Sponsors

We thank the following sponsors:

Platinum
Bayer Animal Health
National Pork Board
Pfizer Animal Health

Silver
Boehringer Ingelheim Vetmedica, Inc.

Bronze
Cargill
Merck Animal Health
Novartis Animal Health

Copper
AgStar Financial Services
Elanco Animal Health
IDEXX
Newport Laboratories
PIC USA
PRRS CAP

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

Formatting
Tina Smith Graphics
www.tinasmithgraphics.com

CD-ROM
David Brown
www.davidhbrown.us

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.

Evaluation of the economic return of two vaccination programs on a high health Canadian herd

de Grau, F[1]; Dewey, C[2]; Thacker B[3]; Drapeau S[1]; Tully B[1].
[1] Intervet Canada Corp., Kirkland, Quebec [2] Department of Population Medicine, Ontario Veterinary College, University of Guelph, Ontario [3] Intervet/Schering-Plough Animal Health Desoto, KS.

Introduction

Immunization against PCV2 has been demonstrated to be effective for controlling PCVAD in the field. However, there are differences among products and protocols with regard to controlling viremia in vaccinated pigs. Viremia has been associated with the sub clinical infection and impaired growth rate. The objective of this study was to evaluate the economic return of Circumvent PCV vaccination (2D) in a high health Canadian herd, in comparison to pigs vaccinated with a one dose commercial vaccine (1D) and to non-vaccinated controls.

Materials and Methods

Close out information from a vaccination trial published previously (Reindl et al., 2010) was used to calculate the production cost differences, variation in growth rate (CV), average daily gain (ADG) and feed disappearance and conversion (FC). Economic impact calculations were made using feed intake, pig weight sold and the average feed price at the time of the trial.

A quintile analysis was used to calculate the variation in growth rates (Figure 1). To predict heavier slaughter weights, mathematical models were created from the regression models to predict heavier slaughter weights (representative of US market weights)

Results

The pigs remained free of cofactor diseases during the trial (SIV, PRRS, and Mycoplasma). Differences in feed disappearance, FC and ADG varied among treatments. Pigs vaccinated with 1D and consumed 5.87 kg more of feed during the grow-finish period compared to pigs vaccinated with 2D pigs. FC was 0.1 higher for the 1D group, representing a production cost increase of $2.00/ pig, based on feed prices during the trial (Winter 2008). The ADG of the 2D vaccine group was 42.3 g per day higher than that of the 1D (P<0.01). (Figure 1)

Furthermore, the CV was 8 % higher in the 1D vaccinated pigs (27.5%) than the 2D vaccinated pigs (19.3%). Analysis of growth categories based on quintile cut-offs (very slow, slow, average, fast and very fast growing pigs) indicated that 1D pigs were growing more slowly than 2D pigs in all categories (P<.01) except the very fast pigs (the fastest 20%) where there was no significant difference (P>0.05).

Data extrapolation to heavier finisher weights predicted the same trend; 1D pigs would be expected to grow more slowly than 2D pigs.

Discussion

Even in the absence of cofactors there were significant economic losses incurred by PCV2 infection. Although clinically healthy, sub clinically affected pigs redirected nutrients intended for growth towards fighting the disease, causing variation in growth and poor feed conversion.
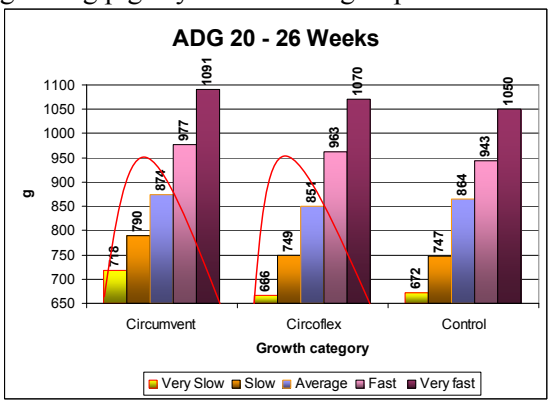
Figure 1. Comparing slow, moderate and fast growing pigs by vaccination group