that were positive only in winter months; in summer months these farms carried the same risk as any of the negative farms from category 1. 3. Farms that were positive during summer and winter months; these farms had a year round higher probability (6% per delivery) to be found positive in the next months.

Discussion and Conclusions

Serological prevalence in all samples was low (2%), whereas prevalence of positive farms (at least one positive sample from that farm) was much higher, ranging from 27% of the Belgian farms to 50% of the organic farms. The high prevalence of positive organic farms does not mean that the within farm prevalence in organic farms was also high. When selecting farms with high within farm prevalence for a case-control study, only one organic farm was selected. Most farms with a high within farm prevalence were from the welfare label.

For this project, a positive farm was defined as a farm with at least one positive sample in the whole study period. This means that farms, from which more than one sample are collected per delivery, like organic farms, or with many deliveries, theoretically have a higher probability to become a positive farm. Therefore, the farm prevalence was perhaps higher for some quality labels with more frequent deliveries per farm. This effect does not extend to the sample-prevalence. The mean sample PP was highest in 2014 and lowest in 2012. It is not known if this is caused by natural variation or represents a trend. Possible explanations are to be found in the test or control samples, different weather conditions per year, different farms that have delivered, changes in the rodent densities, etc.

A very interesting result was finding that positive farms showed different seasonal patterns in persistence of positivity. Part of the positive farms only delivered positive pigs in winter, and were serologically negative during summer months, whereas other farms delivered positive pigs the whole year around. In the next stage of this project, we will analyse this aspect in combination with a case-control study to see if there are risk factors for being a “summer positive” or a “winter positive” farm, for example quality label, farm size, delivery pattern, etc.

Furthermore, we hope to get more insight into why more farms/pigs are serologically positive during winter months. Is this caused by a recent infection? Or were these pigs already serologically positive during the last months of their lives, and did they become infected in the end of summer or autumn?

Conclusion

It could be concluded that serological screening of pigs in the slaughterhouse is a suitable method to divide pigs farms in high risk and low risk farms. The results of this work will be used as an input for a case control study and for developing surveillance scenarios.

References


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Meat Inspection, quality, hygiene, safety and preservation

Assessing and understanding food safety risk practices in Nairobi pork food system: a value chain approach

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In Nairobi the pork food system may represent a major source of zoonotic pathogens. Yet, the system and its public health risks have not been described. The study address this gap by identifying and understanding food safety risks practices in the Nairobi pork food system using a value chain approach.

A cross-sectional study of the Nairobi pork system collected data through focus group discussions and individual interviews with farmers, traders, abattoir owners, large companies’ managers, retailers, government officers and consumers. Data were analysed to identify, describe and quantify the main pork chains, their food safety risk practices and explore their link with chain governance, distribution of benefits and barriers to improving the system.

Main food safety risk practices for ‘city pig keepers’ were: handling and consumption of sick pigs; and swill and scavenging feeding. Pigs in slums were channelled directly to consumers and butchers or through less integrated markets. In ‘less integrated abattoirs,’ risk practices were: lack of traceability, cold chain and adequate cleaning and sterilising practices and equipment. These, with chains of pork from on-farm slaughter to the lower end market. One ‘large integrated company’ accounted for 83.6% of pork marketed through abattoirs and governed the lower-end market where barriers to improvements were less. Among retailers, there was a lack of hygiene due to poor infrastructure, scarcity of water and deficient cleaning practices. Poor profit margins and unequal benefit distribution in the lower-end market hinder investments in infrastructure, cold chains and human capacity building and make it difficult to meet feeding and animal health costs.

This study identified the main food safety risk practices and the people involved in risk-taking activities in the Nairobi pork system. The understanding obtained on chain governance, barriers and system inequalities associated to these risks provide a foundation to design effective control strategies.

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