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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