



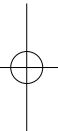
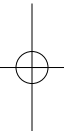
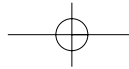
# NATIONAL ANIMAL WELFARE STANDARDS

AT

LIVESTOCK  
PROCESSING  
ESTABLISHMENTS

PREPARING  
MEAT FOR  
HUMAN  
CONSUMPTION

## 2. WORKING MANUAL



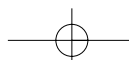
**National Animal Welfare Standards for Livestock Processing Establishments Preparing Meat for Human Consumption,  
2. Working Manual**

M. K. Edge, T. Maguire, J. Dorian & J.L.Barnett.  
2005

Available from: [www.amic.org.au](http://www.amic.org.au)  
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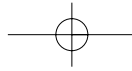
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ISBN



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## 1.0 PREFACE

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These animal welfare Standards have been developed to assist industry to continually improve animal welfare outcomes for Australian livestock at Livestock Processing Establishments. These animal welfare Standards comprise of two documents:

**1. ANIMAL WELFARE STANDARDS FOR LIVESTOCK PROCESSING ESTABLISHMENTS:**

Agreed industry Standards that are based on Model Codes of Practice, international and national guidelines, current practice and scientific literature.

**2. ANIMAL WELFARE WORKING MANUAL:**

Practical documentation to assist in the implementation of the Standard, which contains performance indicators, checklist questions with associated targets and background information. This is aimed to assist processors in implementing the above animal welfare standards and can be utilised for training purposes.

It is intended that animal welfare standards be incorporated into livestock processing quality assurance systems (Approved Arrangements). The scope of the Standards directly concerns the management of livestock from the point of receipt and unloading at the Livestock Processing Establishment to the point of slaughter, for human consumption.

Livestock Processing Establishments already address issues associated with food safety and meat quality using approved arrangements. The addition of animal welfare principles to these systems provides for a comprehensive and practical approach. Thus, this working document contains a series of performance indicators, checklist questions and associated targets that can aid processing establishments in the integration of animal welfare components into their current systems.

The development of the Working Documentation was a collaborative approach with a range of stakeholders, listed in Appendix 2.

## 2.0 MISSION STATEMENT

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The overall goal of the meat and livestock industry is to deliver high animal welfare standards that are integrated across the production chain to ensure the welfare of livestock from birth to slaughter. The mission of the livestock processing industry with regard to the welfare of animals is to ensure acceptable animal welfare standards are implemented and effectively verified.



## 3.0 DEFINITIONS

In these Standards, unless the contrary appears;

|                              |                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Approved Arrangement</b>  | when used in relation to a provision of this standard means the arrangement for the business that is approved by the controlling authority. The requirements that comprise the approved arrangement are set out in the Australian Standard for the Hygienic Production and Transportation of Meat for Human Consumption. <sup>1</sup> |
| <b>Bobby calves</b>          | young bovine animals under 6 weeks of age.                                                                                                                                                                                                                                                                                            |
| <b>Calves</b>                | young bovine animals, up to 150 kg hot standard carcass weight.                                                                                                                                                                                                                                                                       |
| <b>Class</b>                 | when referring to livestock means a group ('class') of animals defined by their age, size, or sex.                                                                                                                                                                                                                                    |
| <b>Construction</b>          | includes the design, layout, installation, assembly of the premises, equipment and vehicles and the materials of which they are made.                                                                                                                                                                                                 |
| <b>Controlling authority</b> | means the Commonwealth, State or Territory authority that is responsible for the enforcement of the Australian Standard for the Hygienic production and Transportation of Meat for Human Consumption.                                                                                                                                 |
| <b>Dressing</b>              | means the progressive separation of the body of an animal into a carcase (or sides of a carcase), offal and inedible material. <sup>2</sup>                                                                                                                                                                                           |
| <b>Emergency slaughter</b>   | means slaughter by necessity of any animal that: <ul style="list-style-type: none"> <li>a) has recently suffered traumatic injury or is affected or suspected of being affected by a disease or other abnormality and;</li> <li>b) is in pain or is likely to deteriorate unless it is killed immediately.<sup>2</sup></li> </ul>     |
| <b>Epileptiform seizure</b>  | the term "seizure" refers to a specific neurological event, in which epileptiform brain wave patterns are shown, such as a tonic-clonic muscular spasms and jerks or unconsciousness. Epileptiform seizures exhibited by stunned animals means no feeling of pain or sensation as the animals are in a state of unconsciousness.      |
| <b>Extremes of weather</b>   | defined as temperature and conditions, eg. rain, hail, snow, wind and heat, that individually or in combination, are likely predispose livestock to heat or cold stress.                                                                                                                                                              |

<sup>1</sup> Refer to appendix 1.

<sup>2</sup> As defined in the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS4696-2000)

## 3.0 DEFINITIONS (CONTINUED)

|                                           |                                                                                                                                                                                  |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hoisting</b>                           | the process of shackling and transferring the animal or animal carcase to the bleed rail.                                                                                        |
| <b>Humane destruction</b>                 | the humane destruction of an animal is accomplished by a method that produces rapid unconsciousness (stunning, anaesthetic agent) and subsequent death without pain or distress. |
| <b>Livestock Processing Establishment</b> | means premises used for the slaughter of livestock and production of meat or meat products for human consumption. <sup>1</sup>                                                   |
| <b>Moribund</b>                           | defined as an animal that is unable to stand, exhibits signs of distress or insensibility, such as panting, or glassy eye, and with little chance of recovery.                   |
| <b>Stunning - Reversible</b>              | the stunning of an animal where the animal may regain consciousness unless effectively bled out to cause its death.                                                              |
| <b>Stunning - Irreversible</b>            | the stunning of an animal where there is no possibility of the animal regaining consciousness if the procedure is correctly applied.                                             |
| <b>Slaughter</b>                          | means the killing of an animal and includes stunning, sticking and bleeding. <sup>2</sup>                                                                                        |
| <b>Sticking</b>                           | means the severing of blood vessels to induce effective bleeding. <sup>2</sup>                                                                                                   |
| <b>Stress</b>                             | A response by animals that activates their (behavioural, physiological and/or psychological) coping mechanisms.                                                                  |
| <b>Stun to stick interval</b>             | the time interval between the procedures of stunning and sticking.                                                                                                               |
| <b>Stunning</b>                           | means the procedure for rendering an animal unconscious and insensible to pain. <sup>2</sup>                                                                                     |
| <b>Sucker lamb</b>                        | a lamb that has not been weaned, and/or is predominantly fed on its mother's milk.                                                                                               |

<sup>1</sup> Refer to appendix 1.

<sup>2</sup> As defined in the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS4696-2000)

## 4.0 ACRONYMS

In this Working Manual, the following acronyms are detailed;

|              |                                                                           |
|--------------|---------------------------------------------------------------------------|
| <b>CSIRO</b> | Commonwealth Scientific and Industrial Research Organisation.             |
| <b>HACCP</b> | Hazard Analysis Critical Control Points                                   |
| <b>OIE</b>   | Office International des épizooties: World Organisation for Animal Health |
| <b>SCARM</b> | Standing Committee on Agriculture and Resource Management                 |
| <b>SOPs</b>  | Standard Operating Procedures                                             |

## 5.0 PURPOSE

To provide a framework for the definition of Standards that provide agreed animal welfare outcomes for the processing of Australian livestock.

**These animal welfare Standards aim to:**

- Support the existing standards and guidelines in the livestock processing industry including:
  - AS 4696-2002 Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption. CSIRO publishing web address, under food production: <http://www.publish.csiro.au/>.<sup>1</sup>
  - OIE Terrestrial Animal Health Code 2005: Guidelines for the Slaughter of Animals for Human Consumption. OIE World Organisation for Animal Health web address: <http://www.oie.int/>
  - Provide consistency with published commercial guidelines, for example the American Meat Institute Foundation's Good Management Practices for Animal Handling and Stunning, 2005 Edition. <http://www.amif.org/FactsandFigures/AMIF-animalwelfare1.htm>.
- Support the Model Code of Practice for the Welfare of Animals at Livestock Slaughtering at Establishments. SCARM Report 79. CSIRO publishing, 2001. <http://www.publish.csiro.au/>
- Clearly define the Standards, with associated indicative targets, for incorporation into quality assurance systems.
- Promote the humane and considerate treatment of livestock, and the use of good husbandry and management practices to improve the welfare of livestock at processing establishments.
- Provide information for all people responsible for the care and management of livestock at Livestock Processing Establishments on their responsibilities.
- Provide assurance to customers of meat and meat products from Australian livestock that these Standards are met.

## 6.0 ROLES AND RESPONSIBILITIES OF LIVESTOCK PROCESSORS

The points below outline the respective roles and responsibilities of the key participants in the livestock processing industry.

- The policy objective (as required under 3.1 of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption) for a meat business must include animal welfare and a demonstrated commitment of the proprietor to this objective.
- The approved arrangement (as required under 3.1 of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption) must include animal welfare considerations for daily management of livestock on the premises.
- It is the responsibility of processors to ensure high animal welfare outcomes utilising principles outlined in a quality management system, thus a system must be in place for verification and review of all practices that impact on animal welfare.
- It is the responsibility of processors to ensure that all personnel managing livestock are aware of their legal and moral responsibility to care for the welfare of animal under their control and that all personnel managing livestock are competent and trained for the purpose.
- There is a requirement for feedback to suppliers (including transporters, feedlot personnel and farmers) on compliance with animal welfare outcomes.

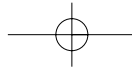
Appendix 4 was utilised to identify animal welfare considerations across the production chain and to define the scope of these standards.

## 6.0 APPLICATION OF THE ANIMAL WELFARE WORKING MANUAL

This manual provides additional information to support the implementation of the National Animal Welfare Standards for Livestock Processing Establishments. The Working Manual contains three components:

- 1) **PERFORMANCE INDICATORS**
- 2) **CHECKLIST QUESTIONS AND ASSOCIATED TARGETS**
- 3) **BACKGROUND INFORMATION AND REFERENCES**

The application of these components is outlined below and detailed at the beginning of each section of the Working Manual.



### **SECTION 1: PERFORMANCE INDICATORS**

The performance indicators are based upon principles in the Standards that describe how the outcomes can be achieved. The performance indicators describe the actions or procedures that need to be undertaken to demonstrate that the outcomes of the Standards have been met.

### **SECTION 2: CHECKLIST QUESTIONS AND TARGETS**

The checklist questions relate to the performance indicators and their purpose is to provide a tool to develop Standard Operating Procedures or Work Instructions and for monitoring and verification purposes. The targets indicate the level of performance expected and will assist in continual improvement. The targets will assist processors in determining 'what to aim for' when considering animal welfare. The targets were derived from the Code of Practice for the welfare of livestock, scientific literature, existing customer requirements and good practice parameters based on industry procedures.

The checklist questions and associated targets may be utilised for internal audit purposes or for monitoring as required by the management at individual Livestock Processing Establishments.

Neither the performance indicators, checklists or targets are compulsory, but are intended to assist processing establishments in demonstrating that the animal welfare outcomes have been met. In addition, they provide support for development and implementation of the National Animal Welfare Standards for Livestock Processing Establishments under the 'Approved Arrangement' currently required.

### **SECTION 3: BACKGROUND INFORMATION AND REFERENCES**

Technical information is provided to support the principles in the Standards. This information combines current industry good practice with scientific rationale in 6 sections corresponding with the Standards, and an additional section (7) that contains relevant information for livestock selection, sale and transport.

This part of the manual may be utilised for staff induction and training purposes, or may be utilised as a reference for Livestock Processing Establishments that are developing or revising their quality assurance program.

This Working Manual was developed to provide:

- Guidance on the actions and procedures required to satisfy the principles of the intended outcomes.
- Support for the development of appropriate work instructions and Standard Operating Procedures for practical use.
- Guidance for the development of associated auditing and verification activities.
- A management tool for monitoring activities.
- Assistance in training and as a reference for staff.



## 6.1 EQUIVALENCE

The performance indicators and checklists describe the means by which the establishment can demonstrate that the animal welfare Standards are being accomplished.

It should be noted that there may be a number of practical methods that could be used to demonstrate that the principles in the Standards are being met. Therefore, the performance indicators and checklists do not preclude Livestock Processing Establishments from utilising procedures or actions that differ from those described in this document, provided the principles outlined in the Standards are achieved and demonstrated.

## 7.0 SUMMARY OF ANIMAL WELFARE STANDARDS FOR THE LIVESTOCK PROCESSING ESTABLISHMENT

**A summary of the Standards for livestock at processing establishments, followed by the outcome intended for each Standard is below:**

### **STANDARD 1. PLANNING AND CONTINGENCIES**

Adequate planning is carried out for management of stock on a daily basis and contingencies are in place for emergencies to minimise risks to animal welfare.

### **STANDARD 2. MAINTENANCE AND DESIGN OF EQUIPMENT AND FACILITIES**

Facilities and equipment are designed, maintained and operated to ensure minimal interference or stress is incurred by livestock.

### **STANDARD 3. STAFF COMPETENCY**

All personnel responsible for the management of livestock or handling livestock are competent in their tasks and fulfil the requirements of these Standards.

### **STANDARD 4. MANAGEMENT AND HUMANE DESTRUCTION OF WEAK, ILL OR INJURED LIVESTOCK**

Weak, ill or injured livestock are identified and promptly treated in a humane manner.

### **STANDARD 5. MANAGEMENT OF LIVESTOCK TO MINIMISE STRESS AND INJURIES**

Livestock are routinely managed to minimise stress and injuries.

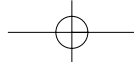
### **STANDARD 6. HUMANE SLAUGHTER PROCEDURES**

Procedures for humane slaughter, including restraint, stunning and slaughter of livestock, are carried out to minimise stress and in an efficient and effective manner.



# SECTION ONE

## PERFORMANCE INDICATORS



# SECTION 1: PERFORMANCE INDICATORS

These performance indicators are based upon the principles that underpin the Standards in the accompanying 'Animal Welfare Standards for Livestock Processing Establishments'. The performance indicators describe the actions that need to be undertaken to demonstrate that the outcomes have been met.

The performance indicators are a guide to assist Livestock Processing Establishments in demonstrating that the outcomes of the Standards have been met. It should be noted that there are a number of other practical methods that can be applied in order to achieve the intended outcomes. Livestock Processing Establishments may fulfil the performance indicators utilising a variety of other means, provided that the welfare outcome is demonstrated and recorded.

## STANDARD 1. PLANNING AND CONTINGENCIES

### Outcome

Adequate planning is carried out for management of stock on a daily basis and contingencies are in place for emergencies to minimise risks to animal welfare.

### Performance Indicators

- 1.1 Management includes a commitment to animal welfare within the establishment's quality policy.
- 1.2 Relevant Standard Operating Procedures and Work Instructions that contain animal welfare considerations for the daily management of livestock on the premises are developed and made available to personnel as necessary.
- 1.3 A system is in place for ongoing verification and review of practices that impact on animal welfare.
- 1.4 Appropriate slaughter and transport<sup>1</sup> arrangements are made with consideration for the class and condition of livestock. Scheduling is routinely conducted.
- 1.5 Written agreed contingencies outlining procedures to be followed in the event of delay, establishment breakdown, extremes of weather and industrial disputes are developed and these actions are implemented.
- 1.6 Competent persons are available or on-call to conduct the designated tasks.
- 1.7 All personnel responsible for the management and/or handling of livestock are assessed and recorded as being competent in their designated tasks.
- 1.8 Management procedures are in place to ensure all personnel on the premises conduct their activities to minimise risks to animal welfare.
- 1.9 Contractual arrangements with livestock suppliers include provisions for animal welfare and a system is in place to provide feedback on adverse outcomes.

<sup>1</sup> when ownership of the livestock consignment rests with the Livestock Processing Establishment at the time of transport

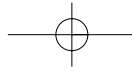
## STANDARD 2. MAINTENANCE AND DESIGN OF EQUIPMENT AND FACILITIES

### Outcome

Facilities and equipment are well-designed, maintained and operated to ensure minimal interference or stress is incurred by livestock.

### Performance Indicators

- 2.1 Facilities are free from protrusions that can cause injury, are clean and in good working order.
- 2.2 Flooring and ramps are designed to minimise slipping, falling and injury.
- 2.3 Facilities are available to separate and treat weak, ill or injured animals as required.
- 2.4 Facilities for water are available and operational.
- 2.5 Facilities for feeding are to be available and operational as necessary.
- 2.6 Design of holding and lairage facilities minimises susceptibility of livestock to heat or cold stress and provides sufficient space for livestock to be held.
- 2.7 Restraining equipment is designed to ensure that animals can effectively be restrained for stunning.
- 2.8 Stunning equipment is effectively stored, maintained and fully operational, and appropriate for the species and class of livestock.
- 2.9 Back-up stunning equipment is available and operational.



## STANDARD 3. STAFF COMPETENCY

---

### Outcome

All personnel responsible for the management of livestock or handling livestock are competent in their tasks and fulfil the requirements of these Standards.

### Performance Indicators

- 3.1 All personnel handling and managing livestock are assessed and recorded as being competent in their specific tasks.
- 3.2 Personnel undergoing training or that are not yet competent are supervised by a competent person.
- 3.3 All personnel managing livestock on a daily basis regularly observe the animals, can identify and respond to behaviours and other signs that may indicate a problem for an animal and can take the appropriate action to rectify the problem.
- 3.4 All personnel are assessed as competent in the careful and appropriate use of goading implements and dogs.
- 3.5 Personnel involved in stunning are trained and are competent in recognising the effectiveness of the procedure (signs of insensibility for the species).
- 3.6 Personnel involved in stunning are competent to use stunning backup equipment.
- 3.7 There is a nominated person(s) competent in humane destruction and available as required.

## STANDARD 4. MANAGEMENT AND HUMANE DESTRUCTION OF WEAK, ILL OR INJURED LIVESTOCK

---

### Outcome

Weak, ill or injured livestock are identified and treated in a humane manner promptly.

### Performance Indicators

- 4.1 Consignments of livestock are assessed upon arrival and any weak, ill or injured livestock are identified.
- 4.2 Livestock identified to be weak, ill or injured are assessed by a competent person and the appropriate action is promptly taken.
- 4.3 Where livestock are identified to require humane destruction or emergency slaughter, the procedure is carried out promptly and effectively.



## STANDARD 5. MANAGEMENT OF LIVESTOCK TO MINIMISE STRESS AND INJURIES

### Outcome

Livestock are routinely managed to minimise stress and injuries.

### Performance Indicators

- 5.1 All livestock are observed to have easy access to drinking water and feed (if feed is required) in holding facilities and yards.
- 5.2 Livestock are penned at densities that allow for free movement in accordance with the class of livestock.
- 5.3 Personnel take appropriate steps to manage any aggressive or unfamiliar animals in holding facilities to avoid any injury that may be caused to livestock.
- 5.4 Livestock are handled and moved through the facility in a calm and quiet manner to minimise stress.
- 5.5 The use of goading implements for livestock handling is monitored to ensure the use is appropriate for the class of livestock.
- 5.6 Dogs used to assist in moving livestock are appropriately trained, used only on appropriate species of livestock and are muzzled when working.
- 5.7 Care is taken when manually washing livestock with hand-held high-pressure hoses to avoid sensitive areas of the animals.
- 5.8 Care is taken when washing livestock to minimise cold stress.

## STANDARD 6. HUMANE SLAUGHTER PROCEDURES

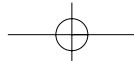
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### Outcome

Procedures for humane slaughter, including restraint, stunning and slaughter of livestock are carried out to minimise stress and in an efficient and effective manner.

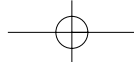
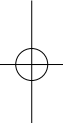
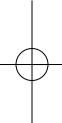
### Performance Indicators

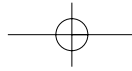
- 6.1 Livestock are restrained effectively with minimal stress and for minimal duration.
- 6.2 Livestock are stunned with appropriate and effective equipment, suitable for the species and class.
- 6.3 Procedures are in place to monitor that the animal is effectively stunned and confirmed insensible; corrective action is immediately taken if required.
- 6.4 Hoisting does not commence until the animal is confirmed insensible.
- 6.5 Livestock are effectively stuck as quickly as possible after stunning.
- 6.6 If reversible stunning is used, sticking is applied in a manner that ensures animals do not regain sensibility.
- 6.7 No animals are stuck without being effectively stunned unless approval is obtained from a controlling authority.
- 6.8 Dressing does not commence until the animal is irreversibly insensible



# SECTION TWO

## CHECKLISTS AND TARGETS





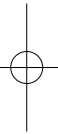
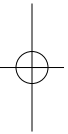
## SECTION 2: CHECKLIST QUESTIONS AND TARGETS

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The checklist questions relate to the performance indicators in Section One, and provide a practical tool to assess the Livestock Processing Establishment's Standard Operating Procedures (SOPs), work instructions or for use in monitoring and verification of daily practices.

Where appropriate, targets have been provided for checklist questions to indicate the appropriate level of performance expected and to assist in continual improvement. The targets were developed to assist processors to determine 'what to aim for' when considering animal welfare and to ensure that personnel responsible for verification are all measuring the same elements for animal welfare.

The checklist questions that are shaded have corresponding targets, detailed in the table at the bottom of each page. Both the checklist questions and associated targets may be utilised for internal audit purposes or for monitoring as required by management at individual Livestock Processing Establishments.



| <b>PERFORMANCE CHECKLIST FOR STANDARD 1:</b>         |                                                                                                                                                                                                                                                       | <b>Checked/ Completed</b><br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | <b>See target below:</b> |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------------------|
|                                                      |                                                                                                                                                                                                                                                       | YES                                                                                                                                      | NO | N/A |                          |
| <b>PLANNING AND CONTINGENCIES</b>                    |                                                                                                                                                                                                                                                       |                                                                                                                                          |    |     |                          |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT: |                                                                                                                                                                                                                                                       |                                                                                                                                          |    |     |                          |
| 1.1                                                  | There is a quality policy that includes the establishment's commitment to animal welfare                                                                                                                                                              |                                                                                                                                          |    |     |                          |
| 1.2                                                  | Animal welfare considerations are included in the establishment's Standard Operating Procedures and Work Instructions                                                                                                                                 |                                                                                                                                          |    |     |                          |
| 1.3                                                  | A system is in place to verify and review practices that impact on animal welfare                                                                                                                                                                     |                                                                                                                                          |    |     |                          |
| 1.4                                                  | Appropriate slaughter and transport (if transport is the responsibility of the establishment) arrangements are made with consideration of class and condition of livestock                                                                            |                                                                                                                                          |    |     | 1.4                      |
| 1.5                                                  | Written contingencies are developed and actions carried out (as required) for the following:<br>- delays or breakdown<br>- use of back-up stunning equipment<br>- industrial dispute<br>- obtaining and providing feed, water and shelter as required |                                                                                                                                          |    |     | 1.5                      |
| 1.6                                                  | Assessments are made and recorded for personnel responsible for the management or handling livestock to verify they are competent in their tasks                                                                                                      |                                                                                                                                          |    |     |                          |
| 1.7                                                  | Contractual arrangements with livestock suppliers include provisions for animal welfare and a system is in place to record and provide feedback on adverse outcomes                                                                                   |                                                                                                                                          |    |     |                          |

**Checklist question****Targets for Standard 1**

- 1.4 Slaughter arrangements take into account the condition of livestock, time of arrival and duration of travel. Expectations and feedback relating to the fitness of stock arriving at the enterprise should be regularly communicated to service providers (including transport and feedlot companies and producers).
- Bobby calves and sucker lambs (unweaned) to be slaughtered on the day of arrival at the Livestock Processing Establishment.
- 1.5 Livestock in holding pens in lairage must have access to water at all times.
- Bobby calves and sucker lambs must not be without appropriate feed for more than 24 hours.
  - Piglets should not be without feed for more than 12 hours and pigs for more than 24 hours from the time of leaving the farm.
  - Sheep and cattle must not be without feed for more than 32\* hours from the time of leaving the farm. \* based on Code of Practice for Land Transport of Sheep under review as of Sept 2005.
- In the event of a delay in slaughter or mechanical breakdown, contingencies and arrangements for the management of animals already at the Livestock Processing Establishment are in place. For example, the diversion of further consignments of livestock scheduled to arrive at the plant.

| <b>PERFORMANCE CHECKLIST FOR STANDARD 2:</b>              |                                                                                                        | <b>Checked/ Completed</b><br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | <b>See target below:</b> |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------------------|
|                                                           |                                                                                                        | YES                                                                                                                                      | NO | N/A |                          |
| <b>MAINTENANCE AND DESIGN OF EQUIPMENT AND FACILITIES</b> |                                                                                                        |                                                                                                                                          |    |     |                          |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT:      |                                                                                                        |                                                                                                                                          |    |     |                          |
| 2.1                                                       | Facilities are free from protrusions or other objects that could cause injury                          |                                                                                                                                          |    |     | 2.1                      |
| 2.2                                                       | Flooring and ramps minimise slipping, falling and injury                                               |                                                                                                                                          |    |     | 2.2                      |
| 2.3                                                       | Facilities are available to separate and treat weak, ill or injured livestock as required              |                                                                                                                                          |    |     |                          |
| 2.4                                                       | Facilities for water and feed (where feeding is required) are available and operational                |                                                                                                                                          |    |     |                          |
| 2.5                                                       | Lighting is adequate and uniform to aid animal movement .and inspection                                |                                                                                                                                          |    |     | 2.5                      |
| 2.6                                                       | Design of facilities minimises the susceptibility of livestock in holding areas to heat or cold stress |                                                                                                                                          |    |     |                          |
| 2.7                                                       | Livestock have sufficient space in holding pens to be able to freely move                              |                                                                                                                                          |    |     |                          |
| 2.8                                                       | Restraining equipment is designed and maintained to restrain animals with minimal stress               |                                                                                                                                          |    |     | 2.8                      |

**Checklist question****Targets for Standard 2**

- 2.1 Injuries to stock as a result of facilities are identified and recorded (bruising data may assist) and the appropriate corrective or preventative action is taken to improve the facilities.
- 2.2 Examination of facilities should occur if livestock are identified to have difficulty, are baulking, handling by stockpeople is excessive or livestock are observed to be regularly slipping and falling in particular areas.  
Particular areas to be assessed for examining facilities are the crowd pen, lead-up chute, restrainer entrance or stunning box:  
– As a guide, less than 3% of animals should be observed to be slipping (loss of footing as a result of flooring, ie. not due to behavioural contact with another animal).  
– As a guide, less than 1% of animals should be observed to fall (body touches floor).  
Ramps to be designed for the particular species of livestock to walk unaided, without slipping or falling. Suggested slopes are 20° for sheep, cattle and pigs and 12° for bobby calves.
- 2.5 Lighting should not cause dark shadows or bright spots; if animals are baulking at the light, action should be taken to make improvements.
- 2.8 Restraining equipment is effective in restraining livestock without causing injury.  
– V-shape conveyors need to be of suitable design and dimension for complete restraint of the animal being carried.  
– Knocking boxes should be appropriate for the size of the animal.  
– Knocking boxes must allow for ready and quick access to the head of the animal that may have fallen or lay down.  
– It is preferable that the knocking box contains a head restraint for cattle.

| <b>PERFORMANCE CHECKLIST FOR STANDARD 2:</b><br><br><b>MAINTENANCE AND DESIGN OF EQUIPMENT AND FACILITIES (Continued)</b> |                                                                                 | <b>Checked/ Completed</b><br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | <b>See target below:</b> |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------------------|
|                                                                                                                           |                                                                                 | YES                                                                                                                                      | NO | N/A |                          |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT:                                                                      |                                                                                 |                                                                                                                                          |    |     |                          |
| 2.9                                                                                                                       | Stunning equipment is appropriately stored, maintained and is fully operational |                                                                                                                                          |    |     | 2.9                      |
| 2.10                                                                                                                      | Stunning equipment is appropriate for the species and class of livestock        |                                                                                                                                          |    |     | 2.9                      |
| 2.11                                                                                                                      | Back-up stunning equipment is available and operational for all species         |                                                                                                                                          |    |     |                          |

**Checklist question**

2.9

**Targets for Standard 2**

FOR MECHANICAL STUNNING:

- Equipment must be maintained to manufacturer's specifications.
- Equipment should be checked at the beginning of production day/shift and stored appropriately.

FOR CARTRIDGE DRIVEN CAPTIVE BOLT GUNS:

- Charges should be appropriately stored (dry, secure and separated into categories of strength and marked accordingly).

FOR PNEUMATIC CAPTIVE BOLT GUNS:

- Compressed air generators must be able to deliver the required pressure for an effective stun and the required air volume to keep up with production (generators should run at around 80% of their capacity during normal production).
- Pressure gauges should be installed and monitored.

FOR CO<sub>2</sub> STUNNING:

- The CO<sub>2</sub> chamber and the equipment used for conveying them should be designed, constructed and maintained in such a way as to avoid injury or unnecessary stress to the animals.
- The conveyor and the chamber should be adequately lit to allow the animals to see their surroundings and if possible, each other.
- There must be alternative back-up stunning equipment for emergencies.
- The chamber should be equipped to continuously measure and display the CO<sub>2</sub> concentration and the time of exposure. The chamber should also give a clearly visible and audible warning if the concentration of CO<sub>2</sub> falls below the required concentration and action must be taken immediately to fix the problem.
- The design of the stunning operation must ensure that animals are loaded into the carriage and lowered in a manner to achieve an effective stun.

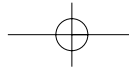
FOR ELECTRICAL STUNNING:

- Electrodes should be maintained in accordance with manufacturer's specifications and kept clean to ensure the flow of current is optimal.
- Regular checks of electrical continuity and insulation should be carried out to ensure current flow to the electrodes is adequate and there is no current leakage.
- Electrical stunning equipment should be tested daily, prior to application on animals using appropriate resistors or dummy loads to ensure the power output is adequate to stun animals.
- The equipment should incorporate a device which monitors and displays stunning current delivered to the animals.
- The stunning equipment should be fitted with a trigger to manually initiate the stun while the current flow should be automatically terminated.
- Ideally the stun should be monitored electronically for the appropriate current level and stun duration, and any fall below minimum levels should be automatically recorded and rectified.
- The stunning equipment should be provided with adequate power to continuously achieve the minimum current levels recommended for stunning as indicated below:
- Cattle – 1.5A, Calves – 1.0A, Pigs – 1.25A, Sheep & Goats – 1.0A, Lambs – 0.7A.

| <b>PERFORMANCE CHECKLIST FOR STANDARD 3:</b>         |                                                                                                                                                                                              | <b>Checked/ Completed</b><br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | <b>See target below:</b> |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------------------|
|                                                      |                                                                                                                                                                                              | YES                                                                                                                                      | NO | N/A |                          |
| <b>STAFF COMPETENCY</b>                              |                                                                                                                                                                                              |                                                                                                                                          |    |     |                          |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT: |                                                                                                                                                                                              |                                                                                                                                          |    |     |                          |
| 3.1                                                  | Personnel handling and managing livestock are assessed and recorded as being competent in their specific tasks                                                                               |                                                                                                                                          |    |     | 3.1                      |
| 3.2                                                  | Personnel undergoing training or that are not yet competent in the task are supervised until competent                                                                                       |                                                                                                                                          |    |     | 3.1                      |
| 3.3                                                  | Personnel managing livestock on a daily basis regularly observe the animals and are competent in identifying abnormal animal behaviour, and taking action when required to rectify a problem |                                                                                                                                          |    |     |                          |
| 3.4                                                  | All relevant personnel are assessed as competent in the careful and appropriate use of goading implements and dogs.                                                                          |                                                                                                                                          |    |     | see 5.5                  |
| 3.5                                                  | There are nominated personnel that are trained and competent in procedures for humane destruction and available to carry out the procedure when required                                     |                                                                                                                                          |    |     |                          |
| 3.6                                                  | Personnel involved in stunning are trained and competent in recognising the effectiveness of the procedure                                                                                   |                                                                                                                                          |    |     | 3.6                      |
| 3.7                                                  | Personnel involved in stunning are competent in the use of back-up equipment                                                                                                                 |                                                                                                                                          |    |     |                          |

**Checklist question****Targets for Standard 3**

- 3.1 Staff competencies are maintained and recorded.  
Staff undergoing training or that are assisting and not yet assessed as competent in a particular task are supervised at all times.
- 3.6 Personnel involved in stunning are trained and competent in recognising the effectiveness of the procedure  
A system should be in place to assess:
- Effectiveness of the stun.
  - Maintenance of insensibility following sticking.
- Signs of successful stun include:
- A) MECHANICAL STUNNING:  
The animal collapses immediately with no attempt to stand. The body and muscles of the animal become rigid immediately after the stun. Normal rhythmic breathing stops. The eyelid is open with the eyeball facing straight ahead and is not rotated. The corneal reflex is absent.
- B) CO<sub>2</sub>-STUNNING:  
Normal reflexes (i.e. corneal reflex) are absent.
- C) ELECTRICAL STUNNING (HEAD-ONLY)  
Animal collapses immediately after the start of the current flow. When the current flow is stopped signs of an epileptiform seizure develop. The seizure exhibited is divided into three stages:
- Tonic stage (animal is rigid, usually with hind leg flexion and front leg extension or flexion).
  - Clonic stage (leg paddling movements).
  - Quiet stage (animal is quite still before first signs of recovery appear). Eye reflexes or movements cannot be used at this stage to assess the effectiveness of the stun. Normal rhythmic breathing is absent. Gasping (breathing in without breathing out) sometimes occurs.



**Checklist question      Targets for Standard 3**

**D) ELECTRICAL STUNNING (HEAD TO BODY):**

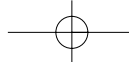
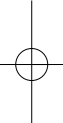
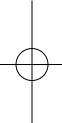
Animal collapses immediately after the start of the current flow. When the current flow is stopped, signs of an epileptiform seizure develop (less pronounced than a head-only stun).

Eye reflexes or movements cannot be used at this stage to assess the effectiveness of the stun.

Normal rhythmic breathing is absent. Gasping (breathing in without breathing out) sometimes occurs.

**Effective Bleeding**

If the sticking is carried out correctly there should be no signs of sensibility in animals on the bleed rail. Regular checks should be done to ensure animals do not regain consciousness after they have been stunned. If there are signs of consciousness the animal should be immediately re-stunned.



| <b>PERFORMANCE CHECKLIST FOR STANDARD 4:</b><br><b>MANAGEMENT AND HUMANE DESTRUCTION OF WEAK, ILL OR INJURED LIVESTOCK</b> |                                                                                                                                                                                                                                  | <b>Checked/ Completed</b><br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | <b>See target below:</b> |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------------------|
|                                                                                                                            |                                                                                                                                                                                                                                  | YES                                                                                                                                      | NO | N/A |                          |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT:                                                                       |                                                                                                                                                                                                                                  |                                                                                                                                          |    |     |                          |
| 4.1                                                                                                                        | Consignments of livestock are assessed upon arrival and any weak, ill or injured animals are identified                                                                                                                          |                                                                                                                                          |    |     | 4.1, 4.5                 |
| 4.2                                                                                                                        | Livestock identified to be weak, ill or injured are assessed by a competent person and appropriate action is promptly taken                                                                                                      |                                                                                                                                          |    |     | 4.1                      |
| 4.3                                                                                                                        | For livestock identified to be humanely destroyed or placed for emergency slaughter, the procedure is carried out promptly and effectively                                                                                       |                                                                                                                                          |    |     | 4.1                      |
| 4.4                                                                                                                        | Weak, ill or injured stock that are to be treated or provided with additional rest prior to slaughter are placed in separate pens with food and water and in a position where they are observed at least 3 times per day         |                                                                                                                                          |    |     | 4.5                      |
| 4.5                                                                                                                        | All other livestock are observed regularly to ensure any sick, weak or injured stock are identified, and if so, the animals are placed in separate pens and/or treated if required or are humanely destroyed as soon as possible |                                                                                                                                          |    |     | 4.5                      |

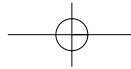
#### Checklist question      Targets for Standard 4

- 4.1      Livestock must be examined upon arrival and any weak, ill or injured stock must be assessed by a competent person and the appropriate action taken.
- As a guide, weak, ill or injured stock that are to be treated can be placed in separate pens with food and water and in a position where they are observed at least 3 times per day or other management/treatment options are carried out as determined by competent personnel.
  - As a guide, weak, ill or injured stock that are to be rested can be placed in holding pens with space to lie down and recover or separated and managed as determined by competent personnel
  - Weak, ill or injured stock that are identified as requiring immediate humane destruction or casualty slaughter, must be humanely destroyed as soon as possible by a competent person.
  - Moribund animals must be euthanased on the spot. (Moribund defined as an animal that is unable to stand, exhibits signs of distress or insensibility, such as panting, or glassy eye, and with little chance of recovery).
- 4.5      – Personnel must regularly observe livestock in lairage (all animals observed at least once daily) to identify any weak, ill or injured stock in holding pens and action taken if required.

| <b>PERFORMANCE CHECKLIST FOR STANDARD 5:</b><br><b>MANAGEMENT AND MOVEMENT OF LIVESTOCK TO MINIMISE STRESS AND INJURIES</b> |                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Checked/ Completed</b><br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | <b>See target below:</b> |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------------------|
|                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                     | YES                                                                                                                                      | NO | N/A |                          |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT:                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                          |    |     |                          |
| 5.1                                                                                                                         | Livestock have easy access to water and feed (if feed required) in holding facilities and yards                                                                                                                                                                                                                                                                                                     |                                                                                                                                          |    |     | 5.1                      |
| 5.2                                                                                                                         | Livestock are penned according to class and species and at densities that allow for free movement                                                                                                                                                                                                                                                                                                   |                                                                                                                                          |    |     | 5.1                      |
| 5.3                                                                                                                         | Steps are taken to manage any aggressive or unfamiliar animals that may fight in pens                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |    |     | 5.2                      |
| 5.4                                                                                                                         | Livestock are moved through the facility in a calm manner that minimises stress                                                                                                                                                                                                                                                                                                                     |                                                                                                                                          |    |     |                          |
| 5.5                                                                                                                         | The use of goading implements and dogs for livestock handling is monitored to ensure the use is appropriate to the species and class of livestock.<br>– Electric prodders can only to be used on cattle over 3 months of age.<br>– Dogs are not used on any animal younger than 3 months of age<br>– Dogs are well trained and are muzzled at all times while working or in the vicinity of animals |                                                                                                                                          |    |     | 5.5                      |
| 5.6                                                                                                                         | Care is taken when manually pressure washing livestock to avoid sensitive areas and cold stress.                                                                                                                                                                                                                                                                                                    |                                                                                                                                          |    |     |                          |

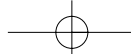
**Checklist question****Targets for Standard 5**

- 5.1 Livestock must be able to move freely in holding pens and yards and be able to access water without any difficulty.
- 5.2 Procedures should be in place to appropriately manage the following groups of animals in a manner that avoids aggression and subsequent injury:
- young calves and animals that significantly differ in size.
  - females that are pregnant or with suckling offspring.
  - entire male animals (bulls/boars etc).
  - unfamiliar groups of pigs.
- These procedures need to include handling of aggressive animals and the availability of facilities to separate animals if required.
- 5.5 Electric prodders, dogs and other handling implements are 'fit for purpose' and used appropriately when moving livestock.
- Electric prodders should not to be used to move sheep, calves or pigs, or on animals less than 3 month of age, (with the exception of moving pigs into the stunner - see targets below). Electric prodders are not to be used on sensitive areas of the animal's body (eyes, ears, nose, anus, etc).
  - Use of other driving aids is recommended, provided these are used appropriately, and in a manner that encourage movement without causing injury. Examples include "flappers", boards, and rattlers.
- Where handling difficulties are identified, or have increased, factors that cause baulking or other facility design issues need to be re-examined and action taken to eliminate the problem. Professional advice should be sought as required. Items that can cause baulking and increase prodder use and handling include noise, poor design, people movement, lighting and shadows.

**Checklist question    Targets for Standard 5**

To monitor handling, particularly prodder use, the recommended targets include:

- Less than 25% of total animals prodded.
- This should be measured at specified locations between lairage and the restrainer by counting the prodded animals and recording the type of prod per animal, for example, 1) use of prod in normal manner, 2) use of prod because the animal baulked (a facility problem), or 3) constant prods. The target is for less than 3 prods per animal (for those requiring the use of a prod) between holding pens and the lead-up chute.
- Dogs are not used on any animal younger than 3 months of age
- Dogs are well trained and muzzled when working in the vicinity of animals
- Dogs are not used on calves or pigs.



| PERFORMANCE CHECKLIST FOR STANDARD 6:<br><br>HUMANE SLAUGHTER PROCEDURES |                                                                                   | Checked/ Completed<br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | See target below: |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----|-----|-------------------|
|                                                                          |                                                                                   | YES                                                                                                                               | NO | N/A |                   |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT:                     |                                                                                   |                                                                                                                                   |    |     |                   |
| 6.1                                                                      | Livestock are restrained effectively with minimal stress and for minimal duration |                                                                                                                                   |    |     | 6.1               |
| 6.2                                                                      | Livestock are stunned with appropriate and effective equipment                    |                                                                                                                                   |    |     | 6.2               |
| 6.3                                                                      | Stunning is effective in rendering the animal insensible                          |                                                                                                                                   |    |     | 6.2               |

**Checklist question****Targets for Standard 6**

- 6.1 Animals should only be allowed to enter the restrainer if they are to be stunned without delay, ie. animals should not be left in restrainers during breaks. Vocalisations in response to an adverse event indicates a potential problem that needs to be identified and where appropriate expert advice should be sought to identify the problem and to provide practical recommendations that should then be implemented. As a guide, targets for vocalisations are as follows:
- less than 3% of animals vocalising (cattle)
  - less than 1% of animals vocalising (pigs)
  - and slipping of less than 3% of animals in the restrainer
- 6.2 To ensure stunning effectiveness the following is a guide for the use of the equipment:
- MECHANICAL STUNNING:**  
The head of the animal should be restrained in such a way that it allows the operator easy access to a relatively immobile target, thus ensuring that gun placement is accurate and the first shot effectiveness remains acceptable. If this rate drops below 95% corrective action should be taken.  
**CARTRIDGE DRIVEN CAPTIVE BOLT GUNS** should be operated with the appropriate loads for the class of livestock to be stunned.  
**PNEUMATIC CAPTIVE BOLT GUNS** should be operated at the pressure levels specified by the manufacturer.
- CONTROLLED ATMOSPHERE STUNNING:**  
At present the agent used for this type of stunning is CO<sub>2</sub>. Other types of gases could be used in the future.  
For CO<sub>2</sub> stunning of pigs, the concentration of CO<sub>2</sub> for stunning should preferably be 90% by volume but no less than 80% by volume. After entering the stunning chamber the animals should be conveyed to the point of maximum concentration of the gas without delay. Ideally, pigs should be exposed to this concentration of CO<sub>2</sub> for no less than three minutes.
- ELECTRICAL STUNNING:**  
An electrical stunning device should be applied to the animal so that it spans the brain.
- For head to body stunning electrodes are to be positioned at either 3cm rostral or 3 or 6.5cm caudal to the ear midline. For head only, positioning at 3cm and 6.5 cm caudal to the ear midline is appropriate. Electrodes need to be positioned close to the brain ie. over the eyes and in front of the ears. Targets include the following before investigation into stunning practice may be required: Correct placement of tongs observed for at least 98% of animals and less than 1% of animals vocalising due to energising of the electrode before firm positioning.
  - The application of electrical currents which bypass the brain is unacceptable unless the animal has been stunned.
  - Appropriate measures, such as removing excess wool or wetting the skin at the point of contact, can minimise the impedance of the skin and facilitate effective stunning.

The following table shows the minimum current level and stun durations necessary to elicit an epileptiform seizure and cause reversible unconsciousness (head only stun).

| Species       | Minimum current levels (Amps) | Minimum stun duration (seconds) |
|---------------|-------------------------------|---------------------------------|
| Cattle        | 1.5                           | 2                               |
| Calves        | 1.0                           | 2                               |
| Pigs          | 1.25                          | 1                               |
| Sheep & Goats | 1.0                           | 1                               |
| Lambs         | 0.7                           | 1                               |

| PERFORMANCE CHECKLIST FOR STANDARD 6:<br><br>HUMANE SLAUGHTER PROCEDURES (Continued) |                                                                                                                                                                                                           | Checked/ Completed<br>(if a problem is identified, standard HACCP principles apply ie. record and take action to rectify problem) |    |     | See target below: |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----|-----|-------------------|
|                                                                                      |                                                                                                                                                                                                           | YES                                                                                                                               | NO | N/A |                   |
| CAN THE LIVESTOCK PROCESSING PLANT DEMONSTRATE THAT:                                 |                                                                                                                                                                                                           |                                                                                                                                   |    |     |                   |
| 6.4                                                                                  | Livestock are stuck (bled-out) effectively and as quickly as possible after stunning                                                                                                                      |                                                                                                                                   |    |     | 6.4               |
| 6.5                                                                                  | If using a reversible stun, sticking is applied to ensure that animals do not regain sensibility                                                                                                          |                                                                                                                                   |    |     | 6.4               |
| 6.6                                                                                  | No animals are slaughtered without prior stun unless approval is obtained from the controlling authority                                                                                                  |                                                                                                                                   |    |     | 6.4               |
| 6.7                                                                                  | Management systems are in place to ensure effective stunning that include:<br>– training,<br>– equipment monitoring/maintenance<br>– verification of effectiveness of the stunning and sticking processes |                                                                                                                                   |    |     | see 3.6           |
| 6.8                                                                                  | Hoisting does not commence until the animal is confirmed insensible                                                                                                                                       |                                                                                                                                   |    |     |                   |
| 6.9                                                                                  | Dressing does not commence until the animal is confirmed irreversibly insensible                                                                                                                          |                                                                                                                                   |    |     | 6.9               |

**Checklist question**

6.4

**Targets for Standard 6**

Reversible stun:

- After a reversible stun all animals should be bled effectively by either cutting both carotid arteries or cutting the vessels from which they arise (eg. thoracic stick). A thoracic stick can be carried out following a carotid artery cut.
- After the head-only electrical stunning of cattle (all ages) it is necessary to follow up a neck cut with a thoracic stick because the blood loss from the neck cut alone is not sufficient to ensure the animal does not regain consciousness.

Irreversible stun:

- After an irreversible stun the stun-stick intervals are not critical, however the aim should still be to keep them to the minimum practical. In most practical applications an electrical head to body stun can be considered irreversible.
- Therefore maximum stun to stick intervals should not exceed:

**Stunning method**

**Maximum interval for commencement of bleeding**

|                                                |                                        |            |
|------------------------------------------------|----------------------------------------|------------|
| Head-only electrical stun                      | Calves                                 | 10 seconds |
|                                                | Sheep                                  | 25 seconds |
|                                                | Cattle                                 | 20 seconds |
|                                                | Pigs                                   | 20 seconds |
| CO2 (pigs)                                     | 60 seconds (after leaving the chamber) |            |
| Non-penetrating captive bolt (concussion stun) | 30 seconds in all species              |            |

6.9

Dressing must not commence until the animal is permanently insensible.

# APPENDIX 1. AUSTRALIAN STANDARD REQUIREMENT FOR APPROVED ARRANGEMENT

All Australian Livestock Processing Establishments that produce meat for human consumption are required to comply with the requirements specified in The Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2002).

The Australian Meat Standard requires Establishments to develop and implement an Approved Arrangement which covers each stage of production and is underpinned by a Hazard Analysis Critical Control Points (HACCP) based process control framework.

The Approved Arrangement must also document management and production practices including:

- The policy objectives of the Establishment.
- The organisational structure, the provision of resources and the provision and training of personnel.
- That a system is in place to verify that the undertakings made by the Establishment are met and the results of the verification activities are documented.
- That corrective and preventative measures are implemented should undertakings not be met.
- That internal audit and management reviews are undertaken.

The 'National Animal Welfare Standards for Livestock Processing Establishments Preparing Meat for Human Consumption' are implemented by Establishments via incorporation into the operational framework established by the 'Approved Arrangement'.

## APPENDIX 2. THE MANAGEMENT GROUP

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The Standards were developed by a management group comprised of representatives from:

- Animal Welfare Science Centre
- Animals Australia
- AUS-MEAT Limited
- Australian Livestock Transport Association
- Australian Meat Industry Council
- Australian Pork Limited
- Australian Quarantine Inspection Service
- Coles Supermarkets Pty Ltd.
- Dairy Australia
- Meat and Livestock Australia
- Queensland Department of Primary Industries
- Queensland Rail
- Royal Society for the Prevention of Cruelty to Animals Victoria
- Victorian Department of Primary Industries
- Woolworths Limited.

### **CORRESPONDING MEMBERS**

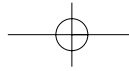
- Dr. Temple Grandin, University of Colorado
- Australian Wool Innovation

## APPENDIX 3. FLOW DIAGRAM OF WELFARE CONSIDERATIONS POST FARM GATE

Represents direct responsibilities for the livestock processing industry.

Represents indirect or secondary responsibilities for the livestock processing industry.

| Process                         | Step | Welfare considerations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Farm/saleyard                   | 1    | <ul style="list-style-type: none"> <li>• Fitness and health of stock selected for transport</li> <li>• Design and maintenance of holding and loading facilities</li> <li>• Animal handling</li> <li>• Demonstrated staff competencies</li> </ul>                                                                                                                                                                                                                                                                                                                                             |
| Transport                       | 2    | <ul style="list-style-type: none"> <li>• Fitness of stock for transport</li> <li>• Vehicle design, cleanliness, maintenance and condition</li> <li>• Stocking density</li> <li>• Time off feed and water</li> <li>• Transport duration</li> <li>• Surveillance of livestock</li> <li>• Handling livestock at rest stops or depots during the journey</li> <li>• Contingencies for emergencies</li> <li>• Humane destruction during transport</li> <li>• Demonstrated staff competencies</li> </ul>                                                                                           |
| Arrival of stock and unloading  | 3    | <ul style="list-style-type: none"> <li>• Planning and scheduling for slaughter</li> <li>• Unloading of livestock at the plant</li> <li>• Identification and treatment of weak, ill or injured stock upon arrival</li> <li>• Humane destruction upon arrival</li> <li>• Facilities for unloading</li> <li>• Operation, maintenance and cleaning of facilities and equipment</li> <li>• Demonstrated staff competencies</li> </ul>                                                                                                                                                             |
| Lairage and holding areas       | 4    | <ul style="list-style-type: none"> <li>• Access to water</li> <li>• Stocking density</li> <li>• Shelter</li> <li>• Mixing, aggression and animal behaviour</li> <li>• Surveillance of livestock and ante-mortem inspections</li> <li>• Provision of feed for livestock to be held</li> <li>• Humane destruction</li> <li>• Animal cleanliness</li> <li>• Maintenance and design of facilities</li> <li>• Operation, maintenance and cleaning of facilities and equipment</li> <li>• Contingencies for daily management and emergencies</li> <li>• Demonstrated staff competencies</li> </ul> |
| Movement to the slaughter floor | 5    | <ul style="list-style-type: none"> <li>• Operation, maintenance and cleaning of facilities and equipment</li> <li>• Handling and drafting of animals</li> <li>• Animal behaviour</li> <li>• Demonstrated staff competencies</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |
| Stunning                        | 6    | <ul style="list-style-type: none"> <li>• Operation, maintenance and cleaning of facilities and equipment for stunning and restraint</li> <li>• Effective stunning</li> <li>• Contingencies including back-up stunning</li> <li>• Demonstrated staff competencies</li> </ul>                                                                                                                                                                                                                                                                                                                  |
| Slaughter                       | 7    | <ul style="list-style-type: none"> <li>• Effective and humane slaughter procedures</li> <li>• Maintenance and design of slaughter equipment and facilities</li> <li>• Contingencies for emergencies</li> <li>• Feedback on carcass quality</li> <li>• Demonstrated staff competencies</li> </ul>                                                                                                                                                                                                                                                                                             |



## ACKNOWLEDGMENTS

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We are extremely grateful to the members of the management group for their contribution to the development of these Standards and to other industry representatives who provided comment and support. This project was financially supported by the Australian Meat Industry Council (AMIC) and the Victorian Government's Naturally Victorian Initiative.

