



Food Act 2008 (WA) Fact Sheet 19

Australian Standard Alternative Equivalent Procedure: Minimal risk inspection for tuberculosis in cattle and buffalo inspection

Version 2 – March 2019

Rationale and description of the alternative technique

The Australian beef industry was declared free of bovine tuberculosis in 1997, though the last case in any species was recorded in a buffalo in the Northern Territory in 2002 (AHA 2016).

Since that achievement surveillance of grossly detectable granulomas at post-mortem inspection (DoA 2009) has been central to validate eradication and ongoing freedom (Pearse et al., 2009). Bovine tuberculosis is now managed as an exotic disease (DoA 2009).

A recently published report using this granuloma surveillance data demonstrated a very high level of confidence that Australia’s cattle herd is truly free from bovine TB. Meat inspection for granulomas in the head and thorax of slaughtered cattle underpins this result by providing surveillance data on an extremely large number of animals each year (Sergeant *et al.*, 2017).

Current and approved alternative post-mortem inspection procedures for Schedule 2 AS4696:2007 for *bovine tuberculosis* in Cattle and Buffalo

In this Schedule:

buffalo means any bubaline greater than 50 kg dressed weight; and
cattle means any bovine greater than 50 kg dressed weight; and

Table 1. Procedure for post-mortem inspection of carcasses

	Cattle and buffalo						
All carcasses	Observe internal and external surfaces of carcass (including tail, musculature, exposed bone, joints, serous membranes).						
Lymph nodes							
Superficial inguinal	Observe See Note #1						
Internal iliac	Observe See Note #1						

Equivalent procedures

Note #1 Cattle and buffalo – Palpate the superficial inguinal and internal iliac lymph nodes in animals subject to conditional slaughter or emergency slaughter and in bulls and mature

females.

Table 2. Procedure for post-mortem inspection of viscera

	Cattle and buffalo						
Lymph nodes							
Bronchial and mediastinal	Observe See Note #1						
Portal	Palpate						
Mesenteric	Observe						
Lungs	Palpate, except in lambs and pigs where observe. Additionally, bronchi opened, and internal surfaces observed when saved for human consumption.						

Equivalent procedures

Note #1 Cattle and buffalo – Incise bronchial and mediastinal lymph nodes in animals subject to conditional slaughter or emergency slaughter.

Table 3. Procedure for post-mortem inspection of heads

	Cattle and buffalo (Note #1)						
All carcasses	Observe external surfaces. For cattle, buffalo and horses observe the oral, buccal and nasal cavities.						
Lymph nodes							
Submaxillary	Observe See Note #2						
Parotid	Observe See Note #2						
Retro-pharyngeal	Observe See Note #2						
Cervical	—						

Equivalent procedures

Note #1 All animals – Other than cattle, buffalo, horses and animals subject to conditional slaughter or emergency slaughter, an equivalent procedure is to remove and discard the head without inspection where tissues, including tongue, are not recovered for human consumption.

Note #2 Cattle & buffalo – Incise submaxillary, parotid and retropharyngeal lymph nodes in animals subject to conditional slaughter or emergency slaughter.

Table 4. Additional post-mortem inspection procedures when gross abnormalities and specific diseases are detected or suspected

Disease	Inspection procedure
Tuberculosis in cattle and buffalo	Incise atlantal, prescapular, prepectoral, suprasternal, superficial inguinal, iliacs, ischiatic, precrural, portal and mesenteric lymph nodes. Incise popliteal lymph node where necessary to determine the extent of infection. All viscera, serous membranes, spinal cord and severed vertebral column inspected by observation, palpation and, where necessary, incision. Udders incised and observed.

Background and supporting information

Because of eradication of TB, from 2011 export-licensed works implemented risk-based inspection procedures based on visual and manual examination of lymph nodes, with incision only required in exceptional circumstances or where abnormalities are detected.

Detailed work instructions were provided as part of the On-Plant Management System accordingly (DoA 2013).

In terms of ongoing surveillance for bovine tuberculosis, the assessment published by Sergeant et al., (2017) supports the use of observation rather than incision as being sensitive enough to pick up bovine TB if it was to re-establish itself in Australia.

Adoption of routine observation avoids potential for microbial cross-contamination to edible tissues arising from incising and palpating lymph nodes (Arthur et al., 2008; Li et al., 2015; Bailey et al., 2017).

Implementation of these minimal risk post-mortem inspection procedures have been accepted by overseas customers of Australian beef.

Useful Resources

Animal Health Australia (2016) Animal Health in Australia ISBN 978-1-921958-27-4. p. 65.

Anonymous (2007) Hygienic Production and Transportation of Meat and Meat Products for Human Consumption. Food Regulation Standing Committee Technical Report Series 3. AS 4696:2007. Standards Australia.

DoA (2009) BOVINE TUBERCULOSIS CASE RESPONSE MANUAL MANAGING AN INCIDENT OF BOVINE TUBERCULOSIS Edition 2. Department of Agriculture, Canberra

DoA (2013) On-Plant Management System Work Instruction I 6.03.02 Post-mortem Inspection – Cattle – Buffalo. Food Division – Export Meat. Department of Agriculture, Canberra.

Pearse, B., Langbridge, J., Cobbold, R., & Glanville, R. (2009). Current activities add little to food safety. *Fleischwirtschaft International*, 24(1), 46-50.

Pointon, A.M., Hamilton, D.H and Kiermeier, A. (2018) Assessment of the post-mortem inspection of beef, sheep, goats and pigs in Australia: Approach and qualitative risk-based results. *Food Control* Volume 90, Pages 222-232 August 2018, <https://doi.org/10.1016/j.foodcont.2018.02.037> (including Supplementary Material)

Sergeant, E. S. G., Happold, J. and Langstaff, I. (2017) Evaluation of Australian surveillance for freedom from bovine tuberculosis. *Australian Veterinary Journal*, **95**:12, 474-479.

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The information contained in this Fact Sheet was provided to the Australian Meat Regulators Group in support of this change to the meat inspection procedures content in the Australian Standard for the Hygienic Production and Transportation of Meat & Meat Products for Human Consumption (AS 4696:2007).

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