

Working together to tackle emerging livestock diseases.

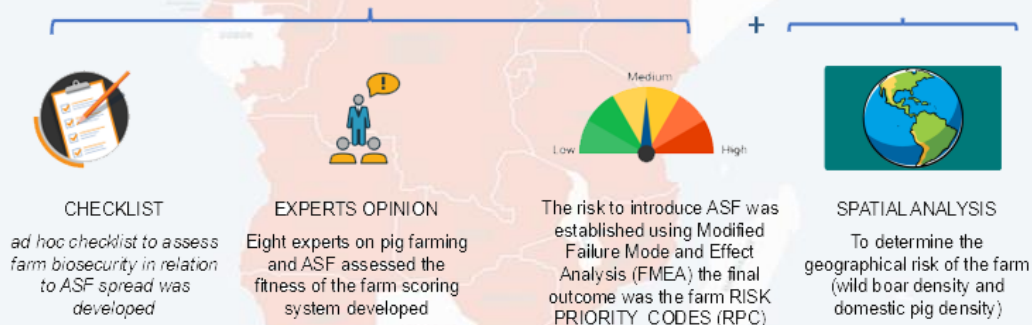
MITIGATING THE IMPACT OF LSDV & ASFV

ASF continues to spread across the world, reaching numerous countries in Asia, the Caribbean, Europe and the Pacific, threatening pig health, food safety and welfare. The disease affects pigs and is endemic in wild boar populations in several European countries. The current lack of vaccines highlights the importance of applying effective management tools to prevent spread of the virus. We studied how implementing good risk management practices in both domestic pigs and wild boar can contribute to the prevention and control of ASF.

Key Findings

For domestic pigs a risk assessment was developed to classify pig farms in terms of the risk of introducing ASFV. The assessment considers the characteristics of the farm and the geographical factors that may increase the risk of introduction of the virus into the farm. The method was applied in commercial and free-range pig farms and has proven effective at quantifying the overall risk of the farm, and to aid in establishing appropriate control measures. This approach could also be used to identify best practice farms suitable to be part of a "compartment", or an animal sub-population with specific health status within a territory. Compartmentalisation can enable trade and export processes to continue.

PROBABILITY OF ASF INTRODUCTION INTO THE FARM



In the EU wild boar represent the reservoir of the ASF virus and facilitates virus entry into pig farms. We found that wild boar carcass removal and culling of adult and sub-adult female wild boar increased the probability of ASF eradication. We also found that wild boar hunting alone, in the absence of removal of infected carcasses, actually

decreases the probability of ASF eradication. The best eradication strategy is therefore removing as many ASFV-infected wild boar carcasses as possible, with the removal of 80 % of infected carcasses exponentially increasing the probability of eradicating ASF.

Recommendations

The application of the risk management practices developed by the DEFEND project is of crucial importance to control ASF in the EU. In large areas where ASF is common, control of African swine fever in wild boar should be based primarily on the removal of infected carcasses, while hunting should primarily target adult and sub-adult females. The availability of an orally administered ASFV vaccine for wild boar in the future will increase the probability of eradication but only if it is part of a carefully designed programme of actions among which - again - the removal of infected carcasses will play a key role.

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Background map indicates Global spread of ASFV. In orange are the countries which had ASF in 2018, and in purple are the countries which have reported their first outbreak since 2018.

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