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African Horse Sickness (AHS serotype 2) in Senegal

Note: Defra's International Trade Core Team (ITCT) monitors outbreaks of specified disease around the world. African horse sickness (AHS) is among those diseases of concern.

Disease Report

The veterinary authorities of Senegal have reported two outbreaks of AHS serotype 2 at Dakar (see map). Both outbreaks were detected in late May 2007. This is the first time that serotype 2 has been reported in Senegal. Disease control measures have been applied. AHS serotype 9 is endemic in Senegal and vaccination against this serotype is carried out in Senegal (OIE, 2007).

Situation Assessment

AHS is a non-contagious viral disease of equidae that is mainly transmitted by midges of the genus *Culicoides*. Mosquitoes and biting flies may also act as biological or mechanical

transmitters of the disease. Nine different serotypes (AHSV 1-9) have been recognised. Horses are most susceptible to all AHS serotypes with a mortality rate ranging between 70-95%.

Zebras are considered to be the natural vertebrate host and reservoir of the virus. Other species (e.g. dogs, camels) may also become infected but are not considered to play a significant role in the epidemiology of the disease (Mellor and Hamblin, 2004). Antibodies to the AHS virus have also been detected in some other wildlife (e.g. rhinoceros and elephants) (Davies and Otiento, 1977; Fisher-Tenhagen and others, 2000), however the potential role of these species in the epidemiology of the disease remains unclear.



The disease appears to be seasonal and is usually associated with hot and humid weather and abundance of the

arthropod vectors, *Culicoides spp.* Commercial vaccines against AHS are available. More information on AHS is available at the Defra's website (<http://www.defra.gov.uk/animalh/diseases/notifiable/africanhorse/index.htm>)

The disease remains confined to sub-Saharan Africa. AHS has been reported to the OIE since 1993 from Botswana, Burkina Faso, Cape Verde, Eritrea, Ethiopia, Gambia, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Republic of South Africa, Senegal, Swaziland and Zimbabwe. Historically, outbreaks of AHS have been reported from the Iberian Peninsula, North Africa, the Middle East, Cyprus, Turkey, Pakistan, Afghanistan and India. The disease, however, has not persisted in these areas.

To our knowledge, this is the first time that AHS serotype 2 has been officially reported from the western sub-Saharan Africa region. Until now, this type was apparently confined to South Africa where a high prevalence of AHS serotype 2 in zebras with a lower prevalence of serotypes 4, 1, 6 and 9 was reported in mid 1990s (Bremer and others, 2000). It remains uncertain how the virus was introduced into Senegal, whether as an extension in range of this serotype of the virus or otherwise. The spread of the disease out of the endemic region is usually attributed to wind dispersal of infected vectors (*Culicoides* species) or the transportation of infected horses or other equidae.

Equidae from Third Countries (any country outside the EU) must meet country and zone freedom requirements from AHS prior to importation to the EU. That is, they may only come from countries or areas that are recognised as free from AHS. The export certificate also requires a statement on the vaccination status of the imported equidae. Registered horses are usually subject to close monitoring and management by their owners or designated handlers. It is highly unlikely that AHS would be introduced into the UK by registered horses because of the usually short incubation period and severity of the disease. However, this may not necessarily be the case with some other equidae. Mules and European and Asian donkeys are less susceptible while African donkeys and zebras rarely demonstrate clinical disease.

Direct imports of horses from Senegal to the UK are not allowed because AHS is present in Senegal. If the transit of equidae is allowed through an AHS affected country or zone, a possibility that some equidae may become infected while in transit through AHS affected countries or zones is considered remote, but cannot be completely excluded. Should this occur, the infection of horses during transport would be considered to be a chance event subject to the fulfilment of optimal conditions.

Conclusion

The likelihood of the disease being introduced by horses directly imported from Senegal to the UK via legal trade before this outbreak is considered negligible because such trade is not allowed.

Imports of horses which may arrive in the UK after being in transit through AHS infected countries or zones, if permitted, would require proportionate risk management measures to mitigate against possible exposure to AHS-infected vector insects.

Defra continues to monitor developments with AHS in Africa.

References

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