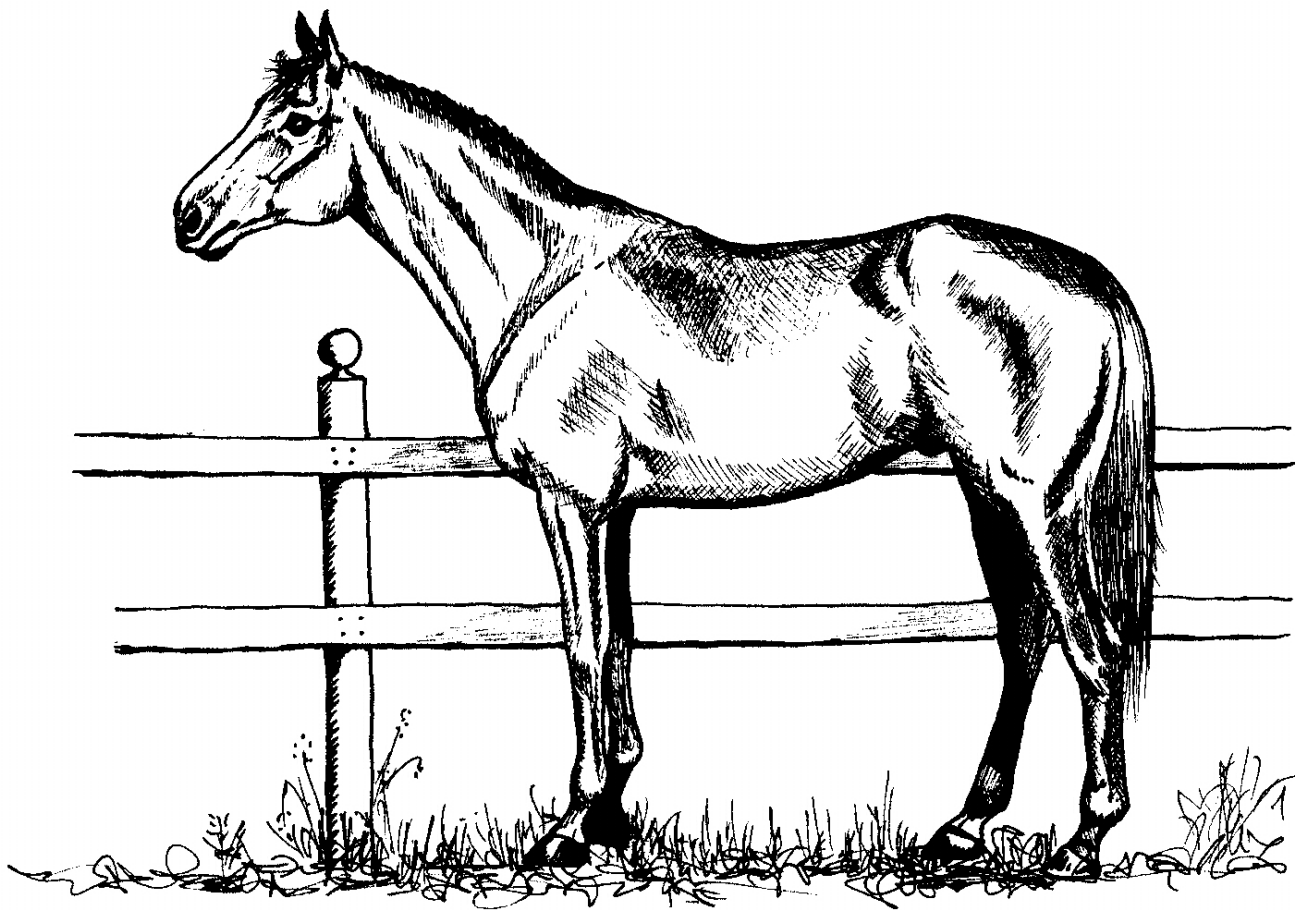


**Recommended Code of Practice for  
the Care and Handling of Farm Animals**

# **H**orses



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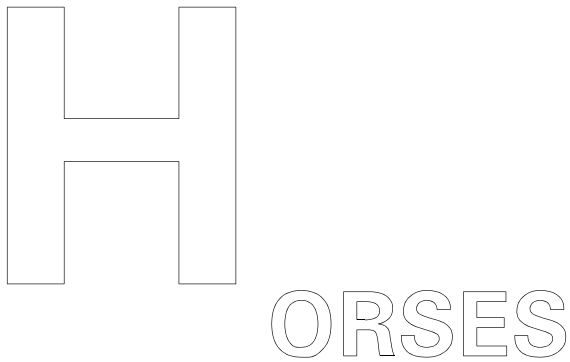
Available from

National and Provincial Organizations as listed in Appendix 9.

*For information on the process for the development of a Code, please write to*  
Canadian Agri-Food Research Council  
Heritage House, Building 60  
Central Experimental Farm  
Ottawa, Ontario  
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*Also available in french*

# Recommended code of practice for the care and handling of farm animals



*Coordinated by*

Canadian Agri-Food Research Council (CARC)

CARC Canada Committee on Animals

CARC Expert Committee on Farm Animal Welfare and Behaviour

Canadian Federation of Humane Societies

*Review committee*

Participants are listed in Appendix 10

*Financial Contributions*

Agriculture and Agri-Food Canada

Canadian Food Inspection Agency

*Cover illustration*

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# Contents

ACKNOWLEDGMENTS .....	iv
PREFACE .....	v
Disclaimer .....	vi
Copyright .....	vi
INTRODUCTION .....	vii
SECTION 1   MANAGEMENT SKILLS AND RESPONSIBILITIES .....	1
1.1    General .....	1
1.2    Personnel .....	1
SECTION 2   SHELTER AND HORSE FACILITIES .....	2
2.1    Shelter .....	2
2.2    Stables .....	2
2.3    Stable Maintenance .....	2
2.4    Lighting and Ventilation .....	3
2.5    Safety .....	3
SECTION 3   FEED AND WATER .....	4
3.1    Feed .....	4
3.2    Water .....	4
SECTION 4   PASTURES/YARDS .....	5
4.1    Pastures .....	5
4.2    Fencing/Safety .....	5
4.3    Electric Fencing .....	5
SECTION 5   HANDLING .....	6
5.1    General .....	6
5.2    Tethering .....	6
SECTION 6   HEALTH MANAGEMENT .....	6
6.1    General .....	6
SECTION 7   IDENTIFICATION .....	8
7.1    General .....	8
SECTION 8   REPRODUCTIVE MANAGEMENT .....	8
8.1    General .....	8
8.2    Stallion Management .....	9
8.3    Mare Management .....	9
8.4    Foaling .....	9
8.5    Care of the Neonate .....	9
8.6    Foal Care .....	10
SECTION 9   FEEDLOTS .....	10
9.1    General .....	10
9.2    Feedlot Management .....	10

9.3	Health .....	11
9.4	Feeding .....	11
SECTION 10	TRANSPORTATION .....	12
10.1	General .....	12
10.2	Vehicles, Trailers and Equipment .....	12
10.3	Loading Density and Headroom .....	13
10.4	Segregation .....	13
10.5	Loading and Unloading .....	13
10.6	Holding Facilities .....	13
10.7	Feed, Water and Rest .....	14
10.8	Injured, Sick and Disabled Horses .....	14
10.9	Precautions in Extreme Weather .....	14
10.10	Commercial Operators .....	15
10.11	Transportation of Horses by Air .....	16
SECTION 11	AUCTION MARKETS AND SALES .....	16
11.1	General .....	16
11.2	Loading and Unloading .....	16
11.3	Feed, Water and Rest .....	17
11.4	Housing .....	17
11.5	Injured, Sick and Disabled Horses .....	17
11.6	Foals .....	17
SECTION 12	SLAUGHTER .....	18
12.1	General .....	18
12.2	Unloading .....	18
12.3	Special Handling of Injured, Sick and Disabled Horses .....	19
12.4	Holding Facilities .....	19
12.5	Stunning and Slaughter .....	20
Appendix 1	Recommended Code of Practice for the Care and Handling of Horses in PMU Operations .....	21
Appendix 2	Recommended Space Requirements for a 500 kg/1100 lb Horse .....	22
Appendix 3	Nutrient Requirements of Horses .....	23
Appendix 4	Reportable Diseases .....	24
Appendix 5	Body Condition Scoring System for Horses .....	25
Appendix 6	Maximum Loading Density for Loose Horses For Transit .....	27
Appendix 7	Guidelines for Dealing with Vehicle Accidents Involving Horses .....	29
Appendix 8	Guidelines to Euthanasia of Horses by Firearms .....	31
Appendix 9	Canadian Equestrian Affiliated Provincial Offices .....	32
Appendix 10	List of Participants .....	33

GLOSSARY OF TERMS ..... 34

# Acknowledgments

*The Canadian Agri-Food Research Council gratefully acknowledges the many individuals and organizations who contributed their valuable time, views and expertise to the development of this Code of Practice. The development of this Code was made possible only through teamwork and cooperation at the national level.*

# Preface

The Codes of Practice are nationally developed guidelines for the care and handling of different species of farm animals. The Codes contain recommended housing and management practices for farm animals as well as transportation and processing.

The Codes of Practice are voluntary and are intended for use as an educational tool by promoting sound management and welfare practices. The Codes contain recommendations to assist farmers and others in the agriculture and food sector to compare and improve their management practices.

In 1980, the Canadian Federation of Humane Societies began coordinating the process of development of draft Codes of Practice for all farm species with the introduction of a **Recommended Code of Practice for the Care and Handling of Poultry from Hatchery to Slaughterhouse**. The federal Minister of Agriculture and Agri-Food (AAFC) provided financial support for the undertaking at that time.

All Codes of Practice are presently developed by a review committee with representatives from farm groups, animal welfare groups, veterinarians, animal scientists, federal and provincial governments, related agricultural sectors and interested individuals.

In 1993, Agriculture and Agri-Food Canada asked the Canadian Agri-Food Research Council (CARC), its Canada Committee on Animals and the Expert Committee on Farm Animal Welfare and Behaviour to take the lead in co-operation with the Canadian Federation of Humane Societies in updating existing Codes and developing new Codes. CARC officially agreed to take on this responsibility in February 1995, upon confirmation of funding from Agriculture and Agri-Food Canada.

In 1996, CARC with the support of the provincial governments began producing four page factsheets in both English and French for such uses as teaching agriculture in the classroom, agricultural fairs and exhibitions.

Codes developed to date:

Species	Original	Revision
Poultry	1983	1989
Pigs	1984	1993
Veal calves	1988	1998
Ranched mink	1988	-
Ranched fox	1989	-
Dairy cattle	1990	-
Beef cattle	1991	-
Sheep	1995	-
Farmed deer	1996	-
Horses	1998	-
Transport	(being developed)	-

Further information on the process of Code development can be obtained from the Canadian Agri-Food Research Council (CARC), Heritage House, Building 60, Central Experimental Farm, Ottawa, Ontario K1A 0C6. Requests for copies of the Codes can be addressed to the national commodity group and/or specific provincial organization.

The CARC Home Page is [www.carc-crac.ca](http://www.carc-crac.ca) for further information.

**Disclaimer**

Information contained in this publication is subject to periodic review in light of changing horse management practices, government requirements and regulations. No subscriber or reader should act on the basis of any such information without referring to applicable laws and regulations and/or without seeking appropriate professional advice. Although every effort has been made to ensure accuracy, the review committee shall not be held responsible for loss or damage caused by errors, omissions, misprints or misinterpretation of the contents hereof. Furthermore, the review committee expressly disclaims all and any liability to any person, whether the purchaser of this publication or not, in respect of anything done, or omitted, by any such person in reliance on the contents of this publication.

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# Introduction

Horses have been domesticated for thousands of years. Throughout the world, horses are kept in a wide variety of situations. Many breeds exist, adapted to a broad range of environmental conditions. This is true within Canada, where the commercial and private horse industries are large and extremely diverse.

This Code does not claim to be comprehensive for all situations, but endeavours to define high standards for the basic principles of horse management to be used in commercial, research, education, recreational, sporting and other farm operations. Most sporting and competitive activities involving horses are conducted under rules set out by their respective governing bodies. Please refer to the governing body of the particular activity for information as to rules, regulations and codes of conduct (Appendix 9).

Animal welfare considerations are important for the keeping and raising of animals. High standards of animal welfare are important legally, have direct economic benefit and ensure that the Canadian horse industry has a place in the international market.

Providing competent handling and an environment that allows horses to fulfil their basic needs are crucial elements in putting this Code into practice. The basic elements of responsible animal care include:

- Comfort and shelter
- Readily accessible potable water and a diet to maintain animals in full health and vigour
- Opportunity for reasonable movement
- Company of other animals, particularly of like

kind

- Opportunity to exhibit most normal patterns of behaviour
- Prevention, or rapid diagnosis and treatment, of abnormal behaviour, injury and disease
- Emergency procedures to cover outbreaks of fire, the breakdown of essential mechanical services and the disruption of supplies.

This Code of Practice is voluntary. Provincial and federal acts and their regulations must always take precedence. When the word “must” is used, it emphasizes the importance of a specific practice.

The Pregnant Mare Urine (PMU) industry is a unique segment of the horse industry. The PMU industry is guided by its **Recommended Code of Practice for the Care and Handling of Horses in PMU Operations**. This PMU Code is an integral part of the Horse Code; information concerning the PMU Code is included in Appendix 1 of this document.

The recommendations in this Code of Practice are based on the best knowledge currently available. We recognize that research into, and evaluation of, various management and welfare issues, such as the amount of exercise a horse requires, humane transportation and the most humane method for stunning at slaughter, must be supported. As scientific and technological knowledge advances, management procedures will evolve. We encourage the pursuit of such knowledge and the adoption of viable handling and management procedures that ensure animal welfare.



# Section 1 Management Skills and Responsibilities

The purpose of this Code of Practice is to promote the welfare of horses. Those involved in the horse industry must make an effort to inform themselves and others in the proper care and handling of horses. This Code of Practice provides a guideline for the care necessary to promote the health and welfare of horses. Detailed information can be found by contacting provincial agriculture ministries, universities, veterinarians and successful horse owners/breeders.

## 1.1 General

1.1.1 People working with horses must have due regard for their welfare.

1.1.2 People involved in the horse industry should be aware of the welfare of horses under their care or the care of others. This may involve reporting cases of cruelty or neglect to the proper authorities, who have the authority to lay charges under federal and provincial regulations.

1.1.3 People involved in the horse industry must be aware of and comply with existing regulations governing the use of horses.

1.1.4 It is the responsibility of people working with horses to be knowledgeable of the proper care and handling of horses. Ignorance is not acceptable as an excuse for cruelty and neglect.

1.1.5 Management practices should accommodate the natural behaviour of horses, such as their need to graze and to socialize.

1.1.6 Horses should receive as much exercise and rest as is necessary for their welfare.

1.1.7 Tack and harness should be properly fitted to each horse to prevent any injury or irritation.

and accept responsibility for the welfare of horses in their care. Employers have an obligation to train employees with respect to humane handling and animal care.

1.2.2 Prior to assignment of duties, personnel must be adequately instructed in the basic needs of horses in their care. A working knowledge of the behaviour of horses combined with adequate facilities are necessary to ensure safe handling. Procedures must be reviewed and practiced to ensure competency and safety.

1.2.3 People working with horses should be able to identify the early signs of distress or disease.

1.2.4 The manager of a horse operation should design a contingency plan for situations (such as fire, mechanical failures, floods or shortage of personnel) that might endanger the lives or health of the horses on the premises. Everyone on the premises should be familiar with the plan and be able to take the proper action in the event of an emergency.

1.2.5 People working with horses should always avoid sudden actions or noise that may startle or frighten horses.

1.2.6 People working with horses should always be aware of the potential danger when working with horses and should take precautions to ensure their own safety and that of others.

## 1.2 Personnel

1.2.1 People working with horses must understand

## Section 2 Shelter and Horse Facilities

The purpose of this section is to provide information on the basic principles of shelter for horses. Management practices for all sectors of the Canadian horse industry have been developed in response to Canada's diverse climatic and geographic conditions. It is beyond the scope of this Code to describe all shelter and housing facilities used for horse care and production. Individuals requiring further information should refer to local sources, such as universities, provincial agricultural ministries, veterinarians and successful horse owners/breeders.

### 2.1 Shelter

- 2.1.1 The design and use of shelter facilities should promote the health, well-being and good performance of horses throughout all stages of their lives. Natural or constructed shelter areas must offer adequate protection from adverse weather conditions. All shelter areas should be structurally safe for horses and personnel. Shelter design should facilitate easy and safe handling. Advice on aspects of welfare should be sought when new buildings are to be constructed or existing ones modified.
- 2.1.2 Shelter areas should be located to avoid adverse effects of predictable natural occurrences, such as flooding.
- 2.1.3 Pastures, paddocks and feedlots used during cold seasons must have adequate windbreaks to reduce the effects of wind chill.

### 2.2 Stables

- 2.2.1 Housing facilities should be designed and constructed to provide for the horse's welfare.
- 2.2.2 Horses should be provided with a clean, dry area for lying down. In all types of housing systems, horses should be free to stand up or lie down comfortably at all times.
- 2.2.3 Alleyways and box stalls should be constructed to permit easy access for both horses and attendants. Horses and attendants should be able to move about safely.
- 2.2.4 Stall size should be calculated in relation to the size and weight of the animal (Appendix 2 gives space requirements for a 500kg/1100

lb. horse).

- 2.2.5 Ceilings and support beams in all facilities used to house horses should be high enough to permit horses to have a full range of head and neck motion without touching the ceiling when standing with four feet on the floor.
- 2.2.6 Floors in a horse stable should be properly designed, constructed and maintained to provide good traction, proper drainage, comfort and prevent injury.
- 2.2.7 The design of housing facilities and the materials used in their construction should permit thorough cleaning.
- 2.2.8 Wiring and electrical panels should not be accessible to horses and must be installed in accordance with applicable electrical codes.

### 2.3 Stable Maintenance

- 2.3.1 Stalls should be cleaned frequently and thoroughly to keep the stable clean, dry and free from noxious odors i.e. ammonia. Adequate amounts of suitable bedding material should be provided.
- 2.3.2 When a deep litter system (see Glossary) is used, the manure pack should be well drained and enough bedding should be added regularly to ensure a dry lying area. The deep litter system is not recommended for enclosed barns.
- 2.3.3 Manure should be handled and stored with a minimal negative impact on the environment.
- 2.3.4 Equipment and services, including feeding utensils, waterers, ventilating fans, heating and lighting units, fire extinguishers and

alarm systems should be cleaned and inspected regularly to ensure that they are working properly.

- 2.3.5 Proper storage facilities should be provided for all equipment so as not to obstruct or endanger horses.

## 2.4 Lighting and Ventilation

- 2.4.1 Horse stables/housing should be lit to permit the effective observation of all horses. Alleyways and work areas should be uniformly illuminated.

- 2.4.2 Natural light sources should be utilized as much as possible in the design of the facility.

- 2.4.3 Ventilation systems in horse stables/housing should be capable of maintaining an air change rate to prevent excessive heat and moisture levels and to remove major dust and gas contaminants that can be damaging to the respiratory system of horses and humans.

- 2.4.4 Mechanically ventilated stables should be equipped to introduce and uniformly distribute fresh air and/or to exhaust foul, moisture-laden air. Stables may be adequately ventilated through the use of air intakes and exhaust openings and/or in combination with the use of window and door openings to give reasonable air exchange without creating drafts.

- 2.4.5 Air movement should not cause discomfort to horses in the stable.

## 2.5 Safety

- 2.5.1 All stables/housing should have emergency

evacuation capabilities, including more than one available exit. Stalls should be equipped with quick release fasteners or some other means of easily releasing horses. A halter and lead rope for each horse should be available.

- 2.5.2 Emergency procedures should be posted and updated regularly and should include:

- a) evacuation procedures for people and horses;
- b) a list of emergency telephone numbers; and
- c) emergency transportation and housing arrangements.

- 2.5.3 Emergency equipment should be installed and should include:

- a) an effective smoke and fire detection system;
- b) fire extinguishers rated at least 2A by the Underwriters Laboratories of Canada; and
- c) emergency lighting systems.

- 2.5.4 Stable owners should consult with their local fire departments and request a site visit to review their emergency preparedness.

- 2.5.5 Electrical equipment (e.g. heated water bowls) should be regularly checked for stray or tingle voltage (see Glossary).

- 2.5.6 Hay and bedding should be stored in a separate building, away from horses. When haylofts are built above horse stalls, the loft floor should be constructed with a fire rating of not less than 45 minutes.

- 2.5.7 Horse owners/handlers should be aware that horses may ingest materials other than normal feed stuffs. Horses must not be allowed access to potentially toxic materials such as agricultural chemicals, lead batteries, petroleum products and paints.

# Section 3 Feed and Water

## 3.1 Feed

adequate for maintaining health. Horses should be fed on a regular schedule.

- 3.1.1 Horses should receive a daily diet that is

- 3.1.2 Diets for all horses should be formulated in accordance with the current recommendations of the National Research Council's (NRC) *Nutrient Requirements of Horses* (Appendix 3).
- 3.1.3 Commercial feeds must comply with the *Feed Regulations* as provided by the *Feeds Act* of Canada.
- 3.1.4 When horses are fed high-grain (high-energy) diets, attention should be paid to avoid nutrition-related health problems such as grain overload, laminitis or obesity. Abrupt changes in diet should be avoided.
- 3.1.5 All feed components used in the diet should be free of spoilage. Dusts and molds are harmful to horses.
- 3.1.6 When horses are fed in groups, enough manger space or feeding points should be available to minimize competition for feed (Appendix 2). All horses should have simultaneous access to feeders so that all can eat at one time, unless self-feeding is being practiced.
- 3.1.7 Horses should have access to a source of salt and appropriate minerals. These may be incorporated in their diet or fed free-choice.
- 3.1.8 All feeds and supplements should be properly labelled to avoid misuse. Feeds designed for other species, particularly medicated feeds and those containing urea, are not suitable for horses.
- 3.1.9 Feed troughs and buckets should be cleaned regularly.
- 3.2 Water**
- 3.2.1 Every horse must have access to a sufficient supply of potable water to meet its individual maintenance and activity needs. Many factors influence water consumption, including air temperature and humidity, water temperature, body weight, level of activity, diet and health and physiological status (e.g. pregnant, lactating or growing). Table 1 gives water requirements for horses.
- 3.2.2 Water troughs/buckets should be located so that they are protected from fouling and freezing. Water troughs, buckets and automatic waterers must be kept clean. Automatic watering systems must be checked daily to ensure that they are dispensing water properly.

**TABLE 1: WATER REQUIREMENTS OF HORSES**

Body weight	Water Requirements - litres		
	MINIMUM	AVERAGE	MAXIMUM
410 kg (900 lbs)	13.5 (3.0 gal)	20 (4.5 gal)	27 (6 gal)
545 kg (1200 lbs)	18 (4.0 gal)	27 (6.0 gal)	36 (8 gal)
680 kg (1500 lbs)	22.5 (5.0 gal)	36 (8.0 gal)	45 (10 gal)

Adapted from: *Nutrient Requirement of Horses*, 5<sup>th</sup> edition, National Research Council 1989.

## Section 4 Pastures/Yards

- 4.1 Pastures**
- 4.1.1 Horses on pasture/range should have access to sufficient quantities of good quality feed and potable water.
- 4.1.2 Salt and minerals should be available at all times (Appendix 3).
- 4.1.3 Properly maintained pastures may provide all or most of the nutrient requirements of

horses. Supplements should be provided, when necessary, to offset shortfalls in pasture quality and quantity. Pasture grazing has behavioural benefits.

- 4.1.4 To prevent digestive and health problems, horses should be gradually introduced to pasture, especially in springtime.
- 4.1.5 Horses on pasture should be inspected regularly, paying particular attention during high-risk periods (e.g. seasonal change, foaling, introduction of new animals to the herd).
- 4.1.6 Application of fertilizers, pesticides, herbicides and farm manure to pastures must be timed and conducted to prevent any risk to grazing animals and the environment. Pastures and yards should be inspected regularly for poisonous plants. Environmental conditions, including flooding and air pollution, can contaminate pastures.
- 4.1.7 Horses on pasture should have access to a well-drained resting area and to a natural or constructed shelter for protection from adverse weather conditions.
- 4.1.8 Pastures, paddocks and yards should be free of equipment, machinery, debris and refuse of all kinds.
- 4.1.9 Fly and insect populations should be regularly monitored and appropriate control measures applied as needed.

## 4.2 Fencing/Safety

- 4.2.1 Yards and pastures should be properly fenced to safely confine horses. The suitability of fencing varies according to the disposition of

the horses, as well as stocking density and paddock/pasture size. Fences should form both a physical and a visible barrier to minimize the potential for injuries.

- 4.2.2 Fences should be maintained in good repair. Fences and gates should be maintained to prevent horses from gaining access to roadways; perimeter gates should be kept closed.
- 4.2.3 Barbed wire and narrow gauge high tensile steel wire, because of their cutting, non-stretching and non-breaking properties, can cause severe injury to horses. These materials may be used for fencing in extensive, pasture grazing situations. In closely-confined paddock situations they should be avoided.
- 4.2.4 Horses should be introduced to unfamiliar fenced areas during daylight hours to reduce the risk of injury.

## 4.3 Electric Fencing

- 4.3.1 Electric fencing units must be CSA approved and must be installed and maintained according to the manufacturer's specification.
- 4.3.2 All power units for electric fences must be effectively grounded to prevent short circuits and/or electricity being conducted to unwanted places, i.e., gates and water troughs.
- 4.3.3 Horses should be supervised when first introduced to electric fencing.

# Section 5 Handling

## 5.1 General

- 5.1.1 Horses should be handled quietly, with care and patience, to avoid injury, pain or distress.
- 5.1.2 Handling and restraining devices must be used humanely and with regard to the horse's natural movement, temperament and physical

capabilities.

- 5.1.3 A properly equipped handling area should be available to facilitate the treatment of horses.
- 5.1.4 All tack and equipment should be maintained in good operating condition.

5.1.5 All halters, leads and lariats and other materials used to restrain or handle horses must be equipped with a method of quick release in case a horse becomes entangled in the equipment. Chutes used to restrain horses should have break out walls to assist horses that go down during handling.

## 5.2 Tethering

5.2.1 Tethering and hobbling for the purpose of grazing is a practice which has a high risk of injury to horses. It is not recommended and is strongly discouraged.

# Section 6 Health Management

## 6.1 General

6.1.1 Horses should be inspected frequently to ensure that they are healthy. Table 2 gives vital signs for an adult, 545 kg (1200 lb) horse at rest at 15<sup>o</sup> C. These will vary according to age, physical fitness and environmental conditions. Younger horses tend to be at the higher end of the range.

6.1.2 Horses on pasture or range should be inspected regularly, paying particular attention during high-risk periods (e.g., seasonal change, foaling period, introduction of new animals).

**TABLE 2: VITAL SIGNS FOR A 545 KG (1200 LB) HORSE AT REST AT 15<sup>o</sup> C**

Vital Sign	Normal Range	Average
Rectal temperature	37.5-38.5 C (99.5-101.3 F)	38.0 C (100 F)
Pulse	23-70 beats/minute	44 beats/minute
Respiration rate	10-14 breaths/minute	12 breaths/minute

Reference: Code of Recommendations and Minimum Standards for the Welfare of Horses - New Zealand 1993

- 6.1.3 In consultation with a veterinarian, people working with horses should develop a sound health care program, appropriate to the facilities and management system being followed. Increased horse population density requires greater attention to disease prevention.
- 6.1.4 A parasite control program should be established in consultation with a veterinarian. This will include administration of anthelmintics (dewormers) and manure and pasture management.
- 6.1.5 Hooves should be trimmed as often as is necessary to maintain the health of the foot. The frequency of hoof trimming will depend on such factors as age, season, nutrition, management and injury. When a horse is shod, shoes should be properly fitted and maintained.
- 6.1.6 Horses' teeth should be examined at least annually. Uneven wear and abnormalities of teeth should not be allowed to interfere with normal eating habits. Dental care will depend on such factors as age, nutrition and management system. Dental care should be performed by a veterinarian or under veterinary supervision.
- 6.1.7 When horses require medication, it must be administered as directed by the veterinarian or manufacturer. Treated horses should be properly identified. Only medications approved for use in horses should be administered. Strict attention must be paid to dosage levels and withdrawal times, either as indicated by the label information or as recommended by a veterinarian.
- 6.1.8 Medication must be administered by competent and knowledgeable personnel.
- 6.1.9 A health record, including any treatment or medication, should be kept for each horse.
- 6.1.10 Surgical procedures must be conducted only by licensed veterinarians or properly trained animal health technicians using accepted surgical techniques, in accordance with provincial and federal veterinary acts and regulations.
- 6.1.11 Horses may be susceptible to transportation stress and disease after transport. On arrival, new horses should be isolated to prevent the possible spread of disease. Handlers should carefully monitor recently transported horses for several days after long-distance transport.
- 6.1.12 Distressed horses should be dealt with humanely, effectively and promptly to prevent suffering. Sick or injured horses must receive veterinary treatment immediately.
- 6.1.13 Under no circumstances should severely sick, injured, blind or disabled horses be transported to a livestock auction. They may be moved directly to a medical facility, after consultation with a veterinarian, or, with veterinary approval, moved directly to a slaughterhouse.
- 6.1.14 Severely disabled horses (downers) must not be dragged. A veterinarian should be consulted prior to any attempt to move a downed horse.
- 6.1.15 Dead horses must be removed and disposed of in an appropriate manner according to municipal, provincial and federal regulations.
- 6.1.16 Suspicion of a reportable disease as defined by the *Health of Animals Act* (Canadian Food Inspection Agency) must immediately be brought to the attention of a veterinarian (Appendix 4).
- 6.1.17 Tail docking of horses for cosmetic reasons is unacceptable.

## Section 7 Identification

## 7.1 General

7.1.1 Permanent identification is an essential aspect of the horse industry. It serves as legal proof of ownership and is necessary to maintain adequate health records.

7.1.2 For registered horses, the breed registry will determine the acceptable method of identification.

7.1.3 Horse owners should use the least invasive method of identification that is effective.

7.1.4 The non-invasive identification system most widely used is a physical description, using colour, markings, breed and position of hair whorls and scars. Chestnut fingerprinting is possible but not currently in general use. Halter tagging, back tagging and neck chains are other non-invasive methods of temporary identification.

7.1.5 Invasive identification techniques include:

a) lip tattooing as described in breed registries;

b) micro chips (transponders) - these are implanted under the skin using a needle. Implantation of this foreign material is not allowed in horses to be used for human consumption;

c) plastic ear tags - can be used for temporary identification; and

d) hoof branding - may be used for temporary identification.

7.1.6 Hot and freeze branding of horses produces a permanent mark on the skin. Hot branding causes a scar where the hair re-grows in a different pattern than on the surrounding skin. In freeze branding, the hair re-grows in a lighter colour. Horse organizations are encouraged to move away from this type of identification.

7.1.7 Horses should never be rebranded. Governments and industry are encouraged to develop a more humane identification system for verifying ownership.

## Section 8 Reproductive Management

### 8.1 General

8.1.1 Reproductive management should be based on several factors, including size, age, health, previous performance and genetic potential.

8.1.2 Pasture breeding is an acceptable method of reproductive management.

8.1.3 Where artificial insemination or hand breeding is practiced, proper heat checking and restraining devices should be available to facilitate easy and effective heat detection, veterinary inspection and/or insemination.

8.1.4 Facilities used for hand breeding should ensure the safety of both horses and handlers. This includes secure footing and adequate ceiling

height indoors and a safe environment outdoors.

8.1.5 In natural breeding, the body weight and size of the stallion must be appropriate to the size and physical development of the mare.

8.1.6 The collection of semen and artificial insemination should be performed only by trained personnel. It is recommended that a phantom mare be used as a mount for semen collection. When a mare must be used as a mount for semen collection, she must be

protected from injury.

## **8.2 Stallion Management**

- 8.2.1 Stallions should be provided with a nutritionally balanced diet, balanced diet, based on body size and activity (Appendix 3).
- 8.2.2 Stallions should be exercised and given the opportunity to safely see other horses.

## **8.3 Mare Management**

- 8.3.1 Mares must be provided with a nutritionally balanced diet prior to breeding, throughout gestation and during lactation (Appendix 3).
- 8.3.2 Mares to be bred/inseminated should be handled as quietly as possible.
- 8.3.3 Pregnant mares should be allowed to exercise. The amount of exercise during pregnancy should reflect the activity level prior to pregnancy and should in no way threaten the health of the mare and/or fetus.
- 8.3.4 Mares should be managed so that they are in suitable body condition at the time of breeding and foaling. A body condition score of 5 or better on the 1-9 scale (Appendix 5) is recommended.
- 8.3.5 Mares should be routinely monitored for health status throughout the gestation period. A health program should be designed in consultation with a veterinarian. This health program should include prefoaling instructions for attendants. Any mare requiring veterinary care during pregnancy must receive such care.

## **8.4 Foaling**

- 8.4.1 Where a foaling stall or paddock is used, it should safely confine both mare and foal. It is recommended that the mare be given the opportunity to become familiar with the stall, foaling area or paddock several days before foaling.
- 8.4.2 Mares foaling on pasture should be provided with a clean, hazard free area. Sheltered foaling areas should be provided when foaling may coincide with adverse weather conditions.

8.4.3 Foaling attendants should be familiar with all the signs of impending parturition (foaling) and the three stages of parturition (see Glossary). To reduce stress to the mare, only one person should be responsible for observing the mare.

8.4.4 Mares generally foal without complications. Before administering assistance to a mare, attendants should be familiar with the signs of a normal delivery. Mares having difficulty foaling should be assisted immediately, preferably by a licensed veterinarian.

8.4.5 After delivery, the umbilical cord should be allowed to sever on its own.

8.4.6 The use of navel disinfectants should be on the advice of a veterinarian.

## **8.5 Care of the Neonate**

8.5.1 Newborn foals must ingest adequate amounts of colostrum as soon as possible after birth, preferably by nursing within the first six hours of life. Previously frozen colostrum should be available in the event that foals are unable to nurse, or the mare's colostrum is unavailable or of poor quality. The newborn foal should consume 250 ml (8oz) of colostrum per hour for the first twelve hours. Feeding colostrum after 24 hours is of limited value.

8.5.2 Foals should be observed regularly (preferably daily) during the first month of life to ensure that they are adequately nourished and healthy. If abnormalities are observed, a licensed veterinarian should be consulted.

8.5.3 Orphaned foals need specialized care. The best option is to foster the foal onto a nurse mare as soon as possible.

If a nurse mare is not available, ensure that the foal receives adequate colostrum as outlined in section 8.5.1. The foal should then be fed a foal milk replacer containing 15-18% fat and 18-22% crude protein made from milk products. For days 2 and 3, the foal should be fed a daily volume equal to 10-15% its body weight, at a rate of 250-500 mls (8-16 ounces) every 1-2 hours around the clock. Starting on day 4, increase the volume to 20% of body weight and adjust the feeding interval to every 3-4 hours. Free choice nipple or bucket feeding is recommended to achieve this level of intake.

By two weeks of age, the foal should be provided with a commercial foal ration and a high quality hay. Free choice water should be available at all times.

8.5.4 Foals should be kept in a warm, dry, well-bedded area.

## 8.6 Foal Care

8.6.1 A high quality forage and commercial foal ration may be made available on a free-choice basis by 7-10 days of age to promote normal growth and development. After 60 days, mare's milk is not sufficient to meet the nutrient requirements of the foal.

8.6.2 Foals should be raised outdoors, where possible. If mares and foals are kept indoors, the opportunity for regular exercise should be provided for normal development.

8.6.3 Foals may be weaned from 3-6 months of age, depending on the health status of both the mare and the foal. Weaning is stressful for mare and foal; strategies should be employed to minimize this stress.

## Section 9 Feedlots

### 9.1 General

9.1.1 Feedlots should be designed with the comfort and safety of the horses in mind. The feedlot should be clean, dry and protected from the elements.

9.1.2 Feedlots should be properly drained, with particular attention to feeding and watering areas. Excessive build up of wet manure must be avoided, in keeping with good animal husbandry practices. Dust control measures may also be required.

9.1.3 Horses in feedlots should be provided with adequate shelter. Adequate shelter may be an open-fronted shed or wind-break fencing (20% porosity) to protect horses from prevailing winds.

9.1.4 A dry, sheltered, elevated resting area should be available at all times.

9.1.5 An adequate supply of clean, dry bedding should be available at all times.

9.1.6 A feedlot facility should have properly designed and maintained unloading and loading facilities.

9.1.7 The space allowance for horses housed in groups should be calculated in relation to the whole environment, i.e. the size of the group, age, sex, weight and behaviour of the horses.

### 9.2 Feedlot Management

9.2.1 Horses should be segregated into groups according to age, sex and size. Segregation into small groups may reduce competition and disease.

- 9.2.2 New arrivals at the feedlot should:
- a) be identified using an acceptable method;
  - b) initially be isolated from other horses in a clean, dry, well-bedded area, protected from the elements;
  - c) have access to a supply of potable water. This supply should be easily identifiable as many new arrivals may be familiar with natural water sources only;
  - d) have free access to good quality hay;
  - e) be gradually introduced to the feedlot ration; and
  - f) be closely monitored for health status and for food and water intake.
- 9.2.3 Adequate feeder space should be provided to reduce competition for feed. Less space is required if horses are on a self-feeding program.
- 9.2.4 Water must be available at all times. Automatic, heated waterers are recommended to ensure a constant source of water. Waterers must be checked daily.
- 9.3 Health**
- 9.3.1 Any horse requiring medical treatment must be identified, treated and a record of the treatment kept.
- 9.3.2 When horses are treated, strict attention must be paid to dosage levels and withdrawal times either as indicated by label information or as recommended by a veterinarian.
- 9.3.3 A parasite control program must be established in consultation with a veterinarian because most anthelmintics (dewormers) are not licensed for use in horses intended for human consumption. This may include manure and pasture management. Strict attention must be paid to the dosage and withdrawal times of dewormers, either as indicated by label information or as recommended by a veterinarian.
- 9.3.4 Isolation pens should be available to accommodate sick horses safely and effectively.
- 9.3.5 Communicable disease may be a problem amongst feedlot horses. Veterinary consultation is recommended to design a health program that addresses prevention, as well as diagnosis and treatment.
- 9.4 Feeding**
- 9.4.1 Feedlot horses should be gradually introduced to the feedlot ration over a period of 7-21 days. Overfeeding grain without proper adjustment can cause enterotoxemia, colic, diarrhea, laminitis or death.
- 9.4.2 Horses can be fed a ration that includes 60 - 70% grain. At least three weeks of gradual increments is required to bring horses up to full feed. Self-feeding can be used after this time if adequate quality forage is provided. To avoid the risk of enterotoxemia, it is best to feed the horses a total mixed ration.
- 9.4.3 Grain may be fed whole, flaked or rolled. Finely-ground grain is not recommended.
- 9.4.4 Good quality, non-moldy, dust free hay should be available free choice at all times or fed as part of the total mixed ration. Good quality silage can be used in a total mixed ration.
- 9.4.5 Salt, minerals and vitamins are normally incorporated into the concentrate portion of the diet. Salt and minerals may be provided free choice. The total ration should be balanced in accordance with NRC requirements (Appendix 3).

# Section 10 Transportation

## 10.1 General

10.1.1 Each person involved in the preparation of horses for transport and in the transporting of horses by any mode should be knowledgeable about horse behaviour, adhere to the principles of animal welfare and comply with appropriate regulations.

10.1.2 The handler should have easy access to each horse.

10.1.3 The driver is responsible for the continued care and welfare of the horses during transport.

10.1.4 Drivers should start, drive and stop their vehicles as smoothly as possible. They should practice defensive driving to avoid sudden stops. Drivers should negotiate turns in the smoothest possible manner.

10.1.5 The transportation of horses from point of origin to a final destination should be completed as safely and as quickly as possible.

10.1.6 Each load should be checked before departure and periodically during transportation. During roadside inspection, the driver should evaluate all animals for signs of discomfort. When the welfare of horses is likely to be compromised due to further transport, the situation must be promptly corrected.

10.1.7 Transportation is recognized as a potential stress to horses. Horses stressed by transport should be closely observed for several days for signs of ill health.

## 10.2 Vehicles, Trailers and Equipment

10.2.1 Vehicles used to transport horses should provide for the safety of horses and personnel during transport.

10.2.2 Vehicles should:

- a) permit easy loading and unloading;
- b) be properly constructed and maintained, with proper cover to protect against extreme weather conditions;
- c) be free from insecure fittings or the presence of bolt heads, angles or other projections;
- d) be properly ventilated. A method must be available to adjust the ventilation from outside the loaded trailer to accommodate a change in weather or unplanned delay in unloading; and
- e) be free from engine exhaust fumes entering the trailer or container.

10.2.3 Vehicles should be cleaned and sanitized regularly to prevent the spread of disease and allow for regular evaluation of floor integrity.

10.2.4 Provisions must be made for drainage or absorption of urine. Horses transported in excess of 12 hours must be bedded with straw, wood shavings or other absorbent bedding material. Bedding should be used to enhance and ensure the security of footing during transportation. Vehicle floors must provide for secure footing.

10.2.5 Vehicle doors and internal gates should be wide enough to permit horses to pass through easily and without risk of injury.

10.2.6 Vehicles used to pull trailers or to carry horses must be appropriate for the safe movement of the load. Vehicles used to pull trailers must have sufficient power to smoothly accelerate the unit and sufficient braking ability to stop safely.

## 10.3 Loading Density and Headroom

10.3.1 Horses must be provided with enough floor space in a vehicle or container to ensure that

they are not crowded in a way that is likely to cause injury or discomfort (Appendix 6). Evaluation of the trailer for sufficient space must be made prior to loading horses.

10.3.2 When the vehicle is not full, horses should be safely partitioned into smaller areas to provide stability for the horses and the vehicle.

10.3.3 Each animal must be able to assume a natural stance standing with four feet on the floor and have a full range of head and neck motion without touching the deck or roof of the vehicle or container. As a guide, it is recommended that there be at least 2.5 cm (1 in) of clearance for each hand of horse height at the withers.

10.3.4 Halters and shanks must be removed from horses immediately if they restrict breathing or otherwise cause discomfort.

10.3.5 Handlers must pay special attention to prevent horses' heads from coming into contact with the deck while moving from the upper to the lower deck of a possum belly trailer, and while exiting the trailer.

#### **10.4 Segregation**

10.4.1 Different species and animals of significantly different age or weight must be partitioned separately from each other when transported. Small or young horses must be partitioned separately from mature horses.

10.4.2 Suckling foals must be transported in the same compartment as their dams and must be separated from other animals.

10.4.3 Mature stallions, aggressive horses and animals incompatible by nature must be partitioned separately from other horses.

#### **10.5 Loading and Unloading**

10.5.1 Horses should not be rushed during loading and unloading. In a new situation or location, all normal, healthy horses are alert and investigative. Consequently, every change or

disturbance in surroundings, such as noises, breezes, sudden movement of objects and/or flashes of light, should be avoided. Abrupt movements by drivers and loaders should also be avoided.

10.5.2 The loading/unloading surface should be level with the vehicle floor. Self-aligning docks are recommended if the loading surface and the vehicle surface are not level. A loose horse should not be required to step forward up or down a step of more than 25 cm (10 in). If backing a loose horse out into an unfamiliar environment or unloading area, the horse should not be required to step up a step of any height nor down a step of more than 15 cm (6 in).

10.5.3 Horses familiar with trailering can safely negotiate a single step of 38 cm (15 in).

10.5.4 No gap should exist between the ramp, its sides, and the stationary vehicle to be loaded.

10.5.5 If a handler leads a horse into a vehicle, there must be an avenue of escape for the handler.

10.5.6 The use of electric prods for handling horses is not acceptable.

10.5.7 All alleys and ramps should be properly illuminated. Harsh contrast in lighting should be avoided.

#### **10.6 Holding Facilities**

10.6.1 All places where horses are temporarily assembled for sale, show, transport, feed, water and rest, slaughter, or for any other reason must have sufficient facilities for the safe loading, unloading and holding of horses (refer to Section 2, Shelter and Horse Facilities).

10.6.2 In all places where horses are housed and handled, the walls and doors must be free of projections and the floors must have suitable traction. Horses must have protection from inclement weather.

10.6.3 Areas where horses are housed must have

sufficient illumination during normal operations to allow the animals to be easily inspected.

## **10.7 Feed, Water and Rest**

10.7.1 Horses destined for long trips (more than 24 hours) must be fed, watered and rested for not less than five hours prior to starting their journey. Resting horses, when compatible by nature, should be able to move freely in a well bedded, protected environment. Horses resting must be put in a facility with access to suitable feed and potable water.

10.7.2 During transport, horses (excluding weanling foals) should not be without feed and water for longer than 24 hours. This time may only be exceeded if they will reach their final destination without being confined longer than 30 hours. (It is acknowledged that this is more restrictive than the regulations made under the *Health of Animals Act*, a federal statute.)

10.7.3 During transport, weanling foals should not be without feed and water for longer than 8 hours.

10.7.4 Any person transporting horses is obliged to plan long-distance trips taking into consideration the availability and location of facilities where horses may be unloaded, fed, watered, and cared for in a humane manner. Facilities must provide protection from extreme weather conditions.

10.7.5 Nursing foals with dams should be allowed an opportunity to nurse undisturbed at least every eight hours. Mares with nursing foals should be provided with appropriate feed and water every 12-18 hours during transportation.

10.7.6 Prior to reloading a vehicle, the interior of the vehicle should be inspected, bedding added and other corrective measures taken to assure continued safe transportation.

## **10.8 Injured, Sick and Disabled Horses**

10.8.1 Only horses fit to travel should be considered for transportation, unless special precautions are taken to ensure that they do not suffer.

10.8.2 Animals identified in distress or injured or

disabled during transport must be attended to at the first opportunity.

10.8.3 Injured, sick and disabled horses should be unloaded in a way that causes them the least amount of suffering.

10.8.4 In the case of a vehicle accident or roadside emergency, immediate action should be taken to minimize suffering of animals (Appendix 7).

10.8.5 Severely disabled horses (downers) must not be dragged. A veterinarian must be consulted prior to any attempt to move a downed horse. In conditions where there is little hope of recovery, horses should be euthanised on the vehicle or, with veterinary approval, taken immediately for slaughter.

10.8.6 Pregnant mares must not be transported if they are likely to give birth during the journey.

10.8.7 Blind horses should be haltered, handled individually and transported only with familiar pen mates or with a compatible horse.

## **10.9 Precautions in Extreme Weather**

10.9.1 Horses must be protected from exposure to severe weather conditions during transportation.

10.9.2 In extreme or rapidly changing weather, horses should be inspected frequently for signs of discomfort or distress from exposure.

10.9.3 In the event of vehicle breakdowns, traffic accidents or other delays during transportation, appropriate action is required to ensure the welfare of horses (Appendix 7).

10.9.4 During winter travel:

- a) increasing stocking density and bedding is not an alternative to proper protection from the external environment;
- b) all horses must be protected from wind

- during transportation to prevent wind chill and freezing; and
- c) precautions should be taken to protect foals. They must be kept dry and provided with an adequate supply of bedding.

10.9.5 During hot and humid weather, precautions must be taken to avoid stress or death caused by the combination of high temperature and high humidity. For transportation during hot/humid weather:

- a) sufficient ventilation must be available because horses maintain body temperature under heat stress by evaporative cooling;
- b) horses must not be transported wearing blankets and/or hoods;
- c) whenever possible, journeys during hot, humid periods should be avoided;
- d) necessary movements should be scheduled at night and/or prior to the heat of the day;
- e) periods of intense traffic congestion should be avoided;
- f) vehicles containing horses should not be parked in direct sunlight. When it is necessary to stop, the duration of the stop should be minimized to prevent the build up of heat inside the vehicle;
- g) loading density for loose horses should be reduced (Appendix 6);
- h) the journey should begin immediately after horses have been loaded; and
- i) unloading of horses should be accomplished promptly, on arrival at their destination.

## 10.10 Commercial Operators

10.10.1 Shippers and consignors are responsible for:

- a) hiring only qualified transporters, who are knowledgeable of the proper care and handling of horses during transportation and have appropriate equipment;
- b) ensuring that all individual horses tendered for transport are fit to be transported;

- c) ensuring proper loading and unloading techniques are used;
- d) ensuring the assembled load is c o m p a t i b l e with the intended vehicle; and
- e) providing the driver with a method to contact them in the event of an emergency.

10.10.2 Particular care should be exercised when using possum belly trailers for horse transport. This style of livestock trailer prohibits easy access to individual animals if they become injured or disabled during transport.

10.10.3 When using possum belly trailers:

- a) strict adherence to headroom and recommended loading densities is required;
- b) each animal must be observed prior to loading to assure soundness and general health necessary to complete the intended trip;
- c) rail (trailer decking material) not in current use must be securely stowed, preferably external to the animal holding compartments;
- d) handlers must pay special attention to prevent horses' heads from coming into contact with the deck while moving into or out of the upper or lower decks; and
- e) internal ramps should have solid sides continuous to the floor to prevent slipping off the side of the ramp.

## 10.11 Transportation of Horses by Air

10.11.1 Information on the shipment of horses by air is contained in the International Air Transport Association's (IATA), *Live Animals Regulations*. Copies can be subscribed from the Customer Services Representative, International Air Transport Association, 2000 Peel Street, Montreal, Quebec, H3A 2R4.

# Section 11 Auction Markets and Sales

## **11.1 General**

11.1.1 All provincial and federal acts and regulations governing all aspects of auction markets must always take precedence. Personnel working with horses should be instructed in acceptable, humane handling techniques. Educational material should be developed to ensure that employees are aware of existing legislation. Horses should be moved through facilities with patience and as quietly as possible to reduce stress and minimize the risk of injury.

## **11.2 Loading and Unloading**

11.2.1 Facilities should be routinely inspected to remove hazards, such as holes in flooring, broken boards and bars, protruding pieces of angle iron, nails or long bolts around the chute and corrals.

11.2.2 Horses generally move toward light. To encourage the safe and efficient movement of horses, adequate and appropriate lighting is required around alleys, loading ramps and the entrance to transport vehicles. Lamps should not be shone directly into horses' eyes. Diffused lighting should be used. Harsh contrasts in lighting should be avoided.

11.2.3 One way gates that prevent horses from reversing direction are recommended.

11.2.4 Secure footing for all horses must be maintained.

11.2.5 Drive-through loading/unloading (see Glossary) facilities are recommended.

11.2.6 Loading ramps, chutes and other holding facilities should be constructed of solid materials which can be easily cleaned and should be well maintained.

11.2.7 Ramps (permanent and portable) should:

- a) be strong and solid;
- b) provide safe footing; and
- c) have sides high enough to prevent horses from falling or jumping off.

11.2.8 Chutes or ramps should be about 76 cm (30 in) wide to allow horses to move in single file. Movement of loose horses is more easily accomplished if the alleys and ramps have no sharp turns that could impede movement or cause injury. Chute design should allow for a gradual curve with no more than a 15° bend. The walls of chutes and ramps should be solid. The inside wall should be made slightly lower so that the animals can see the tops of the heads of horses in front of them.

11.2.9 Concrete ramps should be stairstep design with adequate grooving in the concrete.

11.2.10 Wooden ramps require square cleats 3.8-5.0 cm (1.5-2 in) attached to the ramp every 20 cm (8 in). Hardwood or square steel tubing should be used for cleats.

11.2.11 Angles of elevation of loading and unloading docks should not exceed 25° and must not exceed 45°. Elevated loading and unloading docks should be at least 1.5 m (5 ft) wide and the top of the dock should be level with the vehicle floor.

- 11.2.12 During loading or unloading of vehicles, loading docks must always be aligned. Small gaps can catch or trip horses, resulting in injury (refer to section 10.5.2).
- 11.2.13 If loose horses are backed off a vehicle, the down ramp should remain a constant width until the horse achieves level footing. Horses backing down a ramp should not be allowed to attempt to turn around on an incline.
- 11.2.14 Loose horses should not be unloaded directly into long alleyways. The animals unloaded first will move to the end of the alley and horses unloaded later will have a tendency to bolt to rejoin the previously unloaded group. Every effort should be made to control the speed of horses being unloaded.
- 11.2.15 Drains should be installed outside the alley way. Horses may balk and refuse to walk over drain grates in the middle of the floor or alleys.
- 11.2.16 All commercial unloading facilities must provide an appropriate area suitably equipped for cleaning vehicles during all seasons. In winter, wet bedding can freeze to form an uneven, dangerous surface. Wet bedding should be removed from the vehicle after each winter trip.
- 11.3 Feed, Water and Rest**
- 11.3.1 Potable water must be provided from the time of arrival. Horses must receive feed if they are to remain longer than 5 hours. Foals must have access to feed and water at all times.
- 11.3.2 Horses held for more than 24 hours must be provided with adequate feed and water which cannot become contaminated. The facility must have sufficient bedded floor space for all horses to lie down at the same time.
- 11.4 Housing**
- 11.4.1 Facilities should be routinely inspected to remove hazards such as holes in flooring, broken boards and bars, protruding pieces of angle iron, nails or long bolts.
- 11.4.2 All handling/holding facilities should be cleaned regularly and supplied with fresh bedding.
- 11.4.3 Floors of all pens should be paved or concrete and should be properly scored or treated to prevent slipping. Floors must be graded gently to provide drainage and to allow proper cleaning. The slope of the floor in individual holding units should be between 2° and 4°. Drainage grates, where required, should be at the side of the pens.
- 11.4.4 Adequate protection from adverse weather must be provided for all horses, especially foals.
- 11.4.5 Overcrowding should be avoided.
- 11.4.6 A range of pen sizes should be available to minimize the need to mix various types and sizes of horses. In larger pens, adjustable dividing gates should be used to reduce mixing of horses.
- 11.4.7 Every horse that is a potential danger to other horses should be segregated immediately.
- 11.5 Injured, Sick and Disabled Horses**
- 11.5.1 All horses should be inspected on arrival at the auction market. Any signs of abuse, neglect or injury should be reported to the appropriate authority.
- 11.5.2 Non-ambulatory horses (downers) must not be unloaded until examined by a veterinarian. Downers must not be dragged. In conditions where there is little hope of recovery, non-ambulatory horses should be euthanised on the trailer or, with veterinary approval, taken directly for slaughter.
- 11.5.3 Distressed and injured horses should be held separately in appropriate pens and must receive veterinary attention.
- 11.6 Foals**
- 11.6.1 Foals less than 3 months old must not be accepted for sale, unless accompanied by their dams.

11.6.2 Foals must have access to feed and water at all times.

11.6.3 Foals must have adequate protection from adverse weather conditions at all times.

## Section 12 Slaughter

### 12.1 General

12.1.1 No food animal shall be handled in a manner that subjects the animal to avoidable distress or pain (*Meat Inspection Act*).

12.1.2 All personnel working with horses should be instructed in acceptable, humane handling techniques. The selection and training of the personnel are the most important factors in ensuring humane slaughter.

12.1.3 Operators of slaughter facilities are responsible for humane preslaughter handling and for the humane stunning and slaughter of horses on their premises.

12.1.4 It is the responsibility of federal and provincial inspectors to monitor the humane handling and slaughter of horses.

12.1.5 Violations of humane handling and transportation regulations, such as overcrowding, careless exposure to inclement weather or other circumstances that result in suffering, should be reported immediately to plant management, inspectors and other authorities.

12.1.6 Slaughter horses imported from the USA cannot be unloaded in Canada for feed, water and rest. They must reach their final destination prior to unloading. Transporters must assure that the total duration of the trip does not exceed 36 hours.

12.1.7 Horses held for more than 24 hours must be provided with adequate feed and water which cannot become contaminated. The facility must have sufficient bedded floor space for all horses to lie down at the same time.

### 12.2 Unloading

12.2.1 Unloading should take place as soon as possible after arrival at the plant. The packer,

the trucker and the veterinary inspector should consult to prevent unnecessary delays.

12.2.2 Unloading facilities that will not cause injury to horses must be provided.

12.2.3 Vehicles and docks should always be aligned. There should be no gaps between the vehicle and the bottom and sides of the platform.

12.2.4 Facilities should be inspected routinely to remove hazards such as holes in flooring, broken boards and bars, protruding pieces of angle iron, nails or long bolts.

12.2.5 Horses generally move toward light. To encourage the safe and efficient movement of horses, adequate and appropriate lighting is required around alleys, loading ramps and the entrance to transport vehicles. Lamps should not be shone directly into horses' eyes. Diffused lighting should be used. Harsh contrasts in lighting should be avoided.

12.2.6 One-way gates that prevent horses from reversing direction are recommended.

12.2.7 Secure footing for all horses should be provided and maintained.

12.2.8 Loading ramps, chutes and holding facilities should be constructed of solid materials which can be easily cleaned and maintained.

12.2.9 Ramps should:

- a) be strong and solid;
- b) provide safe footing; and
- c) have sides high enough to prevent horses from falling or jumping off.

12.2.10 Chutes or ramps should be about 76 cm (30 in) wide to allow horses to move in single

file. Handling of loose horses is more easily accomplished if the alleys and ramps have no sharp turns that could impede movement or could cause injury to the horses. Chute design should allow for a gradual curve with no more than a 15° bend. The walls of chutes and ramps should be solid. The inside wall should be made slightly lower so that the animals can see the tops of the heads of the horses ahead of them.

- 12.2.11 Concrete ramps should be of stairstep design with adequate grooving in the concrete.
- 12.2.12 Wooden ramps require square cleats 3.8-5.0 cm (1.5-2 in) attached to the ramp every 20 cm (8 in). Hardwood or square steel tubing should be used for cleats.
- 12.2.13 Angles of elevation of loading and unloading docks should not exceed 25° and must not exceed 45°. Loading and unloading docks should be at least 1.5 m (5 ft) wide and the top of the loading dock should be level with the vehicle floor.
- 12.2.14 During unloading of vehicles, loading docks must always be aligned. Small gaps can catch or trip horses, resulting in injury (refer to section 10.5.2 on loading and unloading).
- 12.2.15 Drains should be installed outside the alley ways. Horses may balk and refuse to walk over drain grates in the middle of the floor or alleyways.
- 12.2.16 Commercial unloading facilities must provide an appropriate area, suitably equipped, for cleaning vehicles during all seasons. In winter, wet bedding can freeze to form an uneven, dangerous surface. Wet bedding should be removed from the vehicle after each winter trip.
- 12.2.17 Injured animals or animals unable to move (downers) must not be unloaded and must be seen immediately by a veterinarian. Downer horses should be euthanised on the trailer.
- 12.2.18 Odours and noise originating in the slaughter area may deter horses from moving. Procedures should be in place to minimize these deterrents.

### **12.3 Special Handling of Injured, Sick and Disabled Horses**

- 12.3.1 All horses that are obviously sick, injured or disabled must be separated immediately from healthy horses. Special segregation is required for horses found to be unfit during antemortem inspection.
- 12.3.2 Special facilities must be provided for the unloading and conveyance of crippled horses directly into the plant. Downers must not be dragged.
- 12.3.3 Animals unable to move (downers) must be seen immediately by a veterinarian. Downer horses should be euthanised on the trailer.
- 12.3.4 Facilities should be available to permit conveyance to the kill floor of animals slaughtered on a transport vehicle.

### **12.4 Holding Facilities**

- 12.4.1 Sufficient pen space must be provided to prevent overcrowding, to permit necessary segregation of horses and to enable all horses to lie down.
- 12.4.2 Every holding area must be adequately ventilated to minimize distress to the horses and to prevent excessive accumulation of odours.

12.4.3 Each holding pen must provide access to potable water. Water heaters must be provided to prevent drinking water from freezing.

12.4.4 Antemortem inspection facilities must be provided and must include a restraining device. Such devices must provide protection against injury for both the animals and the inspectors. Adequate lighting must be provided.

## **12.5 Stunning and Slaughter**

12.5.1 No horses shall be slaughtered without first being rendered unconscious by a properly trained person using an approved, humane method. Shooting is the preferred method.

12.5.2 Hoisting of conscious horses is illegal.

12.5.3 Stunning pens should be designed and constructed to accommodate a single horse and to permit easy and safe stunning.

12.5.4 Stunning systems must be well maintained and used only by operators who are properly trained and have the ability to apply such systems so that unconsciousness of the horse results immediately.

# Appendix 1   ◇   Recommended Code of Practice for the Care and Handling of Horses in PMU Operations

The Pregnant Mare Urine (PMU) industry developed its Recommended Code of Practice for the Care and Handling of Horses in PMU Operations in 1990. The code was developed by an eight member committee comprised of veterinarians, animal scientists, producers and Wyeth-Ayerst company representatives. The code was endorsed by the Ministers of Agriculture of Manitoba, Saskatchewan and Alberta and the Commissioner of Agriculture of North Dakota.

The code was reviewed and revised in 1993 and again in 1995. A third review and revision was carried out in June of 1996 and the revised code has now been reprinted, again with the endorsement of the four jurisdictions already mentioned.

Because of the specialization of the PMU industry and the uniqueness of its code, the PMU Code is not printed in its entirety in this document. If you wish to receive a copy of the PMU Code, please contact:

Manitoba Department of Agriculture  
545 University Crescent  
Winnipeg, Manitoba  
R3T 5S6

## Appendix 2 Recommended Space Requirements for a 500 kg / 1100 lb horse

Requirements	500 kg	1100 lbs
Stall sizes: - box - foaling (box) - tie (incl. manger)	3m x 3m to 3.6m x 3.6m 3m x 3m to 3.6m x 3.6m 1.5m x 3.6m - 3.8m	10' x 10' to 12' x 12' 10' x 10' to 12' x 12' 4'-5' x 8' - 9'
Watering Facilities: - space requirements - water used (daily)	1 bowl / 20 horses 40 litres	1 bowl / 20 horses 10 gallons
Grain Feeders: (individual grain boxes) - length - width - depth - throat height	30 to 60 cm 20 to 40 cm 15 to 30 cm 60 to 90 cm	12 - 24" 12 - 16" 6 - 12" 24 - 36"
Hay Feeders: (individual manger) - length - width - depth - throat height	60 to 90 cm 50 to 60 cm 60 to 76 cm 60 to 106 cm	24 - 36" 20 - 24" 24 - 30" 24 - 42"
Barn Facility Alleys	3 m (minimum)	10' (minimum)
Pasture Gates	3.6 m (minimum)	12' (minimum)
Stall Doors	1.2 m or wider	4' or wider
Corrals: - for runs - for working pens	95 m <sup>2</sup> / horse 20 m <sup>2</sup> / horse	1000 ft <sup>2</sup> / horse 250 ft <sup>2</sup> / horse
Open Front Sheds	7.5 m <sup>2</sup> to 9 m <sup>2</sup> / horse	80 to 100 ft <sup>2</sup> / horse

Adapted from: Horse Handling Facilities  
February, 1997  
Alberta Agriculture  
Food and Rural Development, Publishing Branch  
700-113 Street  
Edmonton, Alberta T6H 5T6

# Appendix 3 Nutrient Requirements of Horses

To obtain information from the National Research Council on the nutrient requirements of horses, refer to the following:

Nutrient Requirements of Horses  
Fifth Edition, 1989  
National Academy Press  
Washington, D.C.

## Appendix 4 Reportable Diseases

For the purpose of Section 2 of the *Health of Animals Act*, the following reportable diseases may affect horses:

Anthrax

Brucellosis

Contagious Equine Metritis

Dourine

Equine Infectious Anaemia

Equine Piroplasmiasis

Glanders

Rabies

Tuberculosis

Vesicular Stomatitis

Source: Canadian Food Inspection Agency, *Reportable Diseases Regulations*, February, 1991.

## Appendix 5 ◇ Body Condition Scoring System for Horses

SCORE	DESCRIPTION
1 POOR	Extremely emaciated. Spinal vertebrae, ribs, tailhead and point of the hip and buttock are prominent. Bone structure of withers, shoulders and neck easily noticeable. No fat can be felt anywhere.
2 VERY THIN	Emaciated. Slight fat covering over base of spinal vertebrae, transverse processes of lumbar vertebrae feel rounded. Spinal vertebrae, ribs, tailhead, point of hips and buttocks are prominent. Withers, shoulders and neck structure faintly evident.
3 THIN	Fat built up about halfway on spinal vertebrae, transverse processes cannot be felt. Slight fat cover over ribs. Spinal vertebrae and ribs easily discernible. Tailhead prominent, but individual vertebrae cannot be visually identified. Point of hip appears rounded, but easily seen. Point of buttock evident. Withers, shoulders and neck accentuated.
4 MODERATELY THIN	Slight ridge along the back. Faint outline of ribs visible. Tailhead prominence depends on confirmation, fat can be felt around it. Point of hip not evident. Withers shoulders and neck not obviously thin.
5 MODERATE	Back level. Ribs cannot be visually distinguished but can be easily felt. Fat around tailhead beginning to feel spongy. Withers appear rounded over spinal vertebrae; shoulders and neck blend smoothly into body.
6 MODERATE TO FLESHY	May have slight ridge along back. Fat over ribs feels spongy. Fat around tailhead feels soft. Fat beginning to be deposited along the sides of the withers, behind the shoulders and along the sides of the neck.
7 FLESHY	May have crease down back. Individual ribs can be felt, but noticeable filling between ribs with fat. Fat around tailhead is soft. Fat deposited along withers, behind the shoulders and along the sides of the neck.
8 FAT	Crease down back. Difficult to feel ribs. Fat around tailhead very soft. Area along withers filled with fat. Area behind shoulder filled in flush. Noticeable thickening of neck fat deposited along inner buttocks.
9 EXTREMELY FAT	Obvious crease down back. Patchy fat appearing over ribs. Bulging fat around tailhead, along withers, behind shoulders and along neck. Fat along inner buttocks may rub together. Flank filled in flush.

Adapted from: Henneke et al., *Equine Veterinary Journal*: 371-372 (1983)

## CONDITION SCORE SYSTEM

Tailhead	Crease down back	Along the withers	Along the neck
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Ribs

Behind the  
shoulder

**Diagram of areas emphasized in condition**

# Appendix 6 ◇ Maximum Loading Density For Loose Horses For Transit \*

\* Stocking densities will be less in smaller trailers (less than 8 feet wide)

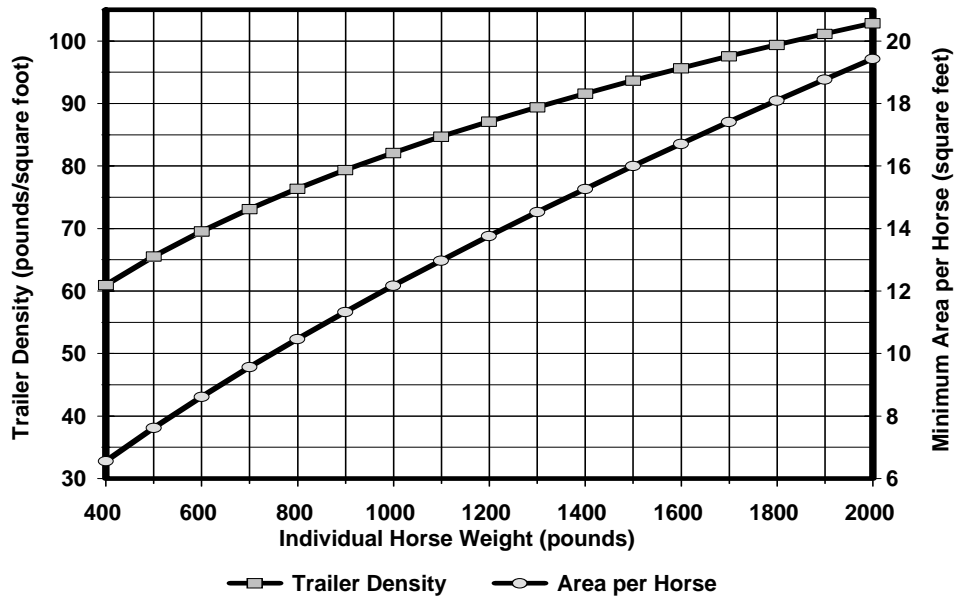


Figure 1 Maximum recommended stocking density (Imperial) for loose loaded horses in body condition score 5. Floor density on the left axis and area per horse on the right. Thin horses in body condition score 1 to 3 require more space per horse. Reduce loading density 10-15% for hot humid conditions.

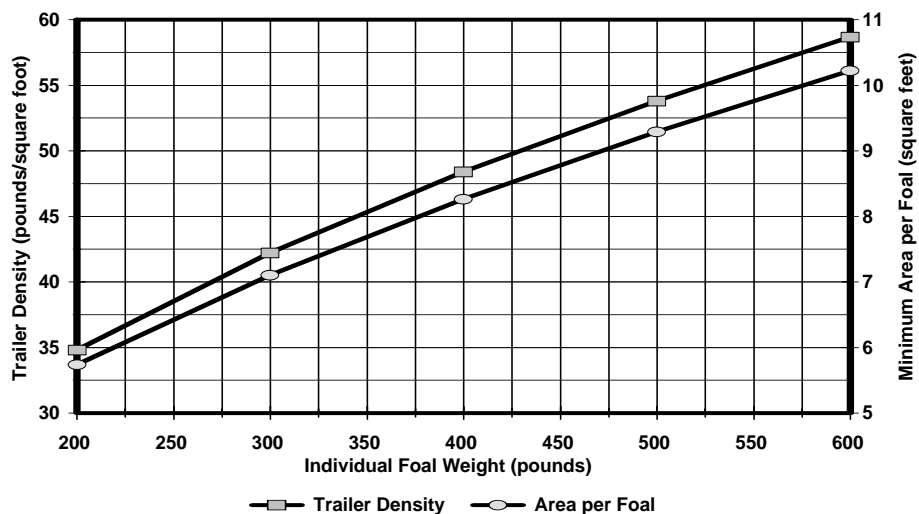


Figure 2 Maximum recommended Stocking Density (Imperial) for loose loaded foals in body condition score 5. Reduce stocking density 10-15% for hot humid conditions.

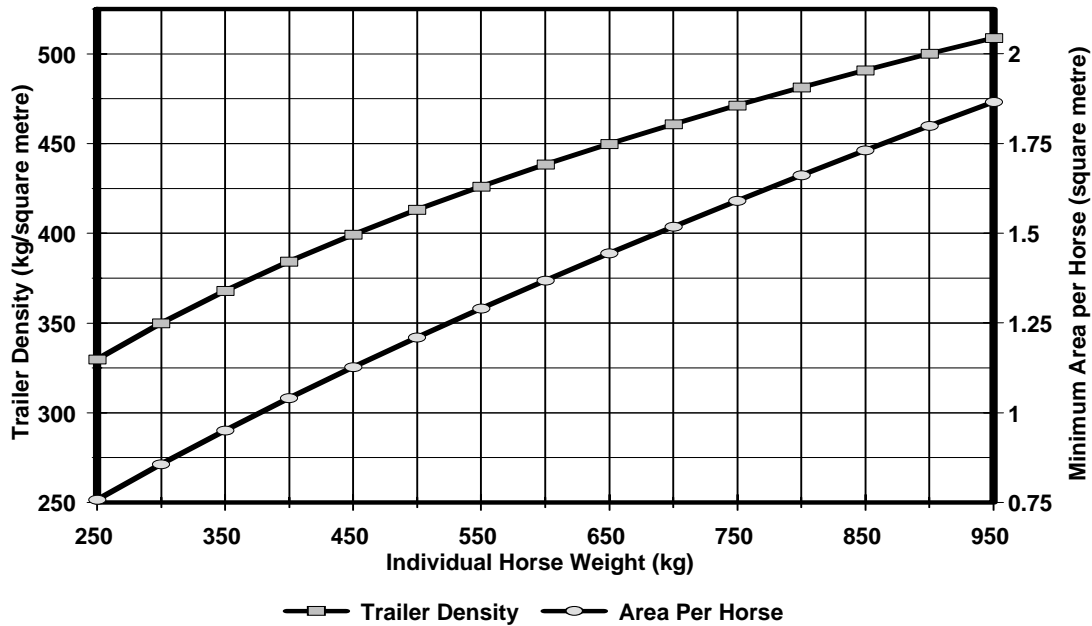


Figure 3 Maximum recommended stocking density (Metric) for loose loaded horses in body condition score 5. Floor density on the left axis and area per horse on the right. Thin horses in body condition score 1 to 3 require more space per horse. Reduce loading density 10-15% for hot humid conditions.

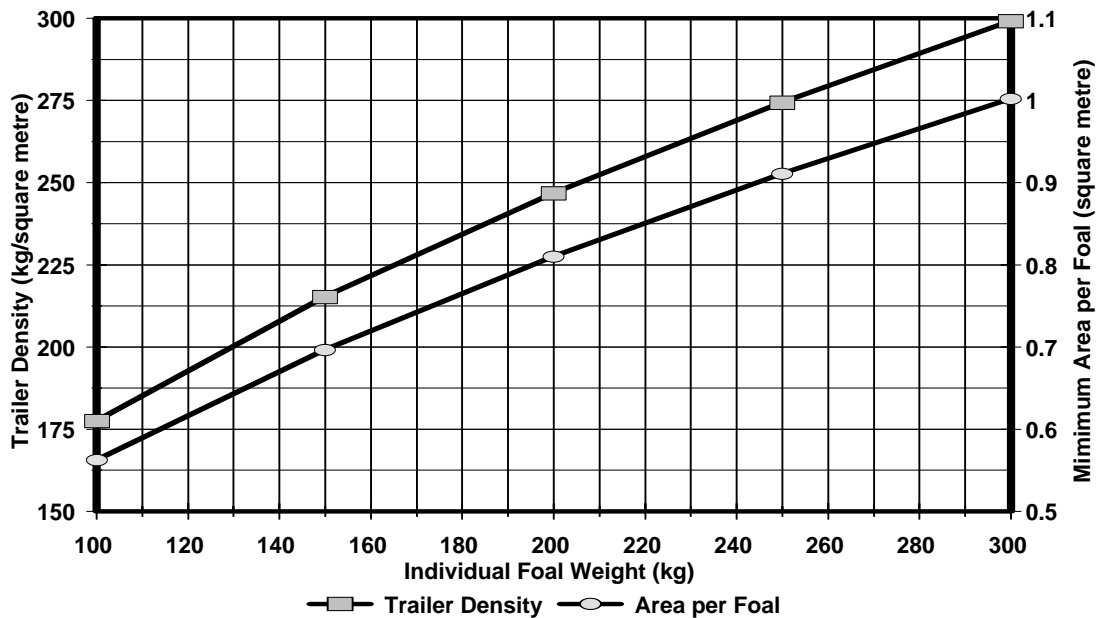


Figure 4 Maximum recommended Stocking Density (Metric) for loose loaded foals in body condition score 5. Reduce loading density 10-15% for hot humid conditions.

Source:

T. Whiting  
 Canadian Food Inspection Agency (CFIA)  
 269 Main Street, Federal Building  
 Winnipeg, Manitoba  
 R3C 1B2

# Appendix 7   ◇   Guidelines for Dealing with Vehicle Accidents Involving Horses

## **General:**

The ability to handle horses is a skill which is not common among the general public. A good citizen with this specialized ability should provide assistance in emergency situations as necessary.

## **PROCEDURE**

### **Provision of Assistance to Police and Emergency Personnel:**

1. Horse owners and handlers present at motor vehicle accidents involving horses should provide assistance to police or emergency personnel who are attending the accident and are legally responsible for management of the site. The judgement and common sense of experienced horse handlers may have a very positive influence in these situations.
2. Horse handlers should employ procedures which facilitate the safe and efficient handling of horses.
3. Always ensure that emergency officials have the site under control before presenting yourself as available to assist. Inform police or emergency officials of any special training or experience that you have which is applicable to the situation and await instruction from the attending officers.

### **If first to arrive at the accident site:**

1. Remember human health and safety should be your primary concern. Provide first aid to the driver and other people involved in the vehicle accident.
2. Evaluate the whole situation and try to identify the types and numbers of horses involved, and the most expedient response.
3. Always deal with loose, mobile horses first. Expect horses to be frightened, disoriented and excited. Frightened horses are unpredictable and may react instinctively by running. If possible, allow them to calm down before trying to move them. It is very important to remain calm and quiet. Take your time and be patient. Stay alert as you may need to move quickly. Always have an escape route for yourself. If possible, seek the assistance of another experienced animal handler when attempting to deal with or move large or excited horses.
4. Once the loose horses have quietened down, advise all people involved:
  - a) DO NOT shout or wave arms wildly.
  - b) DO NOT approach an animal from directly in front unless absolutely necessary, e.g. assisting injured people.
  - c) Direct the movement of horses to a safe area. The horses should be moved slowly and in a group away from traffic areas. Horses may be temporarily penned with portable fencing such as crowd control barriers that police can bring quickly. Barriers which will stand alone can be assembled to adapt to the area. Other possibilities are snow fencing, vehicles, yellow police tape or a combination of materials.
  - d) Approach horses slowly from the rear half of the animal, and slightly to one side. If using crowd control

barriers, stand behind the barriers and gradually decrease the area by pushing forward and walking behind. The barriers can also be used to create a chute or funnel to guide the horses. Once you are in the animal's personal space or flight zone (up to 15 feet from the animal) it will move forward. Move back outside the flight zone to stop forward movement. If you enter the flight zone too deeply or too quickly, the animal will try to run.

5. Deal with loose conscious, badly injured horses second. Advise spectators to stay away. Injured horses are less likely to struggle to their feet if left alone. Euthanasia may be considered the most humane action. If unsure, consult with a veterinarian and/or the driver and owner if available (Appendix 8).
6. Live animals must be removed from the disabled vehicle before it is righted or moved in any way. Live animals should be transferred to a new conveyance for transport from an accident site. Dead animals should be removed from the truck and injured animals assessed.

Animals released from the truck must be contained or they will create a traffic hazard which may endanger human life. Various means may be used to handle the release of animals from the truck or trailer.

Access to horses, when trailers are lying on their sides, can be accomplished by removing the roof of the trailer. The roof can normally be cut away with equipment routinely carried by highway Emergency Response Teams.

A second truck may be backed up to the damaged truck and animals transferred directly. Use gates or temporary fencing to prevent animals from escaping.

Horses trapped in the trailer can vary in extent of injury. Every effort should be made to protect horses from further injury and to minimize the suffering of animals not likely to recover.

7. To quiet a struggling injured animal which is lying down (e.g. with broken limbs), place a heavy cover over its eyes, leaving the nostrils exposed, and press down lightly on the neck just behind the head with a knee. Approach the animal from the back in order to stay clear of the feet.
8. Comatose horses are not aware of any pain and may be left to last. Horses lying down having seizures or paddling their legs may have serious head injuries. Unless these horses show signs of regaining consciousness, such as lifting the head, looking about or trying to rise, they may be left.
9. If a comatose animal does not blink when the clear part of the eye at the corner is touched, it may be dead. Check for breathing by positioning yourself at the animal's back, near the shoulder, and place a hand on the chest.
10. Euthanasia of moribund and severely injured animals, unlikely to recover can be effectively accomplished with a firearm (Appendix 8).

Source: Adapted from *Vehicle Accidents Involving Livestock*, Halton Regional Police Service (Ontario), 1996.

# Appendix 8 Guidelines for Euthanasia of Horses by Firearms

## Introduction

All animals that need to be killed must receive a quick and painless death. The following brief guideline is intended to assist persons who must perform this unpleasant task.

## General Considerations

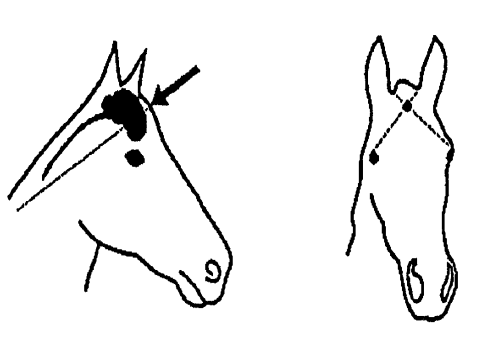
For a horse to receive a humane death it must be rendered immediately unconscious and go on to die without regaining consciousness. Therefore most recommended methods of euthanasia involve agents that affect the brain very rapidly. Shooting, although aesthetically unpleasant, is a humane method of killing provided that the shot penetrates the brain and does significant damage. To ensure that this occurs, the weapon used must be fired with the muzzle placed close to the horse's head, pointing in the required direction. The horse should be adequately restrained to ensure proper placement of the shot. Knowledge of the anatomy is essential.

Shooting a horse should only be done by persons well versed in handling firearms and licensed to use firearms and only in jurisdictions that allow for firearm use. In emergency situations on site police agencies should be involved. Safety to personnel and the general public must be considered. The procedure should be performed outdoors in a location away from public access. It must be noted that although a horse shot correctly is instantly unconscious, there may be convulsive thrashing and muscle spasms for some seconds after the shot.

The preferred firearm for humanely shooting a horse from close range is a shotgun. A 410 gauge is ideal, however a larger gauge may be used. At close range, any weight of shot is acceptable. The barrel of the firearm should be 3 to 5 centimeters (1-2 inches) from the head if using a shotgun. If using a high powered rifle (e.g. .308, .223) the distance may be increased and still be effective. The use of a pistol may be satisfactory, however permanent complete brain dysfunction may not be accomplished with light pistols (e.g. police .38). If a light pistol, .22 caliber rimfire rifle or a captive bolt is used to render the animal unconscious, the animal's death must be assured by a second means such as exsanguination. If using a high powered rifle or pistol, the projectile may pass through the horse's head. Thus the direction of shooting must be considered.

## Guideline for Horses, Mules and Donkeys

These animals should be haltered to control the head and led to the desired location. It is essential to aim the shot above the eyes as the brain is high in the upper part of the skull. The bullet should enter the skull at a point where an imaginary line crosses from the eyes to the ears. The direction of the shot should be down toward the withers.



Adapted from: J. (Al) Longair, Gordon G. Finley, Marie-Andrée Laniel, Clayton MacKay, Ken Mould, Ernest D. Olfert, Harry Rowsell, and Allan Preston. 1991. Guidelines for euthanasia of domestic animals by firearms. *Can. Vet. J.* (32) December.

# Appendix 9 Canadian Equestrian Affiliated Provincial Offices \* \*

## **Canadian Equestrian Federation**

1600 James Naismith Drive  
Gloucester, Ontario  
K1B 5N8

## **Horse Council of B.C.**

5746 B 176A Street  
Cloverdale, B.C.  
V3C 4C7

## **Alberta Equestrian Federation**

8989 Macleod Trail South West  
Suite 210  
Calgary, Alberta  
T2H 0M2

## **Saskatchewan Horse Federation**

2205 Victoria Avenue  
Regina, Saskatchewan  
S4P 0S4

## **Manitoba Horse Council**

200 Main Street  
Winnipeg, Manitoba  
R3C 4M2

## **Ontario Equestrian Federation**

1185 Eglinton Avenue East  
North York, Ontario  
M3C 3C6

## **Fédération Equestre du Québec**

4545 Pierre de Coubertin  
P.O. Box 1000, Station M  
Montreal, Quebec  
H1V 3R2

## **New Brunswick Equestrian Association**

479 Model Farm Road  
Rothesay, New Brunswick  
E2G 1L2

## **Nova Scotia Equestrian Federation**

5516 Spring Garden Road, 4<sup>th</sup> Floor  
P.O. Box 3010 South  
Halifax, Nova Scotia  
B3J 3G6

## **P.E.I. Horse Council**

P.O. Box 1887  
Charlottetown, P.E.I.  
C1A 7N5

## **Newfoundland Equestrian Association**

P.O. Box 272, Station C  
St. John's, Newfoundland  
A1C 5J9

\*\* This list is by no means conclusive. You may also wish to contact a local or national association.

# Appendix 10 List of Participants

Representatives of the following organizations provided input at various stages in the drafting of this code. However, the code does not necessarily have the unequivocal endorsement of any agency.

<i>Organization</i>	<i>Representative</i>
Alberta Agriculture	L. Burwash
Animal Welfare Foundation	J. Quine, D.V.M.
Canadian Food Inspection Agency <i>Animal Health Division</i>  <i>Meat &amp; Poultry Products Division</i>	T. Whiting, D.V.M. G. Doonan, D.V.M. I. Kirk, D.V.M.
Canadian Council on Animal Care	J. Wong, D.V.M.
Canadian Federation of Humane Societies	J. Ripley F. Rodenburg
Canadian Veterinary Medical Association	A.K. Preston, D.V.M.
Nova Scotia Equestrian Federation	J. Porter
Ontario Ministry of Agriculture, Food and Rural Affairs	P. Lawlis (Chair/Secretary)
Ontario Society for the Prevention of Cruelty to Animals	M. Cole

The participants would like to thank the hundreds of individuals who gave input into the development of this document.

# Glossary of Terms:

<b>Container</b>	A box or crate that is constructed for the shipment of horses and that can be moved independently from one mode of transportation to another.
<b>Deep Litter System</b>	Over winter, soiled bedding and manure are not removed. Instead dry, fresh bedding material is added at a rate which provides a clean, dry place for resting. The accumulated “pack” provides insulation from the cold.
<b>Drive Through Unloading</b>	An enclosed corral system where low riding single level trailers can be driven into and the animals released directly into the enclosure.
<b>Horse</b>	For the purposes of transport, horse is taken to mean all members of the family Equidae, including horses, ponies, mules, hinnies, and donkeys.
<b>Loose Loading</b>	The practice of loading groups of horses in a single compartment of a transportation vehicle.
<b>Loose Horse</b>	When applied to transport any animal handled without a halter and lead.
<b>Possum Belly Trailer</b>	A specialized commercial livestock trailer designed with multiple levels and internal ramps to allow animals to be carried in two tiers or layers in the vehicle.
<b>Potable</b>	Ice free, uncontaminated water, fit for animal consumption.
<b>Slaughter</b>	Those processes related in humanely converting a live animal into a safe wholesome product for human consumption.
<b>Stages of Parturition</b>	<p>1<sup>st</sup> stage - behavioural and physiological stage leading into the second stage Signs: filling of udder, waxing of teats, relaxing of vulva, restlessness, discomfort, tail elevation, defecation, urination</p> <p>2<sup>nd</sup> stage - passage of the fetus through birth canal Signs: rupture of water bag, fetus enters birth canal (10-60 minutes), abdominal contractions, expulsion of fetus</p> <p>3<sup>rd</sup> stage - delivery of placenta Signs: mild colic, uneasiness, rolling, etc. (1/2 - 3 hours)</p>
<b>Tethered Horse</b>	A horse stationary, or in motion (i.e. on a vehicle) where movement is controlled by a restraining halter and lead.
<b>Tingle Voltage</b>	Also known as “stray” voltage, tingle voltage is a known problem in farm animal production. It can occur when a voltage differential exists between two points (metal structures and either floor or earth) that may be touched at the same time by an animal.
<b>Transponder</b>	A small electronic device which generates a specific electromagnetic signal.
<b>Vehicle</b>	Any means used to transport horses, including trucks, tractor-trailers, railway cars, ferries and aircraft.
<b>Wind Chill</b>	A measure of the combined chilling effect of wind and temperature.