



**CODE OF CONDUCT**

**FOR THE**

**COMMERCIAL PRODUCTION**

**OF OSTRICHES**

**Updated version Sept 2011**

# FOREWORD

The “Code of Conduct for the commercial production of ostriches” provides minimum standards for the commercial production of ostriches in South Africa. The main objective is to ensure sustainable farming practices that incorporate animal welfare, environmental conservation, social acceptability and optimum production.

The document is the culmination of several attempts made to address welfare and conservation aspects of commercial ostrich production, with reference to the following legislation that applies to ostrich producers:

- Animal Protection Act (Act No. 71 of 1962).
- Meat Safety Act (Act No. 40 of 2000), Section 22: Ostrich Meat Regulations, 2003.
- Act on Conservation of Agricultural resources (Act No. 43 of 1983).
- Animal Diseases Act (Act No. 35 of 1984)
- Stock Theft Act (Act No 57 of 1959)

The Code of Conduct is part of a continuous and dynamic development process, which aims to ultimately ensure the welfare of the ostriches and the ostrich industry in South Africa. It will be reviewed from time to time to incorporate advances in the understanding of the ostrich’s physiology and behavior, technological changes in animal husbandry and their relationship to the welfare of ostriches.

The Code is based on the five basic requirements for the welfare of any animal:

- Freedom from thirst, hunger and malnutrition
- Freedom from discomfort
- Freedom from pain, injury and disease
- Freedom from fear and distress
- Freedom to express normal behavior

These should also be considered when dealing with any aspect that is not currently covered in the Code of Conduct. Performance, health, behavior and physiology are generally accepted indicators of welfare that should be assessed and considered when making decisions.

The “Code of Conduct for the commercial production of ostriches” was compiled by and endorsed by the following institutions:

- South African Ostrich Business Chamber
- Klein Karoo Group Ostrich Producers
- Klein Karoo International – Meat
- Mosstrich Group
- National Society for the Prevention of Cruelty to Animals (NSPCA)
- Department of Agriculture, Western Cape

The involvement of all role players in this process is imperative and their support with the development of the Code is appreciated.

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## 1. INCUBATION OF OSTRICH EGGS

- Ostrich eggs can be incubated naturally or artificially in incubators.
- Temperature fluctuations of more than 1°C in the incubator should be prevented to prevent embryonic deaths.
- Incubators should supply sufficient oxygen and remove sufficient water to satisfy the biological needs of the embryos.
- Eggs in incubators should be turned regularly to ensure normal development of the embryos. Eggs must be rotated through a wide rotation plain to ensure a proper supply of nutrients to the embryo.
- Infertile, dead or contaminated eggs should be removed from the incubator to prevent contamination of the other eggs.

## 2. HANDLING OF CHICKS IN THE HATCHER

- Chicks in brooders or hatchers should be inspected at least once every 12 hours and action should be taken to correct problems as they occur.
- Chicks usually hatch by themselves and should be allowed to do so. Hatching assistance is only required when the chick is unable to emerge from the shell on its own.
- Ensure that all chicks that failed to hatch are dead before disposal. Deformed or weak chicks should immediately be killed humanely and quickly.
- Hatching trays must be moved in a level position only.
- Chicks should be kept in the hatcher after hatching to dry off before being moved to rearing facilities.
- Vent sexing should be done soon after hatch only. Only skilled and trained operators should perform vent sexing.

### 3. TRANSPORTATION OF CHICKS

- Sudden temperature deviations should be prevented when moving chicks from the hatchery to other facilities. Chicks should not be moved unprotected in cold, wet and windy conditions.
- Containers must have clean, dry floor pads. The floor surface should prevent slipping.
- Containers and the stacking thereof must allow sufficient ventilation for the chicks.
- The temperature and duration of the journey must be considered when determining the density of chicks and of containers in the vehicle. Transport during extreme temperatures should be avoided.
- Each chick must have sufficient space to allow chicks to sit down without sitting on top of each other.
- Containers with chicks must be handled with care and tied down or packed in a manner that will prevent unnecessary movement during transportation.
- Chicks should be handled carefully when removed from the containers. The entire body must be supported when carrying.
- Movement of chicks (from day old) may only occur if an official movement authorization number had been obtained from the SAOBC.

## 4. NUTRITIONAL REQUIREMENTS

Nutritional imbalance or inadequacies must be prevented.

### **a) Food**

- Ostriches must have access to sufficient and appropriate food to provide in its daily requirements, taking into account the age and condition of the ostriches.
- Feed troughs should be spaced evenly to ensure that each ostrich has free access to sufficient food to obtain all the necessary nutrients.
- The diet must not contain harmful ingredients.
- The use of any animal protein, including bone meal, fish oil or fish meal is prohibited.
- No growth stimulants may be used.

### **b) Water**

- Each chick must have access to sufficient clean water to provide in its daily requirements.
- Clean fresh water of adequate quality (physiochemical and microbiological) must be supplied.
- Water troughs should be easily accessible and cleaned regularly.
- Water should be disinfected with a suitable disinfectant. Registered disinfectants include F10, Virukill, Virkon or standard water chlorination methods.

## 5. HOLDING FACILITIES

Ostriches' holding facilities must provide appropriate comfort and shelter to allow safe, humane and efficient movement of ostriches. The need for housing will vary according to the climate, geographic location of the farm, the age structure of the ostriches and the management practices. Generally, chicks require some form of housing or shelter up to three months of age. The type of housing will vary considerably according to above-mentioned factors, but all facilities must comply with certain minimum standards:

### **a) Shelter**

- Chicks up to three months of age must be provided with adequate shelter to protect them from adverse weather conditions.
- Sufficient light, feeding and water troughs should be provided during long periods of bad weather.

### **b) Space**

- Chicks should not be raised in overcrowded conditions. Paddocks should be large enough to allow for freedom of movement.
- Stocking density will depend on the age and weight of the chicks. Flock size, ambient temperature, ventilation capacity and flock health should also be considered when determining stocking density.

### **c) Floor and other surfaces**

- Floor surfaces must prevent slipping and injuries and ensure free movement of chicks.
- Surfaces should be kept dry and clean, and free of objects that may cause injury.
- Grids should not have openings that are large enough for the chicks' legs or toes to become entrapped.

### **d) Temperature control**

- Healthy ostrich chicks are capable of effective thermoregulation soon after hatching. Thermoregulation is energetically expensive, however, and may interfere with other physiological activities like immunity and growth. Ambient temperature control is therefore essential for small chicks up to three weeks of age. Sudden temperature fluctuations, overheating and chilling of the chicks must be prevented.
- Juvenile and adult ostriches are generally tolerant of extreme temperatures. Simultaneous exposure to heat stress and dehydration should be avoided, however.

#### **e) Ventilation**

- Ventilation must never be compromised in an effort to keep the chicks warm. Indoor facilities must have adequate ventilation to ensure an adequate supply of oxygen and to prevent the accumulation of ammonia and humidity.

#### **f) Hygiene**

- When raising chicks on cement floors, the floors must be washed and disinfected regularly, depending on the age and density of the chicks.
- The creation of wet spots in shelters or paddocks must be prevented as it encourages disease.

#### **g) Lighting**

- The indoor light intensity should be sufficient to provide adequate illumination and stimulation for normal activities, and feed and water intake. Ostriches should be exposed to a sufficient period of continuous light per day – at least eight hours of light.

## 6. HEALTH

### a) Disease prevention

- Artificial rearing of ostriches necessitates the implementation of disease control measures based on bio-security and preventive medicine to protect the health of the ostriches and to prevent diseases.
- A flock health program should be developed with veterinary advice.
- Separate facilities should be used for rearing, breeding, incubation and processing of ostriches to minimize the transfer of diseases and pathogens.
- Sound management practices must be followed to prevent the contraction of diseases:
  - Ostriches must be inspected regularly for early detection and diagnosis of problems to prevent suffering. The frequency and level of inspection should be related to the specific conditions and the needs of the ostriches.
  - All persons responsible for the care of ostriches must know and be able to recognize the early signs of distress or disease. These include sudden changes in behavior, posture, or excretions.

### b) Disease treatment

- A correct diagnosis must be made before appropriate treatment can be given, or corrective actions taken.
- Sick birds must be treated promptly and underlying problems addressed.
- The correct product, method of administration and dosage for each remedy must always be used.
- Antibiotics must be given only after diagnosis of specific diseases that is responsive to treatment with antibiotics. Antibiotics should be given under the supervision of a veterinarian.
- Any outbreak or suspicion of an outbreak of controlled diseases (Avian Influenza or Newcastle) has to be reported to the nearest state veterinarian or animal health technician.
- Proper records must be kept of treatments.

### c) Injury prevention

#### i) *Management practices*

- The possibility of injury within management practices and facilities must always be considered and limited.

- When using identification devices that are permanently or temporarily attached to the chick's body, these must be lightweight and not cause any discomfort or impair movement of the chick. Identification devices should be checked regularly to prevent physical injury

*ii) Equipment*

- All equipment (food and water containers, handling equipment) should be constructed to prevent causing injuries to ostriches.
- Sharp edges must be avoided and small objects such as needles etc. that can be pecked at and swallowed must be kept clear of the ostriches.

*iii) Facilities*

- All holding and handling facilities should primarily be constructed to enable effective handling of ostriches and to prevent injury to ostriches.
- Floor surfaces should be slip-proof to prevent injuries.
- Fences and handling facilities should have smooth sides with no projections or sharp protruding edges.
- Diamond mesh fencing in which ostriches can get their heads or feet stuck should not be used.
- Fences must be high enough to prevent ostriches from jumping or falling over them, and sufficiently close to the ground to prevent birds from crawling underneath, according to the size of the ostriches kept in the paddock. Fences should also preferably be predator proof.
- If woven materials are used, there should be no loose threads that can be pecked at and ingested by the ostriches.
- Access to inappropriate material such as long grass, twigs and sticks, dead grass or leaves, which could cause impaction, must be minimized in outdoor paddocks.
- Thorn bushes and other vegetation that could cause injuries should be eradicated in or near ostrich enclosures.
- Access to poisonous plants must also be avoided.
- Quarantine camps must comply with the requirements stipulated in the Farm Registration documents.

**d) Euthanasia**

- Ostriches with an incurable sickness, untreatable injury or painful deformity should be humanely killed to prevent suffering.
- Only experienced persons should be used to perform euthanasia.
- Appropriate and approved sites should be used for the disposal of dead ostriches.

## 7. BEHAVIOURAL REQUIREMENTS

It is essential to fully characterize the natural behaviour of ostriches and to relate their behavioural needs to the demands imposed by production systems. Proper management and husbandry practices are of the utmost importance. The following measures should be taken to prevent stress:

- Ostrich behaviour should be closely monitored to determine when abnormal behaviour patterns arise, since these indicate stress and could compromise the welfare of ostriches. Sources of stress must be identified and managed, wherever possible.
- Ostriches should not be kept in solitary confinement, or grouped at too high stocking densities.
- Ostriches should never be confined to small spaces for excessively long periods.
- Ostriches must be allowed to exhibit their natural behavior patterns. Paddocks must be large enough to allow for freedom of movement, dancing and natural roaming.

## 8. IDENTIFICATION OF OSTRICHES

- Ostriches need to be identified by a tag with a unique number at the age of four months when the bird is vaccinated against Newcastle Disease.
- These tags are being issued according to a central register by the SAOBC.
- The tags may only be applied by an accredited official and must be recorded on the prescribed official certificate.
- The tag numbers must also be recorded on the “Ostrich Passport” when transporting ostriches.
- No ostrich may be slaughtered without a tag.
- Should a tag be lost, the ostrich should be tagged and vaccinated again.

## 9. HANDLING OF OSTRICHES

Ostriches must be handled with consideration and care to prevent suffering and injuries. Adequate handling facilities must be provided and personnel should be trained in sound handling practices.

### a) Handling facilities

- Handling facilities should be designed for effective handling of ostriches and prevention of injuries.
- When handling ostriches, flocks should first be moved into a small enclosure before attempting to catch a bird. The enclosure should preferably have high smooth walls, which the birds cannot see through, and rounded corners to prevent injuries.

### b) Handling methods

- Small chicks must not be held or carried by the neck or legs alone. Chicks can be caught by the neck, but the body or legs must be supported when they are picked up to prevent struggling and kicking. Chicks can be picked up whilst supporting the body by placing one hand underneath the chick's body. Chicks should be held firmly, but not too tightly, to prevent them from struggling out of control and injuring themselves.
- After having been handled, chicks should be put down carefully. It should be ensured that the chick is stable and on the ground before releasing it. Chicks must not be placed on top of other chicks.
- A minimum of three handlers is needed to restrain an adult bird to avoid injuries to both the ostrich and handlers. A handler must be positioned at each side of the ostrich holding the wings. One of these handlers must be positioned between the wing and tail, taking hold firmly of both the wing and the tail. One handler should be employed at the head where he holds the neck-head junction while immediately putting a blindfold or hood over the head of the ostrich. The handler at the head must prevent injury to the soft beak as well as interference with respiration. After hooding, ostriches will be calm and the handler can move to the wing, while the handler at the wing moves backwards to the tail from where the ostrich can be steered.
- "Hooding" is recommended as a safe method of helping to restrain ostriches older than 6 months of age. It facilitates easier handling and minimizes stress. The hood or blindfold must not interfere with respiration. Ostriches must not remain hooded for more than a few minutes or restrained longer than necessary. Handlers should attend to hooded birds throughout.
- A shepherd's crook can be used in large camps or when working with very wild or aggressive birds that are difficult to catch. The shepherd's crook should always be used with care to prevent injury and to safely restrain an adult ostrich's head to bring it into position for applying a hood.
- Care should be taken not to injure the neck or wings during handling. Birds should not be held by one leg or a wing.

- Ostriches can be pushed into a triangular crush for restraint during handling procedures. One handler must be positioned at the tail to prevent the ostrich from reversing and two at the wings to prevent the bird from jumping out.
- Whenever possible, handling procedures should be undertaken under low light conditions as this minimizes stress. Noise should also be kept to a minimum when handling ostriches as this induces stress.
- Handling ostriches in hot weather should be avoided.
- Husbandry operations involving handling of ostriches must be planned to prevent unnecessary handling. Activities such as dosing, feather harvesting and weight classification can be combined in one operation.
- Chemical restraint (by tranquilizers) should not be employed for routine handling of ostriches.
- When administering liquids, one must ensure that the liquid does not end up in the air pipe (trachea). The beak must be opened wide and two gingers must be placed over the air pipe opening at the back of the throat (adult birds). The neck must be straightened upwards and kept in that position until the liquid has been swallowed.

### c) Moving ostriches

- Ostriches must always be herded calmly, with minimal noise, to prevent distress and injuries and to keep them manageable.
- When moving ostriches there should always be a sufficient number of handlers in front and at the back of the group of moving ostriches. The handlers must control the direction and movement of the group of ostriches.
- Ostriches should preferably not be moved in groups exceeding 50 birds.
- Road safety regulations should be followed when moving birds on public roads.
- A red flag must be clearly visible in the front and at the back of a group of ostriches moved on the public roads to warn oncoming traffic. The flags must be visible to oncoming traffic at least 100m in front and 100m behind the ostriches.
- All entrances along the way must be closed to prevent the ostriches from breaking away in other directions.
- Ostriches should not be moved on foot over excessively long distances or in extremely hot weather.
- Birds of different ages or weight should not be moved together to prevent smaller birds being run over and trampled by bigger birds.
- Ostriches may only be moved with a **movement authorization** between farms and a **slaughter permit** for movement to an abattoir.

## 10. FEATHER MANAGEMENT

### a) Control of external parasites

The primary cause of physical damage to feathers is external parasites (feather lice and mites). An external parasite control program must be implemented and adhered to strictly for effective control of parasites.

The first spraying against lice and mites is done at 3 1/2 months. A repeat spraying 2 weeks later is done to annihilate possible lice eggs that have hatched. Further spraying takes place at 3 monthly intervals for consistent control.

- Only products registered for use on ostriches should be applied.
- The instructions of the respective products should always be followed stringently.
- Spraying birds on either extremely hot or extremely cold days should be avoided.
- Care should be taken not to spray inside the bird's beaks or in open feather shafts (immediately after feather harvesting).

### b) Feather harvesting

Producers must ensure that they use trained handlers and abide by regulations when harvesting feathers. A feather management program should be followed to ensure that the correct timing and procedures are used. Feather harvesting must be done according to the health and nutritional status of the ostriches, and according to the weather conditions. Excessive removal of body feathers in winter may lead to cold exposure and in summer to sunburn.

#### *i) Juveniles*

- At approximately six months of age, the ripe chick wing feathers are clipped. These are clipped with pruning shears approximately 2.5 cm from the feather base above the marrow on the feather stem. The wing floss should be left for protection of the skin against the clipped shafts.
- At the age of 7½ -9 months the dried shafts of the full-ripe wing and the tail feathers are cut, and the ripe bodies are harvested. It is vital that the feather quill marks on the buttocks as well as the body may not be visible during the harvesting of bodies.
- Care must be taken when pruning ripe feathers not to damage the shafts or cause inconvenience to the ostrich. Handlers must be trained in the correct methods that will prevent damage or injury to the birds. The correct method is to support the shaft opening between thumb and index finger and to remove the shafts one at a time.
- Blood feathers may under no circumstances be removed.

- Only cutting of feathers may be performed on a live bird. Plucking can only be performed post-mortem.

*ii) Slaughter birds*

- No feathers (including wing feathers) may be removed on the farm or at the abattoir before the slaughtering process.
- All feathers from slaughtered ostriches are harvested post mortem, after stunning and bleeding.

<b>11. REGULATIONS FOR THE REMOVAL OF FEATHERS BY APPROVED ABATTOIRS</b>
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- Reception kraals at the abattoir must initially be inspected by the NSPCA.
- Supervisory staff involved with the harvesting of feathers must be approved by the NSPCA.
- Periodic monitoring of the abattoir by officials of the NSPCA is essential.

<b>12. TRANSPORT OF OSTRICHES</b>
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Transportation should avoid undue stress caused by overcrowding, excess time in transit, or improper handling during loading and off-loading. It is the responsibility of the producer to ensure that slaughter ostriches reach the abattoir in a good condition and without injuries. Upon arrival at the abattoir, the responsibility shifts towards the abattoir. The abattoir personnel must ensure that the ostriches are not injured or ill treated before being slaughtered.

The guidelines do not necessarily apply in situations where ostriches may be transported within the wildlife industry, as different parameters apply.

**a) Documentation**

- Each consignment of ostriches must be accompanied by the necessary transport documentation as required by legislation (The Ostrich Passport).
- A document with the name, address and emergency telephone number of the owner must accompany each consignment of ostriches.

### **b) Grouping of ostriches**

- Ostriches must not be transported together in the same compartment with any other species of animals.
- Aggressive or fractious ostriches must be transported in separate compartments from other ostriches.
- Except in the case of fractious animals or downers, ostriches should not be separated from each other, as this is stressful for them.
- Ostriches of different sizes should not be loaded and transported in the same vehicle unless adequate provision has been made for the effective separation of smaller and larger birds.
- No ostrich which is sick, emaciated, injured, disabled, exhausted, blind or otherwise unfit, should be loaded onto a vehicle and transported unless absolutely necessary, and even then the purpose should be to minimize its suffering, and then with the least discomfort.

### **c) Food and water**

- Ostriches that are to be transported over long distances ( $\pm$  12 hour trips) should have their food removed from them 10 hours before loading. Ostrich droppings are very wet and slippery and could cause the ostriches to slip and fall inside the vehicle.
- After being off-loaded at their final destination, food and water must be supplied immediately. At an abattoir, water only must be supplied unless ostriches are held for over 24 hours the food must be provided.

### **d) Vehicle construction for transportation of ostriches**

- Ostriches should be transported only in trucks and trailers that are specifically designed for the transportation of ostriches.
- Ostriches must be able to stand upright at all times.
- The vehicle should be constructed to allow adequate ventilation. Polluting the load area with exhaust gases must be prevented.
- The vehicle must be constructed in such a way that ostriches are prevented from sticking out their legs and heads or injuring themselves in any way.
- The vehicle must have appropriate partitioning to separate different categories of birds, or to divide large numbers of ostriches into smaller groups to avoid crushing.
- Partitioning sides should be solid to prevent birds from attempting to jump off the vehicle.

- Vehicles must be partitioned off in sections to allow a maximum of 12 adult ostriches per section, with a minimum space allocation of  $\pm 0.5 \text{ m}^2$  per 80 kg of ostrich. This will allow the handler on the back of the vehicle sufficient space to move among the birds.
- Provision must be made for ostriches that keep lying down to be cordoned off to prevent other ostriches from trampling on them.
- The sides of the vehicle must be at least as high as the top of the neck, just below the head, to prevent ostriches from jumping out of the vehicle.
- The loading space may not have sharp angles, corners, protrusions or holes that may injure the birds.
- The floor surface must be slip-free.
- The flooring of the vehicle must have a steel gridding fixed solidly to the floor to prevent the ostriches from slipping and injuring themselves. A thick layer of sand (minimum 10cm) may be used on the floor for transportation over short distances or short time periods of transportation.
- Provision should be made to allow handlers safe and easy access to the birds at all times.
- Loading gates must be large enough to allow free movement of ostriches during loading and off-loading.
- The owner of the vehicle used to transport ostriches to the abattoir must ensure that the vehicle is kept in a clean and hygienic condition.
- Vehicles must be disinfected before transporting ostriches.

#### **e) Drivers**

- Drivers must be in possession of a valid driver's license for the specific type of vehicle.
- Drivers of vehicles must be well trained in transporting ostriches. They must be aware at all times of their cargo. These birds have only two legs and a high center of gravity. A sharp turn, sudden stop or pull-off may cause ostriches to fall and be trampled by those standing.
- Drivers of vehicles must ensure a smooth ride, and refrain from handling the vehicle in such a manner as to cause the ostriches conveyed therein to slip, fall or be injured. The vehicle shall not be driven in disregard of the safety or well being of the ostriches.
- Drivers of vehicles transporting ostriches should not maintain excessive speeds or drive at any speed that could be detrimental to the wellbeing of the ostriches. Driving should comply with the Road Traffic Ordinance.

- Drivers must be aware that the faster the vehicle travels, the greater the wind-chill factor:

Wind-chill factor at various speeds and ambient temperatures\*

Speed km/h	Ambient air temperature (°C)								
	25	20	15	10	5	0	-5	-10	-15
8	25	19	14	9	4	-2	-7	-12	-17
16	23	17	11	3	-2	-7	-13	-18	-24
24	21	15	8	2	-5	-11	-17	-24	-30
32	20	13	7	0	-7	-13	-20	-26	-33
40	19	12	6	-1	-8	-15	-22	-29	-35
48	18	11	4	-3	-10	-17	-24	-31	-38
56	17	10	3	-4	-12	-19	-26	-33	-40
64	16	9	2	-5	-13	-20	-28	-35	-42
72	16	8	1	-6	-14	-21	-29	-36	-44
80	15	8	0	-8	-15	-23	-30	-38	-45

\* These parameters are applicable to dry animals only. The wind-chill factor is exacerbated when animals are wet. The danger of pneumonia and death is greatly increased when the birds are not protected sufficiently during transportation in wet conditions.

- There must always be a pre-arranged contingency plan for emergencies such as breakdowns.
- Drivers shall only stop the vehicle when necessary, and then only on a level surface, preferably in the shade in a quiet area away from inquisitive onlookers. Stops should not exceed 30 minutes, except in the case of breakdown, or when assistance is rendered to the ostriches.
- Drivers must be in possession of a written and approved route plan of the most suitable and shortest route to the destination, a contingency alternative route as well as a contingency plan for emergencies and the telephone numbers of the consignor, the consignee, the transporters and 24 hour emergency contact numbers.
- Drivers must ensure that the load space of the vehicle is free of any objects or equipment such as wire, webbing, spades, spare wheels, drums, tools, etc., which may cause injury to the animals being transported therein.
- Drivers shall always be alert and able to perform their duties in an expert and responsible manner.

#### f) Handlers

- A number of persons (handlers) must always accompany ostriches during transportation. There should be one handler per compartment.
- Handlers at the back of the vehicle must be well trained and competent to perform their duties.

#### **g) Inspection of ostriches during transportation**

- Ostriches should be under constant supervision.
- Drivers shall be responsible for the frequent and regular checking of handlers and ostriches on the back of the truck, and to ensure that all is well.

#### **h) Maximum standing time**

- Ostriches can stand for long periods and will sit down when tired. Ostriches should not be in transit for longer than 12 hours. After 12 hours of transportation, the birds must be off-loaded and allowed to rest for  $\pm 6$  hours at a suitable place. Water must be provided.

#### **i) Sick, injured or weak ostriches**

- Should an ostrich become sick, weak or injured during transportation, the ostrich must be separated from other ostriches. A handler must monitor the ostrich at short and frequent intervals for the entire remainder of the journey.
- In the event of severe sickness or injury, at least one of the handlers or the driver should possess the knowledge and expertise to perform emergency slaughter.

#### **j) Emergency services**

- In the event of any delay, accident or injury during transportation, the driver must contact the nearest Animal Welfare Society, SAPS office or the provincial traffic department and ask for assistance. The local Animal Welfare Society may be able to assist if all other contacts cannot be of assistance.
- Should it be necessary to park the vehicle loaded with ostriches, the vehicle must be parked on level ground to prevent the ostriches to one side. The vehicle should preferably be parked in the shade.

#### **k) Loading and off-loading**

- Trained personnel must immediately off-load ostriches upon arrival at the abattoir.
- There should be enough handlers to ensure that ostriches are off-loaded slowly and carefully. Handlers should be positioned at critical places such as gates to prevent ostriches from hurting themselves by running into protrusions.
- Loading and off-loading must be done quietly and with the minimum of force. Ostriches must be moved with care in a calm and unhurried manner to prevent them from panicking and running.
- Ostriches should be off-loaded one bird at a time.

- Suitable loading ramps with the minimum possible incline/decline must be used to off-load the ostriches. They must be prevented from jumping off the vehicle. The incline/decline of the ramp should not exceed 20°. Ostriches should not be off-loaded directly onto a declining slope. The loading ramps must be built or adapted to match vehicle height and loading gate and to ensure that ostriches cannot escape or fall off.
- The vehicle must be abutted against the platform to avoid creating gaps that may lead to injuries.
- Horizontal surfaces should be provided with solid sides to a height of 2 meters for off-loading ostriches.
- Loading and off-loading facilities must have non-slippery floors.
- Off-loading ramps may not have sharp protruding edges.
- Off-loading ramps must have adequate artificial lighting if birds are offloaded at night.
- Prodders must not be used on ostriches.
- Canvas hoods may be used on ostriches during loading and off-loading, to facilitate the calm handling and guidance of the ostriches by trained and competent handlers. Only trained and competent handlers may hood ostriches. Methods of hooding that require squeezing of the beak or throat chokeholds are not acceptable. It is strongly recommended that holes of an appropriate size be cut out of one corner of the hood to facilitate breathing while still restricting the visual ability of the ostrich.

### **13. HANDLING OF OSTRICHES AT SALE YARDS AND VENDING SITES**

- Fresh water must be available at all times. Adequate troughs of the correct height and construction should be provided.
- Suitable loading and off-loading facilities must be provided.
- Lairage facilities should be suitable for their purpose and their size and construction should be adequate for the number of ostriches housed therein.
- Blind, lame or severely deformed/badly injured or otherwise unsound ostriches should not be put up for sale at a sale yard. However, if an ostrich is injured on the way to or at the sale yard, or in extremis, it shall be removed and humanely killed as quickly as possible. Any ostrich showing signs of injury, illness or disability not necessitating immediate slaughter, should as far as practicable be isolated pending veterinary attention or humane slaughter.
- Facilities for restraining or separation of fractious ostriches should be available at all sale yards.
- Ostriches that are naturally hostile to each other because of their species, gender, age or origin should be separated from each other.
- The marking of ostriches for identification purposes should be done with such materials and in such a manner as will not cause distress to the ostriches at the time of marking or subsequently. Only non-toxic aerosols or paints should be used for temporary marking.
- Neckbands, tags, or leg bands used for identification purposes should be fitted with care and adjusted as required to avoid pain or distress to the animal.

## 14. PRE-SLAUGHTER HANDLING OF OSTRICHES

### **a) Regulations for slaughter ostriches**

- Ostriches must be kept on registered holdings for slaughtered purposes. Slaughter ostriches must be stationed on specific registered farms for at least 3 months prior to slaughter.
- Vaccination against Newcastle disease must be done on registered farms within a minimum of 3 months before slaughter.
- Registration of holdings must be done in accordance to the regulations of the South African Policy for the export of ratite meat, National Department of Agriculture.
- Ostriches must be confined to quarantine paddocks for a minimum of 14 days before slaughtering, according to the requirements of the European Union.
- Quarantine camps (isolation camps) are camps that are scraped clean and surrounded by a 3 meter strip, free of plant growth, throughout the year.
- Before entering the quarantine area, slaughter ostriches must be treated against external parasites with registered products to prevent Congo fever. Treatment must be repeated every 14 days if kept in quarantine camps (isolation camps) for longer than 2 weeks.
- Slaughter ostriches must be accompanied by a declaration of health and origin of the ostriches by the owner of the slaughter stock. This declaration must be recorded by the abattoir and must contain the following information:
  - ❖ Date of delivery
  - ❖ Name and address of owner or farm
  - ❖ Number of ostriches
  - ❖ Health status of herd
  - ❖ Medication, if given, as well as withdrawal periods and dates
  - ❖ Declaration of adherence to quarantine conditions

### **b) Lairages and holding pens**

- All abattoir facilities and handling of ostriches must comply with approved standards as outlined in the Meat Safety Act, 2000 (Act No. 40 of 2000).
- Ostriches awaiting slaughter must be held in lairages and pens.
- Pens must comply with approved standards (Veterinary Public Health)
- Adequate protection against rain, sun and wind must be available.
- Floors must be slip-proof.
- Ostriches from different origins must be penned separately.

- Holding pens should preferably be round or octagonal to avoid right-angled corners. Pens should be constructed with rounded wood or metal tubes. Floors should be constructed to prevent birds from slipping and falling. Grids should be without openings in which birds might trap their toes, legs, head or wings. Passages must be without steps or other obstructions that may cause birds to jump or fall or that may cause injuries.
- The stocking rate in the holding pens must not be less than the minimum of 1m<sup>2</sup> per ostrich.
- Clean drinking water must be available for birds awaiting slaughter.
- Ostriches should not be kept in holding pens for longer than 24 hours without the provision of food.
- Troughs must preferably be attached on the outside of the lairage pens. Troughs inside the pens must be fixed in such a way and position to prevent birds injuring and/or bruising themselves.
- In the case of ostriches being off-loaded at an abattoir, standing time is at the discretion of the veterinarian, depending on the condition of the birds when off-loaded. When no veterinarian is available, ostriches have to stand overnight before being slaughtered.

#### **c) Inspection**

- Pre-slaughter inspection must be done by a registered meat inspector or by an accredited government veterinarian (Veterinary Public Health).
- Ostriches must be inspected on the day of arrival at the abattoir, and the inspection must be repeated on the day of slaughter when slaughtering is not done within 24 hours of arrival.

#### **d) Pre-stun race**

- Ostriches should be moved through the pre-stun area in small groups not exceeding six birds. The pre-stun race should have solid sides up to a height of two meters. It should be designed to prevent trapping of a bird's head, neck or wings. Obstructions or sharp bends should be avoided.
- The floor of the race must be non-slippery.
- All movement of ostriches must be done calmly and humanely, without the striking of birds or shouting.
- Electric or battery prodders must not be used on ostriches.
- Crushes or races for herding birds between lairages and the stunning area must be designed that the stunning pen is not visible from the crush or pre-stunning pen.
- It is recommended that ostriches be hooded in the pre-stunning pen, if possible, to calm them and to prevent fear and stress when entering the stunning area.

## 15. SLAUGHTERING OSTRICHES

Ostriches shall only be slaughtered in registered ostrich abattoirs that comply with the requirements outlined in the Meat Safety Act, 2000 (Act No. 40 of 2000).

### **a) Restraint**

- To facilitate stunning, birds must be restrained in a way that avoids pain, suffering, agitation, injuries or contusions. It is required that birds be restrained to ensure that stunning can be done accurately and effectively. Restraining facilities must be designed to ensure humane handling of the bird as well as the safety of the workers. The restrainer should be designed to facilitate rapid shackling after stunning.
- The ostrich's head should be presented for correct application of the stunning equipment (e.g. by holding the beak to encourage the ostrich to lower its head).
- Static boxes, metal foot restraints and alike together with manual stunning tongs will be phased out in favor of rotating boxes with automatic stunners.

### **b) Stunning**

- Hoods must be removed prior to stunning in order for the stunning operator to place the stunning tongs in the correct position.
- Stunning must cause immediate loss of consciousness in birds. Unconsciousness must last until death. After stunning, animals must be bled immediately to cause death.
- No bird shall be stunned until the previously stunned ostrich has been hoisted for sticking and moved away from the stunning area.
- Stunning devices must be kept in immaculate working order and be used only in accordance with the manufacturer's recommendations. It is forbidden to use stunning devices for any purpose other than stunning, for example to immobilize ostriches by application to body parts other than the head.
- Accurate application of the stunning device is essential for ostriches to be stunned effectively.
- Ostriches should preferably be stunned electrically to render them unconscious, although a captive bolt pistol may be used.
- The stunning electrodes must be designed and applied to ensure a maximum contact area with the head of the ostrich. Manual tongs should be fitted with cup electrodes that shall not touch the eye.
- Electrodes must be cleaned regularly to maintain maximum current flow.

- The accurate placement of electrodes is important for a good electrical contact. The electrodes must span the brain in such a manner that the current passes through the brain. The stunning tongs must be positioned:
  - Between the eye and ear on each side of the head, or
  - On the top and the bottom of the head

Care must be taken not to place the stunning tongs over or partly over an ostrich's eye.

- The criterion for effective stunning is to pass a current of at least 400 mille-amperes (mA) through the brain of the ostrich with sufficient voltage and for long enough to ensure unconsciousness. With equipment presently available, the recommended stunning parameters are:

Current:	400 – 600 mA (0.4 – 0.6 amperes)
Voltage:	90 – 110 volts
Time:	4 – 6 seconds

- The stunning apparatus must have appropriate meters to monitor the time, voltage and amperage used during stunning to ensure that the recommendations are adhered to. The current must be checked regularly, at least once a day.
- Captive bolt stunning (mechanical stunning) may also be applied. To ensure an effective stun it is essential that the shot be directed accurately so that the bolt penetrates the (fore) brain.
- Effective stunning can be presumed when an epileptiform insult is shown. This is when the bird becomes rigid with its legs flexed under it (tonic phase), followed by a period of kicking of varied intensity (clonic phase). The bird will not show any signs of rhythmic breathing and corneal reflexes are absent (i.e. touching the eye surface produces no reaction of the eyelids). A return to rhythmic breathing in a stunned ostrich indicates recovery from the stun.
- The rate of stunning must be controlled and be determined by the rate of bleeding and dressing of previously stunned birds
- Manual stunning is not allowed (except in emergency situations) and a rotating box must be used.

### **c) Shackling and hoisting**

- Shackling and hoisting must follow stunning immediately – this must be achieved within 15 seconds. Extended application of the current (for 6-10 seconds) has been shown to delay the onset of kicking and hence reduce the risk of injury during shackling and hoisting.
- Ostriches must be shackled on both feet and must be hoisted by both legs.

### **d) Sticking and bleeding**

- Sticking or cutting of the throat must be done immediately after stunning. This should be done within 60 seconds after stunning.

- Bleeding must be achieved in one, or both, of the following ways:
  - By a complete ventral cut of the neck, just below the head, which must sever both the carotid artery and the jugular vein on both sides of the neck.
  - By thoracic sticking with a sharp knife to sever the major blood vessels, including those from which the carotid arteries arise.
- No further dressing operation may be carried out before bleeding-out has been completed.

**e) Emergency slaughter**

- Ostriches injured during transportation, off-loading or lairaging, or diseased, must be slaughtered with the minimum delay to prevent further suffering.
- If an animal has to be killed because of injury or other reason, it may be done by electrocution following stunning.

**f) Slaughter of ostriches, not in an abattoir, for own consumption**

- A person may not slaughter more than one ostrich in a 14-day period for own consumption.
- A person may only slaughter ostriches on a property of which he or she is the legally registered owner, the lawful tenant or occupier or otherwise has the right of control, management or use.
- Only healthy animals may be slaughtered.
- Regulations contained in Section 22 of the Meat Safety Act, 2000 (Act No. 40 of 2000) must be followed when slaughtering ostriches for other reasons such as for religious or cultural purposes.

## 16. BREEDER BIRDS

### a) Breeder paddocks

- There should be a perimeter fence outside the breeder pen fences to keep predators away.
- A double fence with a corridor of at least one meter must separate breeding paddocks to prevent fighting among males in adjacent paddocks.
- Fences should be sturdy and high enough to keep breeder birds inside.
- Nests should be well drained to prevent eggs and birds from lying in water and/or mud.

### b) Nutrition

- A constant supply of high quality food should be provided throughout the breeding season to supply in the increased physiological requirements of breeding birds.
- Ostriches must have access to clean drinking water.

### c) Breeding

- Inbreeding should only be employed when inbred lines are intended for crossbreeding purposes and the exploitation of hybrid vigour. Inbreeding should otherwise be prevented as it may lead to congenital deformities and a reduced viability in offspring.

### d) Brooding

- Breeder birds must not be allowed to incubate eggs if the chicks are to be taken away from them directly after hatching. Either the eggs should be artificially incubated, or the brooder birds must be allowed to raise the chicks themselves.

### e) Rest

- Breeder birds should be allowed a rest period between breeding seasons during which males and females may be kept separately.

## 17. UTILISATION OF NATURAL VELD

The management practices and stocking rates on all ostrich farms should be compatible with sustainable agriculture as outlined in the Act on Conservation of Agricultural Resources (Act 43 of 1983).

The production of ostriches for slaughtering purposes and the subsequent export of the meat to the European Union requires that the ostriches be confined to quarantine camps for at least two weeks before they are slaughtered, for various health reasons. These camps must be scraped clean and a 3-metre band, free of plant growth, must encompass the camp. These requisites create erosion problems within these camps. Ostrich farming, therefore, has a particular challenge as far as soil preservation or resource conservation goes, and requires special care and management practices, to address this problematic aspect.

The utilization of natural veld for ostrich farming deserves serious attention from every land user, because of the following reasons:

- In the long term natural pastures cannot sustain the feeding requirements of ostriches. They therefore need to be fed supplemental feed. The veld therefore merely serves as pasturage or holding area for ostriches.
- Concentrating large numbers of ostriches causes a serious trampling effect. Such areas are prone to severe wind and water erosion.
- The territorial behaviour of male ostriches results in the constant patrolling of fence lines. This contributes to the trampling effect, making these areas particularly vulnerable to erosion.

It is important that ostrich farmers, conservation committees and officials from the *Department of Agriculture: Western Cape, the National Department of Agriculture, the Department of Environmental-, Cultural Affairs and Sport and the Western Cape Nature Conservation Board*, combine their efforts to prevent the effects of soil degradation and to stop trampling and erosion in the areas of natural veldt where ostriches are kept. For this reason, guidelines set should be adhered to strictly.

### a) Guidelines for the utilization of veld by ostrich farmers

- The utilization of veld during any production stage may under no circumstances result in the deterioration of the natural resource, particularly when utilized continuously for extended periods.
- Farmers should apply for permission should they decide to use natural veld for grazing or breeding. Application to obtain permission to change ground usage and to keep vast numbers of livestock should be made to the following authorities:

The Department of Environmental, Cultural Affairs and Sport (Act 73 of 1989);  
The Department of Agriculture: Western Cape;  
The Western Cape Nature Conservation Board.

#### b) **Slaughter ostriches**

- Slaughter birds should at no stage, for whatever reason, be kept on natural veldt. Slaughter birds may only be kept in feedlots.
- A live stock capacity of 70 to 100 ostriches per hectare is used as guideline, with a maximum surface area of 10 ha per camp. Unnecessary large camps should be avoided, as large exposed dusty areas predispose ostriches to conditions such as respiratory disease.
- Topography and surrounding exposed land areas should be considered in the positioning of camps. The exposed surface areas of quarantine camps and feedlots are especially prone to wind and water erosion. The positioning of these camps must be considered very carefully.

#### c) **Breeding ostriches**

- Breeding pairs or trios should be kept in camps not larger than a quarter hectare (0.25 ha), provided that these ostriches receive a proper breeding diet.
- Should breeding ostriches be kept in a free-pairing flock, the following guidelines are recommended:
  - Breeding ostriches should not depend on the natural veld for their subsistence, and should therefore be provided with a complete breeding diet.
  - The numbers of birds must be in accordance with the carrying capacity of the natural veld for a specific production area. This carrying capacity will only be valid for the breeding period, which normally ranges from May/June to the end of January, after which camps and birds should have a rest period.
  - Three separate camps for each flock are recommended. This allows for a rest period of two seasons, following the utilization of a camp for one complete breeding season.
  - A feeding and watering point is recommended for each 50 ha to facilitate even utilization and to discourage the trampling of veldt.
  - During rest periods, breeder birds should preferably be kept in feedlots; lucerne camps or camps where saltbushes have been planted (February to May).

#### d) **Soil erosion in feedlots and breeding camps**

The sensitive characteristic of natural veld, combined with the trampling effect of ostriches, necessitates informed choices regarding the location of camps and the placing of feed and watering points for slaughter- and breeding birds.

Application for the extension of such camps is therefore compulsory. It is necessary that any extensions be well planned to prevent soil erosion and to ensure ecological preservation of biodiversity. The establishment of such camps must be planned in conjunction with the relevant departments.

The land user should employ the necessary soil conservation measures to limit soil erosion in these camps. Such measures include natural zones, contours, rocky ridges or whatever measure or technique might be necessary and approved by the Department of Agriculture: Western Cape.

The above-mentioned guidelines should be followed throughout. A land user, who does not comply with this, will be incriminated and can be sanctioned to comply with the specified precautionary measures.

**e) Regulations governing the conservation of resources**

These guidelines do not exemplify any land user of his responsibility under the regulations pertaining to the conservation of agricultural resources. The National Department of Agriculture administers the Act on Conservation of Agricultural resources (Act 43 of 1983) with the specific aim to provide for the conservation of natural resources.

According to Article 6 of the aforementioned Act, the Minister can prescribe precautionary measures that land users must adhere to, and which are relevant to the utilization and protection of natural vegetation.

A land user can be sanctioned by means of a prescribed order to comply with specific controlling measures, in order to comply with the aims of this Act, which is outlined in Article 7 of the same Act.

Routine inspections are done on a regular basis in order to determine the conservation conditions of the natural resource. Producers must strive to maintain a sustainable and profitable ostrich industry in harmony with the natural environment.

<b>18. TOE-CLIPPING</b>
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**Recommended Monitoring Protocol**

The clipping of ostrich chicks' toenails will be implemented in the ostrich industry by the South African Ostrich Business Chamber (SAOBC) according to a Protocol agreed to by the South African Veterinary Association (SAVA) and the SAOBC ensure correct and responsible implementation. This Protocol will be reviewed annually at the end of the hatching season by the SAOBC and SAVA.

- Certified Training Courses for Operators of the clipping equipment.
- Use of recommended equipment: Lyon Beak Trimmer. Stop plate must be removed.
- Quality control: All clipped nails on each farm to be placed in a container with 10% formalin. Macroscopic examination of a predetermined percentage of clipped nails stored in formalin jars to be done by independent experts. A balance needs to be found between the statistically relevant number and the cost.

**IMPLEMENTATION PLAN FOR TRAINING, REGULATING AND MONITORING THE CLIPPING OF OSTRICH CHICKS' TOENAILS**

**1. Implementation:**

- a) Implementation of the procedure is done under the auspices of the SAOBC.
- b) Implementation by the concerned parties (i.e. slaughter producers, chick raisers and hatchery managers) is compulsory.
- c) Only trained, certified individuals will be allowed to perform the procedure.

2. Persons who qualify to perform the procedure:
  - a) The person must have a minimum of one year experience of ostriches and the ostrich industry.
  - b) The person must receive formal training in the correct procedure. Training courses will be presented:
    - By a suitable qualified professional appointed person by the SAOBC.
    - The course will include training in the correct use of equipment, practical examination and basic anatomy.

A certificate will be issued by the SAOBC. Each certificate will contain a unique number, which will serve as that person's certification number.

- c) Specifically trained person will be responsible for performing the Toenail Clipping on each farm. This person will be accountable for the correct application of the procedure at all times.

3. Correct procedure and application:

- a) The toenails must be clipped as soon as possible after the chicks have hatched, and not longer than 72 hours after hatching. The procedure will be performed at the hatchery. Producers that incubate their ostrich eggs at independent hatcheries must make arrangements with the hatchery managers beforehand to ensure that the toenails can be clipped within the specified period after hatching.
- b) A certified person must clip each chick's toenails, using a Lyon Beak Trimmer, under hygienic conditions.

4. Regulation and monitoring:

- a) A list of certified persons will be kept at the offices of the SAOBC.
- b) The SAOBC will regulate and monitor the implementation of the protocol on a continuous basis.
- c) Quality control will include:
  - Farms visits by the SAOBC.
  - All clipped nails on each farm to be placed in a container with 10% formalin.

Macroscopic examination of 500 clipped nails, stored in formalin jars, to be done by independent experts. Cost to be carried by the SAOBC.

Note: Statistically relevant number of toenails to be examined:

- If the expectation is that 1% of toenails may be defective (i.e. incorrectly amputated), and a 99% probability of detection is required, 500 toenails will have to be examined.
- d) Any producer in possession of chicks without toenails must be able to present evidence of the certified individual that was involved in the clipping of the toenails.
  - e) Certified individuals who do not comply with the standard procedure and guidelines will be disciplined by the SAOBC.

## 19. OTHER POULTRY

In order to prevent the spreading of animal diseases, no other poultry (such as chickens) may be kept in ostrich production areas.

This is imperative on farms which are registered as export farms.

### **IN CONCLUSION:**

This document is being updated regularly and is also available on the SAOBC website:  
[www.ostrichsa.co.za](http://www.ostrichsa.co.za).



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