



# PRRSGard®

## PRRSGard® is shown to cause limited vaccine drag resulting in minimal impact on growth performance and shedding of virus when given in a commercial finishing setting

Trial conducted by Swine Vet Center to evaluate airborne shedding and production setback post-weaning from Pharmgate PRRSGard vaccine in commercial conditions

### Experiment Design

A 3,600 head, two room, tunnel ventilated commercial wean to finish farm was filled from a Porcine Reproductive and Respiratory Syndrome virus (PRRSV) naïve sow farm. On day 0, room 2 received 1.0 mL of Pharmgate PRRSGard vaccine intramuscularly, while room 1 was assigned the negative control and received 1.0 mL of saline intramuscularly. Two pens within room 2, directly adjacent to vaccinated pens, were also assigned as non-vaccinated controls and received 1.0 mL of saline intramuscularly on day 0.

400 animals were randomly selected within each room (800 total), tagged, and individually weighed. 30 pigs from each room (60 total) were also randomly selected for blood testing for quantitative

PRRSV PCR and PRRSV ELISA. An additional 10 animals were randomly selected from the non-vaccinated control pens in room 2 and blood sampled for quantitative PRRSV PCR. While blood samples were collected, oral fluids in these pens were also collected and tested for quantitative PRRSV PCR. A Cyclonic Air Collector and Cub Air Collector were used to assess the amount of aerosol shedding in the barn, directly outside of a pit fan for room 2, and one mile downwind from the site. Air samples were collected by running the collectors side-by-side for 30 minutes at each location. Samples were tested for PRRSV rt-PCR. All sampling timepoints can be seen below in days post-vaccination (dpv).

### Sample Collection Schedule

Serum Samples



Air Samples



Oral Fluid Samples



Individual Weights



## Results

**Growth Performance:** There were no significant differences in growth performance between the PRRSGard vaccinated and non-vaccinated populations through the nursery, finisher, or wean-to-finish phase ( $p > 0.10$ ; Table 1).

**Response to vaccination:** Vaccinated animals turned viremic promptly, with 100% being PRRSV positive 3-dpv. The viremia within the vaccinated population peaked at 14-dpv, followed by a reduction in viremia throughout the nursery phase. Within room 2, the 10 non-vaccinated control pigs remained PRRSV negative on sampling out to 35-dpv. Differences in seroconversion were also observed (S/P values) post-vaccination ( $p < 0.01$ , Table 2). Vaccinated pigs displayed an immune response within 14 to 28-dpv, with all vaccinated pigs seroconverting by 28-dpv.

**Limited shedding:** Within the non-vaccinated control room (room 1), pigs remained PRRSV negative on sampling out to 91-dpv. From 0 to 49-dpv, all unvaccinated pigs remained PRRSV ELISA negative. There was no PRRSV detected in aerosol samples at any of the three locations out to 35-dpv, when aerosol sampling concluded. At approximately 100-dpv, oral fluids confirmed the presence of Influenza virus (IAV) on the site. This finding correlated with increased shedding of PRRSGard and resulted in the initial detection of the vaccine in room 1.

**Table 1**

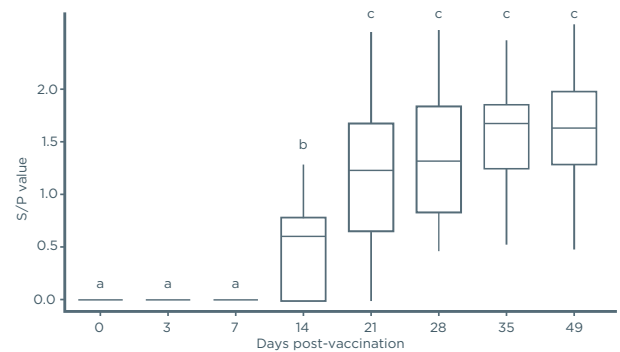
Growth performance based on treatment group

	Vaccinated	Unvaccinated	SEM	P-Value
<b>Weight, lb</b>				
D 0	17.0	17.2	1.14	1.00
D 49	78.0	80.4	4.89	0.699
D 119	241.2	238.4	6.04	0.558
<b>ADG</b>				
D 0-49	1.24	1.29	0.07	0.590
D 49-119	2.33	2.25	0.09	0.380
D 0-119	1.88	1.86	0.05	0.532

A total of 674 pigs (vaccinated = 308, unvaccinated = 366) were included in the data analysis. D = day post-vaccination

**Table 2**

S/P values of vaccinated animals up to 49-dpv



Superscript differences indicate statistical significance

## Conclusions

There were no significant differences in growth performance when the animals were vaccinated with PRRSGard compared to the non-vaccinated controls. The vaccinated population developed a sustained viremia from 3 to 14-dpv, followed by a reduction in viremia throughout the nursery period. PRRSGard did not spread to pen adjacent, non-vaccinated controls by 35-dpv and room adjacent non-vaccinates by 91-dpv, until the study was impacted by an unexpected diagnosis of IAV. This study demonstrates that PRRSGard may be a useful tool to control PRRSV infection, with minimal impact on pig performance, and with reduced risk of vaccine area spread.

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](http://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**



**Product No:**

**Serial No:**

**Exp. Date:**

Manufactured by:

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**VLN 329**  
**PCN 19S1.R0**

Visit USDA website for full label indications & technical information: [productdata.aphis.usda.gov](http://productdata.aphis.usda.gov)



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