

TITLE

**VACCINATION OF SOWS WITH A PRRS MODIFIED LIVE ATTENUATED VACCINE
DEMONSTRATES PROTECTION FOLLOWING A PRRSV CHALLENGE 26 WEEKS LATER**

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CONTENT

Introduction

Depending on circumstances and objectives, PRRS vaccination in sows may be on a regular, whole herd basis or timed to the reproductive cycle of individual animals. Knowing the duration of immunity that can be expected from a vaccine can help veterinarians to design the most appropriate farm protocol. Suvaxyn PRRS MLV has previously demonstrated a duration of immunity of 4 months in gilts. This study evaluated efficacy 26 weeks following vaccination, using a heterologous PRRSV-1 challenge.

Materials and methods

Eighteen PRRSV-naïve, non-pregnant sows were included in the study: nine kept as negative controls and nine vaccinated with Suvaxyn PRRS MLV. All sows were mated eleven to eighteen weeks post-vaccination and then challenged with a virulent PRRSV-1 isolate at 81-89 days of gestation. Viremia and shedding were monitored. Litters were evaluated at farrowing and piglets monitored until euthanasia at weaning; data gathered included: clinical observations, piglet viremia and body weight at birth and weaning, lung scoring at necropsy and PRRSV viral load in lungs.

Results

Piglets from vaccinated sows showed significant increases in the percentages born alive (87 v 61, $p=0.0343$), born healthy (77 v 42, $p=0.0449$) and weaned (79 v 37, $p=0.0098$); weights at birth ($p=0.0183$) and weaning ($p=0.0001$) and calculated ADWG ($p=0.0001$); along with significant reductions in % stillborn (11 v 31, $p=0.0313$), level of piglet viremia at birth and at weaning ($p<0.0001$), viral load in lungs ($p=0.0001$) and clinical signs such as abnormal general condition ($p=0.0205$), depression ($p=0.0164$) and respiratory distress ($p=0.0159$). In vaccinated sows post-challenge viral loads in serum, nasal swabs and oral swabs were significantly reduced at different sampling points.

Conclusions

A duration of immunity of 26 months was demonstrated for Suvaxyn PRRS MLV in breeding sows, allowing veterinarians greater flexibility when developing vaccination protocols to suit specific farm circumstances.