and destruction of specified risk material has existed since 2003.

Regulated processes, defined instructions and quality assurance systems for both ante- and post-mortem activities ensure that diseased and BSE suspect animals are not processed for animal feed and human food supplies. Quality management systems ensure that appropriate slaughtering and processing techniques are employed to prevent contamination of carcasses and ensure that beef is safe for human consumption.

Tracebiility requires both animal identification programs to monitor cattle movements and enable tracing of cattle back to farm of origin, and food traceability programs to trace beef or beef products back to the source animal. Both systems are well-established in Latvia. Animal identification systems were introduced in 1998 and procedures to monitor cattle movements have now developed to a high degree of accuracy. Both the identification system and movement monitoring are underpinned by a comprehensive database that enables the competent authority to monitor animal production factors. This information assists in developing annual inspection plans. Imports and exports of animal-derived products are traceable through the EU-wide Trade Control and Expert System (TRACES) program. The system enables electronic tracking of animals, animal products (semen, ova, embryos, hatching eggs), animal by-products (including meat-and-bone meal (MBM) and material containing MBM), and products of animal origin (fresh meat, meat products, meat preparations and milk).

Active surveillance for BSE was implemented in 2001 and Latvia's programs are in line with OIE recommendations. Currently surveillance is conducted such that the points acquired from testing animals across the recommended sub-populations, meet the target for Type B surveillance.  BSE cases have not been reported in Latvia and risk management strategies to investigate and respond to BSE cases have been developed  From 2000 to 2006 Latvia obtained a total of 60,623 surveillance points and this satisfies the points target established by the OIE for Type A surveillance.Cosequently, Latvia is now permitted to conduct Type B surveillance only and be eligible for negligible risk status by the OIE if all other BSE-related controls are implemented effectively.BSE controls were observed to be operating effectively during the in-country assessment. Controls are underpinned by a high degree of government oversight and enforcement of BSE regulatory measures. Appropriate monitoring and inspection procedures were verified across the beef production chain. Auditing of establishments (feed mills, slaughterhouses, farms and rendering plants) by the competent authority occurs through both random and targeted programs, and significant adverse findings with respect to official BSE controls have not been identified. Based on findings of the in-country inspection, introduction of the BSE agent and subsequent amplification and recycling within the bovine feed system, or introduction to the human food supply, is considered to be unlikely.

In conclusion, Latvia has comprehensive and well-established controls to prevent the introduction and amplification of the BSE agent within the cattle population, and contamination of the human food supply with the BSE agent. This assessment concludes that imported beef and beef products sourced from Latvia are safe for human consumption and recommends that Latvia be given a **Category 1** for country BSE food safety risk status.

# List of Acronyms

| | |
|---|---|
| ADDL | Animal Diseases Diagnostic Laboratory |
| ADC | Agricultural Data Centre |
| ABP | Animal by-products |
| BIOR | Institute of Food Safety, Animal Health and Environment |
| BIP | Border inspection post |
| BSE | Bovine Spongiform Encephalopathy |
| CSVI | Chief State Veterinary Inspector |
| EC | European Commission |
| EFSA | European Food Safety Authority |
| EFTA | European Free Trade Agreement |
| ELISA | Enzyme-Linked Immunosorbent Assay |
| EURL | European Union Reference Laboratory |
| FVO | Food and Veterinary Office (of the EC) |
| FVS | Food and Veterinary Service |
| FSANZ | Food Standards Australia New Zealand |
| HACCP | Hazard Analysis Critical Control Point |
| LATAK | Latvian National Accreditation Bureau |
| MBM | Meat- and-bone meal |
| NRL | National Reference Laboratory |
| OIE | Office International des Epizooties (World Organisation for Animal Health) |
| PAP | Processed animal proteins |
| PCR | Polymerase chain reaction |
| QMS | Quality Management System |
| RASFF | Rapid Alert System for Food and Feed |
| SRM | Specified risk material |
| TRACES | Trade Control and Expert System |
| TSU | Territorial Structural Unit |
| TSE | Transmissible Spongiform Encephalopathy |
| WHO | World Health Organization |

# Glossary

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

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

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

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

**National Reference Laboratory** (NRL) refers to laboratories that are appointed under the European Union Reference Laboratory (EURL) and have scientific and technical expertise relating to the designated area of animal or public health (e.g. detection of animal proteins in feeds or diagnosis of transmissible spongiform encephalopathies (TSEs).

**PAP** (processed animal proteins) as defined by European Union (EU) legislation means meat-and-bone meal, meat meal, bone meal, blood meal, dried plasma and other blood products, hydrolysed proteins, hoof meal, horn meal, poultry offal meal, feather meal, dry greaves, fishmeal, dicalcium phosphate, gelatine and any other similar products including mixtures, feeding stuffs, feed additives and pre-mixtures, containing these products.

**PCR** is polymerase chain reaction used to identify DNA of bovine material in feed samples to monitor the effectiveness of the feed ban.

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

**Specified risk material** as defined by EU legislation as tonsils, intestines (from duodenum to the rectum) and mesentery from bovines of all ages; brains, eyes, spinal cord, skull (excluding mandible) from bovines > 12 months; 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 bovines> 30 months. The Australian BSE food safety policy[1] defines BSE risk materials as tonsils and distal ileum from bovine animals of any age; brains, eyes, spinal cord, skull and vertebral column of bovine animals over 30 months of age.

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

**TRACES or Trade Control and Expert System** is the electronic system that enables traceability of all animals and products of animal origin across the EU.

# Table of contents

# 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. Latvia submitted an application to FSANZ for assessment of BSE food safety risk on 11 July 2011. The Latvian submission was a compilation of its 2006 submission to the OIE and annexes demonstrating various aspects of their BSE control systems and history. 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.

This report describes the findings of the BSE food safety risk assessment and concludes with the assignment of a country BSE risk category that indicates the risk that the BSE agent may be present in beef and beef products imported from Latvia.

# Overview of Latvia's BSE regulatory system

Regulations for BSE controls are mainly set by the European Commission (EC) to allow BSE controls to be harmonised across the EU and to support an agenda for BSE eradication. EC legislation is introduced as Directives or Regulations that must be adopted by member countries. Other rules for implementation are set either by the EC or by national regulatory bodies. Latvia has been subject to EC regulations on BSE since it became a member of the EU in 2004. However, most Latvian BSE controls have been consistent with EC regulations since 2001, when the general rules for the control of BSE were legislated across the EU.

National legislation for BSE controls is covered firstly by the *Veterinary Medicine Law* which is the highest law applied to animal health and animal disease control, and second, by *Orders* which provide more details on the implementation of laws and regulations. A list of BSE-related legislation in effect for Latvia is provided in Appendix 1.

The Latvian Ministry of Agriculture sets policy to support the agriculture and food sectors and has responsibility for drafting legislation in the area of food and feed safety, and animal health and welfare.

The Food and Veterinary Service (FVS), established in 2002, is the competent authority within the Ministry of Agriculture. It is responsible for implementation of official controls and compliance with EC legislation across all sectors of the food chain including animal health and disease. Principally, the FVS implements and administers programs for animal identification, controls on uses and production of animal feeds, surveillance, laboratory testing, and imports from third countries and within the EU. The FVS has powers for monitoring and enforcement of BSE requirements as set by the EC or national legislation. The FVS is headed by the Director-General who is also the Chief Veterinary Officer for Latvia. The FVS organisation chart is shown in Appendix 2.

Within FVS, responsibilities for monitoring and controlling transmissible spongiform encephalopathies are mainly shared between the Food Surveillance Department and the Veterinary Surveillance Department (Table 1). Controls are carried out through eleven regional offices called Territorial Structural Units (TSUs). The TSUs are staffed by food and veterinary inspectors who conduct monitoring activities at slaughterhouses, farms, feed mills and food production establishments. Additional veterinary or food experts carry out other regional services such as training and reporting related to animal health, feed controls, and food safety. The number of inspectors and experts allocated to each TSU is dependent on the number of establishments (animal holdings, slaughterhouses, meat production establishments, etc.) in the region.

Analytical testing is performed by the Institute of Food Safety, Animal Health and Environment (BIOR)[b], a non-government independent organisation formerly known as the National Diagnostic Centre (up to January 2010). BIOR is the official national reference laboratory in Latvia and as such, it coordinates its work closely with the FVS to ensure

[b] http://www.bior.gov.lv/en/top-menu/about-us accessed 3 December 2012

compliance with EC directives. Two laboratories managed by BIOR conduct testing in relation to BSE controls. The Animal Diseases Diagnostic Laboratory (ADDL) is responsible for animal disease testing as part of surveillance programs and investigations arising from disease outbreaks. The Laboratory of Food and Environmental Investigations (LFEI) conduct analyses of animal feeds and is the reference laboratory that coordinates testing with the European Reference Laboratories. Detailed responsibilities for each laboratory are provided in specific sections of this report.

**Table 1 : The Food and Veterinary Service**

| Department | Responsibilities |
|---|---|
| **Food Surveillance** | • Organises and co-ordinates official controls for food of animal and non-animal origin<br>• Ensures compliance of food products with consumer health and quality criteria<br>• Approval and registration of food, feed and by-product establishments<br>• Develops guidelines, instructions and procedures, and inspection plans<br>• Maintains records of sampling results<br>• Apply and follow up corrective actions |
| **Veterinary Surveillance** | • Organise official BSE surveillance according to EU and national legal requirements<br>• Develops guidelines, inspection procedures and surveillance/monitoring plans for slaughterhouses<br>• Analyse results of surveillance activities<br>• Coordinate and carry out training programs for veterinary inspectors<br>• Supervise operation and performance of TSUs<br>• Implement controls on animal identification, movement and holding registration (through the Agricultural Data Centre) |
| **Border Control** | • Operate Border Inspection Posts (BIPs)<br>• Carry out controls on imports of animals, food of animal and plant origin, plants and contact materials |
| **Territorial Units** | • Carry out inspection, training, reporting, and various activities for food and veterinary surveillance and controls |

# BSE History

FSANZ previously assessed Latvia's BSE risk in 2003 and concluded the country to be *Category C* which meant that Latvia was assessed to have had considerable exposure to BSE risk materials, but have not reported indigenous cases of BSE. In 2002, the European Food Safety Authority (EFSA) classified Latvia's Geographical BSE Risk level as 'III', also indicating that it was likely but not confirmed that domestic cattle were (clinically or pre-clinically) infected with the BSE-agent[4]. In 2008, Latvia was classified by the OIE as meeting the requirements for *controlled* BSE risk status[5].

No BSE cases have been reported in Latvia.

# 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 for human consumption) that have been imported during the past eight years.

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

**General rules for trade within and into the European Union in regards to BSE**

In general, all products imported into EU countries must satisfy the same safety standards as products produced within the EU. The term 'introduction' refers to commodities (live animals and animal products) imported into the EU from third countries (i.e. non-EU) and 'trade' refers to movement of commodities between EU member countries.

There are several levels of EU regulations that restrict the import and/or trade of live cattle or products derived from cattle. Firstly, non-EU countries must undergo an approval process that includes a competent authority assessment[6]. The main purpose of this assessment is to evaluate whether the animal and public health situation, official services, legislation, control systems and production standards of the country meet EU requirements. Approved countries are listed in EU legislation (Regulation (EC) No 206/2010) and products can be introduced subject to specified certification requirements.

Restrictions are also based on the BSE risk status of the exporting country and this applies to any bovine products placed on the EU market whether introduced from a third country or traded between EU countries. Criteria for the determination of country BSE risk status were

defined in 2001 under Regulation (EC) No 999/2001. Amendments adopted in 2007 (Regulation (EC) No 722/2007) mean that the BSE status of countries is now determined by a risk analysis in accordance with OIE recommendations for BSE controls (i.e. country has been assessed and categorised by the OIE as *negligible* or *controlled* BSE risk status). Countries currently recognised under the EC legislation with *negligible* or *controlled* status are listed in Table 1. Countries with undetermined BSE status may also export bovine animals or bovine products to EU countries if conditions prescribed for the country-specific risk status are met.

Live cattle, or products derived from cattle, that move across EU borders from third countries are subject to certification and inspection at specified border inspection posts (BIPs). The conditions under which such commodities can be traded depend on the BSE risk category of the exporting country. Specific BSE-related conditions for each commodity (meat-and-bone meal (MBM), live cattle, beef and beef products) are detailed in the Section 1-3 below.

Lastly, requirements under specific country legislation may also be applied. Mostly these would be rules or instructions to ensure compliance with EU legislation, laws that were introduced before the general EC rules for TSE control were enacted in 2001 or, in the case of Latvia, laws that were enacted prior to its becoming an EU Member State in 2004.

**Table 2: List of Countries and BSE Risk Status[a]**

| | EC Member Countries | | EFTA[b] Countries | Third Countries |
|---|---|---|---|---|
| **Negligible Status** | Finland<br>Sweden | | Iceland<br>Norway | Argentina<br>Australia<br>New Zealand<br>Paraguay<br>Singapore<br>Uruguay |
| **Controlled Status** | Belgium<br>Bulgaria<br>Czech Republic<br>Denmark<br>Germany<br>Estonia<br>Ireland<br>Greece<br>Spain<br>France<br>Italy<br>Cyprus<br>Latvia | Lithuania<br>Luxembourg<br>Hungary<br>Malta<br>Netherlands<br>Austria<br>Poland<br>Portugal<br>Romania<br>Slovenia<br>Slovakia<br>United Kingdom | Switzerland<br>Liechtenstein | Brazil<br>Canada<br>Chile<br>Taiwan<br>Mexico<br>United States |

[a] *Source: Decision 2008/829/EC*

[b] *European Free Trade Agreement. These countries also members of the European Economic Area (EEA) which comprises EU member states plus Iceland, Norway and Liechtenstein and allows these countries to trade on European market without being EU members.*

# 1 Importation of MBM

## 1.1 Overview

Processed animal protein (PAP) is the term used in the EU to describe all meat meals including MBM, greaves, processed products derived from animals, and any other similar products including mixtures, feedstuffs, feed additives and pre-mixtures containing these products. Importation of ruminant-derived PAP poses a food safety risk as it is the primary route through which cattle are exposed to BSE infectivity. Latvia permits trade from other EU countries of certain PAP-containing, low-risk materials (i.e. SRM removed) mainly as meal for pet food production and feed for fur animals. Restrictions on the processing and use of imported and domestically produced animal by-products (ABP), which includes MBM, are discussed in detail in Section 5.

## 1.2 Legislation

Prior to joining the EU in 2004, Latvia prohibited the importation of PAP under Order No 44 (2001) from the Latvian Chief State Veterinary Inspector (CSVI). Imports of certain animal-derived materials were permitted including feed for pet animals, fur animals and fish; animal fodder containing fish meal (provided it is not intended to be fed to ruminants); non-ruminant-derived gelatine, and milk and dairy products. Imports of these materials are consistent with recommendations under Chapter 11.5 of the OIE *Terrestrial Animal Health Code (2011)*[3] (the Code).

Since joining the EU in 2004, imports of PAP have been regulated under EU regulations including: (1) Decision 2000/766/EC which prohibits the importation of PAP into Member States for the purpose of feeding animals intended for human consumption; and (2) Regulation (EC) No 1069/2009 which consolidated a number of previous regulations covering the handling and use of animal by-products. Regulation (EC) No 1069/2009, in combination with Regulation (EC) No 999/2001, defines ABP, and sets criteria for categorisation of materials according to risk, and lists requirements for their import or export, processing and use. More details on requirements for handling animal-derived products including SRMs are explained in Section 5.

## 1.3 Details of MBM imports

### *1.3.1 Countries of origin*

Latvia provided data from 1999 to 2011 on imports of MBM and greaves. Countries which have exported MBM and greaves are either EU member countries with OIE-recognised BSE status (*negligible* or *controlled*), or third countries which have not had indigenous BSE cases (Australia, New Zealand, United States and Norway). Table 3 lists the countries and quantities of flours, meals and pellets of meat or meat offal (tariff code 2301 10 00) that were exported to Latvia from 1999 until 2011. As shown, the amount of meat-meal imports has decreased significantly since 2006. With the exception of a consignment of sheep meal from New Zealand in 2011, all animal material for use in feed for non-food production animals was derived from non-mammalian animals. None of the products imported since 2004 (accession

to the EU) were BSE risk materials since the EC has banned all trade in these types of products.

**Table 3: Meal import data**

| Year | Countries | Total weight (kg) |
|---|---|---|
| 1999 | Sweden, Poland, Netherlands, Germany, Finland, Belgium, Italy, Ireland, Estonia, Norway | 2,119,498 |
| 2000 | Sweden, Lithuania, Denmark, Estonia, Finland | 2,748,804 |
| 2001 | Sweden, Denmark, Serbia, Norway | 2,793,550 |
| 2002 | Denmark, Sweden, Finland, United States | 684,710 |
| 2003 | United States, Sweden | 180,921 |
| 2004 | Sweden, Denmark, Czech Republic | 26,750 |
| 2005 | Peru | 500,000 |
| 2006 | Belarus, Morocco, Iceland, Japan, Peru | 4,579,608 |
| 2007 | | None |
| 2008 | | None |
| 2009 | | None |
| 2010 | | None |
| 2011 | New Zealand | 10,800 |

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

Category 3 is low-risk animal material which may contain non-SRM bovine materials or animal by-products (ABP) from other farmed species (Regulation (EC) No 999/2001; see Section 5). These are permitted to be traded between EU countries, or imported from approved third countries, subject to the rules around handling these materials including separation of transport and processing lines (Section 5), and traceability (Section 10). The only permitted uses for non-risk materials (i.e. Category 3) are for fertiliser, technical applications or processing into pet food.

Category 1 and 2 materials contain the tissues of highest risk for BSE and must be destroyed by incineration. These materials are not permitted for import from third countries or for trade between EU countries, except under specific circumstances (e.g. transported for destruction in another EU country). No Category 1 or Category 2 materials have been brought into Latvia since 2001.

Discussions at the in-country inspection verified that consignments of meal from non-EU countries over the last eight years were not BSE risk material because all animal material was imported from specific, certified establishments, and was derived from non-mammalian

animals (with the exception of sheep meal from New Zealand in 2011) for use in feed for non-food production animals (e.g. pets or aquarium species). In addition, consignments of animal-derived material are sampled and tested for the presence of mammalian protein.

### *1.3.3 Certification and clearance*

Certification requirements are harmonised in the EU and are set out in Regulation (EC) No 1069/2009 since March, 2011. The regulation was preceded by Regulation (EC) No 1774/2002 with Chapter II setting specific requirements in relation to importation of PAP. Imports from third countries are permitted to enter Latvia through eight EU-approved BIPs, located at Riga port and airport, and on borders with Russia and Belarus. Consignments of any animal-derived products must be accompanied by a health certificate that provides information such as country of origin details, description of the commodity, and an animal health attestation signed by the official veterinarian of the exporting country. Commercial documentation includes a description of the material (quantity, category of ABP from which the material was derived, species, ear-tag number) as well as details of origin and destination. Before clearance at the BIP, documentation is checked by a FVS official veterinarian, and sampled to test for microbiological contamination.

The paper-based system for certification of products traded between EU countries or imported from third countries has been replaced by the electronic system Trade Control and Expert System (TRACES) which is described in Section 10.

Upon Latvia acceding to the EU, the European Commission Food and Veterinary Office (FVO) audited Latvia's import controls annually. Recently this has been reduced to once every two years. The most recent audit on import controls for animals and animal-derived products was completed in September 2011. According to the FVO report of this audit[7] no major issues were identified in relation to imports of MBM or PAP.

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

Mammalian protein must be processed to the minimum rendering specifications prescribed under Regulation (EC) No 1774/2002 (which is consistent with OIE guidelines) to remove any BSE infectivity (heating to a core temperature of more than 133°C for at least 20 minutes at a pressure of at least 3 bars produced by saturated steam, with a particle size of not more than 50 mm). This control measure applies to imported or traded mammalian protein and has been in place in Latvia since they acceded to the EU in 2004. Processing conditions are listed in the health certificate, which is signed by the official veterinarian of the exporting country and must accompany any consignment of animal protein.

# 2 Importation of live cattle

## 2.1 Overview

Importation of live cattle represents a potential food safety risk if imported cattle are sourced from countries which do not have adequate control programs to minimise the risk of BSE exposure. EU countries have been the only source of cattle imports into Latvia and numbers of imported animals have diminished from about 10000 head per annum in the period 2000-

2003 to about 1000 head per annum over the past several years. Most imported cattle are 12-30 months of age and are imported for immediate slaughter. This represents a minimal BSE risk.

## 2.2 Legislation

Prior to joining the EU in 2004, BSE-affected countries were not permitted to export cattle, sheep or goats to Latvia. The duration of the prohibition was seven years commencing from the time of detection of the exporting country's last BSE case.

After 2004, regulations on imports of live cattle were covered under legislation harmonised across the EU. Controls are detailed in part under Regulation (EC) No 999/2001 as amended in Regulation (EC) No 722/2007, which sets out criteria for the categorisation of countries according to BSE risk status.

> **Negligible risk status:** Animals must be: (1) born and continuously raised in country of negligible status; (2) permanently identifiable to enable traceability back to dam and herd of origin, and (3) if indigenous is BSE present, then the animals must be born after the date from which a ruminant feed ban was in place or after the date of birth of the last indigenous case of BSE.
>
> **Controlled risk status:** Animals must be: (1) born and continuously raised in country of controlled status; (2) permanently identifiable to enable traceability back to dam and herd of origin, and (3) animals must be born after the date from which a ruminant feed ban was in place or after the date of birth of the last indigenous case of BSE.
>
> **Undetermined risk status:** Animals must be: (1) permanently identifiable to enable traceability back to dam and herd of origin, and (2) born at least 2 years after a ruminant feed ban was in place or, if born after the date of the feed ban, 2 years after the date of the last indigenous BSE case.

These conditions are in line with the international standards set in Chapter 11.5 of the OIE Animal Health Code (2011).

Certification requirements for the introduction of live animals or fresh meat from third countries are set in Regulation (EC) No 206/2010. The regulation provides a list of third countries that are permitted to export live cattle to the EU. Only specified countries (that have never had a case of BSE) are permitted entry into an EU country under this regulation and they must satisfy veterinary certification requirements set out in Annex 1 of Regulation (EC) No 206/2010. Certification requirements include health certificates, passports containing full animal history, and animal identification. These conditions are checked as part of the inspection process at the official BIP.

## 2.3 Details of live cattle imports

European countries have been the only source of imported cattle into Latvia with neighbouring countries (Lithuania and Estonia) being the main exporting countries and fewer cattle exported from Denmark, Germany, Sweden and the Netherlands. As confirmed during in-country verification interviews, Latvia has imported significantly fewer bovine animals per

annum since becoming part of the EU in 2004: approximately 10 000 bovines per annum were imported from 2000 to 2004, reducing to approximately 1 000 bovines per annum since 2006. Over 90% of imported bovines per annum are 12 to 30 months of age and intended for immediate slaughter.

# 3 Importation of beef and beef products

## 3.1 Overview

This section focuses on the risk of releasing the BSE agent through the importation of beef food products which are intended for human consumption. As with imports of animal protein products and live cattle, importation of beef and beef products are regulated through EC legislation covering both intra-community trade and importation from third countries. Imports are not permitted from countries that do not have adequate BSE controls and regulations in place. The likelihood that BSE could be released through importation of a beef food product is minimised by requiring removal of SRM at slaughter, regardless of the BSE risk status of the source country.

## 3.2 Legislation

Prior to joining the EU in 2004, Latvia prohibited the importation of bovine, sheep and goat meat and any products or by-products originating from these animals from countries affected by BSE. The duration of the prohibition was seven years commencing from the time of detection of the exporting country's last BSE case. Since joining the EU in 2004, this prohibition has been replaced by provisions under Regulation (EC) No 999/2001 and subsequent regulations.

Under Regulation (EC) No 722/2007, products traded between Member States, or sourced from a third country, must meet requirements for ante- and post-mortem inspection and ensure that SRMs are removed. Countries must certify that these requirements are met. Specific production facilities must be EU-approved to be eligible to export products to the EU and are regularly inspected by the FVO to ensure compliance with certification requirements. Additional certification requirements for imports from third countries are detailed in Regulation (EC) No 206/2010.

Additional legislation regulating animal products intended for human consumption is summarised in Appendix 1.

## 3.3 Conditions for imports

As listed in Regulation (EC) No 722/2007, imports are restricted according to the BSE risk status of the source country (Table 1). Countries categorised under conditions set out in the Regulation must meet requirements for feed ban controls and surveillance in accordance with OIE recommendations. Specific products covered under the regulations are fresh meat, minced meat and meat preparations, meat products, rendered animal fats, greaves and gelatine (as defined in Regulation (EC) No 853/2004). Trade in beef products is subject to presentation of an animal health certificate at border inspection. The certificate requires that the products do not contain SRM or mechanically separated meat and that the source animal

has passed ante- and post-mortem inspection. In addition, products are subject to certain conditions based on the BSE risk status of the country:

> **Negligible status**: Products are derived from animals that: (1) were born, continuously-reared and slaughtered in a negligible risk country and, for countries with indigenous BSE cases; and (2) were born after the date in which the ruminant feed ban was in place.
>
> **Controlled status:** (1) Products do not contain nervous or lymphatic tissues exposed during the deboning process; and (2) animals have not been slaughtered after stunning by means of gas injected into the cranial cavity (or related methods). Carcasses and half carcasses may be imported with the vertebral column if all SRM has been removed (i.e. spinal column and dorsal root ganglia), and carcasses are labelled and recorded as specified under regulation.
>
> **Undetermined status:** (1) Products do not contain nervous or lymphatic tissues exposed during the deboning process; and (2) animals have not been fed MBM or greaves derived from ruminants; and (3) animals have not been slaughtered after stunning by means of gas injected into the cranial cavity (or related methods). Carcasses and half carcasses may be imported with the vertebral column if all SRM has been removed (i.e. spinal column and dorsal root ganglia), and carcasses are labelled and recorded as specified under regulation.

### 3.4 Amounts of imported beef or beef products

Data on imports of beef products was provided either through the desk assessment or during the in-country verification visit. In 2003 and 2004, the greatest proportion of bovine meat was imported from Lithuania (3752 tonnes, 95% of total imports of bovine meat over this period), followed by Sweden (98 tonnes, 2.5% of total imports of bovine meat over this period). Since 2005, no fresh, frozen or retorted bovine meat or meat products have been imported — only meat of sheep or goats. Latvia's reconfirmation of its BSE risk status to the OIE for 2009 and 2010 indicated oxen gall bladder from Uruguay (60 tonnes) and the USA (39 tonnes) have been the only imports of beef products from non-EU countries over this period. These are not considered BSE risk materials.

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

The assessment of import controls indicates that it is unlikely that the BSE agent will be released into the Latvian cattle population through imports of MBM, live cattle, or beef and beef products.

Trade in products containing animal protein is highly regulated in the EU and only Category 3 material containing low-risk animal protein is imported. Latvia limits the sourcing of materials from only countries with negligible or controlled BSE risk status, and for use only in pet food, fertiliser or technical applications. In-country verification confirmed that imported animal protein for use in pet food (which may include non-risk bovine material) is transported, processed and stored separately from PAP that is destined to be fed to farmed animals (non-

bovines). For farmed animals (excluding bovines), fishmeal is the only animal protein permitted as a feed ingredient. Other ingredients imported for use in ruminant feed are of plant origin and sourced from designated and accredited suppliers.

Very few live cattle have been imported in the last seven years and only from EU countries, all of which have negligible or controlled BSE risk status. Discussions with competent authority officers at the in-country inspection confirmed that most cattle are less than 30 months of age and are imported for immediate slaughter which represents a minimal BSE risk.

Underpinning controls on imports is the European TRACES system which is the electronic system that enables government authorities and businesses to track and trace live animals and products of animal origin (food and feed ingredients sourced from animals) that are traded on the EU market (see Section 10).

# Exposure control

Exposure of cattle to BSE contaminated material and amplification of the BSE 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.

Reviews on the effect of BSE control measures on the epidemiology of the disease emphasize 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 [8-11]. 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 and food (including pet food and human food products). BSE control measures applied across the Latvian beef production chain to prevent exposure to BSE are summarised in Figure 1.

This chapter describes the control measures that prevent the contamination and recycling of the BSE agent in cattle feed and contamination of food for human consumption.

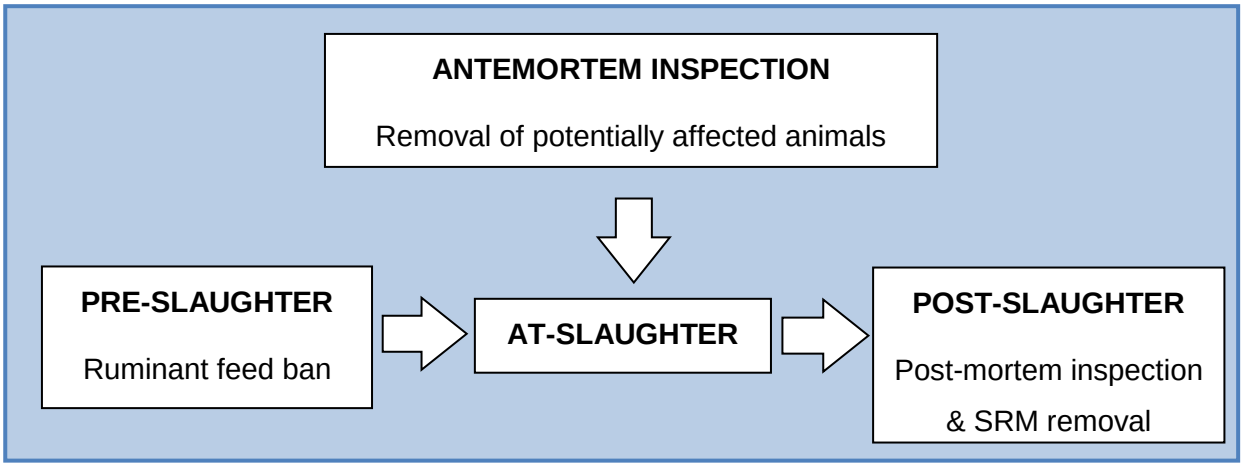



***Figure 1:*** *Exposure controls in beef production system*

# 5 Pre-slaughter controls: feed ban

## 5.1 Overview

The Australian Questionnaire requires that countries demonstrate that ruminant-derived meat-and-bone meal (MBM) has not been fed to cattle for the last eight years and that an effective ruminant feed ban has been effectively implemented.

## 5.2 Legislation

### *5.2.1 Feed ban*

The Latvian government prohibited the use of ruminant MBM for use in ruminant feed in 1990 (ruminant to ruminant feed ban). Subsequent legislation implemented in April 2001 banned the use of mammalian protein for feeding to ruminants (mammalian to ruminant feed ban) which harmonised Latvian feed ban requirements with EU legislation at the time. In June 2001, a total feed ban prohibiting the use of any animal protein in feed for any farmed animals produced for human food (total feed ban) was enforced across the EU under Decision 2000/766/EC.

Since the total feed ban was implemented, several amendments to EU feed ban regulations have been introduced to allow use of some animal protein to be fed under very restricted conditions, to farmed animals. The intention of these amendments is to allow the use of certain animal proteins (e.g. fishmeal) that are considered safe from BSE to be fed to non-ruminants as determined by scientific risk assessments conducted by EFSA. The amendments are summarised in Appendix 1.

### *5.2.1 Current rules on use of animal-derived by-products*

After Latvia's entry into the EU in 2004, BSE-related restrictions on the use of animal protein (not for human consumption) were implemented according to EU legislation. Currently this is based on the categorisation of the material under Regulation EC) No 1069/2009, as summarised below.

*Category 1*: Carcasses of animals suspected or confirmed of TSE infection and their cohorts and SRM (see Section 7 of this report).

*Category 2*: Products of animal origin imported from a third country which fails to comply with EU veterinary legislation; carcasses of animals that died other than being slaughtered for human consumption.

*Category 3*: Carcasses, parts of animals and products of animal origin that were intended and considered safe for human consumption but not destined for humans for commercial reasons including hides, skins, horns, and feet of animals not suspected of TSEs (i.e. low risk materials).

For EU Member States, the basic requirements for the processing or destruction of ABP have been in place since 2001 under Regulation (EC) No 999/2001 with most of the key details prescribed in Annex IV of this regulation. Category 1 and 2 materials cannot be used for feeding to any farmed animal and are destroyed by rendering then incineration (or used

for biofuel). Category 3 material is the only animal by-product (i.e. not suitable for human consumption) which may be processed but then used only for pet food, fertiliser or technical uses. Category 3 materials must be rendered according to OIE recommended conditions which, under Article 11.5.19 of the OIE Code [3], are stated as:

1) The raw material should be reduced to a maximum particle size of 50 mm before heating.

2) The raw material should be heated under saturated steam conditions to a temperature of not less than 133°C for a minimum of 20 minutes at an absolute pressure of 3 bar.

*5.2.3 Prevention of cross-contamination*

Latvian Order No 64 implemented in 2001 includes measures to reduce the likelihood that cross-contamination of animal protein with feedstuffs destined for feeding to ruminants does not occur. Dedicated facilities are in place for the production of pet food (which is permitted to include Category 3 bovine by-products) and these establishments are not permitted to produce feed for agricultural animals. Additional requirements include:

- the separation of ruminant feed ingredients from non-ruminant feed ingredients
- dedicated equipment for the production and packaging of ruminant and non-ruminant feed
- implementation of hazard analysis critical control point (HACCP) principles
- ensuring that products destined for non-ruminant feed are labelled as 'not for feeding to ruminants'
- complete separation of pet food producers from establishments that produce feed for agricultural animals.

Establishments producing feed for non-ruminant food-producing animals are required to have documentation that confirms: procurement of feed containing animal protein (ie fishmeal), usage of animal protein for feed production, and distribution of feed to a specific destination.

The potential for cross-contamination of feeds at the farm level has been minimised with the number of multispecies farms decreasing substantially since 2002, as farms transition to larger holdings specialising in specific product sectors such as milk, beef or pork.

## 5.3 Production and use of animal feedstuffs

Updated information about the feed production sector was obtained during the in-country verification visit. There are 28 registered feed producers in Latvia and, of these, 13 produce feed for ruminants that is prohibited from containing any animal protein. Only three of the 13 establishments that produce feed for ruminants handle fishmeal and these have separate lines for manufacturing feed for ruminant and non-ruminant species. Therefore, the risk of cross-contamination of commercial ruminant feed with fish meal (or any other animal protein) is very low.

The FVS has developed written procedures setting down controls for feed operators. These cover all aspects of feed production including sampling protocols, controls for importers, and

checklists and methodology to ensure compliance with feed ban requirements under Annex IV of Regulation (EC) No 999/2001.

Individual farms are permitted to mix their own feed but are not permitted to sell this feed to another holding. Only establishments registered with the FVS are permitted to sell feed for use in farmed animals. There are two FVS-registered mobile mixers that are used for on-site mixing, and they are permitted to mix only feeds containing plant-based protein.

No imported or domestic MBM or animal protein has been used for feeding of cattle in Latvia for over eight years. ABP (ruminant and non-ruminant) are used for pet food production in Latvia.

### 5.4 Analysis of feed samples

A thorough explanation of feed analysis and sampling programs was provided by interviews conducted at the competent authority and by staff at BIOR testing laboratory and the feed mill which were visited during the in-country verification visit.

All raw materials are sampled and quality control testing (i.e. humidity, protein, fat and crude fibre content) is conducted on-site before the material is used for feed production. Official samples of raw materials and finished products to be tested for the presence of animal protein are collected by the FVS under an annual audit program. Establishments to be audited and sampled are selected based on a risk-based analysis (i.e. previous audit results, sampling results and recommended actions). Materials from the 13 feed mills that produce feed for ruminants are sampled and tested for animal protein at least once per year.

As explained by competent authority officers during in-country interviews, Latvia has been pro-active in their work to minimise the risk of cross-contamination during feed manufacturing. Through the EU accession program, Latvia engaged in a successful collaboration with animal feed experts from Denmark to ensure their feed sampling protocols were developed in line with international standards.

BIOR is the EU-appointed national reference laboratory for animal feed testing in Latvia and carries out analyses of all samples taken through the FVS official feed monitoring program. Samples are analysed according to protocols developed by the EU reference laboratory (EURL) for TSEs in compliance with Regulation (EC) No 152/2009. The latter requires the use of the OIE-approved microscopic method to detect bone fragments of mammalian species which would be a constituent of prohibited materials such as MBM. The method utilises markers to characterise the bone fragments according to the size and density of lacuna and thereby allows differentiation of mammalian (and bird) fragments from fish fragments (permitted in some animal feeds). The method allows detection of mammalian protein (not species-specific) to a level of 0.1% or less which is acceptable under EC requirements. Samples in which animal protein has been detected through screening are further analysed by polymerase chain reaction (PCR) at a EURL to identify the source species of the contaminating protein.

### 5.5 Evaluation of the ruminant feed ban

The effectiveness of the feed ban is assessed through annual monitoring of animal feed through FVS programs and through targeted audits conducted by the FVO.

*5.5.1 Latvian monitoring programs*

According to Latvian Order No 60, the Latvian Chief Veterinary Inspector is responsible for establishing controls over feed production facilities to ensure compliance with Annex IV of the TSE regulation (Regulation (EC) No 999/2001).

As confirmed at the in-country inspection, feed mills are monitored through multiple inspections or audit programs. Monthly internal checks are conducted by the establishment and involve physical checks of machinery, log books for cleaning and servicing, and labelling of raw materials and finished products. The FVS conducts random, unannounced inspections that may involve sampling and testing materials for animal protein, as well as full audits conducted according to the official annual risk-based plan. The latter focuses on sampling and testing for materials of animal origin, traceability, and labelling.

The number of samples tested annually through official monitoring programs is set at 20 for every 100 000 tonnes of feed produced. Official feed samples (i.e. taken from ready-to-feed feeds, feed mixes, and feed materials) are taken from farms, on-farm mixers, mobile mixers, as well as from multiple points of the feed production chain (feed production, packaging, distribution and transport). Up until 2009, both feed and dust sampling was performed in establishments producing ruminant feed. Sampling of dust, which did not follow official protocols and was intended to add an additional level of testing to indicate risk of contamination, was discontinued as feed companies improved internal control procedures and adopted -HACCP systems. Swine and poultry feed are also tested as an enforcement measure of the mammalian feed ban.

The feed sampling program for 2012 was discussed at length during the in-country verification visit. A schematic of the sampling plan is shown at Appendix 3. Details on the number of establishments audited as well as the sampling protocol and volumes were also provided.

Results of feed analyses conducted annually according to the official sampling program demonstrate that effective feed ban controls are in place (Table 4). During this time period, small numbers of samples obtained under the prescribed sampling protocols have tested positive for fish protein. The larger number of samples that tested positive in 2006 was addressed by increasing the sampling number to 300 for 2007-08. Over this two year period, the number of infringements dropped to one per year. Because of this very low number of infringements, and increasing level of overall compliance with feed regulatory measures amongst feed manufacturers, the number of samples tested from 2009 to present has been reduced.

The infringements listed in Table 4 did not represent risk of BSE transmission and therefore, corrective actions were not imposed. In general, however, the number and type of infringements are included in the development of the official annual risk-based monitoring plan.

*5.5.2 FVO audits*

Regulation (EC) No 882/2004 provides authority to the EU for evaluation of feed ban compliance in EU Member States. The FVO is responsible for conducting regular compliance audits and the scope of these audits generally covers all stages of the feed chain, including pre-mixture manufacturers, feed mills, farms, recycling plants converting food products into feed, and entry points (i.e. designated border points where feed imports are permitted). The most recent audit for Latvia was completed in 2007 and no significant issues relating to feed ban controls were noted in the audit report.[12]

**Table 4: Results of Feed Monitoring**

| Year | Total samples | Number of infringements (positive for presence of animal protein) |
|---|---|---|
| **2004** | 202 | 0 |
| **2005** | 228 | 2 |
| **2006** | 250 | 4 |
| **2007** | 300 | 1 |
| **2008** | 300 | 1 |
| **2009** | 184 | 1 |
| **2010** | 152 | 1 |
| **2011** | 160 | 2 |
| **2012*** | 77 | 0 |

*At time of in-country verification visit, September 2012

# 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 identified and prevented from entering the ruminant feed and human food chain.

## 6.2 Legislation

Regulation (EC) No 854/2004 sets out requirements to prevent the spread of BSE and ensure traceability of all materials. The regulation requires slaughtering establishments to have procedures based on HACCP principles which are approved and verified by the country competent authority (the FVS). Regulation (EC) No 854/2004 (Annex I) also sets out responsibilities and official monitoring controls to be carried out by the official veterinarian including auditing and inspections tasks, ante- and post-mortem examination, laboratory testing, and health marking. The slaughtering practices of pithing or high-pressure gas injection into the brain are prohibited under Decision 2000/418/EC.

## 6.3 Ante-mortem procedures

Slaughterhouses must have an official veterinarian (i.e. FVS-employed veterinarian) present on-site for the days when animal slaughter is taking place. Veterinary staff at each establishment may include several official veterinarians as well as official auxiliaries (also FVS employees) depending on the size of production. The main responsibility of the official veterinarian is to supervise all activities associated with the slaughter including ante- and post-mortem inspection, entry of data into the identification databases, BSE sampling, and notifying the TSU in the event that a BSE suspect animal is identified.

Prior to conducting ante-mortem inspection, the official veterinarian checks documentation and official certification which includes supplier information and registration, animal welfare and health status, and identification and analyses of information contained in the records of the animal's holding of origin. Animals must have two ear tags and be registered in the national database (ADC database) to be considered fully identifiable. In the unlikely circumstance that an animal does not meet these criteria upon arrival at the slaughterhouse (it is illegal to transport cattle without identification) the official veterinarian will conduct an investigation and determine further action. If full identification cannot be verified, the animal is removed from the production chain and processed as Category 1 material.

Cattle are examined by the official veterinarian according to a list of classified symptoms such as condition of skins and bones, behaviour, temperature, and breathing. The age of the animal is the primary consideration to identify animals that are to be tested for BSE. All animals over 72 months and any animals over 48 months that display any disease symptoms must be tested. Animals to be tested are segregated and slaughtered together at the end of the day.

Ante-mortem inspection takes place within 24 hours of the animal's arrival at the slaughterhouse and less than 24 hours before slaughter. Results of ante-mortem inspection are recorded in the Agricultural Data Centre (ADC) database.

## 6.4 Handling of BSE suspect cattle

If BSE-like symptoms are confirmed the ante-mortem inspection by the on-site official veterinarian, the FVS is notified immediately. Suspect animals are removed from the production chain for separate slaughter and, as part of the BSE surveillance program, brain tissue is collected sampled for BSE testing (see Section 18).

Animals, carcasses and by-products from the following are designated as Category 1 materials (see Section 5.2.1) and are killed, removed from the establishment, and destroyed by rendering and incineration: (1) animals without identification and registration; (2) cattle that are fallen stock and animals showing symptoms of BSE or neurological disease, and (3) animals that are deemed BSE positive according to the BSE rapid test. Burial of animals or animal materials is prohibited.

## 6.5 Auditing and compliance

All slaughtering establishments are monitored through a Quality Management System (QMS) introduced by the FVS in 2003. The QMS incorporates policies and procedures for supervision of food production to ensure that they are uniform across the sector and consistent with international standards. The QMS is accredited by the Latvian National Accreditation Bureau (LATAK) which is the Latvian national organisation that verifies compliance programs are in accordance with International Standards Organisation (ISO) 17020. This standard sets criteria for conducting audits and inspections. LATAK is similar to the accreditation organisation which operates in Australia and New Zealand, Joint Accreditation System of Australia and New Zealand (JAS-ANZ). The QMS includes checklists, guidelines, protocols and general information to ensure the legal requirements set by Latvian and EU regulations for food safety are maintained. In addition, each slaughterhouse operates according to a quality manual developed by the official veterinarian in line with the QMS and FVS policy and procedures. The manual provides detailed instructions for the specific establishment and also forms the basis for checklists against which the establishment is audited and inspected by FVS Senior Inspectors.

Slaughtering establishments must be registered and approved by the FVS in order to operate. The FVS Food Inspectors inspect approved establishments according to a risk-based annual plan that is developed on the basis of previous inspections (planned and unannounced), and production scale and/or capacity of the establishment. Inspection results are recorded in a centralised FVS database. Generally, routine, unannounced inspections of slaughtering establishments occur frequently (at least four times per year). Comprehensive announced audits that look across the establishment's whole production system occur at least once a year. Information from audits and inspections is analysed by FVS officers to obtain an overview of control activities across the country, summarise and review outcomes from the different TSUs, identify trends and issues, and allocate resources.

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

## 7.1 Overview

Post-slaughtering controls are required to ensure that tissues potentially containing BSE infective material do not enter the animal feed or human food chains. SRM is defined through a categorisation system which permits high risk animal by-products to be removed from the production chain and destroyed. SRM is classified as a Category 1 material (see Section 5.2.1) and is processed by rendering and then incineration.

## 7.2 Legislation

General requirements for post-slaughter controls are covered under Regulation (EC) No 999/2001, which defines SRM and sets requirements for its destruction. The regulation has been amended several times. More specific procedures relating to the handling of products not intended for human consumption were introduced under Regulation (EC) No 1774/2002 which contained provisions for the classification of risk materials and methods for their isolation and destruction. This legislation was repealed by Regulation (EC) No 1069/ 2009,

which expanded controls in areas such as traceability of ABP and provided more stringent and harmonised controls, particularly for non-compliance, across Member States.

National legislation includes *O*rder No 87 from the CSVI '*On animal by-products not intended for human consumption*' which provides instructions for establishments to fulfil the requirements laid down by Regulation (EC) No 1774/2002, and by Order No 29 from the Latvian CSVI '*On collection and disposal of specified risk material*' which covers instructions for the collection and disposal of SRM. Order No 45 from the Latvian CSVI, prohibits fallen animals (including those fallen during transportation) and animals slaughtered for disease prevention for use in feed production.

### 7.3 Definition of SRM

SRM are those tissues from an infected animal that are most likely to contain BSE infectious material. Bovine tissues defined as SRM are determined through risk assessment conducted by EFSA and, as such, the definition has been modified since the term was first introduced in 1995. The present definition, as in Article 3 of the TSE regulation (Regulation (EC) No 999/2001), is shown in Table 5.

The above definition for SRM is consistent with:

- assignment of BSE infectivity in bovine tissues as set by the World Health Organization (WHO)[13]
- OIE recommendations on bovine tissues that should not be traded (the Code, Article 11.5.14)
- the definition of SRM set in the Australian BSE food safety policy.[1]

Latvia has had a legal requirement to remove and destroy SRM since 2003. Initially SRM was defined as: the skull including the brain, eyes, and tonsils of bovines, sheep and goats; the spinal cords of bovines, sheep and goats over 12 months of age; the spleens of sheep and goats of all ages; and fallen ruminants older than one year. Since 2005, Latvia has harmonized with Regulation (EC) No 999/2001 and has required that these tissues are designated as Category 1 material and incinerated.

**Table 5: Definition of Bovine SRM (according to Regulation (EC) No 999/2001)**

| | |
|---|---|
| **From bovines, all ages** | • Tonsils<br>• Intestines (from duodenum to the rectum)<br>• Mesentery |
| **From bovines, > 12 months** | • Skull (excluding mandible)<br>• Brain<br>• Eyes<br>• Spinal cord |
| **From bovines, > 30 months** | • 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)<br>• Dorsal root ganglia |

Prior to 2003, SRM was removed and rendered. According to the geographical BSE risk report issued by EFSA in 2002, [4] it was considered that rendered protein could have entered the animal feed chain up until 2003. However, there have been no BSE cases detected since active surveillance was implemented in 1997.

### 7.4 Post-mortem procedures

Similar to ante-mortem inspection, post-mortem procedures are supervised by the official veterinarian according to instructions developed by the FVS. Post mortem tasks and inspections are generally carried out by official veterinarians and in some slaughterhouses are assisted by official auxiliaries (who are also FVS employees). Functions monitored include:

- Carcass is cut along the backbone to remove spinal cord (backbone is not removed) which is placed in container for Category 1 material.
- Complete removal of SRM from the head and backbone is confirmed by the official veterinarian or official auxiliaries at two designated control points. If the carcass does not pass inspection it will not receive a health mark and is not permitted for further processing for human consumption.
- Sampling of the brainstem is handled by the official veterinarian or official auxiliaries who record identification information and remove the obex portion of the brainstem for the BSE rapid test. One ear tag (there are two with each animal) is retained with the brainstem sample for identification purposes, the second ear tag is kept with the carcass. The results of the rapid test are generally known on the next day after sampling. If this is not achieved, the carcass and by-products for that animal are not permitted to leave the premises until a BSE result is known.
- Data for each animal (results of ante- and post-mortem inspection, BSE test results, weight of animal, weight of meat and edible offal) are recorded in the centralised ADC database which serves to monitor production output, compliance measures (see Section 16), results of BSE examination, and age of the animals.

Official veterinarians also conduct periodic and random checks on post-mortem tasks during processing of carcasses. Only the official veterinarian can decide to condemn a carcass if it does not pass post-mortem inspection.

### 7.5 Processing of ABP

Rendering plants were integrated within slaughterhouses in Latvia prior to 2003. From 2003 onwards, ABP have been collected from slaughter establishments and processed centrally. All Category 1 and Category 2 materials are transported, delivered to and processed by a single rendering company which is located in Lithuania. There are eleven rendering plants registered with the FVS for the processing of Category 3 material.

According to Latvian Order No 64 (which was superseded by Regulation of Cabinet Ministers No. 477 in 2002 to align with EC Directive 90/667) , rendering establishments are required to cut raw material into pieces less than 5cm and to treat them for at least 20 minutes at 133°C and greater than three atmospheres. Rendering operators are required to record time-

temperature and time-pressure diagrams to indicate proper processing conditions for each run, as well as conduct procedures to verify equipment once per year. These conditions are in line with OIE recommendations.

For traceability purposes, establishments that consign, transport or receive ABP are required under Regulation (EC) No 1069/2009 to keep a record of consignments and related commercial documents or health certificates. All animal-derived materials used in further processing are traceable through TRACES which is detailed in Section 10.

## 7.6 Evaluation of compliance with legislation

### *7.6.1 Latvian audit programs*

TSU food inspectors are responsible for routine monitoring and enforcement of the controls around SRM removal and disposal. Slaughter establishments are inspected in accordance with the procedure detailed in the FVS procedure '*Methodological instructions for completion of inspection protocols at food establishments and carrying out of inspection'*. This procedure incorporates the requirements under Regulation (EC) No 1069/2009 concerning SRM removal and disposal.

The FVS monitors controls around SRM removal and destruction as part of the Quality Management System (QMS) described in Section 6.5. Upon completion of an inspection, TSUs submit completed inspection reports to FVS authorities who review the findings of inspections and decide on actions, if required. Reports are prepared in accordance with set instructions set out in '*Methodological instructions for preparing of reports on surveillance carried out at establishments handling animal by-products not fit for human consumption*'. TSUs are also required to report to the FVS at the beginning of each year concerning the total amount and origin of by-products (across all categories) collected in their respective regions. Establishments handling animal by-products (including SRM) are legally required to report the incoming and outgoing movements of all by-products to the FVS on a monthly basis (in force since 2007 but currently under Regulation of the Cabinet of Ministers No112 (February 14, 2012).

The FVS is authorised to impose sanctions in the event that infractions are detected through monitoring programs. Typically these would include fines or warnings with follow-up inspections to be conducted. Infractions which have been detected include inadequate product storage, poor hygiene and technical condition of equipment, inadequate pest management, infrequent sampling, inadequate labelling of by-products, and lack of updates to HACCP documentation. These infractions have primarily occurred in plants processing non-ruminant material.

### *7.6.2 EU audit programs*

Compliance with control measures applicable to handling ABP was last reviewed by an FVO mission in 2009[14]. The audit covered all aspects of handling bovine waste products including collection, transport, handling, treatment, transformation, processing, storage, placing on the market, distribution, use and disposal for ABP and any ABP-derived products. The audit

report concluded that the systems in place satisfy the requirements of Regulation (EC) No 1774/2002.

Meat food safety systems were last reviewed by an FVO mission in 2009[15]. Three slaughterhouses were reviewed and no deficiencies linked to BSE controls were identified. The report confirmed that systems were in place to ensure effective post-mortem controls in relation to BSE.

# 8 Summary: Exposure control

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

- A total feed ban in place since 2001 (firstly under Latvian legislation then under EC regulations) which was preceded by a prohibition on the feeding of ruminant MBM to ruminants from 1990
- Legislation for removal and destruction of SRM has existed since 2003. Prior to this date, SRM was removed and rendered
- Complete separation of ruminant feed lines, to minimise risk of cross contamination in feed production, has been in place since 1999
- Comprehensive compliance monitoring and sampling procedures conducted through FVS control programs as well as through EU auditing programs.

Regulated processes both at ante- and post-mortem inspections ensure that diseased and BSE-suspect animals are not processed for the animal feed or human food supply. QMS ensure that appropriate slaughtering and processing techniques are employed to minimise cross-contamination of carcasses. In-country inspection confirmed the high degree of government oversight and enforcement of BSE control measures in these areas. Therefore, the introduction of the BSE agent and subsequent amplification and recycling within the bovine feed system or introduction to the human food supply in Latvia, is considered to be unlikely.

# BSE food safety controls

The Australian Questionnaire requires countries to have in place effective controls during the slaughtering process so that food for human consumption is prevented from becoming contaminated with materials that may 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. This chapter describes how these requirements are addressed in Latvia.

## 9 Meat processing

### 9.1 Legislation

Annex I of Regulation (EC) No 854/2004 sets out food safety requirements for meat which include provisions for: (1) responsibilities of the official veterinarian in ante- and post-mortem mortem inspection; (2) general inspection procedures; (3) removal, separation, and marking of SRM; (4) marking of animals and carcasses with the official health mark; (5) documentation of inspection results and decisions; (6) communication of inspection results to operators across the production chain; and (7) qualifications and training of slaughterhouse staff (including official veterinarians).

Additional requirements prohibit the use of ruminant bones in the production of mechanically separated meat (Regulation (EC) No 999/2001) and require BSE testing of at-risk animals to prevent contaminated meat from entering the human food chain (according to EC requirements for surveillance, see Section 18).

More generally, Regulation (EC) No 852/2004 Article 5 Part 1 requires that HACCP plans be properly documented and implemented and Regulation (EC) No 853/2004 sets out general hygiene requirements for foods of animal origin.

Factories which process meat for human consumption (e.g. cutting plants) must be registered and approved by the FVS.

### 9.2 Procedures to prevent BSE contamination of food

Methods that may potentially spread central nervous system (CNS) material to tissues destined for human consumption are banned. Specifically, pithing[c] and stunning by use of gas injection into the cranial cavity are prohibited in bovine animals under EU legislation.

As described in Section 7, carcasses are inspected for removal of SRM by official veterinarians who are supervised by the TSU senior food or veterinary inspectors. As observed during inspections of slaughtering facilities at the in-country verification visit, SRM is isolated, transported, and disposed of in such a way that it cannot be diverted for food use.

[c] Pithing is the laceration of the CNS by means of an elongated rod-shaped instrument introduced into the cranial cavity after stunning.

Only carcasses which pass inspection for SRM removal receive a health mark which permits them to be further processed.

Head meat (tongues, cheek meat) of animals over 12 months of age may be harvested for human consumption at the slaughterhouse in which case the remainder of the head is disposed of as Category 1 material.

# 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.

## 10.1 Legislation

Traceability systems for beef are required under Regulation (EC) No 1760/2000. This legislation mandates that any beef product destined for human consumption must be traceable across the entire production chain including a complete history of the animal from which the product was sourced. The system must enable efficient monitoring of the status of imports and exports, as well as exchange of information on animal health, inspections, identification, and health emergencies.

New legislation was introduced in 2011 (Regulation (EC) No 931/2011) to improve traceability by expanding the labelling requirements for products of animal origin. The new legislation requires processed and unprocessed meat products to be labelled with prescribed information about the food producer and product source to enable ‘one-step-back, one-step-forward’ traceability.

## 10.2 Details of the traceability systems

All fresh meat and meat products are traceable from retail to source animal by means of a label and packaging that contains information such as establishment(s) where carcass originated, name of producer, batch number, cutting plant, production and expiry date, animal identification and production information, and the health stamp. As part of FVS audits and inspection programs, slaughterhouses and other beef production businesses are required to demonstrate capability to trace-back beef products to the source animal and then trace-forward to those products which have originated from the same farm.

Products exported from Latvia are traceable through the TRACES program. TRACES[16] is a trans-European web-based system that allows exchange of electronic certification and other importation documents between the competent authorities responsible for animal health controls. The system covers all imports and exports of animals, animal products (semen, ova, embryos, hatching eggs), and ABP including MBM and material containing MBM, and products of animal origin (fresh meat, meat products, meat preparations, and milk). The

system has been in place since 2004 and usage is mandatory for EU Member States. The system distinguishes trade within the EU, imports from third countries into the EU, and exports to a third country from the EU.

# 11 Recall systems for beef and beef products

EU Member States conduct recalls of animal feed and food products using the Rapid Alert System for Food and Feed (RASFF) which is managed by the EC and has been in operation since 1979 (electronic since 2002).[17]

## 11.1 Legislation

Regulation (EC) No 178/2002 sets down the legal provisions and requirements for systems to ensure the withdrawal and recall of food or feed products in the event of a food safety emergency.

## 11.2 Food recall process

RASFF provides a system for reporting food safety issues within the EU. Notifications of serious or indirect risks to human health from food or feed are sent to the EC and Member State authorities. Notifications are issued in several forms and result from border rejections of imports, feed or food testing, consumer complaints, food company notices, or bans on certain foods or ingredients. An 'Alert' is the most serious type of notification and is issued when the food or feed presenting the risk is on the market and immediate action is required.

In practice, the country competent authority is responsible for notifying RASFF when a food or feed risk is identified. RASFF then circulates notification to EU member countries and third countries that are importing the food or feed and have subscribed to receive notifications for the commodity of concern. There is also a website and a weekly newsletter that reports on food incidents occurring in the EU.

The FVS is the Latvian authority that provides information to RASFF and monitors and acts on notices forwarded by RASFF. The FVS is responsible for ensuring that businesses have provisions and procedures in place to enable efficient removal of feed or food from the market if recalled. These procedures are included in audits and inspections of food establishments. As reviewed and discussed at the in-country verification visit, the FVS has prepared specific recall instructions including details of responsible persons and flow charts for decision making in emergency recall situations such as incidents of food-borne illness.

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

Under Regulation (EC) No 999/2001, EU member states are required to have procedures for investigations and documented response protocols for the handling of animal disease outbreaks such as BSE. The FVS is responsible for coordinating the investigation and response to all notifiable diseases including BSE (see also Section 15). The FVS contingency plan is underpinned by Latvian legislation set out in 2008 comprising Order

No.64 '*Instruction on TSE eradication*' and Order No. 65 '*General part of the eradication plan of highly dangerous infectious disease*'.

Instructions covering responsible officers and their tasks, decision-making flow-charts, checklists, and other procedures for handling outbreaks of notifiable animal diseases have been developed. Despite the fact that no BSE cases have been detected in Latvia, interviews conducted during the in-country verification visit indicated that official veterinarians, regional FVS officers, and national laboratory staff were knowledgeable of the actions that need to be taken in the event a BSE-suspect or BSE-case is identified or confirmed.

RASFF would also be informed in the most serious situations where an animal is confirmed as positive for BSE and recall of beef or beef products is determined to be required. In this situation the FVS coordinates the response to manage the disposition of meat that may have entered the food chain from particular animal cohorts.

Details of actions to be taken when a BSE suspect is identified are described in Section 15.

# 13 Summary: BSE food safety controls

Food safety controls, in accordance with EU legislation, are well-established in Latvia and allow effective protection of the human food supply from potential BSE contamination. This conclusion is based on the following key elements of control: legislation that ensures good hygienic practices are employed throughout the beef production chain; traceability systems to enable recall of potentially contaminated food products; and contingency measures that would be enacted in the event of an animal disease emergency such as BSE.

# BSE Control Programs and Technical Infrastructure

The following chapter addresses the requirements in the Australian Questionnaire for appropriate control programs that support a capability to adequately identify, notify, and diagnose cattle that display clinical signs that meet meeting the case definition of BSE. Under Regulation (EC) No 999/2001 for the prevention, control, and eradication of TSEs, EU Member States must have programs in place ensuring adequate training for relevant staff and sufficient measures to handle BSE cases should they occur.

## 14 BSE Education and Awareness

Ongoing education and training is provided to a range of personnel through FVS programs across the beef production chain. Annual training courses on animal diseases have been a compulsory requirement for all veterinary inspectors, food inspectors, and official veterinarians within each TSU of the FVS since 2001. The FVS also organises monthly meetings which provide a forum for heads of all TSU units to discuss current animal disease issues.

The FVS conducts annual qualification courses for veterinary inspectors which focus on the differential diagnosis for rabies and BSE. These are supported by the Latvian Agricultural Advisory and Training Centre which organises similar training. Veterinary inspectors who have undergone the training course subsequently provide training to all authorised veterinarians within their own administrative district. Training includes BSE-specific topics such as revised information on clinical suspect definitions and diagnostic procedures. Veterinary inspectors are also responsible for disseminating information covered in the FVS monthly meetings to authorised veterinarians and veterinary practitioners within their respective district.

Other mechanisms by which veterinarians maintain knowledge on TSEs include the FVS website, a monthly publication issued by the FVS on animal diseases and food issues, as well as through FVS-organized seminars and practical training exercises. For example, a team of international experts delivered a two-day seminar series on TSE/BSE control that focussed on BSE clinical signs and the handling of clinical suspects on farms and in slaughterhouses. In addition, frequent practical training in sampling techniques is conducted at slaughterhouses.

A TSE-specific course organised by the FVS is provided to farmers, slaughterhouse workers, transporters, and other workers across the production chain. Attendance is voluntary. Other training material distributed by the FVS includes a video on clinical signs of BSE and a pamphlet known as the ‘BSE bulletin’ issued to animal owners. The ‘BSE bulletin’ uses a question and answer format to deliver information on BSE clinical signs, course of action to be taken in the event of a clinical suspect, surveillance activities, and compensation. Animal owners have also been made aware of the feed ban through regional seminars and numerous articles published in professional magazines and journals.

The EC conducts training for EU member states and third countries entitled the ‘*Better Training for Safer Food*’ program.[18] The program focuses on issues around compliance with

food and feed law, animal health and welfare rules and plant health rules. It is aimed at staff working for competent authorities in EU member states, particularly those involved with implementing and enforcing official controls. Latvia regularly sends FVS staff to participate in these training courses.

BSE training programs were discussed at each establishment inspected during FSANZ's in-country verification visit. All establishments confirmed that active programs are in place with training at each establishment conducted at least once per year. This includes both training of new staff on official controls for animal diseases as well as frequent update sessions for on-going staff to cover changes in EC legislation. In the latter case, for example, the feed mill that was visited had undertaken two training sessions in the past year to inform staff on changes to the feed ban legislation in 2012 that will allow certain animal protein to be fed to non-ruminant species.

Overall, the successful dissemination of knowledge and awareness around TSEs across the meat production chain was evident from interviews conducted as part of the in-country verification visit. Legislated controls and diagnostic methods were well-accepted, monitoring activities are sophisticated, and there is a high level of understanding of BSE-related regulations and the need for compliance.

# 15 Disease notification and diagnoses

This section focuses on procedures developed under the FVS surveillance and monitoring program (Figure 2) for notification and diagnoses of animals that are identified as BSE-suspect animals. Effectiveness of BSE surveillance is underpinned by a systematic notification chain and internationally accepted diagnostic laboratory methods.

## 15.1 Legislation

Under passive surveillance programs, notification of suspect BSE cases has been compulsory for farmers and veterinarians since 1990. Details of the notification chain are prescribed under the Veterinary Medicine Law (Articles 56 and 59) and through Orders issued through the FVS such as Order No 234 *'Instruction on Notification of Highly Dangerous Animal Infectious Diseases'.*

BSE was first listed as a notifiable disease under EC legislation in 1992 (Directive 1992/450/EC). The legislation went through a series of amendments until the current regulations on the generalised rules for the prevention, control and eradication of TSEs that are prescribed under Regulation (EC) No 999/2001. Articles 12 and 13 of this regulation set out measures to be carried out in response to the identification of BSE-suspect animals. Latvia has been subject to these controls since 2004.

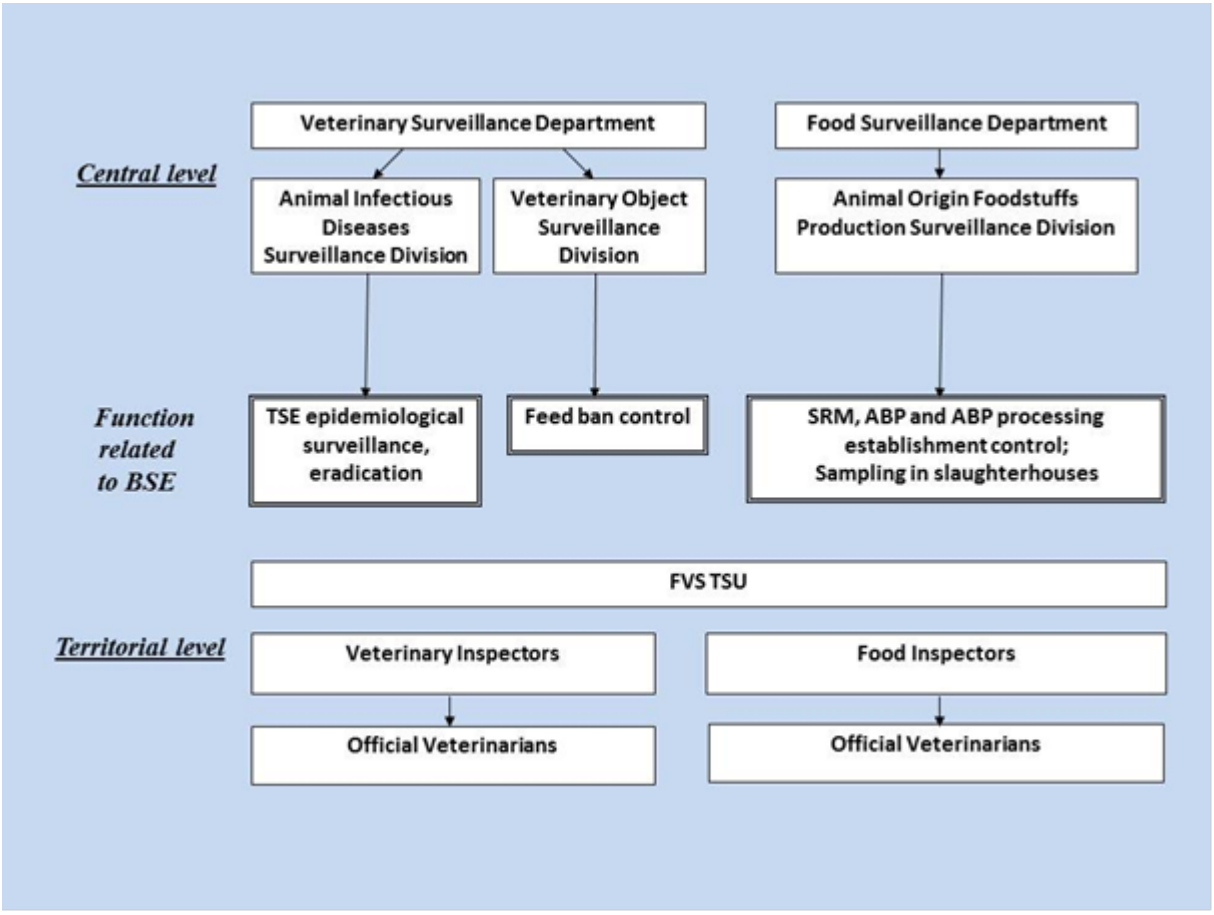



***Figure 2: Schematic of the TSE Surveillance System***

## 15.2 Identification and handling of BSE suspects

Cattle displaying behavioural or clinical signs during ante-mortem inspection, as described in Article 11.5.21 of the OIE Animal Health Code (the Code)[3] are defined as 'clinical BSE-suspect' animals. Clinical signs are based on behavioural changes such as excitability, persistent kicking when milked, changes in herd hierarchical status, hesitation at doors, gates and barriers, as well as those displaying progressive neurological signs without evidence of another infectious disease. Brain tissue from these animals is tested for BSE and results are included in the statistical reporting of the BSE surveillance program, as discussed in Section 18 of this report.

Measures to be taken in the event that a BSE-suspect animal is identified are listed in Box 1. As determined through discussions at the in-country inspection, FVS officers (at central offices and regional TSUs) as well as slaughterhouse and farm workers were well-informed about these measures.

**Box 1: Measures in the event a BSE suspect is identified**

***At a farm:***

- Owner is obliged to inform veterinary practitioner (or veterinary inspector).
- Veterinary practitioner/inspector visits farm, carries out clinical examination.
- Suspect animal is euthanized and sampled with head sent to BIOR. Premises are disinfected
- FVS veterinary inspector restricts animal movements and undertakes epidemiological investigation.
- FVS veterinary inspector sends report to FVS central office.
- Animal movement restrictions are lifted if negative result received from laboratory.

***At a slaughterhouse:***

- Animal found dead after transport is designated Category 1 material and destroyed.
- Suspects identified during ante-mortem inspection are:
    - isolated from other cattle
    - slaughtered after all healthy animals
    - sampled, with the head sent to national reference laboratory (BIOR) for testing.
- Carcass and by-products including skin are kept until laboratory results are obtained.
- All suspect animals are reported to the TSU veterinary inspector who undertakes further action.

***Follow-up on confirmation of BSE case***

- BIOR notifies positive BSE tests to the FVS, official veterinarian at the slaughterhouse or veterinarian at the establishment from which the sample originated (e.g. farm) and the relevant TSU.
- Movement restrictions imposed.
- Inquiry conducted at farm by TSU veterinarians to identify:
    - all other ruminants on premises
    - progenies within last 2 years
    - cohort animals and their location
    - possible disease origin
    - feed and other materials that may be possible sources of contamination
- Progeny and cohort animals are euthanized and destroyed as Category 1 material.
- Increased control measures and monitoring are implemented at farm.

BSE at-risk animals are also targeted through testing of brain samples taken from routine slaughtered animals as part of the BSE active surveillance program. As discussed in Section 18, cattle from specified age groups are slaughtered separately and sampled. The carcass and any Category 3 by-products destined for further use are retained until BSE rapid test results are available.

If testing of clinical suspects or sampled animals confirms the presence of BSE, then trace-back procedures are carried out by the FVS according to the prescribed contingency protocols for dealing with BSE cases (see Section 12). Animals culled as part of the trace-back would be destroyed by incineration.

### 15.3 Diagnostic methodology

Testing of brain samples for the presence of BSE is carried out by the BIOR laboratory, Latvia's national Reference Laboratory (formerly the National Diagnostics Centre). BIOR is composed of three central laboratories: the Food and Environmental Investigations Laboratory; the Clinical Microbiological Investigations Laboratory; and the Animal Diseases Diagnostic Laboratory (where BSE is diagnosed).

Histopathology was used as the BSE screening test from 1997 to 2001. From 2001 onwards, IDEXX Herd Check or BioRad TeSeE rapid tests have been used with Prionics western blotting. Immunohistochemistry and histopathology are used for confirmatory testing if required. All methods are in line with OIE recommendations under Chapter 2.4.6 of the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2011.*[19]

Laboratory staff carrying out or supervising BSE testing includes at least three veterinary experts who maintain knowledge through annual participation in EU-based training at an EU reference laboratory, relevant conferences, and training conducted by EU specialists at BIOR.

BIOR staff provided thorough information on the practical matters of BSE testing during the visit to the BIOR laboratory. Discussions were undertaken on a range of topics that included the processing of deteriorated samples, protocols in the event that samples were submitted with insufficient identification, electronic record keeping, and communication and reporting mechanisms.

### 15.4 Laboratory assurances and auditing

BIOR is accredited by LATAK for BSE testing under ISO/IEC 17025: '*General requirements for the competence of testing and calibration laboratories'.* BIOR is inspected every 12-18 months by LATAK to maintain accreditation.

External assessment of BIOR is conducted by the EU reference laboratory for TSE (the Veterinary Laboratories Agency, Weybridge, UK) for proficiency and accuracy in rapid tests, histology, and immunoassays.

### 15.5 Penalties and reporting incentives

Failure to notify authorities of a suspected BSE case can result in penalties as prescribed in the *Latvian Administrative Violation Code*. Under *Veterinary Medicine Law* and specific Orders issued by the FVS (see Appendix 1), financial incentives are provided to farmers who report suspect animals to encourage submission of samples from clinical suspects. Owners may receive compensation for animal losses as a result of surveillance efforts. However both these situations are rare as BSE cases have not occurred in Latvia.

# 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 animals of interest if required. The system should ensure effective and timely identification, tracing and removal of beef and beef products (suspected to be BSE-infected) from markets and the distribution chain.

## 16.2 Legislation

Identification and registration requirements are prescribed in Regulation (EC) No 1760/2000 which requires EU Member States to have an established identification and registration system for bovine animals that includes:

- ear tags for the identification of individual animals
- computerised databases
- animal passports
- individual registers within each holding.

Latvian national legislation setting requirements for bovine identification has been in place since 1997 (with updates as needed) and is still the legal basis for the identification of bovine animals in Latvia. According to this regulation, it is a requirement that all bovine animals in Latvia are identified with ear tags. All holdings must also be registered with the owner's name and an identification number.

## 16.3 Cattle identification systems

The Agricultural Data Centre (ADC) is the body responsible for maintenance of the identification system, and production and distribution of ear tags and bovine passports to animal owners. The ADC is supervised by the Ministry of Agriculture of Latvia with official controls implemented by the FVS.

The ADC maintains an electronic data register of animals, herds and holdings which was established in 1997 and registers the following:

- animal description (such as date of birth and death, sex, breed and coat colour)
- animal identification number (and that of its mother)
- animal movements (premises and dates)

- description of all premises where the animal has resided over its lifetime (identification number, name of owner, address, geographical coordinates, herd identification number); and slaughter details (place and date)
- animal holding health status
- results of official controls performed at holding
- milk production data.

The current system enables traceability of all domestic and imported cattle. Movement data is communicated to a central electronic register in paper form, telephone, or directly by authorised internet access to the ADC database. Data is fully searchable by holding, ear tag number, birth date, movements, and health status.

### *16.3.1 Ear tags*

Ear tags are allocated by the ADC. The conventional format for ear tags in all Member States is a two letter country code followed by up to 12 numeric digits. Cattle are tagged with a double ear tag at birth. The ear tags are plastic and contain an individual number which is linked to date and place of birth and other information related to the individual animal (breed, sex, identification code of the mother, identification number of the holding where the animal was born). Ear tag numbers for individual animals are retained with all consignments of meat destined for human consumption to enable full traceability.

### *16.3.2 Holding Registers*

A register held at each holding contains at minimum the following information:

- the identification code of the holding
- identification code of the cattle
- date of birth, sex, breed or colour of coat, identification code of the mother
- in the case of animals arriving at the holding, the identification code of the holding from which the animal was transferred and the date of arrival
- in the case of animals leaving the holding, the identification code or the name and address of the holding of destination
- date of death or slaughter.

Ear tags for new births and for cattle with missing ear tags must be replaced within 20 days. Any animal that is not registered and correctly identified with two ear tags is not permitted to be transported, traded, or slaughtered.

### *16.3.3 Passports*

A passport is a paper document containing information such as ear tag number, animal details (sex, breed, birth date and genetic dam), and complete movement records. The passport is required to accompany each individual animal that moves between Member States. In 2010, the EC determined the Latvian animal identification system to be fully

operational and therefore, under Decision 2012/692/EU, the use of the passport to accompany all intra-community animal movements is no longer required.

### 16.4 Evaluation and inspection

The FVS conducts frequent audits on holdings to ensure accuracy of the database. Through these audits each dairy farm is inspected at least once every three years, 5% of fattening farms are inspected annually, and extraordinary inspections can be conducted on the basis of complaints or history of non-compliance.

Inspections and audits are handled by the veterinary inspectors at the TSU. The FVS uses specific information contained in the ADC to conduct a risk analysis of each holding to identify where unscheduled inspections may be necessary. Criteria that are considered by the FVS include:

- holding information (number of animals and details of each animal)
- history of disease outbreaks
- significant changes in situation compared to previous status
- prior risk analysis outcomes for the establishment (e.g. previous non-conformities, adequacy of passports and the holding register, and notification of information to the ADC)
- movement information (such as non-compliance with movement restrictions, movement of non-registered animal, and lack of notifications)
- the capacity for good traceability (such as the occurrence of a calf without a registered mother, mothers not being registered as female, lack of notification of calving)
- number of births within 300 days.

### 16.5 Penalties

The ADC manages failures in the daily reporting, corrections of register entries, and helpdesk enquiries. If breaches to bovine identification requirements are identified (e.g. during an inspection), penalties can be imposed in accordance with the Latvian Administrative Violations Code. Penalties include warnings, fines, forfeiture of special rights assigned to animal owners, and restrictions on animal movements. All penalties and corrective actions are recorded in the ADC database to inform future unscheduled inspections.

## 17 Summary: BSE control programs and technical infrastructure

BSE has been listed as a notifiable disease in Latvia for over two decades and comprehensive BSE education and awareness programs have been in place for over ten years. Farmers, veterinarians, and other cattle handlers are educated to recognise the clinical signs associated with the disease through ongoing awareness and education exercises for BSE and the provision of incentives to facilitate reporting. The capacity to

accurately diagnose diseased animals is underpinned by an accredited national laboratory, as well as the use of diagnostic methods that are approved by the OIE.

This assessment considers Latvia's cattle traceability system to be satisfactory. A single, centralised data management system for domestic and imported cattle is present in Latvia. Furthermore, movement documentation and record management systems are effectively used to monitor not only animal movements but also trends in animal health status or potential problems at holdings. Compulsory EC-compliant identification of cattle has been in place for over a decade in Latvia, and together with penalties for failure to identify bovine animals, assists in the management of efficient and effective responses to disease outbreaks. This ultimately ensures that effective trace-back can be achieved when required.

# BSE Surveillance

Section 3 of the Australian Questionnaire requires countries to provide evidence of the number of BSE-related samples collected for each cattle subpopulation, with data stratified by year and age group. BSE surveillance points are then calculated annually using the recommendations of Chapter 11.5 of the OIE Code[3]. 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 and the effectiveness of BSE control measures.

## 18 BSE surveillance program

Requirements for passive BSE surveillance programs covering the definition of BSE clinical signs and pathological material to be sampled for testing were first introduced in Latvia in 1990 under the government of the USSR. From 2001 to May 2004 (EU accession period), BSE testing requirements underwent frequent revision through Orders issued by the FVS, primarily to harmonise with the surveillance requirements under EC legislation (see Appendix 1).

Since Latvian accession to the EU in 2004, surveillance protocols have been mandated under Regulation (EC) No 999/2001. However, an active surveillance program according to Regulation (EC) No 999/2001 has been in place since 1997.

The categories of animals which must be tested and their ages are listed in Box 2.

**Box 2: Cattle tested for BSE**

- fallen stock over 48 months (24 months before 1 July 2011)
- emergency slaughter animals over 48 months (24 months before 1 July 2011)
- animals over 48 months (24 months before 1 July 2011) with clinical signs at ante-mortem inspection)
- healthy slaughtered animals over 72 months (30 months before 1 July 2011)
- suspect animals (no age limit)

The strategy under Regulation (EC) No 999/2001 has been modified based on the continuing improvement in the BSE epidemiological situation in European countries. In 2011, the age limit for testing healthy animals was raised to 72 months (testing of at-risk animals remains at 48 months). This decision (Decisions 2009/719/EC and 2011/358/EC) resulted from a favourable risk assessment conducted by EFSA[20] in which 25 Member States (including Latvia) were found to have implemented effective BSE control measures and a BSE surveillance system for at least six years. The assessment recommended adoption of the 72 month age limit for healthy cattle based on the finding that the risk for human and animal health would be negligible since less than one BSE case would be missed annually if implemented from 2013.

Other key features of Latvia's surveillance program include:

- The FVS is responsible for developing and administering Latvia's monitoring program for animal infectious diseases including BSE
- Accurate determination of animal age is confirmed by the mandatory animal identification scheme which requires individual ear tag numbers linked to full animal history, as described in Section 16
- Assignment of a BSE-suspect is based on the definition prescribed in Regulation (EC) 999/2001 and has been employed in Latvia's surveillance strategy since 2004. Prior to 2004, the definition of a clinical suspect was a bovine animal 'showing disturbances of (the) central nervous system'. The result of the change in definition has meant that the number of BSE-suspects has declined since 2004.

## 19 BSE surveillance points data

The OIE recommended BSE surveillance strategy is a points based system which sets target values to measure the risk of BSE present in the adult cattle population existing in a country (Articles 11.5.20 -11.5.22 of the OIE Code). 'Type A' surveillance will allow detection of one BSE case in 100,000 adult cattle and 'Type B' surveillance will allow detection of one BSE case in 50,000 adult cattle (at 95% confidence interval).

The average size of the adult cattle population in Latvia (24 months and older) is 204,419 head based on the data submitted for the years 2004 to 2009. As reported to FSANZ during the in-country verification visit, the current cattle population is 220,714. Since the adult cattle population in Latvia is between 200,000 and 400,000, the OIE recommended target for Type A surveillance is 60,000 points, and for Type B, 30,000 points, collected over seven consecutive years.

Updated surveillance data were provided at the in-country verification visit. A total of 44,796 points was accrued for the seven year period from 2005 to 2011. This meets the recommended target for Type B surveillance and is appropriate for controlled risk status countries. In addition, Latvia reached a points target of 60,623 during the seven year period 2000 to 2006 (see Appendix 4 for BSE surveillance data). Upon reaching the Type A points target a controlled risk status country may then conduct Type B surveillance and be eligible for negligible risk status upon complying with all other BSE related control measures for the required time period.

## 20 Summary: BSE surveillance

Latvia's program for BSE surveillance meets recommendations set by the OIE for Type B surveillance. Type B surveillance is designed for countries that have already achieved 'negligible' risk status under OIE requirements or for countries to maintain a 'controlled' risk status. Latvia has previously reached the level for Type A surveillance and BSE controls have been in place in Latvia for at least eight years. Under these criteria, Latvia is therefore eligible for 'negligible' or Category 1 BSE risk status.

# Conclusions and BSE risk categorisation

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

Control measures to prevent the recycling and amplification of the BSE agent in Latvia are rigorous and well-established. This has been due largely to legislated controls imposed in response to the BSE epidemic in Europe. Most control measures are based on EU-wide legislation (introduced in the EU in 2001) but some Latvian control measures (e.g. feed ban controls) have been in place since the 1990s through nationally coordinated programs and regulations.

Latvia only imports small numbers of cattle and low volumes of beef and beef products for human consumption. Source countries are predominantly from other EU countries or from countries which have been assessed as negligible or controlled risk for BSE. Ruminant-derived protein is not imported or traded on the EU market because of the restrictions on the use of animal by-products and the requirement that high-risk material must be incinerated. Because neither risk products nor live animals from risk countries are imported, the risk of introducing the BSE agent into Latvia is very low.

Since Latvia's accession to the EU in 2004, rigorous measures have been established which are consistent with the EU policy mandating the eradication and prevention of BSE from entering the animal feed system. Prior to 2004, control measures to prevent prions from entering the animal feed or human food chain had also been implemented. As a result, standard controls for SRM removal, ante- and post-mortem inspection at slaughterhouses, and for processing and use of ruminant by-products (feed ban), have been in place for over ten years. Effective enforcement of these measures was clearly evident from inspections conducted as part of the in-country verification visit.

A BSE active surveillance program is in place that targets and samples representative numbers of cattle sub-populations at highest risk of BSE. Latvia satisfies the OIE's recommendations for Type B surveillance but previously reached Type A surveillance from 2000—2006. As such it is eligible for negligible or Category 1 BSE risk status. Laboratory tests for BSE are carried out using OIE-approved methods at an accredited national laboratory. Underpinning these strategies are systems that ensure the full traceability of animals through a comprehensive cattle identification program and of animal products through the EU-wide TRACES program. A contingency plan is in place to ensure that cohort animals of BSE cases can also be traced, identified and culled.

The competent authority covering BSE controls, the FVS, demonstrated a high level of oversight of all BSE-related controls during the in-country verification visit. Integration of auditing and inspection programs between the FVS head office and the regional TSUs were evident. The animal identification and registration program is very strong and supports the management of, and compliance with, BSE controls in Latvia. The national centralised database provides a mechanism to monitor not only animal movements but also other production and compliance related information.

This assessment concludes that imported beef and beef products sourced from Latvia pose a negligible risk to human health and recommends that Latvia be given a **Category 1** for country BSE food safety risk status

# References


1. FSANZ (2010) Bovine Spongiform Encephalopathy (BSE): Requirements for the Importation of Beef and Beef Products for Human Consumption – Effective 1 March 2010. Food Standards Australia New Zealand. http://www.foodstandards.gov.au/consumerinformation/bovinespongiformencephalopathybse/requirementsfortheim4751.cfm. Accessed 3 December 2012.

2. FSANZ (2010) Australian Questionnaire to Assess BSE Risk. Food Standards Australia New Zealand. http://www.foodstandards.gov.au/consumerinformation/bovinespongiformencephalopathybse/australianquestionna4749.cfm. Accessed 3 December 2012.

3. OIE (2011) OIE Terrestrial Animal Health Code - Chapter 11.5. - Bovine spongiform encephalopathy. http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.11.5.htm. Accessed 3 December 2012.

4. EC Health and Consumer Protection Directorate-General Scientific Steering Committee (2002): Opinion on the geographical risk of bovine spongiform encephalopathy (GBR) in Latvia. http://ec.europa.eu/food/fs/sc/ssc/outcome_en.html. Accessed 3 December 2012.

5. OIE (2012): Bovine Spongiform Encephalopathy (BSE). http://www.oie.int/en/animal-health-in-the-world/official-disease-status/bse/list-of-bse-risk-status/. Accessed 3 December 2012.

6. European Commission DG Health and Consumers: Importation of fresh meat derived from domestic and wild ungulate (hoofed) animals. http://ec.europa.eu/food/animal/animalproducts/freshmeat/index_en.htm. Accessed 3 December 2012

7. FVO (2011) Import/transit control system and border inspection posts. Inspection number 2011-8967. European Commission, DG Health and Consumers, Food and Veterinary Office, Brussells. http://ec.europa.eu/food/fvo/rep_details_en.cfm?rep_id=2800. Accessed 3 December 2012.

8. C. Ducrot, M. Arnold, Koeijer A. de, D. Heim, and D. Calavas. Review on the epidemiology and dynamics of BSE epidemics. Vet.Res. 39 (4):15, 2008.

9. E. L. Mumford and U. Kihm. Integrated risk reduction along the food chain. *Annals New York Academy of Sciences* 1081:147-152, 2006.

10. D. Heim and E. Mumford. The future of BSE from the global perspective. *Meat Science* 70 (3):555-562, 2005.

11. Hörnlimann B, Bachman J, Bradley R (2006) Portrait of Bovine Spongiform Encephalopathy in cattle and other ungulates. In: Hörnlimann B, Riesner D, Kretzschmar H. (eds) Prions in Humans and Animals. de Gruyter, Berlin, p. 233-249.

12. FVO (2007) Feed and Feed Hygiene. Inspection number 2007-7265. European Commission, DG Health and Consumers, Food and Veterinary Office, Brussells.

http://ec.europa.eu/food/fvo/rep_details_en.cfm?rep_id=1868. Accessed 3 December 2012.

13. WHO (2010) Tables on Tissue Infectivity Distribution in Transmissible Spongiform Encephalopathies 2010. World Health Organisation, Geneva.

14. FVO (2009) Health Rules on Animal By-products. Inspection number 2009-8431. European Commission, DG Health and Consumers, Food and Veterinary Office, Brussells. http://ec.europa.eu/food/fvo/rep_details_en.cfm?rep_id=2443. Accessed 3 December 2012.

15. FVO (2009) Food Safety – Food of Animal Origin. Inspection number 2009-8207. European Commission, DG Health and Consumers, Food and Veterinary Office, Brussells. Accessed 3 December 2012.

16. European Commission DG Health and Consumers: TRACES. http://ec.europa.eu/food/animal/diseases/traces/index_en.htm. Accessed 3 December 2012.

17. European Commission DG Health and Consumers: RASFF. http://ec.europa.eu/food/food/rapidalert/index_en.htm. Accessed 3 December 2012.

18. European Commission DG Health and Consumers: Better Training for Safer Food. http://ec.europa.eu/food/training_strategy/index_en.htm. Accessed 3 December 2012.

19. OIE (2011) Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2011, Chapter 2.4.6, Bovine Spongiform Encephalopathy. http://www.oie.int/en/international-standard-setting/terrestrial-manual/access-online/. Accessed 3 December 2012.

20. EFSA Panel on Biological Hazards: Scientific Opinion on a second update on the risk for human and animal health related to the revision of the BSE monitoring regime in some Member States (2010). *EFSA Journal* 8(12):1946. doi:10.2903/j.efsa.2010.1946. http://www.efsa.europa.eu/en/efsajournal/pub/1946.htm. Accessed 3 December 2012.

# Appendices

## Appendix 1: Key Legislation for BSE Controls

Prior to 1991, laws around BSE controls were imposed by the USSR government as instructions or orders issued by the Chief State Veterinary Inspector (CSVI). With Latvian independence in 1992, veterinary legislation was introduced under the Veterinary Medicine Law with orders issued by the CSVI of the Republic of Latvia or as *a Regulation of Cabinet of Ministers*. In 2001, a revised version of the Veterinary Medicine Law was adopted which largely harmonised with EC regulations for BSE. From 2001/2002, the FVS was established (to replace the previous office - the State Veterinary Service) with responsibilities to implement official controls across all sectors of the food chain. The FVS Director General (who is also the State Chief Food and Veterinary Inspector) issues orders and instructions for BSE and beef production controls. From 2004, EC legislation has been in effect with the FVS imposing instructions and orders regarding the implementation of EC regulations.

The list of legislation below is a composite of laws introduced under these four systems.

### 1. Legislation prior to EU-accession (May 2004)

| LEGISLATION | YEAR APPLIED | CONTROL MEASURES |
|---|---|---|
| **General** | | |
| Veterinary Medicine Law | 1992 | Regulations for veterinary activities including: prevention and combating animal infectious diseases, veterinary medical practice, circulation of products of animal origin, imports of animals and products of animal origin, |
| Veterinary Medicine Law | 2001 | As above (revised) |
| **Importation of MBM** | | |
| CVSI Order No 147 | 2002 | Prohibition in importation of MBM from BSE-affected countries |
| CSVI Order No 44 | 2001 | Prohibition on importation of MBM |
| **Importation of Live Cattle** | | |
| FVS Order No 15 | 2001 | Controls on importation of live cattle including surveillance and BSE testing |
| **Pre-slaughter Controls: Feed Ban** | | |
| USSR Order No 60 | 1990 | Prohibits the feeding of MBM to ruminants |
| CSVI Order No 45 | 2001 | Prohibition on use of fallen stock for feed production |
| CSVI Order No 46 | 2001 | Total feed ban (prohibition on feeding MBM and MBM-containing materials to food-producing animals |
| Regulation of Cabinet of Ministers No 237 | 2004 | Lists undesirable substances in products intended for animal feed and requirements for animal feed safety |

| | | |
|---|---|---|
| **Post-slaughter Controls: Post-mortem Inspection, SRM Removal, Rendering Procedures** | | |
| CSVI Order No 64 | 2001 | Rules for pet food producing establishments including rendering conditions and prevention of cross contamination |
| FVS Order No 65 | 2001 | Rendering conditions for MBM (pet food only) and rules to prevent cross-contamination |
| Regulation of the Cabinet Ministers No 477 | 2002 | The rules for animal origin waste processing and incineration (consistent with EC Directive 90/667) |
| FVS Order No 29 | 2003 | Instructions on collection and disposal of specified risk material |
| **BSE Food Safety Controls** | | |
| Regulation of Cabinet Ministers No 187 | 2003 | Hygiene requirements to cutting, wrapping and packing of meat; definition of by-products not fit for human consumption |
| **BSE Control programs and Technical Infrastructure** | | |
| USSR Instruction | 1990 | Preventative control measures for protection of the USSR from BSE; BSE listed as notifiable disease |
| Veterinary Medicine Law | 1992 | Compulsory reporting of infectious diseases (including BSE) |
| Regulation of the Cabinet Ministers No 323 | 1998 | Compulsory reporting of listed animal infectious diseases (includes BSE) |
| FVS Order No 186 | 2001 | Instructions on handling suspected and confirmed cases of bovine spongiform encephalopathy (Contingency Plan) |
| FVS Order No 241 | 2001 | Notification procedures for BSE suspects |
| FVS Order No 234 | 2002 | Instruction on notification of highly dangerous animal infectious diseases |
| Regulation of the Cabinet Ministers No 293 | 2003 | Procedure for compensation for losses by animal owners due to eradication of animal infectious disease |
| **Cattle Identification and Traceability** | | |
| Regulation of Cabinet of Ministers No 10 | 1998 | Rules of registration of animals and herds |
| Regulation of Cabinet of Ministers No 712 | 2003 | Individual identification of cattle |
| **Surveillance and BSE Testing** | | |
| FVS Order No 209 | 2001 | Procedures for sampling and compulsory groups for BSE testing |
| FVS Order No 13 | 2002 | Detailed instructions for sampling and submission of samples |
| FVS Order No 15 | 2002 | Revised groups for compulsory BSE testing |
| FVS Order No 71 | 2002 | Provisions for record-keeping of BSE test results |
| FVS Orders No 75, 345,,498,108,170,229,24 | 2002-04 | Various revisions to provisions for BSE testing (harmonisation with Regulation (EC) 999/2001 |

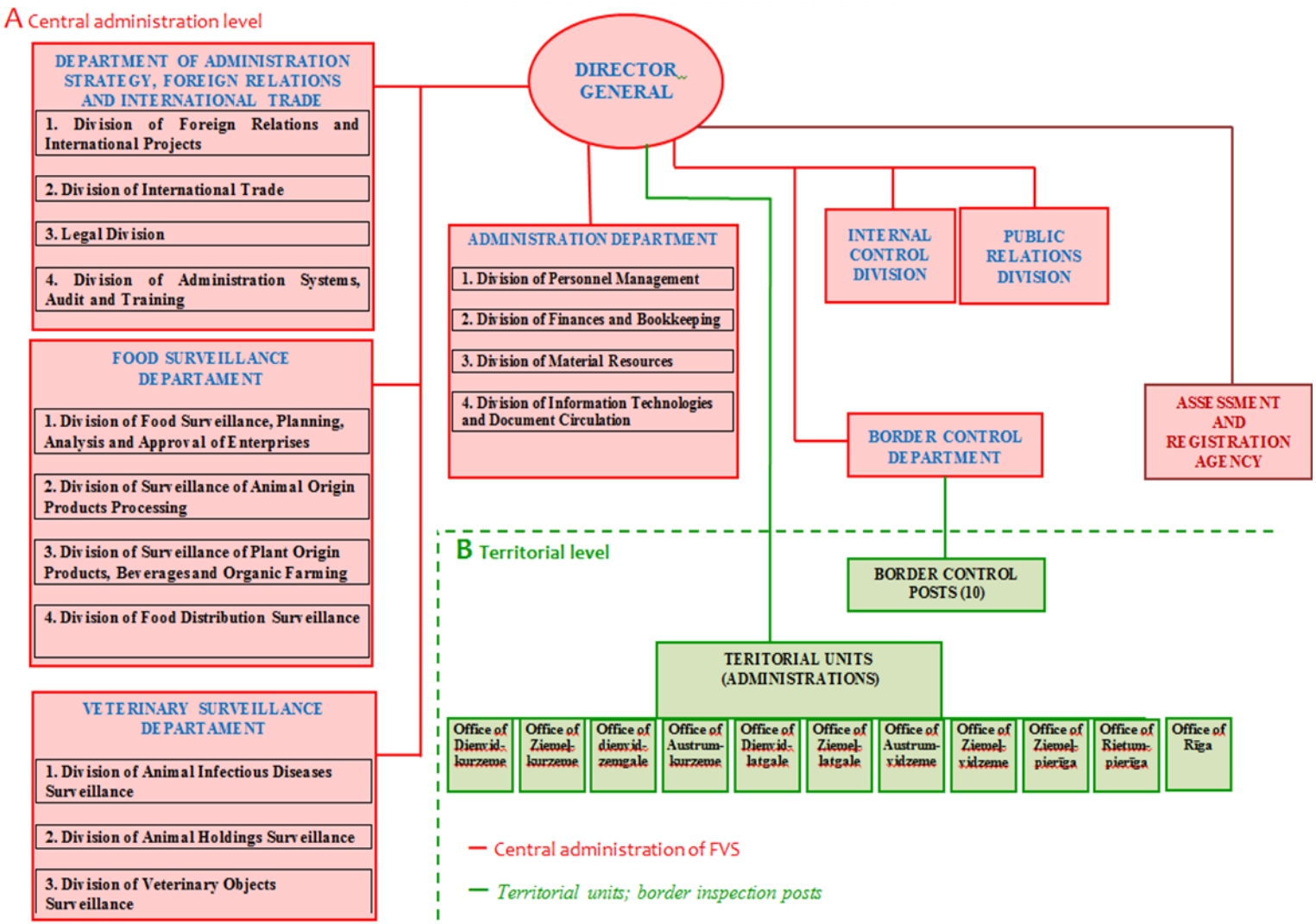
## 2. Legislation after May 2004 (post-EU-accession)

| LEGISLATION | YEAR APPLIED | CONTROL MEASURES |
|---|---|---|
| **General** | | |
| Regulation (EC) No 999/2001 | 2001 | Rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies including:<br>• Definition of SRM<br>• Categorisation of animal by-products (not for human consumption)<br>• Controls for imports of live animals<br>• Adequate training to handle BSE cases<br>• Surveillance<br>• Regulations on intra-community trade for products of animal origin<br>• Restrictions on use of ruminant-derived material<br>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 | 2007 | Definition and criteria for the BSE status of Member States (amendment to 999/2001) |
| Decision 2008/829/EC | 2008 | Gives list of current BSE status of EU and Third countries |
| **Importation of MBM** | | |
| Regulation (EC) No 1774/2002 | 2002 | Certification requirements for animal protein |
| Regulation (EC) No 1069/2009 | 2009 | Import controls on animal by-products |
| **Importation of Live Cattle** | | |
| Regulation (EC) No 206/2010 | 2010 | Certification requirements for introduction of live animals or fresh meat from third countries |
| **Importation of Beef and Beef Products** | | |
| Directive 2002/99/EC | 2002 | General animal health rules in relation to introducing products of animal origin for human consumption |
| Regulation (EC) No 853/2004 | 2004 | Hygiene rules for food of animal origin including definitions of different types of meat products |
| Regulation (EC) No 854/2004 | 2004 | Conditions for trade between Member States for products of animal origin intended for human consumption |
| Regulation (EC) No 722/2007 | 2007 | Requirements for ante- and post-mortem inspection for traded or imported products |
| Regulation (EC) No 206/2010 | 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 | 1994 | Ban on the use of mammalian protein for feeding to ruminants |
| Decision 2000/766/EC | 2000 | Total ban on the processed animal protein for use in feed for any farmed animals |

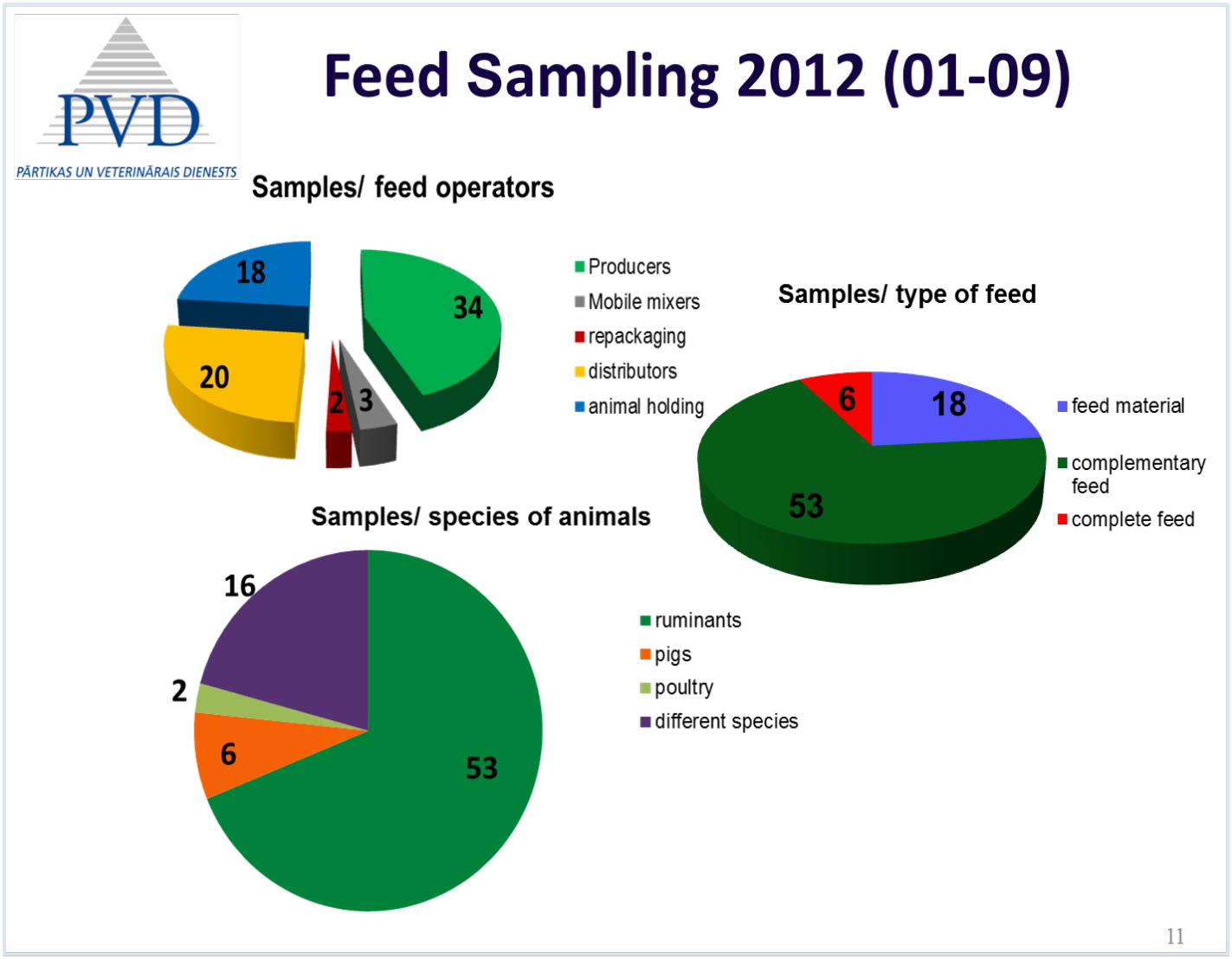
| | | |
|---|---|---|
| Directive 882/2004/EC | 2004 | Official controls for food and feed and requirements for national authorities to carry out official controls |
| Regulation (EC) No 956/2008 | 2008 | Permits the use of fish protein to be used as milk replacers in calf feeds |
| Regulation (EC) No 163/2009 | 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 | 2009 | Prohibits the use of milk and milk products derived from small ruminants for feeding to ruminants |
| Regulation (EC) No 1069/2009 | 2009 | Categorisation of animal risk material |
| Regulation (EC) No 152/2009 | 2009 | Sampling methods and preparations for testing feed for animal protein contamination |
| Regulation (EC) No 163/2009 | 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 | 2000 | Prohibition on the use of pithing or high-pressure gas injection into the brain during slaughter |
| Regulation (EC) No 854/2004 | 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 | 2002 | Rules for collections, transport, storage, handling, processing, and disposal or use of animal by-products |
| FVS Order No 87 (2003) | 2003 | Instructions on collection and disposal of specified risk material |
| **BSE Food Safety Controls** | | |
| Regulation of Cabinet of Ministers No 310 | 2003 | Instructions for animal stunning and slaughter process |
| Regulation (EC ) No 854/2004 | 2004 | Food safety requirements for meat including inspection procedures and SRM removal |
| Regulation (EC) No 852/2004 | 2004 | Requirements for use of HACCP and documentation |
| Regulation (EC) No 852/2004 | 2004 | General hygiene requirements for foods of animal origin |
| **BSE Control programs and Technical Infrastructure** | | |
| Directive 1992/450/EC | 1992 | EU requirement for BSE as notifiable disease (amended under Regulation 999/2001) |
| Regulation of the Cabinet Ministers No 177 | 2005 | Compensation for losses due to eradication of animal infection diseases |
| FVS Order No 355 | 2006 | Implementation of payment system for authorized vets |
| FVS Order No 64 | 2008 | Instruction on TSE eradication |
| FVS Order No 65 | 2008 | 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 | 1998 | Provisions for animal and herd registration |
| Regulation (EC) No 1760/2000 | 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 | 2000 | Requirements for traceability systems for food |
| Regulation (EC) No 178/2002 | 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) | 2011 | Registration of animals, herds, and holdings, and identification of animals |
| Regulation (EC) No 911/2004 | 2004 | Specifies requirements for ear tags, passports, and registers for data. |

## Appendix 2: Structure of the FVS and Levels of Administration



**Appendix 3: Diagram of feed sampling program for 2012**



# Appendix 4: BSE Surveillance points for Latvia from 2000 to 2012

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | | Totals |
|---|---|---|---|---|---|---|---|---|---|
| **2000** | | | | | | | | | |
| Surveillance subpopulations | | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points | |
| >1 and <2 years | **0** | 0.01 | **0** | 0.2 | **0** | 0.4 | **0** | 0 | |
| ≥2 and <4 years | **67** | 0.1 | **0** | 0.2 | **0** | 0.4 | **0** | 260 | |
| ≥4 and <7 years | **209** | 0.2 | **0** | 0.9 | **0** | 1.6 | **3** | 750 | |
| ≥7 and <9 years | **24** | 0.1 | **0** | 0.4 | **0** | 0.7 | **0** | 220 | |
| ≥9 years | **7** | 0 | **0** | 0.1 | **0** | 0.2 | **0** | 45 | |
| Subtotals | **307** | | **0** | | **0** | | **3** | | |
| Total points | **50.9** | | **0** | | **0** | | **2250** | | 2300.9 |

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **2001** | | | | | | | | | |
| Surveillance subpopulations | | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points | |
| >1 and <2 years | **3** | 0.01 | **0** | 0.2 | **0** | 0.4 | **0** | 0 | |
| ≥2 and <4 years | **307** | 0.1 | **0** | 0.2 | **1** | 0.4 | **3** | 260 | |
| ≥4 and <7 years | **1569** | 0.2 | **7** | 0.9 | **5** | 1.6 | **14** | 750 | |
| ≥7 and <9 years | **211** | 0.1 | **2** | 0.4 | **2** | 0.7 | **1** | 220 | |
| ≥9 years | **23** | 0 | **1** | 0.1 | **0** | 0.2 | **0** | 45 | |
| Subtotals | **2113** | | **10** | | **8** | | **18** | | |
| Total points | **365.63** | | **7.2** | | **9.8** | | **11500** | | 11882.63 |

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2002** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **3** | 0.01 | **4** | 0.2 | **4** | 0.4 | **0** | 0 |
| ≥2 and <4 years | **401** | 0.1 | **27** | 0.2 | **17** | 0.4 | **5** | 260 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ≥4 and <7 years | **2979** | 0.2 | **358** | 0.9 | **109** | 1.6 | **25** | 750 |
| ≥7 and <9 years | **299** | 0.1 | **30** | 0.4 | **28** | 0.7 | **4** | 220 |
| ≥9 years | **31** | 0 | **16** | 0.1 | **2** | 0.2 | **3** | 45 |
| Subtotals | **3713** | | **435** | | **160** | | **37** | |
| Total points | **665.83** | | **342** | | **202.8** | | **21065** | 22275.63 |

| **SUMMARY TABLE FOR BSE SURVEILLANCE** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2003** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **17** | 0.01 | **25** | 0.2 | **5** | 0.4 | **3** | 0 |
| ≥2 and <4 years | **666** | 0.1 | **228** | 0.2 | **63** | 0.4 | **3** | 260 |
| ≥4 and <7 years | **1566** | 0.2 | **343** | 0.9 | **77** | 1.6 | **12** | 750 |
| ≥7 and <9 years | **981** | 0.1 | **189** | 0.4 | **50** | 0.7 | **1** | 220 |
| ≥9 years | **1608** | 0 | **229** | 0.1 | **68** | 0.2 | **2** | 45 |
| Subtotals | **4838** | | **1014** | | **263** | | **21** | |
| Total points | **478.07** | | **457.8** | | **199** | | **10090** | 11224.87 |

| **SUMMARY TABLE FOR BSE SURVEILLANCE** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2004** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **31** | 0.01 | **28** | 0.2 | **1** | 0.4 | **1** | 0 |
| ≥2 and <4 years | **4978** | 0.1 | **364** | 0.2 | **47** | 0.4 | **0** | 260 |
| ≥4 and <7 years | **8519** | 0.2 | **445** | 0.9 | **41** | 1.6 | **0** | 750 |
| ≥7 and <9 years | **5176** | 0.1 | **229** | 0.4 | **37** | 0.7 | **0** | 220 |
| ≥9 years | **9313** | 0 | **322** | 0.1 | **44** | 0.2 | **0** | 45 |
| Subtotals | **28017** | | **1388** | | **170** | | **1** | |
| Total points | **2719.51** | | **602.7** | | **119.5** | | **0** | 3441.71 |

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2005** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **23** | 0.01 | **58** | 0.2 | **3** | 0.4 | **0** | 0 |
| ≥2 and <4 years | **6451** | 0.1 | **535** | 0.2 | **39** | 0.4 | **1** | 260 |
| ≥4 and <7 years | **10574** | 0.2 | **596** | 0.9 | **49** | 1.6 | **0** | 750 |
| ≥7 and <9 years | **6666** | 0.1 | **249** | 0.4 | **34** | 0.7 | **0** | 220 |
| ≥9 years | **11303** | 0 | **353** | 0.1 | **29** | 0.2 | **0** | 45 |
| Subtotals | **35017** | | **1791** | | **154** | | **1** | |
| Total points | **3426.73** | | **789.9** | | **124.8** | | **260** | 4601.43 |

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2006** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **11** | 0.01 | **36** | 0.2 | **2** | 0.4 | **0** | 0 |
| ≥2 and <4 years | **7087** | 0.1 | **415** | 0.2 | **101** | 0.4 | **1** | 260 |
| ≥4 and <7 years | **11978** | 0.2 | **452** | 0.9 | **94** | 1.6 | **0** | 750 |
| ≥7 and <9 years | **6976** | 0.1 | **216** | 0.4 | **39** | 0.7 | **0** | 220 |
| ≥9 years | **11708** | 0 | **245** | 0.1 | **34** | 0.2 | **0** | 45 |
| Subtotals | **37760** | | **1364** | | **270** | | **1** | |
| Total points | **3802.01** | | **607.9** | | **225.7** | | **260** | 4895.61 |

| | | | | | |
|---|---|---|---|---|---|
| **TOTAL POINTS 2000-2006** | **11508.68** | **2807.5** | **881.6** | **45425** | **60622.78** |

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2007** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **12** | 0.01 | **19** | 0.2 | **4** | 0.4 | **0** | 0 |
| ≥2 and <4 years | **8783** | 0.1 | **730** | 0.2 | **141** | 0.4 | **0** | 260 |
| ≥4 and <7 years | **14702** | 0.2 | **754** | 0.9 | **171** | 1.6 | **0** | 750 |
| ≥7 and <9 years | **7793** | 0.1 | **270** | 0.4 | **67** | 0.7 | **0** | 220 |
| ≥9 years | **12755** | 0 | **275** | 0.1 | **69** | 0.2 | **0** | 45 |
| Subtotals | **44045** | | **2048** | | **452** | | **0** | |
| Total points | **4598.12** | | **963.9** | | **392.3** | | **0** | |

5954.32

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2008** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **11** | 0.01 | **33** | 0.2 | **3** | 0.4 | **0** | 0 |
| ≥2 and <4 years | **8964** | 0.1 | **888** | 0.2 | **127** | 0.4 | **0** | 260 |
| ≥4 and <7 years | **16195** | 0.2 | **856** | 0.9 | **133** | 1.6 | **1** | 750 |
| ≥7 and <9 years | **8042** | 0.1 | **318** | 0.4 | **70** | 0.7 | **0** | 220 |
| ≥9 years | **11594** | 0 | **290** | 0.1 | **75** | 0.2 | **0** | 45 |
| Subtotals | **44806** | | **2385** | | **408** | | **1** | |
| Total points | **4939.71** | | **1110.8** | | **328.8** | | **750** | |

7129.31

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2009** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **3** | 0.01 | **18** | 0.2 | **2** | 0.4 | **0** | 0 |
| ≥2 and | **8869** | 0.1 | **842** | 0.2 | **73** | 0.4 | **0** | 260 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| <4 years | | | | | | | | |
| ≥4 and <7 years | **16597** | 0.2 | **1032** | 0.9 | **90** | 1.6 | **0** | 750 |
| ≥7 and <9 years | **7936** | 0.1 | **304** | 0.4 | **46** | 0.7 | **0** | 220 |
| ≥9 years | **8670** | 0 | **254** | 0.1 | **34** | 0.2 | **0** | 45 |
| Subtotals | **42075** | | **2450** | | **245** | | **0** | |
| Total points | **4999.93** | | **1247.8** | | **213** | | **0** | |

6460.73

| **SUMMARY TABLE FOR BSE SURVEILLANCE** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2010** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **10** | 0.01 | **9** | 0.2 | **0** | 0.4 | **2** | 0 |
| ≥2 and <4 years | **7215** | 0.1 | **568** | 0.2 | **183** | 0.4 | **0** | 260 |
| ≥4 and <7 years | **13749** | 0.2 | **641** | 0.9 | **238** | 1.6 | **0** | 750 |
| ≥7 and <9 years | **6261** | 0.1 | **214** | 0.4 | **113** | 0.7 | **0** | 220 |
| ≥9 years | **6808** | 0 | **211** | 0.1 | **82** | 0.2 | **0** | 45 |
| Subtotals | **34043** | | **1643** | | **616** | | **0** | |
| Total points | **4097.5** | | **799** | | **549.5** | | **0** | |

5446

| **SUMMARY TABLE FOR BSE SURVEILLANCE** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **2011** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **1** | 0.01 | **5** | 0.2 | **0** | 0.4 | **2** | 0 |
| ≥2 and <4 years | **5787** | 0.1 | **391** | 0.2 | **63** | 0.4 | **1** | 260 |
| ≥4 and <7 years | **12994** | 0.2 | **586** | 0.9 | **123** | 1.6 | **5** | 750 |
| ≥7 and <9 years | **7817** | 0.1 | **190** | 0.4 | **41** | 0.7 | **1** | 220 |
| ≥9 years | **8170** | 0 | **131** | 0.1 | **39** | 0.2 | **0** | 45 |
| Subtotals | **34769** | | **1303** | | **266** | | **9** | |
| Total points | **3959.21** | | **695.7** | | **258.5** | | **4230** | |

9143.41

| SUMMARY TABLE FOR BSE SURVEILLANCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **November, 2011 - October, 2012** | | | | | | | | |
| Surveillance subpopulations | | | | | | | | |
| | Routine slaughter | | Fallen stock | | Casualty slaughter | | Clinical suspect | |
| | Samples | Points | Samples | Points | Samples | Points | Samples | Points |
| >1 and <2 years | **0** | 0.01 | **0** | 0.2 | **0** | 0.4 | **1** | 0 |
| ≥2 and <4 years | **0** | 0.1 | **2** | 0.2 | **1** | 0.4 | **0** | 260 |
| ≥4 and <7 years | **5647** | 0.2 | **468** | 0.9 | **225** | 1.6 | **3** | 750 |
| ≥7 and <9 years | **8458** | 0.1 | **172** | 0.4 | **32** | 0.7 | **1** | 220 |
| ≥9 years | **7871** | 0 | **113** | 0.1 | **22** | 0.2 | **1** | 45 |
| Subtotals | **21976** | | **755** | | **280** | | **6** | |
| Total points | **1975.2** | | **501.7** | | **387.2** | | **2515** | |

5379.1