

## PULSE 200 EFFECTIVE APPLICATION METHOD FOR PRRS VACCINE IN GILTS

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Key words: PRRS, vaccinology, injection method, needle-less

### Introduction

The Pulse 200 is the first needle-free injector commercially available to the swine industry. This device is a 2ml fixed intramuscular or subcutaneous, powered, injector which propels the 2ml dose through the skin without the use of needles. There are several studies published which demonstrate similar immunological responses in pigs injected with various vaccines with the Pulse 200 to those given the same vaccines with a needle and syringe. However, the studies discussed here, investigate the comparative immunological responses gilts given PRRS vaccines with the Pulse 200 and conventional needles and syringes.

**Objective:** To compare the serological responses of gilts vaccinated with Ingelvac PRRS MLV (Boehringer Ingelheim Vetmedica, Inc) administered with conventional needles and syringes to those receiving the same vaccine with the Pulse 200 Needle-less injector.

### Materials and methods

1. 2-Treatment Groups
  - a. 1: PRRS negative gilts vaccinated w/ Ingelvac PRRS MLV; with needles and syringes
  - b. 2: PRRS negative gilts vaccinated w/ Ingelvac PRRS MLV; with the Pulse 200 needle-less injector
2. Sample Size of 35 (n=35) for each group
3. Individual animals identified and monitored serologically post-vaccination

### Results

The gilts given the PRRS vaccine with the Pulse 200, reached peak S/P ratios at Day 28 (14 days post-revac) where the average for the treatment group was 1.11 (fig 1). The gilts given the same vaccine with conventional needles and syringes also exhibited peak S/P ratios on Day 28 at 1.26 (fig 1), however

there were no statistical differences in S/P ratios between the two treatment groups at any of the 5 time periods. In figure 1 are the S/P ratios of gilts vaccinated with Ingelvac PRRS MLV demonstrating similar immunological responses over the 8 week period for both treatment groups. This would indicate that the injecting gilts with Ingelvac PRRS MLV with the Pulse 200 will result in similar immunologic responses to gilts given the same vaccine with needles and syringes.

### Conclusions

1. There were no significant differences in serologic responses post-vaccination w/ Ingelvac PRRS MLV in gilts given the vaccine with conventional needles and syringes vs. those given the same vaccines with the Pulse 200 needle-less injector.
2. There were no visible injection site lesions at 2 week post-vaccination bleeding time.
3. The Pulse 200 is clearly an effective administration tool for PRRS vaccination in gilts; similar conclusions have been scientifically derived with several other swine vaccines.

### References

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Figure 1: Average post-vaccination S/P ratios for gilts treated with Ingelvac PRRS MLV with needles and syringes vs. Pulse 200

