TRANMISSIBLE SPONGIFORM ENCEPHALOPATHIES FREEDOM ASSURANCE PROGRAM

2018-19 REPORT

Contents

INTRODUCTION

There are a number of transmissible spongiform encephalopathies (TSEs) that affect people and animals. Of most interest to Australia's livestock industries are bovine spongiform encephalopathy (BSE) of cattle and scrapie of sheep.

BSE has never been recorded in Australia. Scrapie has occurred once, in imported sheep on a single property in 1952. It was promptly eradicated. Two cases of feline spongiform encephalopathy have been diagnosed in imported animals in Australian zoos in 1992 (cheetah) and 2002 (Asiatic golden cat). In both instances, effective response measures were undertaken.

Australia's livestock continue to remain free from TSEs. National and international risk assessments have concluded that Australian cattle do not present a BSE risk. However, Australia's status can only be assured if we continue to apply vigorous preventive measures complemented by an ongoing surveillance program meeting international standards. These processes need to be well coordinated, nationally uniform, transparent and auditable in order to maintain our trade access. The TSE Freedom Assurance Program (TSEFAP) was formed to integrate all TSE measures into one national program with clear and nationally integrated operational components and a transparent funding framework.

At the 2003 FMD/BSE Policy Forum it was agreed that a national TSE Freedom Assurance Program be developed with the following operational components:

1. Active TSE surveillance (the current NTSESP);
2. Ruminant feeding restrictions, including audit, feed sampling and testing;
3. Imported ruminant surveillance, including buy-back schemes for certain imported cattle;
4. Surveillance and management of designated imported zoo animals;
5. Communications, including the production of advisory material for industry, etc.;
6. Research and development, including validation, adoption and technology transfer of diagnostic tests.

In January 2004, TSEFAP was instigated by Animal Health Australia (AHA). Since then, TSEFAP has become an integral part of AHA's work program peaking with the World Organisation for Animal Health (OIE) deciding in 2006 to rate Australia as BSE Free and again in 2007 to rate Australia's BSE risk as 'Negligible'. The review of the TSEFAP in 2006 showed that all objectives of the TSEFAP had been met.

TSEFAP is independently reviewed at the end of each Business Plan, with the last one carried out by Herd Health Pty Ltd. They found that stakeholders consider the TSEFAP to be a well-managed and positively received program, which is continuing to achieve its objectives. Recommendations from the review were implemented in late 2019.

The TSEFAP is in its fourth Business plan and covers the period from July 2018 to June 2023. It provides the framework to meet the identified requirements for a nationally integrated approach to animal TSE risk-reduction measures in Australia.

This report aims to provide information on the last 12 months (July 2018 to June 2019) of activity undertaken within the TSEFAP.

PROGRAM AIM

TSEFAP will enhance market confidence that Australian animals and animal products are free from TSEs through the structured and nationally integrated management of animal-related TSE activities.

PROGRAM OBJECTIVES

1. Maintain Australia's freedom from BSE and scrapie and the highest level of international rating
2. To carry out sufficient surveillance to meet international requirements and assure trading partners, markets and consumers that Australian animals and animal products are free of TSEs and to ensure the early detection of a TSE (should it occur).
3. To demonstrate that no restricted animal material is fed to ruminants.
4. To manage the risks posed by animals imported from countries that have had native-born cases of TSE.
5. To provide a forum to involve all stakeholders in addressing animal-related TSE issues.

STAKEHOLDERS

The following organisations are considered to be the major stakeholders in this project and are involved in the development of the Business Plan. These stakeholders will also be required to have some involvement with the operations of the TSEFAP.

- Australian Government Department of Agriculture
- Food Standards Australia and New Zealand (FSANZ)
- Australian Commonwealth Scientific & Industrial Research Organisation (CSIRO)
- Department of Primary Industries, NSW
- Department of Agriculture & Fisheries, QLD
- Department of Primary Industry & Resources, NT
- Department of Primary Industries & Regional Development, WA
- Primary Industries and Regions, SA
- Department of Economic Development, Jobs, Transport and Resources, VIC
- Department of Primary Industries, Parks, Water & Environment, TAS
- Territory and Municipal Services, ACT
- SAFEMEAT
- Cattle Council of Australia (CCA)
- Australian Lot Feeders' Association (ALFA)
- Australian Dairy Farmers (ADF)
- Sheep Producers Australia (SPA)
- WoolProducers Australia (WPA)
- Goat Industry Council of Australia (GICA)
- Australian Meat Industry Council (AMIC)
- Australian Meat Processor Corporation (AMPC)
- Australian Renderers' Association (ARA)

Stock Feed Manufacturers' Council of Australia (SFMCA)

ASSESSMENT AGAINST DELIVERABLES

NATIONAL TSE SURVEILLANCE PROJECT

The aim of the NTSESP is to demonstrate Australia's ongoing freedom for BSE and classical scrapie through an integrated national program. It aims to achieve this by:

1. Maintaining a TSE surveillance system that is consistent with the OIE Terrestrial Animal Health Code and assures all countries which import cattle and sheep commodities that Australia remains free of these diseases
2. Ensuring the early detection of TSEs should they occur in Australia's livestock so that an appropriate, early response can be mounted under AUSVETPLAN to protect the health of Australia's people and livestock
3. Reviewing the needs and priorities of TSE surveillance and advising Animal Health Australia and Animal Health Committee

OIE Consistent Surveillance System

BSE

The OIE requires that a country must meet a points target, which is based on the adult cattle population and the risk category that the OIE recognises the country as being. Australia is a country assessed by the OIE as BSE *Negligible Risk* and therefore should implement OIE Type B surveillance. The application of OIE Type B surveillance is designed to allow the detection of at least one BSE case per 50,000 in the adult cattle population at a confidence level of 95%. Australia's target is to achieve a minimum of 150,000 surveillance points during a seven-year moving window. Australia should also meet OIE recommendations to investigate all clinically consistent cattle regardless of the number of points accumulated and ensure that cattle from the fallen and casualty slaughter subpopulations are also tested.

Table 1 below is used to determine the OIE point values of each BSE surveillance sample collected. Points are assigned to each animal's sample according to the animal's age and cattle subpopulation from which it was collected. The points are determined by the relative likelihoods of expressing BSE by age and sub-population, according to scientific knowledge of the disease. The OIE recommends that samples should be collected from at least three of the four subpopulations, but that ages and sub-populations sampled should reflect the demographics of the cattle herd.

The total points for samples collected may be accumulated over a maximum of seven consecutive years to achieve the target number of points determined in Table 1. Surveillance points remain valid for seven years (the 95th percentile of the incubation period).

TABLE 1: SURVEILLANCE POINT VALUES FOR SAMPLES COLLECTED BY SUBPOPULATION AND AGE

Routine slaughter	Fallen stock	Casualty slaughter	Clinically consistent
Age ≥ 2 years and < 4 years (young adult)			
0.1	0.2	0.4	260
Age ≥ 4 years and < 7 years (middle adult)			
0.2	0.9	1.6	750
Age ≥ 7 years and < 9 years (older adult)			
0.1	0.4	0.7	220
Age ≥ 9 years (aged)			
0.0	0.1	0.2	45

The NTSESP for the period 1 July 2018 to 30 June 2019 has collected and tested 185,669 points from cattle that are clinically consistent with BSE, fallen and injured cattle. All samples were found to be negative for BSE.

Table 2 provides a summary of points collected and includes samples collected by Australian Government Department of Agriculture, exported from National Animal Health Information System (NAHIS) database on 30/11/2019.

TABLE 2: NUMBER OF SAMPLES TESTED FOR BSE (AND THEIR POINTS) DURING 2018-19.

Jurisdiction	No. examined	No. of points	No. positive
NSW	177	56,932.8	0
NT	18	7,060.8	0
Qld	141	50,894.5	0
SA	38	10,804.8	0
Tas	17	1937.1	0
Vic	140	44,129.1	0
WA	27	13,910.4	0
Australia	558	185,669.5	**0**

Scrapie

The NTSESP scrapie sampling design is consistent with meeting the OIE's Terrestrial Animal Health Code on scrapie surveillance. It was previously based on detecting scrapie with 99% confidence if it comprised 1% of neurological cases. It was assumed that there are about 80 million sheep in Australia and that 50 million of these would be over 18 months of age. Thus, the reference population of interest comprised the 5,000 expected neurological cases from this group. This resulted in a recommendation to examine a minimum of 438 eligible neurological cases each year, assuming perfect sensitivity and specificity of the diagnostic system.

It is further assumed that neurological cases in sheep are uniformly distributed throughout Australia. The sampling fraction was expected to be the same for each State and is applied to each State's sheep population. While scrapie can occur in both sheep and goats, the NTSESP only applies to sheep. Scrapie in goats would only be seen in Australia as a 'spill-over infection' from sheep.

The NTSESP for the period 1 July 2018 to 30 June 2019 has collected and tested 516 samples from sheep that are clinically consistent or injured and fallen sheep. All samples were found to be negative for classical scrapie. Table 3 provides a summary of samples collected, tested and entered into the NAHIS database and includes Department of Agriculture samples (exported from NAHIS database 30/11/2019).

TABLE 3: THE NUMBER OF CLINICALLY CONSISTENT SHEEP COLLECTED AND TESTED FOR SCRAPIE FOR 2018-19.

Jurisdiction	No. examined	No. positive for classical scrapie
NSW	128	0
NT	0	0
Qld	29	0
SA	41	0
Tas	9	0
Vic	137	0
WA	172	0
Australia	516	**0**

RUMINANT FEED BAN COMPLIANCE SCHEME

The aim of the RFBCS is to enhance market confidence that Australian animals and animal products are free from TSEs by demonstrating that no restricted animal material is fed to ruminants. This is achieved by:

1. Coordinating a risk-based compliance inspection/audit program that targets all sectors in the livestock feed chain
2. Ensuring quarantine measures prevent the entry of the BSE agent
3. Complementing official regulatory and inspection/audit programs with quality management and assurance measures implemented by the ruminant livestock and stockfeed manufacturing industries
4. Creating awareness and developing the necessary competencies and capacity regarding legislative rules on animal feed and TSEs through education and training programs
5. Collating and reporting these activities at a national level.

Every (financial) year each state undertakes a risk based inspection program. At the same time industry undertakes audits of their constituents against standards that reflect the prohibition of feeding of restricted animal material to ruminants. The results of the inspections and audits are compiled into an annual activity report and provided to SAFEMEAT and the Animal Health Committee (AHC). The annual return for the 2018-19 financial year can be found in tables 4 to 7.

TABLE 4: JURISDICTIONAL RFB INSPECTIONS (2018-19)

Jurisdictional Inspections								
	Renderers	RAM only (monogastric) feed manufacturers	Only no RAM feed manufacturers	Mixed feed manufacturers Single lines	Mixed feed manufacturers Separate lines	Retailers	End-users / Farmers	**TOTAL**
Number requiring inspection / 12 months	5	24	104	24	9	156	159	**481**
Number inspected	6	22	104	24	8	121	169	**454**
Number CARs issued in current FY –Critical nonconformities (A)	0	0	0	3	0	0	2	**5**
Number CARs issued in current FY –Major nonconformities (B)	0	0	0	1	0	25	3	**29**
Number CARs finalised of those issued in current FY (C)	0	0	0	4	0	25	3	**32**
Number of CARs carried forward from last report (D)	0	0	0	0	0	0	1	**1**
Number of CARs carried forward from last report and finalised since last report-(E)	0	0	0	0	0	0	1	**1**
Number of CARs to be carried forward to next FY (F)	0	0	0	0	0	2	2	**4**
Number of feed samples tested	0	0	10	26	7	8	7	**58**
Number of feed samples negative for RAM @ 30/06/19	0	0	10	22	7	8	7	**54**
Number of prosecutions	0	0	0	0	0	0	0	**0**

NB: Number carried forward from this financial year plus number carried forward from last financial year should equal the total number to be carried forward to next financial year i.e. (A+B-C) +(D-E) = F

TABLE 5: END-USER GOVERNMENT INSPECTIONS 2018-19

End-users Inspected									
	NSW	NT	QLD	SA	TAS	VIC	WA	ACT	TOTAL
Cattle- Feedlot	0	0	3	0	0	0	3	0	6
Cattle – Grass fed	0	3	9	0	0	0	0	0	12
Sheep or goats	0	0	2	3	0	1	0	0	6
Mixed (ruminants with pigs and/or poultry)	39	0	17	11	9	38	12	0	126
Other ruminants (e.g. deer, buffalo, camels)	0	0	3	0	0	0	0	0	3
Pigs	14	0	0	2	0	0	0	0	16
Poultry	0	0	0	0	0	0	0	0	0
Total	53	3	34	16	9	39	15	0	169
Number of inspections required to meet Uniform Guidelines	50	1	33	16	5	37	15	0	157

TABLE 6: FEED SAMPLES COLLECTED AND TESTED FOR RAM DURING 2018-19

Number of Feed Samples Collected and Tested for RAM				
	Number of Samples Required	Number of Samples Tested	Number of Positive Results for Ruminant Feed	Comments
Queensland	16	20	3	All three detections were of ruminant feed produced by Mixed feed-SINGLE line manufacturers.
New South Wales	17	5	0	Reasons for shortfall identified and procedure changed to ensure target met in 2019-20
Australian Capital Territory	0	0	0	
Victoria	18	20	0	
Tasmania	1	1	0	
South Australia	6	6	0	
Western Australia	6	6	1	Manufacturer that returned a positive feed sample is no longer operating.
Northern Territory	1	0	0	
TOTAL	**65**	**58**	**1**	

TABLE 7: INDUSTRY FOOD SAFETY AND QA THIRD PARTY AUDITS (2018-19)

		Number of program participants	Number inspected during 2018-19	Number of CARs issued – Critical nonconformities	Number of CARs referred to Jurisdictions	Number of CARs finalised 30 June 2019
LPA Food Safety Program		197,855[1]	4,684[2]	0	0	0
LPA Quality Assurance Program		157[3]	142	0	0	0
National Feedlot Accreditation Scheme		379[4]	387	0	0	0
Dairy Quality Assurance	**QLD**	356	0[5]	0	0	0
	NSW	571	368	0	0	0
	VIC	3,510	1,400	0	0	0
	TAS	404	404	0	0	0
	SA	238	238	0	0	0
	WA	150	0	0	0	0
	Total Dairy	5,229	2,410	0	0	0
Feed Safe		112	98	22	0	22[6]
Australian Rendering Standard		72[7]	72	0	0	0
TOTAL		203,804	7,793	**22**	**0**	**22**

Jurisdictional inspection numbers were above their target (Tables 4-6) except for NSW for stock feed sampling and retailer inspections, due to a systems error that has since been corrected. Most categories have generally had good levels of compliance with the Ruminant Feed Ban (RFB) except for stockfeed retailers. However, most issues detected tend to be minor (e.g. labelling) and are corrected. Animal Health Australia and some of the jurisdictions will continue to target stockfeed retailers with communications about their RFB requirements in the coming year. They are a difficult stakeholder group to communicate with as there is no peak industry body, and there is high turnover in staff and businesses.

[1] LPA-accredited PICs @ 4/9/19
[2] Includes audits conducted as part of random audit program plus NRS (including R Status)
[3] Distinct Number @ 30/6/19 (producers accredited in Cattlecare and/or Flockcare)
[4] Accredited Feedlots (Category A & P) @ 30/6/19.
[5] From a food safety aspect, Safe Food gets electronic data via a Central Information Management System (CIMS) for on farm performance from the respective processor (factory) that receives the raw milk. All farms, with the exception of a small number, are party to these arrangements. Safe Food Officers review 'Alert Reports' that are generated from analysis of performance data in CIMS and conduct farm visits if required. In addition, all farms are engaged by the processor's Farm Services Officers who would report any biosecurity issues directly to Biosecurity Queensland
[6] 3 Moderate CARs, 19 minor, all closed out.
[7] Number of participants @ 30/6/19

There were nearly 7,800 industry quality assurance audits completed nationally with only 22 CARs issued for RFB issues (Table 7). These were mostly minor and all have since been resolved.

Importation of stockfeeds, stockfeed ingredients and stockfeed additives

The Australian Government Department of Agriculture undertakes TSE risk assessments on import permit applications for stock feeds, stock feed ingredients (including fishmeal) and stockfeed additives. Assessments are conducted in accordance with the policy *"Importation of stockfeed and stockfeed ingredients – Finalised risk management measures for transmissible spongiform encephalopathies, September 2015"* (TSE policy).

There are two areas of the department responsible for these assessments - the Animal and Biological Imports Branch (ABIB) and Plant Import Operations (PIO). ABIB and PIO work collaboratively on the biosecurity risk assessment for animal disease risks, including prion diseases.

Permit issuing areas will seek case specific advice from Animal Biosecurity and Plant Biosecurity branches where a specific risk assessment falls outside the scope of the TSE policy.

All import permit applications for stock feeds, stock feed ingredients and stock feed additives must be accompanied by a completed 'Production Questionnaire for Animal Feed'. Applications not accompanied by a completed questionnaire will not be processed.

In assessing import permit applications for these commodities the permit issuing areas take into consideration all relevant information including:

- Sourcing of ingredients (e.g. animal, plant, fermentation, synthetic)
- Country of origin of the manufacturing facility
- Manufacturing processes
- Manufacturer's quality systems, and
- Transport and storage of ingredients/final products.

Consignments of stockfeed, stockfeed ingredients and stockfeed additives may be sampled and tested for mammalian and avian DNA before being released from biosecurity control.

Consignments of stock feed are subjected to analytical testing for the presence of ruminant-derived materials in any of the following cases:

a) The product is transported in bulk and the cleanliness of containers or ships holds before export cannot be guaranteed to the satisfaction of officers from the department through, for example, a pre-approved arrangement;
OR
b) The product is transported in bulk but at inspection on arrival the cleanliness of containers/holds is not confirmed and there is a risk of contamination with ruminant derived materials;
OR
c) The product is packaged in packages that are not clean and new;
OR
d) At inspection upon arrival the integrity of packaging is found to be deficient.

Consignments of stockfeed packed in bags must be accompanied by a declaration from the manufacturer confirming that the product is packaged in clean, new packaging. This provides additional assurance that the risk of cross contamination is acceptably low.

The following tables contain information on the permit-related activities of ABIB and PIO:

TABLE 8. ABIB STOCKFEED PERMIT RELATED ACTIVITIES (1 JULY 2017 – 30 JUNE 2019)

Requirement	2018/2019	2017/2018
Permits requiring mandatory testing on arrival	**2**	**2**
Permits for non-avian meat and bone meat from NZ	**0**	**0**
Permits for dairy based stockfeed from NZ	**3**	**7**
Permits for fishmeal from NZ	**0**	**1**
Permits for fishmeal from countries other than NZ	**38**	**63**
Permits requiring DNA testing on arrival if contamination or deficient packaging found.	**40**	**64**
Number of facilities audited by ABIB (or approved 3rd party) under these guidelines	**0**	**0**

TABLE 9. PIO PLANT BASED STOCKFEED RELATED ACTIVITIES (1 JULY 2017 – 30 JUNE 2019)

Requirement	2018/2019	2017/2018
Permits requiring DNA testing on arrival if contamination or deficient packaging is identified	**96**	**193**
Permits requiring mandatory DNA testing on arrival	**0**	**0**
Number of facilities inspected by PIO	**13**	**0**
Number of ruminant DNA tests performed on plant based products	**0**	**0**
Number of positive ruminant DNA tests	**0**	**0**

IMPORTED ANIMAL QUARANTINE AND SURVEILLANCE SCHEME

The Imported Animal Quarantine and Surveillance Scheme (IAQSS) aims to address the risk posed by animals imported from countries with native-born cases of BSE. Cattle imported from countries which have recorded cases of BSE in native-born cattle, may have been exposed to the agent that causes BSE before arriving in Australia. These animals that remain alive are prohibited from entering the human or animal food chains in Australia.

National and international risk assessments have been conducted on the risk that the BSE agent infected Australian cattle, with favourable findings. These assessments included significant scrutiny of the risks posed by cattle imported from countries that subsequently reported native-born cases of BSE.

Every (financial) year each state or territory must undertake surveillance of those cattle identified as being "imported". The results of these inspections are compiled into an annual activity report and provided to SAFEMEAT and the AHC.

Surveillance was undertaken by the jurisdictions as part of the IAQSS for the 2018-19 period.

After the deaths of three animals in 2018-19 there remains nine cattle from the USA (three in NT, one in Queensland, one in NSW and four in SA). All imported cattle from Japan, Canada and the EU are now deceased.

COMMUNICATIONS

The communications strategy is a support component of the program and also addresses one of the program objectives of communicating '*Australia's favourable status for TSEs consistently and efficiently*'. The strategy is collaborative in nature and seeks to provide a consolidated, credible platform for all stakeholders to communicate the range of issues associated with the assurance program. The strategy seeks to ensure consistency in terms of the message and its delivery.

The Animal Health Australia website provides a dedicated information centre provided via will provide the basis for a range of tailored initiatives. During the 2018-19 financial year the TSEFAP webpages were updated.

The Ruminant Feed Ban (RFB) brochures for manufacturers, retailers and end-users (explains each sectors responsibilities in relation to RFB legislation) were distributed by industry and government stakeholders. The *RFB Livestock Producers* brochure is linked to in the electronic cattle and sheep National Vendor Declarations (eNVD) so all producers using this system are reminded of their obligations under the RFB.

The *Bucks for Brains* brochure for TSE surveillance is distributed to producers and veterinarians by state coordinators, to help promote the NTSESP and the incentives available to help cover the costs of the testing of animals that meet the criteria for the project.

PROGRAM MANAGEMENT

The TSEFAP is a project based on cooperation and shared commitment to deliver the project objectives, with Animal Health Australia as Project Manager. Sub-projects undertaken, as part of the TSEFAP, will only be progressed with the agreement of the member Parties.

The last financial year saw the National Technical Committee (NTC) meet once face to face and once by teleconference, and the National Advisory Committee (NAC) meet via teleconference. The NTC worked on a number of issues out of session over the course of the year. All project management plans and national guidelines are reviewed annually by the NTC.

The TSEFAP was externally reviewed at the end of the previous five-year Business Plan (conducted by Herd Health Pty Ltd). The NAC considered the report at their meeting in August 2018. Recommendations from the review were then used to help develop the new five-year (2018-23) Business Plan for TSEFAP. These include considering up to 20% decrease in the level of surveillance for BSE and scrapie, as Australia far exceeds the OIE requirement for surveillance. This will in turn lead to reduced costs for the program.

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