INTRODUCTION

The aim of this study was to demonstrate that UNISTRAIN® PRRS applied by the intradermal route (ID) with a Hipradermic® device clinically protects gilts after a heterologous PRRSV challenge.

MATERIAL & METHODS

Sixteen gilts, clinically healthy and free from virus and antibodies against PRRS, were randomly assigned to two different groups. One group was vaccinated with UNISTRAIN® PRRS by the ID route (0.2 ml/dose; $10^{3.5}$ CCID$_{50}$/animal) 4 weeks before artificial insemination (AI).

Animals in the non-vaccinated group received 0.2 ml of PBS (ID). At 90 days of gestation, all the gilts were challenged by intranasal route with a heterologous pathogenic strain of genotype I of the PRRSV (Italian strain; 89% ORF5 homology; $10^6$-CCID$_{50}$/gilt).

RESULTS

After intradermal UNISTRAIN® PRRS administration there were no adverse effects resulting from vaccination.

No premature farrowing or abortion occurred in any sow (100% farrowing rate).

Although it was not statistically different, the number of weak piglets improved in the vaccinated group (0.3±0.7 piglets) vs control group (0.8±1.5 piglets). Moreover, no mummies were detected in the vaccinated group (0.0±0.0) whereas among the non-vaccinated litters there were some mummies died after challenge (1.0±1.4).

In the vaccinated group, a clear statistical higher number of live born piglets/gilt was observed (13.4±4.1) vs control group (7.3±3.0).

DISCUSSION

The results obtained allow us to conclude that a single vaccination of gilts with UNISTRAIN® PRRS ID using a Hipradermic® device is safe and significantly reduced reproductive failure caused by heterologous wild-type PRRS infection during gestation.

Figure 1. Piglets born alive per gilt.

Figure 2. Stillborn piglets observed after challenge.