



Agriculture
Canada

Recommended code of practice for the care and handling of mink



Publication 1819/E

Canada

CONVERSION FACTORS		
Metric units	Approximate conversion factors	Results in:
LINEAR		
millimetre (mm)	x 0.04	inch
centimetre (cm)	x 0.39	inch
metre (m)	x 3.28	feet
kilometre (km)	x 0.62	mile
AREA		
square centimetre (cm ²)	x 0.15	square inch
square metre (m ²)	x 1.2	square yard
square kilometre (km ²)	x 0.39	square mile
hectare (ha)	x 2.5	acres
VOLUME		
cubic centimetre (cm ³)	x 0.06	cubic inch
cubic metre (m ³)	x 35.31	cubic feet
	x 1.31	cubic yard
CAPACITY		
litre (L)	x 0.035	cubic feet
hectolitre (hL)	x 22	gallons
	x 2.5	bushels
WEIGHT		
gram (g)	x 0.04	oz avdp
kilogram (kg)	x 2.2	lb avdp
tonne (t)	x 1.1	short ton
AGRICULTURAL		
litres per hectare (L/ha)	x 0.089	gallons per acre
	x 0.357	quarts per acre
	x 0.71	pints per acre
millilitres per hectare (mL/ha)	x 0.014	fl. oz per acre
tonnes per hectare (t/ha)	x 0.45	tons per acre
kilograms per hectare (kg/ha)	x 0.89	lb per acre
grams per hectare (g/ha)	x 0.014	oz avdp per acre
plants per hectare (plants/ha)	x 0.405	plants per acre

AGRICULTURE CANADA PUBLICATION 1819/E
 available from
 Communications Branch, Agriculture Canada,
 Ottawa K1A 0C7

©Minister of Supply and Services Canada 1988
 Cat. No. A63-1819/1988E ISBN: 0-662-15912-8
 Printed 1988 Reprinted 1990 2M-2:90

Egalement disponible en français sous le titre
*Code de pratiques recommandées pour le traitement
 et la manipulation des visons.*

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Preface

Domestication and artificial selection of livestock have made farm animals dependent on humans. Consequently, according to the currently accepted moral and ethical standards of our society, humans have no choice but to accept this dependence as a responsibility to practice humane conduct toward domestic animals and to prevent avoidable suffering at all stages of their lives. This voluntary code of practice represents a step toward meeting that responsibility.

In 1980 the Canadian Federation of Humane Societies (CFHS) began coordinating the process of drafting codes of practice for all livestock species with the drafting of a code of practice for chickens and the agreement of the federal Minister of Agriculture to support the undertaking financially. Subsequently, the Canadian Society of Animal Science (CSAS) undertook, at the request of the Agricultural Institute of Canada (AIC), to prepare draft codes of practice for other livestock species. CSAS and AIC agreed that the successful CFHS coordination of the drafting process should continue, and the draft codes were turned over to CFHS. The process has involved representatives of agricultural industries and their organizations, federal and provincial government departments, associations of animal science, representatives of the animal welfare movement, and interested individuals. A *Recommended Code of Practice for Handling Chickens from Hatchery to Slaughterhouse* was published in September 1983, and a *Recommended Code of Practice for Care and Handling of Pigs* was published in 1984.

This voluntary code is intended to be used by the mink industry, scientists, and animal welfare groups as an educational tool in the promotion of sound husbandry and welfare practices. The recommendations are not purported to be comprehensive for all circumstances, but an attempt has been made to define high standards of mink production and well-being in commercial, research, educational, and other farm operations. As a guideline, the code can serve operators in the various sectors of the mink industry as a standard for comparison with or improvement of their own managerial routines. It should, however, be understood that new scientific discoveries and changing economic conditions may make it necessary to update the code periodically. For example, it should be noted that minimum pen sizes are based on current farming practices in Canada. No published research data were available when this code was written.

Recommended code of practice for the care and handling of mink

Coordinated by

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Introduction

The humane raising of mink is entirely dependent on the skills, training, and integrity of mink farmers.

Before placing mink on a commercial mink farm, farmers (owners) must take the following steps:

1. Acquire a thorough knowledge of the natural history (life cycle) of ranch mink and normal mink behavior, including breeding cycles, whelping behavior, proper weaning and separation procedures, and growing and furring periods.
2. Acquire a working knowledge of the nutritional needs of mink throughout their life cycle.
3. Acquire adequate facilities and financial resources to supply and maintain proper housing, a reliable source of feed and water, proper vaccination procedures, treatment of injured or sick animals, and anything else necessary to ensure that the welfare of the mink is a primary consideration. Financial costs should not be a reason for neglecting any mink obviously in distress or for failing to secure prompt and appropriate treatment when necessary.

4. Assume complete responsibility for the welfare of their animals, which includes developing the skills of observation and a sensitivity for the animals, as well as ensuring that all employees and attendants on the farm are competent, properly trained individuals who have a genuine concern for the welfare of the mink.

Definition

In its wild state, the mink (*Mustela vison*) is a small, brown fur-bearing animal, a member of the weasel family, rarely exceeding 1350 g (3 lb) in body weight. Wild mink are fierce, solitary carnivores, with an average life span in the wild of less than 3 years.

The mink is native only to North America and varies in size, fur quality, and appearance in various geographical locations, giving rise to a number of subspecies.

In captivity, several subspecies have been combined and subjected to selective breeding for desirable traits such as docility, size, coat specialty and color, fecundity, mothering ability, and best growth and survival of offspring. Selective breeding, combined with good nutrition and comfortable housing, has resulted in an animal that is more than double the mass of the wild mink and with a much quieter temperament.

In the course of more than forty generations, mutations of many coat colors have occurred, and the desirable colors have been established as separate and genetically stable types.

In this document mink refers to the ranch-raised variety and not to its wild counterpart.

Section 1. Accommodation

1.1 Site

A mink farm's location should be carefully selected. Due consideration should be given to local environmental conditions, foreseeable neighborhood development, and subsequent anticipated farm growth. The following items should be of particular concern:

- 1.1.1 Slightly sloping land with good drainage and no risk of flooding forms the ideal site for a mink farm. Safe and efficient disposal of effluent is vital to prevent unpleasant or unlawful conditions, for example, pollution of neighboring streams or rivers.
- 1.1.2 Additional drainage for the disposal of effluent from the feed-preparation areas is essential.
- 1.1.3 A supply of fresh, clean water is necessary to supply the watering systems and to provide for daily clean-up in the feed-preparation areas.
- 1.1.4 A suitable source of energy is essential to supply power for the wide range of equipment and machinery used on the modern mink farm.
- 1.1.5 The site of a mink farm should be chosen with regard to availability of and convenience to sources of feed supplies.
- 1.1.6 The site needs a suitable access road but should not be situated in the immediate vicinity of houses, highways, or heavily used roads.
- 1.1.7 It is advisable to avoid excessive artificial light and noisy situations, such as quarry blasting, aircraft flight paths, or low-flying areas.
- 1.1.8 It is advisable to construct a protective fence around the perimeter of the area where the mink are housed.

1.2 Sheds

In most parts of Canada, mink require protection from environmental extremes throughout the year. Sheds usually serve that purpose. Any building erected to offer that protection should also be designed to provide clean, airy, and sanitary conditions. Particular attention should be paid to the following recommendations:

- 1.2.1 Sheds may be erected specifically to house mink kept for breeding purposes or those kept for pelting, or may serve a combination of both purposes.

- 1.2.2 Sheds may be constructed to hold any number of rows, providing all other conditions of this code of practice are met. The greater the number of rows the more difficult it is to keep the building hygienic.
- 1.2.3 Mink sheds are normally open-sided. Where extreme conditions are encountered, such as strong winds, severe cold, drifting snow, or driving rain, partial or total enclosure of sheds should be considered. However, mink should be kept in enclosed buildings only if environmental conditions interfere with the natural needs of the mink, including the reproductive and furring cycles.
- 1.2.4 Roofs of sheds should incorporate translucent (not transparent) sheets to provide natural light.
- 1.2.5 Sheds should be situated in a direction that allows the use of natural ventilation and lighting.
- 1.2.6 Paths or passageways between the rows of pens should allow enough space for the operation of feed carts and automatic feeders.
- 1.2.7 The areas under the pen should allow the efficient removal of all effluents.
- 1.2.8 Good shed construction should allow workers to stand and work upright.
- 1.2.9 Precautions should be taken to prevent fires (for example, grass fires) around the mink sheds and other buildings, and fire-fighting equipment should be readily available.
- 1.2.10 All equipment and services should be inspected regularly and kept in good working order.

1.3 Pens

Mink pens should provide an area that is large enough for the mink to perform natural movement and should allow for activities such as rest, sleep, defecation, and other functions that maintain the comfort of the animal.

- 1.3.1 Mink breeder pens should provide an area that is large enough for females to deliver and rear their young to weaning age, allowing mink confined in an individual cage reasonable freedom of movement.

- 1.3.2 For individual males over 9 months of age or females with litters, pens should have a floor area of not less than 2100 cm² (325 sq in.) including the nesting area, and a minimum height of 32 cm (13 in.).*
- 1.3.3 For all other mink, housed one to a pen, pens should have a floor area of not less than 1200 cm² (186 sq in.) including the nesting area, and a minimum height of 32 cm (13 in.).*
- 1.3.4 Pens should be of sturdy construction to contain the mink securely and should be designed to prevent the mink from injuring themselves or animals in adjacent cages.
- 1.3.5 Pens should be constructed of materials that permit easy cleaning and that resist corrosion.
- 1.3.6 Pens should be high enough off the ground to allow feces to fall to the ground beneath and to permit easy clearing of the manure.
- 1.3.7 Cage inspection and repair should be undertaken routinely to ensure the secure enclosure of all mink.
- 1.3.8 Whelping pens should be designed with enough space for the fitting of temporary false floors to prevent newborn mink from falling to the ground.
- 1.3.9 All pens should have enough space to allow the mink farmer to catch and inspect the mink easily.
- 1.3.10 Mink should have access to clean, potable water ad libitum.
- 1.4 **Nesters**
 - 1.4.1 A suitable, warm, dry nest that is large enough to house the mink should be attached to or incorporated into every pen. Mink should be provided with clean, dry, appropriate bedding during nesting periods.

* Pens with dimensions that exceed minimum code specifications are generally in use on Canadian ranches. No published research data that identify specific size requirements for ranch-raised mink are currently available.

- 1.4.2 Nesters may consist of wood or wire, or both. They should be large enough and constructed to allow the mink to rest and sleep comfortably.
- 1.4.3 Nesters should be large enough to allow each animal to lie and sleep comfortably, taking into consideration various sizes of mink.
- 1.4.4 Breeder nesters should allow enough space and privacy for the mother and her litter. At whelping time the mother and her newborn kits should not be unduly exposed to public view or disturbance.
- 1.4.5 Special care should be taken to avoid projections into the nesting area that could cause discomfort to the mink.

Section 2. Food and water

2.1 Nutrition

Mink should be fed a complete diet that fulfills the various nutritional needs throughout their life cycle. It is essential that mink farmers have a working knowledge of the nutritional requirements of mink.

- 2.1.1 Mink farmers should seek nutritional advice when required.*
- 2.1.2 Analysis of the mixed diet may be obtained from a laboratory equipped for such purposes.
- 2.1.3 Commercial feed available for mink should be stored and fed according to the manufacturer's instructions. Care should be taken to ensure that feed used is suitable for mink. Health of the mink must be maintained at all times.

* Information is available from the Canada Mink Breeders Association, 65 Skyway Avenue, Suite B, Rexdale, Ont. M9W 6C7.

2.2 Feed preparation

When mink farmers use fresh or frozen offal as feed, which can deteriorate rapidly, they should ensure that its collection, storage, and preparation are carried out under sanitary conditions.

- 2.2.1 Containers used for the collection of offal should be drip-proof and always covered.
- 2.2.2 Containers should be washed thoroughly after each collection.
- 2.2.3 Offal should be refrigerated or ensiled at all times. Proper storage is essential to provide a reserve of feed and to take advantage of seasonal availability of materials.
- 2.2.4 Feed preparation machinery, grinders, mixers, and homogenizers must be cleaned after use to prevent food poisoning and should be regularly maintained.
- 2.2.5 Alternative methods of food supply or preparation should be available in the event of breakdown or emergency.
- 2.2.6 Bulk foods should be purchased in small enough quantities to ensure that they are used before the nutritional value is lost.

2.3 Feed distribution

A sufficient quantity of feed should be given at all times to ensure the health and well-being of the mink.

- 2.3.1 Feed should be placed in a position that allows the mink to reach it easily; this is particularly important with young kits and during periods of severe frost.
- 2.3.2 Spoiled feed must be removed from feeding areas to prevent food poisoning.
- 2.3.3 Care should be taken to ensure that birds do not take food away from the mink. Where there are large bird populations, access areas to sheds or to feeding positions should be covered with a light-gauge wire.
- 2.3.4 Wet feed should not be of a consistency that allows feed to fall through the wire of the pens.

- 2.3.5 Feed should be given at least twice daily to growing mink and daily to mature mink.
- 2.3.6 Feeding machines and all utensils for feed distribution must be cleaned thoroughly after each use.

2.4 Watering systems

The farmer should ensure that clean, potable water is available ad libitum.

- 2.4.1 When a fully automatic or a semiautomatic watering system is used, either a heating system to prevent freezing or an alternative supply of water is required during freezing periods. This alternative supply of water is most critical for mink that receive dry feed.
- 2.4.2 When fully automatic systems using valves or nipples fed from a control tank are used, care should be taken to ensure that the entire system remains clean and that individual valves or nipples function properly.
- 2.4.3 Regular maintenance should be carried out to prevent leaking valves and connections that cause wet areas where the mink are kept.
- 2.4.4 Semiautomatic systems require manual operation of control stopcocks and regular cleaning of water dishes.
- 2.4.5 All systems should be either checked or operated daily, including on rest days, and particular care should be taken during hot or cold weather.
- 2.4.6 Mink must have easy access to drinking water at all times. This requirement is particularly important for young mink.

Section 3. Care and supervision

3.1 Supervision of animals

All mink should be inspected at least once each day. The arrangement of mink pens should enable easy inspection of all areas and all housed mink, particularly where one attendant is responsible for a large number of mink.

3.2 Attendants

- 3.2.1 It is the mink farmers' responsibility to see that every person working with their animals is able to understand and accept the responsibility for preventing any avoidable suffering on the part of the mink. Before duties are assigned, personnel should be adequately instructed in the care and handling of mink, and should demonstrate a knowledge of the basic needs of the mink entrusted to their care. Attendants should be able to recognize behavioral symptoms that indicate discomfort, disease, or the need to consult a veterinarian.
- 3.2.2 The working routine of attendants should be consistent and should be performed, where possible, on a regular schedule.

3.3 Health and disease

Mink farmers have a responsibility to be aware of the condition of their herd and should be able to recognize the signs of a distressed or sick animal.

- 3.3.1 It is important that mink farmers develop the observation skills necessary to detect any abnormalities of behavior, posture, gait, or health.
- 3.3.2 Sick or injured mink should be treated immediately or, depending on the severity of their condition, destroyed humanely.
- 3.3.3 The unexplained death of mink should be investigated promptly. It is strongly recommended that mink farmers make use of diagnostic services commonly available through provincial departments of agriculture and that mink farmers inform appropriate provincial authorities when an abnormal number of mink deaths occur on a ranch. Dead mink shall be disposed of in an appropriate manner or according to prevailing legislation.
- 3.3.4 It is strongly recommended that all mink be vaccinated against distemper, botulism, and virus enteritis.
- 3.3.5 All vaccinations and medical treatment programs should follow accepted veterinary medical practices and should be conducted by properly trained personnel.

- 3.3.6 Where mink herds are infected with Aleutian disease, it is recommended that this problem be controlled by the use of the counterimmunoelectrophoresis test (CEP) in conjunction with an appropriate sanitation program.
- 3.3.7 All mink added to an existing herd or purchased to stock a new herd should be free of Aleutian disease before they are placed on a ranch.

Section 4. Hygiene and sanitation

Mink farmers should ensure good hygiene and sanitary measures to avoid conditions that are unpleasant for the animals. Regular removal and disposal of manure, and fly control, are essential parts of a good farm sanitation program.

- 4.1 Poor drainage contributes to bad sanitation. Wet and damp areas are unpleasant and provide breeding areas for flies.
- 4.2 Manure should be removed regularly from under the pens, especially where drainage is less than adequate.
- 4.3 Feed-preparation buildings and surrounding areas should be cleaned daily.
- 4.4 Pens and nests should be cleaned as required.
- 4.5 Unsanitary conditions can cause distress to the animals and to farmers, attendants, visitors, neighbors, and the environment.

Section 5. Transportation of live mink

The transportation of mink requires special attention to the design of traveling crates, the care of mink while in transit, and the completion of appropriate documentation as required by the transporter or government authority.

- 5.1 Traveling crates should be adequately designed for transportation by road, rail, and air to allow sufficient space, airflow, and comfort for each animal.

- 5.2 The design of a traveling crate should take into account the length of time the mink will be in transit. Each compartment must have enough space to allow the animal to lie comfortably and to turn without restriction. Essentially, the animal should have the food, water, and bedding material that it requires.
- 5.3 Crates can be made to individual specifications with regard to the number of compartments, but the usual number is five compartments for females and four for males. For full-grown mink, dimensions of each compartment should not be less than 38 cm × 18 cm × 18 cm (15 in. long, 7 in. wide, and 7 in. high) for females; and 46 cm × 20 cm × 20 cm (18 in. long, 8 in. wide, and 8 in. high) for males. IATA* regulations prohibit the transportation of more than one mink per compartment.
- 5.4 Crates can be made with a variety of materials, but care in construction is paramount to ensure that the animals cannot escape or injure themselves, each other, or their handlers.
- 5.5 Crates should be designed to prevent accidental or unauthorized opening yet allow access to individual animals in emergency situations.
- 5.6 There should be a gap of at least 2.5 cm (1 in.) beneath the wire floor of the crate to a watertight tray of plywood, tin, or hardboard. This tray allows moisture to drain away from the compartment and prevents unnecessary dirt from falling into the transport vehicle.
- 5.7 Great care should be taken at all times to allow sufficient airflow. If the air is restricted around stacked crates it will heat up, and the mink, always susceptible to heat exhaustion, may expire quickly.
- 5.8 The comfort of the mink should be a priority. The movement of mink in summer is not recommended. Hot weather can seriously endanger the lives of the mink during transportation. Therefore, when shipping is essential, all precautions listed must be observed rigorously.

* IATA regulations are available from the International Air Transport Association, IATA Building, 2000 Peel Street, Montreal, Que. H3A 2R4.

- 5.9 Provision should be made for unexpected delays. The consignor must ensure arrangements for feeding and watering, the latter being particularly important.
- 5.10 It is important that the consignor and the consignee agree on the methods of transportation to be used and that rapid communication be available between them.
- 5.11 Where mink are to be imported or exported, each country's regulations should be investigated and the necessary permits and certificates obtained before shipment.

Section 6. Euthanasia

Mink farmers must consider the humane death of their stock to be of paramount importance. The term "euthanasia" means "easy death" and thus carries the implication of a quiet, painless death. As used in this code the term describes the process of killing mink with the use of recognized, acceptable, and humane techniques. Methods of euthanasia used must have an immediate depressive action on the central nervous system to ensure insensitivity to pain without causing fear or anxiety.

Although a number of euthanasia methods meet these criteria, the procedures recommended in this code are humane and have been found to be practical, reliable, easy to use, relatively inexpensive, and compatible with operational practices on mink ranches.

6.1 Carbon monoxide

- 6.1.1 The carbon monoxide euthanasia chamber must contain the appropriate concentration of carbon monoxide before any mink are introduced. Carbon monoxide in a concentration of not less than 3.4% is recommended for the euthanasia of mink. Higher concentrations are commonly used and produce rapid unconsciousness. A reliable instrument, capable of accurately measuring the concentration of carbon monoxide in the chamber, should be incorporated in the design of the chamber of the carbon monoxide delivery system. The system must be able to render mink introduced to the chamber unconscious within 30 seconds.

- 6.1.2 In addition to providing a humane death for mink, carbon monoxide chambers should be mobile, easy to clean, and provide for consistent performance, ease of operation, and safety to the operator and to other animals in the vicinity of the chamber.
- 6.1.3 The use of pure carbon monoxide, available in cylinders, is strongly recommended to avoid possible irritation and discomfort from improperly generated, filtered, or cooled gas from internal-combustion engines.
- 6.1.4 Only one mink should be introduced to the chamber at any one time, allowing time for collapse before a second is introduced.
- 6.1.5 When mink are removed from the chamber, they must be individually checked to ensure that death has taken place.
- 6.1.6 Carbon monoxide is a highly toxic gas. Since it is odorless, it must be used only under well-ventilated conditions, and safety practices for those using it must be strictly adhered to.

- 6.2 Electrical stunning followed by cervical dislocation**
- 6.2.1 Electrical equipment specifically built for the stunning of mink, followed by cervical dislocation, is an accepted method of euthanasia.
- 6.2.2 The mink farmer must ensure that all personnel who perform euthanasia on mink are thoroughly trained and skilled in the handling of mink for euthanasia, in the utilization of the stunner, and in the cervical dislocation of mink.
- 6.2.3 The stunner should be a portable device with its own power supply and should be able to produce a proper stunning shock.
- 6.2.4 The operator must make sure that the stunner is functioning properly to ensure that a stunning shock is delivered.
- 6.2.5 The electric stunner must use a voltage across the terminal of approximately 2000 volts and must be designed to allow the current to pass through head, neck, body, and hind legs of the mink.
- 6.2.6 The stunning time must take a minimum of 3 seconds, and cervical dislocation must be completed within 20 seconds of the stunning.

6.3 Curariform agents

Curariform agents, which include strychnine and nicotine sulfate, are not accepted euthanasia agents and must not be used for the euthanasia of mink.

Appendix A Participants

During the course of preparing the five drafts of this code, the following individuals contributed to the process at various times. Although their respective organizations are listed, a listing does not necessarily imply that the code has the unequivocal endorsement of any agency.

<i>Organization</i>	<i>Representative</i>
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Canadian Association for Humane Trapping	D.C. Baillie, Ph.D. M.J.B. Lash
Canadian Council on Animal Care	H.C. Rowsell, D.V.M., Ph.D.
Canadian Federation of Humane Societies	J.H. Bandow
Canadian General Standards Board	W.B. Dodd, B.Eng.
Canadian Veterinary Medical Association	G. Finley, D.V.M.
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