

SWINE HEALTH

Title: Transmission of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) to Age-Matched Sentinel Pigs - **NPB # 98-15**

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Abstract

Understanding the ecology of porcine reproductive and respiratory syndrome virus (PRRSV), particularly its transmission, is imperative in the development of successful prevention programs. This study was designed to determine, through a systematic approach, how long PRRSV-infected pigs remain contagious to age-matched sentinel pigs. Five pigs (principals) housed in one isolation room were inoculated with PRRSV. Pairs of seronegative sentinel pigs were placed in direct contact with the principal pigs for two-week periods of time with one-week intervals between pairs of sentinel pigs. Sentinel pigs were held for two weeks in an isolation room after removal from the principals' room. Serum was collected from the sentinel pigs at the end of the two weeks in the isolation room and tested for anti-PRRSV antibodies (ELISA) to determine if transmission had occurred between the principal and the sentinel pigs. Eight pairs of sentinel pigs were rotated through the principals' room over a 167 day period. The principal pigs were found to be contagious through day 62 but not after day 69. Future research is needed to determine the effect of different factors such as time since exposure, gender, age of principals, age of sentinels, breed, and strain of virus on transmission. Until the effect of these factors are better understood it is dangerous to assume that the relatively short contagious period found in this study is typical of transmission between similar aged pigs.

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