“EFFICACY OF UNISTRAIN® PRRS AGAINST A PRRS OUTBREAK ON A EUROPEAN FARM”

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INTRODUCTION

The aim of this field trial was to demonstrate under field conditions the efficacy of UNISTRAIN® PRRS after a PRRS outbreak.

MATERIALS AND METHODS

A randomized, double blinded and controlled field trial was carried out on a problematic PRRS farm with 711 piglets from 3-4 weeks of age at vaccination. The animals were randomly divided into two treatment groups: the vaccinated group (n=357) received 2ml of UNISTRAIN® PRRS by the intramuscular route and the control group (n=354) was injected with 2 ml of PBS (phosphate buffered saline). An outbreak was considered to have occurred when at least 10% of the pigs showed respiratory symptoms. The outbreak was confirmed by PCR and serology. To assess the efficacy of the vaccine, different parameters were recorded: clinical respiratory signs, animals with lung lesions and positive to PRRSV (RT-PCR), average daily weight gain (ADWG) from weaning up to PRRS outbreak (kg) and percentage of animals treated with antibiotics.

RESULTS

A clinical PRRS outbreak appeared in animals at 140-150 days of age. The strain isolated from the outbreak had a homology with the vaccine strain of 88 %. Clinical signs were observed over 6 days and the signs recorded were tachypnoea and dyspnoea at rest, with cough and nasal secretions in some animals and moderate to severe depression. The overall percentage of animals with associated clinical respiratory signs was statistically lower in the vaccinated group (10.9 % vs. 18.2 %, Figure 1). The percentage of lung lesions among RT-PCR PRRSV positive animals was lower in the vaccinated group than in the control group (26.6 % vs. 31.2 %, Figure 1). The percentage of animals treated with antibiotics was statistically lower in the vaccinated group (9.5 % vs. 14.4 %, Figure 1). Moreover, mean ADWG (kg) was statistically higher in the vaccinated group (0.57±0.08 vs. 0.54±0.08 in the control group, Figure 2).

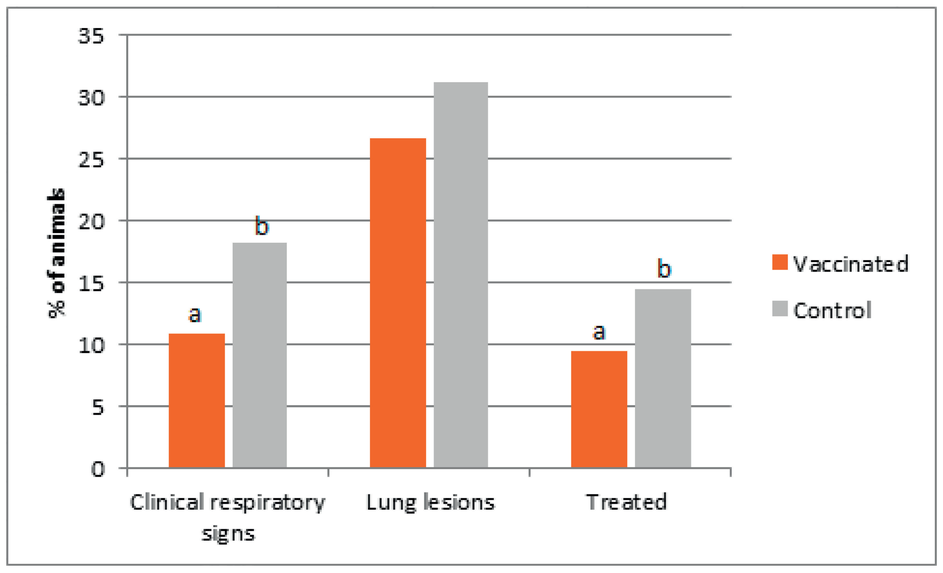

Figure 1. Percentage of piglets with clinical respiratory signs, percentage of piglets with lung lesions among RT-PCR PRRSV positive animals and percentage of piglets treated. [a,b] Different superscripts indicate statistically significant differences between groups using the Chi-square test ($p<0.05$).

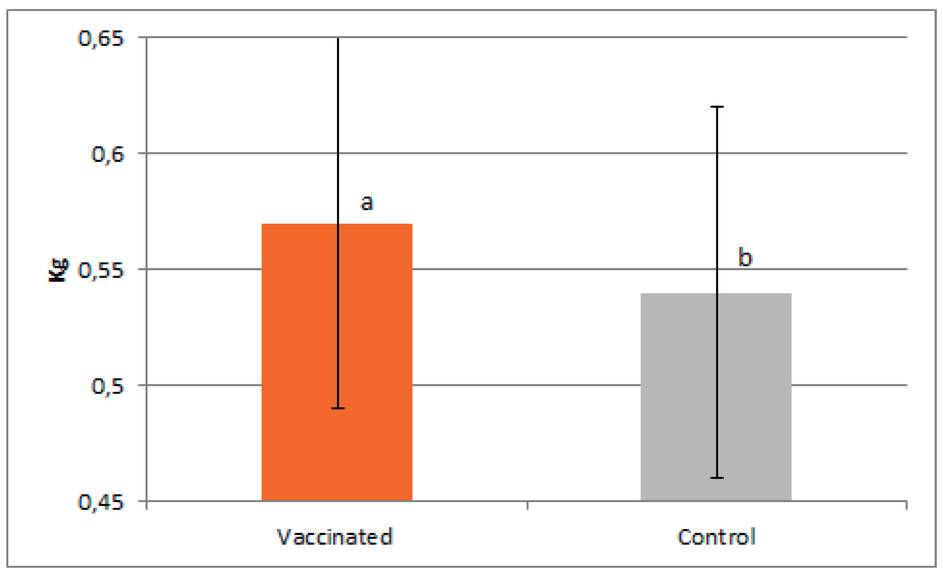

Figure 2. Mean ± SD ADWG (kg) from weaning up to PRRS outbreak. [a,b] Different superscripts indicate statistically significant differences between groups using the Mann-Whitney U test ($p<0.05$).

CONCLUSIONS AND DISCUSSION

Vaccination with UNISTRAIN® PRRS significantly reduced the clinical respiratory signs associated with PRRS and the percentage of antibiotic treatments. Moreover, vaccination reduced the percentage of animals with lung lesions and positive to PRRSV. Moreover, vaccination significantly improved the ADWG of the piglets after a PRRS outbreak. Therefore, UNISTRAIN® PRRS is effective in piglets and it is a useful tool to reduce the negative clinical and productive consequences of a PRRS outbreak.

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