

Mortality reductions from large scale PRRS control project in the USA

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PRRSv has been shown to have an economical impact per pig up to \$US9.12 in the nursery phase and up to \$US23.3 in the finisher phase. Modified-live virus vaccine represents a viable option to minimise the negative impact of PRRS in growing pigs in production systems.

The objective of this project was to determine if strategic use of Ingelvac PRRS MLV could improve growing pig performance and reduce mortality compared to the previous 24 months of production data in a large-scale pig production system.

Materials and methods

The project was performed in a 70,000 sow multisite production system. Breeding herds were endemically infected with PRRSv type 1 (EU) and type 2 (NA).

Both types were identified in nursery and finisher pigs. The primary interventions were herd closure for 130 days and systematic breeding herd mass vaccination with Ingelvac PRRS MLV (2ml), followed by quarterly sow mass vaccination, and ongoing pig PRRS MLV vaccination at weaning with Ingelvac PRRS MLV (2ml). The project duration was 15 months.

In growing pigs, system-wide average daily

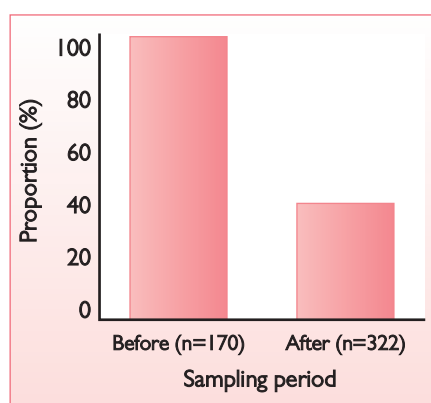


Fig. 1. Proportion of wild type PRRSv detected in system before and after vaccination.

gain (ADG) and mortality percentage were compared in a before-after analysis, running 2-sample t-test for ADG and 2-sample proportion test for % mortality (Minitab 16.1).

In the nursery phase, a total of 703 closeout groups representing 3,656,862 pigs were included in the before period, and 328 closeout groups representing 1,463,539 pigs were included in the after period.

In the finisher phase, 489 closeout groups, representing 2,659,631 pigs were included in the before period and 188 closeout groups, representing 1,006,072 pigs were included in the after period.

An intense monthly diagnostic monitoring in piglets at each breeding herd as well as

nursery and finisher pigs (hospital pens) was implemented to assess PRRSv circulation dynamics and system-wide wild type presences (using ORF-5 sequencing) proportion during the project.

This large scale PRRS control project was successfully implemented for 15 months. A significant increase in ADG ($P<0.01$) and significant decrease in mortality ($P<0.01$) was detected in both nursery and finisher pigs when compared against the previous 24 months closeouts.

In addition, a reduction of PRRS wild type virus proportion in the whole system was observed. PRRS MLV pig vaccination and modified herd closure were the primary tools utilised to achieve an improvement in ADG and reductions in mortality even in the presence of both PRRSv type 1 and type 2 in the system. ■

Table 1. Analysis of system-wide closeout gain and mortality before and after vaccination.

Parameter	Vaccination	
	Before	After
Nursery		
ADG (g)	411 ^a	442 ^b
Mortality (%)	3.19 ^a	2.45 ^b
Finisher		
ADG (g)	773 ^a	828 ^b
Mortality (%)	5.56 ^a	3.65 ^b

Different superscripts differ at $P<0.01$