



# Sustainable Cape Wool Standard

Good Practice Principles for  
Sustainable Wool Production in South Africa





Release Date: 2020

**Disclaimer**

Although reasonable care was taken in the preparation of this document, Cape Wools SA NPC and any other party involved in the creation of the document HEREBY STATE that the document is provided without warranty, either expressed or implied, of accuracy or fitness for purpose, AND HEREBY DISCLAIM any liability, direct or indirect, for damages or loss relating to the use of this document.

**Copyright**

This publication is protected by copyright. Information or material from this publication may be reproduced in unaltered form for personal, non-commercial use. All other rights are reserved. Information or material from this publication may be used for the purposes of private study, research, criticism or review permitted under the Copyright Act 1976.

Any reproduction permitted in accordance with the Copyright Act 1976 shall acknowledge the Sustainable Cape Wool Standard as the source of any selected passage, extract, diagram or other information.



# Table of Contents

Introduction and Scope.....	5
Glossary, Definitions and Vocabulary .....	5
1. KEY FOCUS AREAS .....	7
1.1 Introduction .....	7
1.2 Animal Welfare.....	7
1.2.1 Mulesing.....	8
1.2.2 Tail Docking .....	8
1.2.3 Castration .....	8
1.2.4 Hoof Care .....	8
1.2.5 Horn Care .....	8
1.2.6 Ear Marking .....	8
1.2.7 Lambing.....	9
1.2.8 Shearing.....	9
1.2.9 Euthanasia .....	9
1.2.10 Sheep Handling and Transport .....	10
1.2.11 Housing .....	10
1.3 Animal Health and Disease Management.....	11
1.3.1 General.....	11
1.3.2 RVF.....	11
1.3.3 Promotion of Internal and External Biosecurity.....	13
1.3.4 On-farm Handling and Management of Chemicals .....	15
1.4 Nutrition and Water .....	16
1.4.1 General.....	16
1.4.2 Nutrition .....	17
1.4.3 Water .....	17
2. ENVIRONMENTAL CUSTODIANSHIP .....	17
2.1 General.....	17
2.2 Soils.....	18
2.3 Water .....	18
2.4 Invasive Vegetation .....	18
2.5 Pasture Systems .....	18
2.6 Wildlife Management .....	19



2.7	Predator Management .....	19
3.	SOCIAL ETHICS AND LABOUR RELATIONS.....	19
3.1	Introduction .....	19
3.2	Human Rights .....	20
3.3	Labour .....	20
4.	BUSINESS/ECONOMIC ASPECTS.....	21
4.1	Introduction .....	21
4.2	Core Issues .....	21
	Bibliography .....	22
	Annexure 1 .....	23



## Introduction and Scope

---

Wool is not a mandatory choice in today's apparel markets. It competes with other fibers, natural, and synthetic. However, the retail sector is rapidly evolving and issues such as sustainability, animal welfare, ethics and the environment are becoming increasingly important as factors influencing fiber choice when purchasing garments. Traceability and transparency along the value chain are also becoming increasingly important to underpin the story of wool at consumer level.

Traditionally, the marketing of wool at consumer level has mostly concentrated on promoting fiber attributes in the end-product form. As the other issues mentioned gain traction in the marketing and promotion effort, best practice and assurance protocols must be introduced, implemented, maintained and supported by appropriate documented proof or evidence to support the overall marketing and promotion of the wool industry and its products.

This document is intended to package the essential components and principles for good production of wool in South Africa, as the first "quality" step in the value chain. Wool producers, single or in groups, who can be shown to comply with the basic requirements covered here will be well positioned to attract the attention of buyers supplying value chains for brands, as and when appropriate. It will also support the market in general, where credible proof of custodianship for the environment, the animals and the people in the industry is becoming increasingly important.

Best practice is the operational response of a business or an industry to threats and opportunities. It is, by definition, not static, and the supporting processes and procedures underpinning them will evolve as science, technology and legislation develop over time. However, the driving principles are stable. Consequently, the focus of this document is less on the former than on the latter, to mitigate the need for too frequent revisions.

This document provides the operational framework to allow the wool growers industry and its stakeholders in the value chain to utilize the necessary and appropriate tools, as well as evidence to support this process to promote our industry and its products.

## Glossary, Definitions and Vocabulary

---

This document can be used as information for people not necessarily informed on the meaning of certain terms, concepts and descriptions used within the wool production environment in South Africa. Accordingly, for clarity purposes, these have been included to broaden its usefulness as a source document to understand the credentials of the South African wool growing industry. In general terms, as far as vocabulary is concerned, "shall" indicates a requirement, "should" indicates a recommendation, "may" indicated an allowance and "can" indicates capability/possibility. Terms used in this document and their definitions include the following:





**Audit** – Assessment of compliance with a set of guidelines or with a standard. It is usually carried out on the property (farm) and takes the form of an internal audit or an external (independent) audit by a third party. (Accredited 3<sup>rd</sup> party)

**Animal Health / Welfare** – The AVMA defines animal welfare as its ability to cope with the conditions in which it lives. Procedures to ensure the absence of sheep diseases, and conditions to ensure that sheep can produce and reproduce in a natural way, are core components.

**Tail Docking** – Surgical removal of sheep tails.

**Mulesing** – Removal of woolled skin adjacent to the anal area to reduce the risk of fly strike.

**Fly strike** – Flies lay eggs at the moist area surrounding the anus and vulva with resultant maggot (fly larvae) infestation and tissue damage.

**Castration** – Removal of ram testicles at a young age to avoid non-managed coupling with ewes.

**Hoof Care** – Trimming/paring of hoofs to avoid foot rot or hoof deformation.

**Horn Care** – Trimming or removal of horns for various reasons.

**Ear Marking** – Clipping, tattooing or tagging of ears for identification purposes.

**Euthanasia** – Administration of a quick and painless death to end / avoid unnecessary pain and suffering.

**Crutching** – Shearing around the anus and vulva to avoid a moist area which is conducive to fly strike.

**Rangeland** – Natural (non-pasture) grazing areas. (Veld)

**Predation** – Livestock losses as a result of attacks by wildlife species, such as caracal, jackal or leopard.

**Pesticides** - Synthetic chemical products used to prevent or treat external parasite infestation.

**Dosing** – Application of remedies for the control of internal parasites through ingestion.

**Controlled/Notifiable Diseases** – Diseases which are listed in the Animal Diseases Act (Act 35 of 1984) which if suspected or confirmed must be reported to the Provincial Veterinary Authorities or the Animal Health Directorate of the National Department of Agriculture, Land Reform and Rural Development (DALRRD) previously the Department of Agriculture, Forestry and Fisheries (DAFF). The reporting of these diseases is a statutory obligation on the part of the farmer.

**OIE** – World Organization for Animal Health.

**SANS** – South African National Standard.



# 1. KEY FOCUS AREAS

## 1.1 Introduction

An operational plan focused on appropriate good practice principles shall be based on the key focus areas requiring the effective application of management expertise and assets. These are the following:

- Animal Welfare (Incl. animal health & disease management, nutrition and water)
- Environment Custody (Incl. protection of biodiversity)
- Social Ethics and Labour Relations
- General Business / Economic Aspects

## 1.2 Animal Welfare

Animal welfare represents a core requirement for responsible and profitable wool farming. Management processes to achieve this must consider the five basic principles of animal freedom as developed by the OIE (Terrestrial Animal Health Code 2016).

- Freedom from hunger, thirst and malnutrition.
- Freedom from discomfort through provision of adequate shelter.
- Freedom from pain, injury and disease.
- Freedom from fear and distress.
- Freedom to express normal patterns of behavior.

To achieve the goal of maintaining a situation in which the animal can cope with and thrive under external conditions, a large number of good, effective husbandry/management practices are required, not necessarily involving excessive costs. A useful indicator to measure the effectiveness of such practices is to use Body Condition Score (BCS) for benchmarking purposes. BCS is rated on a scale of 1 to 5, with 1 being emaciated and 5 being extremely fat. Most sheep on farms will have a BCS ranging from 2 to 4. Farm workers shall be able to measure the BCS of sheep. If there is evidence of BCS below 2, appropriate action shall be taken to return the animals to good health.

Preventative and reactive procedures, when animal health is threatened, is usually in the form of a complex matrix of activities requiring experienced management. The following principles shall apply:

- Preventative or reactive practices which might cause pain or discomfort shall only be used if effective alternatives to achieve the same result are not available.
- All procedures shall be carried out by competent and experienced practitioners, or under direct supervision of such practitioners.
- At all times relevant hygiene precautions must be adhered to and appropriate pain relief preparations must be available for use as and when required.



Growers are encouraged to liaise with local State or Provincial veterinary authorities, or private sector veterinarians, on an ongoing basis to keep up to date with developments in this regard.

#### **1.2.1 Mulesing**

This procedure is prohibited and shall not be practiced under any circumstances.

#### **1.2.2 Tail Docking**

Tail docking shall be carried out after establishment of the lamb/ewe bond, when the lamb is older than 24 hours but not older than 6 weeks, using appropriate equipment. Such equipment must be fit for purpose and clean.

#### **1.2.3 Castration**

Castration shall be performed on ram lambs which are not to be kept for breeding purposes, and who are between one and six weeks old. It should be performed before or after the season for blowfly attack, by competent staff with the necessary skills. There are a number of appropriate techniques available, such as surgical castration, use of rubber bands or a castrator clamp (burdizzo). Registered antiseptic as well as topic pain relief products should be available for use during castration. If castration has to be performed during a high-risk period for blowfly strike, wounds must be treated using registered products to avoid blowfly attack and deposition of eggs in the wound area. Castrated lambs should be inspected two days after castration to check for complications and then a week later to assess the wound healing process.

Vaccination against Tetanus is required, especially if rubber bands/burdizzo are used. Ewes to be vaccinated to achieve this immunity in the lambs.

#### **1.2.4 Hoof Care**

Hoofs may be checked and trimmed as necessary using a clean sharp knife or pruning (foot rot) shears to remove dead or overgrown hoof wall. This process should preferably not be carried out during periods of external stress, high temperature or late gestation.

#### **1.2.5 Horn Care**

Removal of horns from adult sheep is unacceptable unless carried out for a specific reason and then only by a veterinarian using appropriate anesthesia. Horns may be trimmed back to avoid ingrowing or injury to other sheep, by pairing the tip where the horn tissue is devoid of nerves and blood vessels.

#### **1.2.6 Ear Marking**

Ear markings shall be used for identification purposes. According to the current relevant legislation – the Animal Identification Act, (Act 6 of 2002) – all lambs must be tattooed at 1 month of age.

Pain relief and/or topical antiseptic treatments should be available for use as and when required.





Ears may also be tagged, notched, hole-punched or have a transponder/microchip inserted. However, please note, although used as a management tool, none of these comply with the current legislation.

### 1.2.7 Lambing

Pregnant ewes shall be allowed to lamb without interference, and if required, assistance shall be given by competent individuals with the necessary experience using acceptable techniques. Routine surveillance shall be provided to monitor risks associated with potential health problems and predation. Under inclement weather conditions adequate shelter shall be provided including a clean and dry area for the lambing process. Surveillance must continue after the lambing process to monitor bonding and to take the appropriate action with strays and abandoned lambs. (Reuniting with mothers, raise as orphans or euthanasia)

### 1.2.8 Shearing

Shearing is the first link in the wool value chain and therefore of critical importance. Shearing shall be monitored and managed to minimize all potentially stressful effects. To ensure that all in-shed processes comply with the Animals Protection Act, (Act 71 of 1962), strict supervision is required during the entire process.

- Shearing shall be performed by trained, competent and accredited shearers only, according to the wool industry shearing standards. These standards are covered in the Cape Wools SA Code of Best Practice for Sheep Shearing and Wool Handling.
- Sheep gathered and penned in preparation for shearing shall not be deprived of food and water exceeding a period of 24 hours.
- Undue and careless handling of sheep shall be avoided
- Shearing equipment shall be well maintained
- Shed facilities shall be well maintained, clean, well ventilated and have adequate lighting
- Shorn sheep shall be returned to adequate food and water as quickly as possible
- Shorn sheep shall not be exposed to adverse weather conditions
- Shear cuts shall be treated immediately with suitable products to minimize pain, distress and infections
- Appropriate shed management procedures for disinfection should be in place to avoid the spread of disease within or between individuals and flocks.

Shearing sheds shall not be used for activities such as skinning of dead sheep, housing of sick animals, drying and storage of skins and pelts or storage of agriculture chemicals.

### 1.2.9 Euthanasia

The core purpose of euthanasia is the application of effective and humane methods to cause quick and painless death of sheep when there are no other options to prolong life or to limit pain and suffering.



Humane methods are:

- Stunning by captive bolt, followed by rapid severance of the trachea, carotid arteries and spinal cord.
- Clean head shot from firearm
- In emergency cases, rapid and clean severance of trachea, carotid arteries and spinal cord with a sharp bladed knife of suitable length
- Medical overdose by a qualified veterinarian

#### **1.2.10 Sheep Handling and Transport**

- Sheep shall be provided shelter against extreme weather conditions, providing clean, well ventilated, dry and sanitary conditions if comprising a constructed shelter.
- Races, loading facilities and enclosures shall be free of sharp projections, protruding nails or bolts or broken or slippery sections to avoid injuries.
- Sheep shall be patiently driven at a calm and relaxed pace to avoid exhaustion, and not faster than the slowest animal in the group. One hour rest per 10km with provision of water, is recommended.
- Electric prodders or whips shall not be used for any activity related to the handling, driving and transport of sheep.
- Transport of sheep by road shall be compliant with all relevant legislation, as well as with relevant SANS guidelines and standards. In this respect the following requirements are important:
  - Vehicles shall be licensed and roadworthy, and drivers suitably licensed.
  - Vehicles and trailers shall have a non-slip floor.
  - Sheep shall not be transported totally enclosed and preferably in sub-divisions for not more than 20 sheep each.
  - Side walls must be adequate to prevent escape or falling out.
  - Animals shall be watered and fed before loading.
  - Loading and off-loading shall be done calmly, quietly and tolerantly.
  - If restrain is required, wire and baling twine shall not be used. Rope shall be long enough to avoid strangulation or neck-break.

All animals must be promptly off-loaded upon arrival at destination.

#### **1.2.11 Housing**

Sheep requiring temporary housing (i.e. feed lot) shall be handled in the same way as required by item 1.2.10. Such facilities shall be well ventilated, clean and provide sufficient freedom of movement and floor space. The minimum space per animal shall depend on age, size and class and can typically vary between 0.4m<sup>2</sup> and 1.7m<sup>2</sup>. The period of housing per individual animal shall not exceed 12 weeks.



## 1.3 Animal Health and Disease Management

### 1.3.1 *General*

A bio-secure farming environment is a core requirement for healthy sheep and management systems shall be in place to mitigate potential hazards. Healthy sheep is the foundation for a profitable and sustainable wool farming enterprise. Throughout its life sheep shall be kept free from pain, injury and disease through the strategic, tactical and responsible application of appropriate management practices and remedies. This goal is best supported if the woolgrower has a written animal health plan which is regularly reviewed and updated as health technology improves, new health issues requiring attention emerge, or as new or improved remedies, are introduced. Consultation with veterinary practitioners is to be recommended in this regard.

Infectious diseases are the main focus of biosecurity practices.

The Animal Disease Act (35 of 1984) requires that certain diseases shall be reported to the veterinary authorities, and woolgrowers are therefore legally obliged to do so. These diseases are divided into two categories:

#### Controlled sheep diseases:

- Anthrax
- Brucellosis
- Foot and Mouth Disease (FMD)
- Johne's Disease
- Rabies
- Rinderpest
- Scrapie
- Sheep Scab
- Skin conditions in sheep.

#### Notifiable sheep diseases:

- Bluetongue
- Rift Valley Fever (RVF)

### 1.3.2 *RVF*

Rift Valley Fever is a viral disease of sub-Saharan Africa. The virus attacks the liver and causes symptoms ranging from fevers and listlessness to hemorrhage and abortion rates approaching 100% in pregnant sheep. It is transmitted by mosquitoes. There is no specific therapy for infected animals. Vaccination of animals against RVF is used to prevent disease in endemic areas.



**Different vaccines are available:**

- **Live vaccine**

This is a vaccine that confers long lasting immunity but cannot be used in pregnant animals as it can cause abortion. In addition, should it be used in the first three months of gestation and abortion does not result, the lamb can be born with brain abnormalities.

Lambs from vaccinated ewes should not be vaccinated before 6 months of age to avoid maternally acquired immunity interfering with the immune response to the vaccine.

- **Inactivated vaccine**

This vaccine is safe to use for pregnant sheep. Its disadvantage is that the immunity lasts for one year at most.

**Points to note:**

- Vaccination against RVF is strongly recommended as a routine, because vaccination during outbreaks is a problem.
- Severe losses are suffered during an outbreak.
- RVF is a zoonosis. (A disease that can be transmitted from animals to humans)

Although both Controlled and Notifiable diseases must be reported as a legal obligation the difference between the two groups is the reaction of the National and Provincial State Veterinary authorities to the report and confirmation of the disease.

The response to Controlled diseases is vastly more intensive, intrusive and far reaching than to Notifiable diseases, with a legal obligation on both National and Provincial State sectors to deploy resources to deal with a Controlled disease outbreak.

**Specific Requirements:**

- Biosecurity shall be maintained by utilizing all available tactics e.g. maintenance of good fencing, vendor declarations, quarantine procedures, controlled access onto the farm etc.
- Preventative measures should be used for diseases which are common or prevalent in the area where the farming operation takes place.
- All remedies shall be stored in original containers and be used strictly in accordance with the supplier's instructions or with veterinary advice/prescription. This is necessary to effect successful application and to avoid risk to animals, humans and the environment.
- Application of remedies shall be by competent individuals only, who can demonstrate the appropriate skills and knowledge levels.
- Expired products and empty containers/receptacles shall be disposed of in an appropriate manner.



- Storage of medicines shall be according to label instructions in a locked, clean and well-lit environment, and separate from all other materials.
- Emergency information shall be displayed, and facilities shall be available to deal with spillages or accidents.
- An appropriate balanced inventory comprising record of purchase and use of medicines shall be kept as an addendum to the animal health plan.
- Equipment used to administer remedies and medicines, such as injection syringes, needles and dosing guns shall be clean, well maintained, sterile (if required) and regularly calibrated.
- Treatment of sheep against external parasites using pour-on products or by dipping shall be well planned and executed using only registered products, strictly according to prescription. No products containing organophosphates, cypermethrin or chlorfenvinphos shall be used. Studies have shown that these chemical compounds pose significant health threats under extreme or extended periods of exposure to humans (e.g. farmworkers). Absorption takes place through the skin or lungs and can lead to cardiovascular and respiratory disease and cancer. This is also important to avoid downstream pollution and environmental degradation caused by scouring effluent as per international environmental protection standards such as Oeko-Tex®.

### *1.3.3 Promotion of Internal and External Biosecurity*

#### Quarantine:

The implementation of quarantine procedures is the single most effective way of preventing the introduction of biological hazards into a flock. The construction of a suitable quarantine station should be one of the first activities of any flock manager to ensure that all animals introduced into the system are managed in such a way that the lowest possible threat to the flock's health is presented by new introductions. The quarantine station shall be positioned in such a way that animals can be off-loaded into the quarantine facility without any possibility of coming into contact with the resident flock. The quarantine facility shall be adequately fenced and positioned far enough from existing camps, pens or human activity to prevent the spread of hazards. Run-off water should not contaminate downstream farming activities. If no other terrain is available, the run-off water shall be channeled into a dam that is inside the quarantine area. Quarantine facilities shall ideally be sited downstream from the rest of the farm. Insects can pose a serious problem in carrying infective material from a quarantine facility. Quarantine facilities shall ideally be situated downwind from the rest of the farm. Quarantine areas shall always have their own handling facilities such as races, footbaths and dips. At least 100m clearance around animals in quarantine should be allowed to avoid aerosol transmission.



**Quarantine procedure:**

Before purchasing any animals, request a vendor declaration and get a signed commitment that sheep can be returned if found to be infected with slow incubation period diseases.

**Before departing from source (if possible):**

- a) Dip all animals.
- b) Conduct a Famacha flock examination.
- c) Collect a faecal sample from at least 10 animals, for assessment of worm infestation.
- d) Vaccinate the animals as required against at least the following diseases if more than 7 days remain before movement to their destination: Enterotoxaemia and Pasteurellosis. (Mannheimia).

**After arrival:**

- a) Perform a physical examination.
- b) Tag each group with a distinct colour code and record origin and destination.
- c) Clip feet that need attention.
- d) Footbath with Zinc sulphate plus small amount of soap.
- e) Dip and or inject for external parasites.
- f) Collect faeces for egg counts.
- g) Conduct a Famacha flock examination.
- h) Respond to faecal examination results.
- i) Drench if necessary.
- j) Test the response to drenching after 10 days and act accordingly. (Alternative procedure: Buy susceptible Haemonchus larvae and drench introductions with low levels to stimulate their immunity.)
- k) Collect blood for serology (discuss with flock health veterinarian – for example: Johnes Disease, Pulmonary Adenomatosis (Jaagsiekte), Brucellosis).
- l) Respond to serology results.
- m) Keep animals in quarantine for at least the incubation period of short incubation infectious diseases (21 days) or sufficient time for vaccinations to take effect.
- n) Observe animals daily. Take temperature and record if possible.
- o) After release from quarantine facility keep rams separate until genital soundness examination and first mating if possible. Pizzle Disease becomes apparent only at mating time.
- p) Keep pregnant ewes separate until after lambing.
- q) Keep ewes separate until after first mating.





### 1.3.4 On-farm Handling and Management of Chemicals

- Chemicals used in the wool growing environment cover a large and diverse range of products, such as stock remedies and medicines, vaccines, fertilizers, pesticides and herbicides.

Refer to Annexure 1 - GUIDE TO THE ECTOPARASITICIDES USED ON LIVESTOCK HORSES, OSTRICHES AND GAME IN SOUTH AFRICA.

- Use of chemicals as well as storage and disposal of surplus products and empty containers shall be carefully managed to obviate deleterious effects on animals, humans and the natural environment.
- Storage of all chemical products shall only be in a locked well-lit facility with access limited to key holders only who have an understanding of the use of such chemical products and the implications of incorrect use. No other products for human or animal consumption shall be stored in proximity to such chemicals. Access to first aid in the case of accidents is a priority.
- All chemical products shall be stored in original containers and never decanted. Containers shall be kept on non-absorbent shelving. Labels shall be present on the containers and be legible.
- Solid or powdered products shall be stacked above liquid products.
- A chemical register recording data such as date of purchase, product use and shelf life shall be kept.
- Expired, defective or hazardous chemical products shall be responsibly disposed of, taking into account human, animal or environmental risk when deciding on a suitable disposal method. This includes destruction or part destruction of empty containers.
- Prescribed withholding periods for all chemicals used shall be strictly adhered to, and no organophosphate, chlorfenvinphos or cypermethrin containing products for external parasite control shall be used.
- There are various types of vaccines:
  - a) **Live vaccines** usually contain a live micro-organism which has been weakened (attenuated) in some way, or a naturally occurring strain which is of low virulence and/or pathogenicity. Most live vaccines are in a freeze-dried form. Freeze-dried vaccines are presented in the form of a compact, dry pellet, which must be mixed with sterile water before it can be injected. In this form the micro-organisms in the vaccine can be successfully stored provided the vaccine is kept in a refrigerator and is not exposed to direct sunlight.
  - b) **Inactivated vaccines.** There are 3 types of inactivated or non-living vaccines.
    - Killed vaccines: This is a vaccine made of micro-organisms that have been killed using chemicals or heat. Killed bacterial vaccines are sometimes referred to as bacterins.
    - Toxoids: These are vaccines made of bacterial toxins, which have been rendered non-toxic by chemical treatment.



- Sub-unit vaccines: Sub-unit vaccines contain only certain parts or structures of a micro-organism.

Inactivated vaccines are usually less effective inducers of an immune response than live vaccines and so they have chemicals added to them which improve the immune reaction. These chemicals are called adjuvants. The adjuvant may be mineral oils or potassium or aluminum salts. In some adjuvanted vaccines that have been standing for a while, a sediment may settle out to the bottom of the vaccine bottle. Vaccines containing adjuvants must be shaken well but gently before use to mix all the components.

#### How to use a vaccine:

Directions for the use of a specific vaccine must always be followed carefully. As the directions for using a vaccine are changed from time to time, vaccines should never be purchased without the package inserts which contain the directions for use. It is essential to read the package inserts with regard to the following important information:

- a) Storage: The vaccine must be stored at the recommended temperature. With the exception of heartwater and frozen red water vaccines, which are kept frozen, on dry ice or in liquid nitrogen, all other vaccines should not be frozen. Freezing and thawing destroys certain components in vaccines and therefore a vaccine which has been accidentally frozen must be discarded. Fridges used for vaccine storage should be checked regularly for efficient functioning. Maximum-minimum thermometers or commercially available colour indicators can be used for this.
- b) Vaccines must not be used after expiry date and surplus vaccines should not be stored for later use. All vaccines must be used within the prescribed period after opening the container.

## 1.4 Nutrition and Water

### 1.4.1 *General*

Convenient access to sufficient quantity and quality food and water underpins animal health and welfare, which is required for sustainable and profitable wool production. It is the woolgrower's responsibility to ensure that his sheep have convenient access to sufficient food and clean water to mitigate hunger, thirst, malnutrition and dehydration. These factors, when present, not only impact sheep health and welfare, but also efficient fiber and meat production.



#### 1.4.2 Nutrition

- Depending on age and needs, nutrition availability shall be estimated by means of practical and proven stocking rates when allowing sheep to graze and browse on rangeland.
- Best practice as far as palatable food stock cultivars and associated stocking rates for pasture farming shall be employed, with, if needed, appropriate advice from an experienced pasture scientist. Advice on supplementing feed and dietary needs may also be sourced from professional and experienced animal nutritionists and/or veterinarians.
- When farming on either rangeland or on planted pasture, care shall be taken not to expose sheep to moulds, poisonous plants or seeds and any toxic material or physical objects.

#### 1.4.3 Water

- Sufficient, accessible and safe water supply points shall be made available to allow thirst slaking at least once in a 24-hour period.
- Water quality shall be monitored regularly to assess the presence of potentially toxic levels of chemical products or substances.
- Drought exacerbates stress conditions and severely affects sheep welfare. Since droughts are essentially the result of external, non-manageable climatic conditions, an appropriate management plan to mitigate such effects should form an essential component of the woolgrower's business plan.

## 2. ENVIRONMENTAL CUSTODIANSHIP

### 2.1 General

- The woolgrower shall take responsibility for custodianship of the natural environment in which he conducts his commercial wool growing business.
- A business plan to action key performance areas for the maintenance of biodiversity, ecosystem stability and protection of the agricultural resource base shall be developed and revised on a regular basis to benchmark progress and to identify new threats. Target areas shall include, but are not limited to, plans for soils, waterways, vegetation (alien and naturally occurring) fauna (wildlife) and other features affecting biodiversity. National and Provincial legislation, as well as associated land care guidelines shall be accessed to ensure appropriate compliance where legal requirements exist.
- Custodianship can also be demonstrated, for example, by conversion of electricity sourcing from traditional sources to environmentally friendly options such as solar or wind.
- Climate change and its effect on the farming environment shall also be considered and long-term plans made accordingly. A useful reference document to assist in this regard is "The Green Choice Living Farms Reference".



## 2.2 Soils

- Sustainable use of this natural resource base shall be demonstrated through prevention of erosion and not exceeding the maximum grazing capacity of the farm.
- Cultivation and fertilization of soils shall target improvement of soil fertility and maintenance of appropriate nutrition levels.
- Rangeland (veld) grazing capacity shall be established and reduced where deterioration is observed, particularly during periods of drought.
- Suitably developed grazing/resting protocols must be observed to support long term sustainability.
- Eroded and damaged soils should be restored if feasible and cost-effective.

## 2.3 Water

- South Africa is a water-poor country, and, accordingly, woolgrowers must manage water resources and water bodies accordingly.
- Systems shall be in place to avoid degradation of natural water sources through contamination with effluent, agricultural run-off and leaching from potential sources of contamination such as dip tanks or troughs.
- Moisture/ water retention may be improved through provision of strategically placed contour planning and catchment of precipitation.
- Water quality shall be monitored through testing and assessment for animal and human use.
- A large body of National and regional legislation exists which regulates water use in South Africa. Growers are encouraged to stay informed in terms of all regulatory guidelines in this regard.

## 2.4 Invasive Vegetation

- Invasive alien species cause habitat destruction and can affect the availability of surface and sub-surface water and increase veld fire risk.
- By definition, an on-farm alien plant and grass eradication program is of a long term nature and is best planned in association with public nature conservation authorities.
- Cost effective plans should include collaboration with neighboring properties to increase clearing efficiency.
- Advice shall be sourced from external expert service providers to seek an appropriate balance between different options for eradication, which may include the use of herbicides, biological methods or even well managed burning.
- Potential for dispersal of invasive plant seeds by sheep to unaffected areas of the farm and neighboring properties shall be monitored, and stock movement planned accordingly.

## 2.5 Pasture Systems

The use of clean or safe pastures will help to control parasite problems.

The “refugia” principle applies here: “Refugia” is simply the Latin term for “refuge”. When managing drenching/anthelmintic resistance it refers to avoiding the whole population of worms being exposed, **at the same time**, to the drench and therefore subject to drench resistance



development. In other words leave some of the worm population in “refugia” – in “refuge” from the drench.

There are various ways of achieving this and it should developed as part of the flock management plan with your flock health advisor.

Pasture rotation system: A pasture grazed by cattle and/or horses is also considered safe, since sheep/goats and cattle/horses do not share the same parasites.

Rotational grazing generally does not help to control internal parasites unless pasture rest periods are long enough (> 70 days).

## 2.6 Wildlife Management

- South Africa has a rich and diverse population of wildlife in most wool production areas. In terms of the woolgrower’s overall responsibility for, and custody of, the natural environment in which the business operates appropriate conservation must be properly managed. This is important even if game farming is not a branch of the overall farming operation.
- Woolgrowers must be knowledgeable about bird and wildlife species occurring naturally on the property. Appropriate conservation plans shall be in place to avoid decimation of such species through the irresponsible use of agrichemicals, veterinary products or any other ill planned farming operations.

## 2.7 Predator Management

- Predators such as jackal, leopard and caracal form part of the natural ecosystem on many wool growing properties.
- Predation, by definition, causes severe economic problems for woolgrowers, as a result of production and stock losses. Predation very often also causes severe suffering to livestock due to maiming. Accordingly, a balance between predation management and environmental protection of biodiversity is of critical importance. Therefore, predator management shall be addressed in a suitably developed plan. Consultation with public and private nature conservation agencies and compliance in terms of legislation is strongly advised.
- The underpinning of a good predator management plan is the use of preventative measures as a first line of defense. These include but are not limited to using guard dogs (Anatolian shepherd dogs), donkeys, alpacas, fencing and technologies such as protection collars and noise/light generating devices. If ineffectual, the use of other legal control methods by accredited and experienced service providers shall be sourced.
- All methods used for predator control shall be selective, be as humane as possible and have no effect on non-target species or on the environment in general.
- The use of any poison is strictly prohibited and shall not be considered as an option under any circumstances.

# 3. SOCIAL ETHICS AND LABOUR RELATIONS

## 3.1 Introduction

Wool growing as an economic activity must comply with social and ethical standards applicable to the woolgrower as well as to his staff, their dependents and the communities in which the



business operates. Social principles which shall be upheld include rights, privileges and obligations, and a system of clear understanding of these issues. Fair labour practices, a safe, hygienic and enjoyable work environment and a commitment to build and sustain good, productive employment relationships to support the strategic business goals of the wool growing enterprise is required.

### 3.2 Human Rights

Human rights in line with the South African Bill of Rights and the South African Constitution must be supported and protected in line with all core labour rights, as embodied in the principles of the International Labour Organization. This includes, but is not limited to, prohibition of forced labour or child labour. It shall guarantee freedom of association and the right to organize and bargain collectively. No discrimination of any nature will be practiced.

### 3.3 Labour

Access to and the ethical, efficient and effective utilization of labour is critical in terms of the sustainability of a wool growing enterprise. Labour can be utilized via a workforce employed by the woolgrower directly, or indirectly via external labour providers. In the latter context the provision of shearing and wool classing services by brokers, or by shearing contractors, is a major component. A Code of Best Practice for Sheep Shearing and Wool Handling developed by Cape Wools SA (NPC) is the source document for woolgrowers to use, covering a range of minimum requirements in this regard.

In terms of basic conditions of employment legislation, the wool growing employer shall ensure that a contract is in place with his employees, specifying the following:

- Working hours and responsibilities.
- Compensation and timing of reviews and salary increases.
- Leave particulars and provisions (sick leave, normal leave and maternity leave)
- Conditions of employment termination details.
- Any other particulars to ensure a fair and equitable arrangement between employer and employee, consistent with legislation.
- Details of grievance and disciplinary procedures to manage and/or prevent conflict in a productive manner.
- Details to support development and management of good labour relations. It is important for the woolgrower employer to proactively seek and utilize opportunities for skills development to increase productivity and job satisfaction.

The employee has the right to provide his/her services in a working environment that is safe, healthy and conducive to general wellbeing. The employer shall have available a set of contingency procedures and access to first aid in the case of emergencies, and to ensure that employees are aware of such procedures to be able to respond timeously and appropriately.





The employer is well advised to source assistance to analyze the farming operation from a risk assessment point of view in this regard.

Employers shall make provision for their employees to have access to unemployment insurance and pension/provident fund schemes, and to medical aid schemes or other similar assistance plans, if so desired.

Employees have the right of access to comfortable, safe and convenient housing with electricity supply, good sanitation and ablution facilities and other appropriate conveniences.

## 4. BUSINESS/ECONOMIC ASPECTS

### 4.1 Introduction

The business and economic environment for wool marketing requires that these processes form the bedrock for market driven, sustainable wool production and marketing, as the first link in a profitable and sustainable supply chain.

Wool production can only be run as a profitable business on a sustainable basis if a plan exists which balances the optimal utilization of resources such as the climate, soil, water, animal assets, labour resources and operating capital. Of necessity, a relatively large body of documentation is kept as required for legal compliance (e.g. submissions for tax purposes and drawing up of financial statements).

However, wool growers are encouraged to expand this process by drafting and regularly reviewing plans for responding to opportunities and threats impacting on the overall business of wool growing.

### 4.2 Core Issues

- A comprehensive record keeping strategy shall be in place to allow estimates of the status of the business at any point in time. Records can be quantitative or qualitative in nature.
- Records are also critically important for supply chain marketing arrangements. Traceability is a key requirement to verify authenticity and origin of product, through tracking of documents along the supply chain.
- A mapped land use plan is recommended for strategic management and long-term planning of farming operations to mitigate climate change. Regular audits of this plan, e.g. annually, should be carried out as new science becomes available.
- A written plan and budget are required for the wool growing enterprise, as for any other commercial enterprise. Although forward pricing to estimate income is speculative at best in the spot market, thorough and regular sourcing of market intelligence from industry organizations, local and international, is recommended.
- Shearing shall be carried out by well-trained and competent shearers and the clip prepared, packed and offered in line with commercial and marketing requirements. These are contained in the Cape Wools SA Classing Standards.



## Bibliography

---

1. National Woolgrowers Association of South Africa. Code of Best Practice for Wool Sheep Farming in South Africa (2008).
2. SA Mohair Growers Association/Mohair South Africa. Sustainable Mohair Production Guidelines (2017/18).
3. IWTO Specifications for Wool Sheep Welfare (2017).
4. RPO/NERPO Code of Best Practice for Sustainable and Profitable Red Meat Production (2014)
5. Abelusi Wool. Taking Responsibility for Sheep, Food, the Environment and People (2018).
6. SustainaWool Integrity Scheme (2017).
7. ZQ/ZQ Premium Growers Accreditation Manual. The New Zealand Merino Company Ltd (2017).
8. Textile Exchange. Responsible Wool Standard Farmers Guidebook (2016).
9. The Green Choice Living Farms Reference (2010).
10. Global Organic Textile Standard (GOTS), Version 5 (2017).
11. Griffon Poison Information Centre Guidelines on Ectoparasiticide use on Livestock in South Africa (2019).



ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®



**SOUTH AFRICAN ECTOPARASITICIDES AND OXPECKERS**



**A GUIDE TO THE ECTOPARASITICIDES USED ON LIVESTOCK, HORSES, OSTRICHES AND GAME IN SOUTH AFRICA AND THEIR COMPATIBILITY WITH RED-BILLED AND YELLOW-BILLED OXPECKERS**

**IMPORTANT DISCLAIMER!!**

THIS IS ONLY A REFERENCE DOCUMENT. IT DOES NOT REPLACE OR SUPERCEDE THE LABEL INSTRUCTIONS OF ECTOPARASITICIDES. IT REMAINS THE SOLE RESPONSIBILITY OF THE APPLICATOR TO FOLLOW THE LABEL INSTRUCTIONS OF THE ECTOPARASITICIDE. OMISSIONS AND/OR ERRORS IN THIS DOCUMENT CANNOT BE USED AS A REASON FOR NOT READING AND NOT FOLLOWING LABEL INSTRUCTIONS!!

SOME OF THE ECTOPARASITICIDES LISTED IN THIS DOCUMENT MAY HAVE BEEN DISCONTINUED

**WARNINGS**

Do not use products that are not registered in the Republic of South Africa. Registered products must have a valid registration number starting with a capital G followed by four digits and (Act No. 36 of 1947). Do not attempt to manufacture your own ectoparasiticide from basic components as it will be ineffective, damaging to animals and the environment, result in parasite resistance and it is a transgression of Act No. 36 of 1947. Do not overdose or underdose. Do not discard left-over products in an irresponsible way; participate in the CropLife SA Waste Management Programme. Do not re-use empty containers; they must be triple rinsed and recycled by a certified plastic recycling operator or incinerated by a certified incinerator. Do not use products for any animals or any parasites that are not indicated on the labels of the products.

**WHEN IN DOUBT, CALL FOR ASSISTANCE:**

REGISTRATION HOLDERS OF PRODUCTS AND THE GRIFFON POISON INFORMATION CENTRE CAN BE OF ASSISTANCE

**KEY TO THE OXPECKER COMPATIBILITY TABLE**

Compatibility: Y = Yes for compatible with oxpeckers, N = No for incompatible with oxpeckers

Chemical class of Active Ingredient (AI): PY = pyrethroid, CM = carbamate, OP = organophosphate, SY = synergist, AM = amidine, ML = macrocyclic lactone, GR = insect growth regulator, OT = others

Bird LD50: Values given are for the active ingredients and not the formulations; LT = low toxicity

AI bird risk colour code: dark green = very low risk, light green = low risk, yellow = medium risk, orange = high risk, red = very high risk

AI bird risk factor: 1 = very low risk, 3 = low risk, 5 = medium risk, 7 = high risk, 10 = very high risk

Type of application: PL = plunge dip, SP = spray dip, PO = pour-on, ST = spot treatment, OR = oral solution, IN = injectable solution

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 1

(version 0)



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s) AI(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Acatak Pour-On	Y	G2422	Novartis AH	Fluazuron	2.5	IGR	>2,000		1							Blue ticks	Beef cattle only	12 ml/100 kg
Amidip Max	Y	G3767	Virbac RSA	Amitraz	25	AM	788		2							Ticks, lice, mange mites	Cattle	10 ml/10 ℓ
Amigard	Y	G3512	Zoetis AH	Amitraz	12.5	AM	788		2							Ticks, lice, mange mites	Cattle	1 ℓ/500 ℓ
Amipor	Y	G2058	Virbac RSA	Amitraz Cypermethrin Piperonyl butoxide	1 1 5	AM PY SY	788 2,000 2,250		2							Ticks & Karoo paralysis ticks, house, stable & face flies, biting, sucking & red lice	Cattle, sheep, goats, game	1 ml/10 kg/cattle 2 ml/10 kg sheep & goats
Animec Super	Y	G3909	AfriVet BM	Ivermectin Chlorsulon	1 10	ML OT	2,000		1							Lice, mange mites, sand tampans, blue ticks, screw-worms, eye-worms	Cattle	1 ml/50 kg
Animectin	Y	G2966	AniPharm	Ivermectin	0.08	ML	2,000		1							Itch mites, lice	Sheep, goats	2.5 ml/10 kg
Avotan Pour-On	N	G3745	MSD AH	Abamectin	0.05	ML	84.6		8							Blue ticks	Cattle	1 ml/10 kg
Bantik Cattle Dip	Y	G3571	Cipla Agrimed	Cymiazol Cypermethrin	17.5 2.5	AM PY	1,212 2,000		1							Ticks, lice, screw-worms, biting, face & nuisance flies	Cattle	1.5 ℓ/1,000 ℓ
Baymec	Y	G3220	Bayer AH	Ivermectin	1	ML	2,000		1							Scab mites	Sheep	200 ug/kg
Bayopet Bacdip Plus	Y	G2029	Bayer AH	Flumethrin Piperonyl butoxide	2 10	PY SY	>2,500 2,250		1							Ticks, fleas	Horses, dogs	2 ml/1 ℓ
Bayticol	Y	G0489	Bayer AH	Flumethrin	2	PY	>2,500		1							Ticks, stable flies, Northern fowl mites, feather mites	Cattle, horses, dogs, poultry, ostriches	10 ml/5 ℓ
Blitzdip Aerosol	Y	G1059	Bayer AH	Cypermethrin	0.5	PY	2,000		1							Ticks	Cattle, goats, sheep	Apply to infested areas
Blitzdip Pour-on for Cattle	Y	G1049	Bayer AH	Cypermethrin	1	PY	2,000		1							Ticks, nuisance flies, biting & sucking lice	Cattle	1 ml/10 kg
Blowfly Dressing	N	G0935	Bayer AH	Cypermethrin Chlorfenvinphos	0.05 1	PY OP	2,000 16		10							Blowfly maggots & biting flies	Sheep	Brush on & around infested areas
Bodygard	Y	G3424	Zoetis AH	Flumethrin Piperonyl butoxide	1 5	PY SY	>2,500 2,250		1							Ticks, feather mites, red lice, tsetse flies	Cattle, sheep, ostriches, game	10 ml/100 kg
Buzz-Off Gel	Y	G2951	V-tech	Cypermethrin Citronella oil Herbal extracts	0.3 0.6	PY OT OT	2,000 LT LT		1							House flies	Horses	Wipe onto coat where flies are a nuisance
Buzz-Off Fly Repellent	Y	G2953	V-tech	Cypermethrin Citronella oil Herbal extracts	0.3 0.6	PY OT OT	2,000 LT LT		1							House flies	Horses	Brush onto coat where flies are a nuisance
Ceva Iver 1% injectable solution	Y	G2811	Novartis AH	Ivermectin	1	ML	2,000		1							Sheep scab mites, Australian itch mites, sucking & biting lice, sand tampans, Blue ticks, screw worm	Cattle, sheep	1 ml/50 kg

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**


©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

(version 0)





## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s) AI(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Closamectin Injection for Cattle and Sheep	Y	G3801	Biotech Laboratories	Ivermectin Closantel	0.5 12.5	ML OT	2,000 LT		1							Sheep scab mites, itch mites, sucking & biting lice, mange mites, blue ticks, screw-worms, sand tampans	Cattle, sheep	1 ml/25 kg
Clout	Y	G1447	AfriVet BM	Deltamethrin	1	PY	4,460		1							Ticks, stable, horn, cattle louse & nuisance flies, biting & sucking lice, blackflies, Karoo paralysis, bont-legged & red-legged ticks	Cattle, sheep, goats	1 ml/10 kg
Coopers Redline	Y	G3445	AfriVet BM	Flumethrin	1	PY	>2,500		1							Ticks, tsetse flies, feather mites, Karoo paralysis ticks	Cattle, sheep, ostriches, game	1 ml/10 kg
Coopers Supadip	N	G3349	AfriVet BM	Chlorfenvinphos	30	OP	16		10							Ticks, lice, mange mites, fleas, keds, blow flies	Cattle, sheep, goats, dogs, horses	1 ℓ /600 ℓ
Coopers Tick Grease	Y	G3667	AfriVet BM	Deltamethrin Piperonyl butoxide	0.1 0.05	PY SY	4,460 2,250		1							Ticks	Cattle, sheep	Brush onto ticks
Cooperzon 30	N	G0821	AfriVet BM	Diazinon	30	OP	3.5		10							Ticks, mange & sheep scab mites, sheep lice & keds, blowfly maggots, pig mange mites	Sheep, goats, pigs	1 ℓ /600 ℓ
Cydectin 1% Injectable	Y	G1463	Zoetis AH	Moxidectin	1	ML	278		5							Lice, mange mites, sheep scab & itch mites, blue ticks	Cattle, sheep, ostriches	0.1 ml – 1 ml/5 kg
Cydectin 0.1% Oral Solution	Y	G2388	Zoetis AH	Moxidectin	0.1	ML	278		5							Itch mites	Sheep, ostriches	2 ml/10 kg
Cydectin Antiparasitic Pour-on for Cattle	Y	G2678	Zoetis AH	Moxidectin	0.5	ML	278		5							Mange mites, red & blue lice, horn flies, blue ticks	Cattle	1 ml/10 kg
Cydectin Eweguard & vaccine	Y	G2304	Zoetis AH	Moxidectin plus antigens	0.5	ML	278		5							Sheep scab & itch mites, sucking lice	Adult sheep & goats	1 ml/25 kg
Cydectin Eweguard & vaccine plus Se & Vit B12	Y	G3541	Zoetis AH	Moxidectin plus antigens Na Selenate Vitamin B12	0.5 0.1 0.1	ML OT OT	278 LT LT		5							Sheep scab & itch mites, sucking lice	Adult sheep & goats	1 ml/25 kg
Cydectin LA Injectable for sheep	Y	G3449	Zoetis AH	Moxidectin	2	ML	278		5							Sheep scab mites, sucking lice, itch mites	Sheep	1 ml/20 kg
Cydectin Plus Tape Oral Drench	Y	G3407	Zoetis AH	Moxidectin Praziquantel	0.1 1.88	ML OT	278 LT		5							Itch mites	Sheep	1 ml/5 kg

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**


©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 3

25



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©


Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concen- tration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
<b>Cydectin Plus Tape Oral Drench</b>	Y	G3407	Zoetis AH	Moxidectin Praziquantel	0.1 1.88	ML OT	278 LT		5							Itch mites	Sheep	1 ml/5 kg
<b>Cydectin SE Oral Solution</b>	Y	G3408	Zoetis AH	Moxidectin Selenium	0.1 0.05	ML OT	278 LT		5							Itch mites	Sheep	1 ml/5 kg
<b>Cylence</b>	Y	G1725	Bayer AH	Cyfluthrin	1	PY	>2,000		1							Flies, lice, ticks, tsetse flies	Cattle, sheep, goats	1.5 - 2 ml/10 kg
<b>Cymigard</b>	Y	G3922	Zoetis AH	Cymiazol Cypermethrin	2 1	AM PY	1,212 2,000		1							Ticks	Cattle	1 ml/10 kg
<b>Cypermil Pour On</b>	Y	G3012	Ourofino AH	Cypermethrin	5	PY	2,000		1							Ticks, sucking & biting lice	Cattle	1 ml/10 kg
<b>Cypermil Spray</b>	Y	G3111	Ourofino AH	Cypermethrin	15	PY	2,000		1							Ticks, sucking & biting lice	Cattle	1 ℓ /1,000 ℓ
<b>Cypermil Plus Spray</b>	N	G3020	Ourofino AH	Cypermethrin Dichlorvos	5 45	PY OP	2,000 24		10							Ticks, sucking & biting lice	Cattle	Spot treatment
<b>Daz-Dust 2%</b>	N	G0421	Bayer AH	Diazinon	2	OP	3.5		10							Lice, blowfly, horse flies	Cattle, sheep, goats, horses	Dust freely onto affected areas
<b>Dazzel NF</b>	N	G0582	Bayer AH	Diazinon	30	OP	3.5		10							Ticks, scab & mange mites, sheep keds, lice, blowfly	Sheep, goats, pigs, rabbits	1 ℓ /600 ℓ
<b>Deca-Spot 0.5% Pour-on</b>	Y	G3433	AfriVet BM	Deltamethrin Piperonyl butoxide	0.5 2.5	PY SY	4,460 2,250		1							Ticks, Karoo paralysis ticks, nuisance flies, stable, horn & cattle louse flies, blackflies	Cattle, sheep, goats	Cattle 1 ml/10 kg Sheep/goats 1 ml/5 kg
<b>Decatix 3</b>	Y	G1348	AfriVet BM	Deltamethrin	2.5	PY	4,460		1							Ticks, lice, various flies, sheep scab mites, sheep keds, screw-worm, blackfly, ostrich feather lice	Cattle, sheep, goats, ostriches	1 ℓ /500 ℓ
<b>Dectomax</b>	Y	G1726	Zoetis AH	Doramectin	1	ML	2,000		1							Blue ticks, screw-worm, sand tansans, sucking lice, mange & itch mites, blowfly, sheep scab mites	Cattle, sheep, goats, pigs	1 ml/50 kg
<b>Delete</b>	Y	G2815	MSD AH	Deltamethrin Piperonyl butoxide	0.5 2	PY SY	4,460 2,250		1							Ticks, Karoo paralysis ticks, biting & sucking lice, stable, horn, cattle louse & nuisance flies, blackflies	Cattle, sheep, goats	Cattle 1 ml/10 kg Sheep/goats 1 ml/5 kg
<b>Delete All</b>	Y	G2837	MSD AH	Deltamethrin Amitraz Piperonyl butoxide	0.5 2 2	PY AM SY	4,460 788 2,250		2							Ticks, Karoo paralysis ticks, biting & sucking lice, stable, horn, cattle louse & nuisance flies, blackflies, mange mites	Cattle, sheep, goats, game	Cattle 1 ml/10 kg Sheep/goats 1 ml/5 kg
<b>Delete-XS</b>	Y	G3279	MSD AH	Deltamethrin	5	PY	4,460		1							Ticks, cattle lice, sheep scab mites, sheep & goat lice, sheep keds, ostrich feather lice, African face, nuisance & biting flies	Cattle, sheep, goats, ostriches	250 ml - 1 ℓ /1,000 ℓ
<b>Deltab Tablets</b>	Y	G2517	MSD AH	Deltamethrin	25	PY	4,460		1							Ticks, lice, flies, screw worm, scab mites, keds, feather lice	Cattle, sheep, goats, ostriches	1 tablet/100 ℓ

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**





## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concen- tration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
<b>Deltab Back-Pack</b>	Y	G2518	MSD AH	Deltamethrin	25	PY	4,460		1							Ticks, cattle lice, sheep scab mites, sheep & goat lice, sheep keds, ostrich feather lice, stable, house, cattle louse, horn, tsetse & <i>Stomoxys</i> flies, blackflies	Cattle, sheep, goats, ostriches, dogs, horses	1 tablet/12.5 ℓ
<b>Deltadip Pour-On</b>	Y	G3838	Cipla Agrimed	Flumethrin	1	PY	>2,500		1							Ticks, stable flies, horn flies, cattle louse flies, nuisance flies, biting & sucking lice, black flies	Cattle, sheep, goats	1 ml/10 kg
<b>Diffly Wound Spray</b>	Y	G2155	MSD Animal Health	Cypermethrin Dichlorophen Chlorocresol Pine oil Gentian violet	0.0125 0.015 0.5 15 0.15	PY OT OT OT OT	2,000 LT LT NT NT		1							Blow-flies, flies	Sheep, goats, pigs, horses	Treat affected areas
<b>Doraject LA +AD+E</b>	Y	G3912	Ascendis AH	Doramectin Vitamin A Vitamin D <sub>3</sub> Vitamin E	1 3.3 0.015 5	ML OT OT OT	>500 LT LT LT		3							Blue ticks, sheep scab, blowfly strike, ictic mites	Cattle, sheep	1 ml/50 kg
<b>Dovertec</b>	Y	G4092	Bupo	Doramectin	1	ML	2,000		1							Blue ticks, screw-worm, sand tamps, sucking lice, mange & itch mites, blowfly, sheep scab mites	Cattle	1 ml/50 kg
<b>Drastic Deadline</b>	Y	G723	Bayer AH	Flumethrin	1	PY	>2,500		1							Ticks, tsetse fly, red lice, feather mites,	Cattle, sheep, ostriches, game	1 ml/10 kg
<b>Drastic Deadline Extreme</b>	Y	G3840	Bayer AH	Flumethrin Fluazuron	2.5 1	PY IGR	>2,500 >4,000		1							Ticks, blue ticks, tsetse fly, red lice,	Cattle	1 ml/10kg
<b>Ecobash</b>	Y	G3382	AfriVet BM	Cymiazol Cypermethrin	17.5 2.5	AM PY	1,212 2,000		1							Ticks, biting, face & nuisance flies, lice, screw-worm	Cattle	1.5 ℓ/1,000 ℓ
<b>Ecomectin 1% Injectable Solution</b>	Y	G2275	AfriVet BM	Ivermectin	1	ML	2,000		1							Sucking & biting lice, blue ticks, horn flies, mange mites, screw-worms	Cattle, sheep, pigs	Cattle, sheep 1 ml/50 kg Pigs 1.5 ml/50 kg
<b>Ecomectin Cattle Pour-on</b>	Y	G3274	AfriVet BM	Ivermectin	0.5	ML	2,000		1							Sucking & biting lice, sand tamps, blue ticks, screw-worm, sheep scab mites, itch mites, mange mites	Sheep, cattle, pigs	1 ml/10 kg
<b>Ecomectin Pig Premix</b>	Y	G3860	AfriVet BM	Ivermectin	0.6%	ML	2,000		1							Lice, sarcoptic mange mites	Pigs	Only to be administered by veterinarians
<b>Ecomectin Sheep Drench</b>	Y	G2630	AfriVet BM	Ivermectin	0.08	ML	2,000		1							Itch mites	Sheep, goats	2.5 ml/10 kg
<b>Ectomin 100EC</b>	Y	G3341	Novartis AH	Cypermethrin (high-cis)	10	PY	2,000		1							Ticks, nuisance & biting flies, cattle lice & keds, sheep & goat lice, poultry mites	Cattle, sheep, goats, poultry	1 ℓ/1,000 ℓ
<b>Ectopor Pour-On</b>	Y	G3313	Novartis AH	Cypermethrin	0.002	PY	2,000		1							Ticks, lice, keds, flies	Cattle, sheep, goats, camels	1 ml/10 kg

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshar@tiscali.co.za March 2019


Page 5

27

(version 0)



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application							Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN				
Ectoshield	Y	G2671	Cipla Agrimed	Cypermethrin Amitraz	1.5 1.75	PY AM	2,000 788		2								Ticks, house flies, stable flies, face flies, lice	Cattle	1 ml/10 kg
Ektoban	Y	G0598	Novartis AH	Cymiazol Cypermethrin	17.5 2.5	AM PY	1,212 2,000		1								Ticks, biting, face & nuisance flies, lice, screw-worm	Cattle	1.5 ℓ /1,000 ℓ
Eliminate	N	G3348	Virbac RSA	Abamectin	0.5	ML	84.6		8								Sucking & biting lice, mange mites, blue ticks, horn flies	Cattle, antelope	1 ml/10kg
Epricis 1%	Y	G3917	Ceva AH	Eprinomectin	1	ML	2,000		1								Cattle	Blue ticks	1 ml/50kg
Equivet Fly Repel	Y	G1329	Zoetis AH	Cypermethrin Piperonyl butoxide	0.25 1.25	PY SY	2,000 2,250		1								House & stable flies	Horses	Spray or wipe onto horse's coat
Equiworld Fly Repellent for Horses and Dogs	Y	G1857	Stride Distributors	Cypermethrin Piperonyl butoxide Natural plant oils Lanolin	0.25 1.25 0.025 1	PY SY OT OT	2,000 2,250 LT LT		1								House & stable flies, blackflies, ticks, mosquitoes	Horses	Ready to use spray or paint-on
Equiworld Tick Dip	Y	G3148	Stride Distributors	Cypermethrin	20	PY	2,000		1								Ticks, lice, nuisance & biting flies	Cattle, horses	1 ℓ /1,000 ℓ
Eraditick Ultra	N	G3976	AfriVet BM	Chlorfenvinphos Cymiazol Cypermethrin	20 16 2.5	OP AM PY	16 1,212 2,000		10								Ticks, house flies	Cattle	1 ℓ /600 ℓ
Expel Wound Aerosol	Y	G3245	AfriVet BM	Resin & oils Germicide Deltamethrin	99.39 0.51 0.1	OT OT PY	LT LT 4,460		1								Screw-worms, ticks	Cattle, sheep, goats, wildlife	Apply to infested areas
Expel Jetting Fluid	Y	G3941	AfriVet BM	Ivermectin	3	ML	2,000		1								Lice, blowfly larvae	Sheep, goats	Apply to infested areas
Expel Plus Jetting Fluid	Y	G4027	AfriVet BM	Ivermectin Novaluron	3 2	ML IGR	2,000 >2,000		1								Lice, blowfly, red lice, mange mites	Sheep & goats	Apply to infested areas
Extinosad	Y	G3826	Elanco	Spinosad	2.5	OT	2,000		1								Red lice, blow fly maggots	Sheep, goats	1 ml/10 kg
Fluportik	Y	G3977	Ceva AH	Flumethrin	1	PY	>2,500		1								Ticks	Cattle	1 ml/10 kg
Fluxacur NF	N	G3202	MSD AH	Abamectin Triclabendazole	0.2 10	ML OT	84.6 LT		8								Itch mites	Sheep, goats	1 ml/10 kg
Interdip 20	Y	G3321	MSD AH	Cypermethrin	20	PY	2,000		1								Ticks, lice, biting & nuisance flies	Cattle, horses	1 ℓ /1,000 ℓ
Intervet Quadripel	Y	G3328	MSD Animal Health	Cypermethrin Piperonyl butoxide Natural plant oils Lanolin	0.25 1.25 0.025 1	PY SY OT OT	2,000 2,250 NT NT		1								House & stable flies, ticks, mosquitoes	Horses	Treat affected areas
Ivermax 1% Injectable Solution	Y	G3582	Cipla Agrimed	Ivermectin	1	ML	2,000		1								Sucking & biting lice, mange mites, sand tampons, screw-worms, blue ticks, sheep scab mites, Australian itch mites	Cattle, sheep, pigs	Cattle, sheep 1 ml/50 kg Pigs 1 ml/33 kg
Ivermax 1% Injectable Solution + AD <sub>3</sub> E	Y	G3723	Cipla Agrimed	Ivermectin Vitamin A Vitamin D <sub>3</sub> Vitamin E	1 5M IU 40K IU 1K IU	ML OT OT OT	2,000 LT LT LT		1								Sucking & biting lice, mange mites, sand tampons, screw-worms, blue ticks, sheep scab mites, Australian itch mites	Cattle, sheep	1 ml/50 kg


**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 6



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concen- tration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Ivermax 1% Injectable Solution +minerals	Y	G3724	Cipla Agrimed	Ivermectin Cu Zn Co Mn	1 3.83 mg 0.06 mg 0.16 mg 2.49 mg	ML OT OT OT OT	2,000 LT LT LT LT		1							Sucking & biting lice, mange mites, sand tampan, screw-worms, blue ticks, sheep scab mites, Australian itch mites	Cattle, sheep	1 ml/50 kg
Ivermax LA Platinum	Y	G3832	Cipla Agrimed	Ivermectin	3.15	ML	2,000		1							Blue ticks	Cattle	
Ivermax Metabolic	Y	G3910	Cipla Agrimed	Ivermectin Vitamin B1 Various minerals	1 0.01 Various	ML OT OT	2,000 LT LT		1							Blue ticks	Cattle	
Ivermax Sheep Drench	Y	G3579	Cipla Agrimed	Ivermectin	0.08	ML	2,000		1							Australian itch mites	Sheep	2.5 ml/10 kg
Ivermectina 1% Ourofino Injectable	Y	G2889	Ourofino AH	Ivermectin	1	ML	2,000		1							Sucking & biting lice, mange mites, sand tampan, screw-worms, blue ticks, sheep scab mites, Australian itch mites	Cattle, sheep	1 ml/50 kg
Ivomec Eprinex	Y	G2628	Merial	Eprinomectin	0.5	ML	2,000		1							Sucking & biting lice, mites, horn flies, blue ticks	Beef & dairy cattle	1 ml/10 kg
Ivomec Gold	Y	G3080	Merial	Ivermectin	3.15	ML	2,000		1							Sucking & biting lice, mange mites, sand tampan, screw-worms, blue ticks	Cattle	1 ml/50 kg
Ivomec Injection	Y	G2329	Merial	Ivermectin	1	ML	2,000		1							Sucking lice & biting lice, sand tampan, blue ticks, sheep scab mites, mange mites, screw- worms	Cattle, sheep, pigs, ostriches	Cattle 1 ml/50 kg Pigs 1 ml/33 kg Sheep 0.5 ml/25 kg Ostriches 1 ml/50 kg
Ivomec Liquid	Y	G0590	Merial	Ivermectin	0.08	ML	2,000		1							Australian itch mites	Sheep, goats	2.5 ml/10 kg
Ivomec Maximiser CR Capsules (weaner sheep)	Y	G2510	Merial	Ivermectin	80 mg	ML	2,000		1							Sheep scab mites, itch mites blowflies, keds	Weaner sheep	1 Capsule/20 to 40 kg
Ivomec Maximiser CR Capsules (adult sheep)	Y	G2509	Merial	Ivermectin	160 mg	ML	2,000		1							Sheep scab mites, itch mites, blowflies, keds	Adult sheep	1 Capsule/40 to 80 kg
Ivomec Premix for Swine	Y	G1960	Merial	Ivermectin	0.6	ML	2,000		1							Lice, mange mites	Pigs	Follow premix instructions
Ivomec Super Injection	Y	G2629	Merial	Ivermectin Chlorsulon	1 10	ML OT	2,000		1							Sucking & biting lice, mange mites, sand tampan, screw-worms, eye worms, blue ticks, sheep scab mites, Australian itch mites	Cattle, sheep	Cattle 1 ml/50 kg Sheep 0.5 ml/25 kg


**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 7



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Ivotan	Y	G2858	MSD AH	Ivermectin	1	ML	2,000		1							Sucking lice, biting lice, mange mites, sand tampans, blue ticks, cattle screw worms, sheep scab mites, itch mites	Cattle, sheep, pigs	Cattle, sheep 1 ml/50 kg Pigs 1 ml/33 kg
Ivotan Oral	Y	G3393	MSD AH	Ivermectin	0.08	ML	2,000		1							Sucking lice, biting lice, mange mites, sand tampans, blue ticks, cattle screw worms, sheep scab mites, itch mites	Sheep, goats	2.5 ml/10 kg
Karbadip	Y	G1291	Bayer AH	Carbaryl	50	OT	>1,000		1							Ticks, red mites, lice, tampans, fleas	Cattle, horses, chickens, dogs	3 kg/1,000 ℓ
Langa-Dip	Y	G3515	Elangeni AH	Cypermethrin	20	PY	2,000		1							Ticks, Karoo paralysis ticks, biting & sucking lice, nuisance & biting flies, sheep scab mites, blowflies	Cattle, sheep	1 ℓ/1,000 ℓ
Langa First-Year Drench	N	G3503	Elangeni AH	Abamectin Praziquantel	0.08 1.5	ML OT	84.6 LT		8							Australian itch mites	Sheep, lambs, goats, kids, calves, ostriches	2.5 ml/10 kg
Langa Max LA	Y	G3506	Elangeni AH	Ivermectin	1	ML	2,000		1							Sheep scab mites, sucking & biting lice, mange mites, Australian itch mites, screw-worms, blue ticks, sand tampans	Sheep, cattle, pigs	Cattle, sheep 1 ml/50 kg Pigs 1 ml/ 33kg
Langa MEC	Y	G3500	Elangeni AH	Ivermectin	1	ML	2,000		1							Sheep scab mites, sucking & biting lice, mange mites, Australian itch mites, screw-worms, blue ticks, sand tampans	Cattle, sheep, pigs	Cattle, sheep 1 ml/50 kg Pigs 1 ml/ 33kg
Langa Pour-Line	Y	G3501	Elangeni AH	Amitraz Cypermethrin Piperonyl butoxide	1 1 5	AM PY SY	788 2,000 2,250		2							Ticks, Karoo paralysis ticks, house, stable & face flies, biting & sucking lice, red lice	Cattle, sheep, goats, game	Cattle, game 10 ml/100 kg Sheep, goats 2 – 4 ml/ 10 kg
Langa Super MEC	Y	G3502	Elangeni AH	Ivermectin Chlorsulon	1 10	ML OT	2,000 LT		1							Sucking & biting lice, mange mites, sheep scab mites, Australian itch mites, sand tampans, Blue ticks, screw-worms	Cattle, sheep, goats	1 ml/50 kg
Langa Tablets for Sheep and Goats	N	G3510	Elangeni AH	Abamectin	0.8	ML	84.6		8							Australian itch mites	Sheep, goats	1 tablet/50 kg

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**


©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 8

30



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Maxi-Cyp 20%	Y	G3656	Cipla Agrimed	Cypermethrin	20	PY	2,000		1							Ticks, nuisance & biting flies, lice	Cattle, horses	1 ℓ/1,000 ℓ
Maxipour	Y	G3567	Cipla Agrimed	Flumethrin	1	PY	>2,500		1							Ticks, tsetse flies, feather mites	Cattle, sheep, ostriches, game	1 ml/10 kg
MBD Cypertraz Pour-on	Y	G3472	Ceva AH SA	Amitraz Cypermethrin	17.5 15	AM PY	788 2,000		2							Ticks, house, stable & face flies, lice	Cattle	10 ml/100 kg
Milbitraz Spray Dip	Y	G2084	Bayer AH	Amitraz	12.5	AM	788		2							Ticks, mange mites, lice	Cattle	1 ℓ/500 ℓ
Milbitraz LS	Y	G2385	Bayer AH	Amitraz	23.75	AM	788		2							Ticks, mange mites, lice	Cattle	250 g/250 ℓ
Nokalt	Y	G3021	Ourofino AH	Amitraz	12.5	AM	788		2							Ticks, lice, mange mites	Cattle	1 ℓ/500 ℓ
Noromectin Injection	Y	G2734	Biotech Laboratories	Ivermectin	1	ML	2,000		1							Blue ticks, cattle & pig mange mites, sheep scab mites, Australian itch mites, lice	Cattle, sheep, pigs	Cattle 1 ml/50 kg Sheep 0.5 ml/25 kg Pigs 1 ml/33 kg
Noromectin Pour-On	Y	G2735	Biotech Laboratories	Ivermectin	0.5	ML	2,000		1							Blue ticks, mange mites	Cattle	1 ml/10 kg
Notix NF	N	G3537	MSD AH	Chlorfenvinphos	30	OP	16		10							Ticks	Cattle	1 ℓ/600 ℓ
Novallex	Y	G4007	Ceva AH	Ivermectin	1	ML	2,000		1							Sucking & biting lice, mange mites, sand tampons, screw-worms, blue ticks	Cattle, sheep	
PAB-NF	N	G0961	Bayer AH	Propetamphos	0.14	OP	197		7							Blowflies, blowfly maggots	Sheep	Apply onto crutch
Paracide	Y	G0791	Zoetis AH	Alphamethrin	7	PY	10,000		1							Ticks, Karoo paralysis ticks, various flies, lice, blackflies, midges, sand tampons	Cattle, sheep, goats	1 ℓ/1,000 ℓ
Paramax 1% Injectable Solution	Y	G3083	MSD AH	Ivermectin	1	ML	2,000		1							Sucking & biting lice, mange mites, sheep scab mites, Australian itch mites, sand tampons, screw-worms, blue ticks	Cattle, sheep, pigs	Cattle 1 ml/50 kg Sheep 0.5 ml/25 kg Pigs 1 ml/33 kg
Pouracide NF	Y	G0971	Zoetis AH	Alpha-cypermethrin Cypermethrin Tetrachlorvinphos Piperonyl butoxide	0.5 1 2 7.5	PY PY OP SY	2,025 2,000 1,500 2,250		1							Ticks, house & biting flies, biting & sucking lice, sand tampons	Cattle	1 ml/10 kg
Privexia	Y	G3915	Ceva AH	Moxidectin	1	ML	278		5							Blue ticks	Cattle	1 ml/50 kg
Pro-Dip Cyp 20%	Y	G2311	Virbac RSA	Cypermethrin	20	PY	2,000		1							Ticks, lice, Karoo paralysis ticks, screw-worms, blowflies, nuisance & biting flies	Cattle, sheep	1 ℓ/1,000 ℓ

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019


Page 9

31





## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concen- tration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Shoo-Fly Spray	Y	G2777	Kyron Laboratories	Permethrin Esbiothrin Piperonyl butoxide Aromatic oils	1 0.35 1.5	PY PY SY OT	>3,000 >5,000 2,250 LT		1							Biting & nuisance flies	Dogs, horses	Spray onto coat
Solution 3.5% LA	N	G3689	MSD AH	Ivermectin Abamectin	2.25 1.25	ML ML	2,000 84.6		8							Blue ticks	Cattle	1 ml/50 kg
Sovereign	Y	G3831	MSD AH	Ivermectin Triclabendazole	1.5 24	ML OT	2,000 LT		1							Blue ticks	Cattle	1 ml/10 kg
Startect	N	G3889	Zoetis AH	Derquantel Abamectin	1 0.1	OT ML	LT 84.6		8							Itch mites	Sheep	2 ml/10kg
Steladone 300EC	N	G1328	Bayer AH	Chlorfenvinphos	30%	OP	16		10							Ticks, lice, mange mites, blow flies, Karoo paralysis ticks	Cattle, sheep, goats	10 ml/6 ℓ
Stopatik	Y	G1431	Virbac RSA	Cypermethrin Piperonyl butoxide	2 8	PY SY	2,000 2,250		1							Ticks, house, stable & face flies, Karoo paralysis ticks	Cattle, sheep	1 ml/10 kg
Supaspray Plus	N	G3829	Cipla Agrimed	Dichlorvos Cypermethrin Sulfadiazine Piperonyl butoxide	0.16 0.037 0.011 0.021	OP PY OT SY	24 2,000 LT 2,250		10							Blowfly maggots	Sheep	Spray onto whole wound areas
Supatraz 125	Y	G3011	Cipla Agrimed	Amitraz	12.5	AM	788		2							Ticks, lice, mange mites	Cattle	2 ℓ/1,000 ℓ
Supatraz 25%	Y	G3581	Cipla Agrimed	Amitraz	25	AM	788		2							Ticks, itch & mange mites, lice, sheep scab mites, Australian itch mites	Cattle, sheep, goats	1 ℓ/1,000 ℓ
Supatraz Cattle Pour-on	Y	G3649	Cipla Agrimed	Amitraz	2	AM	788		2							Ticks	Cattle	1 ml/10 kg
Supona 30	N	G1284	Bayer AH	Chlorfenvinphos	30	OP	16		10							Ticks, Karoo paralysis ticks, lice, blowflies	Cattle, sheep, goats	1 ℓ/600 ℓ
Supona Aerosol	N	G0411	Bayer AH	Chlorfenvinphos Dichlorvos Gentian violet	0.48 0.74 0.145	OP OP OT	16 24 LT		10							Blowfly maggots, ticks	Cattle, horses, sheep, goats, dogs	Spot treatment
Taktic Cattle Spray	Y	G2535	MSD AH	Amitraz	12.5	AM	788		2							Ticks, lice, mange mites, sheep scab mites, itch mites, sheep lice, keds	Cattle, sheep, goats, ostriches	1 ℓ/1,000 ℓ
Taktic LS Cattle Dip	Y	G2536	MSD AH	Amitraz Calcium hydroxide	23.75 75	AM OT	788 LT		2							Ticks, lice, mange mites	Cattle	1 kg/1,000 ℓ
Taktic Pour-On	Y	G2927	MSD AH	Amitraz	2	AM	788		2							Ticks	Cattle, ostriches	1 ml/10 kg
Taktic Pig Pour-On	Y	G2574	MSD AH	Amitraz	1	AM	788		2							Mange mites, ticks	Pigs	5 ml/10 kg
Taktic TR	Y	G2537	MSD AH	Amitraz	23.75	AM	788		2							Ticks, cattle lice, sheep scab mites, itch mites, goat mange mites	Cattle, sheep, goats	1.43 kg/1,000 ℓ

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**


©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshet@tiscali.co.za March 2019

Page 10





## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Taktic WP Cattle Spray	Y	G2538	MSD AH	Amitraz	23.75	AM	788		2							Ticks, lice, mange mites	Cattle	100 g/100 ℓ
Tickenda	Y	G3725	Virbac	Flumethrin	1	PY	>2,500		1							Ticks, feather mites, red lice, tsetse flies	Cattle, sheep, ostriches, game	1 ml/10 kg
Tick Dressing 'S'	N	G0434	Bayer AH	Chlorfenvinphos	0.3	OP	16		10							Ticks	Cattle	Apply to infested areas
Tick Grease	Y	G1104	Bayer AH	Cypermethrin	0.025	PY	2,000		1							Ticks	Cattle	Apply to infested areas
Tick & Maggot Oil Plus	N	G1494	Bayer AH	Chlorfenvinphos Cypermethrin Pine oil	1 0.1 4	OP PY OT	16 2,000 LT		10							Ticks	Cattle, sheep, goats	Apply to infested areas
Tickotan	Y	G3849	Bayer AH	Cymiazole Cypermethrin	17.5 2.5	AM Py	1,212 2,000		1							Ticks, biting, face & nuisance flies, lice, screw-worms	Cattle	1.5 ℓ/1,000 ℓ
Tiguvon Spotton	N	G0145	Bayer AH	Fenthion	20	OP	7.2		10							Brown ear ticks, flies, screw-worm, cattle lice	Cattle, sheep, goats, horses	2.5 ml/100 kg
Tikgard	N	G1488	Zoetis AH	Chlorfenvinphos Alpha-cypermethrin	30 3	OP PY	16 2,025		10							Ticks, Karoo paralysis ticks, goat mange mites, sheep scab mites, itch mites, lice, keds, nuisance flies, screw-worm, midges	Cattle, sheep, goats	1 ℓ/1,000 ℓ
Triatix 125	Y	G3189	AfriVet BM	Amitraz	12.5	AM	788		2							Ticks, itch & mange mites, lice, sheep scab mites	Cattle, sheep, goats	1 ℓ/500 ℓ
Triatix 250	Y	G3190	AfriVet BM	Amitraz	25	AM	788		2							Ticks, itch & mange mites, lice, sheep scab mites	Cattle, sheep, goats	1 ℓ/1,000 ℓ
Triatix 500 LS Cattle Dip	Y	G3496	AfriVet BM	Amitraz	50	AM	788		2							Ticks, mange mites, lice	Cattle	500 g/1,000 ℓ
Triatix 500 TR Cattle, Sheep & Goat Dip	Y	G3256	AfriVet BM	Amitraz	50	AM	788		2							Ticks, itch & mange mites, lice, sheep scab mites	Cattle, sheep, goats	100 g/1,000 ℓ
Triatix Cattle Pour-on	Y	G3444	AfriVet BM	Amitraz	2	AM	788		2							Ticks	Cattle	1 ml/10 kg
Triatix 2 % Pig Pour-on	Y	G3381	AfriVet BM	Amitraz	2	AM	788		2							Mange mites, lice	Pigs	2.5 ml/10 kg
Triatix Plus Pour-on	Y	G3434	AfriVet BM	Amitraz Deltamethrin Piperonyl butoxide	1.5 0.5 3	AM PY SY	788 4,460 2,250		2							Ticks, stable, horn, cattle louse & nuisance flies, biting & sucking lice, mange mites, blackflies	Cattle, sheep, goats	Cattle 1 ml/10 kg Sheep, goats 1 ml/5 kg
Trifender Pour-On	Y	G3971	Bayer AH	Amitraz Cypermethrin Piperonyl butoxide	1 1 2	AM PY SY	788 2,000 2,250		2							Ticks	Cattle	1 ml/10 kg


**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 11



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Triton	Y	G3565	Merial	Albendazole Levamisole Ivermectin	0.020 0.030 0.088	OT OT ML	LT LT 2,000		1							Australian itch mites	Sheep	1 ml/4 kg
Triton Tape	Y	G3566	Merial	Albendazole Levamisole Ivermectin Cobalt Selenium Praziquantel	0.020 0.030 0.088 0.176 0.04 0.015	OT OT ML OT OT OT	LT LT 2,000 LT LT LT		1							Australian itch mites	Sheep	1 ml/4 kg
Vermectin L.A. Premium	Y	G4112	Bedson Africa	Ivermectin	3.15	ML										Blue ticks	Cattle	1 ml/50 kg
Vetrazin	Y	G0525	Novartis AH	Cyromazine	50	IGR	2,000		1							Blowflies	Sheep	1 kg/500 t
Vetrazin Pour-on	Y	G1397	Novartis AH	Cyromazine	10	IGR	2,000		1							Blowflies	Sheep	1 ml/kg
Virbamax First Drench	N	G3084	Virbac RSA	Abamectin Praziquantel	0.08 1.5	ML OT	84.6 LT		8							Australian itch mites	Sheep, lambs, goats, kids, calves	2.5 ml/10 kg
Virbamax LV	N	G2782	Virbac RSA	Abamectin	0.2	ML	84.6		8							Australian itch mites	Sheep, goats	1 ml/10 kg
Virbamax Premix	N	G3122	Virbac RSA	Abamectin	0.6	ML	84.6		8							Mange mites, pig lice	Pigs	1.67 g/10 kg
Virbamec	Y	G2588	Virbac RSA	Ivermectin	1	ML	2,000		1							Blue ticks, sucking & biting lice, sheep scab mites, Australian itch mites, mange mites, screw-worms,	Cattle, sheep, pigs	Cattle, sheep 1 ml/50 kg Pigs 1.5 ml/ 50 kg
Virbamec L	Y	G3269	Virbac RSA	Ivermectin Chlorsulon	1 10	ML OT	2,000 LT		1							Sucking & biting lice, flies, mange mites sheep scab mites, Australian itch mites, sandtampans, Blue ticks, screw-worms	Cattle, sheep, goats	1 ml/50 kg
Virbamec LA	Y	G2885	Virbac RSA	Ivermectin	1	ML	2,000		1							Sucking & biting lice, flies, mange mites sheep scab mites, Australian itch mites, sandtampans, Blue ticks, screw-worms	Cattle, sheep, pigs	Cattle, sheep 1 ml/50 kg Pigs 1 ml/33 kg
Wipe-out	Y	G3172	AfriVet BM	Deltamethrin	0.5	PY	4,460		1							Ticks, Karoo paralysis ticks, blowfly maggots, red lice, keds	Sheep, goats	2 - 4 ml/10 kg
Wound Aerosol NF	N	G0955	Bayer AH	Dichlorophen Propetamphos Pine oil	1 0.25 2.5	OT OP OT	1,000 197 LT		7							Nuisance flies, blowfly maggots	Cattle, sheep	Apply to infested areas
Wound Oil NF	N	G0956	Bayer AH	Dichlorophen Propetamphos Pine oil	1 0.25 3	OT OP OT	1,000 197 LT		7							Nuisance flies, blowfly maggots	Cattle, sheep	Apply to infested areas

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019


Page 12

34

(version 0)



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

Trade name		Act 36/1947 Reg. No.	Registration holder or distributor	Active ingredient(s)	AI Concentration %	Class	Bird LD50 mg/kg	AI Bird risk colour code	AI Bird risk factor	Type of application						Ectoparasites	Animals	Dosage
										PL	SP	PO	ST	OR	IN			
Wound-Sept Plus Aerosol	Y	G1521	Virbac RSA	Cypermethrin Dichlorophen Chlorocresol Gentian violet	0.012 0.015 0.5 0.15	PY OT OT OT	2,000 1,000 LT LT		1							Blowfly	Cattle, sheep, goats, horses, pigs, dogs	Wound application
Zapp 480SC	Y	G2335	Bayer AH	Triflumuron	48	IGR	561		3							Lice, blowfly	Sheep, goats	5 ml/10 ℓ
Zapp Pour-on for sheep and goats	Y	G2926	Bayer AH	Triflumuron	2.5	IGR	561		3							Lice, blowfly	Sheep, goats	10 ml/10 kg with special Zapplicator & nozzle
Zeramec	N	G3660	Virbac RSA	Ivermectin Zeranol	1 1	ML	2,000 EDR effects		10							Sucking & biting lice, mange mites, screw-worms, sand tampans, blue ticks	Cattle	1 ml/50 kg
Zeropar	N	G1152	Bayer AH	Chlorfenvinphos Alpha-cypermethrin	30 3	OP PY	16 2,025		10							Ticks, Karoo paralysis ticks, goat mange mites, sheep scab mites, itch mites, lice, keds, nuisance flies, screw-worm, midges	Cattle, sheep, goats	1 ℓ/1,000 ℓ
Zeropar Aerosol	N	G0955	Bayer AH	Dichlorophen Propetamphos Pine oil	1 0.25 2.5	OT OP OT	1,000 197 LT		7							Ticks, nuisance flies, blowfly maggots, maggots	Cattle, sheep	Apply to infested areas and open wounds
Zipdip	N	G0381	MSD AH	Triazophos	40	OP	4.2		10							Ticks, Karoo paralysis ticks, lice, keds, sheep scab mites, blowflies, itch mites	Sheep, goats, angora goats, pigs	0.3 ℓ/1,000 ℓ

### IMPORTANT INFORMATION ABOUT THE ECTOPARASITICIDE RISK FACTOR FOR OXPECKERS

The risk that an ectoparasiticide poses to oxpeckers takes several factors into account. These include:

- The avian toxicity of the active ingredient. Avian toxicity constitutes the most important part of the risk to oxpeckers.
- The concentration of the active ingredient in the formulation.
- Solvents used in the formulation.
- The product application type (pour-on, plunge, spot treatment, injectable, etc.) Dermal application products are by nature more direct in their potential impacts oxpeckers than oral and injectable products.
- The quantity of the active ingredient dispensed on the animal.

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**



---

## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©

---

### IMPORTANT ADDITIONAL INFORMATION

***ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY!!! DO NOT ATTEMPT TO DO ANYTHING THAT IS NOT INDICATED ON THE LABEL OF THE PRODUCT!!!***

1. **Parasite management on horses, donkeys, mules, zebras and rhinos.** The uneven toed animals or Perissodactyls are highly sensitive to chemicals, more so than the even toed animals or Artiodactyls. Only products that are *particularly* registered for parasite control on these species should be used and nothing else as other products may kill them. Check with the registration holder of the particular product before using it on rhinos.
2. **Companion animals.** Do not treat dogs and cats with products that are not registered for them as it may cause serious poisoning symptoms or even kill the animals. Consult your local veterinarian for advice on endectocides and ectoparasiticides for pets.
3. **Parasite resistance.** It is very important for every farmer to check the efficacy of ectoparasiticides against ticks. Should resistance be suspected, the registration holder of the particular product must be informed. Contact details are available on the product label. Parasite resistance can be prevented by adhering to the following important principles:
  - a. Never manufacture your own ectoparasiticides from basic chemical components. It will not kill ectoparasites effectively and may even have serious adverse effects on animals.
  - b. Use only registered products according to their label instructions and for the animals which they are registered for.
  - c. Use the correct dosage on animals and refrain from spot treatments unless the product is particularly registered for spot application.
  - d. It may be useful to change to a different class of active ingredient in order to exterminate ectoparasites that start developing resistance against certain active ingredients.
  - e. Consult the registration holders of ectoparasiticides for good additional advice on managing ectoparasite resistance.

---

**ALWAYS READ THE LABEL OF THE ECTOPARASITICIDE BEFORE APPLYING IT AND FOLLOW ALL INSTRUCTIONS METICULOUSLY**

©Compiled by Gerhard H Verdoorn, Griffon Poison Information Centre, 082-446-8946, neshier@tiscali.co.za March 2019

Page 14





---

## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS®

---

- f. When buying animals from areas where ectoparasite resistance has been reported the new stock must be totally cleared of any ectoparasites in a controlled environment like a kraal or boma before animals are released into the grazing areas.
- 4. Managing the impact of products that are incompatible with oxpeckers.** Should it become a requirement to use products that are incompatible with oxpeckers due to parasite resistance the utmost care should be taken to eliminate the impact of such products on oxpeckers. The following mitigation measures should be implemented:
- a. Treat animals in the late afternoon after oxpeckers have departed to their roosting sites.
  - b. Treat only half of the herd and kraal the herd if possible for at least four days before letting them graze extensively again. Graze the other half of the untreated animals extensively for the period that treated animals are kraaled after which the herds can be swopped.
  - c. Keep cattle herdsman with the treated animals to deter oxpeckers from settling and feeding on cattle.
  - d. Offer oxpeckers a mixture of lean mince and fresh blood close to their favourite roosting sites for a period of two weeks while oxpecker incompatible dips are allowed to metabolise to non-toxic compounds.
- 5. Disposal of redundant dip mixtures.** Plunge dips need to be cleaned after a certain number of dip cycles. The remaining dip mixture is usually a concoction of active ingredients and their metabolites. The best practice to dispose of these dip mixtures is:
- a. Pump it into drums and have it disposed of by certified hazardous waste management service providers that are listed under the AVCASA Waste Management Programme lists on [www.avcasa.co.za](http://www.avcasa.co.za).
  - b. Dip mixtures can also be pumped into a plastic lined evaporation pond that is fenced off and cover with netting to keep any animals out. Once the liquid has evaporated the sludge must be collected in plastic drums and disposed of by certified hazardous waste management service providers as mentioned above.
  - c. Do not attempt to dispose of any redundant dip mixture or dip residues by pumping it into natural water bodies or onto the soil. The results will be disastrous for the environment.
- 6. Regional approaches to oxpeckers and ectoparasites.**



## ECOLOGICALLY SOUND MANAGEMENT OF ECTOPARASITES AND OXPECKERS©

---

- a. Nama-Karoo biome. Oxpeckers are not found in the Karoo due to unsuitable treeless habitat over most of the biome. The same holds true for the succulent Karoo biome and Namaqualand although a few individuals have been recorded in the Swartberg region close to Prince Albert.
- b. Savannah biome and thicket. The Kalahari (dry part of the savannah biome) does have oxpeckers but not in the density found in the savannah regions. This is due to the healthier environment and much lower ectoparasite loads. It is not advisable to treat cattle often with parasites – rather allow the oxpeckers to maintain pressure on ectoparasites. Oxpeckers did occur traditionally in the savannah region but due to the use of oxpecker incompatible ectoparasiticides many regions are now without oxpeckers. If oxpeckers are expected to repopulate these areas it is of utmost importance to avoid the use of oxpecker incompatible ectoparasiticides.
  - i. Sweet savannah is expected to have good numbers of oxpeckers.
  - ii. Sour savannah is expected to have limited numbers of oxpeckers.
- c. Grassland biome. The habitat and climate of the grassveld biome are not ideally suitable for oxpeckers even though birds may be passing through on occasion. Other birds such as the pied starling partially fulfil the role of oxpeckers in the grassland biome and therefore oxpecker compatible ectoparasiticides should also be used here.
- d. Fynbos biome. Oxpeckers do not naturally occur in the fynbos biome even though a few sightings of individuals have been recorded.
- e. Forest biome. Oxpeckers may be found in the ecotone between forest and savannah and therefore oxpecker compatible ectoparasiticides should be used if required.