# May 2024

Monthly report on livestock disease trends as informally reported by veterinarians belonging to the Ruminant Veterinary Association of South Africa (RuVASA), a group of the South African Veterinary Association

**Previous disease reports can be accessed on the RuVASA website (**www.ruvasa.co.za**)**

**These reports include data from individual practices**

**Click on Disease Reports**

**Click on the required dates of Disease Reports**

## The following practices and laboratories (136) submitted reports during May 2024:

### Mpumalanga (10)

Bethal – Dr. Hardus Pieters
Grootvlei – Dr. Neels van Wyk
Lydenburg – Dr. Marietjie Malan
Lydenburg – Drs. Trümpelmann and Steyn
Middelburg – Dr. Neil Fourie
Nelspruit – Dr. André Beytel
Piet Retief – Drs. Niebuhr and Weber
Rayton – Dr. Frans Malan
Standerton – Dr. Schalk van der Merwe
Volksrust – Dr. Johan Blaauw

### Gauteng (10)

Bapsfontein – Drs. Engelbrecht and Olivier
Bronkhorstspruit – Drs. De Bruin, De Bruin and Labuschagne
Hammanskraal – Dr. Hentie Engelbrecht
Irene (ARC) – Drs. Van Wyk and Steyn
Krugersdorp (Veeartsnetwerk) – Dr. Danie Odendaal
Muldersdrift – Drs Speedy and Enslin
Nigel – Dr. Henry Labuschagne
Onderstepoort Veterinary Academic Hospital – Proff. Holm and Leask and Drs. Fitte, Grobler, Hentzen, Koeppel, Magadu, Magagula, Marufu, Mokoele, O'Dell, Tagwirreyi, Tshuma and Van den Hurk
Vanderbijlpark – Dr. Kobus Kok

## Limpopo (7)

Modimolle – Drs. Van Niekerk and Te Brugge
Modimolle- Drs. Grobler and Toet
Mokopane (Potgietersburg) – Dr. Henk Visser
Polokwane (Pietersburg) – Drs. Watson, Viljoen, Jansen van Vuuren, Van Rooyen, Snyman and Cremona
Thabazimbi – Dr. Minette Nel
Tzaneen – ZZ2 Farm practice – Dr. Danie Odendaal
Vaalwater – Dr. Hampie van Staden

## North West (11)

Beestekraal - Dr. Alwyn Venter
Brits – Drs. Scheepers and Malan
Brits – Drs.Boshoff and Coertze
Christiana – Dr. Pieter Nel
Leeudoringstad – Dr. Ian Jonker
Potchefstroom – Dr. Martin Jordaan
Rustenburg – Drs. Grobler, Sparks, Stoffberg and Otterman
Schweizer-Reneke - Drs. Venter and Malte
Stella - Dr. Magdaleen Vosser
Vryburg – Dr. Marnus de Jager
Zeerust – Dr. Lizahn Venter

## Free State (25)

Bloemfontein – Dr. Stephan Wessels
Bothaville – Dr. Gerrie kemp
Bothaville – Dr. Tom Meyer
Bultfontein – Dr. Santjie Pieterse
Clocolan – Drs. Wasserman, Kleynhans and Boshoff
Dewetsdorp – Dr. Marike Badenhorst
Fauresmith – Dr.Nienke van Hasselt
Ficksburg – Dr. Woody Kotzé
Frankfort – Drs. Lessing, Cilliers and Janse van Rensburg
Harrismith – Drs. Cook, Korb and Olevano
Harrismith – Dr. Wim Slabber
Hoopstad – Dr. Cassie van der Walt
Hoopstad – Dr. Kobus Pretorius
Koppies – Dr. Kobus Bester
Kroonstad – Drs. Daffue, Eksteen, Van Zyl and Van der Walt
Memel – Drs. Nixon and Nixon
Oranjeville - Dr. D'Wall Hauptfleisch
Parys – Drs. Wessels and Wessels
Reitz – Dr. Murray Smith
Senekal – Dr. Jan Blignaut
Smithfield – Dr. Nienke van Hasselt
Viljoenskroon – Dr. Johan Kahts
Villiers – Drs. Hattingh, Maree and Lourens
Vrede – Dr. Daleen Roos
Vrede – Drs. Reynolds and Nixon

Warden – Dr. Paul Reynolds
Wesselsbron – Dr. Johan Jacobs

## KwaZulu-Natal (11)

Bergville - Dr. Jubie Müller
Camperdown – Dr. Anthony van Tonder
Dundee – Drs. Marais and Fynn
Estcourt – Drs. Turner, Tedder, Taylor, Tratschler, Van Rooyen and Alwar
Ixopo – Dr. Savannah Stutchbury (Howick group)
Kokstad (East Griqualand) – Kokstad, Matatiele and Elliot) – Drs. Clowes, Lees, Westhoff, Kilian and Holyoake
Mooi River – Drs. Fowler and Graver
Mtubatuba – Dr. Trevor Viljoen
Pongola – Dr. Heinz Kohrs
Underberg – Drs. King, Delaney and Huysamer
Underberg – Dr. Tod Collins

## Eastern Cape (16)

Adelaide – Dr. Steve Cockroft
Alexandria – Dr. Charlene Boy
Alexandria – Dr. Johan Olivier
Aliwal North – Dr. Freddie Strauss
Barkly East – Drs. Cronje and Janse van Rensburg
Bathurst – Dr. Jane Pistorius
Elliot - Drs. Walter, Clowes, Lees, Malan, Koekemoer, Kilian and Holyoake
Graaff- Reinet - Dr. Roland Larson
Graaff-Reinet – Drs. Hobson, Strydom and Hennesy
Grahamstown – Drs. Baxter, Hepplestone and Van Vuuren
Port Alfred – Dr.Leon de Bruyn
Queenstown – Drs. Du Preez, Klopper, De Klerk, Wentzel and Webster
Queenstown – Dr. Clara Blaeser
Steynsburg – Dr. Johan van Rooyen
Stutterheim – Dr. Dave Waterman
Uitenhage – Drs. Mulder and Krüger

## Western Cape (17)

Caledon – Drs. Louw and Viljoen
Darling – Drs. Van der Merwe, Adam, Jenkins and Lord
George – Drs. Strydom, Truter and Pettifer
Heidelberg – Dr. Albert van Zyl
Malmesbury – Dr. Otto Kriek
Malmesbury – Dr. Ida Glover
Moorreesburg – Dr. Suenette Kotzé
Oudtshoorn – Dr. Glen Carlisle
Oudtshoorn -Dr. Adriaan Olivier
Paarl – Dr. Carla van der Merwe
Plettenberg Bay – Dr. André Reitz
Riversdale – Drs. Du Plessis, Taylor and De Bruyn

Stellenbosch – Dr. Alfred Kidd
Swellendam – Drs. Malan and Fourie
Vredenburg – Dr. Izak Rust
Wellington – Drs. Van Zyl and Louw
Worcester – Drs. De Wet and Rabe

## Northern Cape (14)

Calvinia – Dr. Bertus Nel
Colesberg – Drs. Rous and Rous
De Aar – Dr. Donald Anderson
Kathu – Dr. Jan Vorster

**Kimberley – State Vet Group:**
Control Animal Health Technician – Mr. Deon Kriel (gathering information)
Kimberley SV – Dr McDonald Gayakaya
Kimberley SV – Dr. Nelson Matekwe
Kimberley CCS Vets – Drs. Chris Volschenk, Michelle Roets and Charmaine Hattingh
Kuruman SV – Dr. Lea Shuda
Kuruman CCS Vets – Drs. Daniel Saayman and Emma Cilliers
Springbok SV – Dr. Simone Jacobs
Upington CCS Vet – Dr. Gretchen Schmidt

Postmasburg – Dr. Boeta van der Merwe
Upington – Drs. Vorster, Visser and Oosthuizen

## Feedlots (2)

Dr. Eben Du Preez
Drs. Morris, Morris and Barnard

## Biosecurity consultant (1)

Bloemfontein - Dr. Theo Kotzé

## Laboratory reports and others (12)

Dr. Adriaan Olivier – South African Ostrich Business Chamber
Dr. Marijke Henton - Vetdiagnostix, Johannesburg
Dr. Rick Last -Vetdiagnostix, South Africa
Dr. Annelize Jonker, Veterinary Tropical Disease Bacterial Laboratory, University of Pretoria
Dr. Liza du Plessis – Pathcare, Pretoria
Dr. Annelie Cloete – Western Cape, Provincial Veterinary Laboratory, Elsenburg, Stellenbosch
Dr. Mark Chimes – Dairy Standard
Dr. Bennie Grobler - University of Stellenbosch, Dept. of Animal Science
Dr. Hanri Bester-Cloete – Bloemfontein Provincial Veterinary Laboratory
Dr. Clara Blaeser, Queenstown Provincial Laboratory
Prof. Emily Mitchell – Wildlife, University of Pretoria
Me. Amanda McKenzie – Vryburg Veterinary Laboratory

## Key message:

**Biosecurity on farms is a buzz word that is preached at many farmer's days, on TV, in the agricultural media and during conversations at many meetings. If I look at the disease reports I receive monthly from all over South Africa, we are failing dismally in controlling important diseases as a country! Farmers that are serious about their disease status are in many cases surrounded by herds of cattle and flocks of sheep and goats on farms that are positive for brucellosis, trichomonosis, sheep scab, and polluted water sources (cryptosporidiosis and *E. coli*) , just to mention a few diseases. The foot and mouth outbreaks had their origin in the illegal transportation of positive animals.**

**Surely we deserve better, but then every single person has to be serious in keeping the animal production chain healthy and in tact!**

**Red meat**

RPO-Code-of-Best-Practice-complete.pdf (nahf.co.za)

RPO-Kode-van-Beste-Praktyk-volledig.pdf (nahf.co.za)

# For the latest update on Foot and Mouth Disease visit:

2024-05-31-FMD-Outbreak-Follow-up-Report.pdf (nahf.co.za)

**Table 1: Summary of open and closed outbreaks per province in the previous FMD free zone without vaccination since 2021**

| Province | Number of open outbreaks | Number of closed outbreaks | Total number of outbreaks | Start date of last reported outbreak |
|---|---|---|---|---|
| Free State | 21 | 20 | 41 | 07 Feb 2024 |
| Gauteng | 0 | 7 | 7 | 30 Aug 2022 |
| KwaZulu Natal | 130 | 17 | 147 | 18 Apr 2024 |
| Limpopo | 0 | 8 | 8 | 25 Apr 2022 |
| Mpumalanga | 0 | 21 | 21 | 2 Aug 2022 |
| North West | 0 | 18 | 18 | 22 Nov 2022 |
| Eastern Cape | 4 | 0 | 4 | 30 April 2024 |
| **Totals** | **175** | **71** | **246** | |

## Compartementalization

Compartmentalization is a concept developed by the **World Organization for Animal Health** (OIE) to enable international trade to continue in the event of a notifiable disease outbreak. Compartmentalization is separation by common

management and biosecurity measurements while regionalization or zones are based on geography.



**C H A P T E R 4 . 4 .**

**Z O N I N G A N D C O M P A R T M E N T A L I S A T I O N**

**Article 4.4.1.**

**Introduction**

**The purpose of this chapter is to provide recommendations on the principles of zoning and compartmentalisation to Member Countries wishing to establish and maintain different subpopulations with specific health status within their territory. These principles should be applied in accordance with the relevant chapters of the Terrestrial Code. This chapter also outlines a process by which trading partners may recognise such subpopulations.**

**Establishing and maintaining a disease-free status throughout the country should be the final goal for Member Countries. However, given the difficulty of achieving this goal, there may be benefits to a Member Country in establishing and maintaining a subpopulation with a specific health status within its territory for the purposes of international trade or disease prevention or control. Subpopulations may be separated by natural or artificial geographical barriers or by the application of appropriate biosecurity management.**

**While zoning applies to an animal subpopulation defined primarily on a geographical basis, compartmentalisation applies to an animal subpopulation defined primarily by management and husbandry practices related to biosecurity. In practice, spatial considerations and appropriate management, including biosecurity plans, play important roles in the application of both concepts.**

**Zoning may encourage the more efficient use of resources within certain parts of a country. Compartmentalisation may allow the functional separation of a subpopulation from other domestic or wild animals through biosecurity, which would not be achieved through geographical separation. In a country where a disease is endemic, establishment of free zones may assist in the progressive control and eradication of the disease. To facilitate disease control and the continuation of trade following a disease outbreak in a previously free country or zone, zoning may allow a Member Country to limit the extension of the disease to a defined restricted area, while preserving the status of the remaining territory. For the same reasons, the use of compartmentalisation may allow a Member Country to take advantage of epidemiological links among subpopulations or common practices relating to biosecurity, despite diverse geographical locations.**

**A Member Country may thus have more than one zone or compartment within its territory.**

**Article 4.4.2.**

**General considerations**

**The Veterinary Services of a Member Country that is establishing a zone or compartment within its territory should clearly define the subpopulation in accordance with the recommendations in the relevant chapters of the Terrestrial Code, including those on surveillance, on animal identification and animal traceability and on official control programmes.**

**The procedures used to establish and maintain the specific animal health status of a zone or compartment depend on the epidemiology of the disease, including the presence and role of vectors**

**and susceptible wildlife and environmental factors, on the animal production systems as well as on the application of biosecurity and sanitary measures, including movement control.**

**Biosecurity and surveillance are essential components of zoning and compartmentalisation, and should be developed through active cooperation between industry and Veterinary Services.**

**The Veterinary Services, including laboratories, should be established and should operate in accordance with Chapters 3.2. and 3.3., to provide confidence in the integrity of the zone or compartment. The final authority over the zone or compartment, for the purposes of domestic and international trade, lies with the Veterinary Authority. The Veterinary Authority should conduct an assessment of the resources needed and available to establish and maintain a zone or compartment. These include the human and financial resources and the technical capability of the Veterinary**





**Services and of the relevant industry and production system (especially in the case of a compartment), including for surveillance, diagnosis and, when appropriate, vaccination, treatment and protection against vectors. In the context of maintaining the animal health status of a population or subpopulation of a country, zone or compartment, importations into the country as well as movements of animals and their products, and fomites, into the zones or compartments should be the subject of appropriate sanitary measures and biosecurity.**

**The Veterinary Services should provide movement certification, when necessary, and carry out documented periodic**

**inspections of facilities, biosecurity, records and surveillance procedures. Veterinary Services should conduct or audit surveillance, reporting, laboratory diagnostic examinations and, when relevant, vaccination.**

**The production sector's responsibilities include, in consultation with the Veterinary Services if appropriate, the application of biosecurity, documenting and recording movements of commodities and personnel, managing quality assurance schemes, documenting the implementation of corrective actions, conducting surveillance, rapid reporting and maintenance of records in a readily accessible form.**

**Article 4.4.3.**

**Principles for defining and establishing a zone or compartment**

**The following principles apply when Member Countries define a zone or a compartment.**

**1) The extent of a zone and its geographical limits should be established by the Veterinary Authority on the basis of natural, artificial or legal boundaries, and made public through official channels.**

**2) The factors defining a compartment should be established by the Veterinary Authority on the basis of relevant criteria such as management and husbandry practices related to biosecurity, and communicated to the relevant operators through official channels.**

**3) Animals and herds or flocks belonging to subpopulations of zones or compartments should be recognisable as such through a clear epidemiological separation from other animals and all factors presenting a risk. The measures taken to ensure the identification of the subpopulation and to establish and maintain its health status through a biosecurity plan should be documented in detail.**

**These measures should be appropriate to the particular circumstances, and depend on the epidemiology of the disease, environmental factors, the health status of animals in adjacent areas, applicable biosecurity (including movement controls, use of natural, artificial or legal boundaries, spatial separation of animals, control of fomites, and commercial management and husbandry practices), and surveillance.**

**4) Relevant commodities within the zone or compartment should be identified in such a way that their movements are traceable. Depending on the system of production, identification may be done at the herd or flock or individual animal level. Relevant movements of commodities into and out of the zone or compartment should be well documented and controlled. The existence of an animal identification system is a prerequisite to assess the integrity of the zone or compartment.**

**5) For a compartment, the biosecurity plan should describe the partnership between the relevant industry and the Veterinary Authority, and their respective responsibilities. It should also describe the standard operating procedures to provide clear evidence that the surveillance conducted, the animal identification and traceability system, and the management and husbandry practices are adequate to meet the definition of the compartment. In addition to information on controls of movements of relevant commodities, the plan should include herd or flock production records, feed, water and bedding sources, surveillance results, birth and death records, visitor logbook, morbidity and mortality history and investigations, medications, vaccinations, documentation of training of relevant personnel and any other criteria necessary for evaluation of risk management. The information required may vary in accordance with the species and diseases under consideration. The biosecurity plan should also describe how the measures will be audited to ensure that the risks are being managed and regularly reassessed, and the measures adjusted accordingly.**

**Articles 4.4.4. to 4.4.7. describe different types of zones that can be established by Member Countries. However, other types of zones may be established for the purposes of disease control or trade.**

**Article 4.4.4.**

**Free zone**

**A free zone is one in which the absence of a specific infection or infestation in an animal population has been demonstrated in accordance with the relevant requirements of the Terrestrial Code.**

**Chapter 4.4.- Zoning and compartmentalisation**

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**In conjunction with Articles 4.4.2. and 4.4.3., and depending on the prevailing epidemiological situation, the attainment or maintenance of free status may require past or ongoing specific surveillance and vector surveillance, as well as appropriate biosecurity and sanitary measures, within the zone and at its borders. The surveillance should be conducted in accordance with Chapter 1.4. and the relevant chapters of the Terrestrial Code.**

**The free status can apply to one or more susceptible animal species populations, domestic or wild.**

**So long as an ongoing surveillance demonstrates there is no occurrence of the specific infection or infestation, and principles determined for its definition and establishment are respected, the zone maintains its free status.**

**Article 4.4.5.**

**Infected zone**

**An infected zone is one either in which an infection or infestation has been confirmed, or that is defined as such in the relevant chapters of the Terrestrial Code.**

**An infected zone in which an infection or infestation has been confirmed may be:**

**1) a zone of a country where the infection or infestation is present and has not yet been eradicated, while other zones of the country may be free; or**

**2) a zone of a previously free country or zone, in which the infection or infestation has been introduced or reintroduced, while the rest of the country or zone remains unaffected.**

**To gain free status in an infected zone, or regain free status following an outbreak in a previously free zone, Member Countries should follow the recommendations in the relevant chapters of the Terrestrial Code.**

**Article 4.4.6.**

**Protection zone**

**A protection zone may be established to preserve the animal health status of an animal population in a free country or a free zone by preventing the introduction of a pathogenic agent of a specific infection or infestation from neighbouring countries or zones of different animal health status.**

**A protection zone may be established as a temporary measure in response to an increased risk of disease. In such case, it may be maintained up to 24 months.**

**The protection zone can be established within or outside a free zone or within a free country. Based on the results of a risk assessment, more than one protection zone may be established.**

**Biosecurity and sanitary measures should be implemented in the protection zone on the basis of the animal management systems, the epidemiology of the disease under consideration and the epidemiological situation prevailing in the neighbouring infected countries or zones.**

**In addition to the general considerations in Article 4.4.2. and the principles in Article 4.4.3., these measures should include intensified movement control, animal identification and animal traceability to ensure that animals in the protection zone are clearly distinguishable from other populations. Vaccination of susceptible animals in accordance with Chapter 4.18. may also be applied.**

**Increased surveillance, in accordance with Chapter 1.4. and the relevant disease-specific chapter, should be implemented in the protection zone and the rest of the country or zone, including surveillance of wildlife and vectors as relevant.**

**If the animal health status of an established protection zone changes owing to the occurrence of a case, the animal health status of the rest of the country or zone is not affected, provided the measures in place prevent the spread of disease and allow the subsequent establishment of a containment zone in accordance with the criteria in Article 4.4.7.**

**Unless otherwise specified in the relevant disease-specific chapters of the Terrestrial Code, if the animal health status of an established protection zone changes because of vaccination, the animal health status of the rest of the country or zone is not affected.**

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**Chapter 4.4.- Zoning and compartmentalisation**

**Regarding diseases for which the OIE grants official recognition of animal health status:**

**– a protection zone is considered as effectively established when the conditions described in this article and in the relevant disease-specific chapters have been applied and documented evidence has been submitted to and accepted by the OIE;**

**– if a Member wishes to make the protection zone permanent, the process for official recognition by the OIE should be followed in accordance with Chapter 1.6. and the relevant disease-specific chapters.**

**Article 4.4.7.**

**Containment zone**

**1) In the event of outbreaks in a country or zone previously free from a disease, a containment zone, which includes all epidemiologically linked outbreaks, may be established to minimise the impact on the rest of the country or zone.**

**2) A containment zone is an infected zone that should be managed in such a way that commodities for international trade can be shown to have originated from either inside or outside the containment zone.**

**3) Establishment of a containment zone should be based on a rapid response, prepared in a contingency plan, that includes:**

**– appropriate control of movement of animals and other commodities upon declaration of suspicion of the specified disease;**

**– epidemiological investigation (trace-back, trace-forward) after confirmation of infection or infestation, demonstrating that the outbreaks are epidemiologically related and all are contained within the defined boundaries of the containment zone;**

**– a stamping-out policy or another effective emergency control strategy aimed at eradicating the disease;**

**– animal identification of the susceptible population within the containment zone, enabling its recognition as belonging to the containment zone;**

**– increased passive and targeted surveillance in accordance with Chapter 1.4. in the rest of the country or zone, demonstrating no occurrence of infection or infestation;**

**– biosecurity and sanitary measures, including ongoing surveillance and control of the movement of animals, other commodities and fomites within and from the containment zone, consistent with the listed disease-specific chapter, when there is one, to prevent spread of the infection or infestation from the containment zone to the rest of the country or zone.**

**4) A containment zone is considered to be effectively established when the following is demonstrated, unless**

**otherwise specified in the disease-specific chapter:**

**EITHER**

**a) there have been no new cases in the containment zone within a minimum of two incubation periods from the disposal of the last detected case;**

**OR**

**b) it comprises an inner zone where cases may continue to occur and an outer zone where no outbreaks have occurred for at least two incubation periods after the control measures above have been put in place and which separates the inner zone from the rest of the country or zone.**

**5) The free status of the areas outside the containment zone is suspended pending the effective establishment of the containment zone. Once the containment zone has been established, the areas outside the containment zone regain free status.**

**6) The free status of the containment zone should be regained in accordance with the relevant listed disease-specific chapters or, if there are none, with Article 1.4.6.**

**7) In the event of an occurrence of a case of the infection or infestation for which the containment zone was established, either in the containment zone described in point 4(a) or in the outer zone where no outbreaks had occurred as described in point 4(b), the rest of the country or zone loses its free status.**

**Article 4.4.8.**

**Bilateral recognition of country or zone status by trading countries**

**While the OIE has procedures for official recognition of status for a number of infections (refer to Chapter 1.6.), for other infections or infestations, countries may recognise each other's status through a bilateral process. Trading partners should exchange information allowing the recognition of different subpopulations within their respective territories. This**

**Chapter 4.4.- Zoning and compartmentalisation**

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**recognition process is best implemented through establishing parameters and gaining agreement on the necessary measures prior to outbreaks of disease.**

**The Veterinary Services of an exporting country should be able to explain to the Veterinary Services of an importing country the basis for claiming a specific animal health status for a given zone or compartment under consideration.**

**The exporting country should be able to demonstrate, through detailed documentation provided to the importing country, that it has implemented the recommendations in the Terrestrial Code for establishing and maintaining such a zone or compartment.**

**In accordance with Chapter 5.3., an importing country should recognise the existence of this zone or compartment when the appropriate measures recommended in the Terrestrial Code are applied and the Veterinary Authority of the exporting country is able to demonstrate that this is the case.**

**NB: FIRST ADOPTED IN 1998; MOST RECENT UPDATE ADOPTED IN 2021.**

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**Chapter 4.4.- Zoning and compartmentalisation**

- **Movement control**
- **Identification of clinical disease signs**
- **Isolation of diseased animals**
- **Demand a vendor’s declaration when animals are bought**
- **Quarantine animals that are bought for 28 days**
- **Strictly follow your herd management programme that is regularly updated in consultation with your veterinarian**

- **The ultimate goal is to form a disease free (Brucellosis, Foot and mouth disease, Trichomonas) compartment of your farm**
- **See what the pig farmers have achieved regarding African Swine Fever**

**https://www.woah.org/app/uploads/2021/10/asf-compartmentalisationguidelines-en.pdf**

# FOOT AND MOUTH DISEASE

## Foot and Mouth Disease Emergency Plan

**Health management actions to be taken if a case of foot and mouth disease is suspected on your farm. This Emergency Plan must be discussed with your herd veterinarian and adapted for the situation on your farm.**

| Phases | Description | Time-line | Outcome |
|---|---|---|---|
| Phase 1 | Trained herdsman observes suspicious signs of FMD during structured daily observation | Day 1 | Animal/s must be brought to closest handling facility within that camp. |
| Phase 2 | Trained herdsman examines affected animal/s and send findings and photos to the manager and veterinarian | Day 1 | Two possible outcomes based on the results of the observation and subsequent examination:<br>The absence of lesions consistent with FMD – the herd will be monitored daily.<br>A possible case of FMD is confirmed based on the visible lesions and the State veterinarian must immediately be informed to collect samples for laboratory confirmation |
| Phase 3 | If a possible case of FMD is suspected during examination of the herd, the animal must be isolated (quarantined) and other herds on the farm or adjacent farms must be moved at least 1km away from this isolated herd. | Day 2 to 7 | Can take 1 day or more to get a veterinarian to take the samples and then also up to 1 week before the results of the tests are available. |
| Phase 4 | If a possible case of FMD is confirmed by laboratory results this herd must now be managed over the long term (plan for up to a maximum of 3 months) in such a way that the disease is not transmitted | < than 30 days | Two possible outcomes based on the laboratory confirmation tests:<br>Tests are negative and the isolated herd is closely monitored for another 3 weeks until the quarantine is lifted.<br>Tests are positive confirming the case of FMD and the herd is kept as an isolated herd on a longer term basis – the follow up action (vaccination to slaughter or direct slaughter after |

| | | | |
|---|---|---|---|
| | to other herds on the same or adjacent farms. | | recovery from the disease under a red cross permit at the closest approved abbatoir) |

**Procedures**

**Phase 1**

**Observation of signs of disease consistent with Foot and Mouth (FMD) disease by the herdsman.**

In case where a herdsman observes signs of disease that is consistent with a suspected case of FMD he must report it immediately to the manager.

The manager must identify the location of the herds and other herds in the vicinity on a map for further fast re-action (e g moving other herds away from the possible infected herd) if needed.

The herdsman stays with the animal/s and gets it to the closest handling facility for examination.

**Phase 2.**

**Examination of suspected FMD case after observation of typical signs of disease.**

The herdsman then proceeds to examine the feet and the inside of the mouth of the affected animal as per training.

If there are any lesions, the herdsman must take photos and a video to send to the manager.

If the herdsman can't manage the taking of the photos and/or don't have a cell phone with a camera, he must be assisted by a manager.

The manager that arrives must stop at a place well away of the kraal, wear an overall and gumboots and must not physically handle the animal/s but just observe the examination by the herdsman and take photos that must be send to the consulting veterinarian with the history of the case and the number of animals affected.

If lesions are found during the examination that is consisted with the lesions caused by FMD, the herd must be handled as a positive FMD herd.

The affected animal/s must stay separated from the herd until feedback by the consulting veterinarian.

The herdsman must not handle other healthy animals in this herd after examination of the affected animal/s

Depending on the findings of the examination, the consulting veterinarian will give advice on further actions to be taken.

If the lesions observed are not consistent with FMD, the herd will be managed as normal with increased focus on daily observation and reporting.
If the lesions are consistent with FMD, all precautions described will be taken as this herd is now treated as positive for FMD until the results from laboratory testing are available.
The person that came to assist must then go back to the vehicle and before getting into the vehicle pour disinfectant in a bucket with water at the right dilution (or use a 5-liter container with already made-up disinfectant). Disinfect hands and take the boots and overall off and put normal clothes on. Wash (scrub with a hard brush to remove dung and dirt) and disinfect the boots, put the overall in a bucket and wet it with disinfectant, and then wash and disinfect hands and arms. This person can then go straight home and shower. Overalls can be washed as usual.

The herdsman, that examined the affected cattle can wash and disinfect his boots (not at or in the watering trough) before leaving the camp to go to his house.

The outside of rubber boots can be washed (scrubbed) and disinfected again at home and overall can be put in a bucket with diluted disinfectant for 1 hour before washing it.

Although the carrier state of the FMD disease virus is not transferrable to other people, it is advisable that the herdsman must not come into close contact with any other person that also works with animals on the same or other farms.

**Phase 3.**

**After informing the state veterinarian to come and take samples for laboratory testing for FMD.**

The state veterinarian/technician must immediately be contacted (the contact numbers must be ready and available in order for the manager to call immediately).

Ensure that the state veterinarian/technician come to collect the samples within a maximum period of 2 days after reporting the possible case.

Manager to follow up on the results of the laboratory tests on a daily basis – it can be expected that the test results will be available in a maximum period of 5 days.

Herds within 1 km from the possible affected herd on the farm and adjacent farms must be moved away to be at least 1km away from the herd that is now isolated (quarantined).

Only the herdsman that examined the animals initially, will tend to and handle animals in the herd and follow the procedure as described above when leaving the herd every day.

The first function of the herdsman will be to check the fences of the camp in which the cattle are to ensure that no cattle can get out of this camp and that all gates leading to or through this camp are locked.

The herdsman must also assess the grazing and give feedback to the manager regarding the grazing days left in this camp for future planning during Phase 4.

**Phase 4.**

**Manage the herd that test positive on the laboratory confirmation tests.**

If a possible case of FMD is confirmed by laboratory results, this herd must now be managed over the long term (plan for up to maximum 3 months) in such a way that the disease is not transmitted to other herds on the same or adjacent farms.

The herd is kept as an isolated herd and the management during the next 3-4 weeks is of utmost importance because that will be the period when most animals in the same herd will be infected and then they will also recover when immunity develop. The highest risk of transmission is when the animals start showing signs of FMD until they recover 2-3 weeks later.

The follow up action will be determined and directed by the State veterinarian (vaccination to slaughter or direct slaughter after recovery from the disease under a Red Cross permit at the closest approved abattoir).

**Compiled by Dr. Danie Odendaal**

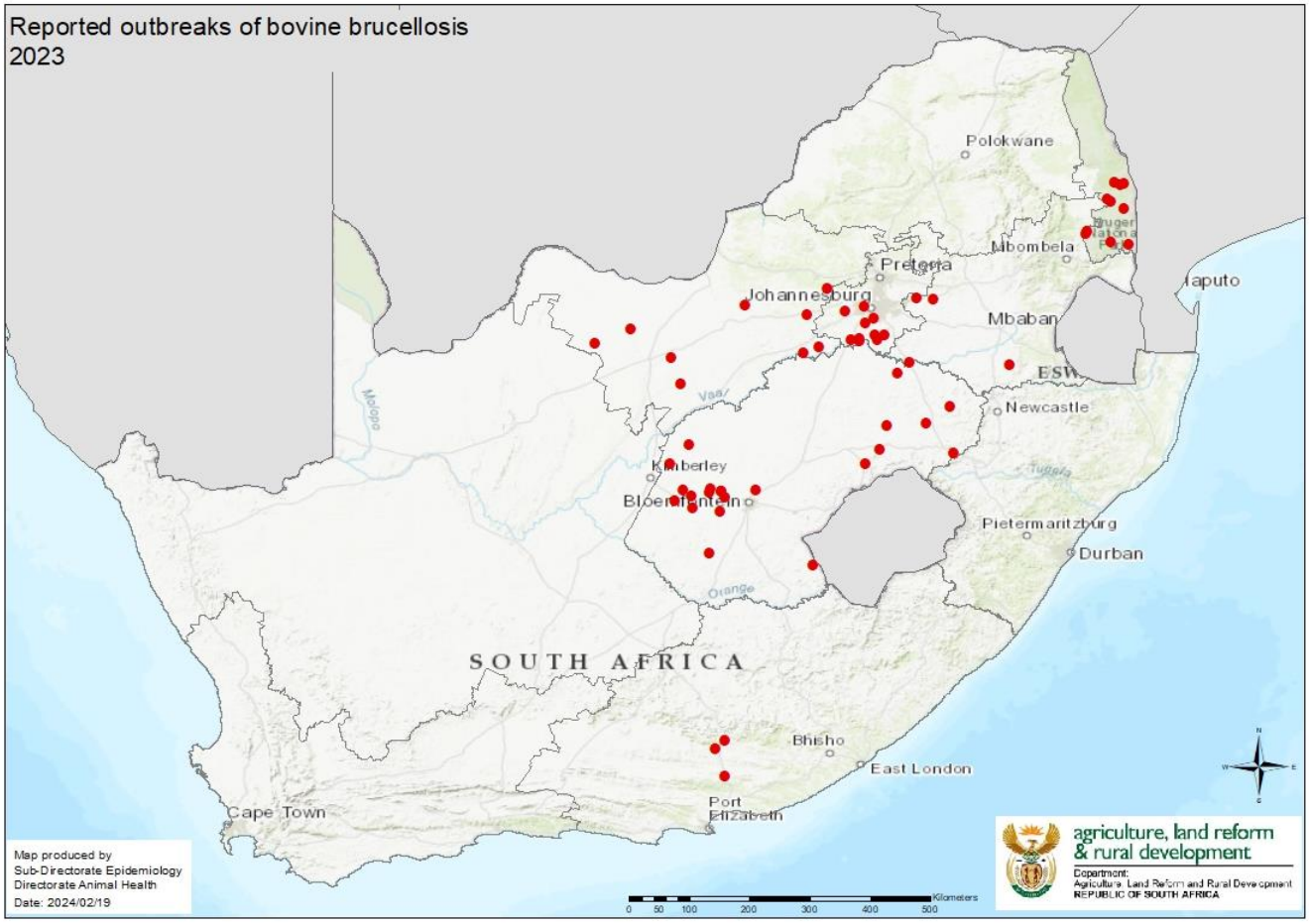
# STOP ILLEGAL MOVEMENT OF CATTLE!!!!!!!!!!

**The reason for the foot and mouth outbreaks in South Africa all had to do with the illegal movement of cattle out of the FMD controlled zones in Limpopo.**

**Owners of motor vehicles are legally bound to have number plates on their vehicles, similarly all cattle have to be branded with a registered mark to prove ownership and in future cattle will be identified with an ICAR approved RFID ear tag.**

**For detailed reports and maps visit [www.ruvasa.co.za](http://www.ruvasa.co.za) and on the toolbar click on Disease reporting**

# Bovine Brucellosis




**Brucellosis is still a huge problem!!!!!! Vaccinate your heifers between the age of 4 to 8 months with Strain 19 and RB 51 in non-pregnant animals. Contact your veterinarian to test your herd and to advise you on vaccination and biosecurity programs.**

**Strain 19 vaccine manufactured by Onderstepoort Biological Products and Design Biologix**

**RB 51 is available through MSD**

**NB Study the packet insert of the vaccines before using the vaccine!**

**Visit www.nahf.co.za and click on Info-centre for details on this HERD disease!**

**Bovine brucellosis is a herd disease, if one animal tests positive in a herd, the herd is regarded as being positive for bovine brucellosis**

## "Bovine Brucellosis – Outbreaks are mostly due to our own fault"

Again, new outbreaks of brucellosis are reported! When will we be able to say that we are winning the battle?

# Brucellosis destroyed my life, and this could happen to you too!

Dr. Frans Banting, a veterinarian who was infected with brucellosis nearly 40 years ago, tells his story and hopefully this will help all of us realize how devastating this disease is; and that we all have to stand together to eradicate brucellosis. It is each farmers responsibility to stop the spread of this disease.

Dr. Banting's story:

**Disease in cattle**
The disease Bovine Brucellosis is also known as Contagious Abortion (CA) and in Afrikaans as "Besmetlike Misgeboorte (BM)". Brucellosis is a herd disease, if an animal is tested positive in a herd, the whole herd is considered to be infected.

The disease is caused by a bacterium (pathogen) *Brucella abortus bovis*. Infected cows and pregnant heifers usually remain life-long carriers of the bacteria; spreading (excreting) the bacteria over many years. The udder and uterus are the most important organs that are infected. Blood and muscle tissue can also be infectious for a short period. Transmission by this means is very rare in humans.

Production losses occur as animals that test positive for brucellosis are slaughtered.
Additional financial losses are due to:
Cost of an abortion
Cost of perinatal mortality
Cost of temporary infertility
Increased calving intervals
Cost of replacement of dairy cows
Cost of replacement of bulls
Cost due to mortality of sero-positive cows
Milk and meat production loss
Veterinary costs

(Information provided by Dr.Chris van Dijk, dairyvetza@outlook.com)

**Clinical signs of infected cattle**
Pregnant cows and heifers which are infected for the first time, having no resistance (immunity) to the disease, usually abort at 4 to 7 months of pregnancy. Such a foetus is usually hairless and about 30 to 40 cm in length. Calves that are stillborn may also be found in

a herd. Weak calves can be born. Infected cows may abort for a second time. Retained afterbirths usually occur.

Temporary infertility after an abortion as well as mastitis may occur. Chronic cases may develop a swelling of the knee (hygroma). Cows that are carriers of the *Brucella* bacteria may show no clinical signs of the disease and could still calf annually and spread the disease to the rest of the herd. Bulls may also become infected.

**Brucellosis in humans**
In humans, brucellosis, is a zoonotic disease i.e., a disease spread from animals to humans. The disease is known as Undulant fever or Malta fever. Undulant fever is caused by *Brucella abortus bovis* and Malta fever by *Brucella melitensis* which occurs in goats.

**Transmission**
Humans are infected through one of the following ways:
Intake of infected raw milk, ice cream, butter or cheese
Ingestion or handling of infected raw or underdone meat, biltong or meat products. The risk is very small as the *Brucella* bacteria dislike dry, warm conditions. If an animal is slaughtered at an abattoir and hung (pH drop), then the risk is negligible.

**Through contact or handling of an infected still born or infected calf, uterine fluid, afterbirth or bull string. The chance of infection when helping a cow during a difficult calving or removing a dead calf, is a reality!**
Through pricking yourself with a syringe needle when vaccinating animals with Strain 19 or RB 51. Accidental contact of mucous membranes (eyes and mouth and open wounds) with the vaccine through aerosol transmission or breakages, could be disastrous to the farmer and personnel.

To summarize, if infected material is consumed (unpasteurised milk, meat, meat products, biltong) or if the bacteria/live vaccine comes into contact with mucous membranes (uterine fluid or fluid from infected calf) a person may become infected with brucellosis. Such an infection may enter the body through the eye, mouth, nasal cavity or skin.

**Symptoms**
The writer of this article was infected with brucellosis about 40 years ago. About two weeks after the infection took place, the first acute attack started.

**Fever**
A very high fever with profuse sweating occurred especially during the night. It felt as though his whole body was glowing. The worst attacks occurred from 22h00 to 01h00 the next morning. During the period from 07h00 to 14h00, the fever usually subsided.

**Muscular pain**
The pain was due to infection and was prominent in calf and thigh muscles

Arthritis and painful, swollen joints especially of the knees and hands.

**Headaches**

This is not a normal headache, but a sudden and serious stabbing headache within a localized area. It does not remain for a long period, but feels as if a long nail is driven into your skull. It disappears usually within a minute or might only last a few seconds.

**Fatigue**
An indescribable fatigue is often present. It often lasts for long periods -anything from one week to 6 months.

Weakness and muscular weakness. This weakness may be so bad that a person may not be able to work.

**Weight loss and chronic diarrhoea**
An affected person could lose 3 to 10 kg body weight within weeks.

**Depression**
Loss of interest in life. Such an attack can last for a few days or up to months.

**Insomnia:**
Waking during the night (especially between 22h00 and 24h00), one cannot sleep or one has a poor sleeping pattern.

**Appetite**
Strangely, appetite is not affected

The above listed symptoms are often confused with flu and therefore a correct diagnosis, in many cases, is not made in time. Most acute cases disappear within a month or two, A large percentage of cases develop a chronic (long lasting) infection with roughly the following symptoms:

**Muscle and joint pain**
Severe fatigue develops with a typical pattern. During the morning and early afternoon, the person feels normal. From about 15h00 to late at night fatigue sets in. This pattern repeats itself and may last for months or years.
Muscular weakness. A normal life is often not possible.

**Treatment**
If the disease is diagnosed and treated at an early stage, the patient could recover from the disease. Diagnosis is confirmed by means of a positive blood test. Unfortunately, many physicians do not recognize this disease or have insufficient knowledge of the disease and a correct diagnosis is not made.
Brucellosis is treated by giving numerous antibiotics as well as anti-inflammatory drugs, pain killers and multi-vitamins to patients. Antibiotics are given per mouth for 3 to 4 months while intra-venous drugs are given for five successive days with a drip containing nutrients.
In chronic cases the treatment is repeated if typical symptoms of the disease are seen. If infection is due to contact with the RB 51 vaccine, the infection cannot be discovered with the ordinary blood-test and the infection does not react to the ordinary treatment. Contact your medical doctor if you suspect you got infected through contact with the RB 51 vaccine.

**Consequences**

In serious cases it might be necessary to give the patient sick leave for an extended period. It may even be the best for the patient to retire or change his/her occupation. Brucellosis has its consequence and could change a person's entire life!

**Prevention**

Brucellosis is a State Controlled Disease. Cattle are tested by taking a blood sample from an animal and sending the samples to an accredited laboratory. If it is suspected that brucellosis is present in a herd, the following procedure is followed:

Test all animals on the farm over 18 months of age. All positive animals have to be branded with a C on the neck, isolated and sent for slaughter as soon as possible (under cover of a Red Cross Permit) to an accredited abattoir. The farm will be quarantined. The herd is tested every two months until two negative tests are obtained. The test is repeated after six months and then annually thereafter.

If adult cows are bought, they should be tested before they are introduced into the herd.

Use the available registered brucellosis vaccines, Strain 19 or RB 51, according to prescribed instructions on the packet insert.

When buying animals, get a vendor's declaration that these animals are from a brucellosis negative accredited herd. Quarantine them and test them again. Heifers should be kept separate until they have calved. Heifers should be tested from 4-5 months pregnancy and then again after calving.

**Humans**

**Never handle suspected infectious material such as foetuses, dead calves, live weak calves or afterbirths without gloves or eye protection.**

**Do not drink raw milk from an unknown, untested source.**

**Remember: A brucellosis infected heifer, cow, dead calf or raw milk from a positive herd is a TIME BOMB which can alter your life dramatically or destroy it totally!**

Written by: Dr. Frans Banting, Veterinarian and translated by Drs. Faffa Malan, Veterinarian (dokfaffa@nashuaisp.co.za) and Sewellyn Davey (sewellynd@gmail.com)

Although we have made positive steps in controlling Bovine brucellosis, the model disease stated in the Veterinary Strategy, we as a country is far from achieving our goal!

## If farmers will just comply by vaccinating their animals against brucellosis, according to law, the incidence of brucellosis will drop dramatically as shedding of bacteria will drop!

Many farmers are still shrugging their shoulders and saying: "Why should I test my animals as it will only cost me money and what if there are positive animals? My farm will be placed under quarantine, so I am not going to test my animals!"

Dr Trudie Prinsloo a veterinarian and legal advisor has compiled legal aspects regarding brucellosis control and it is VERY IMPORTANT that you should avail yourself with the content of this document.

It is available in English and Afrikaans.

http://nahf.co.za/brucellosis-legal-aspects-2018-12-11/

## VENDOR DECLARATION BOVINE BRUCELLOSIS

I hereby declare that I am the legal owner or authorised representative of the cattle on sale and am competent to make this declaration:

| | | | | |
|---|---|---|---|---|
| 1 | The cattle for sale are clearly and permanently identified | | Yes | No |
| 2 | The cattle for sale/slaughter were born on my farm | | Yes | No |
| 3 | The farm has a closed herd policy i.e. I do not buy in cattle, rent out grazing or speculate with cattle | | Yes | No |
| 4 | I practice bio-security on my farm to a level that is ** | Poor | Moderate | Good |
| 5 | I vaccinate my heifer calves against Bovine Brucellosis once between the ages of 4 – 8 months | | Yes | No |
| 6 | In addition, I vaccinate my cattle older than 8 months with RB51 | | Yes | No |
| 7 | I have all the cattle on my farm tested for Bovine Brucellosis | | Yes (date) | No |
| 8 | My herd has been tested negative within the past year | | Yes | No |
| 9 | I did not buy in cattle since my last negative brucellosis test | | Yes | No |
| 10 | I/my vet investigates any abortions on my farm | | Yes | No |
| 11 | To the best of my knowledge, my immediate neighbours and farms in my area are free of Bovine Brucellosis | | Yes | No |
| 12 | I use a veterinarian to advise me on my cattle's herd health | | Yes | No |
| 13 | The cattle handling facilities on my farm are | Poor | Average | Good |

Note: Vaccination does not mean freedom from Bovine Brucellosis as cattle can still be carriers
Please attach the most recent *Brucella* blood test certificate

Owner or authorised representative: ……

Signature: ……

Date: ……..

** * Biosecurity
Poor – speculates with cattle, does not vaccinate, poor fences, cattle come into contact with other cattle

Medium – Vaccinates heifers, does not buy in cattle of unknown health status

Good – closed herd/never buys in cattle, vaccinates heifers and no contact with other cattle, follows a herd health plan as advised by his veterinarian, does not allow transport trucks onto property, washes and disinfects truck after returning from the abattoir or auction grounds.

Compiled by: Dr. Sewellyn Davey, Past Chairman of the Brucellosis Steering committee of the National Animal Health Forum

**BOVINE BRUCELLOSIS IS A HERD DISEASE**

**If one animal is found to be positive for bovine brucellosis, the entire herd is regarded as positive. The State Veterinarian should take responsibility for controlling and eradicating the disease from the farm.**

# SOP for the control of Bovine Brucellosis

**Audit date:_____**

**Authorised person:_____**

| | | Y/N | Comment |
|---|---|---|---|
| **1** | Fences and gates in good condition | | |
| **2** | Gate control - log in | | |
| **3** | Disinfection of vehicles coming onto the farm | | |
| **4** | Protective clothing and boots given to people visiting the farm (cattle area) coming from high- risk areas eg. veterinarians, nutritionists, representatives, truck drivers, workers, etc. | | |
| **5** | Sterilizing equipment coming in contact with cattle | | |
| **6** | Run off water/ streams from neighboring farms | | |
| **7** | All animals identified with a brand mark and ear tag | | |
| **8** | Data base of all animals | | |
| **9** | Closed herd | | |
| **10** | When last were animals bought in or moved from another farm? | | |
| **11** | Only buy in animals from a farm which has a recent negative tested brucellosis herd certificate | | |
| **12** | Origin(s) of acquired cattle? Bought at an auction? | | |
| **13** | Keep heifers separate from herd until they have calved and tested negative for brucellosis | | |
| **14** | Quarantine camp available | | |
| **15** | Separate calving camps | | |

| | | | |
|---|---|---|---|
| **16** | Were all heifers vaccinated between 4 and 8 months vaccinated with Strain 19 or RB51? | | |
| **17** | Any cattle vaccinated with Strain 19 over 8 months of age? History over last few years. | | |
| **18** | Were there any abortions on the farm – samples taken, diagnosis? | | |
| **19** | All sexually mature cattle in herd tested for bovine brucellosis (provide proof) | | |
| **20** | Bovine brucellosis is a State controlled disease. Positive cattle are branded with a C on the right side of the neck. | | |
| **21** | Isolation of infected animals & separate handling facilities | | |
| **22** | Prohibition of movement of animals off quarantined property except under cover of a Red cross permit for slaughter at an abattoir | | |
| **23** | Prohibition of use and on-farm disposal of un-boiled, un-pasteurised or un-sterilised milk on quarantined property | | |
| **24** | Disinfection of places where infection is a possibility. | | |
| **25** | Neighbors/ recent buyers informed of infected herd status | | |
| **26** | Fly, crow and predator control | | |
| **27** | Destruction of afterbirths/abortions in a responsible manner | | |
| **28** | Beware of livestock, game interface | | |

# Trichomonosis

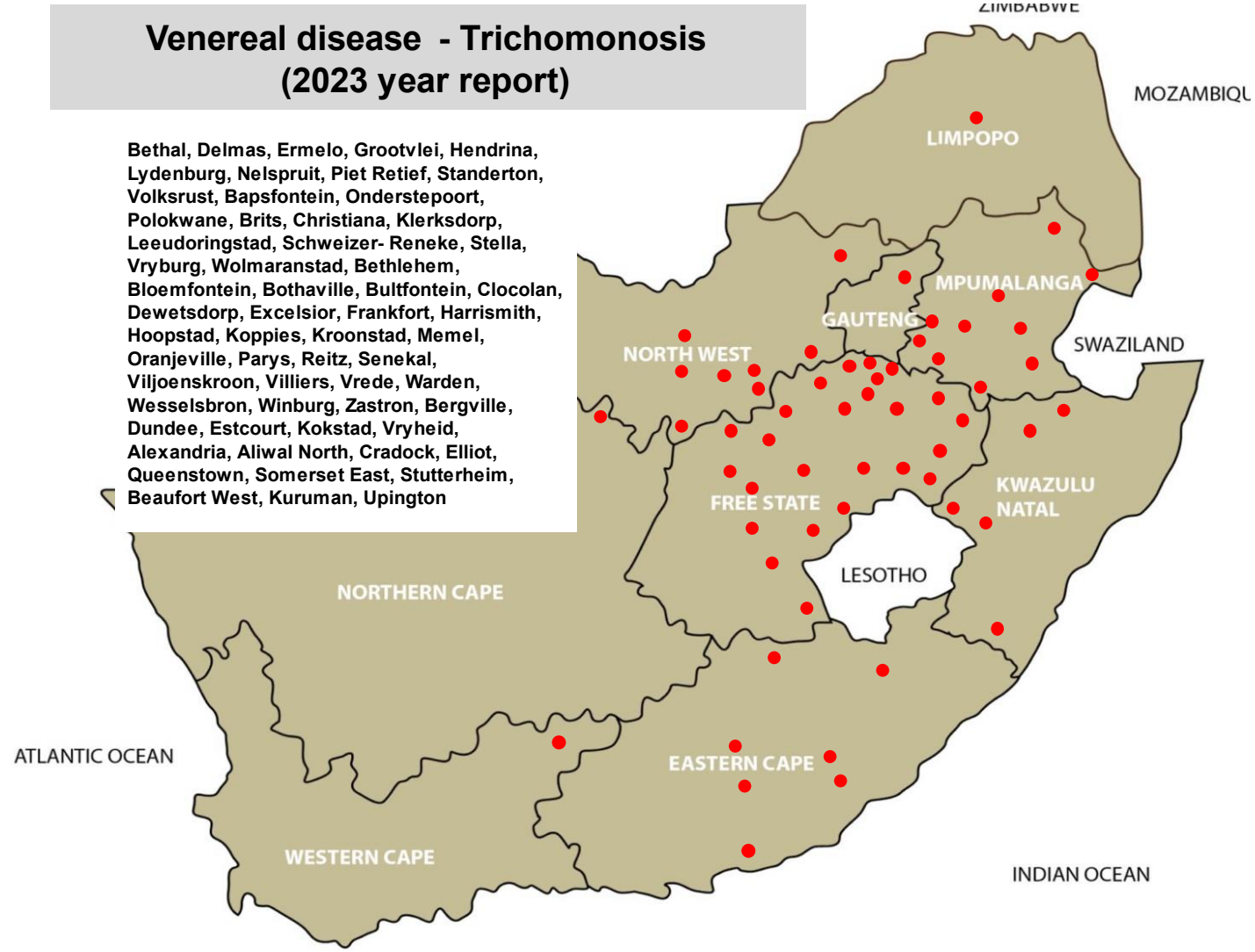
**Test your bulls for Trichomonosis and Vibriosis as these two venereal diseases can ruin your future!**

**HAVE YOU ORDERED YOUR VACCINES? Discuss your management program with your veterinarian!**

**Visit the link for all the disease maps and detailed reports [www.ruvasa.co.za](http://www.ruvasa.co.za)**

## Venereal disease - Trichomonosis (2023 year report)

Bethal, Delmas, Ermelo, Grootvlei, Hendrina, Lydenburg, Nelspruit, Piet Retief, Standerton, Volksrust, Bapsfontein, Onderstepoort, Polokwane, Brits, Christiana, Klerksdorp, Leeudoringstad, Schweizer- Reneke, Stella, Vryburg, Wolmaranstad, Bethlehem, Bloemfontein, Bothaville, Bultfontein, Clocolan, Dewetsdorp, Excelsior, Frankfort, Harrismith, Hoopstad, Koppies, Kroonstad, Memel, Oranjeville, Parys, Reitz, Senekal, Viljoenskroon, Villiers, Vrede, Warden, Wesselsbron, Winburg, Zastron, Bergville, Dundee, Estcourt, Kokstad, Vryheid, Alexandria, Aliwal North, Cradock, Elliot, Queenstown, Somerset East, Stutterheim, Beaufort West, Kuruman, Upington




**To assess your risk, talk to your local veterinarian and update your vaccination and holistic parasite management program. It is important to study what diseases are prevalent in your area and to determine your risk. Take the necessary steps in time, as from experience it is seen that vaccine availability during an outbreak could cause a huge problem. If vaccines are not available, insect and tick control are even more of an importance.**

**Shows have been opened again after the COVID epidemic and due to the presence of diseases in South Africa, strict biosecurity protocols should be practiced at all times! If animals are taken back to the farm from shows, quarantine these animals for 28 days and observe them twice daily before allowing them into the herd again**

**Visit the National Animal Health Forum's website regularly where updates on animal health are posted (www.nahf.co.za).**

www.nahf.co.za

Click on Info centre

Click on Diseases

**When last did you study the Veterinary Strategy??**

The South African Veterinary Strategy – NAHF

# Summary of disease report for May 2024

Reports from veterinary practices and laboratories (136); received from Mpumalanga (MP) 10; Gauteng (G) 10; Limpopo (L) 7; Northwest (NW) 11; Free State (FS) 25; KwaZulu-Natal (KZN) 11; Eastern Cape (EC) 16; Western Cape (WC) 17; Northern Cape (NC) 14; Feedlots (FL) 2; Biosecurity (BC) 1 and Laboratories and others (Lab) 12

## Study this list – these are the most widely spread diseases as well as other conditions as reported by veterinarians, and determine your risk in collaboration with your veterinarian.

## A list of diseases and conditions reported by veterinarians in 5 or more provinces

**Study the table above and determine your risk with your veterinarian and take the necessary preventative measures!**

| **Diseases and other conditions** | **Provinces** |
|---|---|
| Eye infections | 9 |
| | |
| | |
| | **Provinces** |
| Wireworm | 8 |
| Blue ticks | 8 |
| Anaplasmosis | 8 |
| Pasteurellosis | 8 |
| Ringworm | 8 |
| Abscesses | 8 |
| | |
| | |
| | **Provinces** |
| African red water | 7 |
| Asiatic red water | 7 |
| Pulpy kidney | 7 |
| Warts | 7 |
| Selenium deficiency | 7 |
| Joint ill | 7 |
| Lameness/foot problems | 7 |
| Lung infection | 7 |
| Dystocia (difficult calving) | 7 |
| Vaginal prolapse | 7 |
| | |
| | **Provinces** |
| Cryptosporidiosis | 6 |
| Bont-legged ticks | 6 |

| | |
|---|---|
| Heartwater | 6 |
| Blackquarter | 6 |
| Bovine brucellosis | 6 |
| Orf | 6 |
| Protein deficiency | 6 |
| Bloat | 6 |
| Diarrhoea | 6 |
| Mastitis | 6 |
| Poor conception | 6 |
| Retained afterbirth | 6 |
| Uterine prolapse | 6 |
| | |
| | **Provinces** |
| Roundworms | 5 |
| Resistant roundworms | 5 |
| Liver fluke worms | 5 |
| Coccidiosis | 5 |
| Heartwater ticks | 5 |
| Brown ear-ticks | 5 |
| Red-legged ticks | 5 |
| Nuisance flies | 5 |
| Blue tongue | 5 |
| Trichomonosis | 5 |
| Vibriosis | 5 |
| E. coli | 5 |
| Enzootic abortion | 5 |
| Energy deficiency | 5 |
| Calcium deficiency | 5 |
| Blue udder | 5 |
| Trauma | 5 |
| Sheath prolapse | 5 |

**Pneumonia occurred in animals in 8 provinces. Excellent vaccines against organisms causing pneumonia are available and your veterinarian can advise you on the use of these vaccines.**

**Tick numbers were recorded as follows: Blue ticks (8 provinces); Bont-legged ticks (6 provinces); Heartwater ticks (5 provinces); Brown ear-ticks (5 provinces and Red-legged ticks (5 provinces). Tick and biting fly transmitted diseases were recorded in the following provinces: African red water (7 provinces) and Asiatic red water (7 provinces); Heartwater (6 provinces) and Anaplasmosis (8 provinces).**

**Internal parasites, causing production loss and mortalities to production animals were reported from most areas where good rainfall occurred in previous months. Wireworm infestations (8 provinces), and strains resistant to most anthelmintic groups, caused great losses to small stock!**

**Insect transmitted diseases decreased and only Blue Tongue were reported in 5 provinces. A new vaccine against Blue tongue was registered and is available.**

**Bull testing reports were received and Trichomonosis and Vibriosis were recorded from 5 provinces, leading to poor conception rates.**

**Biosecurity measures should be kept in place at all times! Foot and Mouth disease, Bovine Brucellosis (6 provinces), Trichomonosis (5 provinces), Cryptosporidiosis (6 provinces) and BMC (snotsiekte) are some of the diseases that farmers should constantly be aware of.**

**Regularly, farmers should sit down with their herd veterinarian to update management programmes – vaccinations, breeding, biosecurity and nutrition.**

## OVINE JOHNE'S DISEASE VENDOR DECLARATION

## ON THE SALE OF SHEEP

**(Updated Draft May 2015)**

| | | |
|---|---|---|
| **1.** I hereby declare that I am the owner or authorised representative of the sheep on sale and am competent to make this declaration. | **YES** | **NO** |
| **2.** The sheep for sale are clearly identified in the accompanying description. | **YES** | **NO** |
| **3.** The sheep for sale were born on my farm. | **YES** | **NO** |
| **4.** The farm has a closed flock policy. (No live sheep are brought onto the farm from elsewhere) | **YES** | **NO** |
| **5.** I know the signs of the disease and to the best of my knowledge, all of my properties are free of cases of Ovine Johne's Disease. | **YES** | **NO** |
| **6.** I have actively looked for Ovine Johne's Disease and have had tests done for this. | **YES** | **NO** |
| **7.** To the best of my knowledge, my immediate neighbours and farms in my magisterial district of my farm(s) are free of cases of Ovine Johne's Disease. | **YES** | **NO** |
| **8.** The sheep on my properties have been vaccinated against Ovine Johne's Disease and are clearly marked with the approved ear tag. | **YES** | **NO** |
| **9.** All lambs born are vaccinated | **YES** | **NO** |
| **10.** If vaccinated, the number of years that the vaccinations have been done is | | **years** |

**NOTE:** Vaccination does not mean freedom from OJD, vaccinated animals can still be carriers.
Statement 8 and 9 apply only to already infected flocks, and such sheep can only be sold to other infected flocks by law.
Buyers should consult their veterinary advisor before any purchases.

_____ Signature

_____ Date

_____ NAME

Farm: _____

_____ OWNER OR AUTHORIZED REPRESENTATIVE

District: _____

**The use of this declaration is supported by the following organisations:**

## Websites that are there to assist you with information regarding animal health:

## National Animal Health Forum

www.nahf.co.za

Read what the Forum is all about:
http://nahf.co.za/about/

This website will become the information centre of animal health in Southern Africa.
On the toolbar click on **Stakeholders** and you will find links to producer organizations and other organizations who are participating in the NAHF
http://nahf.co.za/stakeholders/

Provincial Animal Health Forums have their own site – click on **Provinces** http://nahf.co.za/provinces/

Important is to study the Veterinary Strategy (2016 -2026) as it gives direction to where we are going with Animal Health in South Africa.
http://nahf.co.za/wp-content/uploads/Vet-strategy-final-signed.pdf

Click on **Info centre** for more information on the "war" we have against Bovine Brucellosis. Please be up to date on the role all have to play to control this zoonotic disease.
http://nahf.co.za/category/diseases/brucellosis/

Information on other controlled diseases (Foot and Mouth Disease, Ovine Johne's Disease, Pest of small stock – PPR, and African Horse Sickness) is available.

This link will continuously be updated.

Information on **antibiotic resistance** is also available at this address: http://nahf.co.za/category/antibiotic-resistance/

## Rural Veterinary Association of South Africa

**www.ruvasa.co.za**
Click on **Disease reporting** where maps and information can be sourced on the prevalence of diseases in all provinces. Abattoir reports are available. Use the information available to update management programmes

## Internal parasite control

**www.wormx.info**

# Farm gates, Fences and Foresight, the 3 F's!

## Bear this in mind as this is where most disease-causing organisms enter or exit farms!

**Major examples are: Foot and mouth disease, brucellosis, Johne's disease, TB, cryptosporidiosis, trichomonosis, vibriosis, sheep scab, resistant parasites such as red lice, blue ticks and internal parasites (Buyer beware programmes).**

**Insist on VENDOR'S DECLARATIONS when buying animals.**

**Quarantine**

**Immunization programmes**

**Speak to your veterinarian**

**Abide the law- vaccinate cattle against anthrax and heifers against brucellosis!**

**For the detailed report and previous reports go to www.ruvasa.co.za and click on Disease reporting**

## Internal parasites

**The following reports were received from practices regarding internal parasite infestations:**

| Internal parasites | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| Roundworms | | | | x | x | x | x | x | |
| Resistant roundworms | x | | x | | x | x | x | x | |
| Wireworm | x | x | | x | x | x | x | x | x |
| Brown stomach-worm | | | | | | | x | x | |
| Bankruptworm | | | | | | | | | |
| Long-necked bankruptworm | | | | | | | | | |
| White bankruptworm | | | | | | | | | |
| Large-mouthed bowelworm | | | | | | | | | |
| Nodularworm | | | | | | | | | |
| White bankrupt worm | | | | | | | | | |
| Lungworm | | | | | | | | | |
| Eyeworm | x | | | | | | | | |
| *Parafilaria* | x | | x | | | | | | |
| *Stephanofilaria* | | | | | | | | | |
| Tapeworms | | | | | x | x | x | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Liver fluke worms** | **x** | | | | **x** | **x** | **x** | **x** | |
| **Conical fluke worms** | **x** | | | | **x** | **x** | **x** | | |
| **Cysticercosis (measles)** | | | | | **x** | | | **x** | |
| **Schistosomiasis (bilharzia)** | | | | | | | | | |
| **Coccidiosis** | **x** | **x** | | | **x** | **x** | **x** | | |
| **Cryptosporidiosis** | **x** | **x** | | **x** | **x** | **x** | | **x** | |
| **Sarcosporidium** | | | | | | | | | |
| ***Giardia*** | | | | | | | | | |

**Wireworm outbreaks were reported from 8 provinces.**

## BEWARE

## A farm has been found where the wireworm strain on the farm is resistant to ALL active de-wormer groups

## Check the eye mucous membrane colour of a group of sheep in all flocks weekly! Bottle jaws and pale eye mucous membranes are indications that deaths are just around the corner!

## Get advice from your veterinarian to ascertain which de-wormer group(s) are still effective on your farm by doing a faecal egg count resistance test (FECRT). Visit www.wormx.info for training material.

The following table was received from Dr. Camilla Paterson (CamillaP@dalrrd.gov.za) from Act 36 of 1947 on 20 October 2022.

**THE CODING OF ANTHELMINTICS**

| GROUP CODE | GENERIC CLASS OF ACTIVES | EXAMPLES OF ACTIVE INGREDIENTS |
|---|---|---|
| **1.** | **Macrocyclic lactones** | **Avermectins** |

| | | |
|---|---|---|
| | | Ivermectin |
| | | Abamectin |
| | | Doramectin |
| | | Eprinomectin |
| | | Selamectin |
| | | |
| | | **Milbemycins** |
| | | Moxidectin |
| | | Milbemycin oxime |
| | | |
| **2.** | **Benzimidazoles** | Fenbendazole |
| | | Flubendazole |
| | | Albendazole |
| | | Mebendazole |
| | | Oxfendazole |
| | | Oxibendazole |
| | | Netobimin |
| | | Triclabendazole |
| | | Ricobendazole |
| | | |
| **3.** | **Imidothiazoles** | Levamisole |
| | | |
| **4.** | **Salicylanilides** | Closantel |
| | | Niclosamide |
| | | Oxyclosanide |
| | | Rafoxanide |
| | | Brationide |
| | | Clioxanide |
| | | |
| **5.** | **Nitrophenols** | Nitroxinyl |
| | | Disophenol |
| | | Hexachlorophene |
| | | Meniclofolan |
| | | Niclofolan |
| | | |
| **6.** | **Sulphonamides** | Clorsulon |
| | | |
| **7.** | **Organophosphors** | Trichlorfon |
| | | Dichlorvos |
| | | |
| **8.** | **Isoquinolones** | Praziquantel |
| | | |
| **9.** | **Spiroindole** | Derquantel (added after table compiled) |
| | | |
| **10.** | **Amino-acetonitrile** | Monepantel (added after table compiled) |
| | | |
| **11.** | **Others** | Piperazines companion animals |
| | | Bunamidine |
| | | Epsiprantel |
| | | Nitroscanate companion animals |

Check the number(s), codes on the labels of the worm remedies. Faecal egg count reduction tests (FECRT) should be done to determine which actives should be used on your farm for worm control. Worm resistance is a huge problem on many farms in South Africa.

## Visit www.wormx.info for valuable information on parasite control!

**Beware of liver fluke and conical fluke outbreaks when animals are grazing in wet areas where the intermediate hosts, water snails, are abundant.**

**Coccidiosis outbreaks were reported from 5 provinces. Young animals are most susceptible.**

**Cryptosporidiosis outbreaks, causing huge losses were reported from 5 provinces. Good colostrum in sufficient volume, protects new born animals. Biosecurity should be practised at all levels on the farm.**

**https://www.google.co.za/search?hl=en&tbm=isch&source=hp&biw=1344&bih=608&ei=PyxyXOO7OcutkwXinK3oCA&q=cryptosporidium+parvum&oq=Cryptosporidium&gs_l=img.1.1.0l10.2885.9850..16402...0.0..0.708.5719.2-4j4j3j2j1.....0....1..gws-wiz-img.....0.o66yefU7Ric**

**Prevention of Cryptosporidiosis**
Prevention is the best control method.
Animals with a well-developed immune system will generally overcome *Cryptosporidium* thus this should be the main aim in controlling *Cryptosporidium*.
A consistent, vet approved and farm appropriate vaccination program for other diseases.
Ensure no nutritional deficiencies especially vitamin A and Selenium
Excellent bio-security management
Ensure clean pathogen free water sources
Hygiene training of personnel
Consult your veterinarian

# SOLUTION

### HOLISTIC INTERNAL PARASITE MANAGEMENT FOR SHEEP AND GOATS

**Gareth Bath, Jan van Wyk and Faffa Malan**

### INTRODUCTION

Over the past ten to fifteen years there has been a radical rethink on our previous worm control strategies and assumptions due to the ever-accelerating failure of anthelmintics globally. This has caused a quiet but drastic revolution in many of the “received wisdoms” which governed advice to farmers for close to a century.

For a start, we have to abandon the underlying philosophy that internal parasites are an evil plague which should be maximally suppressed, or preferably eradicated. We have to learn to live with parasites, and prevent only the unacceptable production losses, while simultaneously breeding animals fit for the environment, rather than making the environment fit for existing animals. By regarding parasites

as part of the natural order of things, we will be able to see them simply as potential problems to be managed in order to achieve optimum productivity and profitability.

Only well integrated, holistic planning has a long-term chance of success, and unless all elements of our potential armamentarium are harnessed, the results will not match the expectations.

While this paper applies to helminths, and mainly nematodes, the parallels and inferences which can be made for ectoparasites, and indeed other organisms, should be obvious.

## WORM MANAGEMENT PRINCIPLES

### A FLOCK MANAGEMENT REQUIREMENTS

**Separation of Groups**
Since different classes of animals vary in their susceptibility to worm infection and its effects, they should be separated into groups, which are grazed, treated and managed as distinct entities. If these distinctions are not made one may be forced to treat the flock according to the most susceptible group. The most susceptible groups can still be managed and treated more intensively in a mixed flock, but this becomes more difficult.

**Identify the groups most at risk**
Research has shown that the more susceptible animals are lambs/weanlings; and pregnant/lactating ewes. The former is susceptible because they cannot yet mount an effective immune response to infection, the latter are prone to infection because of a temporary suppression of immunity. (PPRR). These groups must get special attention.

**Separation of pastures**
Unless pastures can be divided by fencing or herding, all sheep will be exposed to a similar challenge, regardless of whether they are susceptible or resistant to infection and its effects. This will prevent any differentiation in management and treatment. Diversion of pastures is not only good for internal parasite control; it also aids pasture management. Electric fences can be used as temporary pasturage dividers. In communally farmed areas, herding or tethering can achieve the same result without fencing.

**Resting of pastures**
If pastures can be separated, it is then possible to rest them effectively, which has decided advantages to pasture management and improvement. If such pastures can be rested long enough, this will also have a significant effect on the survival of worm larvae and therefore the infection rate of the flock. Although the time needed for effective resting of pastures will vary with the climate, weather and worm species, a useful rule of thumb for effective resting is at least 3 months in subtropical for temperate climates, but as little as 1 month in the tropics. The longer the rest, the better it is for worm management.

**Alternation of host species**
Sheep and goats share the same worm species and alternation with one another is ineffective for worm management. However, other species like cattle, horses and ostriches are generally not susceptible to the worms of sheep and goats. If they are used to graze pastures before or after sheep or goats, they act as "vacuum cleaners" on the pasture, as they ingest many larvae which cannot develop further into egg-laying adults. The other advantage is that the pasture can still be utilised in its growing season, which prevents the grass from becoming senescent, and optimises its usefulness. This aids in maintaining the profitability of the farm.

**Mend water leaks**
Water points (troughs, windmills) should not be allowed to leak, as this encourages the growth of grass. Since this is where sheep concentrate, the area can become lethally contaminated by larvae.

**Avoid grass in pens**
Where sheep or goats have to be penned for lengthy periods (usually at night, to combat theft or predation) there can be a fatal buildup of larvae on the grass growing there. Sheep become hungry overnight and will eat these morsels of food. In consequence they will ingest massive numbers of larvae. It is therefore necessary to remove all grass from such pens.

**Fence off moist areas**
Areas particularly prone to high moisture and therefore the survival of worm larvae, like streams and marshes, should be separated to reduce the challenge of the flock.

**Strategic movement of flocks**
The aim should be to create "safe" (not necessarily "worm free") pastures. By planning changes in camps or paddocks, stock will be subject to lower challenges and need less chemical treatment. Any grazing system where a significant proportion of the pasture is rested for a full growing season will be particularly effective.

**Quarantine and treatment**
Do not simply introduce purchased animals into the flock or herd. They must be quarantined in a worm-unfriendly pen (bare earth or concrete) and treated intensively using the best drugs and schedule. If financially feasible, do an FECRT to ensure minimum carry-over of drug-resistant parasites. Then place them on infected pasture if there is no multiple resistance.

## B GENETIC SELECTION

**Selection for resistance**

Resistance (the acquired or innate ability to prevent or minimize infection by parasites) is heritable and can be selected for, by measuring the faecal egg counts and using only those sheep with the lowest FEC's for breeding. For practical and economic reasons, this is usually only done for rams. Some successful breeding programs have been undertaken but they require good organisation and meticulous record keeping. Culling of bad ewes and their offspring is also practical and recommended.

**Selection for resilience**

Resilience (the ability to withstand the effects of infection and produce satisfactorily in spite of it) is also heritable. At present, only two proven methods, FAMACHA© and Haematocrit determination exist, although preliminary results suggest that Body Condition Scoring may also be useful. The FAMACHA© System can be used only where wireworm is the major parasite. By treating according to clinical anaemia (an indicator of poor resilience), only those sheep unable to cope with wireworm are treated. This reduces selection pressure for anthelmintic resistance and at the same time allows the farmer to cull the non-copers, in the long term thus being able to breed an animal better adapted to the environment.

It is also possible to select rams by a system of allocation of selection indexes. This is currently under investigation and will require measuring individual ram FECs and FAMACHA© scores (or haematocrits) to make the measurement more accurate.

## C MONITORING SYSTEMS

**FEC**

Regular (monthly or 2 - monthly) monitoring of faecal egg counts on a group or flock basis will help to indicate when dosing is really needed, and equally important, when it can be delayed or even omitted. A bulk (composite) FEC comprising a single count of faeces pooled from equal samples from 10 to 20 sheep is certainly cheaper than dosing the whole flock unnecessarily. Keep graphs or tables of changes to indicate when parasite buildup is likely.

**FECRT**

Every farmer should have the flock tested for drug resistance in the worm population on his farm, at regular intervals of not less than two years. Only by knowing exactly what the state of anthelmintic resistance on a farm is, can appropriate action be taken. Generalisation such as "benzimidazole resistance is found on most farms" are not much use since they cannot tell us what the situation is on a particular farm. Just as important, we must know not only that resistance is present, but also how bad it is. Can we still use the drug group at all? Separate bulk faecal samples from each drug group will reduce the cost to acceptable levels.

**FAMACHA© evaluation**

Apart from selection and culling, this system also allows frequent, cheap and easy monitoring of the current situation as regards worm infection, but applies only to haemonchosis.

## D OPTIMISE ANTHELMINTIC USE

**Establish the important parasites species present**
Unless the prevalence and importance of worm species is known, worm management becomes dangerous and unpredictable guesswork. It can also be ineffective and very costly.

**Use the most suitable drug**
If the parasites are ranked in order of economic importance and their susceptibility to groups of anthelmintics is known and combined with knowledge on the anthelmintic resistance situation on the farm, it is then possible to decide which drug(s) and formulations will be the most suitable in each situation. This includes their cost and a cost/benefit analysis. Neither the cheapest nor the most expensive drug is necessarily the best one to use. Beware of generic drugs sold by an unknown company.

**Avoid too frequent treatment**
The old approach of "dosing clean" must be completely abandoned, although not by reducing the dosage rate per animal. The aim has to be to treat only sufficient times and enough individual animals to maintain the equilibrium between parasite, host and environment (that is, worm management). Over-treatment ensures that only resistant parasites can survive. Minimal treatment programs must be the new watchword, but is must be ensured that every treatment is effective.

**Treat all and stay**
This is a major departure from the recommendations made for close to a century. If **all** sheep are to be treated, they should remain in the camp (paddock) where they were grazing before treatment. This will prevent sheep from contaminating a new pasture with only those resistant parasites which survived treatment, thus in the process unwittingly causing the selection for resistance parasites. In most cases they should remain in the paddock for at least 2-3 weeks after treatment to pick up unselected larvae for propagation of the susceptible worms in the new camp/paddock. However, should a long-acting anthelmintic be used, this period will have to be longer (2 to 3 weeks after the effective residual action ends). Particularly bolus (slow release) formulations should be used with great caution.

**Treat selectively**
It is preferable to treat only those sheep or goats unable to cope with the current infection challenge, provided the percentage of non-copers remains below 20%. This can be done with the FAMACHA© system for haemonchosis, or possibly with Body Condition Scoring for other parasites. If clinically unaffected animals are left untreated, an immediate move to new pasture will not be detrimental. In the absence of such selective treatment, just leaving a small percentage (10-25%) of the flock intentionally untreated can be beneficial to slow AR development.

**Move then treat**

*Another way of achieving the same result as "treat all and stay" is to move the flock to a new "safe" pasture and delay treatment for 2-3 weeks, to allow the seeding of the new pasture with unselected worms, before treating the flock.*

**Herbal Remedies**

These are often touted as the answer to worm control. However, unless they have been properly tested and proven by an independent body, they may be useless or even harmful.

## E IMPROVED ANTHELMINTIC EFFICACY

**Dose over the tongue**

By placing the tip of the gun towards the back of the mouth, over the tongue, closure of the oesophageal groove does not occur and thus the full dose lands in the rumen where it is absorbed more slowly - this is particularly important for anthelmintic groups which rely on prolonged blood levels for their effect, like the benzimidazoles and macrocyclic lactones.

This prolonged level of activity (a long so-called "killing zone") means that the drug against which worms have developed a moderate degree of resistance can be made more effective, although of course the resistance of the worms is not reduced, but rather partially overcome. However, dosing (drenching) over the tongue, if done carelessly, can result in two very severe consequences:

the dose can land up the lungs, and cause pneumonia
the nozzle of the dosing gun can penetrate he pharynx and cause severe, fatal infection.
If the sheep jumps forward, the operator must let the gun 'ride' with the sheep, and not oppose it, and the dose must be delivered by a measured, steady pressure rather than a single squeeze.

**Reduce feed intake**

It has been shown in the case of benzimidazoles and closantel that reducing feed intake (i.e. starvation) for 24 hours prior to treatment will improve the absorption of the remedy because of the lower rate of flow of ingesta. As in the previous case, this results in a more effective exposure of the parasite to the drug.

In turn, this means that the drug is clinically more effective and can partially overcome drug resistance.

**Repeat the dose**

This only applies to benzimidazoles and macrocyclic lactones. Two doses given 12 hours apart will again increase the "killing zone" of these drugs, allowing more time for a cumulative killing effect. Thus, resistant worms can still be killed, although this is achieved at a cost since two normal doses rather than one are needed. A double dose, given at one time, will have **no** beneficial effect with these two groups of anthelmintics.

**Increase the dose**

This only applies to drugs which rely mainly on peak concentrations for their effect. In this case, a double amount of drug given at one time can overcome drug resistance in worms. This is useful for

the imidasothiazoles (levamisole). There is however a relatively low safety margin, only 2x – 3x the therapeutic dose may sometimes cause problems of toxicity.

**Correct dosage**
It may seem too obvious, but a lot of problems are caused by not weighing sheep, not calibrating and checking the dosing gun for accuracy and repeatability, and not reconciling the amount of drug used with the number of sheep treated. Underdosing may be a factor leading to anthelmintic resistance, but it is more likely to be the cause of ineffective treatment.

**Drug combinations**
Combining drugs from different activity groups in one dose may temporarily improve the effective clinical action of these drugs, but only if each drug concerned is unaffected by resistance. However, many authorities believe that this will not slow the development of resistance and could even enhance it. If drugs are mixed, this can only be done if the formulation has been fully tested and carried by experts, in registered products. Home-made combinations are dangerous and illegal. Such combinations often just give temporary relief and disguise the emergence of AR until it is severe and multiple.

**Sustained delivery**
Medicated blocks or controlled release capsules will increase the clinical efficacy of those drugs which rely on prolonged action for their effectiveness. However, we have to bear in mind that prolonged exposure to a drug at low levels will increase selection for resistance. This approach will therefore not be permanent, and should only be used for very specific, limited purposes (e.g., weaners on green pasture) and not the entire flock in all circumstances.

**Goats are different**
Because of differences in the rate of metabolising drugs, goats must be treated as different to sheep. This means that goats must often be given a higher dosage rate than sheep except where there is a possibility of toxicity. Note that many anthelmintics may not be registered for use in goats, or that the recommended dose given is the same as for sheep. Unfortunately, therefore if the product is not registered for use in goats, or the dosage rate is increases, the user has no legal redress if the product is used and fails, or causes losses.

## F EFFECTIVE PLANNING

**Use the expert**
Knowledgeable veterinarians, who know the area, farming systems and risks can construct a simple, practical, economic and effective holistic worm management strategy. They can consult helminthologists where necessary.

**Use a program**
Unless a basic planned system is in place and is used, actions will inevitably be largely reactive and based on *ad hoc* or panic decisions. But this does not imply a rigid adherence to the basic plan.

**Flexibility**
The program must be flexible to allow for changes in weather, management and farming systems, drug costs or other factors.

**Treatment strategy**
It is probably true that on most farms animals are either dosed too often, or with inappropriate drugs, or at the wrong times, or with no coherent plan. By setting up a well thought out dosing plan, we can cut out ineffective doses which only add to the selection pressure for parasite resistance. This is one of the areas in which the knowledge and skills of the local vet are vital for success.

## II OTHER MEASURES AND FACTORS

**Protein supplementation**
Since resistance and resilience are dependent on adequate nutrition, and the most important factor identified is protein, it is possible to ameliorate the effects of parasites by feeding animals better. We need to know when and how much of what supplement must be supplied to which class of animal, and what the cost / benefit ratio would be before this aspect can be fully integrated into our overall approach.

**Condition scoring**
The early indications are that this may be useful for identifying individual animals for treatment against some non-haematophagous worm species. The principle is that animals with a condition score which is more than half a score **below** the flock or herd average are treated. If the animals have a condition score below 2 and the risk of worm infestation is high, then treatment should be given.

**Weather monitoring**
Factors which affect the survival, development and infectivity of larvae on pastures must be considered. Temperature, rainfall, rainfall pattern, humidity and could cover will all have an effect and must be considered when making worm management decisions.

**Flock/Herd history**
Without knowing details of numbers, types, ages, reproductive stages, treatment, stocking rates, grazing pressures and livestock movements, decision making is at best arbitrary and at worst potentially disastrous.

**Veld/pasture assessment and history**
Coupled with livestock data, the advisor has to consider details of the veld or pasture type, its condition, growth stage, the soil cover, soil moisture, slope land the grazing history.

**Assessment and decision support computer programmes**

A few of these are available internationally, others are under development. Using computer power, they evaluate all the known risk factors and advocate alternative actions based on the given situation and data provided. The evaluation is of course only as good as the inputs given and these programmes cannot substitute entirely for the skills, knowledge and assessment of the advisor or the farmer.

## III CONTROL MEASURES UNDER DEVELOPMENT

### Predacious fungi

Nematophagous fungi in the soil can severely constrain larval survival by immobilizing and killing them. Practical implementation is, however, still a long way off.

### DILUTION OF RESISTANCE

By the re-introduction of susceptible strains to a farm where a parasite strain has become resistant to anthelmintics, it is possible to significantly reduce the degree of resistance by a dilution effect. There is some indication that this can be effective on severely affected farms, by the process is slow, labour-intensive and costly.

### Vaccination

A vaccine against wireworm is now available, discuss its use with your veterinarian

### Condensed Tannins

Plants containing higher levels of tannins suppress worm egg counts, but also have problems with palatability and digestibility.

### Cupric oxide

Needles of oxidised copper wire dosed into the rumen will reduce worm egg counts, but the long-term toxic effects (especially with sheep) have to be considered, especially if the diet is high in copper.

### Change in body weight

Lack of satisfactory weights gain, or even weight loss, can be considered as indicators for the treatment of individual animals in a flock. However, weighing is time consuming and may not be applicable in a given situation.

## IV INTEGRATED PARASITE MANAGEMENT

If any of the foregoing principles are used exclusively, failure will be certain. It is only by using a prudent mix of strategies that sustainable, cost-effective measures can be established. The decision on which measures are to be used in a given situation can only be made by an expert who is conversant

with local conditions. This programme will of course have to be drawn up in close consultation with the livestock owner(s).

Whether the farming system is based on communal ownership, subsistence farming, small-scale farming, commercial farming or stud farming, the principles remain the same. Only the mixture and weighting of measures used to manage parasites will vary according to circumstances.

## V ACTION CHECKLIST

To implement the holistic use of all the available worm control strategies and principles, the veterinary advisor needs to go about setting up a sustainable programme methodically. The starting point is always the basic management programme, although even this may need to be modified to accommodate sustainable parasite control. Once the key activities like lambing, mating and shearing have been established, and the basic grazing programme has been decided, the requirements of effective parasite management may be superimposed. Planning is a dynamic and never-ending activity, and plans need to be revised each year as necessary.

By following the checklist, advisors can ensure that all appropriate measures have been considered and used:

1. Make sure that the farmer understands and supports the need for change
2. Ensure that all measures are practical, integrated and financially defensible
3. Use an incremented approach, do not try to do everything at once
4. Evaluate and use knowledge in stock flow, reproductive programme, grazing systems, pasture or veld conditions and weather to decide on appropriate and integrated worm management actions.
5. Are the groups/classes of animals properly separated? If not, implement this if possible.
6. Give weanlings and late pregnant/lactating ewes most attention and the best circumstances
7. Are the pastures properly fenced, and are there enough camps for effective management?
8. Implement a satisfactory pasture resting program. Keep well rested pastures for susceptible groups
9. Graze camps sequentially by cattle, small stock and other host species if available
10. Make sure that animals are getting the right nutrition, especially protein, and avoid putting animals in poor condition onto high- risk pastures
11. Mend water leaks and fence off moist areas
12. Remove all grass from pens where animals are routinely held for long periods
13. Buy rams selected for resistance (FEC) and/or resilience (FAMACHA©/haematocrit)
14. Cull the minority of ewes which are unable to cope with prevailing parasite burdens
15. Institute a planned program for FECs to monitor the parasite situation
16. Ensure that the FECRT is done every second year
17. Introduce TST and Institute the FAMACHA© system for haemonchosis or BCS for other worm species
18. Ensure that the types and relative importance of parasites have been established on each farm as well as when they are likely to occur
19. Select and use the best drug for each situation

20. If all animals are treated, do not move to new pastures for 2-3 weeks or longer depending on the drug and formulation used
21. Ensure that the drug used is given in the most effective way
22. Quarantine and treat all introductions and put them onto infected pasture
23. Stick to what is possible in a given situation

## FAMACHA cards can be obtained through your veterinarian (famachasystem@gmail.com)

**Serious problems due to diarrhoea in lambs and calves were received from many areas. In many instances *Cryptosporidium* and pathogenic strains of *E. coli* were involved. Consult your veterinarian for help!**

**https://www.google.co.za/search?hl=en&tbm=isch&source=hp&biw=1344&bih=608&ei=PyxyXOO7OcutkwXinK3oCA&q=cryptosporidium+parvum&oq=Cryptosporidium&gs_l=img.1.1.0l10.2885.9850..16402...0.0..0.708.5719.2-4j4j3j2j1.....0....1..gws-wiz-img.....0.o66yefU7Ric**

## External parasites

**The following reports were received from practices regarding external parasite infestations:**

| External parasites | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| Blue ticks | x | x | x | x | x | x | x | x | |
| Resistant blue ticks | | | | | x | x | | | |
| Heartwater ticks | x | x | x | x | | x | | | |
| Brown ear-ticks | x | x | | | x | x | | | x |
| Bont-legged ticks | x | | | x | x | x | x | x | |
| Red-legged ticks | x | | | x | x | x | x | | |
| Paralysis ticks | x | | | | x | | | | x |
| Tampans | | | | | | | | | |
| Biting lice | x | | | | x | x | | | |
| Sucking lice | | | | | x | | x | | x |
| Fleas | | | | | | | | | |
| Itch mites | x | | | | | | | | |
| Sheep scab | | | | | x | | x | | x |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Mange mites** | x | | | | x | x | | | |
| **Nuisance flies** | | | | x | x | x | x | x | |
| **Midges** | x | | | x | x | x | | | |
| **Mosquitoes** | | | | | x | x | | | |
| **Blowflies** | x | x | | x | | x | | | |
| **Tsetse flies** | | | | | | x | | | |
| **Screw-worm** | | | | | | | x | | |
| **Gedoelstia (uitpeuloogsiekte)** | | | | | | | | | |
| **Nasal bot** | x | x | | | x | | | | |

**Blue ticks were reported from 8 provinces. Blue ticks (African and Asiatic blue ticks) are able to transmit African and Asiatic red water, anaplasmosis and lumpy skin disease.**

**Make sure to assess the blue tick resistance status on your farm before buying tickicides. Your veterinarian will be able to collect engorged blue ticks to be tested for resistance.**

**Heartwater parasites, are transmitted by bont-ticks.**

**Ticks also cause anaemia, udder, ear and hide damage.**

**Most important is to prevent udder damage. Ticks with long mouth parts such as bont and bont-legged ticks, may cause permanent damage to teats and the udder.**

**Screw-worm infestation is rife after tick damage.**

**Actives to be tested for resistance are: organophosphates, pyrethroids, amidines and fipronil. Actives, only registered for controlling blue ticks are: macrocyclic lactones, fluazuron (acaracide growth regulator).**

**Discuss your tick control programme with your veterinarian.**

## Tick borne diseases

**The following tick-borne diseases were reported by practices in the provinces:**

| Tick borne diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **African red water** | x | | x | x | x | x | x | x | |
| **Asiatic red water** | x | x | x | | x | x | x | x | |
| **Anaplasmosis** | x | x | | x | x | x | x | x | x |
| **Heartwater** | x | x | x | x | | x | x | | |
| **Lumpy skin disease** | | | | | | x | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Corridor disease** | | | | | | x | | | |
| **Theileriosis** | | | | | | | | | |

**Asiatic red water is spreading and is one of the deadliest diseases in cattle.**

**Deaths occur when introducing susceptible animals into areas where tick borne diseases are present!**

**Numerous mortalities were reported.**

**Vaccinate your animals before 8 months of age. Contact your veterinarian for advice!!**

**Anaplasmosis outbreaks were reported from 8 provinces! Biting flies are the main transmitters of this disease.**

**Using the same needle when vaccinating cattle may also be the reason for an anaplasmosis outbreak!**

**Red water and anaplasmosis can be confirmed by examining blood smears under a microscope.**

**The keyword is: vaccinate your animals! Contact your veterinarian.**

**Beware of moving susceptible animals into areas where infected ticks are present or moving animals with infected ticks to disease free areas! Before deciding to buy animals speak to both veterinarians – from the area moving the animals and the area where they are moving to.**

## Tick toxicosis

| Tick toxicosis | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Sweating sickness** | | | | x | | | | | |

Sweating sickness is caused by a toxin injected into calves by females of the bont-legged tick specie.

## Insect transmittable diseases

**The following insect transmittable diseases were reported by practices in the provinces:**

| Insect transmittable diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Lumpy skin disease** | | | | x | x | x | | | |
| **Pseudo Lumpy skin disease (Allerton virus)** | | | | | | | | | |
| **Ephemeral fever (Three-day-stiff sickness)** | | x | | | x | x | | | x |
| **Blue tongue** | | | | x | x | x | | x | x |
| **Rift Valley Fever** | | | | | | | | | |
| **Wesselsbron disease** | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Nagana** | | | | | | **x** | | | |

Make sure your animals are vaccinated before the next rainy season!!!!!!!!!! Do not vaccinate your animals during an outbreak on your farm.

Lumpy skin disease is transmitted by biting flies and insects and some ticks. When an outbreak occurs on a farm, needle transmission of the virus is possible. Three provinces reported this disease. If proper vaccination took place hardly any cases should be reported.

Three day stiff-sickness and lumpy skin disease, low conception rates were reported in herds where these diseases were rife.

Five provinces reported Blue Tongue. As midge, mosquito and biting fly numbers decreases due to colder temperatures, insect transmitted diseases will also decrease

A new inactivated blue tongue vaccine was registered.

An abortion storm may indicate an outbreak of Rift Valley Fever. This viral disease is a zoonosis. Do not come into contact with infected material such as afterbirths and blood.

# Contact your veterinarian immediately when having an abortion storm in your animals

## Venerial diseases

**The following venereal diseases were reported by practices in the provinces:**

| Venereal diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Trichomonosis** | **x** | | | **x** | **x** | **x** | | | |
| **Vibriosis** | **x** | | | **x** | **x** | **x** | **x** | | |
| **Pizzle disease** | | | | | | | | | |
| ***Actinobacillus seminis* plus HPA** | | | | | **x** | | | | |

# BEWARE

## New cases of trichomonosis are reported every month and this disease is out of control.

**Make sure to buy bulls from farmers where biosecurity measures are in place and bulls are tested for these diseases at regular intervals. Trichomonosis were reported from 4 provinces.**

**Venerial diseases are HERD diseases! Calculate your losses if these diseases are not eradicated on your farm!**

Make sure that fences are in good order and gates closed so that bulls cannot escape to neighbouring cows that may be infected with *Tritrichomonas* and become infected or infected neighbouring bulls are jumping fences to your farm.

Cattle study groups should discuss preventative and control measures with their veterinarians. **Be sure to test bulls regularly for these diseases**.

**Beware when buying in or sharing bulls! Remember female animals may also be infected.**

**Study the Good management SOP's for cattle farmers on the RPO website**

**Consider Trichomonosis as an area disease, farmers should work together to keep areas free from diseases such as trichomonosis, brucellosis, tuberculosis, Johne's disease and sheep scab.**

## Bacterial diseases

The following bacterial diseases were reported by practices in the provinces:

| Bacterial diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Anthrax** | | | | | | | | | |
| **Blackquarter** | x | x | | x | x | x | | x | |
| ***Clostridium sordelii*** | | | | | | | | | |
| ***Clostridium septicum*** | | | | | | | | | |
| **Clostridial diseases** | | | | | | | | | |
| **Botulism** | x | | | | | | | | |
| **Pulpy kidney** | x | x | | x | x | x | x | | x |
| **Lamb dysentery** | | | | | | | | | |
| **Swelled head** | x | | | x | x | x | | | |
| **Red gut (cattle)** | x | | | | | x | | | |
| **Blood gut (sheep)** | x | | | | x | x | | | x |
| **Tetanus** | | x | | | x | | x | | |
| **Salmonellosis** | x | | | | | x | | | |
| ***Klebsiella*** | | | | | | | | | |
| **Bovine brucellosis** | x | | x | x | x | x | x | | |
| ***Brucella melitensis* (goats)** | | | | | | | | | |
| **Ovine brucellosis (Ram's disease)** | | | | | x | | | | |
| **Bovine tuberculosis** | | | | | | x | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Johne's disease** | | | | | | | | | |
| **Leptospirosis** | | | | | | | | | |
| **Listeriosis** | | | | | | | | | |
| ***Pseudomonas*** | | | | | | x | | | |
| **Pasteurellosis (see pneumonia - lungs)** | x | x | x | x | x | x | x | x | |
| ***Pasteurella multocida*** | | | | | | | | | |
| ***Fusibacterium necrophorum*** | | | | | | | | | |
| **Septicaemia** | x | | | x | x | x | | | |
| ***E. coli*** | | | x | | x | x | | x | x |
| ***Klebsiella*** | | | | | | | | | |
| ***Coxiella* (Q-fever)** | | | | | | x | | | |
| ***Mycoplasma*** | | | | | | | | | |
| ***Histophilus somni*** | | | | | | | | | |
| **Enzootic abortion** | x | | x | | x | | x | x | |
| **Lumpy wool (*Dermatophilus*)** | | | | | | | | | |
| **Bovine dermatophilosis (Senkobo disease)** | | | | | | x | | | |
| **Uterine gangrene** | | | | | | | | | |
| **Wooden tongue (*Actinobaillus lignieresii*)** | | | | | | | | | |
| **Lumpy jaw (*Actinomycosis bovis*)** | | | | | | | | x | |
| **Interdigital dermatitis** | | | | | | | | | |

**Most of the bacterial diseases can be prevented through vaccination! Discuss and update your program regularly in consultation with your local veterinarian!**

**Multi-clostridial vaccines should be used if blackquarter outbreaks still occur when only using a vaccine containing *Clostridium chauvoei*. Remember to give a booster vaccine when using an inactivated vaccine for the first time. Read the packet insert!! Study the table above and determine the risk for animals getting infected from bacterial and viral diseases on your farm.**

**Get advice from your veterinarian on *Cryptosporidium*/*E. coli*/Rota and Corona virus outbreaks in your area and what to do to prevent losses in lambs and calves. Biosecurity!!!!!!!!**

**Enzootic abortion contributes to the disappearance (verdwyning siekte) of foetuses in sheep and goats scanned pregnant. Vaccinate replacement ewes with the live vaccine before putting them to the ram! An inactivated vaccine can be given to pregnant animals.**

**Pulpy kidney (*Clostridium perfringens* type D – *epsilon* toxin) is still the biggest killer of sheep. There are various factors that could lead to pulpy kidney such as: the intestinal tract stops functioning (stasis), sudden change from poor veld to lush artificial pastures; sudden change in diet; grazing of fodder crops such as lucerne, green wheat and green oats, diet high in protein, overeating of concentrates or fertile pastures, deworming and coccidiosis infection. Sudden changes in the weather and grazing in wilted pastures, may also play a predisposing role.**

**Be sure to vaccinate animals against botulism especially if chicken litter is going to be fed to animals. Make sure that there are no carcasses in the water troughs and bales. Prevent pica by giving licks containing phosphorous.**

**Q-fever, a zoonosis, seems to be more prevalent, beware! An abortion storm in sheep should make farmers aware of Q-fever!**

**Challenging farmer's unions and study groups to eradicate brucellosis in their area!! Many success stories are received! Brucellosis is a herd disease!!!**

**Ask for vendor's declarations before buying in animals and quarantine them before releasing them onto the farm!!!!**

**Calves may become infected when drinking infected colostrum!**

**A positive heifer is a TROJAN HORSE!!! This latent carrier of brucellosis may only test positive after calving!!!!!**

**Use a dedicated syringe just for using Strain 19 vaccine. Paint it red! When administering Strain 19 vaccine in adult cattle, these animals may test positive for brucellosis. A few Strain 19 bacteria may remain in a syringe to be used for other vaccines.**

**PREVENTION IS BETTER AND CHEAPER THAN TREATMENT!**

**Do not save yourself bankrupt!**

**Q-fever, enzootic abortion, brucellosis, are all zoonotic diseases and should be handled with utmost care!**

## Viral diseases

The following viral diseases were reported by practices in the provinces:

| Viral diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| BMC (snotsiekte) | | | | x | x | | | x | x |
| Rabies (cattle and sheep) | | | x | | x | | | | |
| BVD | x | | x | | | x | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **IBR** | | | | | x | | | | |
| **BRSV** | | | | | | | | | |
| **PI3** | | | | | | | | | |
| **Maedi visna virus** | | | | | | | | | |
| **Rotavirus** | | | | | | | | | |
| **Coronavirus** | | | | | | | | | |
| **Enzootic bovine leucosis (EBL)** | | | | | | x | x | x | |
| **Foot and Mouth Disease** | | | | | | | x | | |
| **Sheep leucosis** | | | | | | | | | |
| **Jaagsiekte** | | | | x | x | | | | |
| **Orf** | x | | | x | x | x | x | x | |
| **Warts** | x | x | | x | x | x | | x | x |
| **Herpes mammillitis - goats** | | | | | | | | | |

**There is no treatment for viral diseases with the result that the animal's immune system has to be stimulated by vaccinations (if vaccines are available).**

**Preventative vaccinations are the best way to protect animals against viruses and bacteria causing pneumonia.**

**Keep cattle and wildebeest well separated especially when wildebeest are under stress to prevent snotsiekte outbreaks! There is also a sheep associated form of the disease.**

## Have a dialogue with your neighbour if wildebeest are in the area.

**BMC (snotsiekte) is a notifiable disease and have to be reported to the State Veterinarian.**

http://nahf.co.za/controlled-and-notifiable-diseases/

**Discuss vaccination programmes and biosecurity measures with your veterinarian.**

**Orf (vuilbek) is a zoonosis.**

**Enzootic bovine leucosis virus is transmitted by blood (vaccinations, rectal examinations, certain procedures, etc.) This disease, EBL, can be latent in your herd. As there is no vaccine available, be extra careful not to introduce the disease into your herd. More information is received warning us that this disease is also a zoonosis. Talk to your veterinarian as to take necessary precautionary measures.**

## Fungal diseases

The following fungal disease was reported by practices in the provinces:

| Fungal diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| Ringworm | x | x | x | x | x | x | x | | x |

## Protozoal diseases

| Protozoal diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| Besnoitiosis (olifantsvelsiekte) | | | x | x | | | | | |

## Toxicities

**All plants and chemicals that have been responsible for toxicity in the past are listed. The following toxicities were reported by practices in the provinces during May 2024:**

| Toxicities | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| Cardiac glycoside | | | | | | | | | |
| Slangkop | | | | | | | | | |
| Gifblaar | | | | | | | | | |
| Gousiekte | | | | | | | | | |
| Wilde dadel | | | | | | | | | |
| *Cestrum* (ink berry) | | x | | x | x | | | | |
| Tulip | x | | | | x | x | | x | |
| *Cynanchum* (bobbejaantou) | | | | | | | | x | |
| Facial eczema | | | | | | | | x | |
| *Lantana* | | | | | | x | | | |
| Prussic acid | | | | | | | | x | |
| Damkweek (cyanide) | | | | | | | | | |
| *Acacia nilotica* | | | | | | | | | |
| *Senecio* | | | | | | | | | |
| *Cotula nigellifolia* (stagger wood) | | | | | | | | | |
| Geeldikkop (duwweltjies) and dikoor | | | | x | | | | | |
| Vermeersiekte (*Geigeria* spp.) | | | | x | | x | | | |
| Misbek (plant poisoning) | | | | | | | | | |
| *Hertia pallens* (Nenta, krimpsiekte) | | | | | | | | x | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Chrysocoma ciliata*** **(bitterbos)** | | | | | | | | | |
| ***Crotalaria*** **(stywesiekte bossie)** | | | | | | | | | |
| ***Solanum incanum*** **(maldronksiekte)** | | | | | | | | | |
| ***Dipcadi glaucum*** **(wild-onion, malkop ui)** | | | | | | | | | |
| ***Gnidia burchelli*** **(Januariebos, besembossie, harpuisbos))** | | | | | | | | | |
| ***Gomphocarpus (Asclepias) fruticosus*** **(milkweed)** | | | | | | | | | |
| ***Heliotropium*** **(potato weed)** | | | | | | | | | |
| **Bracken fern** | | | | | | | | | |
| **January bush (*Gnidia polycephalatus*)** | | | | | | | | | |
| **Chinkerinchee** | | | | | | | | | |
| **Ceylons rose** | | | | | | | | | |
| **Datura** | | | | | | | | | |
| ***Sarcostemme viminale*** **(melktou, caustic bush)** | | | | | | | | | |
| ***Malva parviflora*** **(kiesieblaar)** | | | | | | | x | | |
| **Bitou** | | | | | | | | | |
| ***Cotula nigellifolia*** **(Stagger weed, stootsiektebossie)** | | | | | | | | | |
| **Eucalyptus (bloekom) bark/leaves** | | | | | | | | x | |
| **Black locust tree (*Robinia pseudoacacia*)** | | | | | | | | | |
| ***Nerium oleander*** **(Ceylons rose)** | | | | | | | | | |
| **Kikuyu** | | | | | | | | | |
| **Ryegrass** | | | | | | | | | |
| **Grass staggers** | | | | | | | | | |
| **Lush pastures (Dikkop)** | | | | | | | | | |
| **Lasiospermum (Ganskweek)** | | | | | | | | | |
| ***Solanum incanum*** | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|
| **Paspalum staggers** | | | | | | | | | |
| ***Phalaris aquaticum* (Phalaris staggers)** | | | | | | | | | |
| **Photosensitivity (Turksnaald, *Erodium moschatum*)** | | | | | | | | | |
| **Photosensitivity (Stellenbosch)** | | | | | | | | | |
| **Photosensitivity (secondary)** | | | | | | | | | |
| **Swelled head (Dikkop) toxicity)** | | | | | | | | | |
| **Sporodesmin toxicity** | | | | | | | | | |
| **Lusern** | | | | | | | | | |
| **Mycotoxicosis** | | | | | | x | | x | |
| **Apergillus** | | | | | | | | | |
| **Aflatoxin** | | | | | | | | | |
| **Diplodiosis** | | | | | | | | | |
| **Lupins** | | | | | | | | | |
| **Soya** | | | | | x | | | | |
| **Syringa berries** | | | | | | | | | |
| **Acorn** | | | | | | | | | |
| **Cycad** | | | | | | | | | |
| ***Alium cepa*** | | | | | | | | | |
| **Kraalbos, Geelbos** (*Galenia africana*) | | | | | | | | | |
| **Radish** | | | | | | | | | |
| **Carrot poisoning** | | | | | | | | | |
| **Onion poisoning** | | | | | | | | | |
| **Bracken fern** | | | | | | | | | |
| **Pollen beetle** (*Astylus atromaculatus*) | | | | | | | | | |
| **Senna toxicity** | | | | | | | | | |
| **Water contamination** | | | | | | x | | | |
| **Oxalates** | | | | | | | | | |
| **Nitrate** | | | | | x | | | | |

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|---|---|---|---|---|---|---|---|---|---|
| ***Amaranthus*** | | | | | | | | | |
| **Tannins** | | | | | | | | | |
| **Urea** | | | | | x | | | | |
| **Excessive protein** | | | | | | | | | |
| **Salt** | | | | | | | | | |
| **Snake bite** | | | | x | | x | | | |
| **Bee stings** | | | | | | | | | |
| **Moth cocoons (impaction)** | | | | | | | | | |
| **Blue green algae** | | | | | x | | | | |
| ***Microcystis aeruginosa*** | | | | | | | | | |
| **Copper** | | | | | x | | | | |
| **Selenium** | | | | | | | | | |
| **Zinc** | | | | | | | | | |
| **Calcium overdose** | | | | | | | | x | |
| **Zinc sulphite** | | | | | | | | | |
| **Fluoride** | | | | | | | | | |
| **Lead** | | | | | | | | | |
| **Arsenic** | | | | | | | | | |
| **Alcohol poisoning** | | | | | | | | | |
| **Chemical products** | | | | | | | | | |
| **Paraquat** | | | | | | | | | |
| **Phosamine** | | | | | | | | | |
| **Aldicarb** | | | | | | | | | |
| **Organophosphate** | | | | | | | | | |
| **Zinc phosphide** | | | | | | | | | |
| **Xanthium** | | | | | | | | | |
| **Pyrethroid** | | | | | | | | | |
| **Amitraz** | | | | | | | | | |
| **Levamisole** | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|
| **Macrocyclic Lactone/Ivermectin** | | | | | | | | | |
| **Moxidectin** | | | | | | | | | |
| **Oxytetracycline** | | | | | | | | | |
| **Tilmicosin** | | | | | | | | | |
| **Bromoxynil nitrate** | | | | | | | | | |
| **Ionophor** | | | | | | | | | |
| **Monensin** | | | | | | | | | |
| **Hypo** | | | | | | | | | |
| **Diazinon** | | | | | | | | | |
| **Carbofuran (carbamate)** | | | | | | | | | |
| **Glutaraldehyde** | | | | | | | | | |
| **Glyphosate** | | | | | | | | | |
| **Chemical products** | | | | | | | | | |
| **Chicken litter** | | | | | | | | | |
| **Medicated maize seed** | | | | | | | | | |

**Keep all chemical products locked!**

## Beware when buying animals or moving them into rested grazing camps as they are the animals which usually eat toxic plants such as gifblaar, tulip, gousiekte, and ink berries (*Cestrum*).

**Do have activated charcoal on the farm as charcoal is the antidote for tulip poisoning! Dosage: 2 gram per Kg body weight, 1 Kg charcoal for 500kg animal. Toxic plants are sometimes eaten by young animals that do not know these plants are toxic. Be aware of this situation and know where these plants are growing on the farm.**

**Urea poisoning occurs every now and then on farms. Make sure that licks containing urea are mixed and formulated properly. Many mortalities were reported where mixing instructions and calculations were not followed correctly! Make sure that licks containing urea do not get wet during the rainy season.**

**Every now and then goats die when they are injected in the neck area, rather inject them in the tail fold or behind the shoulder.**

## Nutritional deficiencies

**The following nutritional deficiencies were reported by practices in the provinces:**

| Deficiencies | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Energy** | x | | | x | x | x | | | |
| **Protein** | x | x | | x | x | x | x | | |
| **Phosphate** | | | | | | | | x | x |
| **Calcium** | | | | x | x | x | x | x | |

**It is important that ewes and cows receive sufficient supplementation so as to have optimal colostrum quality for their offspring!**

## Micro-nutritional and vitamin deficiencies

**The following micro-nutritional deficiencies and vitamins were reported by practices in the provinces:**

| Deficiencies | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Iodine** | | | | | | | | | |
| **Copper** | | | | | | x | | x | |
| **Zinc** | | | | | | | | | |
| **Selenium** | x | x | x | x | x | x | | x | |
| **Magnesium** | | | | x | | | | x | |
| **Manganese** | | | | | | | | | |
| **Vitamin A** | | | x | x | x | | | | |
| **Vitamin B 1** | | | | | x | | | x | |
| **Vitamin E** | | x | | | | | | x | |

**There are antagonists such as calcium, iron and sulphur which hamper the uptake of micro-minerals. Have water and soil samples analysed to see what the levels of these antagonists are. Arrange with your veterinarian to have liver samples analysed to determine the status of these micro-minerals in your herd or flock.**

**Selenium is a powerful anti-oxidant and necessary for immunity. Check the selenium status of the herd.**

**Beware of fluoride poisoning as borehole water levels drop.**

**Supplement animals with vitamin A and Zinc during winter and drought conditions.**

## Multifactorial diseases and other conditions

**The following conditions were reported by practices in the provinces**

| Multifactorial diseases and other conditions | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Abortions** | x | | | x | x | x | x | x | x |
| **Stillbirths** | | | | | x | x | | x | |
| **Abscesses** | x | x | x | x | x | x | x | x | |
| **Intestinal ulcers** | | | | | | | | | |
| **Intestinal perforation** | | | | | | | | | |
| **Peritonitis** | | | | | | | | | |
| **Bladder stones –urolithiasis** | | | | x | x | | | x | |
| **Blindness** | x | | | | x | x | | x | |
| **Bloat** | x | x | | x | x | x | | x | |
| **Oesophageal obstruction** | | | | | | | | | |
| **Blue udder** | x | | | x | x | x | | x | |
| **Diarrhoea** | x | x | | x | x | x | | x | |
| **Epididymitis** | x | x | | | | x | | x | |
| **Eye cancer** | x | x | | | x | x | | | |
| **Eye infections** | x | x | x | x | x | x | x | x | x |
| **Skin lymphoma** | | | | | | | | | |
| **Neoplasma** | | | | | | | | | |
| **Allergic insect bites** | | | | | | | | | |
| **Joint ill** | x | | | x | x | x | x | x | x |
| **Cystitis** | | | | | | | | | |
| **Icterus** | | | | | | | | | |
| **Lameness/foot problems** | x | x | | x | x | x | x | x | |
| **Lung infection** | x | x | | x | x | x | x | x | |
| **Mastitis** | x | x | | | x | x | | x | x |
| **Navel ill** | | | | | x | x | | x | |
| **Abdominal hernia** | | | | | | | | | |
| **Umbilical hernia** | | | | | | | | | |
| **Red gut (sheep, torsion of gut)** | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Rectal prolapse** | | | | | | | | | |
| **Rumen stasis** | | | | | | x | | | |
| **Peritonitis** | | | | | | | | | |
| **Abdominal impaction** | | | | | | | | | |
| **Vagal indigestion** | | x | | | | | | | |
| **Abdominal hernia** | | | | | | | | | |
| **Intussusception** | | | | | | | | | |
| **Floppy kid syndrome** | | | | | | | | | |
| **Swelsiekte** | | | | | | | | | |
| **Traumatic reticulo-peritonitis** | x | | | x | x | | | x | |
| **Trauma** | x | | | | x | x | | x | x |
| **Teeth wear** | | | | | | | | | |
| **Plastic bags (ingestion)** | | | | | | | | | |
| **Sand impaction** | | | | | | | | | |
| **Intussusception** | | | | | | | | | |
| **Downer** | | x | | x | x | | | x | |
| **Obturator nerve paralysis** | | | | | | | | | |
| **Anorexia** | | | | | | | | | |
| **Poor condition** | | | | | | | | | |
| **Anaphylactic shock** | | | | | | | | | |
| **Immune incompetence** | | | | | | | | | |
| **Vestibular syndrome (middle ear infection)** | | | | | | | | | |
| **Hernia** | | | | | | | | | |
| **Deformaties** | | | | | | | | | |
| **Wet carcasses at abattoir** | | | | | x | | | x | x |
| **Yellow carcasses at abattoir** | | | | | | | | x | x |
| **Pseudomonolysis** | | | | | | | | | |
| **Mismothering** | x | | | | | x | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neonatal deaths** | | | | | | | | | |

**Discuss the origin, treatment and prevention of these diseases with your veterinarian.**

**Lameness and eye conditions are a huge problem in most parts of the country.**

**The cause of abortions should be established: brucellosis, enzootic abortion, Q-fever, leptospirosis, Rift valley fever, infectious disease causing a fever, etc. The necessary preventative measures can then be taken.**

## Metabolic diseases

**The following diseases were reported by practices in the provinces:**

| Metabolic diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Acidosis** | x | | | x | x | | | x | |
| **Displaced abomasum** | | | | | | x | | | |
| **Ketosis (domsiekte)** | | | | | x | | | x | |
| **Milk fever** | | | | | x | | | x | |

**Make sure that you adapt animals to feed containing concentrates as more and more cases of acidosis are reported when grazing animals on harvested maize fields. Overeating of soya leads to an alkalosis.**

**Discuss the aetiology, treatment and prevention of these diseases with your veterinarian.**

## Reproductive diseases

| Reproductive diseases | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Dystocia (difficult births)** | x | x | | x | x | x | | x | x |
| **Mummified foetus** | | | | | | | | | |
| **Endometritis** | | x | | | x | x | | x | |
| **Metritis** | | | | x | x | x | | x | |
| **Hydrops** | | | | | | | | | |
| **Foetal maceration** | | | | | | | | | |
| **Poor conception** | x | | x | x | x | x | | x | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Retained afterbirth** | x | x | | x | x | x | | x | |
| **Uterine rupture** | | | | | | | | | |
| **Sheath prolapse** | x | x | | x | x | x | | | |
| **Sheath infection** | | | | | | | | | |
| **Uterine prolapse** | x | x | | x | x | x | | x | |
| **Vaginal prolapse** | x | x | x | x | x | x | | x | |
| **Penis injury** | | | | | | | | | |
| **Orchitis** | | | | | | | | | |
| **Sub-fertile rams** | | | | | | | | | |
| **Sub-fertile bulls** | | | | | | | | | |
| **Vesiculitis in bull** | | | | | | | | | |
| **Hypogonadism (testes hypotrophy)** | | | | | | | | | |
| **Ruptured tunica albuginea** | | | | | | | | | |

**Secret of making money is to have an offspring of EACH heifer, cow, ewe or doe on the farm and wean that calf, lamb or kid EVERY YEAR!!**

A poor conception rate on many farms is a huge issue. Consult your veterinarian to rectify this problem.

## Environmental conditions

| | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| **Environmental conditions** | | | | | | | | | |
| **Exposure to cold** | | | | x | | | x | x | |
| **Frozen to death** | | | | x | | | | | |
| **Heat stress** | | | | | | | | | |
| **Lightning** | | | | | x | | | | |
| **Electrocution** | | | | | | | | | |
| **Drought** | | | | | | | | | |

## Other conditions

| | MP | G | L | NW | FS | KZN | EC | WC | NC |
|---|---|---|---|---|---|---|---|---|---|
| Drug residues (milk, meat, liver, kidney, etc.) | | | | | | | | | |
| Dermatosparaxis | | | | | | | | | |
| Genetic disorders | | | | | | | | | |
| Preditors | x | x | | x | x | | | | |
| Theft/Sabotage | x | | | x | x | x | | | |
| Trauma (fractures etc) | x | x | | | | | | x | |
| Trauma (veldfires) | | x | | | | | | | |
| Cause of death not established | | | | x | | | | | |

**In the CODE OF CONDUCT of the RPO the following standard operating procedures are documented. The local veterinarian should be your partner to help you achieve the necessary standards.**

## RPO CODE OF BEST PRACTICE - Red Meat Producers Organization

**7.3 Health and disease**

**Maintaining health and preventing disease are partly management and partly control driven. For further information RPO and NERPO members should consult the Animal Diseases Act, No 35 of 1984 (including the Animal Disease Regulations, R. 2026 of 1986) and in association the Animal Protection Act, No 71 of 1962. The Animal Diseases Act amongst others provide for measures to promote animal health and control animal diseases.**

**Many husbandry and managerial practices are required to prevent production losses, disease and discomfort. Some procedures may result in short term distress, but if not implemented can lead to even greater distress and pain. Principles here are:**

**• Procedures that cause pain must be minimized and not performed if practical alternatives exist.**

**• On farm health and disease control management procedures must be done by competent and experienced operators under the guidance or supervision of a registered veterinarian.**

**• Immunizations against anthrax and bovine brucellosis must be given strictly according to law. Furthermore, farmers should participate in the bovine brucellosis and tuberculosis test schemes to promote herd health.**

**• Every animal must be permanently identified by a registered branding or tattoo mark (Animal Identification Act, No. 6 of 2002) as well as an individual identification tag or mark.**

**• Movement control measures should be complied with.**

**• Preventative animal health measures should always be taken.**

**• Animals brought onto the farm should be quarantined to ensure that infective diseases and resistant parasites are for bovine brucellosis, bovine viral diarrhoea and tuberculosis.**

**• Fences and gates should be intact to secure biosecurity. If possible, consider jackal and warthog proof fences.**

**• A list of government controlled and notifiable diseases is on the website of the DALRRD. Such diseases must immediately be reported to the State veterinarian, should they occur on the farm.**

**• Farmers should be aware of zoonotic diseases such as bovine brucellosis, tuberculosis, rabies, Rift Valley fever, anthrax and they should take the necessary steps to protect their workers and themselves.**

**• Medicines including parasiticides must be safely stored and empty containers, expired drugs, used needles, syringes and materials discarded according to prescribed procedures.**

**• Protective clothing should be supplied and worn by employees working with poisonous substances and infective material.**

**• The necessary training should be given to employees handling animals, vaccines, drugs, materials and instruments.**

**• Kraals and crush pens should be constructed in such a way that injuries to people and animals are restricted to a minimum.**

**Owners and managers should ensure that livestock are routinely monitored for overall health and maintaining condition. A sound health program must be developed and implemented to the benefit of the herd and traceability purposes (see Section 7). This should be done in consultation with a veterinarian and the monitoring should include regular inspections of welfare issues such as feed, water, protection against climatic extremes, disease, injury, morbidity and distress. Each farm should be visited at least once a year by the herd veterinarian to assess the relevance of the herd health program and to monitor and certify the correct implementation of the program.**

**Sick or injured animals must be attended to promptly, treated appropriately or killed humanely in an accepted manner and within specified legal parameters. If remedies are required, only lawfully registered drugs should be administered strictly according to the instructions of the manufacturer and adherence to the prescribed withdrawal periods. Where applicable, medicines must be administered according to the prescription of the veterinarian.**

**Owners and managers should be aware of the irresponsible use of antibiotics and parasiticides as they can cause potential damage to the environment and user, including the development of resistant organisms and parasites. Therefore, these products must never be administered routinely, but only when required.**

**7.4 Biosecurity and disease control:**

**Biosecurity, from a disease control perspective, relates to proactive steps and measures that need to be taken on a permanent or temporary basis to limit the spread and effect of contagious disease. This could for example be in the form of routine testing as in the case of TB (Tuberculosis) and CA (Brucellosis), which are ever present, vaccinations as in the case of Anthrax, or movement restrictions as in the case of a Foot and Mouth outbreak in the disease management areas, where the restrictions are lifted once the threat is considered over. The reader is referred to Addendum 1 (attached) for specific precautionary measures to prevent diseases being imported onto the farm.**

**In principle the less contact animals have with each other the better the disease (which is continuously eroding the value of the national herd and the productivity of the livestock farmer) can be limited or controlled.**

**Livestock farmers need to undertake to function within the law with respect to controlled diseases (these are usually diseases that affect human health or diseases that cause damage to the economy) and not do things that put other farmers at risk. One example is the farmer should not send animals from a CA positive herd/farm to an auction, even if the individuals to be sold tested negative, as these animals may be latently infected. Prospective buyers should always be informed of the CA status of the herd/farm if cattle are to be sold. However, it is strongly discouraged to**

**sell animals from positive CA herds if the farm is still under quarantine. Lack of compliance with regards to selling of potentially diseased animals erodes the health of the national herd.**

**There are several tools that can facilitate implementing effective bio-security measures:**

**• A healthy working relationship should be developed with the local veterinarian to keep up to date with the changing disease landscape and timely implement the appropriate measures.**

**• An appropriate immunization program should be obtained from the local veterinarian and persist with it. Farmers need to understand why they follow the program as it will help with motivation.**

**• Farmers should routinely test for efficacy of their production parameters and for the presence of diseases that are hard to detect, such as Trichomoniasis, Vibriosis, CA and TB.**

**• Animals that are affected by unfamiliar diseases, should be tested immediately and those that die should receive a post-mortem timeously and appropriately to protect the rest of the herd.**

**• It is ideal to maintain a closed herd. If new genetic material is purchased, it should be from reputable sources and preferably retested while kept in quarantine after arrival.**

**Boundary fences should be regularly reinforced. Effective fences strengthen neighbour relationships and delay the spread of disease.**

**Furthermore, to have an intact fence and to know the TB and CA status on the farm should be considered a minimum prerequisite, as this will go a long way to protecting those who are dedicated farmers and invest actively in their biosecurity measures.**

## Practices that had nothing to report:

Beestekraal – Dr. Alwyn Venter
Fauresmith State Veterinarian
Grahamstown (Ikhala) – Drs. Baxter and Hepplestone
Muldersdrift – Drs. Speedy and Enslin
Nigel – Dr. Henry Labuschagne
Plettenberg Bay – Dr. André Reitz
Thabazimbi – Dr. Minette Nel
Underberg – Dr. Tod Collins
Vaalwater – Dr. Hampie van Staden
Vanderbijlpark – Dr. Kobus Kok
Wellington – Dr. William van Zyl

## Equines:

### Mpumalanga
**Nothing to report**

### Limpopo
**Nothing to report**

### Kwa-Zulu Natal
**Ixopo**
African Horse Sickness – 1 case

**Eastern Cape**
**Port Alfred**
African Horse Sickness – 1 One case in Bathurst and one case West of Kleinemonde

**Northern Cape**
**Upington**
Bont legged-tick – 3
Warts - 3

## Game:

**Mpumalanga**
**Nothing to report**

**Gauteng**
**Nothing to report**

**Limpopo**
**Thabazimbi**
Wireworm – Game, especially in roan and sable
Liver tapeworm - Roans

**Kwa-Zulu Natal**
**Pongola**
Brown ear ticks - 1

**Eastern Cape**
**Nothing to report**

**Northern Cape**
**Upington**
Anaplasmosis – 1

## Swine:

**Gauteng**
**Nothing to report**

**Free State**
**Nothing to report**

**Eastern Cape**
**Nothing to report**

## Oudtshoorn – Report from Dr. Adriaan Olivier, SABOC (South African Ostrich Business Chamber) for May 2024

DISEASE REPORT – MAY 2024

| | |
|---|---|
| Cryptosporidiosis | 3 – Many ostriches immune compromised, highmetabolic demand. Due to wet weather eating soil and drinking dirty water |
| Energy deficiency | 3 – Coldrainy weatherr. Ostriches can not achieve sufficient feed intake – too short feeding time |
| Protein deficiency | 3 – Late osstrich chicks. Too high demand for nutrients for energy and survival |
| Diarrhoea | 3 – Soil pica, severe intestinal disturbances. Drinking dirty water |
| Cold exposure | 3 – Late chicks and growers, low feed time, high metabolic demand |

## Monthly report on Livestock and Wildlife isolations for May 2024 from Vetdiagnostix – Microbiology Laboratory, supplied by dr. Marijke Henton

**(**henton@vetdx.co.za**)**

### Vetdiagnostix microbiology
### Bacteriology

Bovine Respiratory Disease yielded *Pasteurella multocida* [16 occasions], *Mannheimia haemolytica* [5], *Mycoplasma* [3] and *Trueperella pyogenes* [2].

Gangrenous myositis was caused by *Clostridium novyi* [4], *C. chauvoei* [2] and *C. septicum* [2].

Infectious Bovine Keratoconjunctivitis [IBK] was caused by *Moraxella*. Recent research has shown that there are many more *Moraxella* species than was previously known, and they should be distinguished by molecular tests. Ordinary laboratory biochemical tests are too unreliable to be able to do so accurately.

Septicaemia in cattle was caused by *Histophilus somni, Salmonella* Dublin [2] and *E. coli*.

*Salmonella* Dublin was also responsible for abortions [2]. Other abortions were caused by *Campylobacter fetus* and *T. pyogenes*.

Enteritis was caused by *S*. Dublin, *E. coli* [2] and *Clostridium perfringens* [2].

Goats showing abscesses and uterine infections yielded both *T. pyogenes* and *Corynebacterium pseudotuberculosis*. Controlling both pathogens on one farm is very difficult.

Ewes with Blue Udder yielded *Mannheimia glucosida* which is related to *M. haemolytica*. Both were previously known as *Pasteurella haemolytica. M. glucosida* has also been associated with Blue Udder in the same way that *M. haemolytica* causes it.

Ovine enteritis was associated with *Salmonella* Typhimurium, *Clostridium perfringens* and *E. coli* [2], one of which had virulence factors indicating that it was a virulent strain. *E. coli* was also associated with ovine septicaemia.

Septicaemia in pigs also yielded a pathogenic *E. coli* which had virulence factors showing that it was an Oedema Disease strain. *Actinobacillus pleuropneumoniae* caused pneumonia in pigs. Abscesses in pigs were caused by *T. pyogenes* [9], *Streptococcus dysgalactiae* [6] and *Staphylococcus pseudintermedius*.

Septicaemia in springbok was associated with *T. pyogenes* and the anaerobe, *Porphyromonas*.

A wound infection in a rhino initially yielded *Staphylococcus aureus*, and later an ESBL [Extended Spectrum Beta Lactamase] *E. coli* as well as *Pseudomonas aeruginosa*.

A cheetah cub with enteritis also yielded an ESBL positive *E. coli*.

## Monthly report on Livestock and Wildlife isolations for May 2024 from Vetdiagnostix – Supplied by Dr. Rick Last- BVSc; M.Med.Vet (Pathology)

**Specialist Veterinary Pathologist,** Vetdiagnostix - Veterinary Pathology Services, South Africa

**Livestock**.

Bovine Adult Clostridium novyi malignant oedema. Evander, Limpopo.

Bovine Adult Clostridium novyi malignant oedema. J Bay, E.Cape.

Bovine Adult Toxic Hepatosis. Dundee, KZN.

Ovine Abortion. Coxiella burnetti. Graff Reinet, S Cape

Bovine calf. Nutritional myopathy with rumen indigestion and cryptosporidiosis. Gauteng.

Bovine Adult. Infectious necrotic hepatitis. Howick, KZN.

Ovine Lamb. Cryptosporidia and nutritional myopathy. Wellington, W. Cape.

Ovine yearling. Ovine pulmonary adenocarcinoma – jaagsiekte. Cradock, Mpumulanga

## Monthly report on livestock and wildlife isolations for May 2024 by Department Veterinary Tropical Diseases Bacteriology Laboratory, University of Pretoria, supplied by Dr Annelize Jonker

Domestic ruminants

*Trueperella pyogenes* was isolated from a bovine lung sample.

*Trueperella pyogenes*, *Prevotella melaninogenica* and a *Veilonella* species was isolated from a bovine abscess swab.

*Trueperella pyogenes*, *Histophilus somni*, *Fusobacterium* species and *Veilonella* species was isolated from another bovine abscess swab.

*Salmonella* was isolated from an ovine lamb intestine sample.

*Actinobacillus lignieresii* and *Streptococcus suis* was isolated from an ovine abscess swab.

DISEASE REPORT – MAY 2024

*Clostridium perfringens* was isolated from a caprine intestine sample.

*Rhodococcus equi* was isolated from a transtracheal aspirate sample from a goat.

Wild ruminants

*Salmonella* was isolated from joint samples from a neonatal Rhino calf.

## Monthly report on Livestock and Wildlife isolations for May 2024 from Pathcare Vet Lab supplied by Dr. Liza du Plessis (Elizabet.duplessis@pathcare.co.za)

| Condition | Comments and Specie |
|---|---|
| Coccidiosis | O 1 |
| Intestinal roundworms | O 1, G 1 |
| Wireworm | B 1 |
| Orchitis (*Corynebacterium pseudotuberculitis*) | O 1 |
| *E. coli* | B 1 |
| *Streptococcus zooepidemicus* | E 1 |
| Cryptococcus | O 3 |
| Bacterial enteritis | O 1, B 2, P 1 |
| Abscesses – *Clostridium septicum* | O 1 |
| Myocarditis | B 1 |
| Mastitis, *E. coli* | B 2 |
| Lymphoma | O 1 |
| Abortions | B 1, O 2 |
| Abortions Various non-infectious – Brucellosis (B), Chlamydiosis (O) | B, O |
| Diarrhoea – calves, *E. coli* | B 2 |

## University of Stellenbosch, Animal Science Department – Dr. Bennie Grobler May 2024

| Condition | Specie and Numbers |
|---|---|
| Roundworms in general | O 3 |
| Blowflies | B 1 |
| Bladder stones | O 1 |

## Monthly report May 2024: Dr. Annelie Cloete – Western Cape, Provincial Veterinary Laboratory, Elsenburg, Stellenbosch

Nothing to report

## Monthly report May 2024: Dr. Mark Chimes -Dairy Standard Agency

DISEASE REPORT – MAY 2024

| Disease or condition (recorded in the garden route) | Specie and numbers |
|---|---|
| Mastittis in Tsitsikama | Bd 3 |
| Foot and mouth disease (Humansdorp) | B 3 |

## Monthly report May 2024: Dr Theo Kotzé – One Health Consultancy and Vet Lab

U77365845@vodamail.co.za
0827849706
No new State controlled disease or Notifiable disease to be reported during May 2024
Diverse mastitis pathogens
**Thoughts on Foot and Mouth Disease control**
**International and Disease Management Area: protocol needed**
**Farm gate: Self-regulation through entrance control**
**Veterinary certification – 28 days quarantine**
**Traceability at auctions**
**Traceability at abattoirs**
**Strict quarantine control**
**Strategic vaccination**
**Strategic surveillance**

## Feedlot report received from Dr. Eben du Preez for May 2024 (edupreez1@telkomsa.net)

| Condition | Comments and Specie |
|---|---|
| Liver fluke | B 2 |
| Blue ticks | B 3 |
| Brown ear-tick | B 3 |
| Bont-legged ticks | B 3 |
| Screw-worms | B 2 |
| Anaplasmosis | B 3 |
| Heartwater | B 2 |
| Swelled head | B 1 |
| Red gut | B 3 |
| Botulism | B 1 |
| *Histophilus somni* | B 2 |
| Acute Haemorrhagic Pasteurellosis – *P. multocida* Type B | B 1 |
| BMC | B 1 |
| IBR | B 3 |
| EBL | B 2 |
| Warts | B 1 |
| Meningitis | B 3 |
| Energy excess | B 2 |
| Phosphate deficiency | B 3 |
| Calcium deficiency | B 2 |

| | |
|---|---|
| Vitamin B 1 deficiency | B 2 |
| Zinc deficiency | B 3 |
| Selenium deficiency | B 3 |
| Vitamin A deficiency | B 3 |
| Joint ill | B 3 |
| Lameness | B 3 |
| Lungs (pneumonia) | B 3 |
| Diarrhoea | B 3 |
| Eye infection | B 3 |
| Abscesses | B 3 |
| Trauma | B 3, O 3 |
| Pericarditis | B 3 |
| Conditionsreported by farmers | Pneumonia, clostridial diseases, ticks, bloat |

## Feedlot report received from Drs. Morris, Morris and Barnard, May 2024 (ksmorris@mweb.co.za)

| Condition | Comments and Specie |
|---|---|
| Ticks | B 3 |
| Liver pathology (plant associated) | B 3 |
| Pneumonia | B 3 |
| Salmonella | O 2 |
| E. coli | O 2 |
| Besnoitia | Bull in Koster, Limpopo province B 3 |
| Cryptosporidiosis | O 2 |
| Haemorrhagic septicaemia | O 2 |
| African Horse Sickness | E 1 |

## Dr. Clara Blaeser – Post mortems at Queenstown Provincial laboratory – May 2024

| Area | Sample | History | Findings | Other tests/out-come |
|---|---|---|---|---|
| Queenstown (Hukuwa) | Ovine carcase | Weak, had been vaccinated recently with a multi clos-tridial vaccine | White mucous membranes, spleen small, kidneys pale, +++wire worm in abomasum | *Haemonchus con-tortus* induced anaemia |
| Gwaytu | Ovine carcase | Found dead | Foam from nose, plenty fluid in body cavities, moderate autolysis | *Ehrlichia ruminan-tium* on brain smear |

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Section of Pathology
Department of Paraclinical Sciences
Faculty of Veterinary Science

4th July 2024
Import/Export Policy Unit Subdirectorate

**Monthly report: Faculty of Veterinary Science cases**
**Wildlife cases sent to referring veterinarians between 2nd May and 4th July 2024**

Cases from State vet Skukuza or Orpen
Cases imported with master permit (none)

| RefNo | PMDate | Species | Final | Histo No |
|---|---|---|---|---|
| 24/030 | 18-Mar-24 | Lion | Normal reproductive tract | S662-24 |
| 24/031 | 18-Mar-24 | Lion | Ovarian transdifferentiation | S663-24 |
| 24/032 | 18-Mar-24 | Lion | Suspected ovarian atrophy | S664-24 |
| 24/033 | 02-May-24 | Leopard | Subcutaneous fibrolipoma | S1091-24 |
| 24/034 | 02-May-24 | Giraffe | Suspected sarcoid | S1093-24 |
| 24/035 | 18-Mar-24 | Lion | Suspected ovarian transdifferentiation | S665-24 |
| 24/036 | 18-Mar-24 | Lion | Suspected ovarian atrophy | S666-24 |
| 24/037 | 26-Mar-24 | Crowned Eagle | Starvation | S751-24 |
| 24/039 | 14-May-24 | Vervet monkey | Disseminated tuberculosis | S1215-24 |
| 24/040 | 14-May-24 | Vervet monkey | Disseminated tuberculosis | S1216-24 |
| 24/041 | 10-Jun-24 | Lion | Fibroadnexal hamartoma | S1491-24 |
| 24/042 | 28-Mar-24 | Lion | Presumed cytotoxic snake bite | S793-24 |

With kind regards,

Emily Mitchell

Prof. Emily Mitchell