



Ethan with baby brother, Noah

The EHF Team congratulates Camilla and Omar Mehtar on the birth of their second son, Noah Peter, brother to Ethan. Camilla plays a vital role for EHF and ERC with her surveillance work and research in the Western Cape.

DID YOU MEET THE 31ST OCTOBER DEADLINE FOR AHS VACCINATIONS?

On 26 March 2015, the Department of Agriculture, Forestry and Fisheries (DAFF) released a letter regarding the restricted AHS vaccination period of 1 June – 31 October each year.

This was published in our April Newsletter:

(<http://www.equinehealthfund.co.za/News/importantnotice.aspx>), with further explanation contained in our May Newsletter:

(<http://www.equinehealthfund.co.za/News/Vaccinationperiodarticle.aspx>).

Please also read the OBP AHS vaccine insert:

(<http://www.equinehealthfund.co.za/Portals/0/OBP%20AHS%20Vaccine%20Insert.pdf>)

As you will see, the restricted period of 1 June to 31 October is compulsory in the AHS Controlled Area and recommended for the rest of the country. There is also quite a lot of information about AHS vaccinations on the Equine Health Fund website- www.equinehealthfund.co.za (Go to “links” and read both the ERC newsletters and the EHF newsletters.)

In a nutshell, what you need to know is:

- 1) If you live in the AHS infected area of SA, vaccinate all horses for AHS every year between 1 June and 31 October using the registered OBP AHS vaccine. Before we had the OBP vaccine thousands of horses died of AHS every year. The more horses that are vaccinated correctly using the OBP vaccine, the fewer cases of AHS there will be in the country. According to the Animal Diseases Act, 35 of 1984, it is compulsory to vaccinate all horses in the infected area and in the protection zone for AHS every year.

A horse suffering from AHS has the AHS virus circulating in its bloodstream. The virus can be picked up by culicoides midges that feed on that horse. The midge becomes “infected” and can pass that AHS virus onto other horses it feeds on.

A responsible horse owner will make sure his/her horses are correctly vaccinated,

a) to protect his/her own horse(s) from becoming infected, and

b) to prevent an infected horse from acting as a reservoir for the AHS virus which can be passed on to other horses in the area via culicoides vectors.

The AHS vaccine must be used according to the vaccine manufacturer’s recommendations. There are two bottles, each containing different serotypes and the two bottles should be given no less than 3 weeks (21 days) apart.

- 2) The restricted vaccination period, 1 June – 31 October, was introduced to increase the chances that horses are vaccinated and protected **before** the start of the “AHS outbreak season” **and** to decrease the possibility of AHS vaccine involvement in outbreaks of AHS. If horses are vaccinated during a period of high vector activity with any modified live virus vaccine, there is a possibility that
 - a)* the vaccine virus may revert to virulence and be transmitted to other horses by culicoides vectors and it may cause disease in those other horses, or
 - b)* that recombinants of vaccine virus and field virus may occur and “new viruses” may be transmitted to other horses.

These phenomena can be effectively managed by restricting the use of modified live virus vaccines to a period of low vector activity so the risk of transmission of AHS is much lower.

- 3) If you have missed the 1 June -31 October AHS vaccination period and you live in the AHS infected area (the whole of SA except the AHS Controlled Area in the Western Cape), consult your veterinarian. Depending on the age of your horse and the number of previous vaccinations it has had, your veterinarian may advise that you vaccinate your horse for AHS to ensure your horse is given the best possible protection before the height of the AHS season. If you vaccinate outside the recommended period (the recommended period is 1 June – 31 October), your veterinarian will probably also advise you to take additional precautions during the vaccination process to reduce the risk of AHS vaccine uptake by vectors, such as stabling and use of repellents (Products that contain 15% DEET) .

Your veterinarian is likely to advise you to plan to vaccinate all your horses for AHS every year between 1 June and 31 October in future.

- 4) If you live in the AHS Controlled Area of SA in the Western Cape, you will need to adhere to the AHS vaccination policy in the AHS Controlled Area. Horses can only be vaccinated with permission from the SV Boland and only between 1 June and 31 October. You can obtain more details from SV Boland at svboland@elsenburg.com or Ms Danielle Pienaar at censuswc2012@gmail.com

DAFF RELEASES IT’S FINAL REPORT FOR THE 2015 AHS SEASON (next page)

The 2015 African Horse Sickness season: Final Report

1 September 2014 to 31 August 2015



Report by Dr M de Klerk, Ms M Laing, Dr C Qekwana and Ms N Mabelane

Directorate: Animal Health

2015/08/31

African Horse Sickness 2015 season report

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Introduction

African Horse sickness (AHS) virus is an Arbovirus from the Reoviridae Family. The virus is transmitted mainly by *Culicoides imicola* and *C. bolitinos*. AHS is seasonally endemic in the north eastern part of South Africa with seasonal epidemics spreading to the south and west of the country. The existence of endemic areas other than the areas described above could never be proven.

African Horse Sickness outbreaks are recorded from 1 September to 31 August of the next year for practical reasons to include all the outbreaks in a single summer season. An outbreak is defined as a laboratory confirmed or epidemiologically linked positive case or cases on a property (farm or village) in a calendar month. If the disease persists for more than a calendar month in a single location, the responsible Veterinarian or Animal Health Technician should decide if the severity of the situation warrants further action.

The 2015 AHS season: Climatic conditions

Favourable climatic conditions will increase the breeding and spread of the *Culicoides* vector. Periods of drought followed by heavy rains are particularly favourable for the field vector. AHS has both seasonal and cyclical incidence with outbreaks occurring mainly in late summer and autumn.

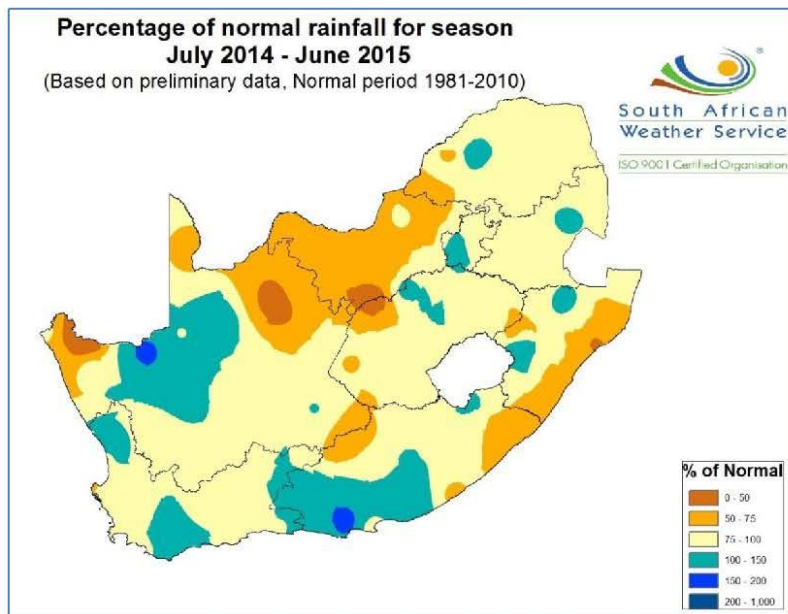


Figure 1: Percentage of normal rainfall for July 2014 – June 2015

Figure 1 indicates that large parts of the country received lower than average rainfall, particularly over large areas of KZN, Limpopo, North-West, Northern Cape and Western Cape. Very few areas received above average rainfall.

Laboratories involved in AHS diagnostics

Three laboratories supplied AHS test results to DAFF:

The Veterinary Genetics Laboratory: Molecular Diagnostics (University of Pretoria) is DAFF approved. An AHSV/Xeno Real-Time PCR is used to detect AHS virus. Serotypes are identified by a serotype specific RT-qPCR which is not yet DAFF approved.

The Biotechnology Laboratory (Onderstepoort Veterinary Institute) is DAFF approved and SANAS accredited. An AHSV hnRT-PCR is used to detect AHS virus.

Deltamune in Oudtshoorn is DAFF approved. A lightcycler PCR test is used to detect AHS virus.

Reported outbreaks

Passive surveillance depends on owners to report suspect cases to the veterinarian who then further investigates the case. All AHS outbreaks must be reported to the local state veterinarian. State veterinarians are required to report all outbreaks to the Department of Agriculture, Forestry and Fisheries on a SR1 report. The SR1 reports can either be e-mailed to Epidemiology@daff.gov.za or faxed to 012 319 7470.

Comparison of the number of reported AHS outbreaks for the previous AHS seasons

The number of outbreaks for the period 1 September to 30 August of the years 2011 to 2015 is compared in Fig. 2. The 2012 season had the lowest number of AHS outbreaks whereas the 2011 season had the highest. As can be seen in Figure 2, there is generally a low occurrence of AHS in the 2015 season throughout the country.

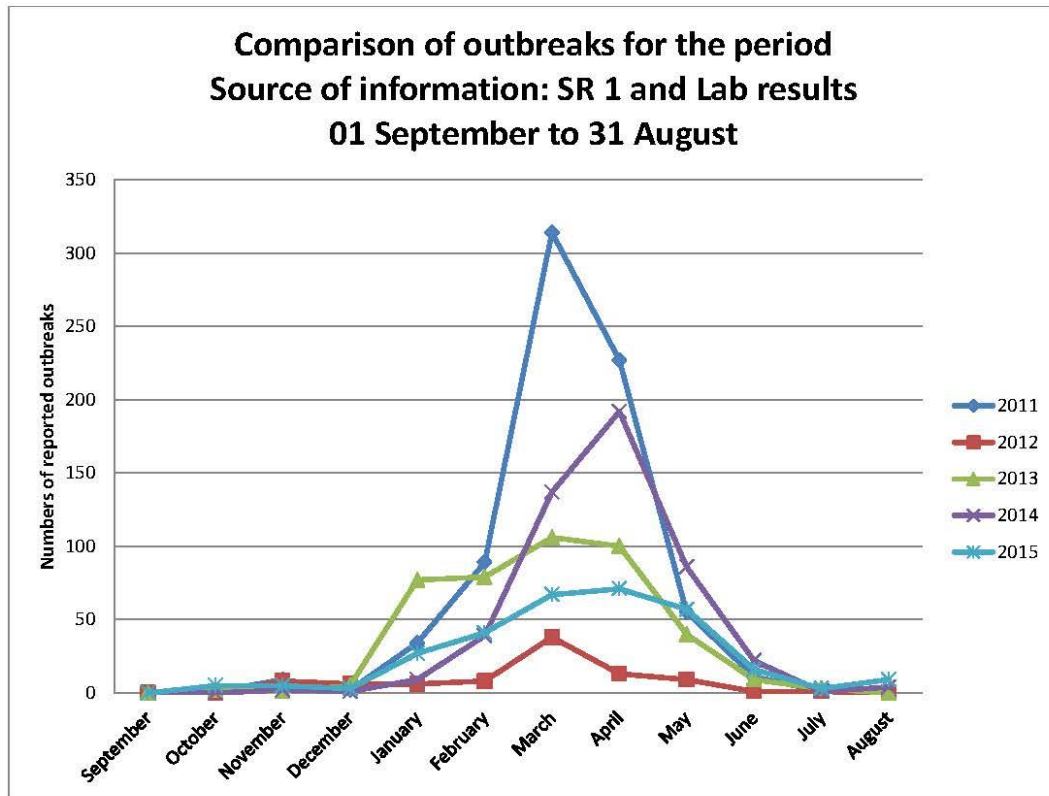


Figure 2: Comparison of the number of reported AHS outbreaks for the previous AHS seasons

Temporal occurrence Of AHS from 1992: countrywide

The number of reported outbreaks combined with the temporal distribution of outbreaks is illustrated in Table 1. Outbreaks commonly occur between January and June. The frequency of outbreaks usually drops during the winter months due to the significant drop in vectors populations.

Table 1: African Horse sickness outbreaks form September 1992 to February 2015 occurrence and number of outbreaks

Season	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Sept 1992-Aug 1993					3		1			1		
Sept 1993-Aug 1994		1		2	2	1	2		3	1		
Sept 1994-Aug 1995					1		2	3				
Sept 1995-Aug 1996						6	24	27	8	1		
Sept 1996-Aug 1997		2		2			10	4	1	2	1	
Sept 1997-Aug 1998		1		3	6	7	8	5	6	1		
Sept 1998-Aug 1999	1	1	1	5	7	30	16	29	10	2	2	1
Sept 1999-Aug 2000			1		2	5	33	69	36	35		2
Sept 2000-Aug 2001					2	1	8	16	29	24	1	
Sept 2001-Aug 2002	1	1		4	17	27	31	24	14	2	2	6
Sept 2002-Aug 2003					1	9	26	16	31	5		
Sept 2003-Aug 2004		1			2	15	51	58	61	9		
Sept 2004-Aug 2005					20	19	35	79	36	2	1	
Sept 2005-Aug 2006	1		1	2	14	36	107	77	62	16		
Sept 2006-Aug 2007	2		2	2	9	8	11	17	5	2	1	
Sept 2007-Aug 2008				7	24	83	137	91	40	5	1	
Sept 2008-Aug 2009		7	1	3	10	31	90	91	47	16		1
Sept 2009-Aug 2010		1			6	13	17	44	14	21	2	
Sept 2010-Aug 2011		8	10	11	32	110	255	226	44	9	1	
Sept 2011-Aug 2012					7	11	38	14	9	1		
Sept 2012-Aug 2013		2	2	5	70	79	105	98	40	9	4	1
Sept 2013-Aug 2014			2	1	7	25	82	94	23	13	1	2
Sept 2014-Aug 2015		5	5	3	27	41	67	71	57	16	3	9



Comparison of the number of AHS outbreaks that have occurred in various provinces for the current season based on SR1 reports and lab reports.

Figure 3 Illustrates the number of outbreaks for 9 provinces in the current AHS season based on Lab results and SR1 reports. Gauteng has the highest number of outbreaks from December 2014 to June 2015 compared to the rest of the provinces.

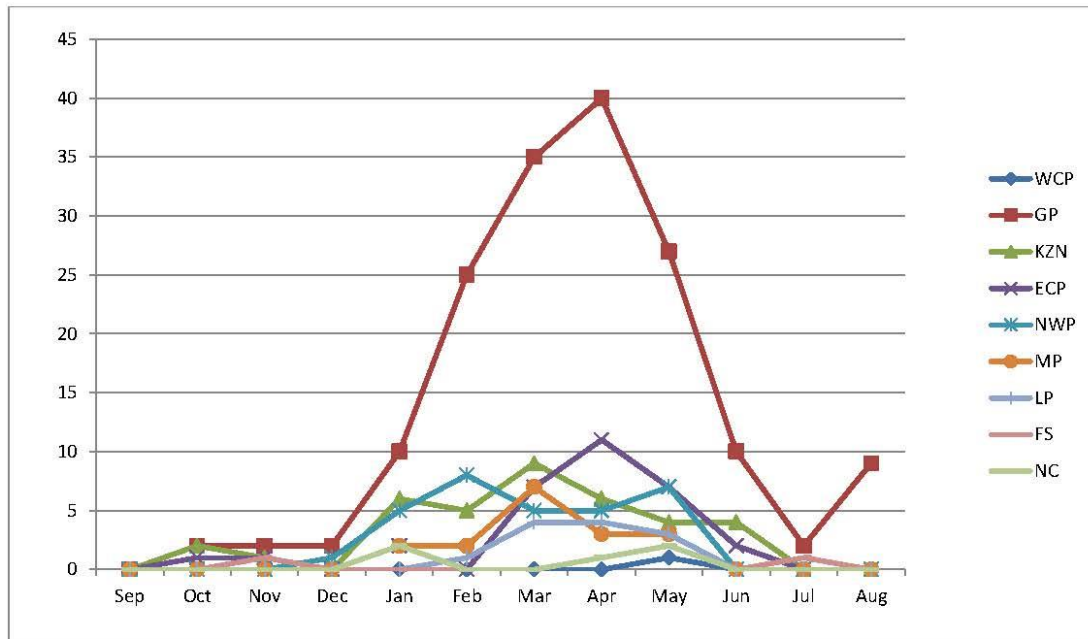


Figure 3: Comparison of the number of reported AHS outbreaks in each province from September 2014 – Aug 2015.

The source of outbreak reports were derived from SR1 reports and Lab results received.

The table (Table 2) indicates the number of AHS outbreaks in each province based on SR1 reports and lab results. According to the Animal Disease Act (35 of 1984) all AHS outbreaks must be reported. Only 48% of the positive locations were reported with SR1 reports.

Cases that have been diagnosed with serology have not been included in the report because background information regarding vaccination history was not available. Positive serological results received could be as a result of vaccination or natural infection.

Table 2: African Horse Sickness outbreaks based on lab and SR1 reports received: September 2014 to Aug 2015

Province	Number of outbreaks reported with SR1 reports	Number of outbreaks reported without SR1 reports	Total number of outbreaks	Total number of disease related deaths based on SR1 reports only
Gauteng	75	90	165	21
KZN	22	15	37	4
North-West	17	14	31	4
Northern Cape	2	3	5	1
Western Cape	1	0	1	6
Eastern Cape	19	12	31	21
Mpumalanga	3	14	17	3
Free State	1	4	5	0
Limpopo	5	7	12	2
TOTAL (1 September 2014 to 31 Aug 2015)	145	159	304	62

African Horse sickness virus is divided into 9 serotypes that are known to be circulating in South Africa. The map (Figure 4) illustrates the location of the laboratories or practices that detected each serotype, 22% of these results are linked to SR1 reports. Six out of the 9 serotypes were detected since the beginning of the current season countrywide, namely: Serotype 1, Serotype 3, Serotype 6, Serotype 7, Serotype 8 and Serotype 9.

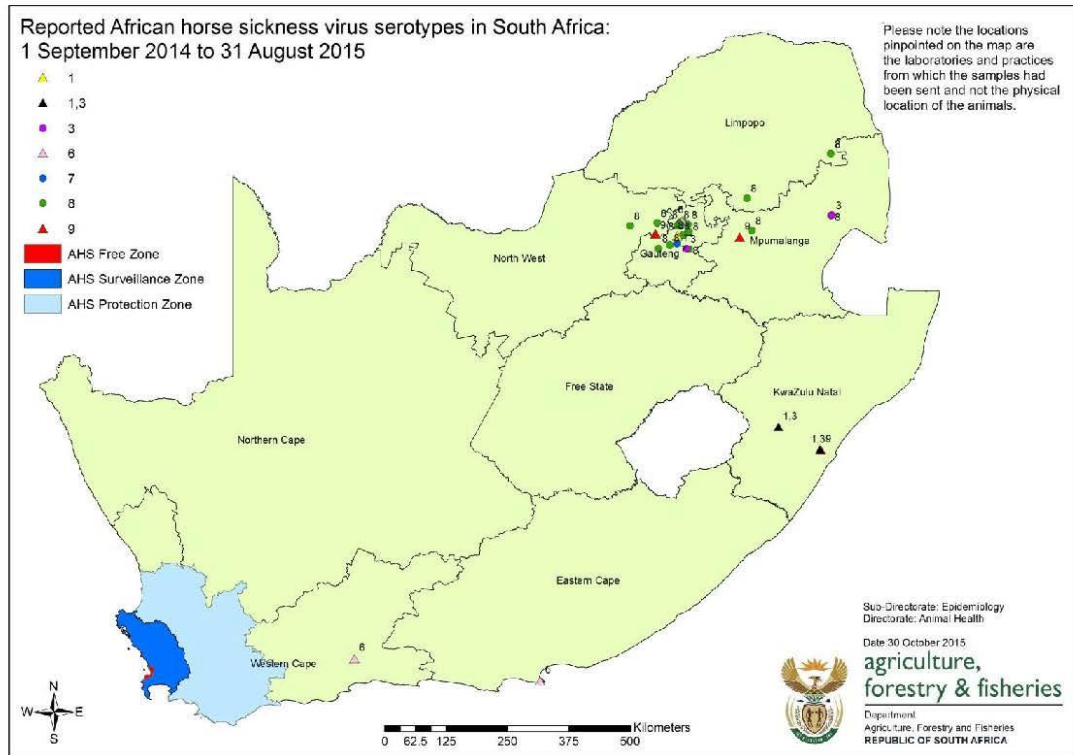


Figure 4: AHS virus serotypes in South Africa

Figure 5 illustrates a central distribution of the serotypes identified and reported by laboratories and practices in the 3 State Veterinarian Areas of Gauteng Province.

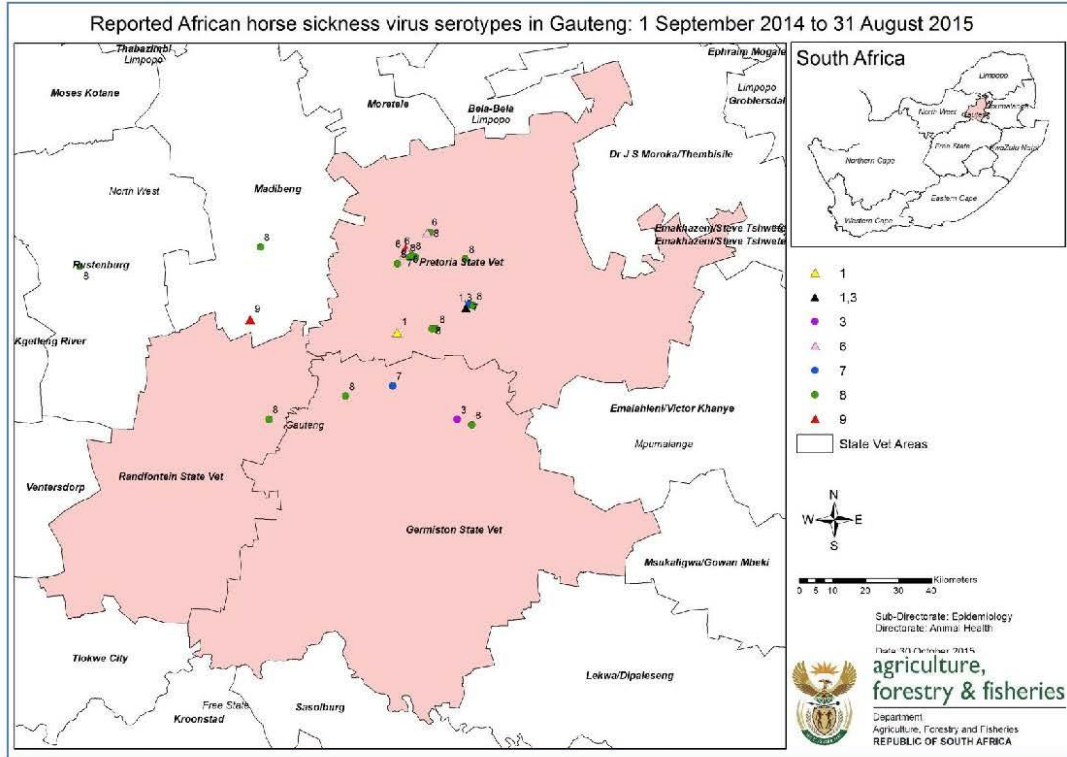


Figure 5: AHS virus serotypes in Gauteng for current AHS season

The table (Table 3) shows all the serotypes that have been identified in Gauteng province from laboratories and practices from the 3 State Veterinarian Areas

Table 3: Number of serotypes in each State Veterinarian Area in Gauteng as illustrated in Figure 5

State Veterinarian Area	
Pretoria State Vet Area	Serotype 1 × 2 Serotype 3 × 1 Serotype 6 × 3 Serotype 7 × 2 Serotype 8 × 9
Germiston State Vet Area	Serotype 3 × 1 Serotype 7 × 1 Serotype 8 × 2
Randfontein State vet area	Serotype 8 × 1

Comparison of all lab results and SR 1 reports for each province

Figure 6 shows the number of positive AHS laboratory reports that were received (red). The blue bars illustrate the number of SR1 reports submitted by each province for the season. Western Cape Province reported 100% and Free State reported 20% of their total outbreaks with SR1 reports.

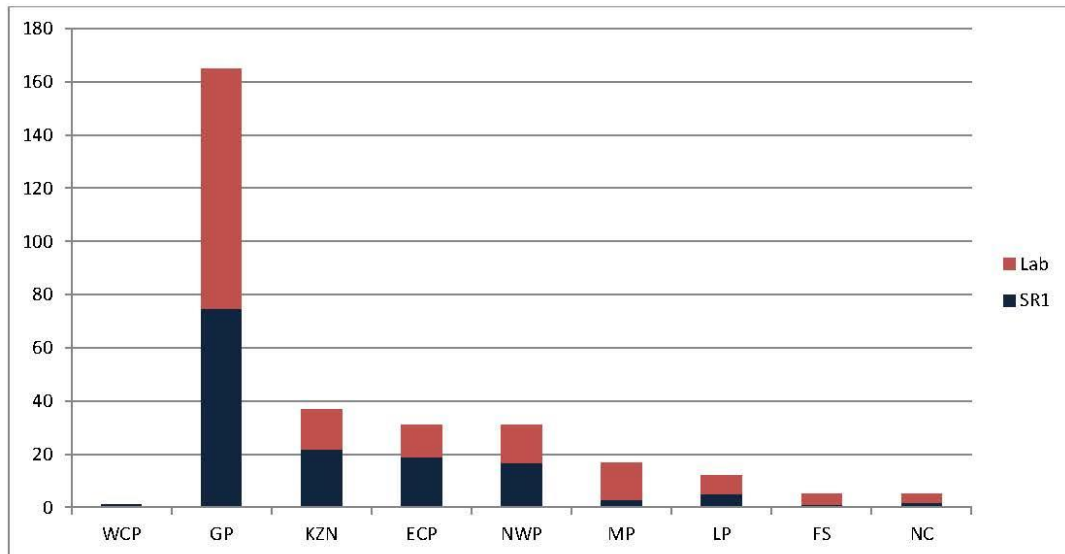


Figure 6: Comparison of the number of AHS outbreaks that were detected with lab results and SR1 reports

Figure 7 illustrates the percentage of SR1 reports and lab results received from all the provinces. So far in the 2015 AHS season only 48% of all detected outbreaks were reported with SR1 reports countrywide as shown in the blue area. All positive locations that were reported with laboratory reports only, are shown in the red section.

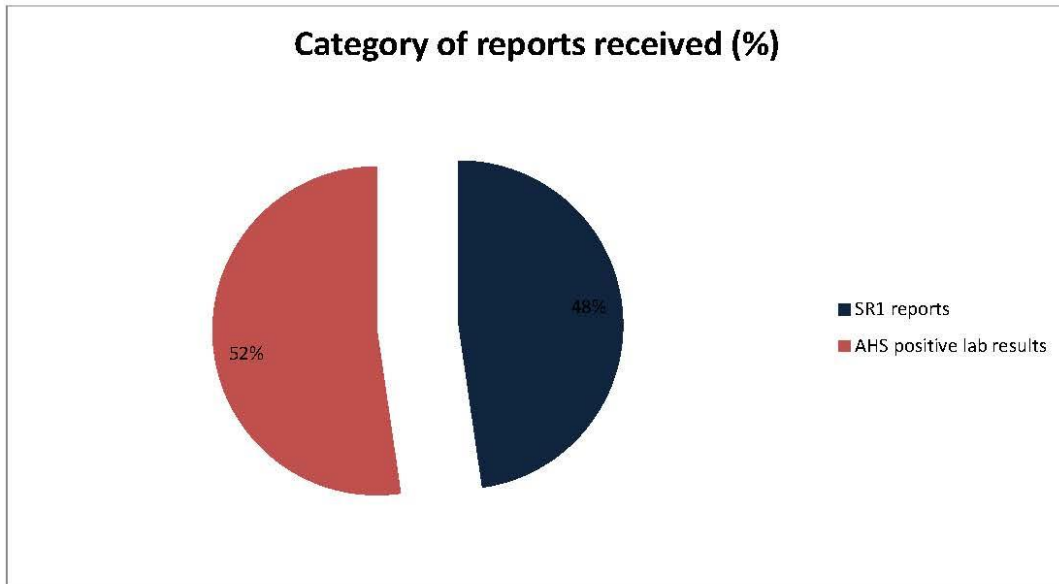


Figure 7: Categories of the detected outbreaks according to report status

The number of outbreaks that have occurred in each province is illustrated in Figure 8, based only on SR1 reports. Results only received from lab reports without SR1 reports do not appear on the map due to insufficient background information. Therefore 52% of all laboratory confirmed outbreaks (159) are not represented in figure 6. The province with the highest number of reported outbreaks was Gauteng Province. Northern Cape and Western Cape Provinces have the least number of reported outbreaks. No SR1 reports were received from Free State.

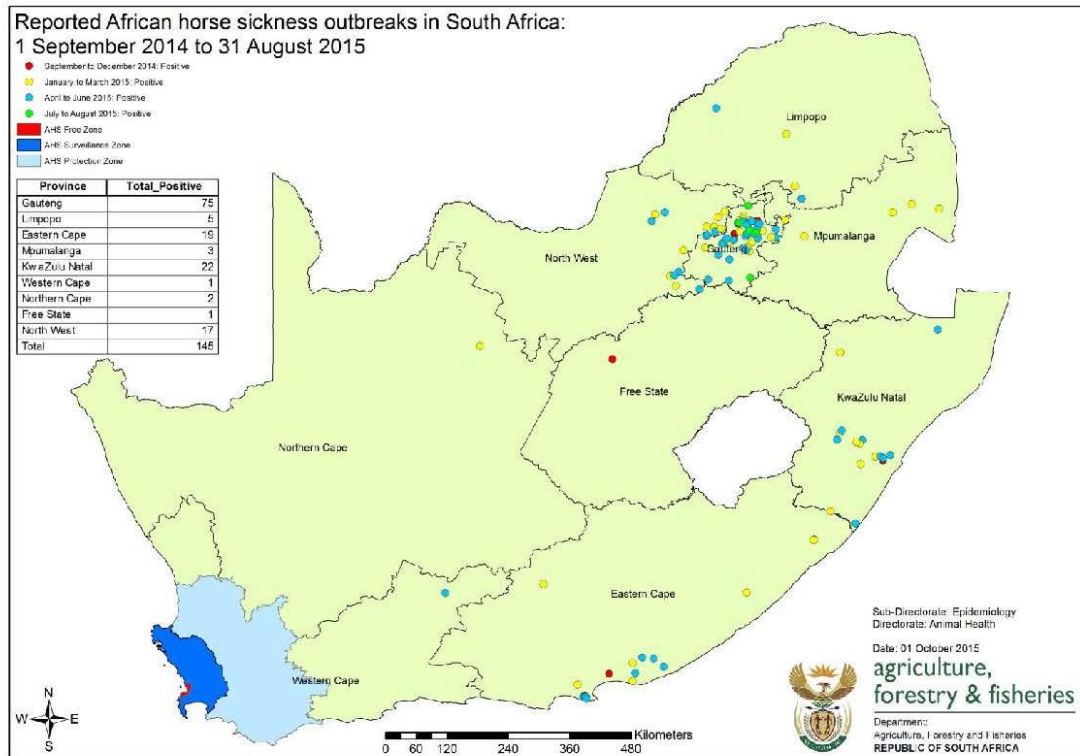


Figure 8: Reported number of AHS outbreaks in each province from September 2014 – Aug 2015

Figure 9 illustrates all the initial outbreaks for each province and the dates thereof based on SR1 reports only. KwaZulu Natal was the first province to report an outbreak in September 2014.

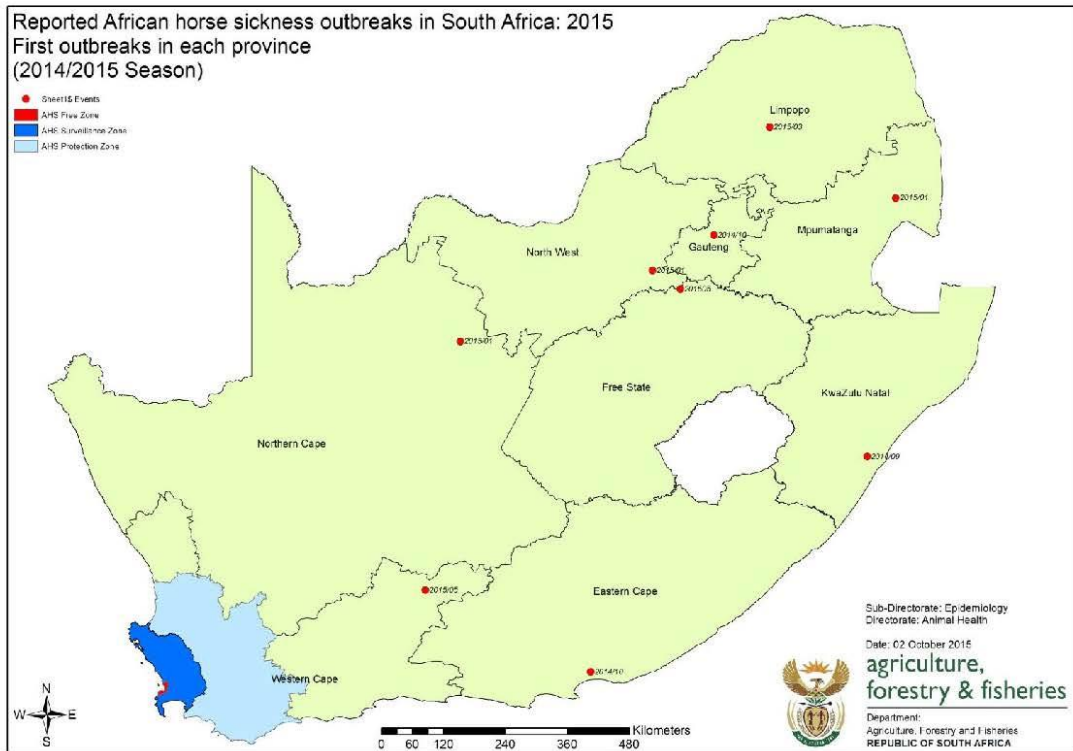


Figure 9: Reported number of initial AHS outbreaks for each province for September 2014 – Aug 2015

Precautions to limit outbreaks

Owners are encouraged to vaccinate their animals annually to limit the impact of the disease. All horses in RSA (except in the AHS free and surveillance zones in the Western Cape Province) must be vaccinated annually using a registered vaccine at the cost of the owner. The African Horse Sickness Vaccine from Onderstepoort Biological Products (Reg No, G116, Act 36 of 1947) is currently the only registered vaccine in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947). According to the OBP AHS vaccine insert, it is important to administer the vaccine in the low vector activity periods when the likelihood of transmission is low. DAFF has issued a directive, restricting vaccination periods from 1 June until 30 October as indicated in Table 3, below.

Table 4: The table indicates the dates for administration of African horse sickness vaccinations for each AHS zone:

Area	Adjustment
AHS Free Zone	Permission for vaccination will only be given from 1 June to 31 October each year.
AHS Surveillance Zone	Permission for vaccination will only be given from 1 June to 31 October each year.
AHS Protection Zone	All equines in this area must be vaccinated within the period 1 June to 31 October each year.
AHS Infected Zone	Strong recommendation is made to vaccinate during the period 1 June to 31 October each year

It is advisable to stable horses at least two hours before sunset and keep them stabled until two hours after sunrise. This is the time period when the *Culicoides* midges are most active and known to be feeding. As *Culicoides* midges also colonize around stagnant water sources, all efforts should be made to prevent such pooling of water and to move animals away from these sources.

To aid in the prevention of the AHS virus introduction into the AHS controlled areas of the Western Cape, all movements of equids to the AHS controlled areas are subject to strict State Veterinary movement control. Movement permits and valid identification of the equines will be required before movement. A health certificate must be obtained 48 hours prior to movement and the equid must be vaccinated 40 days prior to movement but not longer than 24 months prior to movement. For more information please contact your private veterinarian, state veterinarian or State veterinarian Boland at 021 808 5253.

Regular testing and active surveillance of sentinel horses allows for early detection of clinical AHS outbreaks and even subclinical carriers in the Free and Protection zones. Sentinel animals are not vaccinated and are managed at fixed locations in order to detect any circulating infection among the herd. The OIE code requires ongoing surveillance to demonstrate freedom of disease in a country or zone. Owners play a crucial role in testing of sick animals. It is therefore important to educate horse owners about early disease detection and the importance of continuous surveillance.

Reporting of outbreaks

African horse sickness is a controlled animal disease in terms of the Animal Diseases Act, 1984 (Act 35 of 1984). Reporting of AHS outbreaks to State Veterinary Services is compulsory according to the Animal Disease Act, 1984 (Act 35 of 1984). In case of a suspect or positive AHS outbreaks please contact the office of Provincial Director, Veterinary Services, if the contact details of the State Veterinarian are unknown.

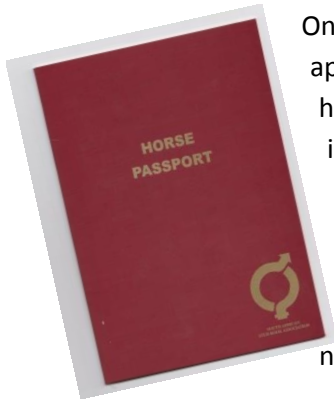
<http://www.daff.gov.za/vetweb/Contacts/Contact%20list%20Provincial%20Directors.htm>



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<http://www.oie.int/wahis/public.php?page=home>

Stud Book Passports are brought up to required standards



One of Stud Book's additional services is to issue passports for horses on application and maintain a comprehensive database. Studbook have worked hard to upgrade the identification section of the passports they issue to international standards in line with other organisations such as the National Horseracing Authority and South African Equestrian Federation. The catalyst to this move was when a horse was turned back from the Western Cape because the state veterinarian would not accept the old studbook passport for movement. The old studbook passport was also not accepted for export.

To achieve the goal of a nationally acceptable passport there were workshops held, and a committee of various stakeholders worked to reach a consensus regarding the structure and issue of passports. In line with this, horses registered with Stud Book must now have their identification pages completed by a registered veterinarian and bound into the passport.

The new Studbook passport will be phased in, with all new horse registrations receiving the new passport, and "old" passports for horses that need to move to the Western Cape or for export or to compete in an FEI event will need to be replaced with the new passport. The old passport will need to be handed in, together with the application forms, whereupon all the vaccination details will be transposed into the new passport. If the old passport's ID page is not the correct format a newly completed ID form signed and stamped by the veterinarian is required to issue a new passport and the old one will be destroyed. There can only be one valid passport for each horse.

Where an old passport is returned with an application for a new passport, the cost of a new one is reduced by 50%.

The Stud Book passport is used by the majority of Breed Societies.

We congratulate Studbook for their hard work in upgrading Studbook Passports to international standards.

Should you have any queries, please contact herman@studbook.co.za.

A SIMPLIFIED 'REFRESHER' ON CLINICAL AHS SYMPTOMS (as published in the January 2014 issue of the Equine Research Centre Newsletter)

The disease manifests in four ways, namely the lung form, the heart form, the mixed form and lastly the horse sickness fever form.

The lung (dunkop) form is characterised in the following manner:

- Very high fever (up to 41 degrees)
- Difficulty in breathing, with mouth open and head hanging down
- Frothy discharge may pour from nose
- Sudden onset of death
- Very high death rate (90%)



The heart (dikkop) form is characterised in the following manner:

- Fever, followed by swelling of the head and eyes
- In severe cases, the entire head swells (“dikkop”)
- Loss of ability to swallow and possible colic symptoms may occur
- Terminal signs include bleeding (of pinpoint size) in the membranes of the mouth and eyes
- Slower onset of death, occurring 4 to 8 days after the fever has started
- Lower death rate (50%).



The mixed form is characterised by symptoms of both the dunkop and dikkop forms of the disease (this is what is seen very commonly in the field).

The horse sickness fever form, presents as a horse that might be mildly depressed, and has a fever, which can be intermittent and last for 48 hours.

It has been shown that subclinical cases (i.e. horses that are infected with the virus but show no symptoms) can also occur.

Diagnosis and Notification

The symptoms described above may assist with an initial diagnosis of AHS. However, this diagnosis can only be confirmed by identifying the virus in a laboratory. It is for this reason that it is essential that blood samples be taken from the horse for analysis.

PRACTICAL PRECAUTIONS AGAINST AFRICAN HORSE SICKNESS

(as published in the Aug/Sept 2014 issue of the Equine Research Centre newsletter)

1. Ensure that your horse's vaccination status, with a registered vaccine against African horse sickness, is up to date.
2. To reduce contact with biting midges infected with African horse sickness virus, stable horses at night from 2 hours before sunset to 2 hours after sunrise.
3. Provide additional protection to stables to reduce midges entering by using 70% shade cloth (e.g. Alnet) to cover all stable openings (e.g. door and window openings) at night.
4. Spray stable walls and protective mesh with an insecticide effective against biting midges, e.g. Fendona 6 containing alphacypermethrin.
5. Apply insecticides registered for use on horses in the late afternoon and early morning, focussing on preferred midge biting sites such as the head, neck, back and belly, e.g. fly sprays containing cypermethrin or permethrin.
6. Apply insect repellent to horses in the late afternoon and early morning, focussing on preferred midge biting sites such as the head, neck, back and belly. (Products that contain 15% DEET.)
7. Move horses away from midge breeding sites such as vleis and muddy areas.
8. Repair leaking water pipes and troughs to reduce midge breeding sites.

Nora-Jean (N-J) Freeman, on behalf of the Equine Health Fund, nfreeman@witshealth.co.za