



The value of longer duration of immunity (DOI) for PCV2 vaccination

Mortality that occurs in late finishing is very costly

When pigs die in late finishing, the revenue that would have been generated is lost and all of the feed needed to get the pig to market weight has already been consumed. When a pig dies early in the growing phase there is at least some consolation since the cost of the feed that would have been required to get the pig to market is spared, thus offsetting some of the lost revenue.

The benefit of reducing late-finishing mortality increases as market hog prices rise. When market prices are relatively high, as they have been in recent years, reducing late-finishing mortality is very rewarding.

“For example, in a barn of 1,000 pigs, if just one 270-pound pig is saved – with carcass prices at \$1 per pound – the benefit is more than \$200, or \$0.20 per pig. Vaccines with a longer DOI can provide better protection and potentially reduce mortality just prior to marketing, where the loss of a pig approaches its market value.”

— Derald Holtkamp, DVM, MS
 Associate Professor, Iowa State University College of Veterinary Medicine

Choosing the right vaccine to reduce the risk of late-finishing mortality

Vaccines will provide immunity and protection against losses associated with disease, but no vaccine is perfect, nor does the protection last forever. Porcine circovirus Type 2 (PCV2) vaccines given around the time pigs are weaned that provide good protection all the way to market are more likely to reduce late-finishing mortality. How do you know how much protection is still provided during the critical late-finishing period? The duration of immunity (DOI) of a vaccine provides guidance on how long a vaccine is expected to be efficacious. Vaccines with a DOI that covers the entire growing period can be expected to provide better protection, and potentially reduce mortality, in late finishing.

When is choosing a PCV2 vaccine with a longer DOI most beneficial?

The timing of vaccination and the time it takes to market all of the pigs in a group is the first consideration for estimating the benefit of a longer DOI. When pigs are marketed over several weeks, the duration of immunity may be sufficient to protect pigs marketed early, while those marketed late may be at greater risk. Seasonality should also be kept in mind. Because pigs grow slower in the summer months, the time it takes to closeout (finish marketing) a group of pigs increases. Finally, keep in mind that early vaccination of pigs extends the time the vaccine needs to provide protection, thus increasing the importance of using a vaccine with a longer DOI to provide protection all the way to market.

The benefit of choosing a PCV2 vaccine with a longer DOI also depends on the PCV2 viral challenge and the magnitude of problems with cofactors, such as porcine reproductive and respiratory syndrome virus (PRRSV), *Mycoplasma hyopneumoniae* and swine influenza virus (SIV), in late finishing. A vaccine with a longer DOI is most beneficial when the PCV2 viral challenge is moderate or high, combined with a moderate or high magnitude of problems with cofactors (see figure). Though not as serious, significant losses can still occur with late PCV2 viral challenge even if the cofactor challenge is low, which also makes a longer DOI beneficial. While not every group of pigs will face disease challenges in the late-finishing period, the way pigs are marketed in the U.S. does present challenges. Since most pigs in the U.S. are marketed over several weeks, there are trucks, usually unwashed, going to and from the packing plant during this time, greatly increasing the likelihood that disease agents [such as PRRSV and SIV, as well as transmissible gastroenteritis virus (TGEV) and porcine epidemic diarrhea virus (PEDV)] will be brought back to the pigs remaining.

		Late-finishing PCV2 viral challenge		
		Low	Moderate	High
Late-finishing cofactor challenge	Low			
	Moderate		When choosing a PCV2 vaccine, a longer DOI is most beneficial	
	High			

Merck Animal Health

Summit, New Jersey 07901

www.merck-animal-health-usa.com • Technical Service: 1-800-211-3573 • Customer Service: 1-800-521-5767

Copyright © 2013 Intervet Inc., doing business as Merck Animal Health, a subsidiary of Merck & Co., Inc. All rights reserved. SW-PCV-TB-036a-1 (08-13)

