



## AHS movements 2022

Adapted from the African horse sickness control: Movement report 2022 by John Grewar, Camilla Weyer, Debra Carter and Lesley van Helden

### Introduction

This is the fifth detailed report on equid movements in South Africa, with respect to controls implemented to mitigate the risk of African horse sickness virus (AHSV) entering the AHS controlled area of the country. The period evaluated is the 2022 calendar year. We differentiate between movements from the infected part of South Africa and those that occur within the AHS controlled area to a zone of higher control and stepwise movements that required a stopover quarantine period.

### Permit based movements

A permit is required for any equid moving from the AHS infected part of South Africa into the AHS controlled area in the Western Cape Province. Movements from the infected zone require an AHS risk status classification which is reported by the state veterinarian of origin in the form of an area status declaration.

### Domestic equids

A total of 1559 movement events, consisting of 3333 domestic equids (all horses), occurred in 2022, with an average of 2 equids moving per movement application. Thoroughbreds represented 52% of the total horses that moved. Other breeds that moved relatively frequently were American Saddlebreds (7.1%), SA Warmbloods (6.8%), Arabians (5.4%), Hackneys (4.7%) and Vlaamperde (2.5%). This breed breakdown is similar to previous years.

As in the previous year, most equids moved between August and December 2022. The AHS surveillance zone remained the most common destination (66.1%) for equids moved. The free zone was the destination for 10.8% of

equids moved.

Figure 1 gives an indication of the primary origin of equids moving into the AHS controlled area. In this case, we have categorised the movement by the state veterinary area of origin. The main province of origin was the Western Cape, with the George, Swellendam and Beaufort West state veterinary areas most represented. These three areas of origin accounted for 41% of all equids moved from the infected area during the year. KwaZulu Natal (Umgungundlovu, Ethekewini), Gauteng (Germiston) and the Eastern Cape (Port Elizabeth) were most represented outside of the Western Cape. The eight labelled areas in Figure 1 accounted for a total of 79.7% of all domestic equids moved during the year.

### Stop-over quarantine (SOQ) movements

A total of 7 SOQ facilities were used during 2022, all in the AHS infected zone. All Gauteng facilities are vector protected facilities. 379 (up from 303 in 2021) horses moved under this protocol. All stop-over facilities used in

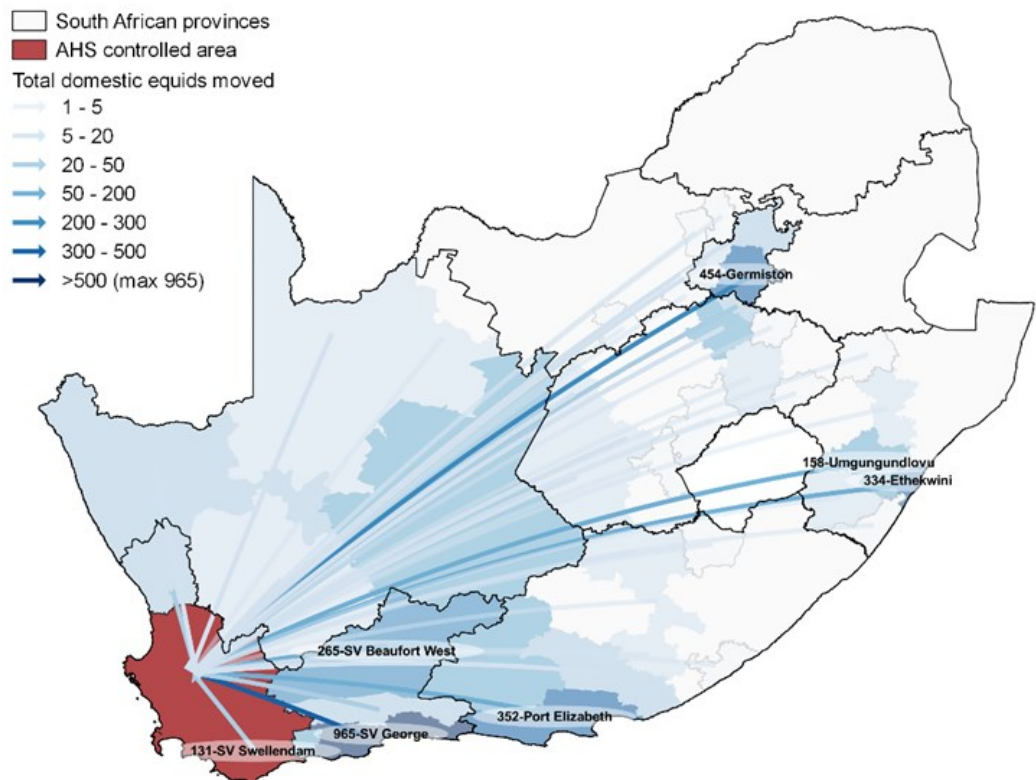


Figure 1: The total number of equids per state veterinary area of origin that moved into the AHS controlled area in 2022. Areas are labelled if 100 or more equids moved from the region during the year.

2022 were within the Western Cape boundaries except for the Gauteng vector proof facilities.

### Wild equids

A total of 73 wild equids were moved into, within or from the AHS controlled area during 2022 (Figure 2). All were Burchell's zebra (*Equus burchelli*). As in the previous analyses, zebra generally move during the colder winter months.

### Concessions, declined and retracted permits

The purpose of permits issued for movements from the AHS infected zone into the AHS controlled area is to ensure AHS risk is mitigated through vaccination, health checks and AHS status at origin declarations. During 2022, 11 horses were declined movement due to passport non-compliance or lack of information on application, 38 horses were declined due to vaccination non-compliance and 59 horses were declined due to a high-risk AHS status at origin. Permits were retracted for 8 horses due to a change in AHS risk status before movement occurred. Two horses received vaccination requirement concessions. This occurred for veterinary care in the AHS controlled area and required post arrival vector protected quarantine.

### Movements within controlled area

Movement within the AHS control area to a zone of higher control requires that notification of movement occurs within 72 hours of movement, in place of a permit being issued. The passport, vaccination and health certification requirements are otherwise the same for a movement into the AHS controlled area. A total of 2876 equids moved in this fashion during the year: 2868 horses, 1 mule and 7 donkeys. Most equids that moved within the controlled area were Thoroughbreds (70%). Most (62%) moved from the AHS protection zone to the AHS surveillance zone.

An important consideration for these movements is that there are a considerable number of horses that move within the AHS controlled area on the multiple movement permit system, which is a same-day return movement licensing system allowing horses to move in this fashion without pre-notification of movement. The information reported here refers to movements where horses would generally not be returning to their origins on the same day.

The movement pattern over time is quite like that of infected area origin movements except for higher levels early in the year. Generally,

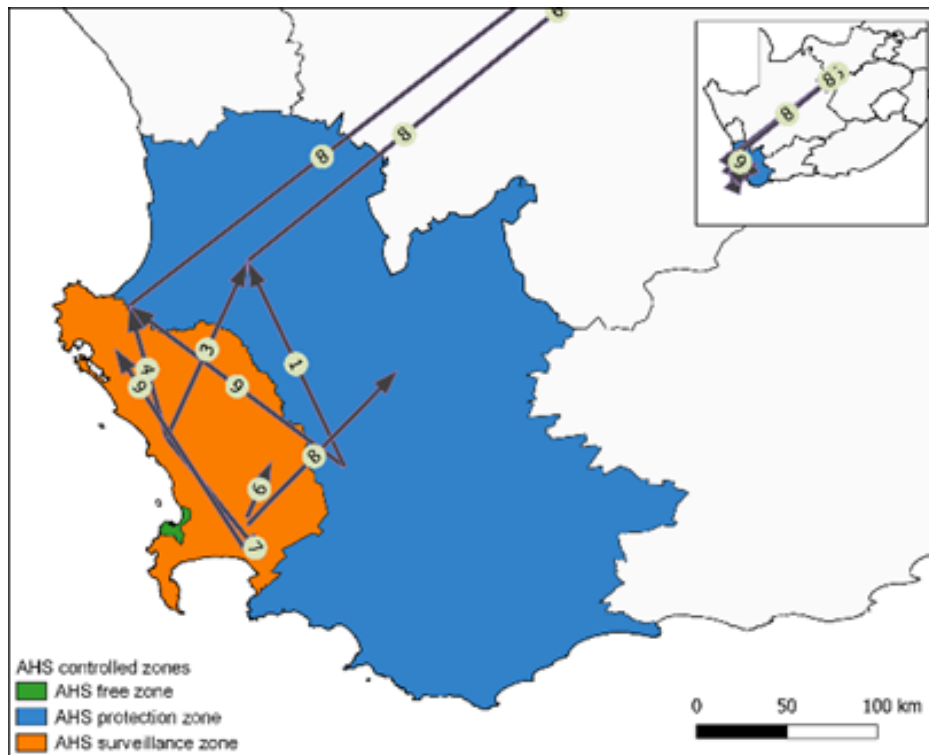
the movements between the surveillance and free zone throughout the year will either be equids moving to one of the two veterinary practices that have their premises within the free zone or thoroughbreds in training that move from feeder farms in the controlled area to the training yards in Milnerton.

### Discussion

A total of 6209 equids moved into a zone of higher control during the year which is a 3% increase from the 6028 in 2021, and a further indication of a return to pre-COVID levels. Once again, most movements into a zone of higher control consisted of domestic equines. The AHS surveillance zone remains the most common zone of destination, both for infected area origin and controlled area origin movements. Thoroughbred horses are the most common breed moved.

Movement regulation requires close communication and interaction between various regulatory and state authorities. Movements originated from 42 of the 126 state vet areas in the country (down from the 49 state vet areas in 2021).

Stop-over quarantine movements have facilitated the movement of 379 horses that would otherwise not have moved or would have required a 40-day residency in an AHS low risk area prior to direct movement. While this system is expensive and intensive, it promotes the movement of high value horses or critical movements (such as for high-level competitions) and allows control and an acceptable system for the public needing to move horses.



**Figure 2: All zebra movements during 2022 that were associated with the AHS controlled area. Numbers on each line represent the total moved for each of the 11 movements that occurred.**

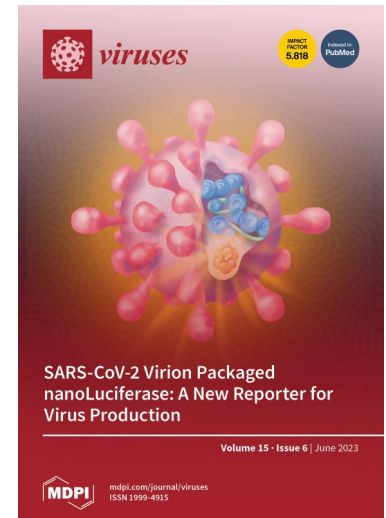
## New publication

**The Molecular Epidemiology of Clade 2.3.4.4b H5N1 High Pathogenicity Avian Influenza in Southern Africa, 2021–2022** by Abolnik et al. was published this month in the journal *Viruses* (Fig. 3), including last author Laura Roberts.

Clade 2.3.4.4b H5N1 HPAI originated in Europe in 2020 and has since spread around the world, causing outbreaks in many countries, including South Africa since April 2021. The paper analyses the genomes sequences of 117 high pathogenicity avian influenza viruses obtained from samples taken from wild birds, ostriches and poultry in South Africa in 2021 and 2022, and compares them to avian influenza viruses from neighbouring countries.

Initial outbreaks were associated with seven H5N1 sub-genotypes, which diminished to two sub-genotypes (one in seabirds) by late 2022. Point introductions from wild birds were shown to be the source of infection for at least 83% of HPAI outbreaks in commercial poultry in South Africa. Outbreaks in poultry in Lesotho and Botswana were not caused by South African poultry, but were also likely introduced by wild birds. Wild bird viruses from Botswana were subsequently introduced back into South Africa and caused an outbreak in ostriches in the Free State in 2022. Viruses from seabirds in the Western Cape also spread to cause outbreaks in seabirds in Namibia by late 2021.

Read the full paper here: <https://doi.org/10.3390/v15061383>



**Figure 3: Viruses: volume 15, issue 6**

## Outbreak events

**High pathogenicity avian influenza (H5)** was detected on a second commercial layer **chicken** farm near **George** after an increase in mortalities. The farm was quarantined and the chickens culled.

**High pathogenicity avian influenza** was identified in dead **African penguins** on **Robben Island** (H5N1) and **swift terns** in **De Hoop Nature Reserve** (H5).

A wild **bat-eared fox** was spotted in the town of **Prince Albert** looking disorientated, with hanging, blood-stained ears. The fox was shot by a farmer and the local animal health technician collected a brain sample, which subsequently tested positive for **rabies**.

**Sheep scab** was diagnosed in a flock of sheep near **Vanrhynsdorp**. The sheep showed signs of previous wool loss with new wool growth (Fig. 4).

Lesions of **swine erysipelas** were seen on two carcasses from two pig farms in the **Piketberg** area at the abattoir after slaughter.

**Salmonella Enteritidis** was cultured from routine samples taken on five commercial broiler **chicken** properties in the **Stellenbosch** and **Malmesbury** areas, linked to an infected breeder flock.

Evidence of **red lice** infestation was seen on **sheep** in **Atlantis** and **Gouda**.

**Orf** lesions were seen in **sheep** near **Prince Albert** during a herd health visit.



**Figure 4: Wool loss as a result of sheep scab** (Photo: J. Kotzé)

**Epidemiology Report edited by State Veterinarians Epidemiology:**

**Dr Lesley van Helden** ([Lesley.vanHelden@westerncape.gov.za](mailto:Lesley.vanHelden@westerncape.gov.za))

**Dr Laura Roberts** ([Laura.Roberts@westerncape.gov.za](mailto:Laura.Roberts@westerncape.gov.za))

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