



discoveries

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- All three vaccines controlled PCV viremia well, based on cycle-threshold values, compared to unvaccinated, challenged controls.
- Pigs vaccinated with two doses of Foster PCV MH had significantly better ADG as well as final weight compared to the Circumvent PCV-M G2 group.

Pigs vaccinated with Foster[®] PCV MH equally protected, weighed nearly 8 pounds more in large comparison trial

Pigs vaccinated with Foster[®] PCV MH were equally protected against porcine circovirus (PCV) type 2d as well as *Mycoplasma hyopneumoniae* (*M. hyo*) and weighed 7.78 pounds more than pigs vaccinated with Circumvent[®] PCV-M G2¹ in a trial involving 550 pigs.²

“Pigs that received two doses of Foster PCV MH had significantly better average final weight — 257.78 pounds — and average daily gain (ADG) compared to the Circumvent group,” said Lucina Galina, DVM, PhD, director of swine technical services, Zoetis (Figure 1). They also weighed nearly 16 pounds more than unvaccinated controls, again a significant difference.

The next best final average weight and ADG were among pigs in the one-dose Foster PCV MH group. These results were numerically better than results in the Circumvent PCV-M G2 group and a third group vaccinated with CircoFLEX[®] and MycoFLEX[®].³

Blind study

For the study, commercial pigs were raised in a commercial-like environment. The pigs had two prevalent influenza subtypes (H1N2, H3N2) and *Streptococcus suis*, not an uncommon field scenario, Galina said of the Zoetis-sponsored study, conducted at a Midwest contract research facility.

Investigators distributed pigs from multiple litters into groups of 110. Pigs from each litter were represented in every group, which received one of five treatments per label directions:

- 1-ml dose of Foster PCV MH at 3 and 5 weeks of age
- 2-ml dose of Foster PCV MH at 3 weeks of age
- 1-ml dose of Circumvent PCV-M G2 at 3 days of age and 3 weeks later
- 1-ml dose of Ingelvac CircoFLEX plus 1-ml dose of Ingelvac MycoFLEX at 3 weeks of age
- 1-ml dose of saline at 3 and 5 weeks of age (control group)



“This clearly demonstrated that one- or two-dose regimens of Foster PCV MH are as effective as its competitors.”

LUCINA GALINA, DVM, PHD

Severe challenge

At 8 weeks of age, researchers challenged pigs with *M. hyo* and, 1 week later, with a high, intranasal and intramuscular dose of PCV2d, the most predominant PCV genotype based on sequencing of samples submitted to Iowa State’s Veterinary Diagnostic Laboratory.⁴ Investigators tracking results did not know which treatment each group received.

All three vaccines controlled PCV viremia well, based on cycle-threshold values, compared to unvaccinated, challenged controls. “This clearly demonstrated that one- or two-dose regimens of Foster PCV MH are as effective as its competitors,” she said.

Injection-site reactions were negligible, Galina added, and there were no significant differences among vaccine groups based on immunohistochemistry, an indicator of virus in lymph nodes.

Fewer gross lesions

At 12 weeks of age, investigators examined 24 pigs from each group for gross lung lesions. Pigs in both Foster PCV MH groups and the Circumvent PCV-M G2 group had significantly ($p < 0.05$) lower lesion scores than the CircoFLEX plus MycoFLEX group.

Galina noted that Zoetis recently increased the PCV-antigen level in Foster PCV MH and that the MetaStim® adjuvant in Foster PCV MH helps pigs mount a strong, cell-mediated immune response.⁵

“These recent study results demonstrate that Foster PCV MH can provide pork producers with an effective and safe option for managing PCV in their herds,” she said.

¹ Circumvent PCV-M G2 is a Merck Animal Health product.

² Data on File, Study Report No. 16PRGBIO-01-01, Zoetis LLC.

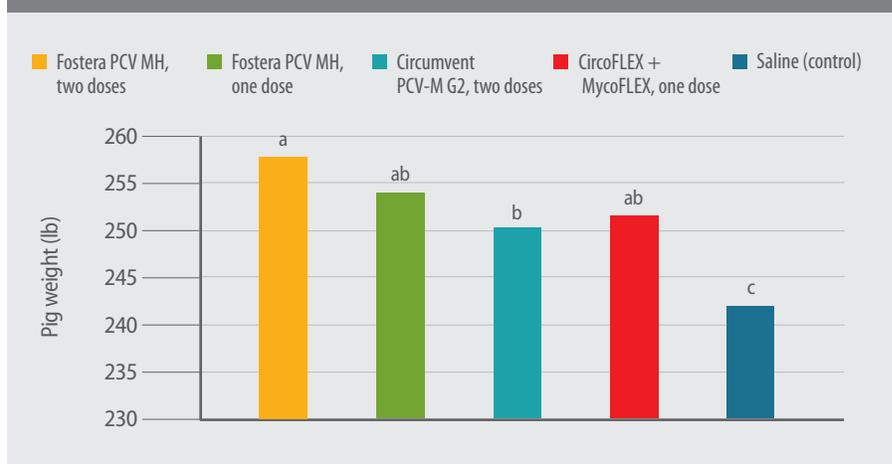
³ Ingelvac CircoFLEX and Ingelvac MycoFLEX are Boehringer Ingelheim products.

⁴ Xiao C-T, et al. PCV2d-2 is the predominant type of PCV2 DNA in pig samples collected in the US during 2014-2016. *Vet Microbiol.* 2016 Dec;197:72-77.

⁵ Seo HW, et al. Comparative analyses of humoral and cell-mediated immune responses upon vaccination with different commercially available single-dose porcine circovirus type 2 vaccines. *Res Vet Sci.* 2014;97:38-42.

For more on this trial, contact Dr. Galina at lucina.galina@zoetis.com.

Figure 1. Final average individual pig weights at 161 days of age*



* Values are Least Squares Means; values with the same letters are not significantly different ($p < 0.05$).