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PCV2 and Mycoplasma Vaccine Comparison in a Commercial Midwest Swine Herd

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Introduction- A swine veterinarian investigated the comparative benefit of a two dose Myco Silencer[®] ONCE and Circumvent[®] PCV vaccination program versus a one dose Suvaxyn[®] PCV2 and RespiSure-ONE[®] program. The farm had been using the one dose program for several years. The producer had noted repeated fluctuations in finishing performance, with occasional outbreaks of PCVAD and pneumonia due to *M. hyopneumoniae* (Mhp).

Methods- The study was conducted in a 700 sow farrow-to-feeder pig operation with separate off-site finishing. The farm was PRRS virus negative but Mhp and PCV2 positive. Pigs were weaned at 18-21 days of age and filled a nursery room of approximately 500 head over seven to ten days. The finishing barns were comprised of two 500 head rooms. Pigs were weighed (lb) at weaning, at movement from the nursery to the finisher and at marketing. The PigCHAMP[®] record system was utilized for capturing data.

Three groups per treatment (two dose vaccinates versus one dose vaccinates) were evaluated. The treatments were assigned in an alternating fashion by room/group. A total of six groups were enrolled over a nine week period with 1,579 pigs enrolled in the two dose groups and 1,623 pigs enrolled in the one dose groups. The two dose program was 2.0 mL of Circumvent PCV and 1.0 mL of Myco Silencer ONCE administered IM on the day of weaning and repeated 17-19 days later. The single dose program was Suvaxyn PVC2 and RespiSure-ONE administered IM on the day of weaning.

For statistical analysis, continuous variables (pig weights, growth rates and feed conversion rates) were evaluated by ANOVA. Mortality and pig quality data were analyzed by Chi square. For economic modeling, the following assumptions were used: 12 lb wean weight; 290 lb market weight, \$75 per dead pig, substandard pigs at 70% of full value, 168 days on feed and \$200 per ton feed cost.

Results- Growth performance and mortality data are presented in Table 1. Table 2 summarizes marketing data. Two dose vaccinated pigs outperformed one dose vaccinated pigs with regard to feed conversion ratio, and mortality, substandard cull pig and full

value pig rates. Treatment did not impact growth rate.

Table 1: Growth performance summary

		ADG	FCR	Mort.
Nurs- ery	Pfizer	0.789	1.288	3.9%
	Merck	0.797	1.292	4.2%
Finish	Pfizer	1.927	2.890 ^a	9.0% ^a
	Merck	1.983	2.733 ^b	3.4% ^b
Wean- Finish	Pfizer	1.633	2.688 ^a	12.6% ^a
	Merck	1.680	2.560 ^b	7.5% ^b

^{a,b} Different superscripts are significant

Table 2: Marketing summary

	% Culls	% Full Value
Pfizer	4.3 ^a	83.4 ^a
Merck	1.4 ^b	91.1 ^b

Summary Points

Safety profile- Similar nursery performance between the two dose and one dose vaccinated pigs indicates a similar safety profile between the two vaccination programs.

Efficacy- Two dose vaccinated pigs compared to one dose vaccinated pigs had:

- 4.8% better feed efficiency
- 40.9% lower mortality rate
- 67.4% lower cull/substandard rate
- 2.9% faster growth rate (not significant)

Economics- The two dose vaccination program yielded a \$14.47 (\$9.01 if growth rate difference was not included in model) per pig advantage versus the one dose vaccination program.