

Code of Recommendations and Minimum Standards for the Welfare of Ostrich and Emu

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Code of Animal Welfare No. 21
ISBN 0-478-07476-X
ISSN 1171-090X
June 1998

Contents

Preface	4
1. Introduction, Purpose and Scope	5
1.1 Introduction	5
1.2 Purpose	5
1.3 Scope	5
1.4 Revision	5
1.5 Interpretation.....	6
2. Legal Responsibilities and Inspectors' Powers.....	7
2.1 Legal Responsibilities under the Animals Protection Act 1960	7
2.2 Owner or Person in Charge	7
2.3 Powers of Inspectors.....	7
3. Quality Assurance System.....	8
3.1 QA System	8
3.2 Records.....	8
4. Stock Management	8
4.1 Introduction	8
4.2 Inspections	9
4.3 Stress.....	9
4.4 Safe Handling of Birds	9
4.5 Mustering.....	10
4.6 Health.....	10
4.7 Food, Water and Medication	11
4.8 Breeding and Rearing.....	12
4.9 Impaction of the Proventriculus	15
4.10 Leg Rotation	15
4.11 De-clawing of Emu	16
4.12 Feather Removal in Ostrich.....	16
4.13 Transport.....	16
4.14 Emergency Euthanasia	16
4.15 Slaughter in Licensed Facilities	17
4.16 Hatchery Management	17
4.17 Contingency Plan.....	17
4.18 Other Uses of Birds	18
5. Housing, Fencing and Yards	19
5.1 General.....	19

5.2 Fencing	19
5.3 Pens and Holding Facilities.....	19
5.4 Protection From Hazards	20
6. Minimum Standards.....	21
6.1 Stress and Safe Handling.....	21
6.2 Food, Water and Medication	21
6.3 Health.....	21
6.4 Leg Rotation	21
6.5 De-clawing.....	21
6.6 Feather Removal	21
6.7 Transport.....	22
6.8 Slaughter	22
6.9 Hatchery Management	22
6.10 Other Uses for Birds.....	22
6.11 Housing, Fencing, and Yards	22
6.12 Protection from Hazards.....	23
Appendix	24
Published Codes	24
Published Guidelines.....	24

Preface

Codes of recommendations and minimum standards for the welfare of animals are prepared by the Animal Welfare Advisory Committee (AWAC), which was established in 1989 by the Minister of Agriculture to advise him on matters concerning animal welfare. AWAC consists of members from the following backgrounds: the farming community, animal welfare groups, the veterinary profession, animal behaviour and physiology, conservation and vertebrate pest control, consumer interests, animal welfare law and the Ministry of Agriculture. It also includes the chairman of the National Animal Ethics Advisory Committee and an independent chairman.

Extensive consultation takes place with industry and other interested groups in the development of codes.

This *Code of Recommendations and Minimum Standards for the Welfare of Ostrich and Emu* was endorsed as a national code at the AWAC meeting held on 28 November 1997.

Other codes of recommendations and minimum standards and guidelines that have been endorsed by AWAC, are listed in the Appendix to this code.

Codes are revised as required to take into account changes in animal management practices, new scientific knowledge and societal values.

1. Introduction, Purpose and Scope

1.1 Introduction

Animal welfare considerations are becoming increasingly important for the keeping and farming of animals, both in New Zealand and internationally. Practices that may once have been deemed acceptable are now being assessed and modified according to new knowledge and changing attitudes. High standards of animal welfare are not only important legally, but also have direct economic benefits and ensure international market success for our animal products.

Without good stock-sense animal welfare can never be adequately protected. This code is intended to encourage all those responsible for its implementation to adopt the highest standard of husbandry, care and handling.

Codes take account of five basic requirements:

- freedom from thirst, hunger and malnutrition
- the provision of appropriate comfort and shelter
- the prevention, or rapid diagnosis and treatment, of injury, disease or infestation with parasites
- freedom from distress
- the ability to display normal patterns of behaviour.

1.2 Purpose

This code is intended as a guide for all people responsible for the welfare, husbandry, transport and slaughter of ostrich and emu that have been bred and reared in captivity.

1.3 Scope

This code provides for the general principles of the care and use of ostrich and emu but is dependent on each facility implementing its own quality assurance programme that incorporates the principles and standards of this code (see Section 3 – Quality Assurance System).

This code does not provide for ostrich and emu held as exhibit animals in zoological parks or animal parks. Standards for zoos and animal parks can be found in the Code of Recommendations for the Welfare of Exhibit Animals and Information for Animal Exhibit Operators (AWAC code no.14).

1.4 Revision

This code is based on the knowledge and technology that was available at the time of publication and may need to be varied in the light of future advances.

While ostrich and emu have been studied under natural conditions for many years, they have been managed under conditions of confinement in New Zealand for only a few years. Consequently, AWAC will review this code when deemed necessary and as a better understanding is gained of the needs and requirements of captive-bred ostrich and emu.

In any event this code will be reviewed no later than 1 June 2001.

1.5 Interpretation

In this code:

"shall" means there is a statutory requirement

"must" means it is a minimum standard

"should" means it is a recommendation.

2. Legal Responsibilities and Inspectors' Powers

2.1 Legal Responsibilities under the Animals Protection Act 1960

The definition of "animal" in the Animals Protection Act 1960, includes "any bird, whether in a domestic or wild state". It follows that ostrich and emu are "animals" for the purposes of the Act.

A breach of a code provision, whilst not an offence in itself, can nevertheless be used in evidence as tending to establish the guilt of anyone accused of causing suffering under the Act.

Under the Animals Protection Act 1960, it is an offence to allow animals to suffer unnecessary or unreasonable pain or distress.

It is an offence to:

- cruelly ill-treat an animal
- omit to supply an animal with proper and sufficient food and water sufficient to maintain the liveweight of the animal within the normal physiological range for its species, type, age and sex
- omit to supply an animal with proper and sufficient shelter
- neglect an animal so that it suffers unreasonable or unnecessary pain or distress
- keep alive an animal which is in such a condition that it is cruel to keep it alive
- wilfully abandon an animal
- confine, convey or carry an animal in such a manner or position as to cause the animal unnecessary pain or suffering (Animals Protection Act 1960, section 3)
- being the owner or person in charge of an animal knowingly permit an offence (as above) to be committed in respect of an animal
- being the owner or occupier of any land, knowingly permit an offence (as above) to be committed on that land.(Animals Protection Act 1960, section 5)

2.2 Owner or Person in Charge

The owner, manager or other person in charge has overall responsibility for the birds.

2.3 Powers of Inspectors

Inspectors appointed under the Animals Protection Act 1960 have the power to enter any land or premises, or any vehicle, aircraft or vessel, for the purposes of enforcing the Act and inspecting any animal when the Inspector has reasonable grounds for believing that an offence against the Act has been, or is being, committed.

Inspectors include veterinarians and livestock officers of MAF, RNZSPCA Inspectors appointed by the Minister, and the Police.

It is lawful for an Inspector to seize and maintain possession of an animal where the Inspector believes that an offence may have been committed.

3. Quality Assurance System

3.1 QA System

To ensure that standards of animal welfare and husbandry are maintained, each ostrich and emu facility should implement a quality assurance system that provides for written procedures that ensure that the conditions of this code are being met. The adoption of an industry generic quality assurance programme will meet this recommendation.

To this end it is recommended that each industry develops a generic quality assurance system. The elements of the quality assurance system should provide for the minimum standards of this code.

3.2 Records

The maintenance of good records is an integral part of a quality assurance system and good farm management.

In breeding establishments accurate records should be kept, where appropriate, of the source of all stock, the breeding history of each bird and the case history of the treatment of any diseased or injured birds.

On meat production establishments accurate records should be kept on the case history of the treatment of any diseased or injured birds.

Care should be taken when using individual marking or tagging of birds as some methods have a potential for injury.

The subcutaneous insertion of a radio frequency identification device (RFID) or microchip is the preferred option. It is recommended that RFIDs conform to ISO Standards 11784 and 11785.

4. Stock Management

4.1 Introduction

The basic behavioural, anatomical and physiological needs of ostrich and emu are considered in this code irrespective of the type of husbandry practised or the climatic conditions to which the ostrich and emu are exposed.

While ostrich and emu have been studied under natural conditions for many years they have been managed under conditions of confinement in New Zealand for only a few years. It follows that as the industry evolves a better understanding will be gained of the needs and requirements of captive-bred ostrich and emu.

The ostrich and emu industries are evolving rapidly and it is inevitable that stock-handlers will encounter circumstances with ostrich and emu that are not discussed in this code.

It is essential that common-sense should prevail and that previous experience with stock should be utilised to the fullest extent so that ostrich and emu are handled humanely and the welfare of the animal is always considered foremost.

Owners, managers and handlers of ostrich and emu have a responsibility for the health, welfare and considerate treatment of the birds under their control.

The importance of competent stock-sense in animal welfare cannot be over-emphasised. An important skill of a competent stockperson is the ability to recognise the early signs of distress or disease in ostrich and emu so that the cause can be identified, and prompt, appropriate, remedial action taken.

Imprinting on, and habituation to, humans is possible and in general birds are inquisitive and will respond to human contact. However, they remain animals that could be dangerous to people and must always be treated with care and respect. An especially high risk period is during the breeding season.

Children and adults unfamiliar with ostrich and emu should not be allowed into any enclosure except under adult supervision as there will always exist the possibility of attack. The ostrich kicks with a forward and downward motion and it is difficult to escape a concerted attack. The emu can also flail its legs about and inflict serious injury.

4.2 Inspections

The frequency and level of inspection should be related to the needs of the ostrich and emu, 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 diseases, or when different groups of birds have been mixed.

Checks should be made of the effectiveness of all feeding or watering systems.

4.3 Stress

Because ostrich and emu are essentially wild species particular attention must be given to reducing or eliminating sources of stress.

While fence pacing can be normal territorial behaviour, it can also be an indication of stress.

All staff that handle birds must be trained and develop an understanding of ostrich and/or emu behaviour, capture and handling, general management procedures, health controls, and signs of stress and disease.

Potential sources of stress should be anticipated and, where possible, be managed. For instance, even a passing farm bike can cause enough panic in birds to cause injury and death.

When firearms are used around the farm, care must be taken not to startle any ostrich or emu.

4.4 Safe Handling of Birds

Both adult and juvenile birds require considerate care in handling, which is facilitated by the provision of adequate races and catching pens.

The safe handling of ostrich and emu is a critical component of the husbandry of the birds. It is recommended that any handling of juvenile and adult birds is done in purpose built facilities by experienced handlers.

The following factors will aid in the reduction of stress to birds and handlers:

4.4.1 Safe Handling of Ostrich

A shed or shelter with smooth, solid walls is very useful for the handling and restraint of both juvenile and adult ostrich.

A "V" shaped crush arrangement may be useful for restraint of adult ostrich during treatment.

"Hooding" of the head is recommended as a safe and reliable method of aiding restraint for ostrich from about 6 months of age.

When hooded, birds should be restrained and attended at all times when they are outdoors and even when they are indoors in the presence of ostrich that are also hooded. Hooded birds can still kick and move about even when in isolation.

A shepherd's neck crook can be used with care to restrain the head and bring it into position for applying a hood to adult birds, particularly to mature males. This is particularly useful when birds need to be restrained in a yard or paddock.

4.4.2 Safe Handling of Emu

Emu do not usually require a crook and do not respond to hooding unless they are already restrained prior to hooding and remained restrained after hooding.

Quiet handling in a darkened narrow pen with smooth sides approximately 0.75 m wide and 1.0 m long is useful for handling fractious and excitable birds.

4.5 Mustering

Appropriately trained dogs may be used to muster birds.

Birds must not be struck.

Electric prodders must not be used.

4.6 Health

All persons responsible for the care of birds must be aware of signs of ill health. These include separation from other ostrich or emu, lethargy, refusal to eat, changes in faeces or urine, 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 veterinarian familiar with ostrich or emu practice.

Farmers should operate an effective programme to prevent infectious disease and internal and external parasitism. Particular attention should be paid to the stocking densities used for juveniles and adult groups, as aggressive behaviour and injuries may be seen during the breeding season when the stocking density is high. Sick and injured ostrich and emu should be treated without delay. They should be isolated if necessary. Records of sick animals, deaths, treatment given and response to treatment should be maintained to assist disease investigations.

Dead stock should be promptly removed and, if not required for post-mortem examination, should be disposed of in a hygienic manner such as by deep burial or incineration.

Ostrich and emu with an incurable sickness, untreatable injury or painful deformity that creates unacceptable levels of suffering should be humanely euthanased.

Newly acquired stock should be separated from existing stock for 4 to 6 weeks to minimise risk of the introduction of a disease although it is recognised that in specific breeding circumstances the introduction of birds into an established flock is required. It is not recommended that birds be kept in solitary confinement.

4.7 Food, Water and Medication

Ostrich and emu must have access to adequate quantities of appropriate food and water at least once each 24 hours but more often for chicks. Chicks under 8 weeks of age and being housed indoors should have food and water available for at least 10 hours per day.

Ostrich and emu should receive a diet containing adequate nutrients to meet their requirements for health and vitality.

This can be achieved by feeding birds of all ages recognised commercial pre-mixes or pellets. If farmers are making their own feed or grazing pasture or fodder crops this should be done with recourse to a qualified nutritionist or veterinarian to ensure properly balanced rations. This is vital for healthy birds, good growth rates and good production.

Chicks should have controlled access to coarse feed that may cause impactions. They should not have access to agents that might cause toxic injury.

Where chicks and juveniles are reared in groups, feed points or trough space should be located to enable all birds to eat at the same time.

Farmers should be knowledgeable about the application and supply of medication before treating their livestock and if in doubt should consult a veterinarian experienced with ostrich or emu. Medicated food or water should only be supplied under the supervision of a veterinarian familiar with ostrich and emu. Care must be taken to avoid chemical residues in carcasses.

When an ostrich or emu farm is first established, or when a new water source is obtained, the water should be tested for mineral content and microbiological contaminants and advice obtained as to its suitability. As the composition of water from bores, dams, and water holes may alter with changes in flow or evaporation the water may require more frequent monitoring for its continued suitability.

4.8 Breeding and Rearing

4.8.1 Intensive Rearing

With present knowledge it is considered inappropriate under New Zealand conditions to keep birds permanently indoors under intensive farming conditions.

Birds can be housed indoors up to 12 weeks of age.

4.8.2 Chicks — up to 12 weeks

4.8.2.1 General

Ostrich and 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 in the ostrich and 7 to 8 weeks of age in the emu.

4.8.2.2 Natural Conditions

Eggs may be incubated by the adults under field conditions in either breeding pens or under open range conditions. Where pens are utilised, protective material should be provided on all fences to reduce the risk of birds being injured. When breeding pairs are housed under free-range conditions, the range should be monitored regularly.

Emu hens may attack their own chicks once they hatch. It is therefore recommended that either the hen is removed before the first chicks hatch or else the chicks are moved to a rearing shed. Where adult ostrich are used as foster parents to raise chicks, unrelated eggs can be added to the clutch before hatch and/or unrelated chicks can be added to the brood after the birds have successfully hatched some of their own eggs.

The adult ostrich may attack introduced chicks that are older than the chicks already in the brood, therefore only younger chicks should be added to the brood. A pair of adult ostrich can successfully rear about 20 chicks at one time but shelter must be provided against adverse weather.

Numbers larger than 20 chicks can be fostered during the day in good weather conditions provided that full shelter facilities are available at night or during periods of adverse weather.

Where breeding pairs are housed under free-range conditions the range must be inspected daily.

4.8.2.3 Intensive Rearing of Chicks

Floors and other surfaces should be designed, constructed and maintained so that they are non-slip, minimise the risk of injury and disease, and adequately support chicks so that they can stand and move freely.

Deep litter flooring should be checked frequently to ensure that it is dry and friable. When litter is caked, wet or excessively dusty the problem should be rectified.

Chicks must not be allowed to walk on smooth or polished floors or on wire floors that may injure them.

Stocking density should be periodically reviewed and adjusted, having regard to age, flock size, temperature, ventilation, lighting, quality of housing, feeding requirements and occurrence of disease.

Under good management and housing conditions chicks may be housed in groups for the first 4 to 6 weeks of life, with a shed density of up to 3 chicks per m² and a minimum running length of 15 m.

Runs should be free of obstructions likely to cause injuries. The shape of the runs should avoid acute angles where birds may be trapped thus creating a potential for smothering.

Chicks should have access to outside runs at an early age paying due respect to the climatic conditions. Outside runs should be constructed to provide a minimum space allowance of 1.5 chicks per m².

The provision of an additional outside run is optional. From 6 to 12 weeks of age, groups of up to 100 chicks can be housed together at the same shed density but in addition access to an outside run of 5 m² per chick should be provided with a minimum running length of 25 m.

After 12 weeks of age, well grown chicks can generally be farmed outdoors but shelter must be provided taking into consideration factors outlined in Section 5.

Chicks that are not well grown or that require treatment may need to be housed under similar conditions to those outlined in paragraph 4.8.2.3 for younger chicks.

Birds should be managed in groups of similar size.

4.8.2.4 Lighting

When chicks do not have access to daylight they should be given artificial light for at least 8 hours per day. The effect of abnormally long photo-periods (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 1 day of age to prevent panic should lighting fail.

Young emu chicks reared away from the adult male parent 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.

4.8.2.5 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.

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 gases. 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 – 15 ppm of ammonia in the air can be detected by smell. An ammonia level of 25 – 35 ppm will cause eye and nasal irritation in humans.

4.8.3 Stocking Rates for Juvenile Birds

There is a considerable variation in the weight of chicks at any given age. The stocking rate for juvenile ostrich and emu should not exceed 5 tonnes of bird per hectare at any point in time.

Periodical adjustments to the stocking rates should be made as birds grow.

4.8.4 Breeding Ostrich

4.8.4.1 Colonies

The stocking rate for mature breeding birds in open conditions should not exceed 20 birds per hectare.

4.8.4.2 Breeding Pairs

Where ostrich are held as breeding pairs they should be kept in a well fenced pen of at least 15m x 40m dimension, although pens of 25m x 80m are recommended.

4.8.4.3 Breeding Trios

Because of the potential for aggression between breeding females where breeding trios are kept (1 male and 2 females), the recommended minimum pen size is 25 m x 80 m.

4.8.5 Breeding Emu

4.8.5.1 Colonies

The stocking rate for breeding birds in open conditions should not exceed 20 birds per hectare.

4.8.5.2 Breeding Pairs

Where emu are held as breeding pairs they should be kept in a well fenced pen of at least 8 m x 20 m dimension, although a pen of 10 m x 40 m is recommended.

4.8.5.3 Breeding Trios

Because of the potential for aggression between breeding females where breeding trios are kept (1 male and 2 females), the recommended minimum pen size is 25 m x 80 m.

4.8.5.4. Stocking Density

The stocking density must be reviewed regularly and adjusted, taking into account the ages of the birds, the flock size, the shedding and paddock conditions, the behavioural needs of the birds and the likely occurrence of disease.

4.9 Impaction of the Proventriculus

Ostrich of all ages are susceptible to impaction of the proventriculus (storage stomach). This most commonly occurs in chicks under 4 months of age which are reared in isolation from adults and exposed to stress, injury or infectious disease, and/or have access to inappropriate materials particularly under high stocking densities.

Inappropriate materials can include:

- long grass
- twigs and sticks
- dead grass and leaves
- pebbles and stones.

Chicks can also become impacted with flooring and bedding materials including:

- dirt and sand
- pumice and pea material
- straw, hay and other litter.

Movement of chicks to a new location can often increase the likelihood of impaction due to a combination of stress and exposure to a new environment even though the flooring and bedding materials have been used successfully with other chicks.

Management of ostrich needs to include an understanding of this tendency for impaction to occur, the need to reduce and minimise access to inappropriate materials, and stress minimisation as discussed in paragraph 4.3.

Training should be provided in detection of impaction and the appropriate treatment for mild impactions. Severe impaction should be recognised as a life threatening condition that requires veterinary intervention (sometimes including surgery) and/or emergency euthanasia (see paragraph 4.14).

4.10 Leg Rotation

Leg rotation and bruising in ostrich and emu can occur resulting from handling and other trauma. A genetic tendency to leg rotation should be recognised.

If there is any doubt about the cause of lameness a veterinary consultation should confirm the diagnosis and any appropriate treatment.

A bird that has suffered leg rotation must be attended to immediately. If the bird has difficulty in rising, walking, and has significant heat, pain and swelling, the bird must be destroyed forthwith.

4.11 De-clawing of Emu

Radical de-clawing of emu chicks by removing part of the toe using a hot-blade de-beaking machine is an unacceptable practice on animal welfare grounds and must not be carried out.

Modified de-clawing that removes only the claw may be carried out under procedures that are set out in the industry generic quality assurance programme.

4.12 Feather Removal in Ostrich

The plucking of live ostrich is an unacceptable practice on animal welfare grounds and must not be carried out.

Feathers, including the wing feathers, must not be removed by cutting from live birds by untrained people.

Personnel employed to remove feathers by cutting must have received feather removal training from a New Zealand Ostrich Association approved trainer and be the holder of a New Zealand Ostrich Association "Feather Removal Training Certificate."

The white wing feathers (white plumes) and the bylocks (the darker feathers at each end of the row of the white plume feathers) may be removed by cutting above the bloodline.

This must be carried out only by trained and accredited personnel.

This is usually carried out in order to prevent contamination of the quality feathers during the slaughter and processing stages.

The feathers must be cut no closer than 10 mm to the bloodline. Feathers without a ripe bloodless clearance above the bloodline must be left on the bird. All other feathers must be removed post-mortem.

4.13 Transport

Special care needs to be taken in transporting ostrich and emu. Ostrich and emu must be transported in accordance with the *Code of Recommendations and Minimum Standards for the Transport of Animals Within New Zealand* (AWAC code no. 15) with particular reference to *Section 21, Ostrich and Emu*, first inserted in 1997.

4.14 Emergency Euthanasia

Ostrich and emu of all ages may need to be killed for a variety of health and production reasons. The method of destruction must be effective and cause sudden and painless death of the bird.

In an emergency, ostrich and emu should be euthanased under veterinary supervision. In many cases, particularly with chicks, this will not be practicable and owners and bird handlers will be required to euthanase injured or moribund birds.

All birds must be stunned before being killed. Birds should be killed by either bleeding or dislocation of the upper cervical vertebrae.

It is emphasised that stunning alone is not adequate to kill a bird and should be followed by bleeding or dislocation.

Stunning can be achieved by a heavy blow to the cranium. Due care should be taken to avoid injury to handlers and other birds. The cranium contains the brain which is immediately above and behind the eyes and above and forward of the ear openings.

Bleeding can be effected by cutting the neck just below the beak and severing the trachea (wind pipe) and both carotid arteries.

The neck can be broken by dislocating the upper neck vertebrae with a sharp rotational movement.

Decapitation without pre-stunning does not render a bird immediately insensible and must not be used as a means of destruction.

Drivers of transport units should carry or have access to the means of carrying out euthanasia in an emergency.

4.15 Slaughter in Licensed Facilities

Routine slaughter of birds must be carried out in licensed facilities in accordance with procedures set out in the industry code of practice for slaughter of ostrich and emu currently under development.

Ostrich and emu must be humanely handled prior to slaughter and must be electrically stunned, or immediately rendered unconscious by some other means, prior to bleeding.

Birds must not be decapitated without pre-stunning.

4.16 Hatchery Management

Hatches and hatchery rooms must be supplied with adequate quantities of actively circulating fresh air to aid in the prevention of build-up of disease-causing organisms that can result in respiratory disease and high mortality rates in newly hatched chicks.

Particular attention should be paid to the quality of air circulating with special attention given to consistent hygiene. This is important because ostrich and emu eggs have a long incubation period and the incubator may need to be de-contaminated whilst in use.

Sufficient disinfection and fumigation should take place between hatches to provide a hygienic environment for the new hatchlings.

Weak or deformed ostrich and emu chicks that need to be culled must be destroyed humanely.

When necessary, chicks should be destroyed by dislocating the cervical spine by a person experienced in this technique. Chicks must not be decapitated or have their necks dislocated without pre-stunning.

Chicks in the brooder should be inspected several times throughout the day.

Hatchery waste should not be stored or allowed to accumulate. Hatchery waste must not be disposed of in rubbish disposal tips unless all un-hatched embryos have been destroyed.

4.17 Contingency Plan

There may be times when ostrich and emu are stranded and without care. This may arise from a farmer being incapacitated or abandoning the birds. It is recommended that each industry association has a contingency rescue plan that ensures that the welfare of birds is not compromised.

4.18 Other Uses of Birds

It is inappropriate to allow ostrich or emu to be ridden because of the risk of injury to wing joints. Birds must be not ridden at any stage of their rearing, transport or mustering for slaughter.

When birds are used for the purpose of entertainment their use must comply with the *Code of Recommendations and Minimum Standards for the Use of Animals in Entertainment*.

It is acceptable to use birds for public display provided such display complies with the *Code of Recommendations for the Welfare of Exhibit Animals and Information for Animal Exhibits* (AWAC code no. 14).

Chicks must not be supplied as pets due to stress considerations for young birds being held in isolation.

5. Housing, Fencing and Yards

5.1 General

Persons intending to erect housing and yards, or to modify housing that has been used for other species should seek advice from the New Zealand Ostrich Association or the New Zealand Emu Farmers Association as the case may be, or a livestock consultant or veterinarian with appropriate knowledge and experience.

There is considerable diversity of opinion about maximum stocking density that is allowable for different classes of ostrich and emu and, as with other forms of livestock, this will be controlled by factors such as the variation in levels of natural vegetation, paddock conditions and various breeding programmes.

Well designed and constructed buildings and yards will provide an improved environment for rearing and breeding ostrich and emu. Care should be taken that handling yards and collection points have adequate drainage.

The type of housing and yard dimensions required will vary with the geographic location of the farm, the age of the birds, the management practices to be employed and the stocking density.

Birds need to be protected from climatic extremes and birds that are kept in yards or in an extensive range must be provided with adequate shade and protection from the elements.

5.2 Fencing

Fencing must be sufficient to ensure that ostrich and emu cannot escape. Care must be taken to provide fencing materials that will protect chicks from predators.

Fencing should be sufficiently close to the ground to prevent birds pushing under the fencing material. Where practicable, the fencing material should be fixed to the inside of the posts.

5.3 Pens and Holding Facilities

Yards and races should be properly designed to assist the movement of birds. Properly designed and maintained yards will reduce direct injury to birds, e.g. acute angles in areas where large numbers of birds could accumulate should be avoided in yard design as it can create the potential for smothering.

There should be no sharp edges or projections likely to cause injury. The confines of the yard must be free of loose materials that may cause injury or ill-health to stock (e.g. tins, nails, staples, bottles, broken rails or gates, exposed hinge gudgeons, strainer assemblies, toxic paint etc.). Concrete floors and walkways should have non-slip surfaces. Care should be taken to avoid projections and footholds.

Yard and pen areas should be designed for rapid drainage and to prevent water accumulating in pools. Drains should be constructed to avoid injury to birds and to ensure efficient drainage from pens and holding areas, and sited so as not to impede the movement of birds.

In holding pens, headroom should be sufficient to allow birds to stand and move about normally.

5.4 Protection From Hazards

5.4.1 Predators

Young ostrich and emu should be protected from known predators. Possible predators are cats, dogs, rats, mustelids and birds of prey.

Birds should be protected from excessively aggressive, older birds and larger birds of the same age.

5.4.2 Fires and Emergencies

Yards should be designed so that birds can be readily evacuated in case of emergency.

New buildings and yards in which birds are housed should incorporate sufficient exits to allow for emergency evacuation of the building and be in a site that is reasonably safe from scrub fires and floods.

Fire-fighting equipment must 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 where birds are confined.

When planning new buildings, consideration should be given to the use of construction materials with high fire resistant properties. All electrical and fuel installations should be planned and fitted to minimise fire risk.

5.4.3 Emergency Plan

Every ostrich and emu farm must have a contingency plan in place relating to likely natural disasters and emergencies. Staff must be trained to implement the contingency plan before any emergency situation arises.

Birds must not be released from captivity unless they are in imminent danger of death or injury. The emergency plan must provide for alternative holding, means of dispersment or transport to another facility in the event of a natural disaster.

5.4.4 Toxic Substances

Toxic substances (for example herbicides and pesticides) used on the farm should not be applied so as to cause risk to birds.

5.4.5 Equipment

All equipment to which birds have access must be designed and maintained to minimise the risk of either injury or pain to the birds.

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

6. Minimum Standards

6.1 Stress and Safe Handling

- attention must be given to reducing or eliminating sources of stress
- all staff that handle birds must be trained
- when firearms are used care must be taken not to startle ostrich or emu
- birds must not be struck
- electric prodders must not be used.

6.2 Food, Water and Medication

- ostrich and emu must have access to adequate quantities of appropriate food and water at least once each 24 hours but more often for chicks
- care must be taken to avoid chemical residues in carcasses.

6.3 Health

- all persons responsible for the care of ostrich and emu must be aware of signs of ill health.

6.4 Leg Rotation

- a bird that has suffered leg rotation must be attended to and if the bird is found to be suffering it must be destroyed forthwith.

6.5 De-clawing

- radical de-clawing of emu chicks must not be carried out.

6.6 Feather Removal

- the plucking of live ostrich must not be carried out
- feathers, including the wing feathers, must not be removed from live birds by untrained people
- feather removal by cutting must be carried out only by trained and accredited personnel
- the feathers must be cut no closer than 10 mm to the bloodline
- feathers without a ripe bloodless clearance above the bloodline must be left on the bird
- all other feathers must be removed post-mortem.

6.7 Transport

- ostrich and emu must be transported in accordance with the *Code of Recommendations and Minimum Standards for the Transport of Animals Within New Zealand*.

6.8 Slaughter

- emergency destruction must be effective and cause sudden and painless death for the bird
- birds must be humanely handled prior to slaughter
- all birds must be stunned before being killed by bleeding or dislocation of the upper cervical vertebrae or decapitated
- slaughter for human consumption (and sale to the public) must be carried out in licensed or registered premises
- birds must be electrically stunned or rendered unconscious prior to bleeding.

6.9 Hatchery Management

- hatches and hatchery rooms must be supplied with adequate quantities of fresh air
- weak or deformed ostrich and emu chicks that need to be culled must be destroyed humanely
- chicks must not be decapitated or have their necks dislocated without prestunning
- hatchery waste must not be disposed of in rubbish disposal tips unless all un-hatched embryos have been destroyed.

6.10 Other Uses for Birds

- birds must be not ridden at any stage of their rearing, transport or mustering for slaughter
- when birds are used for the purpose of entertainment, their use must comply with the *Code of Recommendations and Minimum Standards for the Use of Animals in Entertainment*
- chicks must not be supplied as pets.

6.11 Housing, Fencing, and Yards

- stocking density must be reviewed regularly and adjusted
- birds must be provided with adequate shade and protection from the elements
- fencing must be sufficient to ensure that ostrich and emu cannot escape
- care must be taken to provide fencing materials that will protect chicks from predators
- where breeding pairs are housed under free-range conditions the range must be inspected daily
- chicks must not be allowed to walk on smooth or polished floors or on wire floors that may injure them
- where breeding pairs are housed under free-range conditions the range must be inspected daily and all chicks must be removed from the range as they hatch
- the confines of the yard must be free of loose materials that may cause injury or ill-health to birds.

6.12 Protection from Hazards

- fire-fighting equipment must be available
- every farm must have a contingency plan in place relating to likely natural disasters and emergencies
- staff must be trained to implement the contingency plan before any emergency situation arises
- birds must not be released from captivity unless they are in imminent danger of death or injury
- the emergency plan must provide for alternative holding, means of dispersment or transport to another facility in the event of a natural disaster
- all equipment to which birds have access must be designed and maintained to avoid either injury or pain to the birds.

Appendix

Published Codes

- *Code of Recommendations for the Welfare of Circus Animals and Information for Circus Operators.*
- *Code of Recommendations and Minimum Standards for the Sea Transport of Sheep from New Zealand.*
- *Code of Recommendations and Minimum Standards for the Welfare of Sheep [revised July 1996].*
- *Code of Recommendations and Minimum Standards for the Welfare of Dairy Cattle.*
- *Code of Recommendations and Minimum Standards for the Welfare of Deer During the Removal of Antlers.*
- *Code of Recommendations and Minimum Standards for the Welfare of Animals Used in Rodeo Events.*
- *Code of Recommendations and Minimum Standards for the Welfare of Horses.*
- *Code of Recommendations and Minimum Standards for the Welfare of Bobby Calves [revised July 1997].*
- *Code of Recommendations and Minimum Standards for the Care of Animals in Boarding Establishments.*
- *Code of Recommendations and Minimum Standards for the Welfare of Animals at the Time of Slaughter at Licensed and Approved Premises.*
- *Code of Recommendations and Minimum Standards for the Sale of Companion Animals.*
- *The Animals Protection Act and Its Implications for Those Responsible for Farm Animals.*
- *Code of Recommendations and Minimum Standards for the Welfare of Pigs.*
- *Code of Recommendations for the Welfare of Exhibit Animals and Information for Animal Exhibit Operators.*
- *Code of Recommendations and Minimum Standards for the Welfare of Animals Transported within New Zealand.*
- *Code of Recommendations and Minimum Standards for the Welfare of Animals at Saleyards.*
- *Code of Recommendations and Minimum Standards for the Care and Use of Animals for Scientific Purposes.*
- *Code of Recommendations and Minimum Standards for the Welfare of Layer Hens.*
- *Code of Recommendations and Minimum Standards for the Emergency Slaughter of Farm Livestock.*
- *Code of Recommendations and Minimum Standards for the Welfare of Dogs.*

Published Guidelines

- *Guidelines for the Welfare of Livestock from which Blood is Harvested for Commercial and Research Purposes.*
- *Guidelines for the Welfare of Yearling Fallow Deer During the Use of Rubber Rings to Prevent Antler/Pedicle Growth.*

Codes and Guidelines may be obtained from:

*Animal Welfare and Environment Section
MAF Regulatory Authority
Ministry of Agriculture and Forestry
PO Box 2526
Wellington
Tel: 04 474 4129*