

# Importance of single animal vaccination with a toxoid vaccine against Edema Disease

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## Background and Objectives

A sow farm raises its piglets at different locations. One of them receives 450 piglets every 3 weeks. In September 2015 Edema Disease (ED) occurred at this site in 6 week old piglets.

The farm began to vaccinate 3 week old piglets destined for this site with Ecoporc Shiga. Subsequent, vaccinated groups were not affected by ED.

In October 2016 however 32 piglets died of ED, as was confirmed via necropsy and microbiological analyses (*E. coli* O139K82, F18+, Stx2e+).

The herd veterinarian suspected that the site may have received unvaccinated piglets. The event was reported as a pharmacovigilance case.

## Material and Methods

- Use of a serum neutralization test dedicated to pharmacovigilance cases only
- Detection of antibodies produced after vaccination against shigatoxin Stx2e
- Interpretation of the test at herd level
- After correct vaccination with Ecoporc Shiga, antibodies are detectable in at least 80 % of the pigs (figure 1)
- 11 sera of the dead piglets and 12 sera of healthy piglets analyzed

## Results

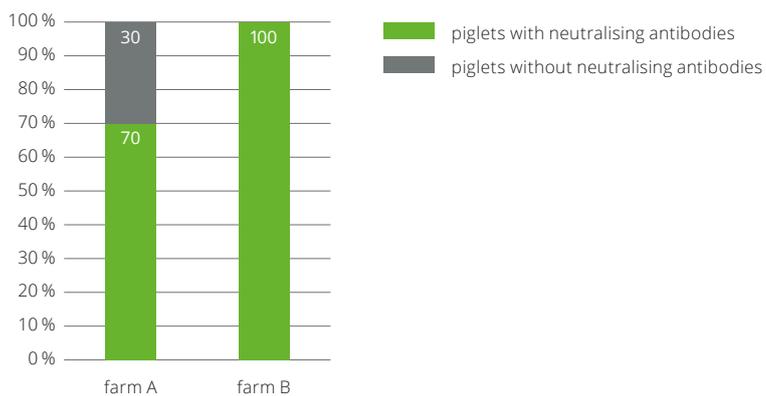
- No antibodies detected on dead piglets
- 11 of the 12 (92 %) healthy piglets had antibodies against shigatoxin Stx2e (figure 2).

## Discussion and Conclusion

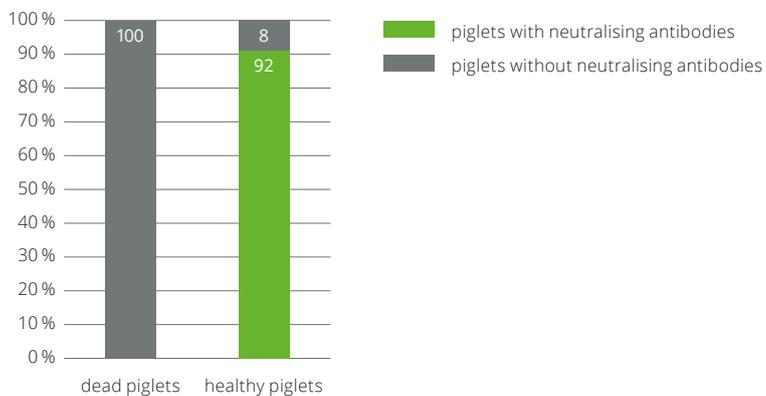
The most likely reason for the death of piglets is that they had not been vaccinated with Ecoporc Shiga.

**Figure 1**

Example of field collected results on theoretically Eco porc Shiga vaccinated piglets. Detectable antibodies against shigatoxin Stx2e in 2 farms (20 piglets). Insufficient quality vaccination on farm A; excellent on farm B.

**Figure 2**

Detectable antibodies against shigatoxin Stx2e in dead and healthy piglets of the studied farm.

**References**

Fairbrother and Gyles. Colibacillosis. In Diseases of Swine, 2012, 10th edition, 723–749