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FAO works to better understand backyard pig sector, key in the fight against swine fever



African swine fever is one of the major animal health challenges worldwide, as demonstrated by recent developments in China and the European Union, where recent outbreaks have prompted health officials to take action.

The disease first entered Europe through Georgia, back in 2007, in an unprecedented epidemic that would gradually spread from Africa throughout the Caucasus, the Russian Federation, Eastern and Central Europe, and more recently Western Europe (Belgium) and China.

The absence of an effective control strategy stems in part from the absence of a vaccine or treatment, but mostly from the difficulty of controlling the disease's spread through pigs in low biosecurity systems – such as small commercial farms or backyards where families keep pigs at home, mostly for personal consumption and extra income.

Almost all the pigs in Georgia are backyard pigs, and this allowed the disease to quickly spread throughout the country. The pig population declined dramatically, to just one-third of its previous number.

In response to this situation, FAO has developed a methodology, based on two sets of questionnaires, to aid in learning more about how these largely informal pig and pork value chains operate: one for pig farmers and a second for butchers, who are key in the commercialization of backyard pigs and their products.

Like other pig diseases, African swine fever also often transmits through the feeding of infected meat, known as swill feeding, to healthy pigs.

Also like most other pig diseases, the spread and persistence of African swine fever is often associated with more informal production systems, where preventing and controlling diseases is most challenging due to people's lower levels of awareness, poor compliance with regulations, lack of animal identification and traceability, and irregular access to veterinary advice.

"Perhaps more than other animal diseases, ASF is mostly spread by humans, through behavior and socioeconomics," explained Daniel Beltran-Alcrudo, an animal health officer with FAO. "And most times, little is known about these backyard systems and trade networks due to their mostly informal nature. Thus, efforts have to be made to better understand them through value chain mapping and surveys."

These production systems are predominant in most countries in the Europe and Central Asia region, but also elsewhere in the world.

In total, 487 pig farmers and 116 butchers in Georgia were interviewed using questionnaires on socioeconomic issues related to pig production, husbandry practices, biosecurity, marketing and movements, and disease awareness.

Analysis of the questionnaires has allowed researchers to quantify biosecurity gaps and risky behaviours, develop risk profiles, and identify critical control points across the market chain where mitigation measures could be implemented.

This information can be used to develop targeted, realistic and sustainable disease prevention and control interventions, not just for African swine fever but also for many other pig diseases that spread in a similar way, such as classical swine fever, foot-and-mouth disease, and porcine reproductive and respiratory syndrome.

"The same methodology can be easily adapted to the many other countries where the backyard sector presents a challenge in disease control," Beltran-Alcrudo said. "Perhaps there is no better example than China, which was just hit by ASF. China is home to more than 50 percent of the pigs worldwide, and about half of them are housed in backyards or small commercial farms."

FAO's research work was jointly conducted with researchers at the University of California, Davis, and with the support of the Georgian National Food Agency.

Related sources

- [Descriptive and multivariate analysis of the pig sector in Georgia and its implications for disease transmission](#)
- [Modeling the live-pig trade network in Georgia: Implications for disease prevention and control](#)
- [African swine fever detection and diagnosis – a manual for veterinarians](#)
- [FAO fact sheet: African swine fever](#)
- [VIDEO: African swine fever awareness](#)

Links

- [Europe, Central Asia ready to address transboundary animal diseases](#)
- [FAO session to address climate change impact on animal diseases](#)
- [With FAO help, Moldova offers a good example of handling African swine fever](#)
- [Evidence points to wild boar in transmission of African swine fever](#)
- [FAO's novel wild boar map could help manage African swine fever](#)

Out of this work, two peer-reviewed scientific articles have been published. One looks at the pig sector and its implications for the spread of diseases ([Descriptive and multivariate analysis of the pig sector in Georgia and its implications for disease transmission](#)), while the other focuses on trade patterns ([Modeling the live-pig trade network in Georgia: Implications for disease prevention and control](#)).

11 October 2018, Tbilisi, Georgia

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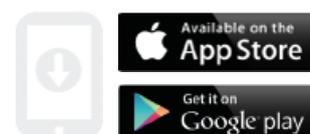
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