

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

July 2021

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

These reports include data from individual practices

Click on Disease Reports

Click on Disease Reports

The following practices and laboratories (127) submitted reports during July 2021:

Mpumalanga (10)

Bethal – Dr. Hardus Pieters
Grootvlei – Dr. Neels van Wyk
Hendrina – Dr. Anja Steinberg
Lydenburg – Dr. Marietjie Malan
Lydenburg – Drs. Trümpelmann and Steyn
Malalane – Drs. Van Sittert and Van Sittert
Middelburg – Dr. Neil Fourie
Nelspruit – Dr. André Beytel
Standerton – Dr. Kobie Kroon
Volksrust – Dr. Johan Blaauw

Gauteng (12)

Afrivet training services
Bronkhorstspuit – Dr. De Bruin, De Bruin and Labuschagne
Hammanskraal – Dr. Hentie Engelbrecht
Irene – Dr. Maggie Wepener
Krugersdorp-Veeartsnetwerk – Dr. Danie Odendaal
Magaliesburg – Dr. Ryan Jeffery
Nigel – Dr. Cindy van der Westhuizen
Nigel – Dr. Henry Labuschagne

Onderstepoort Veterinary Academic Hospital – Proff. Holm and Leask and Drs. Fitte, Grobler, Hentzen, Koepfel, Leask, Magadu, Magagula, Marufu, Mokoete, O’Dell, Tagwirreyi, Tshuma, Van den Hurk and Van der Leek

Pretoria – Dr. Hanneke Pienaar

Rayton – Dr. Frans Malan

Vanderbijlpark – Dr. Kobus Kok

Limpopo (6)

Makhado (Louis Trichardt) – Drs. Harris, Klopper and Jacobs

Modimolle (Nylstroom) – Drs. Huber, Bredell and Brits

Modimolle – Drs. Van Niekerk and Te Brugge

Mokopane (Potgietersburg) – Dr. Henk Visser

Polokwane (Pietersburg) – Drs. Watson, Viljoen, Jansen van Vuuren, Van Rooyen, Snyman and Cremona

Vaalwater – Dr. Hampie van Staden

North West (8)

Christiana – Dr. Pieter Nel

Klerksdorp – Drs. Geral, Van den Berg, Van den Berg and Greyling

Leeudoringstad – Dr. Ian Jonker

Lichtenburg – Dr. Nelmarie-Krüger-Rall

Ottosdal – Dr. Sharnelle Ferreira

Schweizer-Reneke – Dr. Pieter Venter

Stella - Dr. Magdaleen Vosser

Vryburg – Drs. De Jager and Rautenbach

Free State (25)

Bethlehem – Drs. Strydom and Strydom

Bloemfontein – Dr. Stephan Wessels

Bloemfontein – Dr. Lizanne Meiring

Botshabelo – Dr. Savannah Stutchbury

Bultfontein – Dr. Santjie Pieterse

Clocolan – Drs. Wasserman and Kleynhans

Dewetsdorp – Dr. Marike Badenhorst

Excelsior – Dr. Dédé Nel

Ficksburg – Dr. Woody Kotzé

Frankfort – Drs. Lessing, Cilliers and Janse van Rensburg

Harrismith – Dr. Wim Slabber

Hoopstad – Dr. Kobus Pretorius

Hoopstad – Dr. Cassie van der Walt

Koppies – Dr. Kobus Bester

Kroonstad – Drs. Daffue, Eksteen, Van Zyl and Van der Walt

Memel – Drs. Nixon and Nixon

Oranjeville - Dr. D'Wall Hauptfleish
Reitz – Dr. Murray Smith
Senekal – Dr. Jan Blignaut
Smithfield – Dr. Nienke van Hasselt
Viljoenskroon – Dr. Johan Kahts
Vrede – Drs. Bester-Cloete en Myburgh
Wesselsbron – Dr. Johan Jacobs
Winburg – Drs. Albertyn and Albertyn
Zastron – Drs. Troskie and Strauss

KwaZulu-Natal (13)

Bergville – Dr. Jubie Muller
Bergville – Dr. Ariena Shepherd
Camperdown – Dr. Anthony van Tonder
Dundee – Drs. Marais and Fynn
Eshowe – Drs. Pryke and McKernan
Estcourt – Drs. Turner, Tedder, Taylor, Tratschler, Van Rooyen and Alwar
Kokstad – Drs. Clowes, Lees, Malan, Koekemoer, Cronje and Kilian
Mtubatuba – Dr. Trevor Viljoen
Newcastle – Dr. Barry Rafferty
Pongola – Dr. Heinz Kohrs
Underberg – Drs. King, Delaney and Huysamer
Underberg – Dr. Tod Collins
Vryheid – Drs. Theron and Theron

Eastern Cape (16)

Adelaide – Dr. Steve Cocroft
Alexandria – Dr. Charlene Boy
Alexandria – Dr. Johan Olivier
Aliwal North – Drs. Troskie and Strauss
Bathurst – Dr. Jane Pistorius
Elliot - Drs. Clowes, Lees, Malan, Koekemoer, Cronje and Kilian
Graaff- Reinet - Dr. Roland Larson
Graaff-Reinet – Hobson, Strydom and Hennesy
Humansdorp – Drs. Van Niekerk, Jansen van Vuuren and Davis
Jeffreys Bay – Drs. Lategan and Hoek
Kareedouw – Dr. Marten Bootsma
Port Alfred – Dr. Leon de Bruyn
Queenstown – Drs. Du Preez, Klopper, Jansen van Vuuren, De Klerk, Catherine and Wentzel
Steynsburg – Dr. Johan van Rooyen
Stutterheim – Dr. Dave Waterman
Uitenhage – Drs. Mulder and Krüger

Witelsbos – Dr. Elmien Kotze

Western Cape (19)

Beaufort West - Dr. Jaco Pienaar

Beaufort West – Dr. Bennie Grobler

Caledon – Drs. Louw and Viljoen

Caledon – Drs. Small, Greyling and Viljoen

Darling – Drs. Van der Merwe, Adam, Jenkins and Lord

George- Dr. Riaan Putter

George – Drs. Strydom, Truter and Pettifer

Heidelberg – Dr. Albert van Zyl

Malmesbury – Dr. Otto Kriek

Moorreesburg – Dr. Suenett Kotzé

Oudtshoorn – Dr. Glen Carlisle

Paarl – Dr. Carla van der Merwe

Piketberg – Dr. André van der Merwe

Plettenberg Bay – Dr. André Reitz

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 (8)

Calvinia – Dr. Bertus Nel

Colesberg – Drs. Rous and Rous

De Aar – Dr. Donald Anderson

Kathu – Dr. Jan Vorster

Kimberley – Drs. Smith and Van der Merwe

Kimberley – State Vet Group

Postmasburg – Dr. Boeta van der Merwe

Upington – Drs. Vorster, Visser and Oosthuizen

Feedlots (2)

Dr. Eben Du Preez

Drs. Morris, Morris and Le Riche

Biosecurity consultant

Laboratory reports (8)

Dr. Marijke Henton - Vetdiagnostix, Johannesburg

Dr. Liza du Plessis – Idexx SA

Dr. Rick Last - Vetdiagnostix
Provincial Veterinary laboratory (Dr. Annelie Cloete) - Stellenbosch
Dr. Mark Chimes – Dairy Standard, George
Dr. Sophette Gers – Pathcare, Cape Town
Prof. Emily Mitchell – Wildlife, University of Pretoria
Ms. Amanda McKenzie – Vryburg Veterinary Laboratory

Beware of Rabies, have your dogs vaccinated!!!!

CONFIRMED RABIES CASES IN THE CRADLE OF HUMANKIND

The Gauteng Department of Agriculture and Rural Development (GDARD) would like to inform the public of an outbreak of Rabies in the Cradle of Humankind area. The outbreak was first diagnosed in five (5) jackals between the 26th of June and the 5th of July 2021.

On Sunday 25 July, a honey badger attacked a lady carrying a baby on her back in the Kromdraai area. This lady was taken to the hospital by a Good Samaritan. On the morning of Monday 26 July, another lady was attacked by a honey badger next to her house in the same area. The neighbour rushed to assist her and was also attacked by the same honey badger. The Honey badger was subsequently killed and taken to the Onderstepoort Veterinary Institute's veterinary diagnostic laboratory where a positive diagnosis of rabies was made on July the 27. The three human bite cases were immediately referred to the Department of Health and National Institute for Communicable Diseases (NICD) to ensure that the bite victims should receive prophylactic treatment; Rabies Immunoglobulin (RIG) and Post exposure Prophylaxis (PEP).

Rabies is an infectious neurological disease affecting the brain and is almost always fatal to both people and animals. There is no treatment once a person has developed clinical signs. Symptoms vary widely and include behavioural changes, aggressiveness, and paralysis. Symptoms can occur from 7 days to 6 months after being infected with the virus. The virus occurs in great numbers in the saliva of rabid (i.e. an infected animal showing symptoms of Rabies) animals. The Public is advised to always avoid touching or caressing any strange, injured, or sick animal.

The Department wishes to further re-emphasize the following:

It is compulsory for all dogs and cats to be vaccinated against Rabies. Failure to vaccinate domestic pets is illegal and is a public health risk.

Members of the public should avoid touching or caressing strange, injured, or sick animals.

Any person or domestic pet which has been bitten by a strange animal, should immediately contact their local State Veterinarian or Local Government Health Authority.

Pets which have not been vaccinated against rabies, should immediately be taken to the nearest private Veterinarian for a Health check and for vaccinated.

People should avoid contact with wildlife like jackals and honey badgers, if bitten by these animals please contact the vet services numbers are provided at the end of this document or contact nearest clinic

Rabies in KZN

Maps kindly supplied by Kevin le Roux , KZN Department of Agriculture

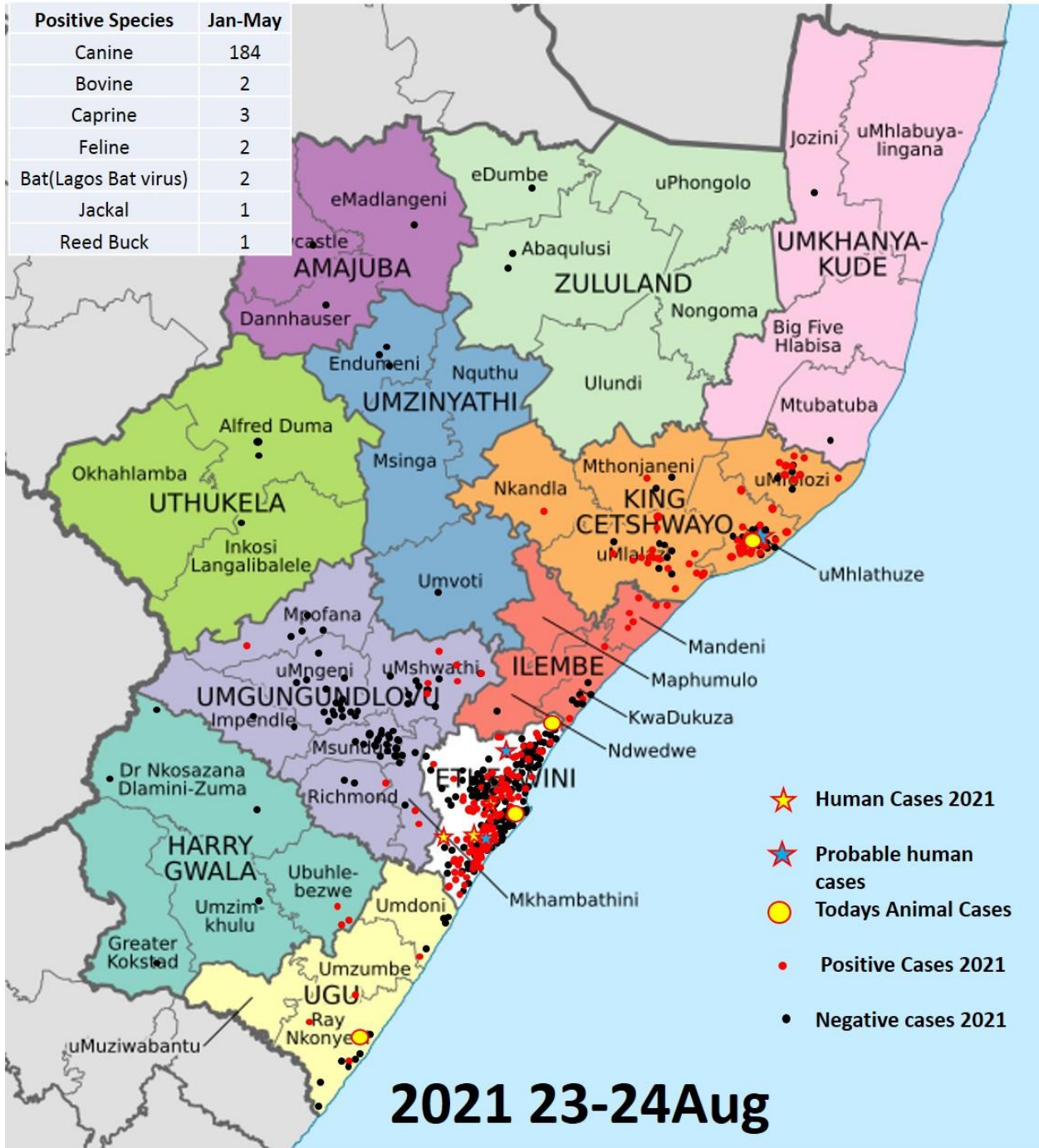
(Kevin.LeRoux@kzndard.gov.za)

KwaZulu-Natal Rabies

1. Canine Tongaat Ethekwini Metro
2. Canine Montclair Ethekwini Metro
3. Canine Ngwelezane uMhlathuze municipality King Cetshwayo district
4. Canine Murchison Ray Nkonyeni municipality Ugu district

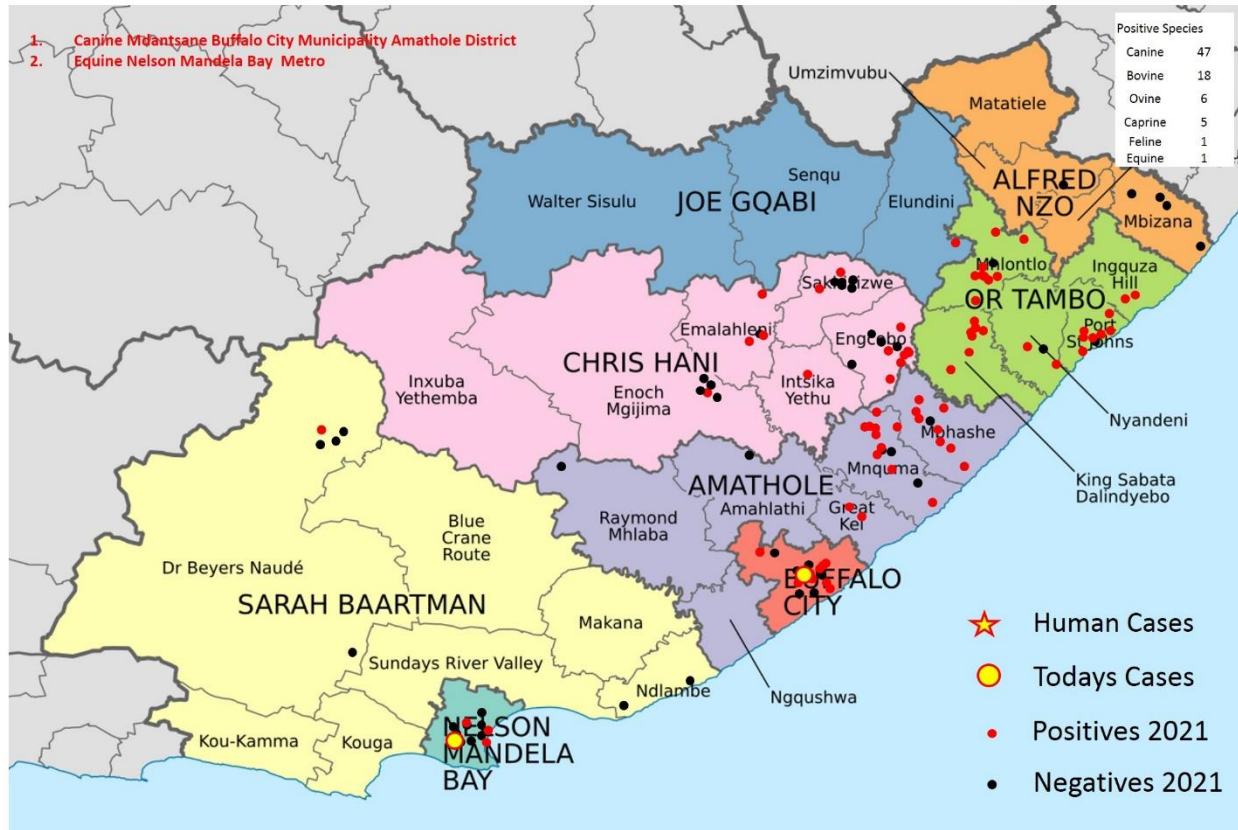
Animal	Human
202	3(Confirmed) 3 (Probable)

Total Negative samples -286



EASTERN CAPE RABIES 26 Jul 2021

Pos	Neg
77	46



Three – day- Stiffsickness

Important message:

One of the most devastating outbreaks of three-day-stiff- sickness occurred during the past three months! It is important to do pregnancy examinations as febrile reactions, due to infectious diseases, may have caused resorptions of foetuses.

“Bovine Brucellosis and Asiatic red water– 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?

Reasons mentioned why this disease of cattle and humans are not controlled:

Farmers buy cattle at auctions with unknown disease status

Lack of a vendor declaration

Animals are not vaccinated against brucellosis and Asiatic red water

Bought in animals are not quarantined and tested for brucellosis
Cattle on adjacent farms not tested for brucellosis.
Brucellosis is an area disease
Positive stray cattle could cause outbreaks
Insufficient knowledge of the diseases by farmers
Positive animals not branded with a C on the neck
Insufficient funding to control the disease (vehicles, petrol, manpower)
Role flies play in the transmission of disease

Take responsibility for animal health or face the consequences.

Below are links that are available for your perusal:

#BrakesonBrucellosis

<http://nahf.co.za/category/diseases/brucellosis/>

Brucellosis Campaign: What is Brucellosis?

<http://nahf.co.za/brucellosis-campaign-what-is-brucellosis-brakesonbrucellosis/>

Brucellosis awareness – do you know?

<http://nahf.co.za/brucellosis-awareness-do-you-know/>

Brucellosis - Have you tested?

<http://nahf.co.za/brakesonbrucellosis-have-you-tested/>

Brucellosis - Dangers of consuming raw dairy products

<http://nahf.co.za/brucellosis-campaign-week-2-brakesonbrucellosis-collaboratetestvaccinate-dangers-of-consuming-raw-dairy-products/>

Brucellosis – The silent enemy in humans

<http://nahf.co.za/brakesonbrucellosis-brucellosis-the-silent-enemy-in-humans/>

Brucellosis - The Trojan Horse for your herd

<http://nahf.co.za/brakesonbrucellosis-brucellosis-the-trojan-horse-for-your-herd/>

Brucellosis: Is a herd disease

<http://nahf.co.za/brakesonbrucellosis-brucellosis-is-a-herd-disease/>

Brucellosis: Cattle branding – C=Brucellosis positive

<http://nahf.co.za/brakesonbrucellosis-brucellosis-cattle-branding-cbrucellosis-positive/>

Brucellosis – Farmer Responsibility

<http://nahf.co.za/brakesonbrucellosis-farmer-responsibility/>

Brucellosis – Abattoirs

<http://nahf.co.za/brakesonbrucellosis-abattoirs/>

Brucellosis – Is the consumer at risk for contracting Brucellosis?

<http://nahf.co.za/brakesonbrucellosis-is-the-consumer-at-risk-for-contracting-brucellosis/>

Brucellosis – Prevention for the Veterinarian and Para-Veterinarian

<http://nahf.co.za/brakesonbrucellosis-prevention-for-the-veterinarian-and-para-veterinarian/>

Biosecurity guidelines

<http://nahf.co.za/wp-content/uploads/FMD-Basic-Biosecurity-Guidelines-2019-11-19-Ver-3-1.pdf>

1. During a FMD outbreak it is the producer's responsibility to keep their animals from getting infected.
2. Although FMD does not pose a food safety or public health concern it has a major impact on animal health and international trade.
3. Each commercial farm should appoint a biosecurity manager.
4. A written biosecurity plan is a basic requirement.
5. Development of a plan must be done by the biosecurity manager with assistance from a veterinarian.
6. The biosecurity plan must include a line of separation/demarcation of the biosecurity area.
7. Training:
 - a. Train all personnel in biosecurity principles at least annually.
8. Access:
 - a. Access points to the area must be identified and demarcated clearly.
 - b. Loading site must be identified away from animals.
 - c. A cleaning and disinfection station needs to be made available and should be away from any animals and an SOP for cleaning of all vehicles entering the biosecurity area must be adhered to.
 - d. Parking areas away from animal areas must be provided.
 - e. Vehicle movement pathways must be mapped.
 - f. Draw up a map demarcating all these areas.

- g. The control boundary should always be respected and identified to all personnel.
- h. No access of vehicles or personnel to the biosecure area unless via proper decontamination protocols. People with any suspected contact with infected animals (or having been in an affected area) should stay away from “clean animals for at least a week.
- i. Access points should be respected, well demarcated and procedures of access described. Biosecurity Guidelines-FMD 2019-11-19 2
- j. Animals arriving on the farm should only be directly from a guaranteed healthy herd accompanied by signed and dated veterinary health certificates.
- k. Personnel entering the biosecure area should shower and change clothing before entering the area.
- l. Logbooks of all persons, vehicles, equipment etc entering or leaving the biosecure area should be kept.
- m. No entry of persons, vehicles or products should be allowed if not expressly permitted by the biosecurity officer.
- n. Feed brought into the biosecure area should only be from sources determined by the biosecurity manager.
- o. For further information go to www.securebeef.org

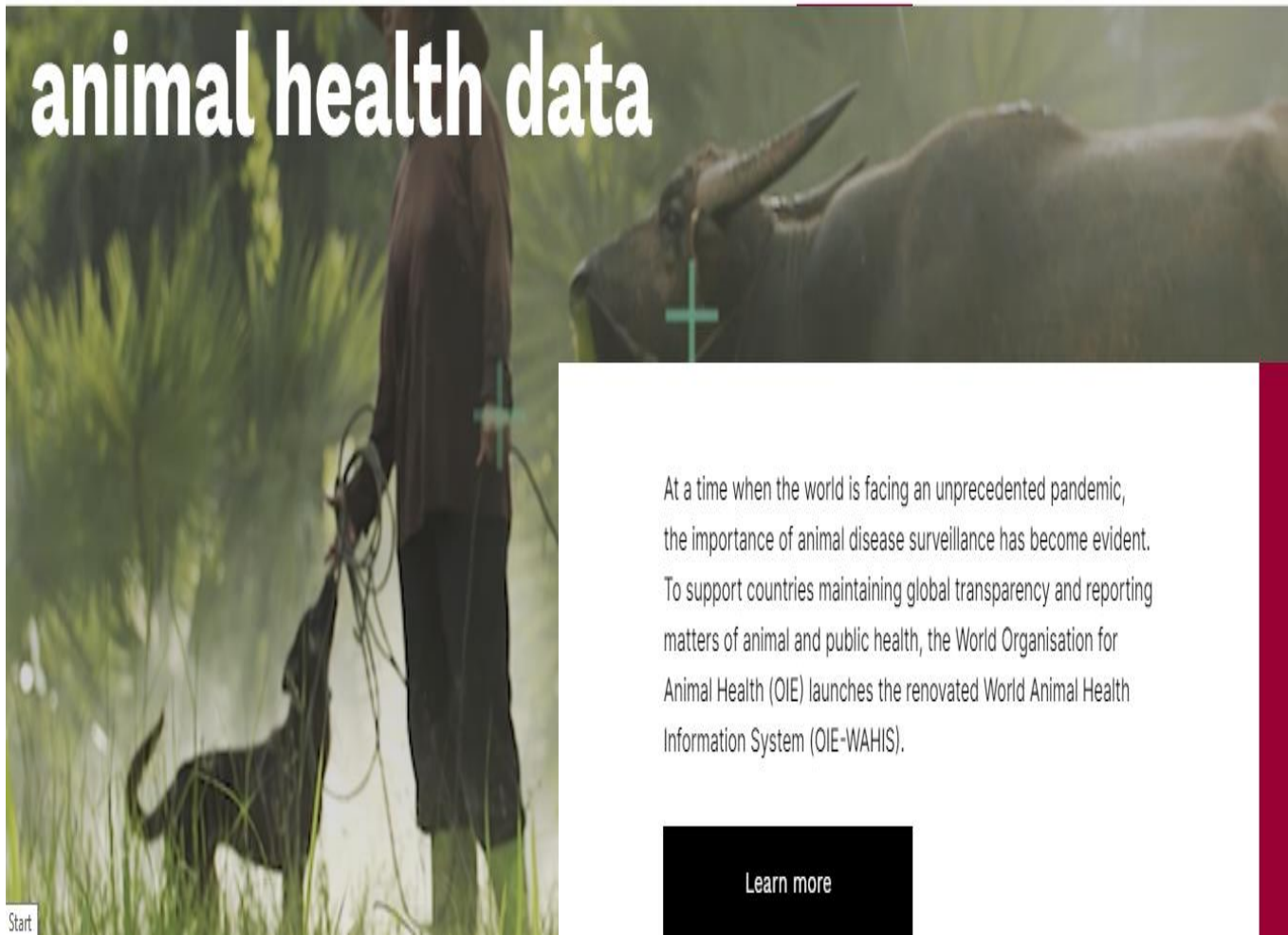
9. Quarantine:

- a. For extra security cattle should be quarantined at least 100 meters for 21 days away from the herd.
- b. There will be absolutely no contact with the herd either directly or indirectly.
- c. They should only be introduced after clinical (and preferably serological) evaluation.

It is now the time that we take ownership of our own industry!!!!!!!!!!

Visit the website of the Organisation for Animal Health

<https://www.oie.int/en/home/>



animal health data

At a time when the world is facing an unprecedented pandemic, the importance of animal disease surveillance has become evident. To support countries maintaining global transparency and reporting matters of animal and public health, the World Organisation for Animal Health (OIE) launches the renovated World Animal Health Information System (OIE-WAHIS).

[Learn more](#)

Start

We should be able to export our products derived from animal origin!!!!!!!!!!

Paris, 18 March 2021 – Since its creation in 1924, the OIE is the mandated international organisation collecting data on, observing and analysing animal diseases throughout the world. Through its current World Animal Health Information System (WAHIS), the Organisation ensures the prompt dissemination of information on potentially devastating outbreaks and facilitates decision making in terms of international trade of animals and animal products by collecting, verifying and publishing official animal health information, following a standardised process, thus providing high quality, reliable data.

Safeguarding animal and public health, global security and international trade

The basis of Disease Control is Animal Identification and Traceability

Visit: <https://www.icar.org/index.php/certifications/animal-identification-certifications/>

Very important legislation regarding the biosecurity rules for livestock agents

<http://nahf.co.za/biosecurity-rules-for-livestock-agents-gazetted-13-november-2020-no-43900-board-notice-135-of-200/>

<http://nahf.co.za/wp-content/uploads/Biosecurity-Rules-for-Livestock-Agents-Gazetted-13-November-2020-No-43900-Board-Notice-135-of-200.pdf>

BACKGROUND and DEFINITIONS:

These rules will regulate the livestock agent's industry with specific reference to required precautions to take during the gathering of live animals at auctions to reduce the risk of the spreading controlled, notifiable and other animal diseases.

In summary, each livestock agent/auctioneer will comply with the following:

- a) The rules for auctions in this document.
- b) Registration with the Agricultural Produce Agents Council (APAC) is compulsory and only registered agents will be allowed to conduct business.
- c) Acceptance of responsibilities in terms of Sections 11 and 26 of the Animal Diseases Act, Act 35 of 1984. This gazette is also available free online at www.gpwonline.co.za 206 No. 43900 GOVERNMENT GAZETTE, 13 NOVEMBER 2020
- d) An external audit of the auction facilities and all procedures, including these rules for auctions, will be undertaken by an independent auditor, these audits will need to be submitted to APAC bi-annually.
- e) Every livestock agent must appoint a Biosecurity practitioner (a person registered with the South African Veterinary Council).

“Biosecure area” is the area where only animals whose documentation has been verified, identification and health status has been confirmed by a SAVC qualified person, i.e. animals unlikely to pose a significant risk of carrying any contagious disease-causing agents, as well as persons who have been decontaminated to the satisfaction of a biosecurity practitioner are allowed to enter;

“Biosecurity practitioner” a person registered with the South African Veterinary Council, who oversees compliance with minimum biosecurity requirements for animals from different origins congregating for auctioning, in line with the requirements of Sections 11 and 26 of the Animal Diseases Act, Act 35 of 1984 and the rules in this document;

“Animal Owner Health Attestation” is a signed declaration from the owner of the animals that attests: This gazette is also available free online at www.gpwonline.co.za STAATSKOERANT, 13 NOVEMBER 2020 No. 43900 207 3

- The name and location of the farm/area of origin.
- The absence of overt signs of disease and parasites.
- The absence of unexplained mortalities on the property of origin in the preceding 28 days.
- No new animal introductions to the property of origin in the preceding 14 days.
- Where possible, and especially during periods of disease control restrictions in specific localities, confirmation of this health status by the farm’s attending veterinarian is ideal, see Addendum A of this document.

Identification of animals

- a) All animals accepted at an auction must be properly and permanently marked with the owner’s registered mark in accordance with the Animal Identification Act, Act 6 of 2002, and regulations published in Government Gazette no 25732 of 21 November 2003.
- b) Animals without registered marks shall not be off-loaded at the biosecure area.
- c) No freshly branded animals may be accepted.

- d) No animals with wet paint marks of previous auctions may be accepted within 28 days after the previous sale.
- e) No branding or marking of animals is allowed on the auction premises.
- f) The auctioneer must ensure the registered brand belongs to the owner, check the brand marking certificate and ID of the owner and driver/transporter where applicable and to follow up any suspicious brands with the local Stock Theft Unit. The livestock agent must insist on a confirmation of their reporting of the noncompliance with the Stock Theft Act and keep these on record
- g) The ear tag / identity tag for each animal's individual identification – as per the Livestock Identification and Traceability System, shall correspond with the list of animals in the Original Animal Owner Health **Attestation**.

Checking animals arriving at auctions

All animals must, upon arrival, be checked for lesions or clinical signs of disease or external parasites. In addition, animals shall be checked for official marks/brands indicating any of the controlled animal diseases such as Brucellosis, Tuberculosis and Foot and mouth disease. If there is any suspicion of any infectious disease, please refer to section 10 below.

Summary of disease report for July 2021

127 Reports from veterinary practices and laboratories were received (Mpumalanga (MP) 10; Gauteng (G) 12; Limpopo (L) 6; Northwest (NW) 8; Free State (FS) 25; KwaZulu-Natal (KZN) 13; Eastern Cape (EC) 16; Western Cape (WC) 19; Northern Cape (NC) 8; Feedlots (FL) 2; Bovine consultant (BC) and Laboratories (Lab) 8

Look at this list – these are the most widely spread diseases, reported by veterinarians.

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

	Number of provinces reporting
Anaplasmosis	9
Abortions	9
Dystocia (difficult births)	9
Liver fluke worms	8

Bovine brucellosis	8
<i>E. coli</i>	8
Orf (vuilbek)	8
Abscesses	8
Matitis	8
Retained afterbirth	8
Intestinal roundworms	7
Blue ticks	7
Biting lice	7
Ringworm	7
Energy deficiency	7
Protein deficiency	7
Diarrhoea	7
Eye infections	7
Lung infections	7
Vaginal prolaps	7
Wireworm (<i>Haemonchus contortus</i>)	6
Coccidiosis	6
African red water	6
Asiatic red water	6
Heartwater	6
Trichomonosis	6

Blue udder	6
Poor conception	6
Exposure to cold	6
Resistant roundworms	5
Bont-legged ticks	5
Mange mites	5
Lumpy skin disease	5
Vibriosis	5
Blackquarter	5
Pasteurellosis	5
Warts	5
Selenium deficiency	5
Eye cancer	5
Joint ill	5
Lameness/ Foot infections	5
Uterine prolaps	5
Theft	5

Bovine Brucellosis

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/>

When buying cattle this Vendor declaration can help you to minimize risk!

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, Chairman of the Brucellosis Steering committee of the National Animal Health Forum

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.	<table border="1"><tr><td>YES</td><td>NO</td></tr></table>	YES	NO	<table border="1"><tr><td>NO</td></tr></table>	NO
YES	NO				
NO					
9. All lambs born are vaccinated	<table border="1"><tr><td>YES</td><td>NO</td></tr></table>	YES	NO		
YES	NO				
10. If vaccinated, the number of years that the vaccinations have been done is		<table border="1"><tr><td style="width: 40px; height: 20px;"></td><td>years</td></tr></table>		years	
	years				
<p>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.</p>					

Signature

Date

NAME

Farm: _____

District: _____

OWNER OR AUTHORIZED REPRESENTATIVE

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



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
UNIBESITHI YA PRETORIA



RUVASA
Council of the Veterinary Surgeons of South Africa



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 neighbouring 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 unboiled, unpasteurised or unsterilised milk on quarantined property		
24	Disinfection of places where infection is a possibility.		
25	Neighbours/ 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		

Websites that are there to help 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	X	X	X	X
Resistant roundworms	X	X		X	X			X	
Wireworm		X	X	X	X			X	X
Brown stomach-worm								X	
Long-necked bankruptworm									
White bankruptworm									
Large-mouthed bowelworm									
Nodularworm									
Lungworm									
Eyeworm									
<i>Parafilaria</i>						X			
Tapeworms					X	X		X	X
Liver fluke	X	X	X	X	X	X		X	X
Conical fluke		X		X	X	X			
Cysticercosis (measles)			X					X	X
Schistosomiasis (bilharzia)									
Coccidiosis	X	X	X	X	X	X			
Cryptosporidiosis	X			X	X	X	X	X	
<i>Giardia</i>									

**Intestinal-worm outbreaks have been reported from all 9 provinces.
On some farms mortality rate was excessive!**

BEWARE

A farm has been found where the wireworm strain on the farm is resistant to ALL active dewormer groups

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

Get advice from your veterinarian to ascertain which dewormer group(s) are still effective on your farm by doing a faecal egg count resistance test (FECRT)

Group code	Generic class of actives	Example of actives
1*	Macrocyclic lactones (ML's)	Abamectin Doramectin Eprinomectin Ivermectin Moxidectin

2*	Benzimidazoles (white drugs)	Albendazole Fenbendazole Febental Ricobendazole Triclabendazole
3*	Imidathiazoles (clear drugs)	Levamisole Morantel
4*	Salicylanilides	Closantel Niclosamide Oxiclozanide Rafoxanide Resorantel
5*	Phenols	Nitroxinyl
6*	Sulphonamides	Clorsulon
7*	Organophosphates	Trichlorfon
8*	Isoquinolones	Praziquantel
9*	Others Amino-acetonitryl-derivatives (AAD's)	Piperazine Monepantel
10*	Spiroindoles	Derquantel

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

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

Coccidiosis outbreaks were reported from 9 provinces. Young animals are most susceptible.

Cryptosporidiosis outbreaks, causing huge losses were reported from 6 provinces. This deadly condition has now spread to the Western Cape. A product has been registered to treat animals against this deadly parasite. Good colostrum 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 minimise 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 economical reasons, this is usually only done for rams. Some successful breeding programmes 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 indices. 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. Generalisations like "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). Overtreatment ensures that only resistant parasites can survive. Minimal treatment programmes must be the new watchword, but it 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 the 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 increased, 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 programme

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 programme 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 cloud 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 longterm 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.

Make sure that the farmer understands and supports the need for change
Ensure that all measures are practical, integrated and financially defensible
Use an incremented approach, do not try to do everything at once
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.
Are the groups/classes of animals properly separated? If not, implement this if possible.
Give weanlings and late pregnant/lactating ewes most attention and the best circumstances
Are the pastures properly fenced, and are there enough camps for effective management?
Implement a satisfactory pasture resting programme. Keep well rested pastures for susceptible groups
Graze camps sequentially by cattle, small stock and other host species if available
Make sure that animals are getting the right nutrition, especially protein, and avoid putting animals in poor condition onto high- risk pastures
Mend water leaks and fence off moist areas
Remove all grass from pens where animals are routinely held for long periods
Buy rams selected for resistance (FEC) and/or resilience (FAMACHA[®]/haematocrit)
Cull the minority of ewes which are unable to cope with prevailing parasite burdens
Institute a planned programme for FECs to monitor the parasite situation
Ensure that the FECRT is done every second year
Introduce TST and Institute the FAMACHA[®] system for haemonchosis or BCS for other worm species
Ensure that the types and relative importance of parasites have been established on each farm as well as when they are likely to occur
Select and use the best drug for each situation
If all animals are treated, do not move to new pastures for 2-3 weeks or longer depending on the drug and formulation used
Ensure that the drug used is given in the most effective way
Quarantine and treat all introductions and put them onto infected pasture
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.1.1.0110.2885.9850..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
Resistant blue ticks					X	X			
Heartwater ticks		X				X			
Brown ear-ticks				X		X			
Bont-legged ticks	X			X	X				X
Red-legged ticks	X			X	X				
Paralysis ticks					X		X		
Tampans									
Biting lice		X		X	X	X			
Sucking lice	X			X	X				X
Fleas									
Itch mites					X				
Sheep scab					X			X	X
Mange mites		X		X	X	X		X	
Nuisance flies	X	X		X	X	X		X	
Midges		X					X		
Mosquitoes		X							
Blowflies	X				X	X		X	
Screw-worm							X		
Gedoeelstia (uitpeuloogsiekte)									
Nasal bot						X			

Theileriosis									
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Asiatic red water is spreading and is one of the deadliest diseases in cattle (6 provinces).

Numerous mortalities were reported and this in the winter!!!

Anaplasmosis outbreaks were reported from all 9 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 going to.

Tick toxicosis

Tick toxicosis	MP	G	L	NW	FS	KZN	EC	WC	NC
Sweating sickness	x				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		x	x
Pseudo Lumpy skin disease (Allerton virus)									
Ephemeral fever (Three-day-stiff sickness)									
Blue tongue		x						x	

Rift Valley Fever									
Wesselsbron									
Nagana						x			

Now is the time to ensure that your animals are protected against insect-transmitted diseases, in time, for the next rainy season! The last RVF outbreak was in May 2018.

http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S0030-24652013000100002

RIFT VALLEY FEVER

Below a link to the 2021 RVF Partners' and Stakeholders' Meeting. Very important information!

https://www.dropbox.com/sh/2bqcqfg8ss928e9/AADvo9p_lkNv-zz6S-RifLLfa?dl=0

If an abortion storm occurs, inform your veterinarian immediately!!!

When outbreaks occur sufficient stocks of vaccines may not be available.

Pregnant animals are to be vaccinated with the inactivated vaccine!

Study the packet insert!

Infectious diseases cause a rise in temperature and pregnant animals may resorb or abort the foetuses!

Veneral 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	x	x		x

Vibriosis	X		X	X	X		X		
Pizzle disease				X	X		X		X
<i>Actinobacillus seminis</i> plus HPA									

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 was reported from 5 provinces.

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

Make sure that fences are in tact and gates closed so that bulls cannot escape to neighbouring cows that may be infected with *Trichomonas* 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

<http://www.rpo.co.za/wp-content/uploads/2016/04/nuutRPO-NERPO-Code-Addendum.pdf>

<http://www.rpo.co.za/wp-content/uploads/2016/04/nuutRPO-NERPO-Code-Addendum-4-Good-management-practices-and-SOPs-for-cattle-farmers-1.pdf>

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
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Anthrax									
Blackquarter	x				x	x	x		x
Clostridial disease									
Botulism				x	x	x			
Pulpy kidney					x	x		x	x
Lamb dysentery									
Swelled head		x			x				
Red gut (cattle)					x	x	x		x
Blood gut (sheep)					x	x		x	x
Tetanus		x				x			
Salmonellosis						x	x		
<i>Klebsiella</i>									
Bovine brucellosis	x	x	x	x	x	x		x	x
<i>Brucella melitensis</i> (goats)									
Ovine brucellosis (Ram's disease)					x		x		x
Bovine tuberculosis									
Johne's							x	x	
Leptospirosis					x				
Listeriosis								x	
<i>Pseudomonas</i>									
<i>Pasteurella multocida</i>									
Pasteurellosis (see pneumonia -lungs)		x	x		x		x		x
<i>Fusibacterium necrophorum</i>									
Septicaemia							x		

<i>E. coli</i>		X	X	X	X	X	X	X	X
<i>Klebsiella</i>									
<i>Coxiella</i> (Q-fever)						X			
<i>Mycoplasma</i>									
<i>Histophilus somni</i>									
Enzootic abortion		X			X				X
Lumpy wool (<i>Dermatophilus</i>)					X			X	X
Bovine dermatophilosis (Senkobo disease)									
Uterine gangrene					X				
Wooden tongue									
Lumpy jaw									
Interdigital dermatitis									

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

Multiclostridial 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 on your farm.

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

Enzootic abortion contributes to the disappearance of foetuses in sheep and goats scanned pregnant. **Vaccinate replacement ewes with the live vaccine before putting them to the ram!**

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 predispositional role.

Be sure to vaccinate animals against botulism especially if chicken litter is going to be fed to animals.

Enzootic bovine leucosis (EBL)					X		X	X	
Sheep leucosis									
Jaagsiekte							X		
Orf		X	X	X	X	X	X	X	X
Warts		X		X	X	X	X		
Herpes mammillitis - goats									

There is no treatment for viral diseases with the result that animals have to be protected by vaccinations if they 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 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	

Aldicarb									
Organophosphate									
Zinc phosphide									
Xanthium									
Pyrethroid									
Amitraz									
Levamisole									
Ivermectin									
Moxidectin									
Oxytetracycline									
Tilmicosin									
Bromoxynil nitrate									
Ionophor									
Monensin									
Hypo									
Diazinon									
Glyphosate									
Chicken litter									
Medicated maize seed									

Beware when buying in animals or moving them into rested grazing camps as they are the animals which usually eat toxic plants such as tulip 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. 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.

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	x		x	x
Protein	x		x	x	x	x		x	x
Phosphate	x	x		x					x
Calcium				x	x	x			

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

We are thankful for rains that fell in most areas of the country but there are still some areas where drought conditions are still present! We pray with you for rain!

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		x			
Zinc						x			
Selenium		x		x		x	x		x

Magnesium							X		
Manganese									
Vitamin A			X	X	X				
Vitamin B 1								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 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	X	X
Stillbirths	X	X			X			X	
Abscesses		X	X	X	X	X	X	X	X
Intestinal ulcers									
Bladder stones –urolithiasis	X				X				
Blindness					X			X	
Bloat	X				X			X	
Blue udder	X	X			X		X	X	X
Diarrhoea	X	X		X	X	X		X	X
Epididymitis					X				
Eye cancer		X			X	X	X	X	

Eye infections	x	x		x	x	x	x	x	
Skin lymphoma									
Joint ill		x		x	x	x		x	
Cystitis		x							
Icterus									
Lameness/foot problems		x		x	x	x		x	
Lung infection	x	x		x	x	x	x	x	
Mastitis	x	x		x	x	x	x	x	x
Navel ill		x				x		x	
Umbilical hernia									
Red gut (sheep, torsion of gut)								x	
Rectal prolaps	x					x			
Rumen stasis						x			
Abdominal impaction									
Abdominal hernia									
Floppy kid synrome									
Swelsiekte									
Traumatic reticulo-peritonitis		x			x				x
Trauma							x	x	
Teeth wear									
Plastic bags (ingestion)									
Downer	x			x	x			x	
Poor condition									
Anaphylactic shock			x						

Immune incompetence									
Vestibular syndrome (middle ear infection)	x								
Hernia									
Deformaties									
Wet carcasses at abattoir		x			x			x	x
Yellow carcasses at abattoir									x
Pseudomonolysis						x			
Mismothering							x		

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

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	x
Displaced abomasum						x			
Ketosis (Domsiekte)	x				x	x			
Milk fever					x	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 etiology, treatment and prevention of these diseases with your veterinarian.

Electrocution									
Drought								x	

Other conditions

	MP	G	L	NW	FS	KZN	EC	WC	NC
Dermatoparaxis					x			x	
Genetic disorders			x		x				
Drug residues (milk, meat, liver, kidney etc)									
Preditors					x			x	
Theft/Sabotation	x	x			x	x		x	
Trauma (fractures etc)			x		x				
Trauma (veldfires)	x			x	x				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.

<http://www.rpo.co.za/BestPractices/English.aspx>

PRECAUTIONARY MEASURES TO SUPPORT BIO-SECURITY.

Precautionary measures are required to protect the herd against diseases acquired because of external contact. The following categories are of concern:

1. DIRECT LIVESTOCK PURCHASES (and own animals returning):

The following should be **verified** before importing new animals into the herd:

How long animals have resided at the purchase or previous location?

Have there been any recent disease outbreaks in the location?

Do brand marks clearly confirm ownership?

Was a vaccination program followed (need paper or veterinarian proof). What are the local prevalent external parasites and the routinely implemented control program?

Is a veterinarian supported control program against transmittable diseases followed?

Dates and sufficient number of tests for reproductive diseases of both male and female

Dates and tests for zoonotic diseases

The above should also be verified with the purchaser's own veterinarian.

2. PURCHASES FROM SALES OR SPECULATORS

Purchase only in areas which are not in close proximity to scheduled areas

Visually inspect the animals before purchasing for:

- * brand marks
- * parasite infestation

3. TRANSPORT TO THE FARM

Use only reputable transporters

Has the truck been cleaned and disinfected?

Truck to follow the shortest uninterrupted route

Truck to take the shortest route to the handling facilities

Do not allow the truck personnel to get in contact with the farm herd

4. ARRIVAL ON THE FARM

Off-load the livestock to limit stress and to be visually evaluated for any unnatural conditions.

Isolate them from the farm herd and shared facilities for at least 21 days (quarantine)

Retest for diseases of concern if needed, before mixing with the rest of the herd

Process new arrivals within 24 hrs after arrival (unique ID tag brand, dip, dose, vaccinate)

Inspect regularly

5. FEED PURCHASES

Ensure bales of hay are sourced from areas that are not bordering scheduled areas

Purchase feed from reputable dealers only

Avoid buying feed in second hand bags

Ensure feed trucks are also disinfected and cleaned, especially if also used to transport animals to abattoirs

6. VISITORS

Do not allow strangers or their vehicles amongst the livestock

Ensure fences are well maintained and preferably jackal and warthog proof

7. EMPLOYEES

Do not allow the employees to eat in feed stores

Supply employees with sufficient ablution facilities

Regularly arrange to let employees be medicated for tape worm and have health check-ups

Keep record of all employee livestock on the property

Treat employee livestock with separate but dedicated health programs

Ensure employees understand the reason behind the implemented bio-security measures to help ensure compliance.

GENERAL AND REPRODUCTION MANAGEMENT

Record keeping: All animals are individually identified and recorded.

To prove ownership: All animals are marked with the registered brand mark according to the Animal Identification Act, No 6 of 2002.

A defined breeding season is the basis of effective management: The breeding season coincides with the rainy season, i.e. the period when nutritive value of the pasture is at its best.

Sufficient energy reserves in the herd as measured by condition scoring are vital, especially for effective breeding, and when inadequate the herd is supplemented in consultation with a nutritionist: Condition scoring of bulls and cows are regularly done, particularly at the onset of the breeding season and supplemented if necessary.

Bull - cow ratios are maintained: A ratio of 1 to 25 is maintained in every separate herd.

Fertility of breeding bulls: All breeding bulls are tested for mating ability and semen quality before the breeding season.

Sexually transferable diseases: Sheath washes or scrapes on bulls are performed annually.

Diseases that can cause poor conception, abortion or weak calves: Cows are vaccinated against such diseases in consultation with the veterinarian.

Breeding success monitored by a veterinarian: Rectal pregnancy or scan diagnosis is done by the veterinarian 8 weeks after the breeding season.

Twenty percent of cows or more not pregnant: Further tests are done to determine cause of low pregnancy rate.

Culling of non-pregnant cows: Non-pregnant cows are removed from the herd and considered a necessary bonus to supporting herd income.

HERD HEALTH AND BIO-SECURITY

Maintenance of herd health is key to a successful enterprise: A veterinarian should visit the farm bi-annually at least.

Calf mortality before 3 months of age is an important reason for poor weaning percentage: Good management practices are applied to limit early calf deaths.

Some diseases and parasites (internal and external) are more often encountered in specific areas: Annual vaccinations and a parasite control program should be applied according to regional requirements and in liaison with the veterinarian.

Farmers selling weaned calves to feedlots may want to have a market advantage compared to others: A specific vaccination program is applied before weaning for that purpose.

Herds may be at risk of being exposed to CA and TB: The herd is tested annually for CA and all heifers are vaccinated against CA between 4 and 8 months of age with an efficient, approved remedy. The herd is tested at least every 5 years for TB

Precautionary measures are required to prevent diseases being imported into the herd: A quarantine program to keep incoming animals separate is followed. All incoming animals have a suitable certificate of negative test results or are of a certified clean, closed herd.

Stock remedies and medicines should be registered, correctly stored and used before the transpire date: All medicines and stock remedies are registered, stored and applied according to prescription.

Prescribed medicines with a specific application are under the control of the veterinary profession: All prescription medicines are obtained and applied under prescription from a veterinarian.

Practices that had nothing to report

Beestekraal – Dr. Alwyn Venter

Cape Town - Dr. Sophette Gers

George – Dr. Mark Chimes

Hendrina – Anja Steinberg

Kareedouw - Dr. Marten Bootsma
 Northern Cape State Vet Group
 Ottosdal - Dr. Sharnelle Pretorius
 Piketberg – Dr. André vd Merwe
 Stellenbosch – Dr. Annelie Cloete
 Vanderbylpark - Dr. Kobus Kok
 Vredenburg – Dr. Izak Rust
 Witelsbos – Dr. Elmien Kotzé

Western Cape

Oudtshoorn – Report from Dr. Ariaan Olivier for July 2021

Protein, Energy deficiency, poor growth	3 - Some rain and cold winter weather chicks returnig from growers- feed refusal or poor intake – becomes a negative/ catabolic donward spiral.more so with chicks not adopted to extensive grazing systems.
Diarrhoea	1 - Consistent with soil pica after short mm of rain
Red gut	1 - Feed intake up and down/ leads to GIT disturbance and Redgut – clostridial enteroxaemia
Soil pica and rectal prolaps	1 - Soil pica and heat stres = cryptosporidium exposure increased dramaticaly with immune compromise
Water contamination	2 - Brackish water – high sodium chloride content – reduced intake of feed and slower growth. When we moved to freshwater significant improvement.

Equines

Kwa-Zulu Natal

Kokstad

Colic – Food impaction

Eastern Cape

Port Alfred

Piroplasmosis – One case Kleinemonde

African Horse Sickness – one case - Port Alfred/Bathurst

Equine encephalosis virus (EEV) – One case Bathurst

Northern Cape

Colesberg

Abortions – 2 unknown origin

Game

Mpumalanga

Heartwater ticks – 2

Theileriosis – 2

Lameness – 2

Ophthalmia- 2

Eastern Cape

Port Alfred

Tick infection: *Theileria* – Black impala Port Alfred

Septic wound Sable, Bathurst/Grahamstown

Western Cape

Humansdorp

Aspiration pneumonia - Buffalo

Oudtshoorn

Capture myopathy – Sable 1

Northern Cape

Kimberley

Theileriosis - Roan

Swine

Gauteng

Irene

E. coli – 41

Neurological *E. coli* – 2

Abscess – 2

Emaciation – 1

Ascaris - 1

Septicaemia – 4

Dehydration – 1 Teat lesion – 1

Lameness- 2

Gastro-intestinal-tract (GIT) issue – 1

Mortalities - 22

Alpaca
Swellendam
Alpaca choked

**Monthly report on Livestock and Wildlife isolations for July 2021 from
Vetdiagnostix – Microbiology Laboratory, supplied by dr. Marijke Henton
(henton@vetdx.co.za)**

Vetdiagnostix microbiology

Bovine Respiratory Disease yielded *Pasteurella multocida* [4], *Mannheimia haemolytica* [3] and *Histophilus somni* [1]

Clostridial myositis in cattle was due to *Clostridium chauvoei* [3].

Calf enteritis was associated with *E. coli* [2]. One of the cases was from a *Cryptosporidium* positive farm and was tested for virulence factors. It was negative, which is usually the case, as *E. coli* is secondary to *Cryptosporidium*.

Abortion in cattle was due to *Trueperella pyogenes* and *Brucella abortus*.

Trueperella pyogenes [3] caused abscesses in cattle. Cases of septicaemia were caused by *T. pyogenes*, *P. multocida*, *E. coli* and *Salmonella* Dublin.

Mastitis in cattle was associated with *Staphylococcus aureus*, *S. pseudintermedius*, *Streptococcus uberis* and *Serratia marsescens* which produces a red pigment. The red pigment in milk may resemble staining with blood.

Pneumonia in sheep was due to *Mannheimia haemolytica* and *Corynebacterium pseudotuberculosis*.

Blue udder was unexpectedly caused by *Streptococcus dysgalactiae*.

E. coli caused enteritis on two pig farms. *Streptococcus suis* caused septicaemia, abortions and vaginal infections together with *T. pyogenes* and *Pseudomonas aeruginosa*.

Pneumonia caused by *P. multocida* was present on two farms.

No significant wildlife pathogens were isolated during July.

**Monthly report on livestock and wildlife isolations for July 2021 by Department
Veterinary Tropical Diseases Bacteriology Laboratory, University of Pretoria,
supplied by Dr Annelize Jonker (Annelize.jonker@up.ac.za)**

Livestock

Haemolytic *E. coli* was isolated from intestinal samples of weaner piglets.

Wildlife

No wildlife samples received.

Monthly report for July 2021 from Dr R D Last (BVSc; M.Med.Vet(Path); MRCVS)

Specialist Veterinary Pathologist, Vetdiagnostix - Veterinary Pathology Services

LIVESTOCK DISEASE SURVEILANCE			
LIVESTOCK SPECIES	DISEASE AGENT	NO. OUTBREAKS	LOCATION
BOVINE ADULT	MALIGNANT OEDEMA	1	DUNDEE, KZN
BOVINE FOETUS	FOETAL BRONCHOPNEUMONIA	1	JEFFERIES BAY, E.CAPE
BOVINE FOETUS	SUSPECTED ANAPLASMOSIS	1	RUSTENBERG, GAUTENG

WILDLIFE DISEASE SURVEILANCE			
WILDLIFE SPECIES	DISEASE AGENT	NO. CASES	LOCATION
SABLE ADULT	HAEMOPARASITES	1	GROBLERSDAAL, MPUMULANGA

Monthly July 2021 report: Dr. Annelie Cloete – Elsenburg, Stellenbosch

Nothing to report

**Monthly July report: Dr Theo Kotzé – Biosecurity/Mastitis consultant
Bloemfontein**

0827849706@vodamail.co.za

0827849706

Diagnostic monthly report

No anti microbial resistant (AMR) or zoonotic organisms isolated.

No State controlled or notifiable diseases to report.

**Feedlot report received from Dr. Eben du Preez for June 2021
(edupreez1@telkomsa.net)**

Condition	Comments and Specie
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<i>Parafilaria</i>	B 3
African red water	B 1
Red gut	B 3
Ringworm	B 3
<i>Histophilus somni</i>	B 3
BVD	B 1
IBR	B 3
EBL	B 1
Warts	B 3
Orf	O 1
Energy excess	B 3
Phosphate deficiency	B 3
Zinc deficiency	B 3
Selenium deficiency	B 3
Vitamin A deficiency	B 3, O 3
Dystocia	B 3
Mastitis	B 1
Retained afterbirth	B 1
Joint ill	B 1
Lameness	B 3
Lung infection	B 3, O 1
Diarrhoea	B 3
Eye infection	B 2
Abscesses	B 3

Cold exposure	B 1
Trauma	B3
Pericarditis	B 3

**Feedlot report received from Drs. Morris, Morris and Le Riche June/July 2021
(shaun@octavoscene.co.za)**

Condition	Comments and Specie
Foot and Mouth Disease	B 3
Chronic lung lesions early in feed period	B 3
Urolithiasis in an ox	B 1
Cryptosporidiosis	B 3

**Monthly report on Livestock and Wildlife isolations for July 2021 from IDEXX
Laboratories supplied by dr. Liza du Plessis (Liza-DuPlessis@idexx.com)**

Condition	Comments and Specie
Orf	C 1
Bacterial enteritis	B 1
BRSV	B 1
Vitamin E / Selenium deficiency	C 1
Pyrrrolizidene alkaloid toxicity (geeldikkop)	C 1
Rumen acidosis	B 2
Rumenitis	B 1
Abortion	B, E, C, O 1

Lung infection	B 1
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Monthly report from Dr. Mark Chimes for June/July 2021 – Dairy Standards

Nothing to report

Monthly report from Dr. Emily Mitchell June/July 2021 - Wildlife cases: Faculty of Veterinary Science



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Section of Pathology
Department of Paraclinical Sciences
Faculty of Veterinary Science

27th July, 2021

Import/Export Policy Unit Subdirector

Monthly report: Faculty of Veterinary Science cases

Wildlife cases sent to referring veterinarians between 24th May and the 27th July 2021

Cases from State vet Skukuza or Orpen (none)

Cases imported with master permit (none)

PMDate	Species	Final	Histo No
13-May-21	Lion	Cachexia	S1307-21
28-May-21	Lion	Cystic endometrial hyperplasia	S1530-21
28-May-21	Lion	Arthropod-associated dermatitis	S1529-21
15-Jun-21	Lion	Dermatophytosis	S1710-21
09-Jun-21	Sugar glider	Ulcerative dermatitis	S1649-21
09-Jun-21	Tambourine dove	Chlamydiosis	S1655-21
22-Jun-21	Serval	Sialocoele	S1765-21
09-Jun-21	Macaw	Cachexia	S1656-21
06-Jul-21	Brown Pelican	Suspected nutritional myopathy	S01891-21
16-Jul-21	Iguana	Bacterial splenitis, myocarditis	S2010-21

Kind regards,



Prof. Emily Mitchell

Fakulteit Veerartsenykunde
Lefapha la Diseense tša Bongakadiruiwa

DISEASE DISTRIBUTION REPORT AS REPORTED BY VETERINARIANS

Month:

Aug 2021 ▼

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[Blue ticks](#), [Heartwater \(Bont\) ticks](#), [Bont-legged ticks](#), [Red-legged ticks](#), [Biting lice \(red lice\)](#), [Mange Mites](#), [Nasal bot larvae](#), [Midges](#), [Other](#)

[Tick-borne Diseases](#)

[African red water](#), [Asiatic red water](#), [Anaplasmosis](#), [Heartwater](#)

[Insect Transmittable Diseases](#)

[Lumpy skin disease](#)

[Venereal Diseases](#)

[Trichomonosis](#), [Vibriosis](#), [Pizzle disease](#)

[Bacterial Disease \(other\)](#)

[Blackquarter](#), [Pulpy Kidney](#), [Blood gut \(Sheep\)](#), [Tetanus](#), [Septicaemia](#), [E. coli](#), [Enzootic Abortion](#), [Pasteurellosis](#), [Other](#)

<u>Protozoal diseases (other)</u>	Besnoitiosis , Coccidiosis , Cryptosporidiosis
<u>Fungal diseases</u>	Ringworm
<u>Viral Diseases (other)</u>	BMC (snotsiekte) , Enzootic Bovine Leucosis (EBL) , Orf , Warts , Rota virus
<u>Poisonings (Plant) and Fungal</u>	Cardiac glycoside poisoning , Cynanchum poisoning , Facial eczema , Prussic acid poisoning , Tulip Poisoning
<u>Poisonings</u>	Urea Poisoning
<u>Macro Nutritional Problems</u>	Energy deficiency , Protein deficiency , Phosphate deficiency , Calcium deficiency
<u>Micro Nutritional Problems</u>	Copper deficiency , Selenium deficiency , Vitamin A deficiency , Vitamin B1 deficiency
<u>Multi-factorial Disease Conditions</u>	Abortions , Stillbirths , Abscesses , Bladder stones , Blindness , Bloat , Blue udder , Diarrhoea , Epididymitis , Eye Cancer , Eye infections , Joint Ill , Lameness/Foot Problems , Lung infection , Mastitis in general , Navel Ill , Red gut (Torsion of the Gut) Sheep , Trauma , Downer , Wet carcasses , Yellow carcasses at abattoir
<u>Metabolic Diseases</u>	Acidosis , Displaced abomasum , Ketosis , Milk Fever
<u>Reproductive diseases</u>	Dystocia (Difficult Births) , Endometritis , Metritis , Poor conception , Retained afterbirth , Sheath Prolaps , Uterus prolaps , Vaginal (Cervical) prolaps
<u>Climatical Cause</u>	Cold exposure , Frozen to death
<u>Non specific diseases</u>	Cause of death not established , Preditors , Sabotation/Theft

Internal Parasites

Roundworms in general

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				1.0 (1)	2.0 (1)	1.5 (2)			2.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef						1.0 (1)			
Sheep				1.0 (1)	2.0 (1)	2.0 (1)			
Goat									2.0 (1)

North West

Christiana, Christiana Dierehospitaal

Sheep: 1

Free State

Clocolan, Clocolan Dierekliniek

Sheep: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Sheep: 2

Underberg, Dr Tod Collins, Veterinary Livestock Consultancy

Beef: 1

Northern Cape

Kimberley, Kimberley Dierekliniek

Goat: 2

Wireworm									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					2.0 (1)			2.0 (1)	
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Sheep					2.0 (1)			2.0 (1)	

Free State

Clocolan, Clocolan Dierekliniek

Sheep: 2

Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 2

Brown stomach-worm									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average								2.0 (1)	
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Sheep								2.0 (1)	

Western Cape

Heidelberg (WC), Heidelberg Dierekliniek

Sheep: 2

Tape Worms									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape

Average	1.0 (1)
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep	1.0 (1)
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Free State

Clocolan, Clocolan Dierekliniek

Sheep: 1

Liver fluke

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average	1.0 (1)					2.0 (1)		2.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	1.0 (1)							2.0 (1)	
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Dairy						2.0 (1)			
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Mpumalanga

Hendrina, Mooiplaas Veterinere Dienste

Beef: 1

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Western Cape

George, George Herd Heath Consult

Beef: 2

Conical Flukes

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average					1.0 (1)	2.0 (1)			
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					1.0 (1)				
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Sheep						2.0 (1)			
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Free State

Kroonstad, Kroonstad Dierehospitaal

Beef: 1

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Sheep: 2

Cysticercosis									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average								1.0 (1)	
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Beef								1.0 (1)	

Western Cape
George, George Herd Heath Consult
 Beef: 1

External Parasites

Blue ticks									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (1)				1.0 (1)			3.0 (1)	
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Beef	2.0 (1)				1.0 (1)			3.0 (1)	

Mpumalanga
Nelspruit, Nelspruit Animal Hospital
 Beef: 2

Free State
Clocolan, Clocolan Direklinik
 Beef: 1

Western Cape
George, George Herd Heath Consult
 Beef: 3

Heartwater (Bont) ticks									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (1)								
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Beef	2.0 (1)								

Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Beef: 2

Bont-legged ticks

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				3.0 (1)					

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 3.0 (1)

North West**Christiana, Christiana Dierehospitaal**

Beef: 3

Red-legged ticks

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (1)			3.0 (1)					

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 2.0 (1) 3.0 (1)

Mpumalanga**Nelspruit, Nelspruit Animal Hospital**

Beef: 2

North West**Christiana, Christiana Dierehospitaal**

Beef: 3

Biting lice (red lice)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					2.5 (2)			1.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 2.5 (2)

Sheep 1.0 (1)

Free State**Clocolan, Clocolan Dierekliniek**

Beef: 2

Kroonstad, Kroonstad Dierehospitaal

Beef: 3

Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 1

Mange Mites

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average

3.0 (2)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy

3.0 (1)

Goat

3.0 (1)

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 3, Goat: 3

Nasal bot larvae

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average

2.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep

2.0 (1)

North West

Brits, Zodiac Dierekliniek

Sheep: 2

Midges

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average

2.0
(1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep

2.0
(1)

Free State

Clocolan, Clocolan Dierekliniek

Sheep: 2

Other

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average 3.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 3.0 (1)

North West

Christiana, Christiana Dierhospitaal

Beef: 3

Sarcoptes Mites

Tick-borne Diseases

African red water

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average 2.0 (1) 2.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 2.0 (1)

Dairy 2.0 (1)

Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 2

Western Cape

George, George Herd Health Consult

Dairy: 2

Asiatic red water

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average 2.0 (1) 2.0 (1) 2.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 2.0 (1) 2.0 (1)

Dairy 2.0 (1)

Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Western Cape**George, George Herd Heath Consult**

Dairy: 2

Anaplasmosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	1.0 (1)			3.0 (1)				2.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	1.0 (1)			3.0 (1)					
Dairy								2.0 (1)	

Mpumalanga**Hendrina, Mooiplaas Veterinêre Dienste**

Beef: 1

North West**Christiana, Christiana Dierehospitaal**

Beef: 3

Western Cape**George, George Herd Heath Consult**

Dairy: 2

Heartwater

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (1)			2.0 (1)					

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep				2.0 (1)					
Goat	2.0 (1)								

Mpumalanga**Nelspruit, Nelspruit Animal Hospital**

Goat: 2

North West**Brits, Zodiac Dierekliniek**

Sheep: 2

Insect Transmittable Diseases**Lumpy skin disease**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				2.0 (1)					

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 2.0 (1)

North West

Brits, Zodiac Dierekliniek

Beef: 2

Venereal Diseases

Trichomonosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	3.0 (1)				1.0 (2)				

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 3.0 (1) 1.0 (2)

Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 3

Free State

Clocolan, Clocolan Dierekliniek

Beef: 1

Kroonstad, Kroonstad Dierehospitaal

Beef: 1

Vibriosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (2)				1.0 (1)				

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 2.0 (2) 1.0 (1)

Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 3

Nelspruit, Nelspruit Animal Hospital

Beef: 1

Free State

Clocolan, Clocolan Dierekliniek

Beef: 1

Pizzle disease

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								1.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep								1.0 (1)	
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Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 1

Bacterial Disease (other)

Blackquarter

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average	2.0 (1)				1.0 (1)	2.0 (1)			
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (1)				1.0 (1)	2.0 (1)			
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Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 2

Free State

Clocolan, Clocolan Dierekliniek

Beef: 1

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Pulpy Kidney

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								3.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep								3.0 (1)	
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Western Cape

Piketberg, Piketberg Dieregesondheid

Sheep: 3

Blood gut (Sheep)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average

1.0
(1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep

1.0
(1)

Free State

Clocolan, Clocolan Dierekliniek

Sheep: 1

Tetanus

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average

1.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep

1.0 (1)

Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Sheep: 1

Septicaemia

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average

1.0
(1)

1.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef

1.0
(1)

1.0 (1)

Free State

Clocolan, Clocolan Dierekliniek

Beef: 1

Western Cape

Paarl, Paarl Dierehospitaal;

Beef: 1

Mpumalanga**Hendrina, Mooiplaas Veterinêre Dienste**

Beef: 1

Free State**Clocolan, Clocolan Dierekliniek**

Beef: 2, Dairy: 2, Sheep: 2

Kwazulu-Natal**Estcourt, Estcourt Vet Clinic**

Dairy: 2

Eastern Cape**Alexandria, Riverview Trading Vet Consulting Services**

Dairy: 3

Western Cape**Piketberg, Piketberg Dieregesondheid**

Sheep: 3

Northern Cape**Kimberley, Kimberley Dierekliniek**

Goat: 1

Other									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape

Average

3.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy

3.0 (1)

Kwazulu-Natal**Estcourt, Estcourt Vet Clinic**

Dairy: 3

Encountering *Histophilus somni* as a cause of Endometritis**Protozoal diseases (other)****Besnoitiosis**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					2.0 (1)				

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef

2.0 (1)

Free State**Kroonstad, Kroonstad Dierehospitaal**

Beef: 2

Coccidiosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average								2.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy								2.0 (1)	
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Western Cape

George, George Herd Heath Consult

Dairy: 2

Cryptosporidiosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average					1.7 (3)	3.0 (1)		2.3 (3)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					2.0 (1)				
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Dairy					1.0 (1)	3.0 (1)		2.5 (2)	
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Sheep					2.0 (1)			2.0 (1)	
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Free State

Clocolan, Clocolan Dierekliniek

Dairy: 1

Kroonstad, Kroonstad Dierehospitaal

Beef: 2, Sheep: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 3

Western Cape

George, George Herd Heath Consult

Dairy: 3

Heidelberg (WC), Heidelberg Dierekliniek

Dairy: 2, Sheep: 2

Fungal diseases

Ringworm

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average	2.0 (1)		3.0 (1)	1.5 (2)	2.0 (1)
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (1)		3.0 (1)	1.5 (2)	2.0 (1)
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Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Beef: 2

North West

Christiana, Christiana Dierehospitaal

Beef: 3

Free State

Clocolan, Clocolan Dierekliniek

Beef: 1

Kroonstad, Kroonstad Dierehospitaal

Beef: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Viral Diseases (other)

BMC (snotsiekte)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				2.0 (1)					
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				2.0 (1)					
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North West

Brits, Zodiac Dierekliniek

Beef: 2

Enzootic Bovine Leucosis (EBL)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average						2.0 (1)		2.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy						2.0 (1)		2.0 (1)	
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Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Western Cape**George, George Herd Heath Consult**

Dairy: 2

Orf

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				2.7 (3)				1.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep				3.0 (1)				1.0 (1)	
Goat				2.5 (2)					

North West**Brits, Zodiac Dierekliniek**

Goat: 2

Christiana, Christiana Dierehospitaal

Sheep: 3, Goat: 3

Western Cape**Heidelberg (WC), Heidelberg Dierekliniek**

Sheep: 1

Warts

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				3.0 (2)	2.0 (1)				

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				3.0 (1)	2.0 (1)				
Sheep				3.0 (1)					

North West**Christiana, Christiana Dierehospitaal**

Beef: 3, Sheep: 3

Free State**Clocolan, Clocolan Dierekliniek**

Beef: 2

Rota virus

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average						2.0 (1)		1.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy						2.0 (1)			1.0 (1)
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Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Western Cape

George, George Herd Heath Consult

Dairy: 1

Poisonings (Plant) and Fungal

Cardiac glycoside poisoning

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					2.0 (1)			2.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					2.0 (1)				
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Sheep								2.0 (1)	
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Free State

Clocolan, Clocolan Dierekliniek

Beef: 2

Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 2

Cynanchum poisoning

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average							2.0 (1)	1.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy							2.0 (1)		
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Sheep								1.0 (1)	
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Eastern Cape

Alexandria, Riverview Trading Vet Consulting Services

Dairy: 2

Western Cape

Heidelberg (WC), Heidelberg Dierekliniek

Sheep: 1

Facial eczema [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average								1.5 (2)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy								1.0 (1)	
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Sheep								2.0 (1)	
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Western Cape

George, George Herd Heath Consult

Dairy: 1

Heidelberg (WC), Heidelberg Dierekliniek

Sheep: 2

Prussic acid poisoning [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								1.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy								1.0 (1)	
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Western Cape

George, George Herd Heath Consult

Dairy: 1

Tulip Poisoning [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average	2.0 (1)				2.0 (1)	2.0 (1)			
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (1)				2.0 (1)	2.0 (1)			
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Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 2

Free State

Clocolan, Clocolan Dierekliniek

Beef: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Poisonings**Urea Poisoning**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					1.0 (1)			3.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					1.0 (1)				
Sheep								3.0 (1)	

Free State**Clocolan, Clocolan Dierekliniek**

Beef: 1

Western Cape**Piketberg, Piketberg Dieregesondheid**

Sheep: 3

Lambs

Macro Nutritional Problems**Energy deficiency**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	1.5 (2)			3.0 (2)	2.0 (4)	2.0 (1)			

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (1)			3.0 (1)	2.0 (1)	2.0 (1)			
Sheep				3.0 (1)	2.0 (3)				
Goat	1.0 (1)								

Mpumalanga**Nelspruit, Nelspruit Animal Hospital**

Beef: 2, Goat: 1

North West**Christiana, Christiana Dierehospitaal**

Beef: 3, Sheep: 3

Free State**Clocolan, Clocolan Dierekliniek**

Sheep: 2

Kroonstad, Kroonstad Dierehospitaal

Beef: 2, Sheep: 2

Warden, Warden Dierekliniek

Sheep: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Protein deficiency

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (2)			3.0 (1)	2.0 (2)	2.0 (1)			

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (1)			3.0 (1)	2.0 (1)	2.0 (1)			
Sheep					2.0 (1)				
Goat	2.0 (1)								

Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Beef: 2, Goat: 2

North West

Christiana, Christiana Dierehospitaal

Beef: 3

Free State

Kroonstad, Kroonstad Dierehospitaal

Beef: 2, Sheep: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Phosphate deficiency

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				3.0 (1)					

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				3.0 (1)					
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North West

Christiana, Christiana Dierehospitaal

Beef: 3

Calcium deficiency									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average								2.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep								2.0 (1)	
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Western Cape

Heidelberg (WC), Heidelberg Dierekliniek

Sheep: 2

Micro Nutritional Problems

Copper deficiency									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	1.0 (1)								

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep	1.0 (1)								
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Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Sheep: 1

Selenium deficiency									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				3.0 (1)					

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep				3.0 (1)					
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North West

Christiana, Christiana Dierehospitaal

Sheep: 3

Vitamin A deficiency									
PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				3.0 (2)					

George, George Herd Heath Consult

Dairy: 2

Stillbirths

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	1.0 (1)							2.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy								2.0 (1)	
Goat	1.0 (1)								

Mpumalanga**Nelspruit, Nelspruit Animal Hospital**

Goat: 1

Western Cape**George, George Herd Heath Consult**

Dairy: 2

Abscesses

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				3.0 (2)	2.0 (3)	2.5 (2)		1.7 (3)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				3.0 (1)	2.0 (1)	2.0 (1)		2.0 (1)	
Dairy						3.0 (1)		2.0 (1)	
Sheep				3.0 (1)	2.0 (2)			1.0 (1)	

North West**Christiana, Christiana Dierhospitaal**

Beef: 3, Sheep: 3

Free State**Clocolan, Clocolan Dierkliniek**

Beef: 2, Sheep: 2

Kroonstad, Kroonstad Dierhospitaal

Sheep: 2

Kwazulu-Natal**Estcourt, Estcourt Vet Clinic**

Beef: 2, Dairy: 3

Western Cape**Paarl, Paarl Dierhospitaal;**

Beef: 2, Dairy: 2, Sheep: 1

Bladder stones [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				1.0 (1)	1.0 (1)				
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep				1.0 (1)	1.0 (1)				
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North West									
Brits, Zodiac Dierekliniek									
Sheep: 1									
Free State									
Kroonstad, Kroonstad Dierehospitaal									
Sheep: 1									

Blindness [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								1.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef								1.0 (1)	
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Western Cape									
George, George Herd Heath Consult									
Beef: 1									

Bloat [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average					1.0 (2)			1.7 (3)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					1.0 (2)				
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Dairy								2.0 (1)	
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Goat								1.5 (2)	
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Free State									
Clocolan, Clocolan Dierekliniek									

Beef: 1

Kroonstad, Kroonstad Dierehospitaal

Beef: 1

Western Cape

Beaufort West, Beaufort Dierekliniek

Goat: 2

George, George Herd Heath Consult

Dairy: 2

Paarl, Paarl Dierehospitaal;

Goat: 1

Blue udder

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				2.0 (1)	2.0 (1)			2.0 (1)	
----------------	--	--	--	---------	---------	--	--	---------	--

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy								2.0 (1)	
Sheep				2.0 (1)	2.0 (1)				

North West

Brits, Zodiac Dierekliniek

Sheep: 2

Free State

Clocolan, Clocolan Dierekliniek

Sheep: 2

Western Cape

George, George Herd Heath Consult

Dairy: 2

Diarrhoea

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				3.0 (1)	2.0 (3)	2.0 (3)			
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				3.0 (1)	1.0 (1)	2.0 (1)			
Dairy					2.0 (1)				
Sheep					3.0 (1)	2.0 (1)			

Goat 2.0 (1)

North West

Christiana, Christiana Dierehospitaal

Beef: 3

Free State

Kroonstad, Kroonstad Dierehospitaal

Beef: 1, Sheep: 3

Warden, Warden Dierekliniek

Dairy: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2, Sheep: 2, Goat: 2

Epididymitis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								2.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep 2.0 (1)

Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 2

Eye Cancer

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				1.0 (1)	2.0 (1)	2.0 (1)		1.0 (1)	
----------------	--	--	--	---------	---------	---------	--	---------	--

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 1.0 (1)

Dairy 2.0 (1) 2.0 (1) 1.0 (1)

North West

Brits, Zodiac Dierekliniek

Beef: 1

Free State

Kroonstad, Kroonstad Dierehospitaal

Dairy: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Western Cape

George, George Herd Heath Consult

Dairy: 1

Eye infections [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				2.5 (4)	2.0 (3)				
----------------	--	--	--	---------	---------	--	--	--	--

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				2.5 (2)	2.0 (1)				
Dairy					2.0 (1)				
Sheep				2.5 (2)	2.0 (1)				

North West

Brits, Zodiac Dierekliniek

Beef: 2, Sheep: 2

Christiana, Christiana Dierehospitaal

Beef: 3, Sheep: 3

Free State

Clocolan, Clocolan Dierekliniek

Beef: 2, Dairy: 2, Sheep: 2

Joint Ill [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average					2.0 (2)			1.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					2.0 (1)				
Sheep					2.0 (1)			1.0 (1)	

Free State

Clocolan, Clocolan Dierekliniek

Beef: 2, Sheep: 2

Western Cape

Paarl, Paarl Dierehospitaal;

Sheep: 1

Lameness/Foot Problems [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average				2.0 (2)	3.0 (2)			2.3 (4)	
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Beef				3.0 (1)	3.0 (1)			1.0 (1)	
Dairy					3.0 (1)			2.5 (2)	
Sheep				1.0 (1)				3.0 (1)	

North West

Brits, Zodiac Dierekliniek

Sheep: 1

Christiana, Christiana Dierehospitaal

Beef: 3

Free State

Clocolan, Clocolan Dierekliniek

Beef: 3

Kroonstad, Kroonstad Dierehospitaal

Dairy: 3

Western Cape

George, George Herd Health Consult

Dairy: 3

Malmesbury, Groenkloof Dierekliniek

Sheep: 3

Foot rot

Paarl, Paarl Dierehospitaal;

Beef: 1, Dairy: 2

Lung infection [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average		2.0 (1)		3.0 (2)	2.5 (4)	2.0 (1)		1.5 (2)	
Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported									
Beef		2.0 (1)		3.0 (1)	2.0 (1)	2.0 (1)		2.0 (1)	
Dairy					3.0 (1)				
Sheep				3.0 (1)	3.0 (1)				

Goat	2.0 (1)	1.0 (1)
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Gauteng

Krugersdorp, Veearts Netwerk

Beef: 2

North West

Christiana, Christiana Dierehospitaal

Beef: 3, Sheep: 3

Free State

Clocolan, Clocolan Dierekliniek

Beef: 2, Dairy: 3, Sheep: 3

Warden, Warden Dierekliniek

Goat: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Western Cape

Beaufort West, Beaufort Dierekliniek

Goat: 1

Paarl, Paarl Dierehospitaal;

Beef: 2

Mastitis in general

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average				3.0 (2)				2.5 (2)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				3.0 (1)					
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Dairy								3.0 (1)	
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Sheep				3.0 (1)				2.0 (1)	
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North West

Christiana, Christiana Dierehospitaal

Beef: 3, Sheep: 3

Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 2

George, George Herd Health Consult

Dairy: 3

Navel Ill

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average					1.0 (1)				
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep										1.0 (1)
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Free State
Clocolan, Clocolan Dierekliniek
 Sheep: 1

Red gut (Torsion of the Gut) Sheep [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average					1.0 (2)				
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep					1.0 (1)				
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Goat					1.0 (1)				
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Free State
Clocolan, Clocolan Dierekliniek
 Sheep: 1, Goat: 1

Trauma [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								2.0 (2)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy								2.0 (1)	
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Sheep								2.0 (1)	
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Western Cape
Paarl, Paarl Dierehospitaal;
 Dairy: 2, Sheep: 2

Downer [^](#)

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average	2.0 (2)				2.3 (3)	2.0 (1)		2.0 (2)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (2)		2.0 (2)	2.0 (1)					
Dairy								2.0 (2)	
Sheep			3.0 (1)						

Mpumalanga

Hendrina, Mooiplaas Veterinêre Dienste

Beef: 2

Nelspruit, Nelspruit Animal Hospital

Beef: 2

Free State

Clocolan, Clocolan Dierekliniek

Beef: 2

Kroonstad, Kroonstad Dierehospitaal

Beef: 2, Sheep: 3

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 2

Western Cape

George, George Herd Heath Consult

Dairy: 2

Paarl, Paarl Dierehospitaal;

Dairy: 2

Wet carcasses

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					1.0 (1)			1.7 (3)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef								2.0 (1)	
Dairy					1.0 (1)			2.0 (1)	
Sheep								1.0 (1)	

Free State

Kroonstad, Kroonstad Dierehospitaal

Dairy: 1

Western Cape

Paarl, Paarl Dierehospitaal;

Beef: 2, Dairy: 2, Sheep: 1

Yellow carcasses at abattoir

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
----------	------------	---------	---------	------------	------------	---------------	--------------	--------------	---------------

Average								2.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef								2.0 (1)	
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Western Cape

Paarl, Paarl Dierehospitaal;

Beef: 2

Metabolic Diseases

Acidosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average					2.7 (3)	3.0 (1)		2.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					3.0 (1)				
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Dairy						3.0 (1)			
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Sheep					2.5 (2)			2.0 (1)	
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Free State

Clocolan, Clocolan Dierekliniek

Beef: 3, Sheep: 3

Kroonstad, Kroonstad Dierehospitaal

Sheep: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 3

Western Cape

Beaufort West, Beaufort Dierekliniek

Sheep: 2

Displaced abomasum

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average						2.0 (1)			
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy 2.0 (1)

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Ketosis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	1.0 (1)				2.0 (1)	2.0 (1)		1.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy 2.0 (1)

Sheep 2.0 (1) 1.0 (1)

Goat 1.0 (1)

Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Goat: 1

Free State

Kroonstad, Kroonstad Dierhospitaal

Sheep: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Western Cape

Heidelberg (WC), Heidelberg Dierkliniek

Sheep: 1

Milk Fever

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average						2.0 (1)	1.0 (2)	2.5 (2)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 1.0 (1)

Dairy 2.0 (1) 1.0 (1) 3.0 (1)

Sheep 2.0 (1)

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Eastern Cape

Alexandria, Riverview Trading Vet Consulting Services

Beef: 1, Dairy: 1

Western Cape

George, George Herd Heath Consult

Dairy: 3

Heidelberg (WC), Heidelberg Dierekliniek

Sheep: 2

Reproductive diseases**Dystocia (Difficult Births)**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	2.0 (2)			2.5 (2)	2.0 (3)	2.0 (2)		1.7 (3)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	2.0 (1)			2.5 (2)	2.0 (2)	2.0 (1)		1.0 (1)	
Dairy					2.0 (1)	2.0 (1)		2.0 (1)	
Sheep								2.0 (1)	
Goat	2.0 (1)								

Mpumalanga**Nelspruit, Nelspruit Animal Hospital**

Beef: 2, Goat: 2

North West**Brits, Zodiac Dierekliniek**

Beef: 2

Christiana, Christiana Dierehospitaal

Beef: 3

Free State**Clocolan, Clocolan Dierekliniek**

Dairy: 2

Kroonstad, Kroonstad Dierehospitaal

Beef: 2

Warden, Warden Dierekliniek

Beef: 2

Kwazulu-Natal**Estcourt, Estcourt Vet Clinic**

Beef: 2, Dairy: 2

Western Cape**Beaufort West, Beaufort Dierekliniek**

Sheep: 2

George, George Herd Heath Consult

Dairy: 2

Paarl, Paarl Dierehospitaal;

Beef: 1

Endometritis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average						3.0 (1)		2.5 (2)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef								3.0 (1)	
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Dairy						3.0 (1)		2.0 (1)	
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Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 3

Western Cape

George, George Herd Heath Consult

Beef: 3

Heidelberg (WC), Heidelberg Dierekliniek

Dairy: 2

Metritis

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average				3.0 (1)				3.0 (1)	
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				3.0 (1)					
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Dairy								3.0 (1)	
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North West

Christiana, Christiana Dierehospitaal

Beef: 3

Western Cape

George, George Herd Heath Consult

Dairy: 3

Poor conception

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average				2.0 (1)	2.5 (2)				
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Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef				2.0 (1)	3.0 (1)				
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Sheep					2.0 (1)				
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North West**Christiana, Christiana Dierehospitaal**

Beef: 2

Free State**Clocolan, Clocolan Dierekliniek**

Beef: 3, Sheep: 2

Retained afterbirth

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					1.0 (2)				

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					1.0 (1)				
Dairy					1.0 (1)				

Free State**Clocolan, Clocolan Dierekliniek**

Dairy: 1

Kroonstad, Kroonstad Dierehospitaal

Beef: 1

Sheath Prolaps

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					1.0 (1)				

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef					1.0 (1)				
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Free State**Clocolan, Clocolan Dierekliniek**

Beef: 1

Uterus prolaps

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average					1.3 (3)	2.0 (1)		1.0 (1)	

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef		2.0 (1)			
Dairy		1.0 (1)	2.0 (1)		1.0 (1)
Sheep		1.0 (1)			

Free State

Kroonstad, Kroonstad Dierehospitaal

Dairy: 1, Sheep: 1

Warden, Warden Dierekliniek

Beef: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Dairy: 2

Western Cape

George, George Herd Heath Consult

Dairy: 1

Vaginal (Cervical) prolaps

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
Average	1.0 (3)			1.0 (1)	2.3 (4)	1.0 (2)	1.0 (1)		

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef	1.0 (1)			1.0 (1)	2.3 (3)	1.0 (1)			
Dairy						1.0 (1)			
Sheep	1.0 (1)				2.0 (1)		1.0 (1)		
Goat	1.0 (1)								

Mpumalanga

Nelspruit, Nelspruit Animal Hospital

Beef: 1, Sheep: 1, Goat: 1

North West

Brits, Zodiac Dierekliniek

Beef: 1

Free State

Clocolan, Clocolan Dierekliniek

Beef: 3

Kroonstad, Kroonstad Dierehospitaal

Beef: 2, Sheep: 2

Warden, Warden Dierekliniek

Beef: 2

Kwazulu-Natal

Estcourt, Estcourt Vet Clinic

Beef: 1, Dairy: 1

Eastern Cape**Alexandria, Riverview Trading Vet Consulting Services**

Sheep: 1

Climatical Cause**Cold exposure**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average2.3
(3)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef2.0
(1)**Sheep**2.5
(2)**Free State****Clocolan, Clocolan Dierekliniek**

Beef: 2, Sheep: 3

Kroonstad, Kroonstad Dierehospitaal

Sheep: 2

Frozen to death

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average2.5
(2)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef2.0
(1)**Sheep**3.0
(1)**Free State****Clocolan, Clocolan Dierekliniek**

Beef: 2, Sheep: 3

Non specific diseases**Cause of death not established**

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average 2.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Dairy 2.0 (1)

Western Cape

George, George Herd Heath Consult

Dairy: 2

Preditors

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average 3.0 (1)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Sheep 3.0 (1)

Free State

Clocolan, Clocolan Dierkliniek

Sheep: 3

Sabotage/Theft

PROVINCE	Mpumalanga	Gauteng	Limpopo	North West	Free State	Kwazulu-Natal	Eastern Cape	Western Cape	Northern Cape
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Average 3.0 (2)

Level of importance scale: 1 = one case, 2 = more than one case but less than ten and 3 = more than 10 cases reported

Beef 3.0 (1)

Sheep 3.0 (1)

Free State

Clocolan, Clocolan Dierkliniek

Beef: 3, Sheep: 3

