



# Code of Practice

Wildlife

**Emu farming**

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# Code of Practice - Emu farming

*Nature Conservation Act 1992*



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Approved by the chief executive of the EPA in accordance with section 174A of the *Nature Conservation Act 1992* on 12 November 2003 and notified in the gazette on 21 November 2003.

## 1. About this code

The *Nature Conservation Act 1992* ("**the Act**") provides that a person must **not** take, use or keep a protected animal other than under a conservation plan applicable to the animal, a licence, permit or authority issued or given under a regulation or an exemption under a regulation. Part 8 of Chapter 3 of the *Nature Conservation Regulation 1994* ("**the Regulation**") specifies statutory provisions for the farming of protected wildlife.

This Code provides Minimum Standards and Conditions for the conduct of persons involved in the farming of emus in Queensland and it is intended for all use by persons responsible for the welfare and husbandry of emus that are maintained in captivity for the purposes of closed-cycle captive breeding and the production of products such as meat, leather and oil. This Code is based on the *Australian Model Code of Practice for the Welfare of Animals - Husbandry of Captive-bred Emus*. Persons involved in the emu farming industry should be familiar with the terms of that Code.

This document is an **interim code** under the *Nature Conservation Act 1992* which will be repealed by legislation relating to the farming of wildlife that is being developed by the Queensland Department of Primary Industries.

The emu farming industry is evolving rapidly and it is inevitable that stock-handlers will encounter circumstances with emus that are not currently covered by this Code. When this occurs it is essential that commonsense should prevail and that previous experience with stock should be utilised to the fullest so that emus are handled humanely.

## 2. Definitions

In this Code of Practice-

"closed-cycle captive breeding" means a regime for breeding emus which has the following characteristics-

- a) breeding is maintained without augmentation of emus from the wild except to prevent deleterious inbreeding; and
- b) is managed so as to be demonstrably capable of reliably producing second generation offspring; and
- c) maintains an environment which is managed by farm management personnel to produce offspring, has a perimeter boundary which is designed and managed to prevent the unintended entry, departure, introduction or removal of emus, and which includes- artificial housing, veterinary care, artificially supplied food and protection from predators;

"emu" means a bird of the species *Dromaius novaehollandiae*;

"emu farming" means the closed-cycle captive breeding and the keeping of emus in captivity intended for the production for sale of live emus and products such as skins, meat, feathers, oil, feet, egg shells.

Other terms are defined in the Act and the Regulation.

## 3. Purpose of code

3.1 The purpose of this Code is to assist in-

- a) the proper care and welfare of emus in captivity; and
- b) the promotion of the understanding of the health and nutritional requirements of farm emus; and

- c) the realisation by the general community of the need for the conservation of viable populations of emus in the wild; and
- d) compliance with any legislative requirements of the State or the Commonwealth relating to emu farming.

#### 4. Basic requirements

4.1 The basic requirements for the well-being of farm emus are:

- 4.1.1. appropriate and sufficient food and water to sustain health and vitality;
- 4.1.2. sufficient area to maintain their well being and to exhibit normal behaviour;
- 4.1.3. protection from predation;
- 4.1.4. protection from disease, including disease that can be exacerbated by management;
- 4.1.5. protection from extremes of climate, but particularly during certain phases of their lives; and
- 4.1.6. protection from pain, distress, suffering and injury.

#### 5. Perimeter fencing requirements

5.1 The function of a perimeter fence is to-

- a) prevent the escape of farm emus from the farm complex in the event of escape from internal enclosures; and
- b) prevent the entry of potentially damaging animals; and
- c) deter the unauthorised entry of persons intent on vandalism towards farm emus.

5.2 The licence holder has a duty to erect and maintain the perimeter fencing as required by the Chief Executive.

5.3 The area of a licensed emu farm, or that part of a licensed emu farm on which emus are farmed, must be enclosed by a perimeter fence which must-

- a) be constructed-
  - i) to a minimum height of 1.9 metres, provided that where in the opinion of the Chief Executive the conditions of confinement (topography) require that a specified section or sections of such perimeter fence be of greater height, the minimum height of such section or sections must be 2.3 metres;
  - ii) of-
    - line posts of pressure treated pine, hardwood, metal or such other material of adequate strength and durability which must be placed at a minimum depth of 760 mm in the ground and at a maximum spacing of 10 metres between line posts;
    - strainer posts of pressure treated pine or hardwood of a minimum diameter size of 200 mm or of metal or such other material of equivalent adequate size, strength and durability, which must be placed at a minimum depth of 900 mm in the ground; and

- chain mesh, welded mesh or such other wire of equivalent strength which must be properly strained and affixed to the line posts to the side of the fence; and
- iii) in such a manner as to prevent the movement of emus into or out of the licensed emu farm;
- b) incorporate sufficient gates for the efficient operation of the licensed emu farm, which must be:
  - i) constructed to the same height, of the same or similar material and in the same manner as that specified in paragraph (a); and
  - ii) in the case of gates used for the ingress and egress of farm emus, no less than 2 metres in width.

## 6. Housing

### 6.1 General

- 6.1.1. Persons intending to erect new housing and yards, or to modify housing that has been used for other species should seek advice from the Queensland Department Primary Industries or other organisation with appropriate expert knowledge.
- 6.1.2. The type of housing and yard dimensions required by emus will vary with the geographic location of the emu farm, the age of the emus, the management practices to be employed and the stocking density. The stocking density should be reviewed regularly and adjusted, taking into account the age of the birds, flock size, the house or paddock conditions, the behavioural needs of the birds and the likely occurrence of disease.
- 6.1.3. All emus need to be protected from climatic extremes and emus that are kept in yards or an extensive range should be provided with adequate shade and protection from the elements.

### 6.2 Chicks - 0 to 12 weeks old

- 6.2.1. Emu chicks may be reared extensively under natural conditions or intensively in buildings having the capacity to achieve and maintain acceptable levels of temperature, humidity, fresh air, light and hygiene. Chicks require special attention until they lose their "stripe" appearance, which usually occurs by 12 weeks of age.
- 6.2.2. Natural conditions
  - 6.2.2.1. Eggs may be incubated by the male under field conditions in either breeding pens or under open range conditions. Where breeding pens are utilised, wire netting to a height of 450 mm should be provided on all fences to prevent the escape of chicks and to prevent them from being injured by emus housed in adjacent pens. The hen could attack her own chicks once they hatch. It is therefore recommended that either the hen be removed before the chicks hatch or else remove the chicks to a rearing shed.
  - 6.2.2.2. Where breeding pairs are housed under free-range conditions, the range should be inspected daily and all chicks should be removed from the range as they hatch.
- 6.2.3. Intensive rearing
  - 6.2.3.1. Floors and other surfaces- Floors and other surfaces should be designed, constructed and maintained so that they are non-slip and minimise the risk of injury and disease, and adequately support emu chicks so that they can stand and move freely.

- 6.2.3.2. Deep litter floors should be checked frequently for dryness and friability. When litter is caked, wet or excessively dusty the problem should be rectified. Chicks should not be allowed to walk on bare concrete floors or those made of wire.
- 6.2.3.3. Space- Stocking density should be periodically reviewed and adjusted, having regard to age, flock size, temperature, ventilation, lighting, quality of housing and occurrence of disease. Chicks should have access to extensive runs at an early age paying due regard to the climatic conditions.
- 6.2.3.4. Under good management and housing conditions it is recommended that chicks can be housed in groups of up to 25 for the first four weeks of life, and a shed density of up to 3 chicks per m<sup>2</sup> is recommended. The provision of an additional outside run is optional. From 5-12 weeks groups of up to 100 chicks can be housed together at the same shed density, but in addition, access to an outside run of 5m<sup>2</sup> per chick should be provided.
- 6.2.3.5. Lighting- Where emus do not have access to daylight, they should be given artificial light for a least eight hours per day. The effect of abnormally long photoperiods (in excess of 16 hours) on the growth of chicks is uncertain and may be detrimental. A "blackout" training period each day is recommended from one day of age to prevent panic should lighting fail.
- 6.2.3.6. Young chicks reared away from the male bird require a high light intensity of about 40 lux on the food and water for the first few days after hatching to learn to find food and water. Light intensity may then be reduced to a minimum of 20 lux.
- 6.2.3.7. Ventilation- Fresh air is required at all times where chicks are reared intensively to prevent the accumulation of water vapour, heat, ammonia, hydrogen sulphide, carbon dioxide, carbon monoxide and dust particles.
- 6.2.3.8. The presence of ammonia may be a problem where there is poor ventilation and is usually a reliable indicator of the build-up of noxious gasses. Ammonia levels should not be allowed to exceed 20 parts per million (ppm) of air, measured at bird level, in enclosed buildings without immediate corrective action being taken. (A level of 10 to 15ppm of ammonia in the air can be detected by smell. An ammonia level of from 25 to 35 ppm will cause eye and nasal irritation in man).

### 6.3 Juvenile (blackhead) emus - 12 weeks to 6 months

- 6.3.1. Young emus require protection from the extremes of heat or cold, wet and windy weather. At this age emus may be kept in groups of up to 250 and should be housed initially in sheds at a maximum density of 2 per m<sup>2</sup> and should be provided with an outside run of a least 40 m<sup>2</sup> per chick. Older blackhead chicks should be reared entirely in open conditions depending on the prevailing weather conditions.

### 6.4 Yearling Emus - 6 to 18 months

- 6.4.1. Yearlings should be housed in open conditions and provided with at least 60 m<sup>2</sup> per bird.

### 6.5 Mature emus

- 6.5.1. Free range

6.5.1.1. Emus older than 18 months of age which have been reared in separate yards until that age, should not be housed at a density of greater than 16 birds/hectare, that is 625m<sup>2</sup> per bird.

6.5.2. Breeding pairs

6.5.2.1. Where emus are kept as breeding pairs, under optimal conditions each pair should be provided with a minimum pen size of 20 m x 20 m which should be securely fenced. This applies to well-drained, high rainfall areas with plenty of vegetation to provide protection and to obscure the bird's view of adjoining pens.

6.5.2.2. These dimensions should be increased where there is little vegetation, and in low rainfall areas, a pen size of 50 m x 50 m has been found to be satisfactory for breeding pairs.

## 7. Equipment

7.1 All equipment to which emus have access should be designed and maintained to avoid either injury or pain to the birds.

7.2 Feeders and waterers should be checked for efficient operation at least once each day. Automated hatchery equipment should have adequate back-up systems, which should include an alarm system or generator in case of a power failure.

## 8. Protection from hazards

8.1 Emus should be protected from predators and, if necessary from each other. Electric fences can be used to discourage predators and are particularly useful in affording protection to young emus.

8.2 Accommodation should be sited to be safe from the effects of fires and floods.

8.3 New buildings in which birds are housed should incorporate sufficient exits to allow for emergency evacuation of the building.

8.4 Yards should be designed so that emus can be readily evacuated in case of an emergency.

8.5 Fire-fighting equipment should be available. Fire hoses should be capable of delivering water of sufficient volume and pressure to control a fire in any building or part of any building.

8.6 When planning new buildings, consider the use of construction materials with a high fire resistance. All electrical and fuel installations should be planned and fitted to minimise the fire risk.

8.7 The use of toxic substances (for example herbicides and pesticides) should be in such a manner as to avoid any risk to emus.

## 9. Food

9.1 Emus other than newly-hatched chicks, should have access to adequate quantities of appropriate food at least once each 24 hours. The period for newly-hatched chicks may be extended to not more than 48 hours. In the light of future experience this period may be altered.

- 9.2 Emus should receive a diet containing adequate nutrients to meet their requirements for good health and vitality. Emus should not be provided with food that is deleterious to their health. Young chicks should not be fed fibrous or coarse food as it may become impacted and cause an obstruction.
- 9.3 Medicated food or water should only be supplied under the supervision of a veterinarian familiar with emus, as the overuse or mixing of medicaments or the medicament itself, may cause toxic injury.
- 9.4 Where it is proposed to slaughter emus that have received medications professional advice should be sought to ensure that chemical residues do not contaminate the carcass.
- 9.5 When using mechanical systems for delivery of food, alternative methods of feeding should be available. There should be enough food on hand, or ready means of obtaining food, in the event of failure of supply.
- 9.6 Where chicks and yearlings are reared in groups multiple feed points should be provided in each pen.

## 10. Water

- 10.1 Emus should be provided with sufficient drinkable water to meet their physiological requirements. Under no circumstances should emus be deprived of water for more than 24 hours.
- 10.2 When an emu farm is first established, or when a new water source is obtained, the water should be tested for mineral content and microbiological contamination and advice obtained as to its suitability. As the composition of water from bores, dams or water holes may change with changes in flow or evaporation, the water may require more frequent monitoring for its continued suitability.
- 10.3 Where chicks and yearlings are reared in groups multiple water points should be provided in each pen.

## 11. Handling and yard facilities

- 11.1 Boundary fences are to be constructed in accordance with the requirements of the Queensland Department of Primary Industries. Internal fences for adult emus should be adequate to contain them, the minimum height and their construction is a subject of ongoing research.
- 11.2 All fences in handling yards and on transportation facilities should have smooth sides with no projections or "footholds" and should be solid sided so that the emus cannot see outside the confines of the yard or race. Conventional yards can be used, so long as some form of cladding such as plywood, tarpaulin or hessian is placed on the inside of the rails so that a solid, opaque barrier is presented to the emus. Emus will behave in a more orderly manner when placed in such an environment.

## 12. Inspections

- 12.1 The frequency and level of inspection should be related to the needs of the emus, but should be at least once each day. Inspections are best made at feeding times. More frequent inspections may be required during hot weather, during outbreaks of disease, or when groups of emus have been mixed. Checks should be made of the effectiveness of any automated feeding or watering systems where these have been installed.



### 13. Health

- 13.1 All persons responsible for the care of emus should be made aware of the signs of ill-health. These include separation from other emus, lethargy, refusal to eat, changes in faeces, vomiting coughing, panting, lameness, and swellings on the body or legs. The manager should, if unable to identify the causes of ill health and correct them, seek advice from a veterinary surgeon preferably familiar with emu practice.
- 13.2 Emu farmers should operate an effective program to prevent infectious disease, and internal and external parasitism. Particular attention should be paid to the stocking densities used for yearling and adult groups as aggressive behaviour and injuries may be seen during the breeding season when the stocking density is high.
- 13.3 Sick and injured emus should be treated as soon as possible. They should be isolated if necessary. Records of sick animals, deaths, treatment given and response to treatment should be maintained to assist disease investigations.
- 13.4 Promptly remove dead emus and, if not required for post-mortem examination, dispose of them in a hygienic manner, such as by deep burial.
- 13.5 Emus with either an incurable sickness, injury or painful deformity should be euthanased, where possible, by a veterinary surgeon in an appropriate and humane manner.

### 14. Transportation

- 14.1 The following recommendations are based on current knowledge and will be subject to review as the industry's experience with transportation increases.
- 14.2 The duration of all journeys should be as short as possible as transportation can be stressful experience.
- 14.3 The successful transportation of adult emus commences with orderly, well-disciplined husbandry practices which are imposed on emu chicks from day old, so that emus are used to being handled and moved about the farm.
- 14.4 The transport vehicle should be dimly lit (in fact, as dark as possible) and provide fresh air, but the chicks should be protected from chilling and extremes in temperature. The roof of the vehicle should be 20 cm or more above the height of the pelvis of the largest emu occupying the compartment, when the emu is standing erect.
- 14.5 The floor surfaces should provide a firm but soft footing for the birds and should be capable of absorbing any moisture associated with faeces.
- 14.6 The housing density in the transport vehicle should be varied with the size and age of the emus so that a comfortable environment is provided. It is recommended that the densities do not exceed 8 birds/m<sup>2</sup> for birds less than 7 kg live-weight; 3 birds/m<sup>2</sup> for birds weighing 25-30 kg and 2 birds/m<sup>2</sup> for mature birds 35-45 kg live-weight.

## 15. Product tagging requirements

15.1 A skin tag must be-

- a) a self-locking, non-reusable tag supplied by the Chief Executive; and
- b) consecutively numbered; and
- c) attached by farm personnel to the body-skin as soon as practicable after the body-skin is removed from the carcass at a slaughter establishment; and

15.2 There is no requirement to tag a leg-skin removed from the carcass of a farm emu.

15.3 A product label must-

- a) be a minimum of 90 mm by 55 mm in size; and
- b) bear a farm identifier such as the farm name or logo; and
- c) bear the message- "Product of a Queensland Government-supervised emu farming enterprise" (and if raw products are lawfully derived from a place outside Queensland, then add) "Raw materials lawfully obtained from (State/Territory of origin)"; and
- d) be attached to an emu product by farm/processor personnel prior to dispatch from a farm/processor to identify the source emu farm/processor.

15.4 A shell mark must-

- a) be of a size and format approved by the Chief Executive; and
- b) contain a farm/processor identifier; and
- c) be permanently affixed to an emu shell or to an egg display stand (when an egg is permanently attached to the stand) by a farm/processor during processing.

### EXPLANATORY NOTE:

As outlined in the introduction to this document, legislation relating to the farming of wildlife is being developed by the Queensland Department of Primary Industries. A *Memorandum of Understanding* has been signed by the Minister for Environment and Heritage and the Minister for Primary Industries which outlines the responsibilities of the Environmental Protection Agency and Primary Industries concerning emu farming. In general terms, the administration of the legislative requirements relating to this industry will be undertaken by the Department of Primary Industries.

### Disclaimer

This publication contains only advisory information. While considerable care has been taken in researching and compiling the information, neither the Environmental Protection Agency nor the Queensland Government accepts responsibility for errors or omissions or for any decisions or any actions taken on the basis of this document.

Readers are referred to the Nature Conservation Act 1992, the Nature Conservation (Wildlife) Regulation 1994 and current amendments.