



### FOOT AND MOUTH DISEASE IN SUB-SAHARAN AFRICA -THE CURRENT SITUATION

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Not only is foot and mouth disease (FMD) endemic in large parts of sub-Saharan Africa, but at least 5 of the 7 serotypes occur and the only known long term wildlife maintenance host, the African buffalo (*Syncerus caffer*), occur in large parts of the sub continent. Disparity is evident in different regions regarding attitudes to agriculture ranging from purely subsistence farming to large scale commercial enterprises focusing on lucrative export markets. Economic circumstances in each country impact on the priority FMD control receives in the face of other demands such as education and human health. All these factors add to the complexity of controlling the disease. In addition, the South African Territories (SAT) serotypes 1, 2 and 3 occur only in sub-Saharan Africa with few historical incursions outside the continent, leading to diminished research interest in these types. There are many epidemiological factors that need clarification. The role of wildlife other than buffalo is not clear, but evidence from the Kruger National Park in South Africa points to ecological factors influencing the disease incidence in impala (*Aepyceros melampus*) even within a relatively small area. It seems therefore that knowledge regarding the epidemiology of FMD in a wildlife species cannot be extrapolated between different ecological regions. Furthermore, it is known that significant genetic and antigenic changes occur in viruses of the SAT serotypes that impact on the efficiency of vaccines. From the viral toptotype distribution, it is evident that custom-made vaccines are needed for various regions, a challenge for production facilities and costly to the end user.

Advances in conservation and initiatives to develop large transboundary conservation areas that span the borders of more than one country have produced new challenges for controlling FMD. Some of the participating countries have successfully used fences to separate infected wildlife from susceptible domestic animals, while wildlife have been free ranging and allowed to follow ancient migration routes in others. Vaccination has been used strategically in a number of countries, but in the majority vaccination is either not performed at all, or only when outbreaks occur and funding is available. The philosophy behind the conservation areas is to allow human development and wildlife conservation to coexist. Fencing would be used sparingly, implicating that novel thinking about control of FMD would be necessary such as relying on vaccination alone for control. A change in export emphasis to that of commodity based trade where products can be treated to render them safe from the virus would also assist in ensuring economic success for the continent.