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TITLE

INVESTIGATION OF SUBACUTE EDEMA DISEASE IN FRANCE. SAMPLING METHOD AND PREVALENCE

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CONTENT

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 by this vaccine, but it seems that other performance parameters may improve as well. These observations raised the question of a subacute form of ED. A study was conducted in order to define the prevalence of STEC in farms without clinical ED.

Material & Methods

Forty-one farrow to finish farms, with no clinical ED and not using anti-ED specific vaccine were selected. In each farm two batches with at least 30 piglets in post-weaning were sampled, allowing the detection of a minimum of 10% prevalence. Two sampling methods were compared in the same pen: a pool of five rectal swabs (from one light, one heavy and three medium weight pigs, respectively) versus boot swabs. A qPCR for the detection of Stx2 was directly applied on the native samples.

Results

qPCR results at pen level are as follows: 17.5% positive for both sampling methods; 7.5% positive for boot swabs only, 2.5% positive for rectal swabs only. More positive pens were detected by boot swabs (24.7% vs 19.2%) with in average four positive pens (out of six) per positive batch. There is no age effect regarding STEC prevalence. At farm level, 19 out of 41 are positive with boot swabs (46.4%). In the positive farms, both batches tended to be positive.

Discussion & Conclusion

This study demonstrates a high prevalence of STEC in farms without clinical signs of ED. This supports the hypothesis of a subacute ED form in pig farms.