



THE KARAKUL BOARD OF NAMIBIA



CODE OF PRACTICE FOR THE CARE AND HANDLING OF KARAKUL SHEEP IN NAMIBIA

Windhoek, June 2006

CODE OF PRACTICE FOR THE CARE AND HANDLING OF KARAKUL SHEEP

IN NAMIBIA

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Disclaimer

This Code of Practice for the care and handling of Karakul was adopted by the Karakul Forum of Namibia at its annual meeting in September 2006, and published and distributed by the Karakul Board of Namibia, insofar as its provisions are in accordance with the results of scientific studies on animal welfare in the years to come, and are not in contradiction with any legislation in force or that may come into force in Namibia.

The Code has been designed to be of assistance to Namibia's Karakul farmers. However, the Karakul Board does not guarantee that it is without flaw of any kind or that it is wholly appropriate for the particular purposes or specific circumstances of individual farmers. The Karakul Board therefore disclaims all liability for any error, loss or other consequence which may arise from relying on any information in this publication.

The Code of Practice was prepared with the assistance of the Ministry of Agriculture, Water and Forestry and the European Union, through the Namibia Agriculture Services Support Programme financed by the 8th European Development Fund.

Background

Namibian farmers, through their representative structures, including the Karakul Board of Namibia and the Karakul Forum, in preparing, publishing and promoting this Code of Practice are signaling that they have a moral responsibility, as well as a legal responsibility, to care for the welfare of the Karakul sheep under their control. They also acknowledge that as human society evolves so do its prevailing moral standards. Specifically, wealthy, post-industrial societies have adopted animal welfare standards that were unheard of in those same societies until recently. And, due to the socio-cultural as well as economic dominance of these societies globally, so their changing moral standards have spread internationally.

It is also recognized that animal welfare activists have in the past found Karakul farming a convenient target for their anti-fur campaigns, and as Karakul pelts increase their profile in the fashion market, so campaigning may be expected to increase. Karakul offers the combination of high fashion, which is portrayed as frivolous consumption by the rich and famous, combined with emotion driven perceptions of cruelty to baby lambs and their mothers. In addition, the recent exposure of the practice of killing pregnant ewes before term so as to produce so called "broadtail" pelts from prematurely born lambs in Uzbekistan has generated significant campaign mileage. Thus, the adoption of Code of Practice which firmly declares that Namibian farmers subscribe to the highest moral norms now prevailing internationally regarding animal welfare, is also meant to provide information to all interested parties which may otherwise be influenced by misinformation.

Namibian Karakul farmers initiated the introduction of this Code and participated in all stages of its development. As such their commitment to the Code is based on true ownership.

Introduction

This Code of Practice describes a set of minimum standards to ensure humane Karakul husbandry in Namibia. The Code's standards should be adhered to by all Namibian Karakul farmers, be they large-scale farmers with Karakul flocks running into the several thousands, technologically advanced Karakul stud breeders, or small-scale farmers with small flocks producing some meat and a few pelts a year. Clearly, these farmers differ in several ways, most notably in terms of the resources available to them for Karakul farming and the incomes they derive from Karakul. They include some of the most resource-poor farming households in Namibia, sometimes operating in remote and harsh environments for whom Karakul provides a vital income. Nevertheless, all Karakul farmers are already expected to adopt progressive animal welfare practices, as well as health, environmental and other practices, in line with the Farm Assured Namibian Meat Scheme, as adopted nationally in 2003. This Code of Practice goes a step further in focusing on one farm animal and the key aspects of husbandry specific to that animal, but its provisions are based on those of the Farm Assured Namibia (FAN) Meat Scheme.

The starting point for this Code is the understanding that one of the most important factors affecting Karakul welfare is the attitude, skills and behaviour of the farmer and the farm workers. Fundamentally, farmers need to practice sound husbandry principles. They need to be able to anticipate situations in which the welfare of the animals may be at risk and to recognise early signs of distress or ill-health in animals, so that appropriate preventive or early remedial action may be taken. Sound animal husbandry is the basis for meeting the welfare requirements of Karakul.

Recognising this, as well as the highly variable farming environments that Karakul production takes place in, this Code presents an outline of sound husbandry practices, but is not excessively detailed or prescriptive. Good farmers need to be flexible in their approach to caring for their animals. Sometimes they will need to get help and specific advice on management and disease control from qualified advisers whose services are available from governmental and private agencies.

This Code focuses on welfare issues, that is to say only on those issues where risks to welfare are evident and where farmer practice can ameliorate those risks or deal with their consequences. It does not describe comprehensive details of recommended Karakul husbandry practices. These can be found in farmer training manuals. It considers the extensive farming systems based on natural grazing where Namibian Karakul thrive. In addition, issues of environmental and labour management are touched on because of their particular sensitivity in Namibia.

Recognising the basic physiological and behavioural needs of Karakul, the basic requirements for the welfare of Karakul sheep in Namibian farming systems are:

- provision of a level of nutrition adequate to sustain good health and vigour;
- ensuring access to sufficient water of suitable quality to meet physiological needs;
- protection from predation;
- protection from pain, injury and disease;
- protection from extremes of weather which may be life threatening;
- provision of reasonable precautions against the effects of natural disasters;
- transportation and handling facilities which under normal usage do not cause injury and which minimise stress to the sheep.

In this document the word **shall** means there is a statutory requirement, the word **must** indicates a minimum standard, and the word **should** signifies a strong recommendation.

OIE Guidelines for Animal Welfare

The World Organisation for Animal Health (commonly known by the abbreviation of its name in French, the OIE) Terrestrial Animal Health Code Guidelines for Animal Welfare of 2005 (as updated on 26.07.05) presents the following introduction to its section on Animal Welfare – which has greatly informed the preparation of this Code of Practice.

APPENDIX 3.7.1.
INTRODUCTION TO THE GUIDELINES FOR ANIMAL WELFARE
Article 3.7.1.1.

Guiding principles for animal welfare

1. That there is a critical relationship between animal health and animal welfare.
2. That the internationally recognised ‘five freedoms’ (freedom from hunger, thirst and malnutrition; freedom from fear and distress; freedom from physical and thermal discomfort; freedom from pain, injury and disease; and freedom to express normal patterns of behaviour) provide valuable guidance in animal welfare.
3. That the internationally recognised ‘three Rs’ (reduction in numbers of animals, refinement of experimental methods and replacement of animals with non-animal techniques) provide valuable guidance for the use of animals in science.
4. That the scientific assessment of animal welfare involves diverse elements which need to be considered together, and that selecting and weighing these elements often involves value-based assumptions which should be made as explicit as possible.
5. That the use of animals in agriculture and science, and for companionship, recreation and entertainment, makes a major contribution to the wellbeing of people.
6. That the use of animals carries with it an ethical responsibility to ensure the welfare of such animals to the greatest extent practicable.
7. That improvements in farm animal welfare can often improve productivity and food safety, and hence lead to economic benefits.
8. That equivalent outcomes (performance criteria), rather than identical systems (design criteria), be the basis for comparison of animal welfare standards and guidelines.

Article 3.7.1.2.

Scientific basis for guidelines

1. Welfare is a broad term which includes the many elements that contribute to an animal's quality of life, including those referred to in the ‘five freedoms’ listed above.
2. The scientific assessment of animal welfare has progressed rapidly in recent years and forms the basis of these guidelines.
3. Some measures of animal welfare involve assessing the degree of impaired functioning associated with injury, disease, and malnutrition. Other measures provide information on animals' needs and affective states such as hunger, pain and fear, often by measuring the strength of animals' preferences, motivations and aversions. Others assess the physiological, behavioural and immunological changes or effects that animals show in response to various challenges.
4. Such measures can lead to criteria and indicators that help to evaluate how different methods of managing animals influence their welfare.

1. Quality control, traceability and record keeping

The Namibian Karakul industry is governed by the Karakul Pelts and Wool Act, Act No. 14 of 1982 Act which gives the Karakul Board unequivocal and wide-ranging powers to control Karakul farming and marketing practices. Furthermore, these powers are being actively used. The Karakul Board has established a Quality Control Committee to oversee the quality standards for pelt exports. It has the power to control the quality of exported Karakul pelts, including the rejection of pelts for exports that do not conform to minimum prescribed standards. Thus, should any animal welfare issues be identified as requiring control, the legal and practical means are in place to deal with them effectively.

In addition, Namibian Karakul sheep fall under the provisions of the Farm Assured Namibian (FAN) Meat Scheme as well as the Stock Brands Act (Act 24 of 1995). These provide for systems to identify all livestock, including Karakul through ear tagging, to record changes in on-farm populations, and to record movements to and from farms (see also 8. Husbandry Practice: Ear marking for identification). The FAN Meat Scheme also prescribes the format for recording of all supplementary feeds and medicines used. All Karakul farmers shall adhere to the provisions of the Stock Brands Act, and must conscientiously comply with the standards and rules of FAN Meat Scheme.

Whereas ensuring the traceability of meat has become an essential component of international trade, and is fully catered for by the FAN Meat Scheme, traceability of pelts is currently not an issue. However, in a market that is increasingly using sanitary controls for various trade as well as disease control purposes, it is wise that the Karakul industry has traceability systems in place. Currently, pelt traceability is ensured by the same mechanism that enables identification of pelt ownership for the purpose of payments. Farmers attach a bar-coded slip to all Karakul pelts sent to the Agra Cooperative, the country's international marketing agent. They also write their individual code on the back of the pelt in case the slip is accidentally detached. This allows all pelts sold internationally to be traced back to the farm on which they were produced.

Farms in Namibia are subject to animal health inspection at least once a year. During such inspections all Karakul on the farm must be presented for inspection in the presence of the farmer or his/her representative who must cooperate with the inspectors as required.

2. Feeds, grazing and water

Food

Sheep must have available a diet which is nutritionally adequate to maintain health and meet the physiological requirements for growth, pregnancy, lactation and to withstand cold exposure, appropriate to their age and condition.

The condition of grazing on a farm should be sufficient to support the Karakul population. Farmers should adopt stocking rates determined by their own rangeland assessment with advice where needed from the Ministry of Agriculture, Water and Forestry. Continual assessment must be made of the needs of the sheep in relation to the amount, quality and continuity of feed supply.

Where provisions for health and vitality cannot be met because of the condition of grazing or the nature of the soils, Karakul should be provided with lick supplementation. Feeds and supplements must be correctly stored under clean and dry conditions. Farmers shall use only registered commercial feed and licks or components. Ingredients derived from ruminants (e.g. bonemeal or carcassmeal), or growth promoters and other illegal substances as prescribed by the Prevention of Undesirable Residues in Meat Act (Act 21 of 1991), shall not be used. Records must be kept for examination by Animal Health Inspectors of the Directorate of Veterinary Services of all feeds and licks used according to the FAN Meat Scheme Lick Supplementation Register.

In extreme cases of lack of feed supply, Karakul should be moved, sold or slaughtered on farm. Karakul must be excluded, as far as possible, from toxic plants and other substances suspected of being damaging to their health.

Water

Karakul must have access to sufficient clean drinking water to maintain their health. Regular assessment must be made to ensure the quality and quantity of water supply. Water points must be of sufficient capacity and allow safe access. They must not have leaks so as to prevent footrot or other diseases. Water supply equipment, including windmills and boreholes, must be inspected regularly, and frequently in hot weather, and kept in good working order. Where sufficient good quality water to maintain health cannot be provided, the Karakul should be moved to where an adequate supply is available. As a guide, Karakul should not be without water for more than 48 hours. This period should be reduced during hot weather.

3. Drought

Drought is defined as severe food and/or water shortage following prolonged periods of abnormally low rainfall. It is not a normal seasonal decline in the quantity and quality of food available. Farmers must consider animal welfare as an important factor in planning their drought management strategies. These must be prepared well in advance preferably with the assistance of experienced advisers. Where supplementary feeding is undertaken it must be started before natural feed runs out. When Karakul are being fed for survival, they must be carefully observed. Weak animals may require special treatment. Karakul must not be allowed to starve to death. Where minimal water and food requirements cannot be met, they should be sent for slaughter or humanely destroyed on the farm. Drought affected Karakul are particularly susceptible to stress and require careful handling:

- if they are unable to rise and walk they must be humanely destroyed on site;
- if they lie down after limited exercise, they are not fit to travel and must be provided with supplementary feed or if this is not possible humanely destroyed on the farm;
- if they are still able to walk they must be moved to emergency grazing or sent directly to the nearest feedlot or abattoir.

4. Protection from climatic extremes, natural disasters and predation

Farmers should take reasonable precautions to minimise the effects of extremes of weather that produce either cold or heat stress. Freshly shorn sheep and newborn lambs are particularly susceptible to cold stress. In the event of fire, flood, injury or disease prompt attention should be given. Reasonable precautions against predators should be taken particularly when shepherding is not practiced (see also 10.2, Other environmental issues).

5. Protection from disease

Farmers should be familiar with normal Karakul behaviour and with the common diseases in the area, and observe their flocks frequently for early signs of disease. Injured or diseased Karakul must be given prompt and appropriate treatment. If effective treatment of fatal conditions is impossible the animal must be humanely destroyed. Advice should be sought from qualified animal health advisers. Appropriate preventative measures should be used for diseases that are common in a particular region or are likely to occur in a flock. Inoculations required by the Directorate of Veterinary Services shall be administered as prescribed. Only registered remedies, including vaccines, drenches and dips, shall be used and these must be used and stored as per the manufacturer's instructions. Other remedies

must only be used on veterinary prescription. Records must be kept of remedies used according to the FAN Meat Scheme On-farm Drug/Treatment Register. Treated Karakul must be identified during withdrawal periods and any buyer of recently treated sheep must be informed accordingly. If notifiable diseases are suspected in the Karakul flock they shall be reported to the Directorate of Veterinary Services as soon as possible. A brief description of the development and symptoms of, and preventative measures and treatments for some of the most serious diseases affecting Karakul in Namibia are presented in Annex 1 of this Code.

6. Handling facilities

Karakul kraaling and handling facilities must be well-designed with expert advice, and constructed and maintained to minimise the risk of injury and disease. Passageways, races, entrances and exits should be designed to take advantage of the flocking behaviour of Karakul. Floors and ground must have surfaces that minimise the risk of injury and disease and allow sheep to stand and walk normally.

7. Transportation

Transportation of Karakul sheep takes place on the farm, and from the farm to various destinations including auction pens and abattoirs. It is undertaken by farmers, traders and commercial transporters. It is potentially the most stressful and dangerous of farming operations and, if not performed well, can lead to animal stress and injury and ultimately loss of production and income. Careful handling, loading and off-loading onto well-designed vehicles will reduce these threats.

Vehicles used for transporting Karakul sheep must comply with the following minimum standards. They must:

- be cleaned between trips;
- be well ventilated, including at the floor level, and not be totally enclosed;
- have some roofing to provide shade and prevent heat stress;
- have non-slip floors to reduce the risk of sheep falling (metal or wooden grid, which is appropriate) ;
- not have sharp or broken edges which might cause injury;
- be level with ramps or loading platforms;
- be loaded with Karakul sheep so as to provide no less than 0.4 square metres per animal;
- not allow for sheep to jump over the sides;
- not allow for legs to protrude through the sides.

In addition, vehicles must be driven safely, smoothly and without sudden stops. Corners must be taken slowly. Transporters must load, transport and off-load Karakul without undue delays.

Transporters over long distances should pad the sides of vehicles, for instance with old tyres, to reduce bruising. They should also feed and water animals before loading to settle them. During the journey the animals must be inspected at least hourly. Journey times must not exceed eight hours from start of loading to off-loading.

Handling and loading facilities on farms, at auctions and at abattoirs must be designed to minimise possible stress and injury to Karakul and be well maintained and in good repair.

8. Husbandry practices

General

Karakul farming involves a large number of husbandry practices. Practices that cause pain should be applied so as to minimise that pain, and should only be carried out if no alternatives exist. Husbandry practices should be performed by competent farm workers or under the supervision of an experienced farmer. Surgical procedures may cause pain and stress, which can be reduced with appropriate restraint and competent application. Any application of anesthesia, both local and general, can only be done by a qualified Veterinarian. Care must be taken to ensure the place the operation is to be performed is suitable. Instruments must be well maintained and sterilized before use. Proper hygiene must be ensured and animals given adequate after-care.

Handling and movement

When Karakul need to be handled for inspection or moved, their handling should be done gently to minimise stress. Karakul may be caught, but not pulled, by one leg. Karakul must not be handled and restrained by the wool or horns unless they are very strong; rather they should be lifted by an arm under the neck and an arm under the rump. They should be moved quietly with the minimum forcing by dog or person. Care must be taken to ensure that gates do not cause injury, as well as to avoid smothering of kraaled sheep, especially lambs and weaners. Dogs must be under strict control and prevented from biting.

Shearing

Karakul sheep are normally sheared twice a year in Namibia. Additional limited shearing around the anus, eyes or teats may be required at other times. Because shearing is stressful, sheep should not be shorn if cold weather is forecast. Shorn animals should be returned to food and water as soon as possible. They should be provided with adequate feed recognising that sheep require increased feed for several weeks after shearing to sustain body temperatures and maintain condition. Shearing cuts must be treated.

Dipping

Pour-ons are less stressful than plunge dips, but where plunge dips are used they must be constructed, maintained and operated so as to minimise injury, disease and stress.

Dehorning

The horns of rams and some wethers may need to be cut back to avoid injury if they curl round in front of the eyes, or are likely to grow into the head, or if they may damage other sheep. The amount of horn removed should be limited to avoid damage to sensitive tissue in the core of the horn and associated bleeding. Complete dehorning must only be undertaken using anesthesia.

Lambing

Karakul sheep in Namibia normally lamb in kraals or in shepherded flocks. Thus ewes in difficulty are given attention and other problems, such as pregnancy toxaemia and predation, are avoided. The practice of artificially inducing premature lambing, including by the slaughter of pregnant ewes, has never been and will never be practiced in Namibia. For more about 70 years Namibian farmers have prided themselves on achieving different pelt quality types, including those short haired types known as Galliac and Shallow Watersilk, through their skilled breeding management, and have consistently rejected other means of achieving such pelt types.

Weaning

Karakul should not be weaned before six to eight weeks of age and should be provided with unrestricted access to water after weaning. In Namibia's communal areas it is common to shepherd young lambs separately from the main flock, and to kraal them together in the afternoon and night. This leads to gradual weaning as lambs graze more and suckle less, thus reducing weaning shock.

Ear marking for identification

In Namibia, sheep shall be identified at either three months or when they move from their farm of birth, whichever comes first. Identification is also useful to establish ownership and record production and reproduction performance. Sheep shall be identified by using either approved metal ear tags or tattoos. Tattoos must be applied by pliers, which have been cleaned and disinfected between animals, on ears that have been cleaned with alcohol. Tags should be applied a few weeks before animals are transported to minimise stress and the risk of infection. The applicator, the tags and the ears must be dry and clean. Tags should be placed along the lower border of the ear. Care must be taken to apply tattoos and tags between cartilage ribs and blood vessels. Ear clipping is no longer recommended as a means of identification.

All ear marking instruments should be sharp, with the cutting edges undamaged, so as to prevent tearing of the ear. Ear tagging can cause some tearing of the ear if not conducted properly; careful technique will avoid this.

Castration

Castration may be unnecessary if lambs are to be marketed for slaughter prior to puberty, which is normally at about 6 months old, because there is no “ram taint” in the meat of pre-pubescent lambs. Where castration is required, it is usually performed at between two to four weeks of age. It must be performed before 12 weeks if rubber rings are used, and six weeks if a castrating knife is used. Animals older than six months require an anaesthetic applied by a Veterinarian. Lambs may be castrated without anaesthesia:

- using a castrating knife: the lamb must be properly restrained and the knife must be kept sharp and clean, and should be disinfected between animals; good post-operative drainage of the wound is required;
- using rubber rings applied with an elastrator according to the manufacturer's recommendations;
- using a burdizzo (emasculatome) which crushes the spermatic cord without cutting or wounding the scrotum skin. This method can be used on larger or older lambs, for which castration with the knife is stressful. There is no open wound, blood letting or visible damage when this method is used.

Tail docking

Tail docking is rarely carried out with Karakul sheep because of their prized fat-tail. Occasionally, farmers dock the tails of Karakul used for breeding to facilitate copulation. It should be performed on lambs less than one week of age. Older animals require an anaesthetic applied by a Veterinarian. Tail docking, without anaesthesia, may be done by cutting with a sharp knife, applying rubber rings according to the manufacturer's recommendations, or using a specialized burdizzo.

Operations such as Mules operation, and pizzle dropping are rarely practiced with Karakul in Namibia. Where they become necessary the advice of a Veterinarian should be sort.

9. Humane euthanasia of Karakul

9.1 Abattoirs

Karakul farmed for meat production must be slaughtered in a humane way and their carcasses processed in a hygienic and efficient way. To a large extent this will take place at commercial abattoirs which should be registered with the Meat Board of Namibia and thus subject to inspection by Meat Board and Municipal officials. Abattoirs should also be participants in the FAN Meat Scheme. Sheep must be moved into the stunning area in a calm manner. They should be restrained and immediately thereafter stunned electrically before exsanguination (bleeding out).

9.2 Mature Karakul on the farm

Farmers must use humane methods of euthanasia which cause a quick and painless death. These include either shooting with a firearm or stunning with a captive-bolt pistol (captive bolt penetrating stunner) followed by bleeding. A suitable firearm for euthanasia is a .22 calibre rifle or .32 calibre humane killer pistol used at short range but not placed directly on the head. When using a firearm either aim just behind the poll in the direction of the animal's muzzle, or aim from the side of the head at a point midway between the eye and the base of the ear, or aim at a point in the middle of the face just above the level of the eyes while aiming along the neck.

9.3 Karakul lambs

Euthanasia of Karakul lambs must be undertaken in as humane a way as possible so as to minimise the stress and pain involved. Evidence shows that the use of an electrically powered stunner to stun the animal prior to euthanasia using a sharp knife which stabs through the neck and spinal cord involves less stress than euthanasia without stunning. Stunning equipment and batteries which supply power must be well maintained. The equipment must have a power supply gauge and must provide sufficient current for the prescribed time to ensure instant stunning. If stunning equipment and power supply is not functioning properly it may cause greater pain and stress to the lamb than not using it. In this case, euthanasia may be carried out by a neck stab which severs the spinal cord using a sharp knife. Personnel conducting stunning and euthanasia should be well trained and should be supervised to ensure that they take due care to minimise stress at all stages of the process and at all times.

10. Environmental management

10.1 Range management

The natural environment of the Karakul farm results from the interaction of climate and different rock types to produce characteristic soils, the interaction of which with climate in turn determines the vegetation and animal life. Farmers can have a positive or negative influence on vegetation depending on such factors as grazing and browsing management, fire, erosion control, water supply and fencing. Vegetation can be damaged or destroyed by:

- over-grazing commonly resulting from poor placement of water points and roads etc., over estimation of carrying capacity, and failure to reduce stock in periods of low rainfall and drought;
- competition from bush species which reduces grass cover;
- deforestation exposing soil to wind and water erosion;
- excessive burning during the dry season which weakens the grasses.

Karakul farming is uniquely able to respond to seasonal variations in rainfall and hence forage that are such a feature of southern Namibia. Apart from Karakul's natural adaptability to the harsh and arid environment found in southern Namibia, farmers are able to juggle with such factors as the capacity of the range for the coming year, the price of purchased feed and licks, the price of sheep meat, and the price of pelts, and to decide whether to keep lambs for meat production or to slaughter lambs for pelt production. Meat production is favoured when range condition and the price of meat is good, while pelt production is favoured when range condition is poor and the pelt price good. Even when pelt prices are moderate or poor, farmers can choose to opt for pelt production to conserve the range as an investment for the coming years. Karakul is rightly known as an environmentally-friendly sheep and has often been labelled the "eco-sheep".

To take advantage of this, Namibian farmers should have a sound knowledge of range management principles and practices including range assessment, resting periods, grazing period, and stocking rates. They should be able to:

- stock according to grazing and browse availability;
- apply short grazing and rest periods to prevent continual removal of re-growth and to build up reserves;
- keep to a conservative grazing height, while not under-utilizing grazing;
- set aside areas for the full growing season or the last part of the growing season to accumulate forage for critical periods; and
- treat range in poor condition by giving it enough rest to restore the vigour of the plants, and to allow seed production and establishment of seedlings.

10.2 Other environmental issues

On freehold farms, predators are normally controlled mainly by maintaining fences and through neighbourhood cooperation. If poisons have to be used all precautions must be taken to ensure that non-target animals are not exposed to poisons by, for instance, careful placement of poisons and rapid removal of poisoned carcasses. In communal areas, poisons are not used because Karakul flocks are always shepherded by day and kraaled by night.

Preparation of pelts on farms is usually done using soap and water. Some farmers use extremely small amounts of insecticide to combat flies, and, while in storage, to combat moths. Many farmers use none at all. As the pelt market is highly sensitive to issues of pelt quality and smell, the industry is trying to minimise and even eradicate the use of chemicals in the pelt preparation and marketing process.

11. Labour management

Namibian farmers, as with all employers, are bound by The Namibian Labour Act (Act 15 of 2004) which contains extensive and detailed provisions relating to basic conditions of employment, and rules concerning *inter alia* termination of service, dismissal of workers, and disciplinary action. The provisions of the Act set out the minimum conditions which apply to all contracts of employment between individual employers and their individual workers. Nevertheless, there is nothing to prevent an employer from agreeing to more favourable conditions if he or she so wishes.

The Labour Act also provides means by which persons who believe they are not receiving the minimum conditions applicable to their employment, are able to lodge complaints with the District Labour Courts and have the situation corrected. In cases of discrimination or harassment, complaints are dealt with by the Labour Court. In circumstances where some infringement of these conditions is thought to have occurred, the assistance of Labour Inspectors employed by the Ministry of Labour can often resolve the problem without the need to bring the matter to court.

In addition, in 2003, minimum wages and other progressive terms and conditions of services for farm workers were agreed between the main farmers' unions and farm workers' union, and have been widely implemented on a voluntary basis by farmers.

Annex 1. The development and symptoms of, and preventative measures and treatments for, some serious diseases of Karakul in Namibia

PASTEURELLOSIS (LONGONTSTEKING/HARTSLAGSIEKTE)

<p><u>Development</u></p> <p>When Karakul are stressed by cold or wet weather, by wind, dust or drought, or if they catch a cold, the disease infects the lungs. Once started, it spreads from one sheep to the next through the air, and many sheep may get sick and die.</p>
<p><u>Symptoms</u></p> <p>Coughing; heavy breathing; water runs from the nose and eyes; this becomes thick and viscous, and forms crusts on the nose; the disease is lethal.</p>
<p><u>Prevention</u></p> <p>If Pasteurellosis is endemic to an area, Karakul should be vaccinated 2 or 3 times a year.</p>
<p><u>Treatment</u></p> <p>All animals, sick and healthy must be treated with long acting tetracycline, until there are no more sick animals.</p>

PULPY KIDNEY DISEASE (BLOEDNIER)

<p><u>Development</u></p> <p>Caused by bacteria that occur in a latent form in the intestines of most sheep. The bacteria are activated by many causes including change of diet. When bacteria start to multiply concentrations of toxin released by the bacteria in the intestines of the sheep increase. The toxins are absorbed in the bloodstream of the infected animal, normally with fatal consequences.</p>
<p><u>Symptoms</u></p> <p>Staggering, shaking and throwing their heads backwards; salivation, diarrhoea and lying down before they die; often the animals in a good condition are affected most.</p>
<p><u>Prevention</u></p> <p>In areas where pulpy kidney disease occurs, animals must be vaccinated against the disease. Ensure that sheep get used to changed feed gradually over a week or two.</p>
<p><u>Treatment</u> None</p>

TETANUS (KLEM-IN-DIE-KAAK)

<p><u>Development</u></p> <p>When an animal has a wound with some dead tissue in it, the tetanus bacteria grow in it and produce poison. This poison affects the nervous system, signalling the muscles to contract.</p>
<p><u>Symptoms</u></p> <p>It takes 1 to 2 weeks from the time the wound occurs until the disease starts; Stiff neck and legs. Stiff chewing muscles; Stiffness of the whole body which gets worse when the animal is handled or with sudden sounds, etc.; Sheep often fall over on their sides with their heads bent back and the legs stretched out straight. When the muscles used for breathing cannot relax any more, the animal suffocates and dies.</p>
<p><u>Prevention</u></p> <p>Clean wounds and remove all dead material and dirt that may be inside; treat wounds with Povidone iodine after cleaning; the Vet can give antitoxin and vaccinate.</p>

Treatment

Once symptoms start, there is no treatment.

RABIES (HONSDOLHEID)

Development

Rabies is caused by a virus that animals and humans get when bitten by an infected animal. The rabies viruses exist in wild animals like the jackal and yellow mongoose. If a Karakul sheep is bitten by an infected animal, it will contract the disease which will eventually lead to death.

Symptoms

Continuously bleat with a strange voice; salivation; aggression; pushing as if to urinate; paralysis and death.

Prevention

If a sheep is thought to have rabies, it must be killed and the head be brought to the State Vet immediately. Dogs must be vaccinated. Rabies is a scheduled disease and the State Vet must be notified if cases occur.

Treatment

Once symptoms have started, there is no treatment.

BLUE TONGUE (BLOUTONG)

Development

Mosquitoes or gnats transmit the virus directly from an infected sheep. It is seasonal in nature and found mainly in low lying, warm and humid areas from mid summer until winter.

Symptoms

Incubation period 5 to 7 days; higher fever initially; increased blood supply to the mucosa of the mouth, tongue, lips and eyes; at the peak of the fever the lip, tongue and mouth cavity swell; the animal moves with difficulty, becomes emaciated and develops ulcers in the mouth; the lips, tongue and mouth may even have a bluish appearance; the animals develop conspicuous foot lesions; on the inside of the hoof crown bleeding occurs; sheep often move about with bent necks about 4 weeks after contracting the disease.

Prevention

Immunization: ewes have to be immunized from September to December. Rams should preferably be immunized after the breeding season as they are temporarily infertile after being injected as a result of the febrile reaction of the vaccine. Keep sheep away from low lying areas during danger periods

Treatment

Administer long acting antibiotic.

INFECTIOUS KERATOCONJUNCTIVITIS (EYE INFECTION)

Development

Drought, dust, wind, bright sunlight and grass pollen in the air all make the sheep's eyes less resistant against diseases. The infection is carried by moths or other flying insects to the rest of the flock and spreads rapidly.

Symptoms

One or both eyes may start watering; the animal keeps the affected eye closed and protects it

against sunlight; the pink of the eye becomes red; there are shallow cavities in the conjunctiva of the eye which turns white so that the animal becomes blind in the eye; later, the fluid running out of the eyes becomes viscous and forms a crust around the eyes; animals may eat less; the condition can last for days or weeks.

Prevention

Keep flies away from the eyes by using insecticides on the skin around the eyes.

Treatment

One of the following options can be applied: eye powder: apply twice every day; eye spray: clean eyes and apply twice every day.

SHEEP SCAB MITE (BRANDSIEKTE)

Development

Sheep scab mites lay their eggs in the skin and ears of sheep. These hatch after three days and are ready to lay their own eggs at six days old. They make holes in the skin and ingest the body-fluids that leak from these wounds. This results in severe itching which causes the sheep to rub and bite itself due to the irritation. They are more active during the cooler winter months. They are spread through direct or mechanical contact of sheep or people handling them.

Symptoms

Sheep bite at their wool and rub against fences and trees; large scales and crusts develop over the affected areas; sheep lose weight; they may die from weakness.

Prevention

As the disease is notifiable in terms of the Stock Diseases and Parasites Act, farmers are required to report any suspicion of sheep scab to the State Vet. If confirmed positive by the State Vet, no sheep may be removed from the farm for a period of six weeks after treatment. To control the mites, all sheep have to be dipped twice (10 days apart).

STURDY (DRAAISIEKTE, MALKOPSIEKTE)

Development

The tapeworm which causes this disease lives in the intestines of dogs and wild animals, and produces small eggs that are excreted in the faeces onto the pasture where sheep graze. The larva from the egg penetrates through the intestinal wall and into the blood vessels and lodges in the brain or spinal cord, where it forms cysts. These cysts put pressure on the brain and leads to its disfunction.

Symptoms

In some cases sheep just die; in other cases sheep stumble around for a few days and then die.

Prevention

All offal fed to dogs should be cooked; pick up the heads of sheep that die in the veld and burn them; deworm all dogs every 3 months.

Treatment

None

**CONTAGIOUS INFERTILITY - EPIDIDYMITIS
(RAMSIEKTE, BYBALONTSTEKING)**

Development

Caused by *Brucella ovis* which passes from ram to ram.

Symptoms

The epididymis of the testes is initially soft, warm and painful; they systematically enlarge and harden; young rams are acutely sick and feverish.

Prevention

Vaccinate young rams once at an age of 2 to 6 months with Rev. 1. All rams should be examined thoroughly by palpation of the testes (examining by hand) for lesions and/or abnormalities regularly. Keep heavily infected rams away from young rams and if necessary cull.

Treatment

None