

Maintain sound on-farm biosecurity with PRRS ‘season’ approaching

By **BRAD LEUWERKE***

AS we creep closer to autumn’s weather change, crop harvest, manure pumping, etc., we also sneak closer to what has become a predictable rise in new cases of porcine reproductive and respiratory syndrome virus (PRRSv) across the country.

For 10 years now, the Dr. Bob Morrison Swine Health Monitoring Project has shown that the swine industry experiences an annual rise in PRRSv cases over an epidemic threshold in the October to November time frame. If history has anything to say, a similar trend should be expected this fall.

Knowing that one of the biggest drivers of profitability for swine producers is reducing nursery and finishing mortality and culls, those swine producers who are able to keep PRRSv out of their herds will have an economic advantage.

As fall arrives and the number of PRRSv cases begins to rise, swine veterinarians will start to get a sense of whether there are any new or more pathogenic “strains” that may become the new virus to be on the lookout for as an industry.

The last two to three years have given rise to PRRSv 1-7-4 and 1-3-4; both viruses caused severe disease in sow herds, leading to aborted fetuses, piglet mortality and sow mortality.

The other challenge these viruses have presented is the difficulty in eliminating them from sow farms. The “traditional” 210- to 240-day closures designed to eliminate PRRSv from a breed-to-wean farm have not been as successful, forcing many producers to make a decision on whether to keep a herd closed longer in hopes of eliminating the virus or to reload the farm and restart the elimination procedures over again in an effort to not miss production targets.

Research on these viruses and how they are transmitted within a herd has shown that these newer strains are shed for a longer period and are shed in higher amounts from infected animals. There also is speculation that new viruses are able to change more quickly within a population. All of these factors have worked to decrease the success of PRRSv elimination in breed-to-wean herds.

The effects of an increasingly pathogenic virus also can be seen in grow-

ing pigs. PRRSv 1-7-4 and 1-3-4 infection in growing pigs continues to be severe, causing greater mortality with higher culling rates and increased treatment costs compared to PRRSv strains observed in the past.

Similar to the observations in sow farms regarding the timing of disease, the effects of PRRSv infection seem to extend to longer periods compared to past PRRSv strains. Nursery and finishing sites that are continuous flow struggle tremendously to eliminate the virus and should consider all-in/all-out or, at the very least, site depopulation to eliminate virus from these populations of growing pigs.

Prevention

The cornerstone of preventing new virus introduction still relies on biosecurity, biosecurity, biosecurity.

Even though newer strains of PRRSv act increasingly pathogenic, sound biosecurity practices — including clean/dirty lines for site entry, controlled supply entry, organized (clean to dirty) personal movement, dedicated trailers, mortality composting, etc. — help limit virus spread from farm to farm.

Air filtration of breed-to-wean farms continues to be successful. Filtration hasn’t been 100% effective in all cases, but when looking at dense areas where sow herds were breaking multiple times each year, the reduction in the outbreak rate has been extraordinary. Updated technologies, including positive-pressure filtration systems and air conditioning, which reduces the amount of air that needs to come into the barn, continue to move the bar on what can be expected for preventing virus introduction into these farms.

A PRRSv vaccine remains an important tool available to producers for virus control. Recent additions of modified live PRRSv vaccines on the market give swine producers further options for vaccines.

In many commercial sow herds, especially those in more densely populated swine areas, a modified live vaccine is used to help maintain immunity at least with the goal of lessening the impact a new virus introduction will have on the herd. In many of these cases, the herds and replacement gilts are vaccinated multiple times each year to maintain immunity.

In growing pigs, millions of pigs continue to be vaccinated for PRRSv (either prior to weaning or at some point while

in the nursery). PRRSv vaccines continue to show the ability to reduce lung lesions for pigs that become infected with a non-vaccine strain of the virus. In addition, groups that are vaccinated and exposed to a field virus consistently show closeouts that have less mortality and a lower cull rate compared to non-vaccinated groups that become infected with field strains.

As an industry, we’ll start to see the benefits of new diagnostic technologies, including whole-genome sequencing, which will provide more insight than ever before regarding PRRS circulation and change within a population. Take, for example, herds that are unsuccessful at eliminating a resident PRRSv strain from their herd. Whole-genome sequencing will help determine if that virus continues to be the resident strain or if a completely new virus strain has been introduced into the herd.

It goes without saying that it has been and will continue to be an interesting time for all swine producers. The industry is already starting to make market pigs for June 2020. It’s paramount to keep PRRSv out of the herd. Those producers who are able to limit new virus entry will have a greater opportunity to keep reducing pig mortality and culls, leading to increased profitability.

PRRSv “season” will be here soon, so it’s important to emphasize that the biosecurity practices producers have used for years for PRRSv and other pathogens still apply. ■



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