



# discoveries

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- **Fostera® Gold PCV MH is the first and only PCV2 vaccine in the US with both PCV2a and 2b — and it also protected against 2d in the field.**
- **Field studies with commercial pigs demonstrate the new vaccine is safe for pigs.**
- **The vaccine will enable pork producers to provide the broadest protection available against PCV2 without concern about undue reactions.**

## Field studies demonstrate safety of Fostera® Gold PCV MH vaccine

**F**ostera® Gold PCV MH, the new inactivated vaccine from Zoetis developed to provide the broadest protection available against porcine circovirus type 2 (PCV2), has been demonstrated to be safe for pigs in field studies.

Fostera Gold PCV MH is the first and only vaccine for the US pork industry to contain both the PCV2a and PCV2b genotypes, and a study showed it also protected against 2d.<sup>1</sup> Research has demonstrated a PCV2 vaccine with two genotypes provides broader in-the-field coverage against circulating PCV2 viruses<sup>2</sup> than vaccines with only one genotype.

### Three-site field study

A field study to evaluate the safety of Fostera Gold PCV MH was conducted in Texas, North Carolina and Minnesota with 750 clinically healthy pigs.<sup>3</sup> At each location, 200 pigs received the vaccine as an intramuscular injection and 50 pigs served as unvaccinated controls.

“Handling of young pigs was kept to a minimum to avoid causing stress, but injection sites were carefully examined for swelling or irritation,” said Meggan Bandrick, DVM, PhD, senior manager, Global Biologics Research, Zoetis.

The pigs were also watched for signs of health problems such as lethargy, cough or lameness. Individuals observing the pigs didn’t know which animals had or had not been vaccinated with Fostera Gold PCV MH, she said.

### Safety trial results

In Texas, piglets at a commercial nursery facility received one, intramuscular 2-ml dose of Fostera Gold PCV MH in the neck. There were no injection-site reactions.

In North Carolina and Minnesota, piglets at commercial farrowing barns received 1 ml of the vaccine at 3 days of age and a second, 1-ml dose 3 weeks later after they were moved to nurseries.

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LUCINA GALINA, DVM, PHD

To provide dosing flexibility, the split dose of the vaccine can be initiated at 3 weeks instead of 3 days of age, but at these two sites, it was initiated at 3 days of age because any reactions that might occur would be more likely to show up in young pigs, Bandrick said.

At the North Carolina site, only three pigs had mild injection-site reactions after the first dose of Foster Gold PCV MH, and the reactions readily resolved. After the second dose, mild injection-site reactions were seen in six pigs, but other vaccines had also been given, making it difficult to tell which vaccine caused a reaction. Nevertheless, the reactions were mild, she explained.

At the Minnesota site, there were no injection-site reactions after the first dose of the new vaccine. After the second dose, one animal had a local reaction, which again was mild, Bandrick said. Apart from mild local reactions, there were no clinically relevant health problems in pigs that received Foster Gold PCV MH, she said.

Lucina Galina, DVM, PhD, director of swine technical services, Zoetis, said she recommends two doses of the vaccine initiated at 3 weeks of age. “Two doses help ensure all pigs get vaccinated. In addition, field experience with PCV2 vaccines tells us waiting until 3 weeks of age to initiate a split-dose regimen may yield a better immune response, even though the vaccine is safe when given at a younger age.”

### Second field trial

Galina said the safety of Foster Gold PCV MH was also substantiated in a large field trial conducted at a commercial Midwest facility in Illinois. Pigs received one, 2-ml dose of Foster Gold PCV MH at 3 weeks of age, or two, 1-ml doses initiated at 3 days or 3 weeks of age with the second dose administered 3 weeks later.

This study involved 880 pigs and was an efficacy trial comparing different PCV2 vaccines, but safety was also assessed. “Of more than 300 pigs that received Foster Gold PCV MH, only one pig had a reaction and it was unremarkable,” the veterinarian added, noting the study demonstrated the vaccine’s efficacy against PCV2d.<sup>4</sup>

The safety of the vaccine is largely attributable to the vaccine’s adjuvant, MetaStim®. The adjuvant is smooth and stimulates antibodies as well as a strong cell-mediated response, which are both necessary to fight the virus. In addition, the vaccine’s 23-week duration of immunity against PCV2 and *Mycoplasma hyopneumoniae* will protect pigs through the finishing period, Galina said.

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<sup>1</sup> Data on file, Study Report No. 16 PRGBIO-01-01, Zoetis LLC.

<sup>2</sup> EpiCC PCV2 Analysis Study, January 2018

<sup>3</sup> Data on file, Study Report No. B921R-US-16-609, Zoetis, LLC.

<sup>4</sup> Data on file, Study Report No. 16 PRGBIO-01-01, Zoetis LLC.