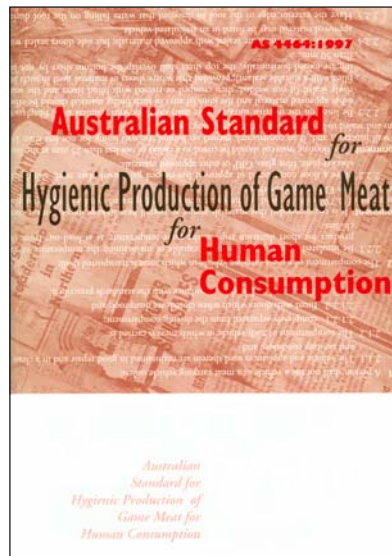


Australian Standard for Hygienic Production of Game Meat for Human Consumption SCARM Report 57



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Australian Standard
for
Australian Standard
Hygienic Production for
Hygienic Production of Game Meat
of Game Meat for
Human Consumption
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Review of Standards

To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards' users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine *The Australian Standard*, which subscribing members receive, and which gives details of new publications, new editions and of withdrawn Standards.

Suggestions for improvements to this Standard, should be addressed to:

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PREFACE

The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) comprises the Australian Federal, State and Territory, and New Zealand Ministers responsible for agriculture, soil, water and rural adjustment policy issues.

In March 1995 the Ministerial Council determined that aspects of all existing national meat industry codes relevant to human health would be mandated by amendment of legislation in all States and Territories.

This decision was given effect by appointment of a Steering Group comprising Chairmen and Chief Executives of State and Territory meat hygiene authorities, the Australian Quarantine and Inspection Service, meat industry organisations, food safety technical advisers and the Australia New Zealand Food Authority.

The Steering Group commenced a fundamental review of existing Codes of Hygienic Practice to express mandatory national standards in outcome terms. The new Australian Standards provided for the implementation of quality assurance programs consistent with the *AS/NZS ISO 9000 (1994)* series. Process control shall be achieved through the application of Hazard Analysis Critical Control Point (HACCP) methodology as defined by the Codex Alimentarius Commission and will allow flexibility in techniques and facilities provided that standards relating to wholesomeness and safety have been met.

“The responsibility for production of safe and wholesome meat should be shared by industry and the controlling authority. The use of the HACCP approach and quality assurance systems reinforces this joint responsibility. The controlling authority will supervise and audit these arrangements to ensure compliance with requirements.” (Codex Alimentarius Vol. 10 (1994))

This Standard is written in substantial compliance and consistency with *Codex Alimentarius* Volume 10. Minor technical variations reflect accepted Australian terminology or commercial industry practice, but with quality standards and performance criteria equivalent to those in the *Codex*.

Where an operator proposes a technique substantially different from those detailed in this Australian Standard the assessment of equivalence shall be determined by the ARMCANZ Meat Standards Committee. This Committee will establish the methodology for determining the equivalence of benchmarks or standards. The proposer of the alternative technique shall supply sufficient supporting information to validate the procedure to the relevant Controlling Authority who will advise the ARMCANZ Committee on Meat Industry Standards. The submission must include a HACCP plan which ensures that equivalence is maintained. Where the ARMCANZ Meat Standards Committee cannot reach agreement on the approval of an alternative technique the final decision shall be made by the Ministerial Council (ARMCANZ).

This publication has been approved on behalf of the Council of Standards Australia, as an Australian Standard. Other Standards in the series are:

Construction of Premises Processing Meat for Human Consumption;
Construction of Premises Processing Animals for Human Consumption;
Hygienic Production of Meat for Human Consumption;
Hygienic Production of Poultry Meat for Human Consumption;
Hygienic Production of Rabbit Meat for Human Consumption;
Transportation of Meat for Human Consumption.

AGRICULTURE AND RESOURCE MANAGEMENT COUNCIL OF AUSTRALIA AND NEW ZEALAND

The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) consists of the Australian Federal, State/Territory and New Zealand Ministers responsible for agriculture, soil, water (both rural and urban) and rural adjustment policy issues.

The objective of the Council is to develop integrated and sustainable agricultural and land and water management policies, strategies and practices for the benefit of the community.

The Council is supported by a permanent Standing Committee, the Standing Committee on Agriculture and Resource Management (SCARM). Membership of Standing Committee comprises relevant Departmental Heads/CEOs of Commonwealth/State/Territory and New Zealand agencies as well as representatives of the CSIRO and the Bureau of Meteorology.

1 SCOPE

This Standard applies to the production for human consumption of products derived from wild animals and birds killed in their natural environment. It contains the minimum requirements of hygiene in harvesting, transport, processing, packaging and storage, to assure a safe and wholesome product. Provision is made for small animals such as hare and game birds presented whole.

The Standard does not apply to production of products from animals or birds unable to roam free, herded or kept under supervision, nor to processing game animals into processed meat products. It does not apply to birds presented for sale eviscerated and without feathers. Generally, it does not apply to “captured game” which can have detailed ante-mortem inspection prior to slaughter. However, possum presented live are included within this Standard.

Game animals shall be processed in accordance with an approved HACCP-based program which consistently demonstrates equivalence with this Standard.

For the purpose of understanding how HACCP is implemented and audited in the Australian meat industry, ARMCANZ has produced an accompanying document, *A Guide to the Implementation and Auditing of HACCP*.

Operation under this Standard requires compliance with the relevant Codes of Practice for the Welfare of Animals. It also requires the relevant provisions of Commonwealth, State and Territory Wildlife Protection Legislation to be observed.

Whenever it appears in the contents of this Standard the word “shall” is to be interpreted as meaning mandatory. Controlling Authorities shall enforce compliance with the Standard.

This Standard applies as the *Australian Standard for Game Meat for Human Consumption*.

2 QUALITY PERFORMANCE STANDARDS

OUTCOMES REQUIRED

The application of this Standard are based on the following quality criteria:

- **microbiological safety**
- **prevention of physical contamination**
- **prevention of zoonotic disease associated with meat**
- **prevention of harmful or unacceptable chemical residues**
- **conformance with consumer image of product wholesomeness.**

2.1 Microbiological Safety

Means carrying a bacterial load consistent with a safe and wholesome product.

Refer to Appendix A

2.2 Physical Contamination

Means contamination with material presenting a risk to product safety, including material likely to carry a heavy microbiological load.

2.3 Zoonotic Disease

Means a disease or condition of animals capable of transmission from live or dead animals to humans.

2.4 Chemical Residues and Contaminants

Means residues defined from time to time by national authorities. Procedures for sampling testing and subsequent action are published in operating instructions issued by Federal and State authorities.

2.5 Product Wholesomeness

Means free from diseases and conditions which while not necessarily bearing direct risk to human health, affect consumer image of product safety.

3 DEFINITIONS

Approved	Approved by the Controlling Authority.
Approved Tag	A tag which shall be marked with the date of harvest and sufficient other information to allow the identification of the field processor and place of harvest.
Audit	A systematic and independent examination to determine whether activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.
Authorised Officer	See Inspector.
Bleeding	The severing of the large blood vessels in the region of the neck or throat to allow the free flow of blood from the carcase as soon as possible after death.
Brand	Any mark or stamp approved by the controlling authority and also includes any tag or label bearing such mark or stamp.
Captured Game	Animals normally running wild but which have been captured and presented alive at the processing establishment.
Clean	In relation to: (a) game carcasses or game meat means free from all visible contaminants including ingesta, dust, rail grease, hair (except for specified “hair-on” products approved by the controlling authority), faecal material, bile, excretions and pathological conditions; and (b) premises means surfaces of floors, walls, ceilings, equipment, appurtenances and utensils free of visible contamination, washed, sanitised and free of objectionable odours. (c) clothing means free from visible contamination.
Condemned	In relation to a game carcase or game carcase part means that the carcase or carcase part is not suitable for use for human or animal food, and requiring destruction.
Contamination	The presence of objectionable matter including substances or microorganisms that makes game meat unwholesome.
Controlling Authority	A person or a body that under a law of a State, Territory or the Commonwealth, has statutory responsibility for game meat hygiene.
Disease	In relation to an animal, means the presence of an infectious agent or pathological process that: (a) affects the health of an animal to an extent that would prevent acceptance of the carcase, the meat or the parts derived from the animal for human consumption; or (b) may not necessarily affect the health of the animal, but may be transmitted to other animals or humans who contact the animal, contact the carcase or who might consume meat derived from the animal.
Dressing	The process of removing the head, hide, skin, viscera, genital organs, urinary bladder and feet from game animals.
Edible	Suitable for human consumption.
Field Depot	A depot approved by the controlling authority (or any other authority as required under State or Territory legislation) in which game carcasses are held temporarily, pending transport to a game-processing establishment.
Field Dressing	The removal of internal organs other than heart, lungs liver and kidneys and may include other parts (feet up to the carpal and tarsal joints and kangaroo tails) providing the procedure does not substantially increase the risk of contamination.

Field Processor	Any approved person involved in the killing of game animals and or the bleeding and field dressing of game animal carcasses for human consumption.
Game Animal	Any vertebrate animal: (a) including a mammal, bird or reptile but, excluding fish; (b) of a species that can be legally harvested; and (c) has not been husbanded in the manner of a farmed animal and is killed in the field.
Game Animal Carcase	An undressed or field dressed body of a game animal that is being or is intended to be dressed or prepared in a game-processing establishment and includes any associated organs.
Game Carcase	A game animal carcase that has been dressed or prepared in a game-processing establishment and has been passed by an inspector as fit for human consumption.
Game Meat	The edible part of any game animal that has been dressed or prepared in a game-processing establishment, and passed by an inspector as fit for human consumption.
Game-Processing Establishment	Any premises approved and registered by the controlling authority in which game and game carcasses are processed, handled, packed or stored.
HACCP	A hazard analysis critical control point approach using the seven principles defined by the joint FAO/WHO Food Standards Program of the Codex Alimentarius Commission, Twentieth Session Geneva. A structured system of analysis of hazards which identifies methods of hazard monitoring and control measures for each hazard.
Harvesting	Includes the killing of game animals, their identification, bleeding, field dressing, cooling, hygienic storage and transport up to the point of their presentation for inspection at a game-processing establishment.
Inedible	Unsuitable for human consumption.
Inspector	A trained person approved by the controlling authority for the purposes of inspection of game animal carcasses, game carcasses and game meat and the control of hygiene in relation to them in the field and the game-processing establishment.
Operator	The person, owner or manager who at the time is in attendance and responsible for the operation of the registered establishment.
Potable	In relation to water means a water quality that is consistent with standards for drinking water in the respective States.
Processed Game Meat	Any product of a manufacturing process that contains game meat and that is intended for human consumption.
Quality Assurance (QA) Arrangement	An arrangement between the controlling authority and the operator of a game-processing establishment with an approved quality system based on <i>AS/NZS ISO 9002</i> , where the operator takes responsibility for ensuring the production of wholesome game meat. The controlling authority's role is to monitor the effectiveness of a company's approved QA system through an audit program to ensure compliance with the relevant provisions of this Standard.
Residue	The residue of a veterinary drug, pesticide or contaminant as defined for the purposes of <i>Codex Alimentarius</i> .
Sanitise	The application of approved chemical and/or physical agents and processes to cleaned surfaces to minimise the risk of contamination of meat by microorganisms.
Sterilise	In relation to equipment or utensils used in the slaughtering or dressing of game, cleaned and immersed for an approved time in an approved agent, or treated by other approved means to effectively eliminate micro-organisms.

Wholesome

Means:

- (a) will not cause food-borne infection or intoxication when properly handled and prepared for its intended use;
- (b) does not contain chemical residues in excess of established limits;
- (c) free of obvious physical contamination;
- (d) free of defects recognised as unsafe (objectionable) to consumers; and
- (e) produced under adequate hygiene control.

4 QUALITY ASSURANCE PROGRAMS

OUTCOME REQUIRED

Where operations are conducted under a Q uality Assurance arrangement it conforms to the essential elements of the Australian Model Standard and process control is achieved through the application of the HACCP approach.

Where the Controlling Authority approves a quality assurance arrangement for the purpose of production and inspection of poultry meat, as required under this Standard, the quality assurance arrangement shall conform to the following principles:

- (a) The quality assurance arrangements shall be consistent with the model for quality assurance in production outlined by Standards Australia (*AS/NZS ISO 9002 (1994)*). The essential elements of these arrangements shall be *AS/NZS ISO 9002* clauses.
 - 4.1 Management responsibility (quality policy, organisation, management review)
 - 4.2 Quality system
 - 4.5 Document and data control (document approval and issue, document changes/modification)
 - 4.6 Purchasing
 - 4.7 Control of customer-supplied product
 - 4.8 Product identification and traceability
 - 4.9 Process control (general, special processes)
 - 4.10 Inspection testing (receiving inspection and testing, in-process inspection and testing, final inspection and testing, inspection and test records)
 - 4.11 Inspection measuring and test equipment
 - 4.12 Inspection and test status
 - 4.13 Control of non-conforming product (non-conformity review and disposition)
 - 4.14 Corrective and preventive action
 - 4.15 Handling, storage, packaging, and delivery (general, handling, storage, packaging, delivery)
 - 4.16 Control of quality records
 - 4.17 Internal quality audits
 - 4.18 Training
 - 4.20 Statistical techniques

1. Australian/New Zealand Standard - *Quality Systems — Model for Quality Assurance in Production, Installation and Servicing* (AS/NZA ISO 9002: 1994).

(b) Process control (AS/NZS ISO 9002 clause 4.9) shall be achieved through the application of the Hazard Analysis Critical Control Point (HACCP) approach, using the seven principles defined by the joint FAO/WHO Food Standards Program of the Codex Alimentarius Commission, Twentieth Session, Geneva

The seven principles are:

1. Identify the potential hazard(s) associated with all relevant stages of production. Assess the likelihood of occurrence of the hazard(s) and identify the preventative measures for their control;
2. Determine the points/procedures/operational steps that can be controlled to eliminate the hazard(s) or minimise its likelihood of occurrence — (Critical Control Point — CCP). A “step” means any stage in food production and/or manufacture including raw materials, their receipt and/or production, harvesting, transport, formulation, processing, storage, etc.;
3. Establishing critical limit(s) which shall be met to ensure the CCP is under control;
4. Establish a system to monitor control of the CCP by scheduled testing or observations;
5. Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control;
6. Establish procedures for verification which include supplementary tests and procedures to confirm that the HACCP system is working effectively; and
7. Establish documentation concerning all procedures and records appropriate to these principles and their application.

(c) Inspection requirements:

1. the individual game animal and game animal carcase shall be inspected in the field in accordance with this Standard by approved persons who are suitably trained; and
2. the individual game animal carcase shall be inspected at a game-processing establishment in accordance with this Standard by approved persons holding recognised meat inspection qualifications or who are suitably trained.

(d) Controlling Authorities shall institute:

1. a process of QA program development and approval, (including amendments) which ensures that a manual accurately describes individual operations and which gives confidence that regulatory standards are consistently satisfied;
2. audit policies and procedures which are aligned with the Standards Association of Australia (AS 3911); and
3. a corrective action and a sanctions policy which effectively address non-compliance with standards and fraud.

5 HARVESTING AND TRANSPORT OF GAME ANIMAL CARCASSES

OUTCOME REQUIRED

Only game animals of healthy appearance shall be harvested. They shall be killed humanely and handled in a manner which shall minimise the risk of physical and microbiological contamination.

- 5.1 A person who harvests game animals shall be approved by a controlling authority and have a certificate of competency or other approved qualification from an approved training course in the harvesting of game animals of the relevant species. The course shall cover killing procedures, recommended equipment, field processor's pre-harvest inspection, hygienic practice of field dressing and field processor's post-mortem procedure.
- 5.2 Game animals shall be harvested in accordance with other relevant legislation for the welfare and conservation of wild animals.
- 5.3 Wild animals shall not be harvested from areas subject of an official prohibition on the harvesting of game animals or known areas where the presence of potentially harmful substances such as pesticides, fungicides, heavy metals, poisons etc. could lead to unacceptable levels of such substances in the game meat.
- 5.4 At the commencement of harvesting the field processor's vehicle, equipment and clothing shall be clean.
- 5.5 Game animals shall be killed by an approved method which is in accordance with animal welfare requirements and which minimises contamination of the game animal carcase.
- 5.6 Only healthy game animals shall be harvested.
- 5.7 Pouch young including foetuses shall be killed humanely and not processed.
- 5.8 Game animal carcasses shall be marked with an approved tag which shall be marked with the date of harvest and sufficient other information to allow the identification of the field processor and place of harvest.
- 5.9 Field processors who note any abnormal condition as described in Appendix D to be affecting the game animal shall not kill it for human consumption.
- 5.10 After shooting, the game animal carcase shall be hung, bled and field dressed without undue delay. Bleeding shall be as complete as possible. With the consent of the controlling authority and subject to such conditions as it may approve, game animal carcasses may be conveyed to a field depot or game-processing establishment without having been bled and/or field dressed.
- 5.11 Any abnormal condition, as described in Appendix E, seen during bleeding and field dressing shall cause the game animal carcase to be dealt with according to the required disposition.

- 5.12 Where field dressing takes place, the lungs, liver, heart and kidneys shall be retained attached to the game animal carcase by natural attachments for the purpose of inspection by an inspector but may be partially freed.
- 5.13 Contamination generated at the time of field dressing shall be removed from the game animal carcase by trimming or other approved means at the time of field dressing.
- 5.14 The skin shall be retained on the game animal carcase until processing.
- 5.15 The game animal carcase shall be:
 - (a) placed under refrigeration within two hours of being harvested, except that where a game animal is harvested between sunset and sunrise it shall be placed under refrigeration within two hours of sunrise; and
 - (b) reduced to a deep muscle temperature of 7°C as soon as possible but no later than 24 hours after being placed under refrigeration.
- 5.16 Game animal carcasses shall be protected from contamination and deterioration by whatever means is necessary to maintain standards of hygiene, during transport and at all other times prior to their arrival at a game-processing establishment.
- 5.17 The hanging frame, floor and equipment of a vehicle used in field harvesting shall be:
 - (a) durable;
 - (b) non-toxic;
 - (c) smooth surfaced;
 - (d) corrosion resistant (Mild steel that does not come in contact with exposed meat is acceptable if maintained rust free. Contact surfaces like pelvic racks, spikes and hooks shall be corrosion resistant);
 - (e) impervious;
 - (f) resistant to, or protected from, impact;
 - (g) easily cleaned and drained to prevent ponding of water and blood and, where necessary, capable of being dismantled for cleaning;
 - (h) resistant to chipping, flaking or fraying; and
 - (i) of a finish that makes contamination clearly visible.
- 5.18 To facilitate hygienic processing, each vehicle used in field harvesting shall have:
 - (a) a supply of potable water sufficient to wash hands and equipment throughout the whole of each day's/night's operation;
 - (b) hand wash facilities equipped with taps and located near the normal processing area;
 - (c) an adequate supply of a suitable agent for sanitising hands;
 - (d) if hands require drying during harvesting, the hand drying facilities used shall be of a type that does not contaminate the washed hands;
 - (e) facilities for cleaning and sanitising equipment used during processing operations; and
 - (f) lighting which is adequate to ensure hygienic processing at night.

- 5.19 To facilitate hygienic processing, the field harvester shall ensure that:
- (a) hanging frames, floors and equipment used in processing are cleaned and sanitised at the end of each day's operations; and
 - (b) the processing area on vehicles is free of equipment not used in harvesting. If such equipment (tyres, tool boxes, jacks etc.) is stored in the processing area, it shall:
 - (i) not present a risk to the wholesomeness of product e.g. a clean impervious cover for tyres;
 - (ii) be carried in a manner that does not create an area for the build up of dust or bacteria that may present a risk to the wholesomeness of product; and
 - (iii) be cleaned at the end of each day's operations or when it becomes contaminated.
- 5.20 The hanging frame used on a field harvesting vehicle shall be constructed to ensure that:
- (a) sufficient space is provided between carcasses to allow effective cooling;
 - (b) carcasses are hung in a manner that does not jeopardise the wholesomeness of the product;
 - (c) contamination of exposed meat surfaces by other carcasses is minimised; and
 - (d) sufficient racks are provided to enable all eviscerated carcasses to be transported within the hanging frame. No eviscerated carcasses shall be transported on the sides or backs of vehicles.
- 5.21 Dogs used in the procurement of game animals shall be:
- (a) carried on field harvesting vehicles in a separate compartment that:
 - (i) provides complete physical separation (e.g. solid partitioning) to ensure that the dogs cannot contaminate the carcasses or other equipment used in processing; and
 - (ii) is easily cleaned.
 - (b) used in accordance with the *Model Code of Practice for Welfare of Animals — Feral Livestock Animals, Destruction or Capture, Handling and Marketing*.
- 5.22 The game animal carcase shall not be transported unless it is hung to allow free flow of air to facilitate it being cooled.
- 5.23 The carcase of any animal other than a game animal shall not be transported with game animal carcasses for human consumption.
- 5.24 No game animal carcase other than that field dressed to human consumption standards shall be transported with a game animal carcase for human consumption.
- 5.25 Except as in 5.21 no animal shall be transported with a game animal carcase for human consumption.

6 CONSTRUCTION, EQUIPMENT AND MAINTENANCE OF FIELD DEPOTS

OUTCOME REQUIRED

The construction and maintenance of the field depot results in minimal microbial growth and contamination during cooling and storage of game animal carcasses.

Field depots shall be used only for the holding of game animal carcasses and shall be of a standard of construction and be equipped in a manner approved by the Controlling Authority.

- 6.1 It shall be constructed of material such that all exposed surfaces are:
 - (a) durable;
 - (b) non-toxic;
 - (c) smooth surfaced;
 - (d) corrosion resistant;
 - (e) impervious;
 - (f) resistant to, or protected from impact;
 - (g) easily cleaned and, drained to prevent ponding of water and blood, and where necessary, capable of being dismantled for cleaning;
 - (h) resistant to chipping, flaking or fraying; and
 - (i) of a finish that makes contamination clearly visible.
- 6.2 Be constructed such that the joints are effectively sealed.
- 6.3 Be constructed to minimise accumulation of dust, water, litter or waste materials on ledges, sills and, by means of adequate coving, at wall to floor junctions.
- 6.4 Where processing (e.g. removal of lactating udders or gross contamination) occurs or hands and/or equipment come into contact with exposed meat surfaces, each field depot used for holding game animal carcasses shall have:
 - (a) a supply of potable water sufficient to wash hands and equipment throughout the whole of each day's/night's operation;
 - (b) hand wash facilities equipped with taps and located near the normal processing area;
 - (c) an adequate supply of a suitable agent for sanitising hands;
 - (d) if hands require drying during processing, the hand drying facilities used shall be of a type that does not contaminate the washed hands;
 - (e) facilities for cleaning and sanitising equipment used during processing operations; and
 - (f) lighting which is adequate to ensure hygienic processing at night.

- 6.5 Be provided with means of disposing of solid and liquid waste.
- 6.6 Be provided with adequate refrigeration to chill the carcasses placed in it to 7°C deep muscle temperature within 24 hours of delivery.
- 6.7 Be provided with suitable means of hanging game animal carcasses.

7 OPERATION OF FIELD DEPOTS

OUTCOME REQUIRED
The operation of the field depot results in minimal microbial growth and contamination during cooling and storage of game animal carcasses.

- 7.1 The operator at a field depot shall take the necessary precautions to minimise contamination and deterioration of game animal carcasses. Where contamination occurs the operator shall implement appropriate corrective action.
- 7.2 Game animal carcasses held in a field depot shall be stored in a hanging position and spaced for the purposes of achieving adequate chilling.
- 7.3 Only game carcasses which have been harvested in accordance with the requirements of this Standard and intended for human consumption shall be held in an approved field depot.
- 7.4 Game animal carcasses shall be chilled to a maximum deep muscle temperature of 7°C within 24 hours and maintained at or below 7°C.
- 7.5 The operator shall implement an approved program of hygiene control to ensure that the depot is kept clean and tidy.
- 7.6 Game animal carcasses shall not be frozen before inspection by an inspector. However, carcasses which have become frozen shall be judged on their merits by an inspector to determine if they may be processed for human consumption, diverted to pet meat or condemned.
- 7.7 All means of transport used for conveyance of game animal carcasses to the game-processing establishment from any field depot, shall be approved and shall:
 - (a) Comply with the meat transport requirements of the *Australian Standard for the Transportation of Meat for Human Consumption*.
 - (b) Deliver the game animal carcasses to the game-processing establishment at a deep muscle temperature not exceeding 7°C anywhere in the carcase.
- 7.8 The harvesting, storage and transport of game animal carcasses shall be subject to audit as determined by the Controlling Authority.

8 GAME-PROCESSING ESTABLISHMENTS

OUTCOME REQUIRED

The construction of the premise facilitates hygienic processing of game animal carcasses and prevents contamination of game carcasses and game meat.

- 8.1 The construction of game-processing establishments shall comply with the requirements of the *Australian Standard for Construction of Premises Processing Meat for Human Consumption*.
- 8.2 Game-processing establishments shall include the following additional requirements:
- 8.2.1 Adequate and well equipped areas to enable inspection services or quality assurance personnel, where premises operated under an approved QA program, to carry out their functions.
 - 8.2.2 An overhead rail for transporting game animal carcasses and game carcasses, so installed as to prevent contamination of carcasses through contact with floors, walls or other equipment.
 - 8.2.3 Room or rooms, for receiving and holding game animal carcasses. Where game animal carcasses are held prior to processing the rooms shall be equipped with refrigeration.
 - 8.2.4 Areas for inspecting game animal carcasses prior to processing which provide adequate temperature control and protection from contamination.
 - 8.2.5 Dressing rooms appropriate to the species which enable the work to be performed on game animal carcasses in a satisfactory manner.
 - 8.2.6 If necessary, separate facilities for the preparation of edible fats.
 - 8.2.7 Separate facilities for the holding and storage of hides, horns and hooves and inedible animal fats or other inedible material. These shall be removed regularly from the processing area and shall not be stored in the processing area overnight.
 - 8.2.8 Dressing rooms shall be temperature controlled where this is necessary to prevent a rise in the temperature of game animal carcasses or game carcasses that is of sufficient magnitude to jeopardise safety and wholesomeness.
 - 8.2.9 Refrigerated rooms suitable for the effective cooling and storage of game meat.
 - 8.2.10 A facility for retaining game carcasses or parts for the purpose of further inspection or treatment.
 - 8.2.11 A facility for secure holding of condemned and downgraded material to prevent contamination of game meat.
 - 8.2.12 Means of controlling access of people to and from the processing and storage areas of the game-processing establishment.

- 8.3 Establishments where boning or slicing occurs, shall include the following additional requirements:
- 8.3.1 Adequate and well equipped areas to enable inspection services or Quality Assurance personnel, where premises operated under an approved QA Program, to carry out their functions.
 - 8.3.2 Refrigerated room or rooms for the holding of game carcasses.
 - 8.3.3 A room, temperature controlled to no greater than 10°C, for boning and cutting, physically separated from other rooms. Boning and cutting and primary wrapping shall be separate from processing operations. However, game meat may be packed in the room where it is boned, sliced and wrapped, provided precautions acceptable to the controlling authority are taken to prevent contamination.

9 INSPECTION AND HANDLING OF GAME ANIMAL CARCASSES AND GAME CARCASSES IN GAME-PROCESSING ESTABLISHMENTS

Note: Game offal cannot be used for human consumption

OUTCOME REQUIRED
Only wholesome game meat is passed for human consumption.

- 9.1 The operator shall ensure that accurate records of product received and the condition of product upon receipt are maintained.
- 9.2 The operator shall ensure that all game animal carcasses presented have an approved tag affixed to the carcase.
- 9.3 The operator shall take all practical steps to ensure a game animal carcase showing pathology or contamination likely to result in total condemnation is not admitted for processing.
- 9.4 The operator shall present the game animal carcase and any organs retained with the carcase in a hygienic manner and in such a way that inspection can be carried out effectively.
- 9.5 The operator shall submit every game animal carcase to a predressing inspection by an inspector responsible for this function to determine whether or not it is suitable for dressing for the production of game meat.
- 9.6 Inspection points with sufficient lighting to enable careful examination shall be provided at appropriate locations in the establishment to facilitate the examination of the game animal carcase. Retention rails and containers shall be provided in continuous systems to allow for a more thorough examination or treatment of a suspect game animal carcase, part or offal when required.
- 9.7 The skin shall be removed if necessary for the purpose of inspection.
- 9.8 If not removed during inspection the skin may be retained on the game carcase for protection or, if desired, for purposes of trade where approved by the controlling authority.
- 9.9 The examination of the game animal carcase and body parts for disposition shall be carried out by a person with training and qualifications which enable the accurate recognition of the conditions described and their correct disposition.
- 9.10 The inspector shall be satisfied the game animal was killed in accordance with the *Model Code of Practice for Welfare of Animals — Feral Livestock Animals, Destruction or Capture, Handling and Marketing*.
- 9.11 The inspector should note and take into consideration observations made during harvesting game animals, which have been reported by the field processor.

- 9.12 Emphasis should be placed on normal healthy carcasses and parts. Departures from normal as described in Appendix E shall be dealt with according to the dispositions described for each observation or set of observations. Where it suits the purposes of the operator, a more severe disposition may be selected rather than that acceptable for the condition described.
- 9.13 A critical risk represents a condition which carries with it a significant risk to human health.
- 9.14 A major risk represents a condition which, while not carrying a significant risk to human health, does affect the wholesomeness of product.
- 9.15 A minor risk represents a condition which does not carry a human health risk, but does affect the wholesomeness of product only in that there may be defects recognised as objectionable to consumers (presentation faults).
- 9.16 Where a lymph node, organ or any carcass tissue has been incised for inspection, the cut surface should be sliced cleanly to present an undistorted view. Where an incision has been made it shall be made in a way that minimises the risk of contamination, whether to game meat, premises, equipment or personnel.
- 9.17 Inspection procedures for each species shall be performed as described in the relevant Appendix. Carcasses, head and viscera shall be presented in a manner which allows inspection to be performed efficiently and effectively.
- 9.18 The game animal carcass, viscera and where appropriate head shall be correlated at least until the point of carcass inspection.
- 9.19 Any game animal carcass, viscera or part which is diseased or suspected of being diseased shall be handled in a manner which ensures that other product is not contaminated, and minimises contamination of plant, equipment and personnel.
- 9.20 In the course of inspection the inspector should pay particular attention to:
- (a) Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
 - (b) Indications of decomposition;
 - (c) Signs of disease transmissible to man;
 - (d) Presence of parasites in the skin, offal or muscular systems;
 - (e) Evidence consistent with poisoning or intoxication from environmental contaminants;
 - (f) Evidence of residues, poisons or pesticides;
 - (g) Injuries or swelling, presence of oedema or fluid, emaciation;
 - (h) Unusual odour or smell or other deviation from normal detected by sensory means; and
 - (i) Contamination that cannot be removed by trimming or other approved means.
- 9.21 No person handling a game animal carcass, prior to the inspection being completed shall:
- (a) Remove any serous membrane;
 - (b) Remove, modify, or obliterate any evidence of disease or defect in any carcass or organ; and
 - (c) Remove any mark or identification from the carcass or any other part.

- 9.22 One of the following dispositions shall be applied to a game carcase or part following post mortem inspection (viscera shall not be saved for human consumption).
- (a) passed for human consumption;
 - (b) retained pending remedial treatment, laboratory findings or other examination before final disposition;
 - (c) saved as animal food or for pharmaceutical purposes; and
 - (d) condemned as unfit for human consumption or as animal food.
- 9.23 Any game animal carcase, part or viscera retained for remedial treatment shall be clearly identified and controlled to ensure that the remedial treatment is carried out.
- 9.24 Any condemned carcase, part or viscera shall be clearly identified or denatured to preclude use for human consumption or animal food.
- 9.25 Inspection shall include continuous monitoring for compliance with the acceptable quality level (AQL) system to control physical contamination as specified in Appendix B.
- 9.26 If the observations made at post mortem suggest that a game animal carcase displays lesions of an exotic disease the relevant Government veterinarian shall be contacted immediately. The head, carcase and viscera shall be retained until a course of action has been determined by that veterinarian.
- 9.27 Game meat downgraded to animal food by an inspector shall be immediately identified by means outlined in the *Australian Code of Practice for Production and Inspection of Chilled and Frozen Pet Food* and shall not be further processed until removed from the establishment or into a completely separate and secure area.
- 9.28 Additional requirements for the inspection of uneviscerated game carcasses in a game-processing establishment.
- 9.28.1 All game carcasses conveyed to the game-processing establishment in an uneviscerated condition shall be subjected to a predressing inspection by an inspector.
 - 9.28.2 Predressing inspection of an uneviscerated game animal carcase shall be carried out by an inspector in a manner and under conditions which are approved by the Controlling Authority. Carcasses of animals of one species shall not be mixed with those of animals of another species in the course of this inspection.
 - 9.28.3 The Inspector shall classify and identify uneviscerated game animal carcasses in the following manner.
 - (a) Those which are suitable for disposal for sale uneviscerated and with skin or feathers intact;
 - (b) Those suitable for evisceration and further processing for production of game meat, subject to post-dressing inspection during which the fitness of the game carcase or viscera for any special purpose may be further determined;
 - (c) Those rejected as unfit for the production of game meat; and
 - (d) Those which require a more detailed inspection.

10 PROCEDURES FOR PROCESSING GAME ANIMAL CARCASSES

OUTCOME REQUIRED
**Processing procedures shall minimise or eliminate risk
of chemical, physical and microbiological
contamination of game meat.**

- 10.1 Only game animal carcasses shall be processed in a game-processing establishment.
- 10.2 Game animal carcasses awaiting dressing shall not be stored in chilling facilities containing dressed carcasses.
- 10.3 After removal of the hide, skin or feathers, game animal carcasses shall be kept separate to prevent cross contamination and to facilitate hygienic processing. Separation of carcasses shall be maintained until they have been passed as fit for human consumption.
- 10.4 Pumping of air or gas under the skin of a game animal carcass to facilitate skinning shall only be permitted if it does not contaminate the game meat.
- 10.5 No game animal carcass, game meat or offal shall be inflated with air or gas in a way that alters its appearance prior to inspection or causes contamination.
- 10.6 Separate facilities shall be provided for the washing or further treatment of skins to prevent contamination of game meat.
- 10.7 Except with the approval of the controlling authority, skinned game animal carcasses shall not be washed prior to inspection.
- 10.8 Game animal carcasses that have been eviscerated, shall not be dehaired or defeathered by immersion scalding.
- 10.9 Game animal carcasses that, with the approval of the controlling authority, are scalded, flamed or similarly treated shall be scoured of all bristles, hair, scurf and dirt. If carcasses are washed such treatment shall be performed prior to first open cut.
- 10.10 Lactating or diseased udders shall be removed as soon as possible during dressing; and no secretion from, or contents of, udders shall be allowed to contaminate the carcass.
- 10.11 Where evisceration is undertaken at the game-processing establishment with the approval of the controlling authority, it shall be carried out in a manner which does not jeopardise the hygienic production of game meat.
- 10.12 Faecal or other objectionable matter contaminating game carcasses or game meat shall be trimmed and the trimmings condemned before leaving the dressing facilities.

- 10.13 All inedible material derived from the dressing of game carcasses shall:
 - (a) be removed from the dressing area in a manner that avoids contaminating the area or game meat and shall not be conveyed through the boning or further processing facilities; and
 - (b) after removal from the dressing area, if subsequently treated in parts of the game processing establishment, be treated in areas intended for this purpose in a way that does not risk contamination of game meat.
- 10.14 The operator shall maintain a system of identification and records that will facilitate trace back, including the identification of product to the processing establishment.
- 10.15 Game carcasses and game meat shall be removed without undue delay from the dressing area and placed under refrigeration which shall be capable of reducing and maintaining the temperature to less than 5°C.
- 10.16 Those operations which carry a risk of contamination of game carcasses and game meat suitable for human consumption shall be sufficiently separated from other operations to avoid the risk of such contamination.
- 10.17 Rooms, equipment and utensils provided for dressing game carcasses shall be used for this purpose only and not for boning out, cutting up, holding or other handling of game meat.
- 10.18 No containers, equipment or utensils shall be stored in any part of a game-processing establishment where game carcasses passed for human consumption are dressed, sliced or boned, prepared, handled, packed, or stored, unless required for immediate use in that place.
- 10.19 The operator shall implement an approved program of hygiene control to ensure that the game-processing establishment is kept clean and tidy.

11 OPERATIONAL HYGIENE REQUIREMENTS

OUTCOME REQUIRED
Hygiene controls effectively prevent physical and microbiological contamination of game and risks to health and safety of plant personnel.

Cleaning and Sanitising

- 11.1 The operator shall implement a program of hygiene control approved by the Controlling Authority.
- 11.2 Buildings, surrounds, perimeter fencing, roadways, yards rooms, equipment and other facilities of the registered premises shall be maintained in good repair and a clean orderly condition at all times.
- 11.3 Rooms and areas shall be kept as free of steam, odours, vapours and excess water as possible. Condensation shall not be permitted to accumulate on overhead structures in an amount conducive to drip.
- 11.4 Amenities provided for the use of employees and inspection staff, including inspection office area, where provided, shall be cleaned after each day of processing or more frequently as necessary.
- 11.5 A person shall not commence each day's operation using plant, equipment, vehicles or protective clothing unless such plant, equipment, vehicles and protective clothing are clean.
- 11.6 Equipment, implements, tables, utensils including knives, steels and knife scabbards, protective gear and containers shall be cleaned regularly during operations. They shall be immediately and thoroughly cleaned and sanitised whenever they come in contact with diseased or infective material, or become contaminated in any way. They shall also be effectively cleaned and sanitised at the conclusion of work each day. Knives and carcass contacting equipment used for dressing shall be sanitised between each carcass.
- 11.7 Where any container used for edible material enters an inedible or condemned material area it shall be effectively cleaned and sanitised before re-entering any edible product area.
- 11.8 Cleaning compounds and similar materials shall be approved for use in game meat processing premises and shall not be allowed to come into contact with carcasses, meat or packaging materials during cleaning and sanitising of rooms, equipment or utensils.
- 11.9 Except when approved for use without a final rinse, any chemical residue shall be removed from surfaces likely to contaminate edible product by thorough rinsing with potable water before the equipment is again used for handling edible product.
- 11.10 Cleaning compounds or other materials likely to cause contamination of product shall not be stored in edible product areas. Cleaning equipment shall be stored in an orderly manner when not in use.

- 11.11 Rooms used for storage of cleaning compounds, chemicals, insecticides and the like, shall have stored materials labelled and stacked so as to facilitate audits.

Pest Control

- 11.12 All possible precautions shall be taken to ensure that pests do not contaminate edible product and materials, equipment and utensils.
- 11.13 The operator shall have an effective and continuing program for the control of insects, birds, rodents or other pests.
- 11.14 Premises and surrounds shall be regularly examined for evidence of infestation.
- 11.15 Pesticides shall be used in a manner that does not risk contamination of product or equipment.
- 11.16 Before pesticides are applied all meat and wrapping material shall be removed from an edible product room. All equipment shall be cleaned before being used again.

Animal Control at Game-Processing Premises

- 11.17 No animals, other than animals for processing or work animals used for delivering animals for processing or for security, shall be present on the premises, and no animals other than animals for processing shall be allowed inside the processing building.
- 11.18 Work animals shall be restrained when not working.

Health and Hygiene of Personnel

- 11.19 A program of continuing training in the hygienic handling of edible product shall be implemented by the operator in each processing premises.
- 11.20 The operator shall ensure that no person, while known to be suffering from or known to be a carrier of a disease capable of being transmitted through game meat or while afflicted with infected wounds, sores or diarrhoea, is permitted to work in any capacity in which it is possible either directly or indirectly to contaminate product with pathogenic micro-organisms. Any person so afflicted shall report the illness to management.
- 11.21 When it is considered appropriate or necessary by the Controlling Authority and/or the operator any person who comes in contact with meat and meat products shall have a medical examination prior to their employment or at times when clinically or epidemiologically indicated. The medical examiner shall pay particular attention to infected wounds and sores, enteric infections, and respiratory diseases.
- 11.22 Any person who is cut or injured shall cease working with game animals, game animal carcasses, game carcasses or game meat until their wound is suitably bandaged. No person working in an edible area of a game-processing establishment shall wear any bandage unless the bandage is completely protected by a waterproof and conspicuously coloured covering which cannot be easily detached. Adequate first aid facilities shall be provided for this purpose.
- 11.23 Notices requiring hand washing and sanitation shall be prominently displayed in appropriate places.
- 11.24 Every person engaged in game meat processing, while on duty, shall frequently and thoroughly wash their hands with liquid sanitiser and potable water. Hands shall be

washed before commencing work, immediately after using toilet facilities or blowing nose, and whenever necessary otherwise.

- 11.25 After handling diseased or suspect material, hands shall be thoroughly washed and any protective gloves washed and sanitised before handling edible material or equipment used on edible material.
- 11.26 Protective gloves for use in the handling of meat shall be maintained in a sound clean and sanitary condition.
- 11.27 Every person engaged in a game-processing establishment to produce edible products shall maintain a high degree of personal cleanliness while on duty.
- 11.28 Every person engaged in game meat processing for edible products shall, at all times wear suitable clean clothing of a colour that allows detection of visible contamination, head covering enclosing hair and enclosed footwear. These articles shall be kept clean consistent with the work in which the person is engaged.
- 11.29 Protective clothing used for meat processing shall be durable, nontoxic, smooth-surfaced, corrosion resistant, easily cleaned, resistant to wear and have a finish that makes surface contamination easily visible.
- 11.30 Protective clothing such as aprons, protective gloves and implements shall be properly cleaned at the end of the day and when necessary in a facility provided for that purpose. Special attention shall be paid to the cleaning and sanitising of steel mesh gloves.
- 11.31 Aprons and personal working gear including protective gloves, knives and scabbards shall not be worn into toilet areas. Hooks shall be provided at designated sites within production areas for the hanging of these articles.
- 11.32 Visitors to areas for edible products, shall be properly clad in clean protective clothing including head covering enclosing hair.
- 11.33 Any behaviour which potentially can contaminate game or game carcasses, such as throwing, eating, spitting, use of tobacco, or chewing, shall be prohibited in any part of the game-processing establishment used for handling, processing, handling, packaging or transportation of game.
- 11.34 Care shall be taken by employees to prevent contamination of edible product by cosmetics, chemicals, sweat and such accidental acts such as coughing and sneezing. Loose jewellery such as wrist watches, earrings, brooches, badges or the like shall not be worn where they could accidentally contaminate edible product.
- 11.35 Persons employed in areas for inedible products shall not be permitted to engage in the dressing or handling of edible product until they have thoroughly washed and ensured their outer clothing, head covering and footwear is free from contamination originating in inedible areas. Outer clothing shall be changed.

Storage and Disposal of Waste

- 11.36 Waste material shall be handled in such a manner as to prevent contamination of food or potable water.
- 11.37 Access to wastes by pests shall be prevented.

11.38 Effluent shall be removed from the processing area at least daily in a manner that complies with the requirements of the appropriate local government and State authorities.

Monitoring of Requirements

11.39 Operators shall ensure hygienic operations at vehicles and game-processing establishments by having in place and operating a monitoring program approved by the Controlling Authority.

12 TRANSPORTATION OF GAME ANIMAL CARCASSES, GAME CARCASSES AND GAME MEAT

OUTCOME REQUIRED

Transportation does not jeopardise the wholesomeness of game animal carcasses, game carcasses and game meat.

- 12.1 Game animal carcasses, (other than those on field harvesting vehicles), game carcasses and game meat shall be transported in accordance with the *Australian Standard for the Transportation of Meat for Human Consumption*.
- 12.2 Game animal carcasses shall be hanging when transported. However, small game may be placed in an approved manner on racks or similar equipment so as to maintain adequate cooling and to minimize cross contamination of carcasses.

13 REFERENCES

- Australian Standard (1990) AS1680-76 *Code of Practice for Interior Lighting and the Visual Environment*.
- Australian/New Zealand Standard (1994) AS/NZA ISO 9002: 1994 *Quality Systems — Model for Quality Assurance in Production, Installation and Servicing*.
- Australian Code of Practice for Construction and Equipment of Abattoirs (1986).
- Construction and Equipment Guidelines for Export Meat (Second edition) (1988).
- Codex Alimentarius*, Volume 10 (1994) — Code of Hygienic Practice for Fresh Meat.
- Code of Practice for the Humane Shooting of Kangaroos*. Endorsed by the Council of Nature Conservation Ministers.
- Australian Code of Practice for Production and Inspection of Chilled and Frozen Pet Food Standing Committee on Agriculture and Resource Management (1992) *Model Code of Practice for the Welfare of Animals: Destruction or Capture, Handling and Marketing of Feral Livestock Animals*. SCA Report No. 34. CSIRO Publishing, Melbourne.
- Standing Committee on Agriculture and Resource Management (1996) *Australian Standard for Construction of Premises Processing Meat for Human Consumption*. SCARM Report No. 53, CSIRO Publishing, Melbourne.
- Standing Committee on Agriculture and Resource Management (1996) *Australian Standard for Transportation of Meat for Human Consumption* SCARM Report No. 56. CSIRO Publishing, Melbourne.
- Standing Committee on Agriculture and Resource Management (1997) *A Guide to the Implementation and Auditing of HACCP*. SCARM Report No. 60, CSIRO Publishing, Melbourne.
- Tasmanian Code of Practice for Capture, Handling and Slaughter of Brush Possums (*Trichosurus vulpecular*)(1995). Animal Welfare Advisory Committee.

APPENDIX A

MICROBIOLOGICAL STANDARDS

Microbiological testing is required for process verification in any HACCP-based quality assurance program in the meat industry. The primary application of testing is to monitor critical control points in production.

Work surfaces and product surfaces must be monitored on a regular basis to verify the HACCP program. The Schedule of testing used shall be documented with the HACCP program.

HACCP Validation: The initial testing and analysis carried out in order to establish that critical limits of a HACCP program are adequate and sufficient to control the likely hazards and to provide the outcomes for which it is designed. The method used for validation shall be a standard method recommended by the CSIRO so that compatibility between plants is possible.

HACCP Verification: The testing and analysis is required by Principle Seven of the HACCP process in order to verify the ongoing effectiveness of the HACCP program. This ongoing testing is for on plant use and need not be a standard method, but can be any one of the proven techniques which will achieve the desired results. Of particular importance is the consistency of testing so that trendlines of production can be established.

Guideline Count: A microbiological criterion used to monitor a process to signal whether microbiological conditions are within the normal range. Australia has not set specific ranges but regulators will be looking to ensure that continuous improvement is achieved and that action is taken by processors whenever a high level is detected.

One-log Growth: Good hygienic practice is designed to deliver meat to the final consumer with a sufficient margin of safety to ensure that under most conditions even poor handling by the consumer will not render it dangerous to human health. A one-log (ten-fold) increase in the load of bacterial pathogens is considered achievable by hygienic production techniques and strict control of temperatures. *E. coli* Biotype 1 shall be used to indicate pathogen load for the purpose of achieving no more than a 1-log increase.

It is important to note that microbiology is to be used as a tool to ensure that the process is delivering good results on a continuous basis. It is not to be used to judge the wholesomeness of individual pieces of product.

Types of Testing: TVC — Total Visible Count may be used to test the overall hygiene and the slaughter process. It always achieves a result but is limited in applications post-chilling. This measure is ideal for work surfaces.

E. coli Biotype 1 — is a very good indicator of enteric contamination. It also is very useful post-chilling because it is one of the major group of bacteria which stop growing at about 7°C. *E. coli* is best used for meat and meat surfaces.

Coliforms — can be used preferably in addition to *E. coli* as an indicator post-chilling. This measure is useful as an indicator of process hygiene, not just faecal contamination.

Records shall be kept to enable benchmarks to be set and trends over time can be identified.

Because carcase contamination is not uniform and pathogen numbers are normally low, microbiological testing cannot be applied and shall not be used to confirm freedom or absence of specific organisms.

APPENDIX B

PHYSICAL CONTAMINATION STANDARDS

Acceptable Quality Level Monitoring of Physical Contamination of Carcase Meat and Cartoned Meat

For the purpose of this performance standard, physical contamination means **visible** physical contamination and **includes** such contaminants as faeces, ingesta, hair, abscesses, parasitic lesions and dust.

For the purpose of this performance standard, Acceptable Quality Levels (AQLs) are used to monitor or assess physical contamination of meat (in a final product form) produced at, or introduced into, meat processing premises. Their use is based on a uniform system of inspecting a representative sample of product of a similar type which indicates that the product has obtained a predetermined quality level.

The AQL system is suitable for incorporation into approved programs of production based on quality assurance principles and serves as an adjunct to official auditing procedures for the assessment of compliance with company quality systems.

The AQL system can be used by management as a mechanism for monitoring standards achieved under a company's program of production and can be applied at any point in the production process to provide a mechanism for verification of the Hazard Analysis and Critical Control Point (HACCP) program.

AQLs can assist in determining any necessary remedial action based on an objective assessment process and can be applied by the regulating body or company staff. However, AQLs are not designed for use as regular policing 'tools'. Their use should complement other monitoring procedures such as process control audits which include the observation of carcasses during routine inspection procedures and observing dressing procedures on the slaughter floor.

Where there is a failure to meet the Acceptable Quality Level the whole group of carcasses or offals from the production run or consignment of cartons is required to be re-trimmed, re-sampled and reinspected and another determination of its acceptability made. This process is to continue until such time as the product group is acceptable.

Objectives of the AQL System

1. Wholesomeness — to encourage the production of wholesome meat.
2. Uniformity — to design, implement, and maintain a re-inspection procedure which includes uniform sampling methods, defect standards and product acceptance and rejection criteria.
3. Control — to provide inspection personnel with a system of control which will ensure that meat, determined by the re-inspection criteria to be unwholesome, is withheld from trade until it is made acceptable.
4. Information — to provide a continuous monitoring system for determining the extent and nature of defects found in meat.
5. Feedback — to provide management and inspectors with objective information and to assist in determining the origins of dressing errors and other defects allowing necessary corrective action.

Acceptable Quality Levels

Based on the objective scoring system detailed on the Inspection Report Form, samples are deemed to be unsatisfactory if either:

- a) Defect score is more than 1.0; or
- b) Sample score is more than 0.3.

If unsatisfactory, the production run from which the sampling occurs is required to be reworked until quality levels are acceptable.

Procedure for AQL Monitoring

This procedure applies to all species of stock. Persons responsible for AQL monitoring are to:

1. determine a manageable number of carcasses or cartons which make-up a consignment, production run etc. to be sampled;
e.g. one day's production of 600 kangaroo carcasses could be sampled by examining three runs (morning to smoko, smoko to lunch, lunch to finish) of 200 kangaroos each;
2. ensure carcasses are sampled after the final wash and in a manner that all surfaces are viewed under adequate lighting;
3. ensure a representative sample is examined, using that sampling rate outlined on the AQL forms. Note that there are two AQL forms — one is for use with carcasses, the other is for use with offals and cartoned meat;
4. ensure representative samples are selected randomly. Random numbers can be used for selecting an individual sample or a point in time at which a sample at a predetermined point in the processing line is selected;
5. record defects identified during AQL examination on the AQL form/s and make the necessary calculation;
6. ensure that those defects identified during examination are trimmed;
7. supply management with a copy of the AQL form/s on completion of the calculation;
8. ensure that the company retains and reworks the whole of the group of carcasses, offals or cartons which has failed an AQL;
9. ensure that those carcasses/offals/cartons reworked as the result of a failed AQL are subjected to actions outlined in 2, 3, 4, 5, 6, 7 and 8;
10. ensure that, for slaughter animals, the frequency of sampling each species is as follows:

Under 100 head per month	Minimum of ten carcasses (where necessary combine days to make up a minimum of carcasses).
Under 100 head per week	One per week.
Under 100 head per day	Three times per week.
Over 100 head per day	At least daily.

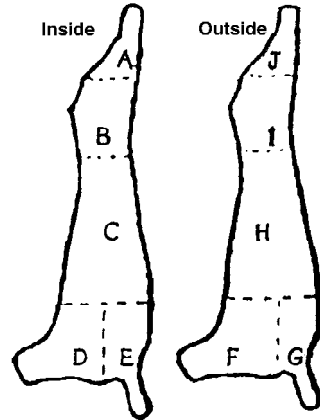
Use of the AQL form

Points to be noted when using the form are as follows:-

- Scoring is done *on a fault basis*. For instance, if one feral goat carcase has two CLA abscesses, two abscesses would be recorded in the relevant “box”, and indicate their positions using the code or if a kangaroo carcase has two joints affected with *Dirofilaria roemeri*.
- Faecal material/staining and ingesta material/staining are recorded by position and size, as this may give some indication of the sources and severity of the problem. The number of these defects in the sample is then totalled and recorded in the “scoring grid” under critical.
- GD is Greater Dimension. If the greater dimension of a condition (e.g. skin) is more than 100 millimetres and the relevant “box” (critical) is blocked out, the score is made in the next available “box” for that condition (major in the case of skin).
- Certain conditions are of an aesthetic nature rather than of public health concern. These conditions should be recorded (in the relevant “boxes” on the extreme right of the scoring grid) and be brought to management’s attention. These “aesthetic faults” are *not* to be used when totalling either defects or weighted defects.
- Provision has been made for recording “other” staining, that is, other than that caused by ingesta or faeces. This is only to be used when the “other cause” is clear (eg. bile).
- Parasites (non-transmissible to man) are recorded as follows:
 - major —less than 3 parasites
 - critical — 3 or more parasites
- Foreign bodies (e.g. glass, splinters, metal fragments, plastic) are recorded as follows:
 - minor — affects product appearance but not wholesomeness
 - critical — affects product wholesomeness
- The area under “units with scored faults” is to be used to record the number or carcasses (or quarters or sides etc.) that have faults. This total is then used for obtaining the Sample Score.
- Random numbers can be selected by using random number charts or computers and calculators with this function.

AQL Inspection Report for Game Carcase

Product Origin
 Description
 Quantity
 Sample Size
 Consigned to
 Consigned from



Sampling Rate:

Total No:		Sample:	Total No:	Sample:
0 – 20	}	10 Total (whichever is less)	201 – 300	17
21 – 40			301 – 400	20
41 – 70			401 – 500	22
71 – 100			501 – 650	25
101 – 150		12	651 – 800	28
151 – 200		14	≥ 801	30

Defect Score = $\frac{\text{Total of Weight Defects}}{\text{Sample No.}}$
 =

Sample Score = $\frac{\text{Total No. of Defective Units}}{\text{Sample No.}}$
 =

No of Units with scored faults
 (Carcases/sides/quarters)

The sample is unsatisfactory if either:
 (a) Defect score is more than 1.0; or
 (b) Sample score is more than 0.3.

Comments/Action Taken

Inspector/Authorised Person: _____

Date: _____

Please indicate, in the appropriate space, the number and location (see diagrams) of defects found during inspection of carcasses/sides/quarters.

	GD < 25 mm	GD 25 – 100 mm	GD > 100 mm
Faecal material/staining (GD)			
Ingesta material/staining (GD)			
SCORING BEGINS			
	Minor	Major	Critical
Total Faecal material/staining			
Total Ingesta Material/staining			
Other Staining (GD).....			
Fleece & Hide Fallout (GD)			
Remnants of viscera, spleen, liver, pizzle (presence)			
Tonsils or organs containing faeces, urine (presence)			
Hair/wool clusters < 20 hairs			
>20 hairs or 10–20 hairs x 2 or more			
Skin (GD)			
Abscess/Grass Seed Abscess			
Parasitic lesions -			
transmissible (state.....)			
non-transmissible (state.....)			
Grass seeds (non-suppurative) >10 seeds			
Other pathological conditions (state)			
Rail Fallout (GD)			
Dust Marks (GD)			
Grease Marks (GD)			
Hook Marks (GD)			
Floor Contact (GD)			
Total			
Weighting Factor	x1	x4	x10
Weighted Defects			
Inspector/Authorised Person		
Date		

AQL Inspection Report for Cartoned Meat:

Product Origin
 Description
 Quantity
 Sample Size
 Consigned to
 Consigned from

Sampling Rate:

Total No:		Sample:	Total No:	Sample:
0 – 20	}	10 Total (whichever is less)	201 – 300	17
21 – 40			301 – 400	20
41 – 70			401 – 500	22
71 – 100			501 – 650	25
101–150		12	651 – 800	28
151– 200		14	≥801	30

Defect Score = $\frac{\text{Total of Weight Defects}}{\text{Sample No.}}$

=

Sample Score = $\frac{\text{Total No. of Defective Units}}{\text{Sample No.}}$

=

No of Units with scored faults
(Carcases/sides/quarters)

The sample is unsatisfactory if either:

(a) Defect score is more than 1.0; or

(b) Sample score is more than 0.3.

Comments/Action Taken

Inspector/Authorised Person: _____

Date: _____

Please indicate, in the appropriate space, the number of defects found during inspection of cartoned meat.

	GD < 25 mm	GD25 – 100 mm	GD > 100 mm
Faecal material/staining (GD)			
Ingesta material/staining (GD)			
SCORING BEGINS			
	Minor	Major	Critical
Total Faecal material/staining			
Total Ingesta Material/staining			
Off condition (sour)			
Other Staining (GD).....			
Fleece & Hide Fallout (GD)			
Hair/wool clusters < 20 hairs			
>20 hairs or 10–20 hairs x 2 or more			
Skin (GD)			
Abscess/Grass Seed Abscess			
Parasitic lesions -			
transmissible (state.....)			
non-transmissible (state.....)			
Grass seeds (non-suppurative) >10 seeds			
Other pathological conditions (state)			
Rail Fallout (GD)			
Dust Marks (GD)			
Grease Marks (GD)			
Hook Marks (GD)			
Floor Contact (GD)			
Foreign Bodies			
Total			
Weighting Factor	x1	x4	x10
Weighted Defects			
Inspector/Authorised Person Date		

APPENDIX C

RESIDUE PERFORMANCE STANDARDS

The provision of wholesome meat to the consumer requires an assurance that the product does not contain residues of chemicals which may be harmful to human health.

Residues may result from intentional treatment, from contamination or treatment of food sources, or from environmental contamination.

This assurance is provided on the basis of measures designed to ensure that the product contains no residues which exceed the Maximum Residue Limit (MRL), for that chemical as set by the National Food Standards Council of Australia through the National Food Authority. Similarly, Maximum Permissible Concentrations (MPC's) have been established for contaminants such as heavy metals. These limits are based on scientific evaluation and technology.

The National Residue Survey (NRS) commenced in 1961 as a monitoring program for chemical residues in agricultural commodities. It provides an estimate of the frequency of residues on a range of agricultural and veterinary chemicals and environmental contaminants in the individual commodities for targeted surveys and extension. The NRS provides assurance to Australia's trading partners and domestic consumers of the low residue status of these commodities. Inclusion of chemical and commodity combinations is based on risk profiling.

- Residue compliance of meat produced at game meat processing establishments is based on:
- Participation in the NRS;
- Participation in any other residue programs as required by the Controlling Authority;
- Systems of animal identification and trace back when violative residues are detected; and
- Identification of appropriate management strategies of areas known to produce animals with violative residues.

The quality assurance systems of establishments shall contain a provision for consideration of the residue status of the animals processed.

APPENDIX D

PREHARVEST INSPECTION

OUTCOME REQUIRED

Only healthy animals are harvested as game for human consumption.

The examination of the game animals for harvesting for human consumption shall be carried out by a person with training and qualifications which enable the accurate recognition of the conditions described and their correct disposition.

The field harvester shall not harvest any game with any evident abnormality which could render the carcase or part of the carcase unfit for human consumption.

The field harvester shall not:

- (a) Remove any serous membrane;
- (b) Remove, modify, or obliterate any evidence of disease or defect in any carcase or organ; and
- (c) Remove any mark or identification from the carcase.

No animal shall be harvested if it can be seen that it:

- (a) Has an abnormal gait;
- (b) Is weak or lethargic;
- (c) Lacks alertness;
- (d) Sits in an unusual way;
- (e) Holds its head in an unusual angle;
- (f) Has any discharge from the nose or mouth;
- (g) Has any skin abnormalities;
- (h) Is poorly fleshed; and
- (i) Or is otherwise apparently injured or suffering from an abnormality that may render meat derived from it unwholesome.

If the harvester during field operations notes a condition that may render the carcase unfit for human consumption and that may assist the inspector in his determinations, the harvester shall note the condition and all relevant details on a tag attached to the carcase.

APPENDIX E**POST-MORTEM OBSERVATIONS AND DISPOSITION****Note: Offal shall not be retained for human consumption**

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Abscess	Soft Pus	Only local involvement	CLA Localised infection. Meliodosis Staphylococcosis	Trim affected parts without spillage and condemn trimmings and associated lymph nodes. Pass remainder for human consumption.	Critical
	Soft Pus	Systemic involvement, (fever, swollen lymph nodes)	Bacteraemia Septicaemia Meliodosis Necrobacillosis	Condemn carcase and parts for human consumption or animal food.	Critical
Multiple Abscesses	Soft Pus	Minimal systemic involvement	Necrobacillosis Staphylococcosis	Condemn carcase and parts for human consumption or animal food.	Critical
Abscess - Granuloma	No systemic Involvement		Tuberculosis Actinomycosis Actinobacillosis	Trim lesion, immediately surround tissue and lymph nodes. Condemn trimmings. Pass remainder for human consumption or animal food.	Critical
	Systemic involvement including loss of condition Bone involvement		Tuberculosis Actinomycosis Actinobacillosis	Condemn carcase and parts for human consumption or animal food.	Critical
	Bone involvement	No systemic involvement	Tuberculosis Actinomycosis	Trim lesion, immediately surrounding tissue and lymph nodes. Condemn trimmings. Pass remainder for human consumption or animal food.	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Abnormal Odour	Mild	No systemic involvement	Metabolic Plant	Hold under refrigeration to determine if odour diminishes. If dissipated pass for human consumption or animal food.	Major
	Mild	No systemic involvement	Chemical	If possibly harmful when consumed condemn as unfit for human consumption or animal food. Otherwise hold under refrigeration to determine if odour diminishes. Where due investigation identified a suspect chemical refer to Food Standards Code for acceptability and if acceptable and dissipated pass for human consumption or animal food. May be passed for animal food if odour remains.	Critical
Anaemia	Strong	No systemic involvement	Metabolic Plant Chemical	If possibly harmful when consumed condemn as unfit for human consumption or animal food. Otherwise hold under refrigeration to determine if odour diminishes. If dissipated pass for human consumption or animal food. May be passed for animal food if odour remains.	Critical
	Putrefaction		Failure of refrigeration	Condemn as unfit for human consumption or animal food.	Critical
	Slight change	No systemic involvement	Gastro-intestinal parasites Blood parasites Metabolic disease	Pass for human consumption.	Minor
	Pronounced change	No systemic involvement	Gastro-intestinal parasites Metabolic disease	Save for animal food or for pharmaceutical purposes.	Major

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Arthritis	Single joint	No systemic involvement	Trauma	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Minor
	Multiple joints	No systemic involvement	Previous infection Swine erysipelas Metabolic disease Congenital condition	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Major
	Multiple joints	Systemic involvement	Swine Erysipelas Necrobacillosis	Condemn carcase as unfit for human consumption or animal food.	Critical
Brown Fat	Slight	No systemic involvement	Plant contaminants <i>Parinari nonda</i> (Nonda Palm nut) <i>Pandanus</i> spp. <i>Haemodorum corymbosum</i>	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Major
	Pronounced	No systemic involvement	Plant contaminants <i>Parinari nonda</i> (Nonda Palm nut) <i>Pandanus</i> spp. <i>Haemodorum corymbosum</i>	Save for animal food or for pharmaceutical purposes.	Major
Bruising	Surface only	Trauma		Trim lesion and immediately surrounding tissue. Trimmings may be used for animal food. Pass remainder for human consumption.	Minor
	Deep	Extensive	Trauma	Trim lesion and immediately surrounding tissue. Trimmings may be used for animal food or pharmaceutical purposes. Pass remainder for human consumption.	Minor
Congested blood vessels	No evidence of fever	Lungs congested	Heat stress	Check harvesting procedures immediately. Pass for human consumption or animal food.	Critical
	Systemic involvement	Evidence of fever	Pneumonia Salmonella	Condemn as unfit for human consumption or animal food.	Critical
Contamination	Slight		Poor harvesting technique	Trim affected part. Condemn trimmings. Pass remainder for human consumption or animal food.	Critical
	Gross		Poor harvesting technique	Condemn as unfit for human consumption or animal food.	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Cysts (fluid filled cavity)			<i>C. tenuicollis</i> <i>C. pisiformis</i> <i>M. serialis</i>	Trim lesion and immediately surround tissue. Condemn trimmings. Pass remainder for human consumption.	Minor
Cysts -Hydatid			<i>E. granulosus</i>	Trim lesion and immediately surrounding tissue. Condemn trimmings. Pass remainder for human consumption.	Critical
Dermatitis	No systemic involvement		Fleas Mites Ticks	Skin carcase. Pass remainder for human consumption or animal food.	Major
Developmental abnormalities	No systemic involvement		Congenital deformity	Trim lesion and immediately surrounding tissue. Trimmings may be used for animal food. Pass remainder for human consumption or animal food.	Minor
Diamond skin	No systemic involvement		Swine erysipelas	Trim affected part. Condemn trimmings. Pass remainder for human consumption or animal food.	Critical
	Systemic involvement		Swine erysipelas	Condemn as unfit for human consumption or animal food.	Critical
<i>Dirofilaria roemeri</i>	Stifle region only		<i>Dirofilaria roemeri</i>	Trim affected part. Condemn trimmings. Pass remainder for human consumption or animal food.	Major
	Found in areas other than the stifle		<i>Dirofilaria roemeri</i>	Save as animal food or for pharmaceutical purposes.	Major
Ecchymosis	No systemic involvement		Improper killing procedure	Check harvesting procedure. Trim lesion, immediately surrounding tissue. Trimmings may be used for animal food. Pass remainder for human consumption or animal food.	Minor
	Systemic involvement		Nutritional Stress	Save as animal food or for pharmaceutical purposes.	Minor
Emaciation	No systemic involvement		Bacteraemia	Condemn as unfit for human consumption or animal food.	Critical
	Systemic involvement				

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Fatty liver	No systemic involvement		Metabolic disease	Save as animal food or for pharmaceutical purposes. (Offal from game animals is not permitted for human consumption).	Minor
Fibrotic tracts in liver	Mild	No systemic involvement	Liver Fluke Acanthosis <i>C. tenuicollis</i> <i>S. dentatus</i>	Save as animal food or for pharmaceutical purposes. (Offal from game animals is not permitted for human consumption).	Minor
	Extensive	No systemic involvement	Liver Fluke Acanthosis <i>C. tenuicollis</i> <i>S. dentatus</i>	Save liver as animal food or for pharmaceutical purposes. (Offal from game animals is not permitted for human consumption).	Major
Fibrotic lungs			Lungworm	Save as animal food or for pharmaceutical purposes. (Offal from game animals is not permitted for human consumption).	Minor
Fistula	No systemic involvement		Staphylococcosis Brucellosis Necrobacillosis	Trim affected areas. Condemn trimmings. Pass remainder for human consumption.	Critical
	Systemic involvement		Staphylococcosis Brucellosis Necrobacillosis Bacteraemia	Condemn carcass and parts as unfit for human consumption or animal food.	Critical
Flystrike	Minor	No systemic involvement	Flystrike	Trim affected areas. Condemn trimmings. Pass remainder for human consumption.	Minor
	Localised involvement	Only regional lymph nodes involved	Flystrike	Trim lesion, affected part and regional lymph node. Condemn trimmings. Pass remainder as fit for human consumption.	Critical
	Systemic involvement	Fever evident	Flystrike	Condemn as unfit for human consumption or animal food.	Critical
Gangrene			Clostridial disease	Condemn as unfit for human consumption or animal food.	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Gastro-intestinal tract inflammation	No systemic involvement	No peritonitis	Gastro-intestinal parasitism Johnes's disease	Condemn Gastro-intestinal tract. Pass remainder as fit for human consumption or animal food.	Critical
	Systemic involvement	With or without peritonitis	Salmonellosis Bacteraemia	Condemn carcase and parts as unfit for human consumption or animal food.	Critical
	Pimply gut	No inflammation	Oesophagostomiasis	Condemn Gastro-intestinal tract. Pass carcase as fit for human consumption or animal food.	Minor
	Stomach fluke		Calicophoron Ceylonocotyle <i>Paramphistome</i> spp	Treat by thorough washing. Trim where necessary to remove flukes. Condemn trimmings. Pass as fit for animal food.	Minor
Grass seed	No systemic involvement		Grass seed	Trim lesion and immediately surrounding tissue. Condemn trimmings. Pass remainder for human consumption.	Minor
	Systemic involvement		Grass seed	Condemn as unfit for human consumption or animal food.	Major
Healed fracture	Localised with no systemic involvement		Old trauma	Trim lesion and immediately surround tissue. Condemn trimmings. Pass remainder for human consumption.	Minor
	Extensive with no systemic involvement		Rickets Old trauma	Trim lesions and immediately surround tissue. Condemn trimmings. Pass remainder for human consumption.	Major
Incomplete bleeding	No systemic involvement		Poor technique	Check bleeding procedure. Save as animal food or for pharmaceutical purposes.	Minor

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Jaundice	Slight	No systemic involvement	Metabolic disease Blood parasites	Hold under refrigeration for re-examination. If improved pass for human consumption or animal food.	Minor
	Pronounced	No systemic involvement Cartilage and Synovia affected	Metabolic disease Blood parasites Plant contaminants	Hold under refrigeration for re-examination. If improved pass for human consumption or animal food. If insufficient change save for animal food or pharmaceutical purposes only.	Major
	Systemic involvement	Kidneys affected	Leptospirosis	Condemn carcase and parts as unfit for human consumption or animal food.	Critical
Lymphadenitis	Systemic involvement		Salmonellosis Melioidosis Necrobacillosis Bacteraemia	Condemn as unfit for human consumption or animal food.	Critical
	Pigs—Swelling in pharyngeal region and neck. Abscess at point of entry	Usually limited systemic involvement	Anthrax in pigs.	Condemn carcase and parts including hide as unfit for human consumption or animal food. Institute disinfection procedures.	Critical
Mange	Inflammation of the skin		Mange mites	Skin carcase. Pass remainder as fit for human consumption or animal food.	Minor
Measle	No systemic involvement		<i>C. cellulosae</i> <i>C. ovis</i>	Trim lesions if practical. Condemn trimmings, treat carcasses by freezing, for boar less than -12°C for 5 days For goats if >5 measles found save as heat treated animal food.	Boar -Critical Goats - Minor
Mould	Myositis	Systemic involvement	<i>C. cellulosae</i> <i>C. ovis</i>	Condemn as unfit for human consumption or animal food.	Critical
	Slight		Fungal contamination	Trim affected parts and surrounding area. Condemn trimmings. Pass remainder for human consumption or animal food.	Critical
	Extensive		Fungal contamination	Condemn as unfit for human consumption or animal food.	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Myositis	Localised	No systemic involvement	Metabolic disease Sarcosporidiosis	Trim affected areas. Condemn trimmings. Pass remainder for human consumption.	Major
	Extensive	No systemic involvement	Metabolic disease Sarcosporidiosis Exertional rhabdomyolysis <i>C. cellulosae</i>	Condemn as unfit for human consumption or animal food.	Critical
Nasal and eye discharge	Localised	Regional involvement	Trauma	Trim affected part and associated lymph nodes. Condemn trimmings. Pass remainder for human consumption.	Critical
	Extensive	Systemic involvement	<i>C. cellulosae</i> <i>S. dentatus</i> Blackleg	Condemn as unfit for human consumption or animal food.	Critical
	Extensive		Myxomatosis	Condemn as unfit for human consumption or animal food.	Critical
Neoplasm	Localised	No systemic involvement	Cancer eye Neurofibroma Melanoma various	Trim affected part and associated lymph nodes. Condemn trimmings. Pass remainder for human consumption.	Minor
	Extensive	Systemic involvement	Cancer eye Neurofibroma Melanoma various	Condemn as unfit for human consumption or animal food.	Critical
Nodules			Onchocerciasis	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Minor
Oedema	Slight	No systemic involvement	Gastro-intestinal or Blood parasites	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Minor
	Extensive, no systemic involvement	Loss of condition	Gastro-intestinal or Blood parasites	Save as animal food or for pharmaceutical purposes.	Major
	Extensive, systemic involvement	Loss of condition	Bacteraemia	Condemn as unfit for human consumption or animal food.	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Pigmentation	No systemic involvement		Metabolic disease Congenital Unknown	Hold under refrigeration for reinspection. If colour dissipates pass for human consumption. If not, save for animal food or for pharmaceutical purposes.	Minor
Pleural and/or Peritoneal adhesions	No systemic involvement		Enzootic pneumonia Traumatic reticulo-peritonitis Old trauma	Trim affected serosal surface and condemn trimmings. Pass remainder for human consumption.	Minor
	Systemic involvement		Salmonellosis <i>E. coli</i> Bacteraemia Pneumonia	Condemn as unfit for human consumption or animal food.	Critical
Pneumonia	No systemic involvement		Enzootic pneumonia of pigs	Trim pleura and condemn. Condemn lungs. Pass remainder for human consumption.	Major
	Systemic involvement		Enzootic pneumonia of pigs Salmonellosis Bacteraemia	Condemn as unfit for human consumption or animal food	Critical
Ringworm	No systemic involvement		Mycotic Infection	Skin carcase. Pass remainder for human consumption or animal food.	Critical
Rumpware	No systemic involvement		Trauma	Skin carcase. Pass remainder for human consumption or animal food.	Major
Sparganosis			Spargana	Check fascia on hind legs and abdominal serosa. If less than 5 lesions trim affected parts. Rest is fit for human consumption after freezing. Meat must be frozen -10°C for 10 days. If more than 5 lesions check muscle seams. If present condemn for human consumption or animal food.	Critical
Ulcer	Localised		Ulcerative granuloma	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Major

Primary Observation	Secondary Observation	Tertiary Observation	Disease	Disposition	Significance of observation on product quality (risk category)*
Uneviscerated carcass			Only as part of an approved process. Delays in processing	Disposition will depend upon a range of factors including ambient temperature, length of delay. Action should be taken to minimise deterioration. Where the bacterial safety of the carcass is compromised condemn as unfit for human consumption or animal food.	Critical
Wounds	No systemic involvement		Bullet wounds Dog bites Trauma	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Major
	Systemic involvement		Bullet wounds Dog bites Trauma	Condemn as unfit for human consumption or animal food.	Critical

*Refer to Section 9 of the Standard

APPENDIX F

POST-MORTEM PROCEDURE FOR MACROPODS

Inspection should be carried out in a systematic manner and should take into account all available information from the field.

Pre-dressing Inspection

OUTCOMES REQUIRED

External evidence of disease or other conditions which may justify special treatment or condemnation as unfit for human consumption be detected.

All macropod carcasses shall be conveyed to a game processing establishment in accordance with this standard and shall be subjected to a pre-dressing inspection.

During the pre-dressing inspection particular attention shall be paid to:

- Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
- Indications of any decomposition process;
- Evidence consistent with poisoning, intoxication or contamination with any chemical substance;
- When transported from a field depot, deep muscle temperature in excess of 7°C;
- Indications of myiasis; and
- Failure to retain the heart, liver, lungs and kidneys.

Should post-mortem observations indicate any of the above the entire carcass shall be condemned as unfit for human consumption or animal food.

Disposition for other conditions shall be as indicated in Appendix E.

POST-MORTEM INSPECTION FOR MACROPODS

Note: Offal shall not be retained for human consumption

OUTCOMES REQUIRED

Only wholesome meat is passed for human consumption.

Carcass Inspection

- Observe and palpate the entire body surface, limbs, axillary regions and groin;
- Examine for superficial wounds, bruises, fractures, gunshot wounds, abscesses, cysts etc.;

- Examine the parietal surfaces of the carcase for cysts, abnormal adhesions, abscesses etc.;
- Swellings are to be incised and examined;
- The stifle area shall be examined for *Dirofilaria roemeri*; and
- The inguinofemoral, iliosacral and axillary lymph nodes shall be examined visually and by palpation.

Viscera Inspection

- The lungs and associated lymph nodes shall be examined by visual inspection and palpation;
- The heart shall be examined by visual inspection;
- The liver and associated lymph nodes shall be examined by visual inspection and palpation; and
- The kidneys shall be inspected by visual inspection and palpation.

Judgement

Disposition for diseases and conditions detected shall be as indicated in Appendix E.

If any carcase or part of the carcase is found to be diseased or is suspected of any disease which may render the carcase or part unfit for human consumption that carcase or part shall be condemned.

APPENDIX G

POST-MORTEM PROCEDURE FOR WILD BOAR

Inspection should be carried out in a systematic manner and should take into account all available information from the field.

Pre-dressing Inspection

OUTCOMES REQUIRED

External evidence of disease or other conditions which may justify special treatment or condemnation as unfit for human consumption be detected.

All boar carcasses shall be conveyed to a game processing establishment in accordance with this standard and shall be subjected to a pre-dressing inspection.

During the pre-dressing inspection particular attention shall be paid to:

- Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
- Indications of any decomposition process;
- Evidence consistent with poisoning, intoxication or contamination with any chemical substance;
- When transported from a field depot, deep muscle temperature in excess of 7°C;
- Indications of myiasis; and
- Failure to retain the heart, liver, lungs and kidneys.

Should post-mortem observations indicate any of the above the entire carcass shall be condemned as unfit for human consumption or animal food.

Disposition for other conditions shall be as indicated in Appendix E.

POST-MORTEM INSPECTION FOR WILD BOAR

Note: Offal shall not be retained for human consumption.

OUTCOMES REQUIRED

Only wholesome meat is passed for human consumption.

Head Inspection

- Observe head surfaces, particularly at the point of severance from the carcass; and
- Incise submaxillary and cervical lymph nodes if warranted.

Options: Discard head without inspection if approved by the controlling authority.

Viscera Inspection

- Observe and palpate the heart;
- Observe and palpate the lungs;
- Observe and palpate the bronchial and mediastinal lymph nodes;
- Observe the liver and palpate the portal lymph nodes; and
- Observe and palpate the enucleated or incised kidneys.

Carcase Inspection

- Observe interior and exterior surfaces; and
- Observe and palpate the superficial inguinal and internal iliac lymph nodes.

Additional Procedures

In animals found to be infected or suspected of being infected with *Cysticercus cellulosae* (Pork measles):

- Incise the internal and external masticatory muscles, tongue muscles of the everted heart and diaphragm after removal of the serous membranes. Observe all exposed muscle surfaces.

In animals found or suspected of being infected with Spargana:

- Observe retro-peritoneal tissues after removal of the peritoneum and the main muscular seams of the hind limb, incising as necessary.

Judgement

Disposition for diseases and conditions detected shall be as indicated in Appendix E.

If any carcass or part of a carcass is found to be diseased or is suspected of any disease which may render the carcass as unfit for human consumption that carcass or its parts shall be condemned.

APPENDIX H

POST-MORTEM PROCEDURE FOR WILD GOATS

Inspection should be carried out in a systematic manner and should take into account all available information from the field.

Pre-dressing Inspection

OUTCOMES REQUIRED

External evidence of disease or other conditions which may justify special treatment or condemnation as unfit for human consumption be detected.

All goat carcasses shall be conveyed to a game processing establishment in accordance with this Standard and shall be subjected to a pre-dressing inspection.

During the pre-dressing inspection particular attention shall be paid to:

- Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
- Indications of any decomposition process;
- Evidence consistent with poisoning, intoxication or contamination with any chemical substance;
- When transported from a field depot, deep muscle temperature in excess of 7°C;
- Indications of myiasis; and
- Failure to retain the heart, liver, lungs and kidneys.

Should post-mortem observations indicate any of the above the entire carcass shall be condemned as unfit for human consumption or animal food.

Disposition for other conditions shall be as indicated in Appendix E.

POST-MORTEM INSPECTION FOR WILD GOATS

Note: Offal shall not be retained for human consumption.

OUTCOMES REQUIRED

Only wholesome game meat is passed for human consumption.

Head Inspection

- Observe head surfaces, particularly at the point of severance from the carcass.

Options: Discard head without inspection at the discretion of the controlling authority.

Viscera Inspection

- Observe and palpate the heart;
- Observe and palpate the lungs;
- Observe and palpate the bronchial and mediastinal lymph nodes;
- Observe the liver and palpate the portal lymph nodes; and
- Observe and palpate the enucleated or incised kidneys.

Options for kids: Only observation required for all viscera except the heart.

Carcase Inspection

- Observe interior and exterior surfaces; and
- Observe and palpate the superficial inguinal, ischiatic, popliteal superficial cervical and precrucial lymph nodes.

Options for kids: Only observation required.

Other options: The superficial inguinal, superficial cervical and precrucial lymph nodes may be discarded prior to inspection.

Additional Procedures

In animals found or suspected of being infected with generalised arthritis:

- Incise the iliac and costo-axillary lymph nodes;
- Observe the heart after opening or eversion; and
- Observe and palpate the skeletal joints.

Judgement

Disposition for diseases and conditions detected shall be as indicated in Appendix E.

If any carcass or part of a carcass is found to be diseased or is suspected of any disease which may render the carcass as unfit for human consumption that carcass or its parts shall be condemned.

APPENDIX I

POST-MORTEM PROCEDURE FOR BRUSHTAIL POSSUM

Inspection should be carried out in a systematic manner and should take into account all available information from the field.

Pre-dressing Inspection

OUTCOMES REQUIRED

External evidence of disease or other conditions which may justify special treatment or condemnation as unfit for human consumption be detected.

All possum carcasses shall be conveyed to a game processing establishment in accordance with this Standard and shall be subjected to a pre-dressing inspection.

During the pre-dressing inspection particular attention shall be paid to:

- Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
- Indications of any decomposition process;
- Evidence consistent with poisoning, intoxication or contamination with any chemical substance;
- When transported from a field depot, deep muscle temperature in excess of 5°C;
- Indications of myiasis; and
- Failure to retain the heart, liver, lungs and kidneys.

Should post-mortem observations indicate any of the above the entire carcass shall be condemned as unfit for human consumption or animal food.

Disposition for other conditions shall be as indicated in Appendix E.

POST-MORTEM INSPECTION FOR BRUSHTAIL POSSUMS

Note: Offal shall not be retained for human consumption.

OUTCOMES REQUIRED

Only wholesome game meat is passed for human consumption.

Carcass Inspection

- Observe and palpate the entire body surface, limbs, axillary regions and groin;
- Examine for superficial wounds, bruises, fractures, gunshot wounds, abscesses, cysts etc.;

- Examine the parietal surfaces of the carcase for cysts, abnormal adhesions, abscesses etc.; and
- Swellings in the axillary region are to be incised and examined.

Note: Particular attention shall be paid to any abnormalities of the superficial lymph nodes of possums processed “skin-on fur-off”.

Viscera Inspection

- Observe and palpate the lungs, liver, heart and kidneys; and
- Observe and palpate the mesenteric chain of lymph nodes.

Judgement

Disposition for diseases and conditions detected shall be as indicated in Appendix E.

If any carcase or part of the carcase is found to be diseased or is suspected of any disease which may render the carcase or part unfit for human consumption that carcase or part shall be condemned.

APPENDIX J

POST-MORTEM PROCEDURE FOR RABBITS AND HARES

Inspection should be carried out in a systematic manner and should take into account all available information from the field.

Pre-dressing Inspection

OUTCOMES REQUIRED
External evidence of disease or other conditions which may justify special treatment or condemnation as unfit for human consumption be detected.

All rabbit and hare carcasses shall be conveyed to a game processing establishment in accordance with this Standard and shall be subjected to a pre-dressing inspection.

During the pre-dressing inspection particular attention shall be paid to:

- Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
- Indications of any decomposition process;
- Evidence consistent with poisoning, intoxication or contamination with any chemical substance;
- Deep muscle temperature in excess of 5°C;
- Indications of myiasis;
- Indications of myxomatosis; and
- Failure to retain the heart, liver, lungs and kidneys.

Should post-mortem observations indicate any of the above the entire carcass shall be condemned as unfit for human consumption or animal food.

Disposition for other conditions shall be as indicated in Appendix E.

POST-MORTEM INSPECTION FOR RABBITS AND HARES

Note: Offal shall not be retained for human consumption.

OUTCOMES REQUIRED
Only wholesome game meat is passed for human consumption.

Carcass Inspection

- Observe and palpate the entire body surface;
- Examine for superficial wounds, bruises, fractures, gunshot wounds, abscesses, cysts etc.; and

- Examine the parietal surfaces of the carcase for cysts, abnormal adhesions, abscesses etc.

Viscera Inspection

- Observe the lungs, liver, heart and kidneys for cysts, abscesses, abnormal enlargement and surface focal haemorrhages.

Judgement

Disposition for diseases and conditions detected shall be as indicated in Appendix E.

If any carcase or part of the carcase is found to be diseased or is suspected of any disease which may render the carcase or part unfit for human consumption that carcase or part shall be condemned.

APPENDIX K

POST-MORTEM PROCEDURE FOR WILD HORSES AND DONKEYS

Inspection should be carried out in a systematic manner and should take into account all available information from the field.

Pre-dressing Inspection

OUTCOMES REQUIRED

External evidence of disease or other conditions which may justify special treatment or condemnation as unfit for human consumption be detected.

All horse and donkey carcasses shall be conveyed to a game processing establishment in accordance with this Standard and shall be subjected to a pre-dressing inspection.

During the pre-dressing inspection particular attention shall be paid to:

- Signs consistent with natural death, death by trapping or of a moribund state at the time of death;
- Indications of any decomposition process;
- Evidence consistent with poisoning, intoxication or contamination with any chemical substance;
- Deep muscle temperature in excess of 7°C; and
- Failure to retain the heart, liver, lungs and kidneys.

Should post-mortem observations indicate any of the above the entire carcass shall be condemned as unfit for human consumption or animal food.

Disposition for other conditions shall be as indicated in Appendix E.

POST-MORTEM INSPECTION FOR HORSES AND DONKEYS

Note: Offal shall not be retained for human consumption.

OUTCOMES REQUIRED

Only wholesome game meat is passed for human consumption.

Head Inspection

- Observe head surfaces;
- Incise and observe parotid, retropharyngeal and submaxillary lymph nodes;
- Observe and palpate tongue; and
- Observe and palpate guttural pouches.

Options: Discard head without inspection at the discretion of the controlling authority.

Viscera Inspection

- Observe and palpate the heart;
- Observe and palpate the lungs;
- Incise the bronchial and mediastinal lymph nodes;
- Observe and palpate the liver;
- Palpate the portal lymph nodes;
- Incise bile ducts; and
- Palpate the enucleated or incised kidneys.

Carcase Inspection

- Observe interior and exterior surfaces;
- Observe the pelvic area;
- Observe the thoracic dorsal spines;
- Incise prepectoral lymph nodes;
- Incise the superficial inguinal and internal iliac lymph nodes;
- Palpate the precrural and prescapular lymph nodes; and
- Observe the cut surface of the vertebral column.

Additional Procedures

For grey and white horses: expose the subrhomboid area by dropping the shoulder to examine for melanoma, incise neck for signs of metastasis.

Judgement

Disposition for diseases and conditions detected shall be as indicated in Appendix E.

If any carcass or part of a carcass is found to be diseased or is suspected of any disease which may render the carcass as unfit for human consumption that carcass or its parts shall be condemned.

APPENDIX L

GAME POST-MORTEM INSPECTION REPORT

DATESPECIESEST NO

	Tag No.	Date	Shooter	Box I/D	No C/Cs	Findings
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Name & Signature Inspector/Authorised Person

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