

EPIDEMIOLOGY REPORT

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African horse sickness vaccinations permission 2023 JD Grewar, CT Weyer & LS van Helden

Introduction

Annual vaccination against African horse sickness (AHS) is compulsory in South Africa (Animal Diseases Act, 35 of 1984) except in the AHS free and surveillance zones in the AHS controlled area in the Western Cape Province. Vaccination against AHS in these zones can only be performed following written approval from the Veterinary Services of the Western Cape Department of Agriculture (WCDOA). Permission to vaccinate against AHS is only granted for vaccination to be performed between 1 June and 31 October each year. This vaccination period is based on the potential for vaccine virus re-assortment/reversion to virulence and the risk of transmission during periods of increased vector activity. The restricted vaccination period mitigates this risk.

The process for vaccination permissions is summarized and available online $\underline{\text{here}}$. This report briefly summarises the vaccination permission applications that were received, and the descriptive statistics of those permissions that were issued during 2023. Permissions are given on an individual horse basis, with horses associated with specific holdings, and the information is analysed as such.

Summary of permissions issued

The numbers of unique permission applications and horses applied for have decreased over the years with 2023 now the lowest to date at 880 applications for 6473 horses. In 2023 the majority (205 of 221 – 92%) of declined applications related to invalid or non-existent passports, with only six horses declined due to incomplete

applications.

Forty veterinarians and veterinary practices were registered as the associated vet likely to perform the vaccination – this has remained stable with 29 in 2022 and 2020 and 37 in 2021. The top five practices were responsible for vaccinating 80.2% of the permission granted horses (n= 5018 of 6252), and the top 10 practices responsible for 90.1% of all permission granted horses.

Reasons must be provided by applicants when requesting permission to vaccinate. The majority of horses that were granted permission to vaccinate (92.4%, up from 91.1% in 2022 and 89.4% in 2021) were to enable horses to comply with AHS movement requirements.

We now have seven years of detailed, individual horse information for the vaccination permission process in the AHS controlled area. A total of 4116 horses that were granted permission in 2023 had also been granted permission in 2022 (compared to 4271 in 2021 – 2022, 4195 in 2020 - 2021 and 4457 in 2019 -2020), making up 65.8% (66.7% in 2021-2022, 63.14% in 2020-2021) of the total for the year. Across seven years: 1057 horses were granted permission to be vaccinated in 2017 through 2023, accounting for 17% of permission granted horses in 2023. There are currently 19 093 horses registered in the AHS surveillance and free zone.

When vaccination permissions are requested, it is for prospective vaccination, and follow up verification of actual vaccination is not undertaken. Below we evaluate the horses that have been granted

Applications

880 on
501
holdings for
6473 horses

Approved

6252 horses (97% of applicants)

Reason

Movement 92.4%

vaccination permission since 2017, and query the movement database to establish what percentage of those granted permission would reasonably have required it. Since 2017: a total of 18 092 individual horses have obtained permission to be vaccinated. Of these, 68.7% have moved in a fashion that would have required AHS vaccination. Of the remaining 31.3%: the primary reason permission was requested was on the basis for movement or competition (83.4%) and individual horse/yard protection (15.6%).

Conclusion

Vaccination coverage within the AHS controlled area, including the AHS surveillance and free zone, continues to be fairly comprehensive with approximately 40-50% of the known population being vaccinated, based on permissions requested during any year. 18 092 different horses have been vaccinated in the AHS surveillance and free zone in the last 7 years (i.e. since 2017). A high number of those horses are associated with repeat requests from year to year, and also, since vaccination is a prerequisite for movement into the controlled area, any new adult horses entering the controlled area will be vaccinated already.

Vets

40 practices with top 5 vaccinating ~80%

Repeats

65.8% from prior year 1057 horses every year since 2017

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Outbreak events

A one-year-old **dog** in **Cape Town** began to show signs of back pain and was diagnosed with discospondylitis. Further diagnostics revealed that the cause was **Brucella canis** infection. The dog will be euthanased and contact animals in the household tested.

A juvenile **Swift Tern** (*Thalasseus bergii*) was found in **Witsand** showing head tremors and corneal oedema. It was euthanased and brain samples subsequently tested positive for H5 **avian influenza**. The virus has been sequenced and is the same H5N1 virus that has been infecting seabirds since 2021.

Outbreaks of **bluetongue** were reported on **sheep** farms in the **Vanrhynsdorp** and **Malmesbury** areas.

Salmonella Enteritidis was cultured from routine samples taken from two broiler chicken farms in the Cape Town and Malmesbury state veterinary areas.

After **sheep** were seen losing weight on a farm near **Cape Town**, samples were taken and **Johne's disease** was confirmed.

Two **cattle** on a farm near **Ladismith** showed nasal discharge and blindness: clinical signs consistent with **bovine malignant catarrhal fever**. The cattle are kept in an area close to golden wildebeest.

A caracal (Fig. 1) was found dead in the enclosure of hand-reared lamb next to the owner's house in Vanrhynsdorp. The caracal was old and emaciated and it is suspected it died of exertion while killing the lamb. A brain sample was taken and tested negative for rabies.



Figure 1: Dead caracal in Vanrhynsdorp (Photo: J. Steenkamp)

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