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Modified live PRRS virus vaccination as a key component in nursery pig performance improvement

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Introduction and Objectives

Two sow farms had experienced continual PRRS instability (large periodic increases in abortion rates) due to multiple PRRS virus isolate introductions over the past several years. The highest mortality rates in grower pigs occurred in the first 8 weeks post-weaning with mean mortality rates in excess of 8% and 14% respectively during the previous 12 months. The objective of this study was to determine if stabilization of the sow herd along with vaccinating pigs pre-weaning (5-10 days of age) with Ingelvac[®] PRRS ATP could reduce mortality in the first 8 weeks post-weaning.

Materials and Methods

The study was conducted in two 3,250 sow farrow to wean farms located in Iowa and Minnesota.

The breeding herd PRRS stabilization program followed a “Load/Close/Homogenize” approach. A 200 day supply of gilts was entered into the farms which were then closed to new animal entries for a minimum of 200 days. All breeding animals including developing gilts were mass vaccinated twice 30 days apart with Ingelvac[®] PRRS ATP (Boehringer Ingelheim Vetmedica, Inc., St Joseph, MO). Both herds practiced industry standard MCREBEL methods with no piglet cross-fostering after 24 hours of age for at least 30 days.

Piglets were vaccinated at 5-10 days of age with the same vaccine. On most continuous flow sites, mass vaccination of all pigs occurred twice 30 days apart when the first PRRS vaccinated weaned pigs entered the site. PRRS PCR testing was conducted every 2-4 weeks on 20 poor quality pigs aged 5 days and younger pooled in groups of 5. “Sow herd stability” was defined as negative results on two consecutive PRRS PCR tests on these pooled piglet sera. PRRS PCR testing of 15 pigs (3 pools of 5 from sick pens) from each group at 4-8 weeks post weaning was done and PCR positives were sequenced. An in-process intervention analysis was done using

statistical process control methods on mortality for the first 8 weeks post weaning.

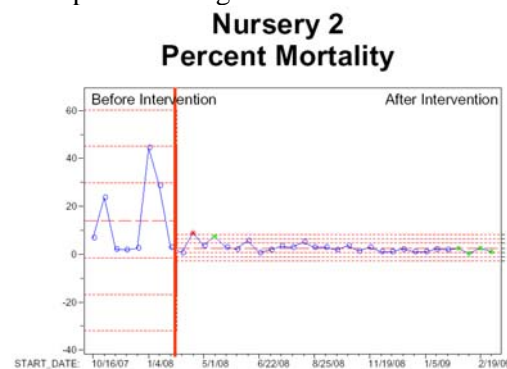
Results

Pig mortality rates during the first 8 weeks post-weaning were significantly reduced from 8.1% to 2.5% and 14.1% to 2.95% from Farms 1 and 2 respectively.

Figure 1. Farm 1 pig mortality rates the first 8 weeks post-weaning before/after intervention.



Figure 2. Farm 2 pig mortality rates the first 8 weeks post-weaning before/after intervention.



Discussion and Conclusions

The sow herd stabilization program along with vaccination of pigs at 5-10 days of age has proven to be very effective in reducing mortality during the first 8 weeks post weaning. This occurred in spite of wild-type virus, including the highly virulent isolate 1-18-2, persisting on or being laterally introduced to five of the sites.