

Investigation of Subacute Edema disease in France. Impact on swine performance



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Background and Objectives

Edema disease (ED) is caused by Shigatoxin Stx2e, produced by STEC (Shiga Toxin producing Escherichia coli). It is described mainly as an acute pathology and a vaccine (Ecoporc SHIGA®) is available since 2013 in France. The mortality due to ED is controlled with this vaccine, but it seems that other performance parameters may improve as well. These observations raised the question of a subacute form of ED. The objective of this study was to evaluate the link between presence of STEC, farm management, and pig growth performance.

Material and Methods

Management practices were recorded in 41 farms without clinical ED and analyzed regarding the isolation of STEC.

For 33 farms, complete data set on performance with a reference period of one year was available for comparison. The hypothesis was that one third of the farms with the best performance would have a lower STEC prevalence. Best farms (11/33) were defined as the ones having an average daily gain (ADG) 8-30 kg over 470 g and post weaning losses below 2 %.

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Performances Status Quo *Qualitative Analyse*

- 1/3 best farms regarding post weaning:
ADG 8–30 > 470 g and % losses < 2 %

	2/3 Farms <	1/3 Farms >
Number positive farms (%)	13 (59.1 %)	2 (18.2 %)
Number negative farms (%)	9 (40.9 %)	9 (71.8 %)

Table 1. Prevalence of STEC Farm depending of farm's performance group. (* Chi2 test, p = 0.026).

↳ Best Farms have a significant lower STEC prevalence

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Results

Farm management practices were not significantly different between STEC negative and STEC positive farms.

STEC prevalence is significantly lower in best farms (18.2 %; 2/11) compared to other farms (59.1 %, 13/22; Chi2 test, $p = 0.026$).

Discussion & Conclusion

The fact that STEC prevalence is significantly linked with performance strengthens the hypothesis of a subacute ED form underestimated until now. Vaccination field trials will be organised in order to test that hypothesis further.