



# Allen D. Leman Swine Conference



Volume 39  
2012

Published by: Veterinary Continuing Education

## **Sponsors**

*We thank the following sponsors:*

### **Platinum**

Bayer Animal Health  
Pfizer Animal Health

### **Gold**

Novartis Animal Health

### **Silver**

Boehringer Ingelheim Vetmedica, Inc.  
National Pork Board  
Newport Laboratories

### **Bronze**

Merck Animal Health

### **Copper**

AgStar Financial Services  
Elanco Animal Health  
GlobalVetLINK  
IDEXX  
Novus International, Inc.  
PIC USA  
USDA PRRS CAP

### **University of Minnesota Institutional Partners**

College of Veterinary Medicine  
University of Minnesota Extension  
College of Food, Agriculture and Natural Resources Sciences

# PRRS incidence/prevalence pilot study

Steve Tousignant; Bob Morrison

College of Veterinary Medicine, University of Minnesota, St. Paul, Minnesota

## Project overview

Despite best efforts from the scientific community, porcine reproductive and respiratory syndrome (PRRS) continues to be a devastating disease to the swine industry with an annual cost recently estimated at \$664 million. It is our impression that producers and veterinary practitioners have become increasingly frustrated with the variable results to control the disease and keep it out of their herds. Therefore, we began the first effort to describe the epidemiology of PRRS infections in a sample of sow herds in the United States which will ultimately increase our understanding of the disease.

In the fall and winter of 2011, we began a pilot project to develop a database of volunteer sow herds within the U.S. The project continues to expand, and includes nearly 300 sow farms, approximately 900,000 sows across 12 states. Veterinarians working with these farms report weekly PRRS status using the AASV classification system (Holtkamp et al., 2010) for each farm beginning July 2009.

Using July 1 as the start of the observation period for each year, figure 1 shows approximately 30-40% of the participating sow farms have become infected each year. During the last three years, new infections increased gradually in September, followed by a dramatic increase at the end of October, then plateauing in late February. At the end of June 2012, approximately 40% of the herds had reported a new infection.

Figure 2 is an Exponentially Weighted Moving Average (EWMA) curve from July 2009 through the end of June 2012. It shows the beginning of the fall epidemic approximately mid-October and subsiding approximately mid-March. These data also suggest a mini epidemic in the spring beginning in late May, lasting only a few weeks.

This is the first scientific effort to understand the epidemiology of PRRS virus in a large sample of US sow herds. It is important to understand that due to the voluntary nature of the participants, this cohort may not be representative of the entire US sow herd. That said, preliminary results are strikingly consistent across three years of data and between systems.

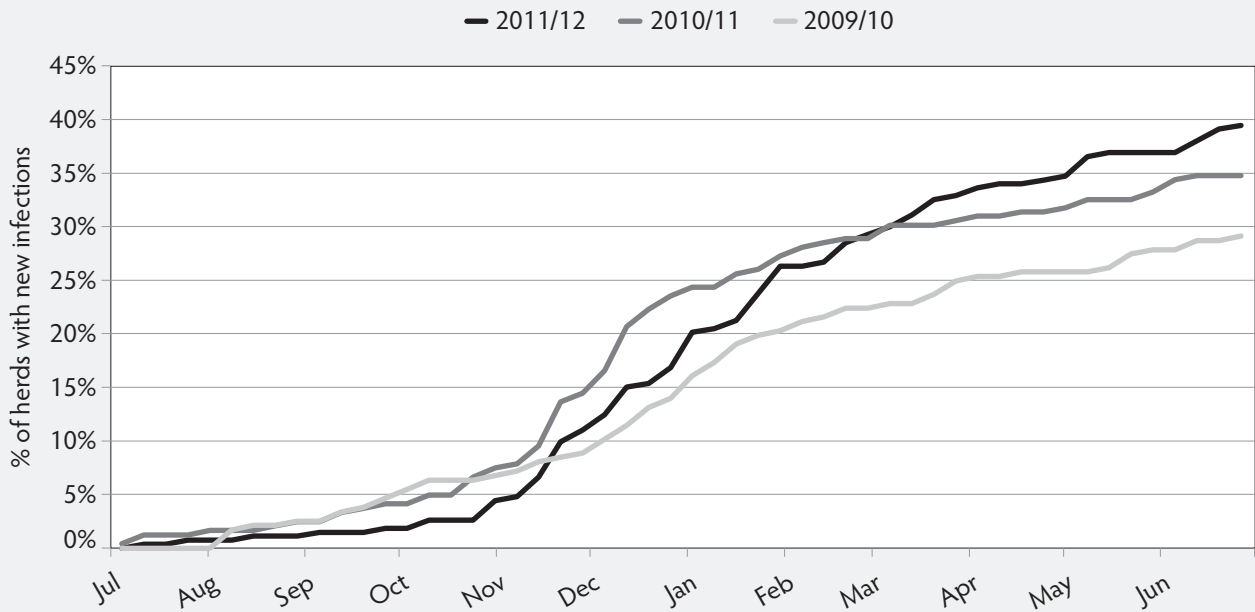
## Acknowledgements

The authors appreciate the willingness of the participating farms and veterinarians to share their data. They would also like to acknowledge funding support from the National Pork Board and the USDA PRRS Coordinated Agricultural Project.

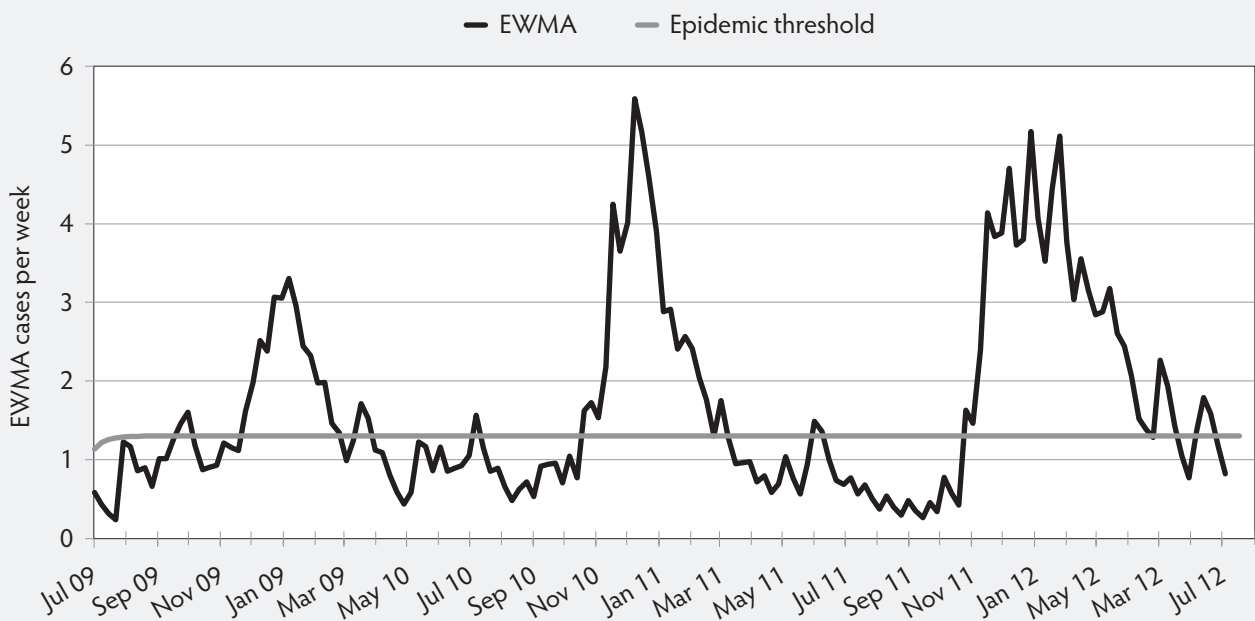
## References

1. Holtkamp D, Polson D, Torremorell M. Standard herd classification system for describing the PRRS virus status of herds. Proc Allen D. Leman Swine Conference 2010; 44–46.

**Figure 1:** Aggregate incidence/week and cumulative. Beginning July 1 for years 2009-2012.



**Figure 2:** EWMA analysis for years 2009-2012.



Diseases Research