



RESEARCH PROJECT ON AFRICAN SWINE FEVER

If warthogs and/or bush pigs are hunted on your property, your assistance is sought in a research project being conducted in the Faculty of Veterinary Science, University of Pretoria

WHAT IS AFRICAN SWINE FEVER?

African swine fever (ASF) is a fatal disease of domestic pigs, caused by a virus that is maintained by transmission between *Ornithodoros* ticks (also called tampsans) and warthogs which do not become sick.

Tampsans do not attach like ordinary ticks, but feed rapidly while warthogs are at rest in burrows. However, they can be carried short distances on warthogs to the vicinity of piggeries where they can transmit infection to pigs.

Warthogs themselves are not infectious for pigs unless they are killed, and their meat and organs are fed to pigs in swill. Bush pigs are also resistant to ASF, but their role as a source of infection for domestic pigs is uncertain.

HOW IS THE DISEASE CONTROLLED?

An 'ASF control zone' was declared in 1935 to include virtually all of Limpopo Province plus adjacent parts of Mpumalanga and North West Provinces, and part of northern KwaZulu-Natal Province where warthogs were known to occur.

Regulations require that domestic pigs farmed commercially within the control zone should be kept in double-fenced piggeries to exclude contact with warthogs, and have to be butchered at designated abattoirs.

Warthogs and bush pigs may only be removed from properties anywhere in the country under veterinary permit, and carcasses should have the skin, head, hooves and entrails with lymph glands removed.

The control measures proved effective for many years, with only a few outbreaks occurring outside of the control zone due to the illegal movement of infected pigs from Limpopo Province.

WHY IS NEW RESEARCH ON ASF CONSIDERED NECESSARY?

In recent outbreaks of ASF in domestic pigs in North West, Free State and Northern Cape Provinces in 2016-2018, no conclusive evidence of the source of the infection was found.

There have been large-scale translocations of warthogs over the past 50 years, so that they are now much more widely distributed in the country than when the control zone was declared in 1935.

The classification of *Ornithodoros* ticks (tampsans) has recently been revised, with description of new species, so there is some uncertainty about the distribution and ability of the various species to transmit ASF virus.

Since the disease can be devastating for the pig industry, the purpose of the project is to determine whether there is evidence of circulation of ASF virus beyond the control zone. The existing regulations already apply to warthogs and bush pigs throughout the country, so the information is required to ensure that protective measures for the pig farming industry are appropriate.

WHAT DOES THE RESEARCH PROJECT INVOLVE?

The intention is to perform a survey for evidence of ASF virus infection on dried blood samples collected on filter paper strips from hunted warthogs or bushpigs on properties that agree to participate. Permission will subsequently be sought for the research team to collect tampsans from burrows on selected properties.

Laboratory tests will be conducted at the ARC-Onderstepoort Veterinary Research Transboundary Animal Disease Laboratory. Findings will be tabulated by region and presented without reference to owners or properties in a postgraduate thesis and scientific publications.