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## A comparison of post-vaccination injection site lesions for combination PCV2 / Mycoplasma hyopneumoniae vaccinations

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### Introduction

Porcine circovirus type 2 (PCV2) and Mycoplasma hyopneumoniae (M.hyo) combination vaccines are relatively new to the marketplace. The objective of this study was to compare injection site reactivity of two commercially available PCV2 and M. hyo combination vaccines.

### Materials and Methods

Pigs were housed in a 2,400 head commercial wean-to-finish facility. A total of 960 pigs (3 weeks of age) were utilized in three replicates. For each replicate, 320 pigs with no esthetic or palpable lesions on the right side of the neck were entered into the trial on day -1. Pigs were tagged in the left ear with radio frequency identification (RFID) tags and allocated to pens by treatment and were blocked by sex and weight. All treatment groups were comingled in pens (80 pigs/pen). The vaccination protocol is described in Table 1. All pigs were picked up, restrained, and injected in the right neck with an 18g x 5/8" needle. Needles were changed every 15 pigs per treatment group to mimic standard field conditions.

Table 1. Vaccination Protocol

Treatment	n	Dosage	Doses
Control/Saline	40	2ml	2 (d0,d17)
Treatment 1*	140‡	2ml	1 (d0)
Treatment 2**	140†	2ml	2 (d0,d17)

\*Ingelvac<sup>®</sup> CircoFLEX-MycoFLEX<sup>®</sup> (Boehringer Ingelheim Vetmedica, Inc, St. Joseph, MO)

\*\* Circumvent<sup>®</sup> PCV M (Merck Animal Health, Summit, NJ)

‡: 141 for replicate 3; †: 139 for replicate 3

Palpations of the right side of the neck were completed on d 7, 17, and 24. Pigs with palpable lesions were picked up, lesions were circumscribed with black ink and with a digital caliper, and the

greatest diameter and diameter perpendicular to the greatest diameter of the lesion were measured.

Data from the three replicates was pooled for analysis.

### Results

The rate of palpable lesions is in table 2.

Table 2: Palpable lesion rate by days post injection (DPI)

DPI	Percent of pigs with lesions, %			P-value
	Control	Trt 1	Trt 2	
d7	0.83% <sup>a</sup> (1/120)	0.48% <sup>a</sup> (2/421)	7.64% <sup>b</sup> (32/419)	P<0.0001
d17	0.0% <sup>a</sup> (0/120)	0.24% <sup>a</sup> (1/421)	7.64% <sup>b</sup> (32/419)	P<0.0001
d24 *	0.0% <sup>a</sup> (0/120)	0.0% <sup>a</sup> (0/385)	57.4% <sup>b</sup> (221/385)	P<0.0001

Rows with different superscripts differ significantly (Fisher's exact test)

\*One pen was accidentally not evaluated so data does not exist on d24 for pigs in that pen.

For the three replicates, the range of greatest lesion diameter was 20.89 mm (only one pig had a lesion), 20.89-31.80 mm, and 89.00-109.29 mm for the controls, treatment 1 and treatment 2, respectively.

### Conclusions and Discussion

Under the conditions of this study, there was no difference (P>0.10) in injection site lesions between pigs vaccinated with Treatment 1 compared to saline, but Treatment 2 had a significantly greater (P<0.0001) number of injection site lesions at days 7, 17, and 24 post-vaccination as compared to Controls and treatment 1. Combination PCV2/M. hyo vaccines differ in the extent of injection site lesions induced post-vaccination.