

**Title:** Impact of pig farm density on incidence of PRRS in a cohort of sow herds – NPB #12-139

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### **Scientific Abstract:**

PRRS continues to be a significant problem in the United States swine industry yet several important epidemiological factors have yet to be elucidated. Therefore the objectives of this project were to document, describe and study the patterns of PRRS in the US. Additionally, we sought to describe the impact of neighboring swine farm density on the odds of reporting a new PRRS infection, and finally, we attempted to describe the frequency and diversity of aerosolized PRRS around sow farms in swine dense regions.

In this project, a highly repeatable and consistent pattern of PRRS infections was documented between 2009 and 2012. In 2013, the patterns changed, and additional work is ongoing to elucidate these factors driving this change. Additionally, positive associations between neighboring swine farm density and reporting new PRRS infections were detected. Finally, using previously published methods, we were not able to detect aerosolized PRRS in 241 samples collected over a 6 month period during the 2012 PRRS epidemic.

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These research results were submitted in fulfillment of checkoff-funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer-reviewed.

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