Technical Brief

PRRSGard®

PRRSGard® is proven to be efficacious against PRRSV 174 challenge

Trial conducted by VRI evaluated the performance of PRRSGard® in a respiratory challenge model with a heterologous PRRSV RFLP 1-7-4

Trial Design

At approximately 3 weeks of age, a total of 48 pigs (24pigs/trt) were randomly assigned to 2 treatments. PRRSGard® (1 mL) or saline (1 mL) was administered once on Day 0. Treatments were housed in separate rooms during the vaccination period. At Day 28, one half of the pens were switched between rooms to ensure equal treatment representation, and all pigs were challenged with 2.0 mL (1 mL per nostril) of PRRSV RFLP 1-7-4 culture supernatant (~3.5 TCID50).

Serum samples were collected weekly from Day 0 through termination of the study on Day 42. Serum samples were tested by PRRSGard®-specific RT-PCR, commercial PRRSV RT-PCR and by PRRSV X3 ELISA.

Pigs were weighed at Day 0, Day 28, and Day 42 to assess average daily gain (ADG). On Day 42 (14 days post challenge), all pigs were necropsied, and macroscopic lung lesions scored. ADG and lung lesions were analyzed using generalized linear models using the lme4 package in R software suite.

Results

Mean PCR cycle time (ct) values of the PRRSGard® specific rRT-PCR and commercial PRRSV rRT-PCR are illustrated in figures 1 and 2 respectively.

Figure 1

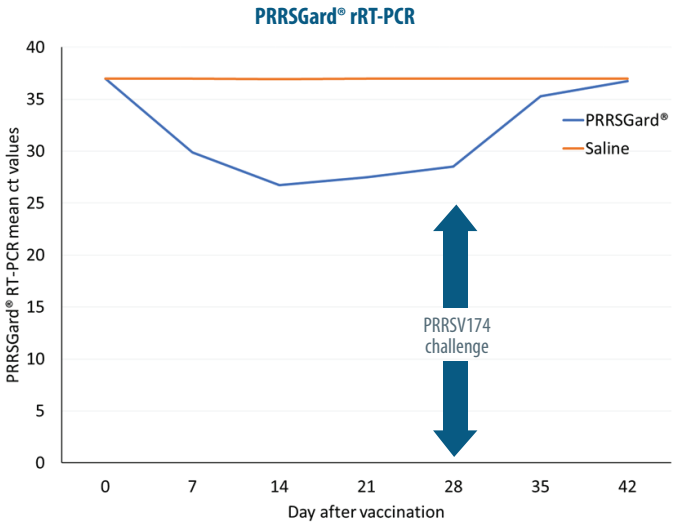
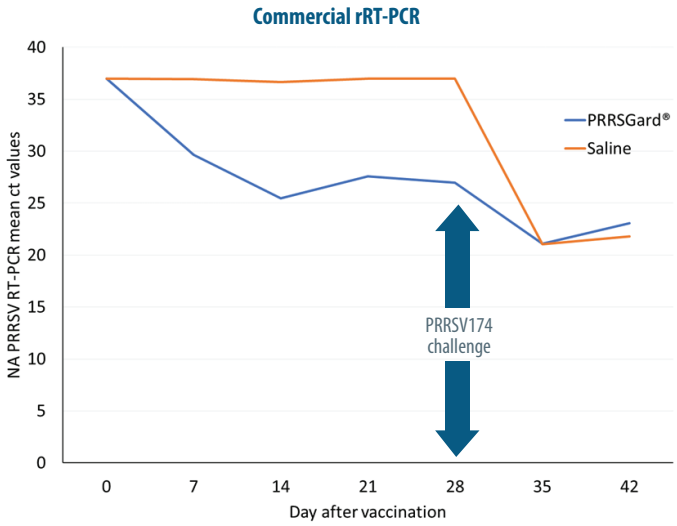


Figure 2



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Results (continued)

Day 0 to Day 42 average daily gain (Fig 3) was significantly higher in the PRRSGard® vaccinated group compared to the saline treatment group. Additionally, macroscopic lung lesions (Fig 4) were significantly lower in PRRSGard® vaccinated pigs compared to saline.

Figure 3

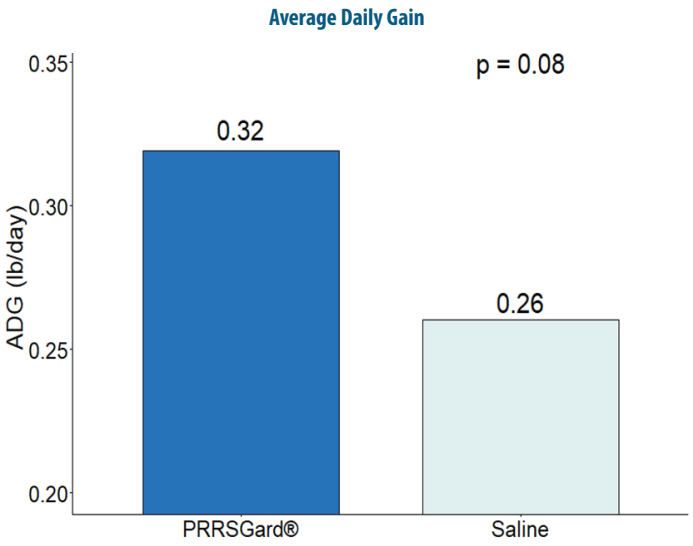
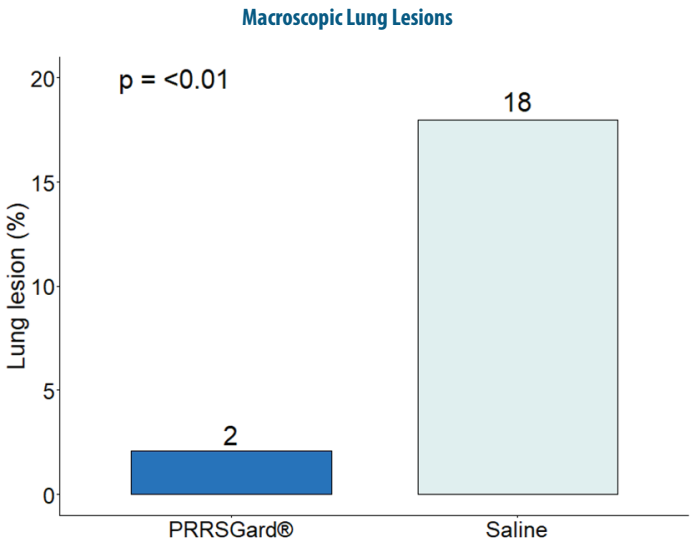


Figure 4



Conclusion

PRRSGard® was efficacious in reducing performance loss as measured by average daily gain and macroscopic lung lesions following a heterologous PRRSV RFLP 1-7-4 challenge. Additionally, the PRRSGard®-specific rRT-PCR was able to illustrate different trends in mean ct values when compared to commercial PRRSV rRT-PCR tests, enabling differential diagnostics between the PRRSGard® vaccine virus and field strains.

References

1. R Core Team (2020). R: A language and environment for statistical computing. Vienna, Austria, R Foundation for Statistical Computing: Statistical Software

This product has been shown to be effective for the vaccination of healthy swine, three weeks of age or older, against Porcine Reproductive & Respiratory Syndrome virus. Duration of immunity is unknown. For more information regarding efficacy and safety data, see productdata.aphis.usda.gov.

The vaccine has been shown to be effective against lung lesions due to Porcine Reproductive & Respiratory Syndrome Virus-associated pneumonia.

ADMINISTRATION AND DOSAGE: The desiccated vaccine is rehydrated with the accompanying liquid diluent, mixed well and used immediately. Dose: 1.0 ml intramuscularly (I.M.).

CAUTION: For animal use only. Do not mix with other products, except as specified on this label. Use entire contents upon opening. Store at 2 to 8°C (35°F to 45°F). Do not freeze. In case of human exposure, contact a physician. If anaphylaxis occurs, use epinephrine or equivalent. Inactivate unused contents before disposal. Do not vaccinate within 21 days before slaughter. Not for use in pregnant swine or boars. Vaccine virus may be shed and transmitted to other populations of swine in contact with vaccinated swine. The duration of potential vaccine virus transmission may vary. Use of the vaccine in herds intended to remain Porcine Reproductive & Respiratory Syndrome (PRRS) virus seronegative is contraindicated. Introduction of vaccinated pigs into herds intended to remain PRRS virus seronegative is contraindicated. The need for annual booster vaccinations has not been established for this product; consultation with a veterinarian is recommended. Product contains penicillin-G and streptomycin as preservatives.

Porcine Reproductive & Respiratory Syndrome Vaccine, Respiratory Form, Modified Live Virus

PRRSGard® | 250 DOSES

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Product No:
Serial No:
Exp. Date:

Manufactured by:
Pharmgate Biologics Inc
2575 University Avenue West, Suite 100,
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VLN 329
PCN 19S1.R0

Visit USDA website for full label indications & technical information: productdata.aphis.usda.gov

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