Biosecurity on a budget for small-scale pig producers

By Jeandré van der Walt |27 August 2021 | 3:36 pm

In this article Dr Peter Evans, veterinary liaison officer of the South African Pork Producers' Organisation, shares affordable and practical tips that small-scale pig farmers can implement to improve biosecurity on their farms and protect their livelihoods.

Informal pig keepers often enable the spread of diseases because their biosecurity measures tend to be poor or non-existent, and they frequently allow their pigs to roam freely.
Photo: FW Archive

South Africa's small-scale piggeries are often at risk of spreading or contracting diseases, as their biosecurity measures are frequently poor or non-existent. However, this need not be the case, according to Dr Peter Evans, veterinary liaison officer at the South African Pork Producers' Organisation (SAPPO).

A growing problem

The number of small-scale pig keepers in peri-urban areas has doubled over the past decade, says Evans, "more than likely due to socio-economic pressures".

Although the role of these pig keepers, who are often found in informal settlements, is limited on the formal pork market, Evans says that at the level of the peri-urban township economy, they play a significant role through the informal selling, slaughtering and distribution of pork.

Given the impact of their contribution, it is crucial for these pig keepers to prevent pig diseases and thereby maintain the sustainability of their livelihoods.

According to Evans, some pig diseases are insidious in nature; they have a negative effect on performance of the animals and increase cost of production because of treatments and/or vaccinations.

“However, diseases such as African swine fever [ASF] are disastrous in that extremely high mortalities are likely and could result in the closure of the business,” he says.

Evans explains that ASF is a hardy virus and can remain viable at room temperature as long as it is in a protein-rich environment such as meat, a carcass or blood. The virus also survives freezing, so if pigs get into contact with infected meat from freezers, they can become infected with ASF.

“ASF is one of the largest known viruses and cannot be transmitted via air. The main sources of infection with ASF for pigs are live pigs, objects contaminated with the blood or excretions of infected pigs, and uncooked or undercooked pork,” says Evans.

The incubation period, or the time from the pig contracting the virus until it becomes clinically ill, is normally between three and 10 days. However, research has shown that this period can stretch up to 21 days.

“There’s no way of knowing by looking at a pig whether or not it’s harbouring ASF,” says Evans.

Currently, there is no vaccine or treatment for ASF. The only effective way in which pig farmers can reduce the risk of spreading AFS is through effective biosecurity practices.

To avoid infection, Evans says that small-scale pig keepers and farmers need to understand the most important biosecurity principle: buy replacement pigs only from a single, trusted pig farmer.

He cautions against buying new pigs from unknown sources, particularly if the price is unusually low, there is an outbreak of ASF in the area, or the buyer is unsure of the health status of the pigs belonging to the seller.

He adds that small-scale pig keepers and farmers should at all costs avoid pig traders and auction sites where the disease state of pigs is unknown.

“If possible, separate new pigs from the rest of the pigs for two weeks and carefully observe them for any signs of disease.”

Restrict access to pigs

According to Evans, another important biosecurity principle that small-scale pig keepers and farmers need to be aware of is that any person or animal entering a farm may be contaminated or inadequately disinfected. This also applies to feed, especially swill, which poses a risk.

“Besides infected pigs, people are the most important means of moving an ASF infection from one farm to another,” says Evans.

He advises that farmers restrict access to the pigs and the premises where they are kept. Only the owner, other people tasked with looking after the pigs, and animal health officers should be able to come into contact with the pigs or enter the premises where they are kept.

When visitors do come onto the farm, they should disinfect or change their footwear before entering the production premises. If visitors rarely enter the farm, a practical alternative may be to provide plastic bags that they can pull over their footwear.

Importantly, the bags should be strong enough to remain intact for the duration of the visit. More regular visitors, such as animal health or extension officers who bring their own boots, should clean and disinfect them with a suitable product before and after the visit.

It is also important to ensure that employees who work with the pigs have dedicated footwear that does not leave the premises and can be cleaned and disinfected after use.

Evans notes that if any equipment or tools used in the pig pens is borrowed or shared between neighbours with pigs, it must be cleaned and disinfected before and after use.

More biosecurity measures

According to Evans, small-scale pig keepers often allow their pigs to roam and forage for food during the day.

“This practice,” he adds, “is obviously nigh impossible to do in a biosecure fashion.”

He stresses that leftover food containing uncooked or undercooked pork should never be fed to pigs. The best possible feed is commercial rations, but there are a number of alternatives, such as agricultural by-products and waste products of plant origin, for example hominy chop, leftover fruit and vegetables or peel.

Food or beverage factory waste, such as stale bread, whey, brewer’s grain and broken pasta can also be used a pig feed. If catering waste is to be given to pigs, if must be boiled, while stirring, for at least 30 minutes and cooled before feeding.

Stable flies, also known as house flies, have been shown to be capable of transmitting ASF for up to 48 hours after feeding on the blood of an infected pig. Although no link has been established between ASF and flies such as horseflies and biting flies, fly control on pig farms is advised. Fly nuisance can be minimised by removing manure and cleaning pens daily, as stable flies breed in manure.

Educating farmers

According to Evans, lack of knowledge among some small-scale farmers and the failure to recognise that disease threats are a very real problem are the main challenges in terms of biosecurity.

“Biosecurity is relatively easy to achieve, and it’s not too costly to provide a level of access control to one’s pigs,” he says.

He adds that one of the dynamics amongst small-scale farmers is a high turnover of owners.

“When we compared the owners who were affected in 2012 by ASF outbreaks in peri-urban areas with those currently affected, fewer than 20% of the outbreaks involved the same players.”

He says that SAPPO, in conjunction with the Department of Agriculture, Land Reform and Rural Development, runs awareness campaigns in all provinces on a regular basis.

This includes the distribution of illustrated leaflets, farmers’ days, and radio commercials on regional radio stations, particularly where there are ASF hotspots.

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