

IMPORTANT NOTICE

Regulation 6(2) of the *Animal Welfare (General) Regulations 2003* modifies some of the existing adopted codes of practice by providing that, to the extent that the code applies to the transport process (as defined in the *Animal Welfare (Transport, Saleyards and Depots) (Cattle and Sheep) Regulations 2020*), the transport process is to be undertaken in accordance with the Australian Animal Welfare Standards and Guidelines for Land Transport of Livestock (which is also an adopted code of practice). These modifications come into effect on 3 October 2020.

A copy of regulation 6(2) is provided below.

6. Codes of practice adopted (s. 94(2)(d))

- (2) Under section 94(2)(d) of the Act, the code of practice relating to the use, care, welfare, safety or health of animals specified in column 2 of each item in the Table is adopted as it exists on the day on which the *Animal Welfare (General) Amendment Regulations 2020* regulation 4 comes into operation, with the modification specified in column 3 of the item.

Table

Column 1 Item	Column 2 Code of practice	Column 3 Modification
1.	<i>Code of practice for goats in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	In the Introduction after the 1 st paragraph insert: To the extent that this Code applies to the transport process for goats in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.
2.	<i>Code of practice for farmed buffalo in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	In the Introduction clause 1.1 after the 2 nd paragraph insert: To the extent that the Code applies to the transport process for buffalo in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.

Column 1 Item	Column 2 Code of practice	Column 3 Modification
3.	<i>Code of practice for farming deer in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	In the Introduction after the 2 nd paragraph insert: To the extent that the Code applies to the transport process for deer in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.
4.	<i>Code of practice for pigeon keeping and racing in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	In the Preface after the 2 nd paragraph insert: To the extent that this Code applies to the transport process for pigeons in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.
5.	<i>Code of practice for poultry in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	In the Introduction after the 3 rd paragraph insert: To the extent that this Code applies to the transport process for poultry in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time. Delete Part 15 titled “Transport of Poultry”.
6.	<i>Code of practice for sheep in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	In the Introduction after the 2 nd paragraph insert: To the extent that the Code applies to the transport process for sheep in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.

Column 1 Item	Column 2 Code of practice	Column 3 Modification
7.	<i>Code of practice for the capture and marketing of feral animals in Western Australia</i> , first published by the Department of Local Government and Regional Development in March 2003	<p>In the Introduction after the 1st paragraph insert:</p> <p>To the extent that this Code applies to the transport process for feral animals in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.</p> <p>In Part B under the heading “Transportation” delete “Operators should refer to other relevant State Codes of Practice for specific guidelines on transport”.</p>
8.	<i>Model Code of Practice for the Welfare of Animals: Husbandry of Captive-Bred Emus</i> (2 nd edition), first published by the Primary Industries Ministerial Council in 2006	<p>In the Introduction after clause 1.1 insert:</p> <p>1.1A To the extent that the Code applies to the transport process for emus in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.</p>
9.	<i>Model Code of Practice for the Welfare of Animals: Livestock at Slaughtering Establishments</i> , first published in 2001 (paperback) and 2002 (online) by CSIRO publishing, acting on behalf of the Primary Industries Ministerial Council	<p>In the Introduction delete clause 1.3 and insert:</p> <p>1.3 To the extent that this Code applies to the transport process for livestock animals to slaughtering establishments in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.</p>

Column 1 Item	Column 2 Code of practice	Column 3 Modification
10.	<i>Model Code of Practice for the Welfare of Animals: Pigs</i> (3 rd edition), first published by the Primary Industries Ministerial Council in 2008	In the Introduction after clause 1.1 insert: 1.1A To the extent that the Code applies to the transport process for pigs in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.
11.	<i>Model Code of Practice for the Welfare of Animals: The Camel</i> (2 nd edition), first published by the Primary Industries Ministerial Council in 2006	In the Introduction after the 1 st paragraph insert: To the extent that the Code applies to the transport process for camels in Western Australia, the transport process is to be undertaken in accordance with the <i>Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock</i> (Edition 1, Version 1.1, 21 September 2012), published by Animal Health Australia (AHA), Canberra, as it is amended from time to time.



CODE OF PRACTICE FOR THE CAPTURE AND MARKETING OF FERAL ANIMALS IN WESTERN AUSTRALIA

FERAL ANIMALS

ISBN 7307 6322 6

Published by the Department of Local Government and Regional Development
Western Australia
March, 2003

[NOTE: This Code is identical to that published by the Department of Local Government and Regional Development with minor typographical errors corrected.]

Contents

PREFACE	1
INTRODUCTION	2
PART A – WELFARE PROBLEMS ASSOCIATED WITH CULLING	2
Humane destruction of feral livestock animals	2
PART B – CAPTURE AND HANDLING OF FERAL ANIMALS	4
Welfare problems associated with capture	4
General guidelines for the capture of live animals	4
Use of traps for the capture of feral livestock animals	5
Humane destruction of feral animals following capture	5
Accommodation and handling facilities	5
Food and water	5
Health and routine inspections	6
Transportation	6
Domestication and management practices	6
APPENDIX 1 – POISONS USED IN FERAL LIVESTOCK ANIMAL CONTROL	7
APPENDIX 2 – FIREARMS AND AMMUNITION SUITABLE FOR THE HUMANE DESTRUCTION OF LIVESTOCK FERAL ANIMALS	8
APPENDIX 3 – SPECIFIC REQUIREMENTS FOR CAPTURE AND HANDLING OF LIVESTOCK FERAL ANIMALS	9

PREFACE

The **Code of practice for the capture and marketing of feral animals in Western Australia** is based on *The Australian Model Code of Practice for the Welfare of Animals – Feral Livestock Animals* and has been adapted for use in Western Australia. The original *Model Code* was prepared for the Standing Committee on Agriculture and Resource Management (SCARM) and endorsed by the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) for use as a national code. It was prepared in consultation with the relevant industry organisations and State agencies.

This Code has been prepared to assist all persons handling or using feral animals in Western Australia, and reference to this Code is made in Regulations provided under Section 25 of the *Animal Welfare Act 2002* for the purposes of a defence against cruelty. It is not intended to be used for either audit or compliance purposes.

This Western Australian version of the Code is supported by the livestock industries and the Department of Agriculture. It is based on current knowledge and technology. It will be reviewed in the future on a needs basis, to take account of advances in the understanding of animal physiology and behaviour, technological changes in animal husbandry and their relationship to the welfare of animals.

For anyone using animals for scientific purposes, as defined in the *Animal Welfare Act 2002*, this Code should be read and used in conjunction with the 'scientific use code'.

Further copies of this Code are available from the Department of Local Government and Regional Development or from the Internet at:
<http://www.dlgrd.wa.gov.au>

INTRODUCTION

Feral animals are members of those domesticated species which have returned to the wild or undomesticated state. They do not include native fauna or introduced wild animals (with the exception of deer which can be regarded as partly domesticated for the purposes of this Code).

The aim of this Code is to provide guidelines which will promote the welfare of feral livestock animals captured for domestication or abattoir slaughter or which are destroyed in control programs.

Feral animals are of concern because they:

- reduce the profitability of agriculture;
- compete with Australian native fauna and damage native flora;
- may prey on domestic livestock and/or native animals;
- degrade environmental quality, e.g. by preventing regeneration and adding to the grazing pressure on land;
- damage fences, crops and watering facilities;
- may be a reservoir of serious endemic animal or human disease and may become a reservoir of exotic diseases;
- may disrupt breeding programs based on improved genetic material.

However, feral livestock animals may also be a useful resource and are often hunted or captured for food, fibre or draught power or for potentially useful genetic material. The management of feral livestock should normally emphasise the control of damage caused by the animals rather than the animals themselves.

The following species of livestock have significant feral populations in Australia:

- pigs (*Sus scrofa*)
- donkeys (*Equus asinus*)
- horses (*Equus caballus*)
- goats (*Capra bircus*)
- cattle (*Bos taurus b. indicus*)
- swamp buffalo (*Bubalus bubalis*)
- Arabian camels (*Camelus dromedarius*)
- deer (*Dama dama*, *Axis axis*, *A. porcinus* *Cervus elephus*, *C. timoriensis* *C. cunicolor*)

Under certain conditions it becomes necessary to control these animals. Reduction in numbers may be achieved by destruction in the field or by live capture and removal. Feral livestock animals may be controlled in a number of ways, including:

- shooting;
- yard trapping;
- mustering;
- poisoning;
- removal of specific members of the breeding unit;
- sterilisation or fertility control;
- habitat deprivation.

PART A – WELFARE PROBLEMS ASSOCIATED WITH CULLING

Culling of animals in management programs should be carried out with due regard for the welfare of the animals involved. Personnel responsible for feral animal control should be aware of their responsibilities to limit the amount of suffering of target animals and avoid suffering of non-target animals. The methods used should involve the lowest level of suffering consistent with effective control.

In practice, a variety of methods may be used with shooting as a humane endpoint, e.g. trapping using feed or water.

The following methods are unacceptable on animal welfare grounds:

- poisoning using unregistered poisons which cause severe and prolonged pain;
- denial of water without provision of alternate sources as a means of killing animals;
- wounding of animals so that they will die some distance from the shooting area;
- trapping without prompt destruction or removal of animals.

Methods which in themselves are acceptable, such as shooting become unacceptable if they are not carried out properly. For example:

- the shooter lacks expertise;
- the calibre or type of weapon is inadequate;
- the nature of the terrain predisposes to many wounding shots;
- humane and prompt despatch of wounded animals is not possible.

Humane destruction of feral livestock animals

Destruction rather than capture of feral animals is indicated in many situations. For example:

- it may be uneconomic or impractical to harvest them commercially;

- they would suffer unacceptable stress if captured and transported;
- it is necessary to control disease outbreaks;
- it is necessary to relieve suffering associated with drought, bushfire, flood, etc.

1. Poisoning

Introduction

Although poisons are widely used for vertebrate pest control in Australia, their use in feral livestock control is limited to the poisoning of feral pigs. Here, the technique can be particularly useful under extensive range conditions and where populations have to be reduced quickly.

Poisons should not be used where more humane, economic and practical alternatives are available.

General guidelines

The effectiveness and specificity of poisons can be improved by careful attention to preparation, presentation and placement of baits and by using the minimum effective lethal dose rates for the target species.

Some poisons are more acceptable than others. An effective humane poison is one which has an initial depressant action on the animal's nervous system to ensure that it is quickly rendered insensitive to pain or distress.

Unsatisfactory poisons are those which, from a knowledge of their general mode of action, are likely to cause prolonged and severe pain or discomfort prior to death.

The legal requirements relating to the sale, storage and use of poisons in Western Australia must be observed.

Poisons which do not fulfil the above guidelines should be phased out or replaced. Appendix 1 lists the two registered poisons currently used in feral pig control, plus other poisons which are used from time to time under special authority. A brief description of mode of action is also given so that some appreciation of relative humaneness is possible.

2. Shooting from the ground

Introduction

Shooting, if properly carried out, is often a most effective and, in some cases, the only method for humanely destroying feral animals. To provide maximum impact and minimum misdirection, the range should be as short as circumstances permit.

Shooting of feral animals should only be carried out:

- by well-supervised, experienced and conscientious shooters;
- by using a firearm capable of killing the target animal with a single round;
- when the animal can be seen clearly and is within range.

General guidelines for ground shooting

Personnel involved in shooting operations must be suitably qualified in the use of firearms. Qualifications should include a practical test of marksmanship.

The firearms and ammunition used should be suitable for the species involved and the distances over which they will be shot (see Appendix 2).

Telescopic sights or alternative sighting aids are essential for accurate long-range shooting from the ground. Some marksmen prefer open sights for short range shooting but this is acceptable only where it can be demonstrated to be preferable.

Shots should be aimed to destroy the brain or heart/great vessels of the target animal. Shooting at other parts of the body is undesirable.

Personnel should be familiar with the awning points for each target species. A bullet should destroy the brain if it is aimed using one of the following methods:

- *Frontal method:* aim horizontally at the point of intersection of lines taken from the base of each ear to the opposite eye. This method is preferred for younger animals. It is not suitable for mature horses as the brain is located higher in the skull.
- *Temporal method:* aim horizontally from the side of the head at a point midway between the eye and the base of the ear. This approach is preferred for mature or old animals.
- *Poll method:* aim behind the head at a point midway along a line drawn from the base of each ear.

For heart shots, bullets should be aimed at the forward chest, above the point of the elbow. Death, due to massive intra-thoracic haemorrhage, is rapid.

After being shot the animal should be checked to ensure that it is dead. A second shot should always be directed to the heart/lung area.

All reasonable action should be taken to locate and destroy any wounded animal as soon as possible.

3. Shooting from helicopters

Introduction

As feral animals may be found over large and inaccessible areas, shooting from helicopters represents an important and necessary method of control, particularly in the more remote regions of Australia.

In outback Australia there is considerable experience in the use of helicopters for mustering of cattle and buffalo

as part of normal station management and for disease control. This experience is utilised in controlling feral animals.

In the event of an emergency such as an exotic disease outbreak, shooting from helicopters is one of the most effective techniques presently available for controlling some species.

To ensure that such shooting is carried out humanely:

- control programs using helicopters should be authorised by the Department of Agriculture;
- shooting should be carried out by competent, trained personnel.

General guidelines

Shooters should be tested and accredited for attitude and marksmanship, both stationary and mobile. Marksmen should not shoot at an animal unless they are confident of cleanly killing it.

Animals should be killed with the least amount of suffering. Head or chest shots should be used. As the brain is a relatively small, mobile target well-protected by bone, many experienced helicopter shooters prefer heart/lung shots. When appropriate weapons and ammunition are used, this is acceptable as animals are killed quickly.

Any animal wounded within a group should be killed immediately before any further groups are targeted and shot. Suckling animals should not be left to die from starvation after their dam has been killed.

Suitable firearms and ammunition for helicopter shooting of the feral livestock species are included in Appendix 2.

Where possible, control operations should use helicopter pilots who are experienced in aerial shooting and are able to place the shooter into a position which facilitates a humane kill.

PART B – CAPTURE AND HANDLING OF FERAL ANIMALS

Feral animals are not accustomed to being handled by humans. It is essential that operators provide the highest standards of care to minimise adverse effects of capture. Operators are also expected to provide the necessary facilities and managerial skills to ensure humane and considerate capture and post-capture care.

Welfare problems associated with capture

Depending on how they are captured and handled, feral animals may be susceptible to the following conditions:

- Capture myopathy. Excessive or prolonged exertion produces high levels of lactic acid in muscle resulting

in muscle necrosis. This condition is associated with severe pain.

- Collapse and sudden death during, or high mortality rates following, pursuit of animals for long distances during capture.
- Chronic lameness due to foot injury or damage to tendons or ligaments.
- Fight injuries due to mixing unfamiliar groups or individuals.
- Chronic ill-thrift associated with stress-induced ulcers, kidney and liver damage.
- Bruising and injury caused by rough capture techniques and poorly-designed handling facilities.
- Stress-induced infections.

The incidence of these conditions will be minimised by developing a greater understanding of the behaviour of feral animals and by using the capture and handling techniques set out in this Code.

General guidelines for the capture of live animals

The capture of feral animals should be conducted by trained and competent operators, with due consideration for the welfare of the animals.

Where anaesthetic or tranquillising agents are used to assist in the capture of feral animals, State laws governing the use of the drugs and weapons must be observed. Their use should be under the supervision of skilled persons. Neuromuscular blocking agents should never be used on their own to immobilise animals.

Where animals are captured as a result of a chase, they should be separated from the group and caught as quickly as possible. Under no circumstances is the deliberate chasing of animals to exhaustion condoned.

To minimise exhaustion, it is preferable for mustering to be carried out when conditions are cool or mild. The tail end of the mob should set the pace rather than being forced to keep up with the leaders.

The practice of 'peppering' recalcitrant animals with shotgun pellets must never be used.

Animals captured by muster or chase should be allowed a minimum of 24 hours rest, with food and water, before they are transported on journeys longer than 8 hours.

It is unacceptable to hold captured animals in small yards or under crowded conditions for extended periods, especially where yards are on hard, stony ground. Where animals are tractable, it is preferable that they be released into a secure paddock which contains an area of cover to provide shelter and security.

The use of dogs in handling captured feral animals should be kept to a minimum. The aim at all times should

be to handle captured animals quietly. Portable yards should be placed under adequate cover or have shade cloth covers provided. Specific guidelines for the capture of the various feral animal species are presented in Appendix 3.

Use of traps for the capture of feral livestock animals

Yard trapping, particularly on water or feeding stations or by the use of funnelling 'wings', is a common method of capture for some feral livestock species.

The design and operation of yard traps will vary considerably depending on species and location and it is not possible to identify and prescribe particular humane designs. However, such traps should conform with the general guidelines for capture, handling and accommodation of feral livestock species detailed in other parts of this Code.

Humane destruction of feral animals following capture

Where it is intended to transport animals it may be necessary to humanely destroy some for the following reasons:

- If the animal has sustained serious injury during capture or in the holding facility.
- If the animal is suffering from a previous disease or condition which militates against transport for domestication or slaughter.
- If the animal is uncontrollably fractious.

The animal should be handled quietly beforehand to ensure that it is not unnecessarily distressed or alarmed. The method of slaughter should result in sudden and painless death.

Shooting is the most efficient and humane method of killing captured feral animals. The humane-killer pistol or captive-bolt pistol are suitable alternatives for recumbent animals.

Accommodation and handling facilities

Buildings and yards

The accommodation provided for captured feral animals should not cause distress or injury, and should not predispose them to disease.

Wherever practical, animals which have a herd instinct should be accommodated in compatible groups. Groups will require sufficient space to rest, feed and exercise. Whenever possible, holding paddocks should contain some dense cover, such as closely planted trees and shrubs, to provide shade and to give timid animals a

sense of security. Fence lines should be constructed of strong and easily visible materials which will discourage attempts to escape.

Loading ramps

Loading ramps should be constructed so as to minimise injury to animals. The ramp must be wide enough to allow easy passage of the hips and horns of mature animals. A flat area at the top of the ramp, not less than 1 metre in length, will assist in the loading and unloading of animals. This platform should be approximately at the same level as the stock crate floor. A slope of 1 in 3 (about 20 degrees) is recommended for permanently installed ramps. The surface should be made of non-slip material with cross-cleats or, if concrete, with suitable cross-grooving to provide a good grip when the ramp is wet.

Portable or adjustable ramps should not have a slope of more than 1 in 2 (about 27 degrees) and they should be equipped with anchoring devices to ensure stability.

The inner rails should be smooth, with no sharp projections which could injure animals. A removable bottom rail is a useful feature.

A walkway on the outside of the ramp for use by an attendant will facilitate animal movement.

Filler boards or flaps should be used to cover any gap between the loading ramp and the floor of the stock crate. Where possible, young or weak animals should be drafted out to prevent them being trampled and crushed.

Food and water

Food

Following capture, if animals are confined to areas with insufficient or unsuitable feed, appropriate feed must be provided.

Operators should check each day that captured animals are eating. Animals which refuse to eat or are less thrifty should receive special attention. Those which do not respond should not be permitted to weaken and starve, but should be humanely destroyed.

If nutritional supplements are included in the diet, they should be introduced gradually to avoid serious metabolic disturbances.

Water

Water must be freely available to animals immediately following capture. When water troughs are the only source, the supply of water should be checked daily.

Animals which have been captured from areas with brackish water should only be introduced to alternative water supplies very gradually.

Health and routine inspections

All captured animals should be checked by an experienced stock handler at least once per day for signs of injury, inappetence, illness or distress. If a problem is apparent, action should be taken to establish the cause and where possible correct it.

If the cause cannot be identified or where remedial action is unsuccessful, veterinary advice should be obtained as soon as possible.

Appropriate preventative measures, such as vaccinations, should be used against diseases which are endemic in areas to which the animals will be taken. This applies if animals are not destined for immediate slaughter.

Lame animals should be handled and transported as little as possible. Failure to allow injuries to heal may result in chronic lameness.

Animals with broken limbs, painful deformities, debilitating illnesses or injuries which do not respond to treatment should be humanely destroyed in accordance with the guidelines given in Appendix 2.

Transportation

Intractable or unmanageable animals should not be transported. To minimise stress, feral animals which are captured for slaughter should be transported to a slaughter house within reasonable range which will accept them.

Operators should refer to other relevant State Codes of Practice for specific guidelines on transport.

Domestication and management practices

Most captured feral animals respond quickly to quiet, gentle handling. The domestication process is easiest with young animals which are hand-fed.

Following capture and transport, animals should be allowed to 'settle down' for as long as possible in their new environment.

They should receive several weeks of active domestication before being subjected to management practices such as dehorning or castration. An exception is 'tipping' of horns to reduce injury to other animals during transport.

APPENDIX 1 – POISONS USED IN FERAL LIVESTOCK ANIMAL CONTROL

Registered poisons

Only two poisons are registered for use in the control of feral livestock species in Australia. A brief description of their modes of action and major clinical signs is given below. Further information on the suitability and use of specific poisons is available from the Department of Agriculture.

Sodium monofluoroacetate

Sodium monofluoroacetate (Compound 1080) has been used, under strict control, for many years to control a range of mainly smaller pest animals in Australia.

Clinical signs vary widely between species. Following a latent period of 0.3 to 4.0 hours after administration, clinical signs commence and the course is rapid and, in some species, violent. Based on their predominant response to the toxin, there are three main groups of animals: those that show mainly cardiac symptoms, those that show mainly central nervous system (CNS) symptoms and those that show a mixture of the two. Swine and other omnivorous species may display both cardiac and nervous signs. There is marked cardiac arrhythmia, a weak rapid pulse and finally ventricular fibrillation. Animals may tremble, stagger and fall. Terminal, non-violent, convulsive seizures occur.

The degree of pain suffered by poisoned animals is subject to debate. Some investigators maintain that fluorocitrate, because of its pronounced physiological action on the CNS, induces in the victim an early state of unawareness of its surroundings and of its predicament – a state somewhat similar to that of alcohol intoxication or epileptic seizure. This theory gains some credence from a human case history where a sub-lethal dose ingested by the subject induced severe convulsions and the outward appearances of pain but where the subject did not recall pain or discomfort other than alarm and anxiety.

Phosphorus

Following ingestion, there are signs of severe gastrointestinal irritation, possibly shock, pain in the gastric region, liver damage, vomiting, diarrhoea and convulsions. Symptoms may last for 6 to 8 hours or longer before coma and death.

Although registered for use against feral pigs, phosphorus, by virtue of its mode of action, cannot be regarded as a humane poison and alternative candidate poisons should be investigated.

Non-registered poisons used under permit or currently being investigated

Anticoagulants

Warfarin, Pindone and other anticoagulant poisons all have a broadly similar mode of action. They increase the clotting time of blood as a result of interference with prothrombin production by the liver. Capillaries are also damaged, and this results in extensive and fatal haemorrhage.

Clinical signs include bloody diarrhoea, lameness, pale, haemorrhagic mucous membranes, and weakness. Death ensues after several days due to haemorrhagic shock. The relative humaneness of this group of poisons is difficult to gauge. Certainly, time to death can be protracted but the degree of pain suffered is a matter of debate. Further investigation of these compounds is warranted.

Other poisons

Strychnine, Cyanides, Zinc Phosphide, and Alphachloralose are amongst a number of other poisons which have been used in vertebrate pest control either in Australia or overseas. For reasons of safety, and the effects on target and non-target species, these poisons should only be used by trained operators in accordance with Department of Agriculture guidelines.

APPENDIX 2 – FIREARMS AND AMMUNITION SUITABLE FOR THE HUMANE DESTRUCTION OF LIVESTOCK FERAL ANIMALS

The following schedule of firearms and ammunition has been prepared after consultation with State officers experienced in feral animal control.

Buffalo

- .308 (7.62 mm) calibre rifles such as the Springfield M14 and M1A, LIAI SLR, Heckler and Koch M91. For helicopter shooting, spot on/aim-point sights or 2x quality telescopic scopes may be useful. Hard pointed/jacketed projectiles 170 grain (or heavier) should be used.

Cattle

- As for buffalo. Silver tip or soft point ammunition is preferred except for heavy scrub bulls where hard pointed/jacketed ammunition should be used.

Horses and donkeys

- As for cattle.

Camels

- As for cattle.

Pigs

- For aerial shooting, rifles of .308 calibre using 150 grain silver tip, hollow or soft point ammunition, and .30/30 calibre with 150 grain soft point ammunition are suitable.

- For smaller pigs (< 40 kg) and ground shooting, .243 calibre rifles with 80 or 100 grain soft nose projectiles are suitable. In competent hands smaller calibre rifles such as .222, .223 may be satisfactory.
- 12 gauge shotguns with 28 to 30 inch barrels on 3/4 to full choke are useful for shooting from helicopters. SG or SSG cartridges are suitable for larger pigs, while BB and AAA cartridges can be used for smaller (< 40 kg) animals. Short barrel (20") open choke shotguns should not be used because of the sparse pattern that they throw.

Goats

- .30/30 and .308 calibre rifles are suitable for aerial shooting.
- For ground shooting, .243 calibre with 80 grain projectile is preferred although .222 and .223 calibres are adequate in skilled hands.
- shotguns as for pigs.

Deer

- Rifles with 100 grain projectiles are widely recognised as the minimum acceptable, with experienced shooters generally preferring larger calibres with heavier bullets. 150 grain .308 projectiles are considered suitable for all deer in Australia.

APPENDIX 3 – SPECIFIC REQUIREMENTS FOR CAPTURE AND HANDLING OF LIVESTOCK FERAL ANIMALS

Feral equines (horses and donkeys)

Acceptable methods of capture

The following methods of capture are acceptable for capturing feral horses and donkeys:

- mustering on horseback, by vehicle or by aircraft. The mob is moved steadily towards a set of stockyards or a holding paddock;
- trapyards on feed and/or water. Traps should be checked at least once every 24 hours. Food and water should be provided for captured animals.

Unacceptable methods of capture

- Deliberate chasing to exhaustion.
- Mutilation.

Handling and transport

Following capture, animals should be separated into the following groups:

- males;
- pregnant females;
- females with suckling foals; and
- other females and juveniles.

Available evidence suggests that family groups will generally travel together well. Intractable or unmanageable equines should not be submitted for transport, neither should mares in late pregnancy because of the risk of injury, abortion or metabolic disease.

Loading, unloading and transport of feral equines should be carried out in accordance with guidelines in other relevant State codes of practice.

Transport of equines in double-decked transports is unacceptable.

Handling practices

Unweaned foals under 6 months of age should not be separated from their mothers for transport and/or sale.

Electric prods and dogs should not be used in handling feral equines, including loading or unloading of transport vehicles.

Barbed wire and high tensile wire can cause severe injury and should not be used to fence areas intended for holding or drafting feral equines.

Feral bovines (cattle and buffalo)

Acceptable methods of capture

The following methods are acceptable for capturing feral cattle and buffalo:

- normal mustering with or without coachers using horses;
- motor bikes or other vehicles;
- mustering by fixed or rotary wing aircraft;
- trapping onto water or lure trapping using hay/molasses or other attractants;
- tail-throwing and strapping of individual animals;
- roping and casting of individuals;
- use of a bull-catching vehicle fitted with a 'bionic arm' to catch individual animals, particularly large bulls.

Unacceptable methods of capture and restraint

- Deliberate chasing to exhaustion.
- Casting the animal and leaving it trussed for more than 1 hour prior to collection.
- Tying animals to trees or other objects for longer than 1 hour prior to collection.
- Restraint by mutilation, including hamstringing and/or kneestrapping.
- Injuring animals by intentional impact from motor vehicles.

Segregation for handling or transport

Following capture, feral cattle and buffalo should be separated into groups to minimise the effects of size differences and aggressiveness. Double handling to effect this segregation should be avoided if possible. Aggressive scrub bulls which cannot be easily drafted and which are a danger to other animals should be roped and removed or humanely destroyed.

Where possible, mustering should be carried out in the cooler parts of the day. Holding yards should be sited under shade if animals are to be held in areas where ambient temperatures are high, for long periods. If no natural shade is available then artificial shade such as hessian or shade cloth should be used.

Chasing animals during very hot weather can precipitate metabolic disturbances causing morbidity and mortality. Animals mustered by helicopter are particularly at risk. Under these conditions animals should be moved as steadily as possible.

Loading, unloading and transport should be carried out in accordance with guidelines contained in other relevant State codes of practices.

Where vehicles are used to guide animals into yards, holding facilities or transport vehicles, the use of unpadded bullbars to physically force animals is unacceptable.

Feral camels

Acceptable methods of capture include:

- trapyards which should be checked daily;
- use of tranquillisers by experienced persons;
- throwing by hand and temporary roping of young animals.

Unacceptable methods of capture

- Deliberate chasing to exhaustion.
- The use of vehicles to cast animals prior to roping.
- Restraint by mutilation, including hamstringing or kneestraining.

Segregation for handling and transport

The following categories of animals should be separated:

- bulls in season (cows in heat are ignored at other times);
- cows with suckling calves;
- other cows and juveniles.

When transporting camels, it is necessary to ensure that:

- there is adequate headroom;
- the camel cannot get its head sideways out of the truck;
- cleats are removed from the floor and replaced with litter (hay or sawdust) or sand;
- camels can be transported in sternal recumbency, by trussing in the sitting/kneeling position.

Loading, unloading and transport should be carried out in accordance with guidelines contained in the *Code of Practice for Camels in Western Australia*.

Handling practices

Camels are cud-chewing animals and mouth bits should never be used on them. Halters can be used once animals are tractable.

Nose-pegs should only be inserted by experienced operators under hygienic conditions.

Feral pigs

Acceptable methods of capture include:

- traps used in conjunction with feeding stations. Trapping is most successful when food resources are limited. Traps should be checked daily, trapped pigs will suffer severely if confined without shade and water in hot weather;
- under some conditions, e.g. in scrub or dense bush, and following trapping or poisoning campaigns, trained dogs can be useful to locate and flush animals out of thick cover. As there is considerable potential for injuries to dogs and pigs, using this technique, operators need to be experienced and dogs well trained.

Unacceptable methods of capture

The use of dogs to attack and bring down feral pigs is unacceptable.

Transport and handling

Feral pigs are normally captured only for game meat processing and this requires that they be killed in the field. However, where legal transport and handling is required, this should be carried out in accordance with guidelines contained in the *Code of Practice for the Transport of Pigs in Western Australia*.

Feral goats

Acceptable methods of capture include:

- trapping around watering points, using one-way swing gates or jump ramps;
- mustering by horseback or motor vehicle. This is often the preferred method in open country. Trained 'sheep' dogs can be useful in mustering. Goats should be moved steadily, with the slow animals setting the pace. Where possible, it is preferable to muster when the weather is cool or mild;
- mustering by rotary or fixed wing aircraft. The pilot drives the goats towards a set of stockyards where a ground team completes the muster.

Unacceptable methods of capture

- Deliberate chasing to exhaustion.
- The use of dogs to attack and bring down goats.

Segregation for transport

Where it is practical, the following categories of feral goats should be separated for transport:

- bucks;
- nannies with kids at foot;
- heavily pregnant does;
- goats which differ greatly in size.

Loading, unloading and transport should be carried out in accordance with guidelines in:

- *Standards for the Export of Goats of Feral Origin;*
- *Model Code of Practice for the Welfare of Animals: Road Transport of Livestock;*
- *Model Code of Practice for the Welfare of Animals: Rail Transport of Livestock.*

Handling practices

Electric prods should not be used to assist in the handling of feral goats.

Only trained sheep dogs should be used to assist in moving and handling feral goats. Their use should be kept to a minimum.

Wild deer

Acceptable methods of capture include:

- trapping onto feed;
- netting from a helicopter;
- chemical restraint by experienced operators.

Unacceptable methods of capture

- Chasing to exhaustion.
- Electro-immobiliser darts.
- Foot snares.
- Use of neuromuscular blocking agents (paralysing drugs).

Segregation for transport

The following classes should be transported separately:

- stags;
- does or hinds with young;
- deer greatly differing in size.

It is preferable to load, unload and transport deer under reduced light conditions, e.g. evening.

Cleats should be removed from the floor of transport pens and straw or hay bedding provided.

There are a number of specific requirements for successfully transporting deer:

- prevention of overcrowding. There should be sufficient space for all animals to lie down without trampling on each other;
- hard antlers should be removed from males;
- semi-dark vehicles or trailers with adequate ventilation;
- avoidance of long periods in vehicles during extremes of temperature;
- provision of feed and water for all but short trips (< 6 hours);
- regular inspections during the journey.

Under no circumstances should deer be tied or restrained during transport. Deer should not be transported if heavily pregnant, exhausted or obviously ill.

Handling practices

Deer are nervous, flighty animals. Handling should be minimised and carried out quietly and smoothly. It is preferable to handle deer under reduced light intensity, i.e. evening, night or early dawn.

Properly designed facilities for handling and restraint are essential. They provide a safe and humane method of handling with minimal risk of injury to animals and operators.

Dogs should be kept well away from wild deer.