

Risk assessment report on beef and beef offal imported to Japan from Chile (Prions/Self-tasking)

(Expert Committee on prions)

Food Safety Commission of Japan (FSCJ)
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3. Chile

(1) Live Cattle

a. Risk of BSE Invasion

Import of Live Cattle from BSE Risk Countries

Data on imported live cattle to Chile are shown in Table 19. Figures in the table are taken from the questionnaire response by the Chilean authority and the data of cattle exports from BSE risk countries to Chile (Source: the World Trade Atlas. Trade statistics published by state governments are also used for some figures). Table 19 shows the number of cattle imported from the BSE risk countries only during the period when weighting factors are set.

According to the questionnaire response, Chile banned importation of live cattle from the UK and Switzerland (countries where BSE cases were reported) in 1990. In 1999, the Chilean government amended regulations to allow import of live cattle, cattle products, and cattle byproducts only from the countries without BSE cases. In 2001, cattle imported from Denmark were destroyed. In 2003, import of live cattle and cattle products from the US and Canada was temporarily suspended. The numbers of live cattle imported to Chile from BSE risk countries between 1986 and 2007 included 106 from European countries with moderate contamination (Denmark), 52 from the US, and 43 from Canada.

Meanwhile, the numbers of live cattle exported to Chile reported in the World Trade Atlas are 106 from European countries with moderate contamination (Denmark) and 152 from the US.

Import of MBM from BSE Risk Countries

Data on imported MBM to Chile are shown in Table 20. The figures in the table are taken from the questionnaire response by the Chilean authority and the data on MBM exports from BSE risk countries to Chile (Source: the World Trade Atlas. Trade statistics published by state governments are also used for some figures). Table 20 shows the amount of MBM imported from the BSE risk countries only during the period for which weighting factors are set.

According to the questionnaire response by the Chilean government, the country banned import of MBM and animal feed containing animal protein (excluding fish meal and poultry meal) from the UK and Switzerland, where BSE cases were reported in 1990. This regulation was modified in 1991 to ban import of ruminant feed containing animal protein (excluding fish meal and poultry meal). In 1999, a new regulation was implemented to limit the import of live cattle, cattle products and cattle byproducts to those from countries without BSE cases. The import of MBM from BSE risk countries in the period between 1986 and 2007 included 55 tons from European countries with moderate contamination (Denmark), 329 tons from the US, and 6,604 tons from Canada.

Meanwhile, the trade statistics recorded 2 tons of MBM imported from the UK, 19,042 tons from European countries with moderate contamination (Germany, Spain and Italy), 28 tons from European countries with low contamination (Denmark), 1,025 tons from the US, and 5,167 tons from Canada.

Import of Animal Oil/Fat from BSE Risk Countries

According to the questionnaire response by the Chilean government, 346 tons of animal oil/fat was imported from European countries with moderate contamination (the Netherland, Spain, Italy and Belgium), and 29,762 tons from the US. With the notification in 2004, the maximum limit of insoluble impurities content in animal oil/fat was set at 0.15%. The questionnaire response states that animal oil/fat is neither produced nor processed for animal feed materials in Chile.

Assessment of the Use of Imported Live Cattle and MBM for Animal Feed

The questionnaire response from the Chilean government reports that the number of imported live cattle and the amount of imported MBM indicated in the trade statistics matches the number and amount of those with the possibility of being a source of exposure, and therefore none should be exempted from consideration as risk animals or MBM. Accordingly, all of the live cattle and MBM imported from BSE risk countries were regarded to have a risk.

In regard to animal oil/fat, import from European countries with moderate contamination and the US has been confirmed. However, the possibility of the imported oil/fat to affect the level of invasion risk is considered low because (1) the risk of animal oil/fat is considered relatively low compared with the risk of live cattle and MBM imported in the same period, (2) the maximum limit of insoluble impurities content has been set at 0.15% since 2004, and (3) animal oil/fat has not been produced or processed as animal feed materials.

Table 19. Import of Live Cattle from BSE Risk Countries (Chile)

		1986-1990	1991-1995	1996-2000	2001-2005	2006-2007	Total	
		Number of imported cattle	Number of imported cattle	Number of imported cattle	Number of imported cattle	Number of imported cattle	Number of imported cattle	
Import data ¹	UK	Questionnaire	0	0	0	0	0	
		Trade statistics	0	0	0	0	0	
	Europe (Countries with moderate contamination)	Questionnaire	0	0	0	0	0	
		Trade statistics	0	0	0	0	0	
	Europe (Countries with low contamination)	Questionnaire	0	0	106	0	0	106
		Trade statistics	0	0	106	0	0	106
	USA	Questionnaire		43	0	9	0	52
		Trade statistics		114	38	0	0	152
	Canada	Questionnaire	38	5	0	0	0	43
		Trade statistics	0	0	0	0	0	0
	Others ()	Questionnaire	0	0	0	0	0	0
		Trade statistics	0	0	0	0	0	0
	Total	Questionnaire	38	48	106	9	0	201
		Trade statistics	0	114	144	0	0	258

		1986-1990		1991-1995		1996-2000		2001-2005		2006-2007		Total
		Number of imported cattle	UK Equivalent		UK Equivalent	Number of imported cattle	UK Equivalent	Number of imported cattle	UK Equivalent	Number of imported cattle	UK Equivalent	Number of imported cattle
Number of imported cattle with a potential of being a source of exposure	UK	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
	Europe (Countries with moderate contamination)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
	Europe (Countries with low contamination)	0	0.00	0	0.00	106	1.06	0	0.00	0	0.00	106
	USA	/	/	40	0.0008	0	0.00	9	0.0002	0	0.00	49
	Canada	38	0.004	3	0.0003	0	0.00	0	0.00	0	0.00	41
	Others ()	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
	Total	38	0.004	43	0.001	106	1.06	9	0.0002	0	0.00	196
	Negligible		Negligible		Negligible		Negligible		Negligible		/	

(Reference) Numbers calculated using the figures in the trade statistics.

Trade statistics ²	Total	0	0.00	114	0.002	144	1.06	0	0.00	0	0.00	258
		Negligible		Negligible		Negligible		Negligible		Negligible		/

- 1: 'Number of cattle imported' and 'Number of imported cattle with a potential of being a source of exposure' cover only the period when weighting factors are set.
- 2: We regard all of the cattle as a source of exposure because the exact number is unknown from the trade statistics as to how many of the imported cattle were not a source of exposure.

Table 20. Import of MBM from BSE Risk Countries (Chile)

			1986-1990	1991-1995	1996-2000	2001-2005	2006-2007	Total
			Volume of importation (ton)	Volume of importation (ton)	Volume of importation (ton)	Volume of importation (ton)	Volume of importation (ton)	Volume of importation (ton)
Import data ¹	UK	Questionnaire	0	0	0	0	0	0
		Trade statistics	0	0	2	0	0	2
	Europe (Countries with moderate contamination)	Questionnaire	0	0	0	0	0	0
		Trade statistics	0	1,638	0	8,527	8,877	19,042
	Europe (Countries with low contamination)	Questionnaire	11	0	44	0	0	55
		Trade statistics	0	0	28	0	0	28
	USA	Questionnaire	/	0	329	0	0	329
		Trade statistics	/	0	602	227	196	1,025
	Canada	Questionnaire	0	0	6,604	0	0	6,604
		Trade statistics	0	0	5,167	0	0	5,167
	Others ()	Questionnaire	0	0	0	0	0	0
		Trade statistics	0	0	0	0	0	0
	Total	Questionnaire	11	0	6,977	0	0	6,988
		Trade statistics	0	1,638	5,799	8,754	9,073	25,264

		1986-1990		1991-1995		1996-2000		2001-2005		2006-2007		Total
		Volume of importation (ton)	UK equivalent	Volume of importation (ton)	UK equivalent	Volume of importation (ton)	UK equivalent	Volume of importation (ton)	UK equivalent	Volume of importation (ton)	UK equivalent	Volume of importation (ton)
Volume of Imported MBM with a potential of being a source of exposure	UK	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
	Europe (Countries with moderate contamination)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
	Europe (Countries with low contamination)	11	0.01	0	0.00	44	0.44	0	0.00	0	0.00	55
	USA	/	/	0	0.00	329	0.01	0	0.00	0	0.00	329
	Canada	0	0.00	0	0.00	6604	0.66	0	0.00	0	0.00	6,604
	Others ()	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
	Total	11	0.01	0	0.00	6,977	1.11	0	0.00	0	0.00	6,988
		Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

(Reference) Numbers calculated using the figures in the trade statistics.

Trade statistics ²	Total	0	0.00	1,638	16.38	5,799	0.83	8,754	85.27	9,073	8.88	25,264
		Negligible	Negligible	Low	Negligible	Moderate	Very low					

1: 'Volume of MBM imported' and 'Volume of imported MBM that can be a source of exposure' are calculated only for the period when weighting factors are set.

- 2: We regard all of the MBM as a source of exposure because the exact number is unknown from the trade statistics as to how many of the imported MBM were not a source of exposure.

Assessment for external challenge

External challenge was evaluated based on the questionnaire response by the Chilean government. The level of invasion risk for live cattle in UK equivalent was 0.004 (1986–1990), 0.001 (1991–1995), 1.06 (1996–2000), 0.0002 (2001–2005), and 0 (2006–2007). Accordingly, the invasion risk for all of these periods was considered ‘negligible’. (The UK equivalents obtained in evaluation of invasion risk levels using trade statistics were less than 2 for all periods between 1986 and 2007. The level of invasion risk for this period, therefore, was regarded ‘negligible’.)

The external challenge resulting from MBM import evaluated using the figures in the questionnaire response were 0.01 (1986–1990), 0 (1991–1995), 1.11 (1996–2000), and 0 (2001–2005 and 2006–2007), and therefore the risk was considered ‘negligible’ for the whole period. In the trade statistics, a considerable amount of import is reported.

From European countries with moderate contamination, and invasion risk level was 0 and regarded ‘negligible’ (1986–1990), 16.38 and regarded ‘low’ (1991–1995), 0.83 and regarded ‘negligible’ (1996–2000), 85.27 and regarded ‘moderate’ (2001–2005), 8.88 and regarded ‘very low’ (2006–2007).

The figures for import from European countries with moderate contamination (Germany, Spain, and Italy) showed a large discrepancy between the questionnaire response and the trade statistics. These values were examined further in detail.

The 1,638 tons of the export from Spain to Chile in 1991 was taken from a brochure published by the Spanish Ministry of Economy and Finance, “Trade Statistics of Spain”, whose HS code was 2301. The code 2301 includes both meat meal (2301.10) and fish meal (2301.20), but the brochure did not show the breakdown. That is, the 1,638 tons could be fish meal, not meat meal.

In order to verify this hypothesis, the Working Group Report on the Assessment of the Geographical BSE-Risk (GBR) of CHILE 2005 (Reference 1) by EFSA was examined. The report, which was compiled using the record by the Statistical Office of the European Communities (EUROSTAT) in addition to the survey documents by the Chilean authority, lists only the export from Denmark as the MBM from Europe. Accordingly, it was proved that the export from Spain in 1991 described in the trade statistics was fish meal and other items (not Code 2301.10).

The 17,404 tons shown as the amount of MBM exported from Germany, Spain and Italy between 2004 and 2007 was taken from the report at the EUROSTAT. This figure was considered to be the amount of the MBM derived from non-cattle animals, because after 1999 Chile allows import of cattle and cattle products/byproducts only from countries without BSE cases. Considering the EU regulation for livestock byproducts (removal of SRM, processing with the 133°C/20min./3bar standard, etc.) that was effective during this period, it is unlikely that the export described with this figure had an invasion risk.

Also, when we sent an inquiry about the considerable amount of export from Europe described in the trade statistics, the Chilean government answered, “We infer that the import amount was this big because the HS code 2301.10 includes poultry scraps and feather meal in addition to MBM.”

The information described above suggests that our risk assessment should be based on the amount of import in the Questionnaire response by the Chilean government, not the figures in the trade statistics. .

The overall invasion risk (combination of risks by imported live cattle and MBM) was regarded ‘negligible’ for the all periods (Table 21). (Invasion risk level based on trade statistics was ‘negligible’ for 1986–1990, ‘low’ for 1991–1995, ‘negligible’ for 1996–2000, ‘moderate’ for 2001–2005, and ‘very low’ for 2006–2007. However, we concluded that import amounts described in the questionnaire response should be used for assessment, as previously explained.)

Table 21. External Challenge (Chile)

	1986-1990	1991-1995	1996-2000	2001-2005	2006-2007
Live cattle	Negligible	Negligible	Negligible	Negligible	Negligible
MBM	Negligible	Negligible	Negligible	Negligible	Negligible
Overall Level	Negligible	Negligible	Negligible	Negligible	Negligible

b. Domestic Stability (BSE propagation risk of the country)

Feed regulations

Feed regulations relevant to BSE in Chile include the regulation established in 2000, which banned feeding of ruminant-derived MBM to ruminants. In 2004, feeding of mammal-derived protein to ruminants was also banned.

Typical feeding methods in Chile are similar to that in Japan. Roughage and concentrated feed are fed to cattle. Mother's milk and substitute milk are fed to calves. With regard to the mixed rearing, while intensification of pig farms and poultry farms have been progressing, as of 2007, 66% of the cattle rearing farms still conduct mixed rearing of cattle and pigs or poultry. According to the questionnaire response, ruminant-derived MBM has been used for animals other than ruminants since 2001.

Compliance with feeding regulations is inspected mainly by the Agriculture and Livestock Services (SAG) in Chile. SAG inspects the compliance by visiting each farm. The numbers of inspections carried out in the past three years are 5,518 in 2005, 9,087 in 2006, and 10,084 in 2007. No violation has been detected in the past three years.

Compliance with regulations on feeding manufacturing and distribution is inspected by SAG. In the inspections, SAG officers visit the facilities and inspect the conditions using a check list.

Feed sampling tests are conducted using a microscope. At the feed mills, veterinary officers sample the feed for testing.

In the last three years, 221 cases (2005), 171 cases (2006), and 88 cases (2007) of inspections were carried out, and only 1 case in 2005 showed a positive result. When violations were found, additional sampling tests were conducted using a microscope, and the facilities were required to submit a report.

Use of SRM

The Resolution No. 5338 adopted by SAG in 2005 defines SRM as "Cerebrum, cerebellum, eyes, tonsils, spinal cord, and spleen of ruminant animals aged over 30 months, and distal ileum of cattle and sheep of all ages." Vertebral column is not defined as SRM in Chile. Use of organs defined as SRM and/or their waste for processing of livestock feed is prohibited.

The Ministry of Health (MINSAL) revised the Food Hygiene Law on February 4, 2006 to ban use of such parts as cerebrum, cerebellum, eyes, tonsils, spinal cord, spleen, and ileum of animals aged over 30 months for human consumption.

Before this regulation was enforced, head, vertebral column, and distal ileum had been used for human consumption, and spinal cord had been used for feeds after rendering. After the enforcement of this regulation, head, and spleen of animals aged over 30 months and spinal cord and distal ileum of animals of all ages are incinerated or buried. Other parts are used for human consumption.

Before the enforcement of the regulation, cattle subject to emergency slaughter had been used for human consumption unless detected at the antemortem test. After the legal enforcement, these cattle are tested for BSE after SRM is removed, and only those that showed negative results in the BSE tests are used for animal feeds or human consumption after rendering.

The animals detected at the antemortem test, which had been rendered and used for feeding before the implementation of the regulations, are incinerated or buried after the implementation of the regulation.

Rendering Conditions

As for rendering conditions, preventive hygienic measures were set in 2001 for the processing of feeds containing ruminant-derived protein for commercial use, which require crushing of the materials into 50mm and heating of the crushed materials at 133°C for a minimum of 20 minutes at absolute pressure of 3 bar pressure (133/20/3).

Compliance with the rendering regulations is inspected by SAG. The number of inspection was 12 in 2003, and 180 per year between 2004 and 2007. In 2006, 2 cases of violation (incompliance with regulated processing conditions, mainly the size of crushed pieces before processing) were found.

Measures to Prevent Cross-contamination

The 2001–2005 data report all of the 57 feed mills in Chile as ‘dedicated facilities’ (they produced feed for particular species). According to the data from 2006 onwards, 76 facilities (about 84%) are dedicated facilities, while 14 facilities (about 16%) are ‘mixed facilities’ (they produced feed for both ruminant and non-ruminant animals). Among the 14 mixed facilities, 9 facilities use separated lines for different species, while the rest wash the lines to prevent cross contamination.

All of the rendering facilities are reported as ‘dedicated facilities’ since 2001. According to the data for 2006 and subsequent years, ruminant-derived materials are used in 7 rendering facilities, while 3 rendering facilities do not to use ruminant-derived materials.

Others

No case of transmissible spongiform encephalopathy (TSE) has been detected in Chile.

Assessment of Domestic Stability

The domestic stability was assessed based on the questionnaire response by the Chilean government. Our assessment revealed that the risk of exposure/propagation was “high” (1986–2000), “moderate” (2001), “low” (2002–2004) and “very low” (2005–2007) in Chile (Table 22, Table 23).

Table 22. Domestic Stability (Chile)

Item	Status
Feeding	2000: Ban on feeding of ruminant-derived protein to ruminants. 2004: Ban on feeding of mammal-derived protein to ruminants.
Use of SRM	2005: SRM was defined. 2006: Ban on use of SRM for human consumption. [SRM] Before defined: Head, vertebral column, distal ileum: used for human consumption. Spinal cord: used for feed after rendering. After defined: Head, spleen of the cattle aged over 30 months, and spinal cord, distal ileum of the cattle of all ages: incinerated or buried: Other parts: used for human consumption. [Emergency slaughter] Before defined: used for human consumption. After defined: SRM is removed and BSE testing is conducted. Only those with negative results at BSE testing are used for animal feed or human consumption after rendering. [Bovines condemned at antemortem] Before defined: used for feed after rendering. After defined: incinerated or buried.
Rendering conditions	2001: Materials are crushed into 50mm and processed at 133 °C/20 mins./3 bar
Measures to prevent cross-contamination	[Feed mills] Separate lines are used at 9 out of 14 mixed facilities. The other 5 facilities wash lines . [Rendering facilities] 2001 onwards: All facilities are dedicated facilities.

Table 23. Assessment of Domestic Stability (Chile)

	Feeding	Use of SRM, Rendering Conditions, Preventive measure against cross-contamination, etc.	Risk of exposure/propagation
1986–2000	No specific regulations		High
2001	Ban on feeding of ruminant-derived		Moderate

2002–2004	protein to ruminants	2001: Rendering process at “133/20/3” was regulated.	Low
2005–2007	Ban on mammal-derived protein to ruminants		Very low

c. Verification by surveillance, etc.

Population Structure

According to the questionnaire response from the Chilean government, the total cattle population in Chile in 1996 was approximately 2,160,000 made up of approximately 1,520,000 of beef cattle, approximately 620,000 of dairy cows, and approximately 20,000 of breeding cattle (oxen). In the Survey on Agriculture and Livestock conducted by the National Institute of Statistics (INE), the number of total cattle reared in Chile in 2007 was reported as approximately 3,720,000.

Surveillance Outline

Passive surveillance started in Chile in 1996 targeting high-risk cattle and sheep. The sample sizes were determined by each state following surveillance plans, and sampling has been conducted from the livestock slaughtered in slaughterhouses.

Active surveillance plan was introduced in 2004, which requires notification of cases with signs of BSE, and clarification of target animals. Sampling was conducted mainly among the livestock with relatively high possibility of BSE positive (e.g., livestock animals aged over 30 months with specific nervous symptoms of TSE, animals died during transportation, emergency slaughtered animals, and animals suspected to have acute or chronic diseases).

Surveillance in Chile is based on the guideline by OIE, and the classification of cattle is in line with the definition by OIE. Sampling is conducted at farms and slaughterhouses. The main target of the sampling includes ‘fallen stock’ and ‘clinical suspects’ at farms, and ‘casualty slaughter’ and ‘routine slaughter’ at slaughterhouses.

Sampling is conducted by official or private veterinarians who have received training. Screening tests are conducted using the ELISA method since 2005. To confirm the results, histopathological method is used since 1996, and immunohistochemical method since 2001. There are two official test facilities, one in charge of preliminary test, and the other in charge of confirmation test.

The number of cattle surveyed was 2,261 in the period between 1996 and 2004, and 3,504 in 2005, 8,874 in 2006, and 7,727 in 2007. No BSE positive case has been detected. The surveillance outcome over the latest 7 year period (2001-2007) was statistically analyzed based on the point system used by OIE, and was assumed to meet the standard which “will allow the detection of BSE around a design prevalence of at least one case per 100,000 in the adult cattle population, at a confidence level of 95%” as stipulated by OIE (Table 24).

Table 24. Surveillance Point Calculation (Chile)

Number of cattle raised (1996): 2,160,000* → 300,000 points are needed in seven years.

Year	Number of Animals Surveyed				Total
	Routine slaughter	Fallen stock	Casualty slaughter	Clinical suspect	
2001	68	0	0	0	68

2002	634	0	0	5	639
2003	645	0	1	11	657
2004	59	1	13	55	128
2005	1333	578	1494	99	3,504
2006	736	2210	5667	261	8,874
2007	410	1913	5289	115	7,727
Total	3,885	4,702	12,464	546	21,597
Surveillance point	(× 0.2) 777	(× 0.9) 4,232	(× 1.6) 19,942	(× 750) 409,500	434,451 (Goal achieved)

Notes:

- Surveillance points were compared with the points needed by the OIE Type A Surveillance.
- Surveillance points were calculated under an assumption that all the animals are 4 years old or older and less than 7 years old.
- The cattle population in the questionnaire response by the Chilean government was used for calculation with an assumption that all the animals are 24 months old or older.

BSE Awareness Program and Mandatory Notification

BSE awareness programs were started in 1996 in Chile. The programs focus on promotion of methods to clinically detect diseases and to collect samples for test purposes. Various training courses are provided for official veterinarians of the governmental organizations, private veterinarians, stock farmers, and agricultural researchers.

Since BSE was officially designated as an infectious disease in 1996, notification has been required for cattle aged over 30 months that show BSE-specific symptoms, as well as changes in temperament, behavior, and other general conditions.

Since 2006, a certain amount of compensation has been paid for the BSE-suspects approved by an official veterinary, fallen stock, and culled bovines in the farms.

(2) Beef and Beef Offal

a. SRM Removal

Methods of SRM Removal, etc.

The Resolution No. 5338 approved by SAG in 2005 defines the hygienic methods to dispose SRM at meat processing facilities. From the meat intended for export to Japan, cerebrum, cerebellum, eyes, tonsils, and spleen of animals aged over 30 months, as well as spinal cord and distal ileum of animals of all ages are removed. The other parts (i.e., cerebrum, cerebellum, eyes, and tonsils of animals aged younger than 30 months and vertebral column of animals at all ages) are not defined as SRM, and removal of these parts are not mandatory. However, importers are instructed to voluntarily refrain from import of SRM, and therefore these parts are not imported to Japan. According to the Resolution No. 5338, SRM is required to be separated from other organs and tissues, chemically degenerated, and either incinerated or transported for burial.

Splitting is a common practice in slaughter houses. Following the regulations for meat processing facilities, knives, handles, saws, and other tools are to be disinfected either with hot water (at least 82°C) and antiseptic solution, or with other systems that are suitable for appropriate disinfection of these tools. Split saws are washed and disinfected between carcasses. The carcasses are split at the sagittal plane of vertebral column, and spinal cord is removed. After the removal of spinal cord, the carcasses are washed and checked by a slaughter inspector to ensure that no spinal cord tissue remains on the carcasses.

To prevent use of tonsil and distal ileum removed from the carcasses in production of animal feeds, these parts are separated from the processing line, denatured, and disposed. Removal of these parts is checked by inspectors.

Control based on (SSOP) and (HACCP)

Compliance of the Hazard Analysis Critical Control Point (HACCP) is required for all the exporting facilities since 1999. All of the 8 slaughterhouses and 5 meat processing plants that are involved in processing meat exported to Japan have adopted HACCP and SSOP. In Chile, removal of SRM from carcasses is obliged by the national standards for BSE. Removal of spinal cord is designated as a critical control point (CCP).

Additional Requirements, etc. for Export to Japan

According to the questionnaire response from the Chilean government, there is no additional BSE-related requirement for export for Japan.

b. Slaughtering Processes

Antemortem inspection and BSE testing at the slaughter houses

Antemortem inspection is conducted by an official veterinarian. All animals must go through testing either immediately after arriving at the slaughterhouse or immediately before slaughter. When the test results show signs of a disease, the animal is isolated, and examined further or followed up. At slaughterhouses, BSE tests are conducted only with a part of ‘casualty slaughter’ and ‘routine slaughter’ for the purpose of surveillance.

Stunning and Pithing

In Chile, stunning methods are specified by the Article 7 of Slaughterhouse Regulations (Decree No. 61), and stunning by injecting pressured air or gas into the skull is not conducted.

Pithing is not practiced in slaughterhouses in Chile.

c. Others

Mechanically Recovered Meat (MRM)

Mechanically recovered meat (MRM) is not produced in Chile.

Traceability

Bovine Sanitary Traceability Program was established in 2004 in Chile. In 2006, this program was revised and renamed Official Sanitary Traceability Program of Livestock Animals (PABCO). This program requires records of the establishments, and declarations of stock for all livestock species. The proportion of bovine among all the reared cattle population, whose age can be specified by the identification system is 17.67% (as of 2007).

Number of Slaughterhouses and Number of Slaughtered Animals

There are 69 slaughterhouses in Chile (as of 2007). Among them, eight facilities are involved in export to Japan. (All of these 8 facilities process meat both for domestic consumption/export to other countries, and for export to Japan.) According to the 2006 data, the number of slaughtered animals is approximately 950,000, among which 665,000 are healthy cattle aged 30 months or younger and 285,000 healthy cattle aged over 30 months. Among the 15 meat processing facilities, 5 facilities are involved in export to Japan. (All of these 5 facilities process meat both for domestic consumption/export to other countries and for export to Japan.)

The number of meat inspectors and official veterinarians are 103 and 95 respectively, according to the 2007 data. In export slaughterhouses, the staff is formed by one Veterinarian (Head of Team), Official Veterinarian Inspectors and Official Meat Inspectors. The number of Official Veterinarians and Technical Inspectors depends on the volume of slaughter. In slaughterhouses for domestic consumption, one Official Veterinary Inspector is responsible.

Export slaughterhouses are under SAG responsibilities. Reactions from the authority to compliance deviations/breaches include suspension of certification, removal from register of exporters, fines, and closure. Domestic slaughterhouses are under Ministry of Health (MINSAL) responsibilities. Reactions include fines, suspension or closure of establishments.

d. Assessment of Risk-reducing Measures at Meat Processing Lines

Based on the questionnaire response by the Chilean government, the risk-reducing measures at meat processing lines in Chile were assessed. The risk-reducing efficacies of the measures were recognized either ‘extremely effective’ or ‘highly effective’ (Table 25).

Table 25. Summary of Assessment (Chile)

		Measure	Judge
Current Practice of SRM Removal	Definition of SRM	2005: The following is decided (SAG Decision No. 5338) <ul style="list-style-type: none"> - Cerebrum, cerebellum, eye, tonsil, spinal cord, tonsil, and spleen of ruminant animals aged over 30 months - Distal ileum of cattle and sheep at all ages. 2006: Banned on consumption of SARM by humans.	SRM is removed based on the regulations of the specific country (vertebral column is removed based on the risk management measures at the time of import) (Methods of practice, etc.: Very good)
	Removal of SRM	[Meat export to Japan] The following parts are removed. <ul style="list-style-type: none"> - Cerebrum, cerebellum, eye, tonsil, and spleen: 30 months old or older - Spinal cord, distal ileum: all ages. Importers are instructed to voluntarily refrain from import of SRM to Japan, and therefore the other parts (i.e., cerebrum, cerebellum, eyes, and tonsils of animals aged less than 30 months and vertebral column of animals at all ages) are not to be imported to Japan.	
	Methods, etc.	Split saws are washed between each carcasses.	
		Carcasses are washed with water with appropriate pressure after spinal cord is removed.	
		Slaughter inspector checks the carcasses for spinal cord residues. HACCP and SSOP are implemented in facilities for export to Japan.	
Inspection at slaughterhouses Stunning and pithing	Inspection at slaughterhouse	<ul style="list-style-type: none"> - Antemortem inspection is conducted in charge of an official veterinarian. Animals showing suspected abnormality are separated. - BSE testing is conducted with a part of routine slaughter cattle only for surveillance purposes. 	Good
	Stunning with injection of pressured air or gas into the skull	Not practiced.	
	Pithing	Not practiced.	
MRM		Not practiced.	
Additional requirements, etc. for export to Japan		There is no additional BSE-related requirements for export to Japan.	
Livestock Hygiene Requirements			
Administrative guidance on import of beef for human consumption, etc. by notice		Importing companies are instructed to withhold import of SRM for human consumption even from non-affected countries in order to prevent possible confusion in case BSE occurs in that country.	
Assessment of risk-reducing measures		Efficacy of risk-reducing measures: 'extremely effective' to 'highly effective'	

(3) Conclusion

The evaluation of beef and beef-offal imported from Chile to Japan, based on the Chile's responses, resulted in our consideration that the external challenge is "negligible" for the whole period between 1986 and 2007. In addition, the risk against domestic stability was considered that risk of exposure/propagation was "high" (1986–2000), "moderate" (2001), "low" (2002–2004), and "very low" (2005–2007).

Based on the results of assessments for external challenge and risk against domestic stability, the risk of BSE exposure/propagation in Chile is considered to be negligible.

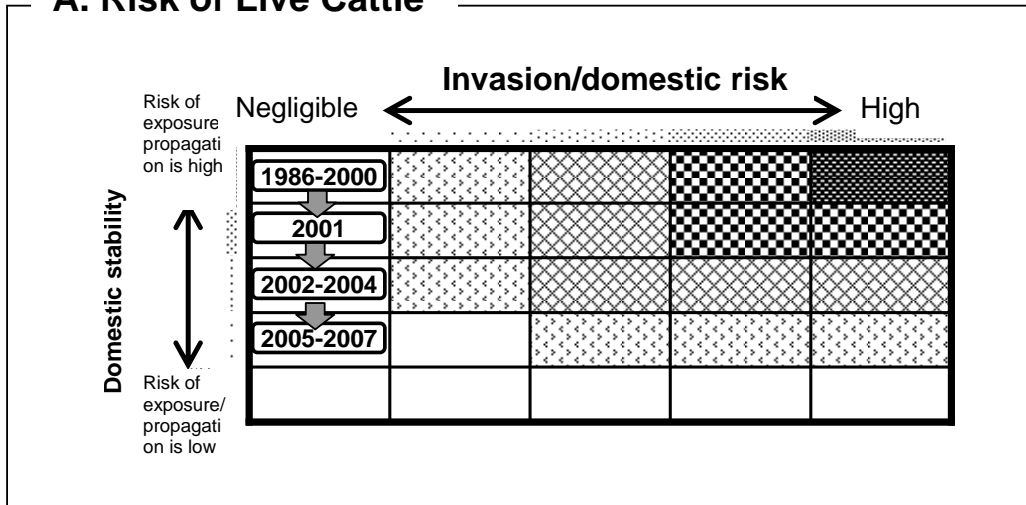
The surveillance so far has turned out to be with no BSE positive cattle, thus the surveillance outcome over the 7 year period (2001-2007) was assumed to meet the standard which "will allow the detection of BSE around a design prevalence of at least one case per 100,000 in the adult cattle population, at a confidence level of 95%" as stipulated by OIE.

Risk-reducing efficacy at the meat processing lines was assessed as "extremely effective" to "highly effective."

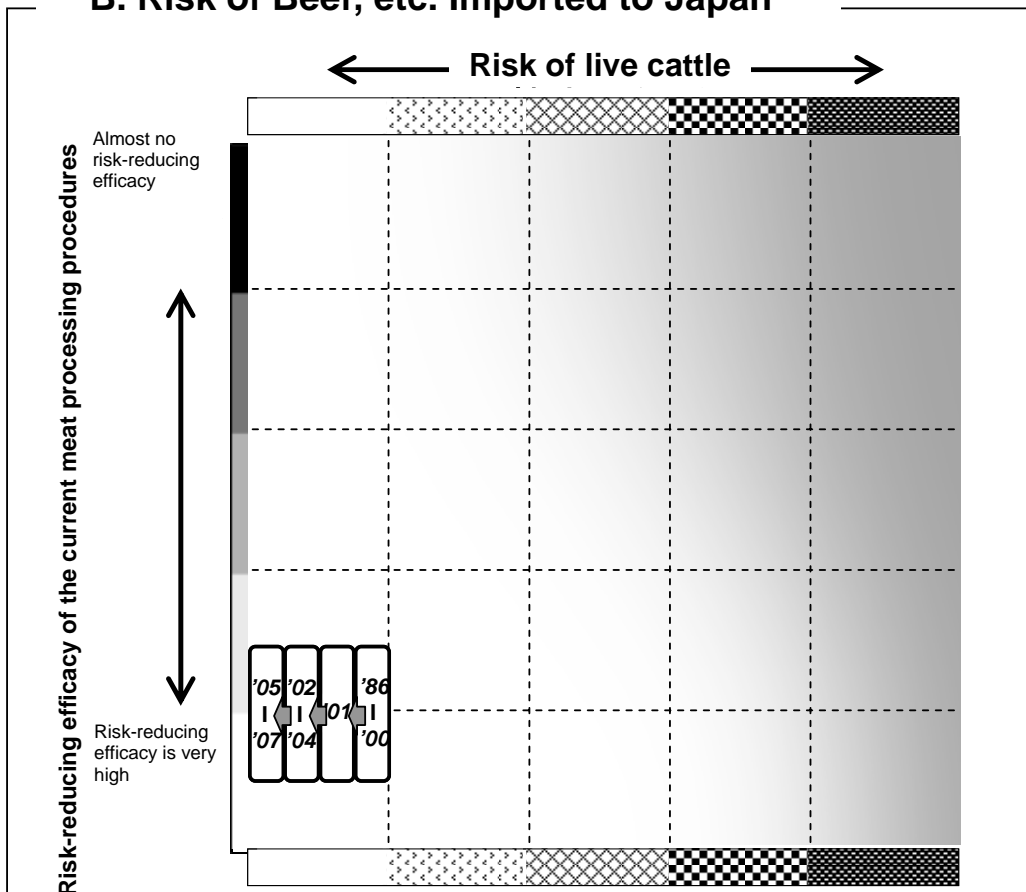
Judging from those presented above, the potential risk of BSE exposure/propagation in Chile is considered negligible, and the risk-reducing efficacy at the meat processing lines was assumed as "extremely effective" to "highly effective." Therefore, the risk of BSE prion contamination in beef and beef-offal imported from Chile is considered to be negligible.

<Reference: Chile>

A. Risk of Live Cattle



B. Risk of Beef, etc. Imported to Japan



Periods show the birth cohort years (birth years of cattle)

¹ EFSA, Working Group Report on the Assessment of the Geographical BSE-Risk (GBR) of CHILE 2005