

Sponsors

University of Minnesota

College of Veterinary Medicine

College of Food, Agricultural and Natural Resource Sciences

Extension Service

Swine Center

Thank you to **IDEXX Laboratories** for their financial support to reproduce the conference proceeding book.

Production Assistant

Janice Storebo

Formatting

Tina Smith

CD-ROM

David Brown

Logo Design

Ruth Cronje, and Jan Swanson;
based on the original design by Dr. Robert Dunlop

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, or sexual orientation.

A vaccination field trial to assess the use of one shot of Circumvent at weaning in comparison to a commercial one dose product side by side on a commercial pig herd suffering from severe porcine circovirus associated diseases (PCVAD)

C. Dewey¹, Z. Poljak¹, R. Friendship¹

¹Population Medicine, University of Guelph, Guelph, Ontario, Canada N1G2W1;

Introduction

During the PCV2 outbreaks across North America the supply of vaccine was overwhelmed by the demand; increasing cases of PCV2 forced producers and veterinarians to “stretch” the supply of the vaccine available into as many pigs as possible (Cardinal and Jones, 2007; Nerem, 2007; Henry et al., 2008). Cardinal (2008) reported that vaccinating pigs only once with a two dose label recommended product, Circumvent PCV (Intervet Inc, Millsboro, Delaware, US) had intermediate results in comparison to a one dose labeled product, Ingelvac Circoflex® vaccine (Boehringer Ingelheim Vetmedica, Inc., St. Joseph Missouri, US).

The objective of this vaccination field trial was to assess the efficacy of the Circumvent PCV using only one dose (off-label) compared to Ingelvac Circoflex, also one dose, in a side by side comparison on a commercial pig herd suffering from severe porcine circovirus associated diseases (PCVAD).

Materials and Methods

A total of 560 pigs were randomly selected within litter at weaning (25 ± 4 d), individually ear tagged and weighed. The odd numbered pigs received one ml of Ingelvac Circoflex® vaccine IM and the even numbered pigs received two mls IM of Circumvent PCV®.

All pigs were weighed at weaning, end of nursery and at the end of the grower-finisher period. The pigs were randomly assigned to treatment and pen, both treatments groups were co-mingled in the same pen. Blood samples were taken from 10 pigs in each treatment group at each weighing and submitted for serology Elisa and qPCR tests. Individual animal records were kept for disease signs, treatments, and reaction to the vaccination.

Post-mortem examination was performed on all pigs that died during the study period.

The data were entered onto a spreadsheet (Microsoft Office Excel, 2003®) and then exported to SAS for statistical analysis.

Results

The farm selected for this study had significant disease challenges in the finishing barn; the mortality rate was extremely high (37.5 %). The mortality rate for the pigs vaccinated with the Ingelvac Circoflex® (37.1%) did not differ from the mortality rate for pigs vaccinated with the Circumvent PCV (37.5%);

seventy one percent of this mortality (71.7%) was due to APP, PRRS and PRDC.

PCV2 signs were present in 5.71% of the vaccinated pigs. Viral copies on sampled pigs were classified as mild. Weight at each phase of production did not differ by vaccine used either (P= 0.68 to 0.98).

Many bacterial agents and viruses were present at the time of the study; however the morbidity rate, growth, mortality, and viremia did not differ statistically between the groups.

Discussion

Reports from field observations lack side by side comparisons. In a previous study, (Cardinal, 2008) the data was collected from different farms at different points in time.

The two-dose regimen recommended by Intervet/Schering-Plough delivers a higher level of efficacy, reducing mortality and virus shedding to help pigs maintain normal growth rates consistently in the face of this devastating disease (Horlen et al., 2008; Henry et al., 2008). Splitting the recommended label dose of Circumvent PCV would likely reduce the protection percentage. However, in this side by side comparative study, one dose of the two dose product performed equally well as the one dose product on a very severely challenged farm.

References

- Cardinal F, Jones B. PCVAD vaccine results in grower-finisher units: practical evaluation and considerations. *Advances in pork production* 2008;19:197-203.
- Nerem J. PCV2 Experiences with sow and pig vaccination. *Proc Allen D. Leman* 2007: 115-117.
- Henry S, Tokach L, et al., PCV2 studies: research from K-State University. *Proc AASV*. 2008:463-468.
- Cardinal F. Finishing mortality in a swine production system using different PCV2 vaccination protocols. *Proc 20TH IPVS congress*. 2008:34
- Horlen K, Dritz S, et al. A field evaluation of mortality rate and growth performance in pigs vaccinated against porcine circovirus type 2. *JAVMA* 2008;232:906-912.