



# Export Meat Operational Reference

## 3.9a *Cysticercus bovis* risk management



### Purpose

This operational reference document describes the verification, notification, and inspection procedures meat establishments must undertake to mitigate the risk of *Cysticercus bovis* entering the food chain and posing a threat to public health.

It is supported by the overarching [Approved arrangement guidelines – Meat](#) and the [Export meat operational guideline: Sourcing livestock and wild game](#).

### Scope

This operational reference applies to all Tier 1 and Tier 2 export-registered meat establishments sourcing cattle and buffalo for slaughter.

### Legislative basis

Under the *Export Control Act 2020* and its subordinate legislation, export-registered meat establishments are bound to comply with:

- their approved arrangement (including all sourcing livestock standard operating procedures).
- the requirements of the Australian standard for the hygienic production of meat and meat products for human consumption (AS4696, the Australian Meat Standard).
- importing country requirements.

Under constitutional arrangements, occupiers must also comply with state and territory regulations for stock identification and control.

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## Background

*Cysticercus bovis* (*C. bovis*) also known as beef measles, is a zoonotic disease that poses a risk to public health. It is a disease of parasitic origin, caused by the larval stage (*C. bovis*) of the tapeworm *Taenia saginata*. The hexacanth embryo or oncosphere migrate into the muscle tissue where it then develops into infective cysticerci (cysts). Humans become infected by ingesting raw or undercooked meat infected with the cysts.

Cattle can become infected by ingesting *Taenia saginata* eggs or gravid proglottids via infected drinking water or grazing on pastures irrigated with human effluent contaminated water. Processed infected cattle can also be partially or fully condemned, resulting in financial loss.

Information on the 2023 revision of the Australian Meat Standard by Standards Australia can be found in the [Export meat operational policy: 17.0 Transition arrangements for the implementation of the new Australian standard for the hygienic production and transportation of meat and meat products for human consumption \(AS4696:2023\)](#). One of the post mortem inspection procedure changes made in the 2023 revised standard was the removal of the internal and external masseter muscle incisions of cattle. Additional post-mortem inspection procedures including the masseter incisions, are still required in cattle where exposure to *C. bovis* infection may have occurred.

## *Cysticercus bovis* risk management

Integrity systems company (ISC) and the Livestock production assurance (LPA) program introduced a property identification code (PIC) and an animal device-based warning system to manage the risk associated with the use of recycled water; refer to Risk Management of *Cysticercus bovis* in LPA and NLIS in section: [Related material](#).

This risk management system will ensure that:

- the correct risk-based post-mortem inspection procedures are applied to the implicated carcase(s) and carcase parts (as outlined in the Australian Meat Standard)
- wholesome meat and meat products enter the food chain and do not pose a risk to human health.

If cattle are identified as being exposed to inadequately treated recycled water, those animals must be identified and declared as being exposed to *C. bovis* on outgoing national vendor declarations (NVDs). Producers verified as using inadequately treated recycled water will have CBP status applied to their PIC and CBA status applied to all cattle on the PIC via the National Livestock Identification System (NLIS), *C. bovis* status alerts are outlined in Table 1, below.

**Table 1: NLIS status alerts for *C. bovis* risk management.**

Status code	PIC or device status	
CBP	PIC based	<p>Applied by the state or territory/ISC when PICs using recycled water from sewage treatment plant (confirmed via LPA audit). May be applied following positive diagnostic testing and subsequent, supply chain investigation and property audit.</p> <p>Removed ONLY when:</p> <ul style="list-style-type: none"> <li>LPA auditor verifies that it has been two years since inadequately treated recycled water use has CEASED on the PIC <b>or</b>,</li> <li>the state or territory official removes the status following a risk assessment.</li> </ul>
CBA	Device based	<p>Applied to ALL cattle devices on a CBP PIC.</p> <p>Remains for the lifetime of the animal.</p> <p>Notifies processors of risk.</p>

<b>CBW</b>	PIC based	'Warning' status. Applied if CBA cattle reside on PIC when the CBP status has been removed. Will remain until all CBA devices are moved off the PIC. Applied if CBA cattle are transferred onto a saleyard or feedlot PIC.
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Producers, saleyards and feedlots who purchase cattle with a CBA device status will have a CBW status applied to their PIC. This status is a warning status providing an alert that CBA device status cattle reside on the PIC. Once all CBA device status cattle have been removed off the PIC, the CBW status will be automatically removed.

### Lost NLIS identification devices

Cattle that lose their NLIS identification tags will assume the status of the accompanying lot of animals; which is to be verified by the processor using NVDs. For further information refer to the section on statuses in the [Terms of use for the National Livestock identification system database](#) document.

### Post-mortem inspection and disposition procedures for at-risk animals

Australian standard for the hygienic production of meat and meat products for human consumption (AS4696) outlines the post-mortem inspection procedures that must be undertaken on carcasses and carcase parts of at-risk animals. These animals are identified by the following:

- animals with device-based CBA statuses.
- animals originating from PICs with CBP status.
- where reasonable evidence of infestation (for example, suspect cysts are observed within incised muscles during post-mortem inspection).

In addition to the observation of all muscle surfaces, the procedure for at risk carcasses and carcase parts must involve a full organoleptic post-mortem inspection and incision of the heart, masseter muscles, tongue, and diaphragm (after removal of the serous membranes). The dispositions for at risk carcasses are outlined in Table 2, below.

All animals originating from CBP PICs or those from a CBW PIC with CBA status, must have a disposition of conditional slaughter applied and the post-mortem inspection verified by the OPV. *C. bovis* is a notifiable disease in all state and territory jurisdictions. If suspected, relevant diagnostic samples must be obtained for laboratory testing and confirmation.

**Table 2: Post-mortem disposition for at risk carcasses and carcase parts**

<b>Generalised infestation</b>	<b>The carcase and all its carcase parts condemned.</b>
<b>Light infestation (a small number of degenerated cysticerci)</b>	Affected viscera must be condemned, and cysts and surrounding tissue trimmed from the carcasses and condemned. The remainder of the carcase and parts passed conditionally fit-for-human consumption subject to treatment by freezing (no warmer than -12°C deep muscle temperature for not less than 10 days in carcasses and 20 days in boned meat).

## Related material

The following related material is available on the departments website:

- Webpage: [ELMER 3 – Electronic legislation, manuals and essential references](#)
- Webpage: [Approved arrangement guidelines – Meat](#)
- Webpage: [Export Meat Operational Guideline: 5.2 Export Meat Systems Audit Program \(EMSAP\)](#)
- Webpage: [Export Meat Operational Guideline: 9.2 Meat Establishment Verification System \(MEVS\)- Establishments.](#)
- Webpage: [Export Meat Operational Guideline: 3.4 Post-mortem inspection](#)
- Webpage: [Export meat operational policy: 17.0 Transition arrangements for the implementation of the new Australian standard for the hygienic production and transportation of meat and meat products for human consumption \(AS4696:2023\).](#)
- Webpage: [Export Meat Operational Guideline: 3.9 Sourcing of livestock and wild game](#)

The following related material is available on the internet.

- Webpage: [Export Control Act 2020](#)
- Webpage: [Export Control \(Meat and Meat Products\) Rules 2021](#)
- Webpage: [Manual of importing country requirements](#)
- Australian standard for the hygienic production and transportation of meat and meat products for human consumption (available for purchase from [SAI global](#))

The following material is available on the [integrity systems](#) or Australian Meat Processor Corporation websites:

- Webpage: [NLIS | Australia's system for identification and traceability of livestock](#)
- Webpage: [NLIS \(cattle\) traceability standards](#)
- Webpage: [Terms of use for the National Livestock identification system database.](#)
- Webpage: [C. bovis risk management plan and verification arrangements](#)
- Webpage: [Risk Management of \*Cysticercus bovis\* in LPA and NLIS](#)

## Attachment 1: Roles and responsibilities.

### The Occupier

- Maintain an up-to-date approved procedure within their approved arrangement for the risk management of *C. bovis*. Development and amendment of these procedures is a significant variation and requires departmental approval prior to implementation.
- Ensure the approved arrangement describes the procedures undertaken to adequately manage cattle from CBP or CBW PICs. These must encompass the following:
  - Identification of any relevant PIC status alerts (CBP or CPW) prior to slaughter of the animals and, this information promptly made available to the authorised officers or meat safety inspectors (Tier 1 establishments).
  - Identification of CBA individual device status alerts prior to slaughter or at the NLIS device scanning point and promptly communicating these to authorised officers, AAO's or meat safety inspectors (Tier 1 establishments) to facilitate the performance of correct post-mortem inspection procedures and application of dispositions.
  - The management of animals with lost NLIS identification devices.
  - The personnel responsible for the crucial points in this procedure where identification and communication of status alerts is crucial and the training they receive.
- Complying with the state and territory regulations and NLIS Rules.

### On-plant veterinarian

- Apply a disposition of 'conditional slaughter' to consignments with a CBP PIC.
- Verify post-mortem inspection and disposition of animals from CBP PICs or those having CBA device statuses.

Undertake Meat Establishment Verification System (MEVS) activities in accordance with procedures outlined in departmental work instructions. This includes the following activities:

- daily kill agenda reconciliation
- daily post-mortem inspection verification
- weekly verification of the establishment's PIC (ERP) checks, NVD interrogations, and kill data uploads into the NLIS database
- monthly check-the-checker verification activities involving the crucial points of this risk management procedure.

### Food safety meat assessors (FSMA) and Australian government authorised officers (AAO)

- Maintain knowledge of status alerts that require specific inspection or retention procedures to be undertaken.
- Maintain knowledge of any additional inspection procedures and dispositions for at-risk carcasses and carcase parts.
- Perform additional inspection procedures for at-risk carcasses and carcase parts and apply disposition.

### Area technical manager (ATM)

#### *Establishment ATM*

- Review and approve the establishment's approved arrangement and/or any significant variations made to it.

#### *Export Meat Systems Audit Program (EMSAP) ATM*

- Verify on-going compliance with requirements through EMSAP.

## Attachment 2: Definitions

### Australian Government Authorised Officer (AAO)

An individual employed by an export-registered abattoir or independent AAO employer, authorised by the department to undertake prescribed functions as an authorised officer under the Export Control Act and subordinate legislation.

### Approved arrangement

An approved arrangement under Chapter 5 of the *Export Control Act 2020*.

An arrangement for a kind of export operations in relation to a kind of prescribed goods approved by the Secretary.

An approved arrangement:

- documents the controls and processes to be followed when undertaking export operations in relation to prescribed goods for export
- enables the Secretary to have oversight of specific export operations.

### Extended residue program (ERP)

A national residue program that notifies of chemical residue risks or early warning statuses on properties assigned a PIC within the NLIS database.

### Integrity systems company (ISC)

Manages and delivers the Australian red meat industry's three key on-farm assurance and through-chain traceability programs, the LPA program, the LPA national vendor declaration program and the NLIS.

### Livestock Production Assurance (LPA)

The Livestock Production Assurance (LPA) program is the Australian livestock industry's on-farm assurance program covering food safety, animal welfare and biosecurity. It provides evidence of livestock history and on-farm practices when transferring livestock through the supply chain.

### Meat export verification system (MEVS)

A system of verification activities implemented at export-registered meat establishments and boning rooms to verify compliance with Australian export legislation, ensure the meat and meat products (red and game meat) are wholesome and fit-for-human consumption.

### National Livestock identification system (NLIS)

The NLIS tracks devices and associated livestock movements and also records device and PIC statuses for disease control, biosecurity, food safety, market access and other industry related purposes. NLIS is a permanent whole of life identification system that enables individual animals to be tracked from property of birth to slaughter for food safety, product integrity and market access purposes.

### National vendor declaration (NVD)

NVD is a national accountable form completed by the vendor describing details of a consignment of livestock. A European Union vendor declaration (EUVD) is a variant of the form specifically for livestock consigned for the European Union (EU) market.

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**Notifiable disease**

An animal disease, the presence or suspected presence of, that must be notified or reported (however this is expressed) under a law of the state or territory in which the disease is present or suspected of being present.

**On-Plant Veterinarian (OPV)**

A Commonwealth authorised officer (veterinarian) employed by the Department to conduct ante-mortem inspection and to provide daily supervision of post-mortem inspection and verification of the establishment's approved arrangement.

**Property identification code (PIC)**

An individual identification code issued to a property by the state or territory.

**Tier 1 establishment**

An export-registered establishment that is audited by the relevant State Regulatory Authority on behalf of the department. Tier 1 establishments have limited export market access. They do not have department authorised officers on site.

**Tier 2 export-registered establishment**

An establishment operating under the Export-Registered Australian Standard Meat Establishment (Tier 2) Scheme. Tier 2 establishments have a full-time departmental on-plant presence to ensure maintained compliance.

**Wholesome/wholesomeness**

According to the Australian Meat Standard, wholesome means that meat and meat products may be passed for human consumption on the basis that they meet all the following requirements:

- are not likely to cause food-borne disease or intoxication when properly stored, handled, and prepared for their intended use
- do not contain residues in excess of established limits
- are free of obvious contamination
- are free of defects that are generally recognised as objectionable to consumers
- have been produced and transported under adequate hygiene and temperature controls
- do not contain additives other than those permitted under the Food Standards Code
- have not been irradiated contrary to the Food Standards Code
- have not been treated with a substance contrary to a law of the Commonwealth or a law of the state or territory in which the treatment takes place.