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Safety Evaluation of Prime Pac PRRS+ in Nursery Pigs

Brad Thacker¹, Tamara Boettcher¹, Tammy Anderson¹, Rick Sibbel²

¹Iowa State University, ²Schering-Plough Animal Health

Several reports, clinical impressions of swine practitioners and experiments conducted in our laboratory suggest that vaccination with a modified-live virus (MLV) preparation of porcine reproductive and respiratory syndrome virus (PRRSV) may suppress growth rate. This suppression is not totally unexpected as vaccination and the associated stress of handling and stimulation of the immune system could diminish appetite for a short period of time and partition nutrients away from growth towards supporting the vaccine induced immune response.

This suppression is balanced against the more serious effects induced by infection with virulent organisms encountered later on, providing that the vaccine is effective.

The objective of the experiments presented in this report was to evaluate the influence of vaccination with Prime Pac PRRS+ (Schering-Plough Animal Health) in weaned pigs from an infected herd, and weaned and feeder pigs from a PRRSV-free herd.

In the infected herd, pigs were weighed at weaning and randomly assigned to either a vaccinated group or control group, stratifying for sex and litter. Two nursery facilities were used to keep the vaccinated pigs separate from the control

pigs. Two experiments were conducted so that pigs of each treatment group was evaluated in both nurseries. In the PRRSV-free pig experiments, the pigs were females purchased for breeding herd replacements. The pigs were placed in isolation facilities at Iowa State. One room contained vaccinated pigs from both age groups and a second room contained nonvaccinated control pigs. The weaned pigs were housed in self contained, enclosed decks to avoid direct contact with the feeder pigs. In all experiments, the pigs were randomly assigned to treatment group, balancing for weight, litter and sex, and weighed on days 0, 14 and 28 after intramuscular vaccination. Data was subjected to ANOVA.

The results are summarized in the table below (weights in lb.). In each experiment, there was no significant difference in average daily gain between the vaccinated and control groups, except in the first experiment, the vaccinated pigs out gained the control pigs during days 1-14 ($p=0.18$).

Prime Pac PRRS+ had no negative impact on growth rate and we conclude that Prime Pac PRRS+ is safe in pigs from infected herds and PRRSV-free herds.

Herd Status	No.	Exp. Status	Vacc. pigs	No. Weight 1-14	Start 1-28	<u>ADG by days post-vacc.</u>	
Infected	1	Yes		50	15.5	.37	.58
		No		50	15.9	.31	.51
	2	Yes		50	19.5	.45	.70
		No		50	19.3	.48	.68
Free	3	Yes		25	10.3	.46	.68
		No		22	10.2	.43	.72
	4	Yes		25	51.8	ND	1.43
		No		25	53.5	ND	1.39