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Effects of area and regional control programs for porcine reproductive and respiratory syndrome virus on the production performance of swine

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Introduction and Objectives

Porcine Reproductive and Respiratory Syndrome virus (PRRSv) costs the United States' swine industry \$560 million annually. Most of that loss, valued at greater than \$10 per pig finished, is attributed to production losses due to PRRSv circulation in the commercial wean to market pig1. A PRRSv Area and Regional Control (ARC) project was initiated in the Northeast Illinois (NE IL) region in January of 2010. Control procedures including McRebel protocols, vaccination of both sows and piglets with Ingelvac® PRRS MLV, and improved internal and external biosecurity started in January of 2010 and were fully implemented by April of the same year on all sow farms in the area. The goal of this project was first controlling, and then eliminating PRRSv from the defined area. Success would also be expected to improve growing pig performance of the area, resulting in increased financial gains to the swine producer. Therefore, the objective of this study is to present the production improvements obtained by the successful establishment and accomplishment of an ARC project in the NE IL region.

Materials and Methods

A dataset (Bethany Swine Health Services) representing 400,000 pigs originating from 12 independent sow farms was analyzed to determine the effects of ARC implementation on performance in the downstream flow. Historical diagnostic data showed that most pigs in the area are exposed to PRRSv during or prior to the nursery phase. Therefore, nursery comparisons were examined for gains and mortalities by month over a two year time period (2009-2010).

Results

Mean average daily gain (ADG) for the entire dataset between 2009 and 2010 showed a minimal increase of 17 g/d (376 to 393 g/d). However, between March and December 2010, mean ADG increased 34 g/d from 381 g/d in March to 415 g/d in December. Piglets originating from Herd Category 12 sow farms

showed an even more drastic improvement of 83 g/d (314 to 397 g/d) between March and December 2010. The entire dataset showed a decrease in mortality of 0.22%. Additionally, Herd Category 1 farms showed a decrease in mortality of 4.38% during the same time period in 2010. While these improvements are small, the decrease in nutrient value and increase in toxins of corn utilized in the diet in 2010 led to decreased performance in all pigs³.

Discussion and Conclusions

In 2010, when the ARC project began, 80% (n= 10) of the sow farms were PRRSv positive, with 50% (n=6) being unstable (Herd Category 1); today only 17% (n=2) are unstable. Therefore, implementing ARC programs is beneficial to all producers in an area due to a decreased risk of external and lateral PRRSv infections. Undoubtedly, producers that undertake a control and elimination plan as a part of an ARC project also take on associated costs (diagnostics, vaccine, biosecurity). Nevertheless, the dataset shows there is a return on those investments by ways of improved performance. Considering that an improvement of 50 g/d in ADG equates to additional revenue of \$1.36/pig and an improvement of 0.1% mortality represents an additional \$0.08/pig; producers in this area were able to retain an additional \$0.64/pig totaling \$256,000 in increased revenue in 2010 over 2009. So, in conclusion, this dataset shows that there are tangible performance benefits not only for the individual producer, but for the area as a whole when undertaking an ARC project.

References

1. Neumann et al. 2005. *J Am. Vet. Med. Assn.* 227(3):385-392.
2. Holtkamp, D et al. 2011. *J Swine Health Prod.* 19(1):44-56.
3. Bradley, C & Hutjens, M. 2009. *The Bulletin.* 24(6).