



Situation Report: African horse sickness in Cederberg Local Municipality: 5 May 2021

Introduction

On the 14th of April 2021, an outbreak of African horse sickness (AHS) was confirmed in the Cederberg local municipality. The outbreak occurred in the AHS protection zone which is the outer zone of the AHS controlled area of South Africa. The outbreak was identified on a farm east of the Pakhuis pass, approximately 20 km from Clanwilliam. The [first public situation](#) report details the control measures taken to curb the spread of the virus. In short, the following measures were taken:

- An outbreak-control zone (OCZ), encompassed by the Cederberg Local Municipality, was designated where the movement of equids into, through, out of and within the zone was restricted to permit-based movement only.
- An active investigation zone (AIZ) was designated in a 10 km zone buffering the R364 from the Cederberg mountains through to the Northern Cape border which enclosed all active cases and where intense, testing-based surveillance and investigation was planned.
- Members of the public were requested to provide any information regarding the movement of horses within the outbreak-control zone while movements were restricted.
- Currently no vaccination against AHS is permitted within the outbreak-control zone. Due to the time of year, there is no vaccination against the disease allowed within the overall AHS controlled area. Even when no outbreaks of AHS are occurring in the control zones, vaccination against AHS is prohibited in the AHS surveillance and protection zones in the high vector risk period which is between 1 November and 31 May each year.
- Private veterinarians in the affected area were requested to inform the relevant State Veterinarian of any suspect AHS cases or cases indicative of infectious disease both within the outbreak-controlled zone and within the AHS controlled area.
- Any equid owner/manager within the AHS controlled area, and specifically within the outbreak-controlled area, detecting illness in horses involving unexplained fever, swelling of the head and neck and difficulty breathing was requested to report the case to their local State Veterinarian as quickly as possible.
- A [website](#) was established to facilitate communication of the extent, control, and progression of the outbreak.

Owners were requested to take measures to decrease the chances of infection spreading onto their properties, these included:

- The stabling of their horses from two hours before sunset until two hours after dawn to decrease the risk of the vector of the disease (*Culicoides* midges) having contact with their horses.
- To make use of a registered insect repellent and insecticide on their horses during the vector feeding periods.
- To consider further protection of the stabled horses by covering all stable openings with 80-100% shade cloth.

Response and current situation

The initial census and surveillance programme by state officials in the area surrounding the affected property has been completed to determine the extent of the outbreak. To date there have been a total of 15 confirmed cases with 12 deaths. All cases have occurred on the index farm and no spread has been confirmed. There are two suspect cases (both deaths) within 20 km and 100km of the index farm that has been sampled and results are pending. 61 different equids have been sampled on 12 different farms to date. Laboratory results for 58 equids to date have resulted in 14 lab positive AHS cases. Over and above AHS testing, 17 equids were tested for a closely related Equine encephalosis virus (EEV). This virus is also a midge transmitted virus of the same family as AHS virus. Four equines to date have tested positive for EEV.

Clinical surveillance and census visits also played a role in the outbreak response. In total 31 holdings have been visited by officials. There are 6 holdings (including the index farm) within 10km of the outbreak, and a further 9 holdings within a total of 20 km. Outside of 20 km, but within the OCZ, 13 holdings have been visited; one holding outside of the OCZ has been visited; and then finally two holdings were sampled where trace-forward investigations needed to occur. In total 273 individual equines have been associated in the investigation, with 256 equines classified as negative based on laboratory or clinical surveillance to date. Two of these negative equids were deaths in the days leading up to the outbreak within 20km of the index farm. Trace-forward investigations relating to movement from the OCZ into the AHS surveillance and/or AHS free zone were completed, and no known movements of this nature took place after 1 March 2021.

The morbidity rate on the affected farm is currently 34% with a mortality rate of 28% and a case fatality rate of 80%. The AHS virus type has not been identified yet. The implications of this are that it is very unlikely that this virus is a live attenuated vaccine re-assorted or reverted to virulence strain, since the test that is used for typing would detect live attenuated vaccine strains.

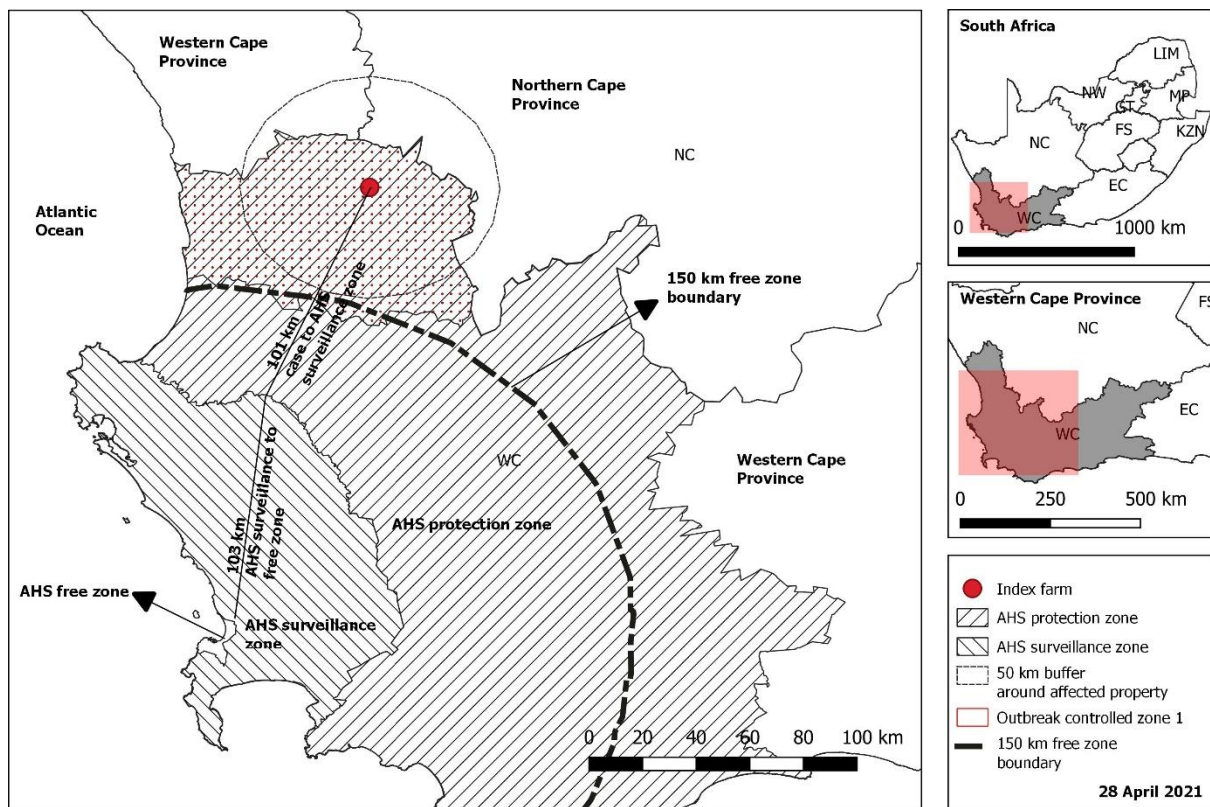


Figure 1: A map showing the current outbreak-controlled zone, the index (and currently only affected) holding. The location of the holding is relative to the existing AHS protection zone and the AHS surveillance and Free zones.

Discussion

The origin of the virus on the affected property is not known. Trace back investigation to legal movements have shown that there was unlikely to be entry of AHS virus through this mechanism. Investigations into the source are ongoing and will include establishing possibility of wind dispersal of infected midges. Knowing the type of the virus will also assist in this part of the investigation.

While the one affected farm has had devastating losses to date, the rest of the outbreak area has been unaffected. While there is still active circulation, at least on the infected farm, we remain cautiously optimistic that the spread has been interrupted. The location of the outbreak has facilitated this lack of spread to a degree. The Cederberg mountains to the west of the affected farm form a formidable barrier to spread of the virus by midges in a westerly and south westerly direction. Equine populations are low in the outbreak area and even more so to the north and north east, so spread here is also not likely to occur easily. There are pockets of donkey, zebra, and horse populations to the south of the index property (Wuppertal is in that area about 28km to the south). Surveillance is ongoing here, and to date no cases have occurred. Even if spread were to occur to the south, further spread will be hampered again by the mountains that enclose that region.