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Euroasiatic wild pigs and ASF virus genotype II: a new challenge

The presence of African swine fever (ASF) virus in wild pigs represents a challenge for any Veterinary Service, as a multisectoral approach is essential for successful disease management. The human contribution to disease spread is one of the most important factors to consider when dealing with ASF in wild pigs.

KEYWORDS

#African swine fever (ASF), #epidemiology, #hunting, #wild boar, #wildlife.

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The presence of African swine fever (ASF) virus in wild pigs represents a challenge for any Veterinary Service, as a multisectoral approach is essential for successful disease management.

The human contribution to disease spread is one of the most important factors to consider when dealing with ASF in wild pigs. Once ASF virus is introduced into the wild pig population, an epidemic wave – determined by direct transmission – is usually observed. The epidemic then develops into an endemic state, during which contact between infectious carcasses and susceptible wild pigs (indirect transmission) is the main mechanism by which infection is maintained in the local wild pig population [2].

The three strategic pillars for disease management are:

(1) Early detection: the prompt detection of virus ensures that its geographical spread remains limited; smaller areas are easier to manage. The virus can only be detected by passive surveillance in a previously free wild pig population or area. Testing dead wild pigs in at-risk areas is therefore critical for early detection.

(2) Addressed management of the infected population: the different management options (i.e. depopulation, sit and wait, fencing) should be evaluated in view of the ecology and demographics of the infected wild pig population. Evidence suggests that immediate depopulation of infected wild pigs is counterproductive, because it enhances escape behaviours (causing the geographical spread of the virus), and efficient hunting is rarely achieved by hobby hunters. Fences may be useful if integrated into a complex eradication programme that includes different interventions for the different epidemiological phases of the disease [2].

(3) Virus contamination of the environment: ASF virus remains active in the carcass long after the death of the host, thus contaminating the environment. Decontamination of the environment is therefore the final goal of any eradication programme in wild pig populations. Biosecurity measures applied during hunting, and safe disposal of wild pig carcasses, play a pivotal role in preventing the local persistence of the virus and further anthropogenic spread into disease-free areas [2].

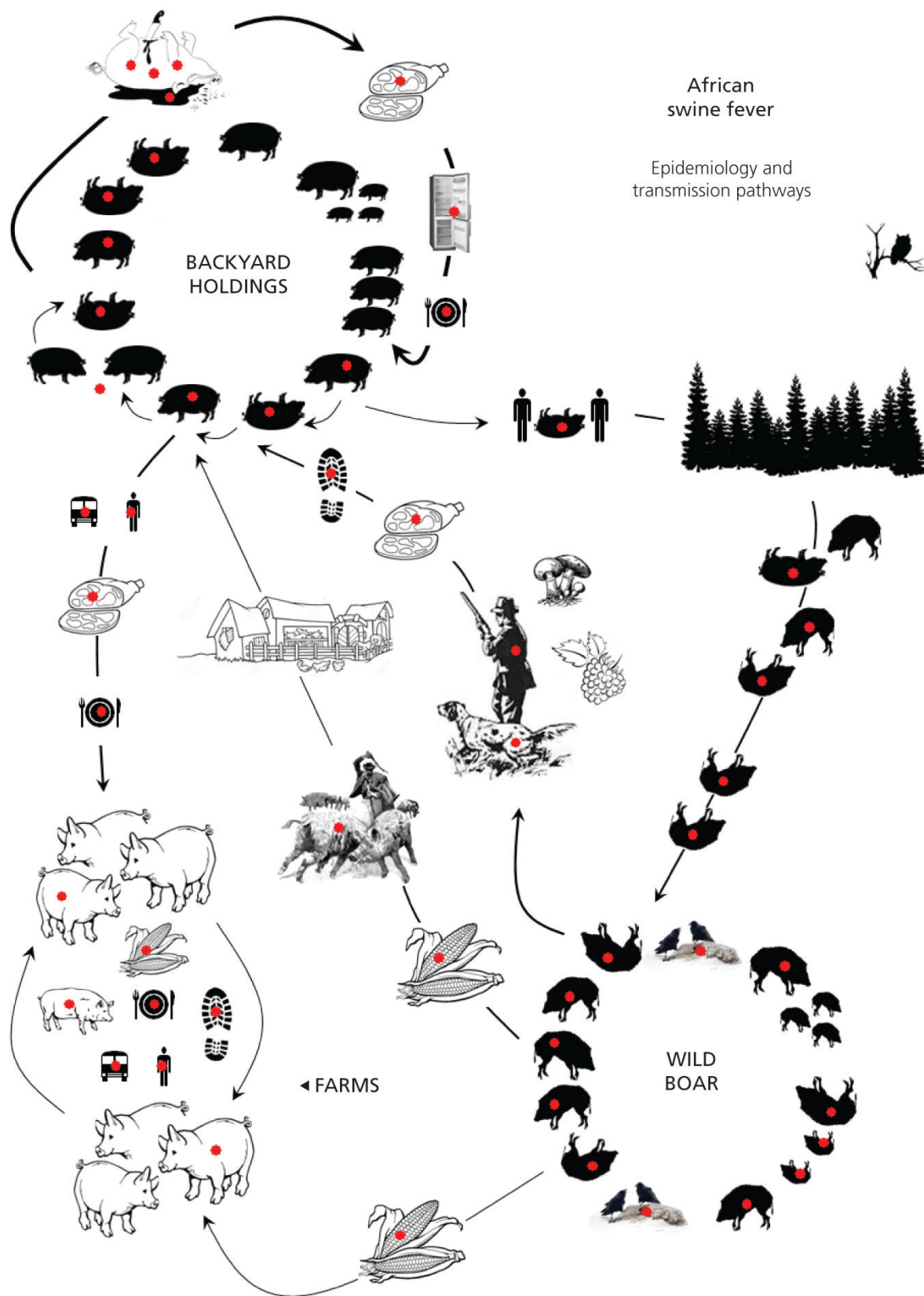


Fig. 1. The ecological complexity of African swine fever. Source: African swine fever in wild boar: ecology and biosecurity [2]

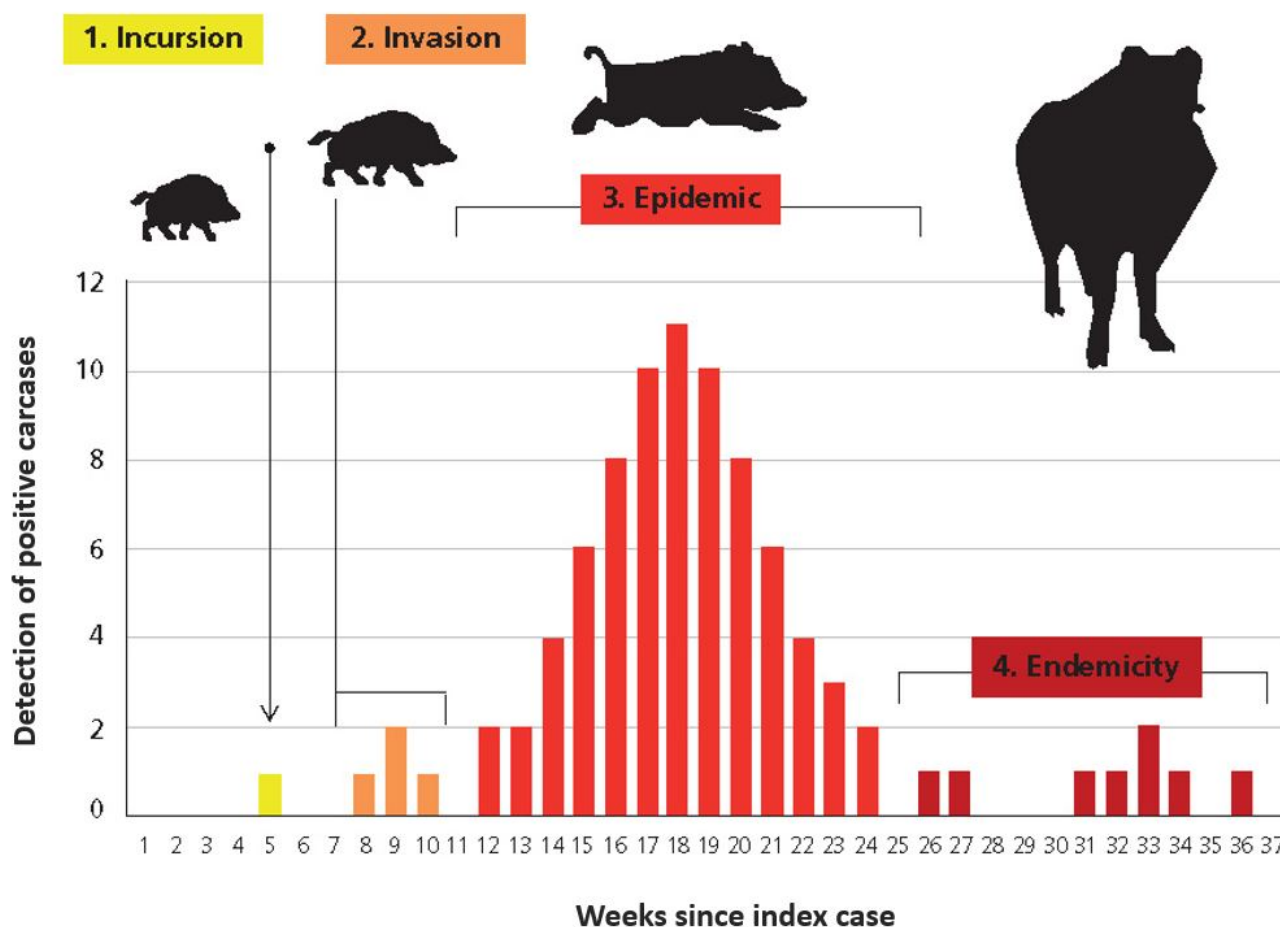


Fig. 2. The different phases of African swine fever infection in wild pig populations. Source: African swine fever in wild boar: ecology and biosecurity [2]

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