



Season 1, Episode 4: What does the PRRS Virus and biosecurity have in common?

Dr. Jeff Blythe, Pipestone Systems, and **Dr. Cesar Moura**, Iowa State University, discuss the PRRS Virus and the importance of biosecurity.

Porcine Reproductive and Respiratory Syndrome (PRRS)

Porcine Reproductive and Respiratory Syndrome (PRRS) is a virus that can impact pigs of any age. However, PRRS has been shown to significantly impact pigs entering the grow-finish stage of production. PRRS may cause reproductive failure, pneumonia, slower growth rates and increased mortality. Annually, PRRS costs the swine industry 600 million dollars. It is an area of emphasis for research and should be top of mind for producers.

Research

One field study, on 81 pigs, aimed to collect information on modified live virus (MLV) vaccine protocols. MLV are attenuated vaccines used to expose pigs to PRRS without causing disease, therefore providing protection from wild type strains. Oral fluid samples were collected every three weeks. Overall, pigs vaccinated with two doses of vaccine, compared to one dose, had significantly reduced mortality rates. No significant differences were observed in growth performance, between pigs receiving the one versus two dose vaccine protocol. The ideal interval between vaccination dose one and two was four weeks. Two doses of vaccine were more effective when pigs were exposed to the wild type virus at the sow farm compared to during grow-finish. Also, two doses were more effective when the pigs had a higher magnitude of challenge, from the wild type PRRS strain, during the grow-finish stage of production.

Biosecurity

Biosecurity can be defined as a set of procedures to protect humans and animals against disease or harmful biological agents. Ultimately, biosecurity is important for both the health and welfare of animals and caretakers. There are many viruses pigs could potentially be exposed to throughout their lifespan. Influenza and PRRS are two common examples. Stringent biosecurity measures can prevent disease transmission from one group of pigs to another, from caretaker to pig, as well as cross species spread. Sickly pigs require significantly more labor from caretakers and with labor being in short supply across the entire industry, it is prudent to prevent the spread of illness before it starts.

Stay vigilant

Pigs are often exposed to disease through caretaker contact. This can include dirty coveralls and boots. It is important to wear site and barn specific clothing, including boots. Transportation and dead stock removal should be kept in mind as essential pieces to a well-rounded biosecurity program. Feed and feed ingredients have also been shown as a source for spread of disease. Entryways should contain a bench and Danish entry system, where dirty clothing and equipment are kept separate from the clean, animal side of the barn. Always know who is visiting your site and ensure they are fully aware of biosecurity measures. Limit visitors and keep barns locked at all times. All visitors should put on booties before their shoes hit the ground on your site. Refreshing employees on the importance of biosecurity keeps the topic top of mind and also helps create a culture of biosecurity.

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