



# Risk Management Proposal

## Natural Sausage Casings

SAUSCASE.GEN

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Final Draft - Provisional

## Disclaimer

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# 1 Purpose

- (1) The purpose of this document is to:
  - a) Show how options have been assessed for the management of risk organisms in natural sausage casings.
  - b) Provide recommendations for import requirements.

## 2 Background

- (1) Natural sausage casings for human consumption derived from the intestines of animals are considered a risk commodity, with the potential to harbour exotic diseases. The Ministry for Primary Industries (MPI) has prepared the following import risk analyses (IRAs) addressing biosecurity risks associated with natural sausage casings:
  - a) Sausage Casings from Small Ruminants, Rapid Risk Assessment (Final - 1 July 2010) <http://www.biosecurity.govt.nz/files/regs/imports/risk/sausage-casings-eu-ra.pdf>
  - b) Supplementary Import Risk Analysis: Sausage Casings of Bovine and Porcine Origin (Final draft - March 2015) <http://www.mpi.govt.nz/document-vault/12831>
- (2) MPI has developed a generic *Import Health Standard (IHS)* for *Natural Sausage Casings* based on these analyses.
- (3) The commodity definition was reviewed by the Risk Analysis Team in response to a public submission and the adaptation of a definition of sausage casings by the World Organisation for Animal Health (OIE). See *Sausage casing commodity definition amendment memo* (12 May 2016), Appendix 1.
- (4) In accordance with MPI processes, the IHS contains generic import requirements. These requirements manage the biosecurity risk of importing natural sausage casings from all countries. The generic IHS serves as the basis for country-to-country (bilateral) negotiations of country-specific veterinary certificates. A guidance document to accompany this IHS will be issued by MPI, which will include a model veterinary certificate.
- (5) MPI will agree country-specific veterinary certificates with the exporting country's Competent Authority once MPI is satisfied with the exporting country's export systems. Negotiations will take into account the verifiable health status of the exporting country, the national systems, legislation and IHSs in the exporting country for regulatory oversight of the sausage casing industry, and the capabilities and preferences of the exporting country's Competent Authority. The assessments will be based on the OIE *Code* Section 3, Quality of Veterinary Services.

## 3 Objective

- (1) The objective is to effectively manage biosecurity risks associated with the import of natural sausage casings, consistent with New Zealand's domestic legislation and international obligations.

## 4 Options assessment

- (1) Under Article 3.3 of the World Trade Organisation Agreement on the *Application of Sanitary and Phytosanitary Measures* (the SPS Agreement), risk management measures which provide a level of protection greater than provided by international standards may be imposed only when they can be scientifically justified on the basis of a risk assessment.
- (2) For a detailed analysis of potential hazards and their risks please refer to the risk assessments listed in section 2 above, which contain the relevant risk assessments and an analysis of management options for each risk organism.
- (3) Of the potential hazards from natural sausage casings derived from sheep, goats, pigs or cattle, the import risk analyses concluded that, **following the required processing**, disease specific risk management measures could only be justified for classical swine fever virus (CSFV) in casings derived from pigs, and bovine spongiform encephalopathy (BSE) in casings derived from cattle.

## 5 General requirements for all imported natural sausage casings

- (1) The casings must be derived from pigs, cattle, sheep or goats that have passed ante- and post-mortem inspections according to the *Code*.
- (2) Casings: means intestines and bladders that, after cleaning, have been processed by tissue scraping, defatting and washing, and have been treated with salt (OIE 2016).

## 6 General processing requirements for all imported natural sausage casings

- (1) The abattoir and processing plant must operate a *Good Manufacturing Practice* (GMP) and a *Hazard Analysis and Critical Control Point* (HACCP) programme to the satisfaction of the Competent Authority.
- (2) After cleaning and scraping, the casings must be salted for at least 30 days with either dry salt (NaCl) or saturated brine ( $A_w < 0.80$ ), or with phosphate supplemented dry salt or saturated brine ( $A_w < 0.80$ ) containing 86.5% NaCl, 10.7%  $\text{Na}_2\text{HPO}_4$  and 2.8%  $\text{Na}_3\text{PO}_4$  (weight/weight/weight), and kept at a temperature of greater than 12°C during this entire period.

## 7 Considerations for specific requirements for the identified risk organism

- (1) Risk management requirements specified in Part 2 of the IHS are presented as one or more of the following:
  - a) Country, zone or compartment freedom and residency requirements.
  - b) Country, zone or compartment status and residency requirements.
  - c) Treatment options.
- (2) Options presented are considered to effectively manage the risk and may be included in the IHS. Where specific Articles of the *Code* have been referred to in the IRA or RMP, the IHS may not state these, as Article numbers may change with each *Code* review. Instead the *Code* is legally incorporated by reference in the IHS and the latest version of the *Code* must be used.

## 8 Recommendations for identified risk organisms

### 8.1 CLASSICAL SWINE FEVER VIRUS (CSFV) – PIGS ONLY

#### 8.1.1 Options presented in the *IRA: Supplementary Import Risk Analysis: Sausage Casings of Bovine and Porcine Origin*

The CSFV risk status of the pig population of a country, zone or compartment should be determined on the basis of the criteria outlined in the *Code* chapter for Infection with Classical Swine Fever Virus, General criteria for the determination of the CSF status of a country, zone or compartment.

##### Option 1

Casings derived from pigs could be imported only from countries, zones or compartments recognised by New Zealand as free from CSF.

##### Option 2

For the inactivation of CSFV in casings of pigs, the following procedures could be used: salting for at least 30 days either with phosphate supplemented dry salt or saturated brine ( $A_w < 0.80$ ) containing 86.5% NaCl, 10.7%  $\text{Na}_2\text{HPO}_4$  and 2.8%  $\text{Na}_3\text{PO}_4$  (weight/weight/weight), and kept at a temperature of greater than 20°C during this entire period.

### 8.1.2 Discussion

Eradication of CSFV in New Zealand occurred after outbreaks were discovered in 1930 and 1953. Since that time, New Zealand has not had a case of CSFV.

The OIE now includes CFSV as a listed disease. Requirements for the CSF-free status of a country, zone or compartment have been outlined in the *Code*.

### 8.1.3 Recommendation

Natural sausage casings derived from pigs may be imported provided that they have been:

- a) Derived from animals continuously resident in countries, zones or compartments recognised to be free from CSF for the 12 months prior to slaughter according to the *Code* criteria for the determination of the CSF status of a country, zone or compartment; OR
- b) Salted for at least 30 days with phosphate supplemented dry salt or saturated brine ( $A_w < 0.80$ ) containing 86.5% NaCl, 10.7%  $\text{Na}_2\text{HPO}_4$  and 2.8%  $\text{Na}_3\text{PO}_4$  (weight/weight/weight) and kept at a temperature of greater than 20°C during this entire period.

## 8.2 BOVINE SPONGIFORM ENCEPHALOPATHY (BSE) – CATTLE ONLY

### 8.2.1 Options suggested in the *Sausage casing commodity definition amendment memo*

#### Option 1

Casings derived from cattle could be imported from a country, zone or compartment posing a negligible BSE risk according to the OIE.

#### Option 2

Casings derived from cattle could be imported from a country, zone or compartment posing a controlled or undetermined BSE risk according to the OIE provided the distal ileum has been removed.

### 8.2.2 Discussion

There are widely accepted international standards to manage the risk of BSE in commodities from cattle. The OIE maintains a list of countries with a negligible or controlled risk of BSE. The OIE Manual includes a list of risk commodities which should not be traded from countries with a controlled or undetermined risk of BSE. Unless the country of origin has a negligible BSE risk according to the OIE, the distal ileum must be excluded from casings derived from cattle.

### 8.2.3 Recommendation

Natural sausage casings derived from cattle may be imported provided they have been:

- a) Derived from cattle continuously resident in a country, zone or compartment included in the negligible BSE risk list found under the OIE List of Bovine Spongiform Encephalopathy Risk Status Member Countries; OR
- b) The distal ileum has been removed.

# Appendix 1

## Sausage casing commodity definition amendment memo (12 May 2016)

The Imports Team has requested that the original commodity definitions used in the risk analyses for sausage casings of bovine, porcine, ovine and caprine origin be amended to the proposed OIE definition in the import health standards based on these analyses:

*'Casings: means intestines, oesophagus and bladders that, after cleaning, have been processed by tissue scraping, defatting and washing, and have been treated with salt.'* (Editor's note: the final version of the OIE definition, which is used in the Import Health Standard, does not include the oesophagus.)

The commodity definition used in the import risk analysis for sausage casings of bovine and porcine origin was:

*'The commodities under consideration are hog casings consisting of the submucosal tissue layer of the small intestine and casings made from the large intestine which contain all tissue layers. For beef casings this consists of all intestinal layers of the entire intestinal tract with the exclusion of the ileum.'*

*The entire intestinal tract of pigs is used for the production of casings. With the small intestines (duodenum, jejunum, ileum), bung (caecum), large intestines (colon ascendens and transversum), after end (colon descendens) and fat end (rectum) being especially utilised (Wijnker 2009).*

*The intestinal tract of cattle is also used entirely for the production of beef casings with the exception of the ileum. Its shape differs too much from the jejunum to produce the classic beef rounds and is therefore removed prior to the cleaning process and destroyed. Beef casings are produced from the small intestines including the duodenum and jejunum (beef rounds) and the caecum and from the large intestines, including the entire colon (beef middles). Beef casings are also produced from the urinary bladder and the oesophagus (weasand) (Ockerman and Hansen, 2000; Wijnker et al. 2008; European Natural Sausage Casings Association 2013).'*

The commodity definition used in the import risk analysis for sausage casings of ovine and caprine origin was:

*'The commodity under consideration comprises the submucosal layer of the small intestines of sheep and goats which have passed ante- and post-mortem inspection according to the OIE's Terrestrial Animal Health Code1 (Chapter 6.2.). After cleaning and scraping, the casings have been stored at room temperature in either salt or saturated brine for a minimum of 30 days.'*

*In making sausage casings from the intestines of sheep and goats, only the small intestines are used (Wijnker 2009). Further, in the European Union, the ileum of sheep and goats is designated as 'specified risk material' (SRM) and is excluded from processing and must be destroyed (Ruffing et al 2007; Wijnker 2009).'*

### **Differences between the proposed OIE definition and the commodity definitions in the risk analyses**

In the proposed OIE definition the species that casings are derived from is not identified. The salting and storage process specific to the manufacturing of casings is also not described.

#### **Bovine casings**

The major gap between the proposed OIE definition and the original definitions in the risk analyses concerns bovine casings, as the ileum is no longer excluded. The exclusion of the bovine ileum from international trade is recommended by the OIE for countries classified as having a 'controlled' or 'undetermined' risk status for the agent of bovine spongiform encephalopathy (BSE). This restriction is not recommended for countries with a 'negligible' risk status.

#### **Porcine casings**

In the original risk analysis definition only the 'submucosal tissue layer of the small intestine' is considered as opposed to all tissue layers in the proposed OIE definition. The oesophagus and bladder are also not included.

#### **Ovine and caprine casings**

For sausage casings of ovine and caprine origin the proposed OIE definition permits the trade in the entire intestinal tract and bladder, whereas, the original definition from the risk analysis states that only the 'submucosal layer of the small intestines of sheep and goats' are considered.



### **Identification of risk management gaps if using the new proposed OIE definition**

If using the proposed OIE definition, the species casing are derived from and the commercial manufacturing process should be described.

The addition of porcine, ovine and caprine bladders for use as casings is not considered to alter the biosecurity risk if commercial processing occurs:

*'After cleaning and scraping, the casings have been stored at room temperature in either dry salt or saturated brine. As an alternative treatment the dry salt or saturated brine may be supplemented with sodium phosphates (E339) for a minimum of 30 days. The pH of casing stored in dry salt and saturated brine is between 7.5 and 8, and if supplemented with phosphate the pH increases to approximately 10 (Wijnker et al. 2009).'*

Additional species-specific risks may require further consideration if the new proposed OIE definition is adopted in the import health standards:

#### **Bovine casings**

Due to the ileum not being excluded in the proposed OIE commodity definition, further assessment may be required to determine if the agent of bovine spongiform encephalopathy is a risk.

In the absence of further assessment, because the agent of bovine spongiform encephalopathy has been identified as a hazard, the international standards described in Article 11.4.14 of the Code could be adopted to effectively manage any risk that may be associated with this hazard.

#### **Porcine casings**

No additional risks are identified associated with the amended commodity definition.

#### **Small ruminant casings**

The import risk analysis concluded that the likelihood of entry of scrapie was negligible because Peyer's patches are removed completely after cleaning. Although the proposed IHS definition does not limit small ruminant casings to the submucosa, it does require that intestines be cleaned, processed by tissue scraping, defatted and washed. Reflecting this, the amended definition would have no impact on the risk assessment for scrapie in small ruminant sausage casings.

### **Literature consulted**

MPI (2010). *Import risk analysis: Sausage casings from small ruminants*. [Online] Available from: <https://mpi.govt.nz/document-vault/2814> [Accessed 10th May 2016].

MPI (2015). *Supplementary import risk analysis: Sausage casings of bovine and porcine origin*. [Online] Available from: <https://mpi.govt.nz/document-vault/8725> [Accessed 10th May 2016].