

SWINE HEALTH

Title: Comparison of the efficacy of sow vaccination versus piglet vaccination for PCV2 and evaluation of the impact of revaccination with a homologous PCV2 vaccine – **NPB #07-217**

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Scientific Abstract

The objectives of this study were (1) to compare the efficacy of two different PCV2 vaccination protocols (maternally derived antibodies versus piglet vaccination) in a conventional PCV2 growing pig challenge model and (2) to evaluate the efficacy of concurrent dam and piglet homologous PCV2 vaccination. Two different commercially available vaccines (VAC1; VAC2) were used side by side. Seventy-eight piglets born to vaccinated or non-vaccinated sows were divided into 8 groups. A proportion of the pigs with and a proportion of the pigs without passively acquired antibodies were vaccinated at 21 days of age. All pigs except negative controls were challenged with PCV2b at 35 days post-vaccination and necropsied at 21 days post-challenge (dpc). The data indicate that both vaccine regimens had similar efficacies in reducing PCV2 viral loads and antigen levels in the growing pigs. Interestingly, dam vaccination alone did result in significantly ($P < 0.05$) lower anti-PCV2-antibodies levels at challenge in piglets from dams immunized with VAC2 compared to piglets derived from VAC1 immunized dams. When data obtained from the growing piglets that were vaccinated with VAC1 or VAC2 were compared, antibody levels and reduction of incidence of PCV2 antigen were not different; however, piglets vaccinated with VAC2 had reduced PCV2 DNA genomic copies in serum by 21 dpc. Homologous revaccination of piglets derived from vaccinated dams did not appear to affect vaccine efficacy as piglets in these groups had anti-PCV2-antibody levels and PCV2 genomic copies similar to the groups where vaccine was administered to the piglets only.

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 This report has not been peer-reviewed.

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