



An interview with  
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## Mycoplasma elimination versus control: What course is best for your farm?

**Q:** Before we dive into the merits of elimination and control programs for *Mycoplasma hyopneumoniae* (*M. hyo*), what do we know about the economic impact of this pathogen?

**DB:** It's substantial but often underestimated. Between decreased performance and increased costs for management and medications, the cost of uncomplicated *M. hyo* infections often ranges from \$3 to \$5 per head<sup>1</sup> over the costs of feeding a non-infected pig from weaning to marketing. It's even worse if the herd is also infected with porcine reproductive and respiratory syndrome virus, influenza virus or both. In those situations, wean-to-market production costs can easily reach \$10 per head over the costs of feeding a non-infected pig.<sup>2</sup>

**Q:** Eliminating *M. hyo* sounds like the best long-term strategy, but that requires a big investment and elimination may not be possible or practical on some farms. How do you help producers decide whether to use a control or elimination strategy?

**DB:** Deciding whether to control or eliminate *M. hyo* is a huge decision — one that can easily keep a sow-farm owner up at night. The implications from both an operations and financial perspective can be daunting.

For this reason, I like to break the decision-making process down into components. Being able to look at the individual pieces of the puzzle gives farm owners a chance to evaluate the pros and cons of elimination programs and arrive at a solution that works best for them.

**Q:** What factors do you consider when determining if elimination is a good option?

**DB:** First, I like to ask some questions about the farm to gauge the situation there. Since the purpose of an elimination program is to eliminate *M. hyo*, it's important to know if a sow farm would be able to maintain its clean status after herd closure ends.

With that in mind, I like to find out specific steps the sow farm can take to prevent future infections. For instance, would the farm have a source of *M. hyo*-negative replacement gilts to

*continued*



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bring onto the farm when the herd reopens? Will the pigs from this farm be placed in nursery or wean-to-finish barns that house only other *M. hyo*-negative pigs?

Additionally, a farm’s location can contribute to the infection risk, especially when it’s in a pig-dense area. Infections in the neighborhood tend to increase the chance of infection at your own farm. So, I’m interested to know if management believes it can reasonably stay *M. hyo*-negative for 2 to 3 years minimum in its present location.

If a producer can answer yes to these three questions, we can take the conversation further to discuss additional factors that go into the elimination decision.

**Q: What other factors does a farm need to consider when evaluating the impact of an elimination program?**

**DB:** With the long herd closure, the farm is going to lose piglet production due to sow mortality and the lack of gilts coming in to replace them. This begs the question: Can the farm withstand this loss? In addition, this lack of regularly scheduled replacement gilts will skew the herd parity structure. Can the farm aggressively correct the altered herd parity structure when the herd reopens?

The drop in piglet production not only impacts the farm but also the relationship the farm has with the packing plant. The plant is expecting a certain number of pigs to be harvested. If that doesn’t happen, the plant loses money. This presents another question: Can the farm purchase open-market weaned pigs so it can continue to fulfill its contractual obligation during herd closure?

**Q: There are lots of moving parts. Are there any steps producers can take to ease the transition?**

**DB:** One option a farm can pursue to help salvage 3 months of breeding is to establish an off-site breeding project. If it’s feasible for the farm and it can absorb the additional expense of renting a barn and hiring labor, *M. hyo*-negative gilts can be brought to the off-site project approximately 4 months before elimination is set to end on the sow farm. The gilts can be bred, and then about the time the herd is ready to open, the gilts that are close to farrowing in the breeding project can be moved back to the clean sow farm.

Another possibility is shortening the herd-closure time frame if the farm can assume the associated risk. Research has shown that during a herd closure, at 254 days infected pigs no longer tested positive for mycoplasma.<sup>3</sup> In practice, when you close a herd for 240 days and at the end of that period use a rigorous antibiotic protocol, you can be successful in creating a mycoplasma-negative herd virtually 100% of the time.

That said, in my experience with shortened closure periods — for example, from 32 weeks to 16 weeks — the likelihood of eliminating mycoplasma decreases from 100% to 80%. However, for certain farm situations, like an isolated sow farm, this is still acceptable. The benefit is you won’t lose any pig production if you’re able to have an off-site breeding project. You can move the replacement gilts there, avoid disruption to your breeding stock contract and then move the gilts back to the sow farm in time for farrowing.

**Q: What should a farm understand regarding the use of medications?**

**DB:** As I mentioned earlier, when herd closure ends after 240 days, if the farm is able to implement a rigorous antibiotic protocol, there's virtually 100% certainty that the herd will be mycoplasma negative.

The question the producer needs to answer is: Does the farm have the cash flow to support an elimination program with a premium injectable antibiotic? With injectables, you know that every sow in your herd is receiving the correct dose every time.

The less expensive option is using feed or water medication, which is useful, but intake can vary among animals, and you don't always have the certainty that your herd is consistently receiving the right amount. If your only goal is to reduce the severity of effects of respiratory disease associated with *M. hyo*, Lincomix® (lincomycin)\* would be a good option. It's the only Type A Medicated Article with an approved *M. hyo* claim.

But remember, reducing severity of infection is not the goal of an elimination program. What I'd like to stress here is that if a farm has committed to an elimination program and they're agreeing to give up breeding some gilts and losing pig production, by choosing the less costly medication route, the likelihood of long-term success drops considerably.

**Q: What role do vaccines play in these different programs?**

**DB:** Vaccination increases a pig's development of immunity against *M. hyo*. In sow herds undergoing elimination, the herd is generally vaccinated at the beginning of the program and again 4 to 6 months later to reduce the severity of lung lesions caused by *M. hyo*. In addition, piglets vaccinated with RespiSure-ONE® have been shown to shed fewer *M. hyo* organisms to their cohorts following vaccination.<sup>4</sup>

After the elimination program ends and a farm is producing weekly *M. hyo*-negative pig flows, some producers opt to discontinue vaccinating. I don't recommend that approach, however. *M. hyo* vaccine is inexpensive, and regular vaccination of a sow herd — usually once or twice a year — as well as one dose for weaned pigs can help reduce the severity of the disease should the sow farm or a group of pigs inadvertently be exposed through a lapse in biosecurity.

In control programs, vaccination helps minimize the signs of the disease (coughing and loss of performance). Every 6 months there's a whole-herd vaccination of the breeding animals, and the pigs produced are vaccinated at weaning.

**Q: Obviously, an elimination program is a huge undertaking. If a farm isn't able to follow all of the steps you've described, would a control program be the better option?**

**DB:** Yes. Using vaccines and medications won't eliminate *M. hyo* from the sow herd. The risk of the pathogen is always there. However, a well-planned program allows the farm to manage *M. hyo* better and minimize losses in finisher pigs. With responsible use of medications under veterinary supervision, better timing of piglet vaccinations and intentional *M. hyo* exposure at crucial points, this type of program aims to reduce the amount of *M. hyo* at key times during pig production.

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**Q: Specifically, where do control programs begin?**

**DB:** A good place to start is wean day, when all the piglets are removed from the gilts and sows. With the infected sow herd no longer a threat, each piglet is injected with an antibiotic that's effective against *M. hyo*. This gives them a boost and sets them up for the upcoming 6-month growing period until market. Feed and water medication can be used during this growing period as well.

Another useful method for better managing mycoplasma is gilt acclimation. A farm can ask its breeding stock supplier to intentionally infect *M. hyo*-negative gilts at a young age, or the farm can purchase 2-month-old feeder pigs, house them in a nursery or grower barn on the sow farm and expose them to mycoplasma. The rationale behind this practice of infecting gilts at a young age is, by the time they've been bred and ready to farrow, they should be partially recovered and shedding fewer organisms.

**Q: What other advice would you share in regard to the elimination versus control program decision?**

**DB:** Today in the swine industry, we have enough information about mycoplasma that we can make solid recommendations to farms concerning elimination versus control programs. We know what questions to ask and we have the right products and services to help you achieve success. Whether your definition of success is elimination or control, we can help get you there with the right management, pig flows and combination of vaccines, feed medications and injectables.

<sup>1</sup> Schwartz M. Cost of *M. Hyopneumoniae* in growing pigs. 2015 Allen D Leman conference.

<sup>2</sup> Haden DC, et al. Assessing production parameters and economic impact of swine influenza, PRRS and *Mycoplasma hyopneumoniae* on finishing pigs in a large production system. In: Proceedings 43rd Annual Meeting Am Assoc Swine Vet. Denver, Colorado. 2012:75-76.

<sup>3</sup> Pieters M, et al. Vet Microbiol. 2009 Mar 2;134(3-4):262-6.

<sup>4</sup> Data on file. Study Report No. 3127R-60-07-552. Pfizer Inc.

**\* CAUTION: Federal law restricts medicated feed containing this veterinary feed directive (VFD) drug to use by or on the order of a licensed veterinarian.**

\* Do not use in swine intended for breeding. Do not allow unapproved species access to feeds containing lincomycin.

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**toolbox**

Toolbox is a series of interviews with veterinarians about their experiences managing antimicrobials, vaccines and other tools for swine health. It is produced by the editors of *Pig Health Today*® on behalf of the US Pork Business of Zoetis.

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