RESEARCH ABSTRACT

SWINE HEALTH

Title: Development of new risk assessments and enhancements to the web application for the Production Animal Disease Risk Assessment Program - **NPB# 07-236**

Investigator: Derald J. Holtkamp, DVM, MS,

Institution: Iowa State University

Co-Investigators: Tom J. Burkgren, DVM, American Association of Swine Veterinarians
Dale J. Polson, DVM, PhD, Boehringer Ingelheim Vetmedica, Inc.
Annette M. O'Connor, BVSc, MVSc, DVSc, MACVSc, Iowa State University
Jamie L. Melody, MS, Iowa State University
Tiffany K. Yoder, MS, Iowa State University
Christine L. Mowrer, Iowa State University

Date Submitted: September 30, 2010

Scientific Abstract

The pork industry is an increasingly high risk industry; disease is a major source of that risk. Pork producers know firsthand that it is difficult to control diseases that are endemic to the U.S. like Porcine Reproductive and Respiratory Syndrome (PRRS) virus. Emerging diseases such as porcine circovirus type 2, foreign animal diseases like foot and mouth disease, and diseases with human health implications like H1N1 create havoc in the swine industry. Waiting until an incident or problem occurs and then scrambling to contain it is not a strategy that will lead to the long-term survival and global competitiveness of the swine industry. Producers need to be able to minimize the risk of introduction and transmission of the pathogens that cause these diseases. The best way to keep disease and pathogens out of a herd is by managing biosecurity.

The American Association of Swine Veterinarian's (AASV) Production Animal Risk Assessment Program (PADRAP) is a standardized method of capturing and quantifying information about biosecurity practices that are essential for learning how to keep herds negative, in addition, to preventing positive herds from repeatedly breaking. Keeping the virus out of herds and minimizing/eliminating lateral transmission between growing pig/breeding herd sites is the major remaining barrier to eradication of PRRS.

The web-based application, PADRAP Online, allows trained veterinarians to complete and submit assessments for breeding herd sites and immediately view and print risk benchmarking reports for the sites. The purpose of this project was to complete the development of PADRAP Online and to develop the next version (version 3.0) of the Breeding Herd survey and a survey (version 1.0) for Grow-finish Herds.

The deliverables for this project included additional functionality in PADRAP Online and two new risk assessment surveys. Additional functionality was added: 1) options to reduce the time required to complete the surveys, 2) provide veterinarians a method to complete the survey without internet access, 3) ability to create JPEGs of the key reports and incorporate into PowerPoint presentations, and 4) ability to print in full color. Development of the next version (version 3.0) of the Breeding Herd survey required a thorough evaluation of all the questions, responses, and risk scores in the current version. In addition, literature, review of biosecurity, and feedback from veterinarians were all components of information made available to a development team who was assembled to conduct the evaluation. They were charged with adding, deleting, or changing the questions, responses and risk scores. The Delphi survey approach was used with this group to narrow the list of questions to be included in the final survey. The Grow-finish Herd Risk Assessment, version 1.0, was constructed with a similar approach used to develop the Breeding Herd survey, version 3.0. Information was accumulated and summarized from multiple sources to provide a basis for the evaluation. A development team was assembled to conduct the evaluation and utilized the Delphi survey approach to decipher which question should be included in the final survey and to assign risk scores to the possible responses for each question.

With the recent interest in eradication of PRRS, PADRAP is also gaining recognition for its use in the regional elimination and control projects. The activities and deliverables funded by this project substantially increased the value of the program for use in these area projects as well as the more traditional uses. For more information about PADRAP, go to www.padrap.org.